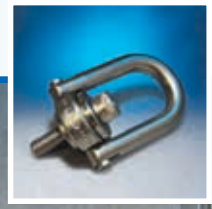
MASTER PRODUCT CATALOG

Jergens 75®

MANUFACTURING EFFICIENCY FOR 75 YEARS










WORKHOLDING SOLUTIONS | SPECIALTY FASTENERS | LIFTING SOLUTIONS

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Jergens
www.jergensinc.com

MASTER PRODUCT CATALOG

MANUFACTURING EFFICIENCY.

Since our founding, Jergens, Inc. has grown to comprise 3 distinct business units: Workholding Solutions, Lifting Solutions and Specialty Fasteners. Building on its reputation of uncompromising quality standards, Jergens is committed to helping its customers achieve leaner,more profitable manufacturing, and continues to add products and engineered solutions for an integrated approach to “Manufacturing Efficiency.”

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We manufacture over 80% of what we sell right here in our 130,000 sq. ft. Cleveland, OH facility, guaranteeing you high quality, competitive pricing and immediate availability (or fast turnaround times on special items). We are a big user of our own products and can set up lean cells to accommodate lot sizes from 1 to 10,000, thanks to our own tooling components and engineered products like the Ball Lock® Mounting System.

So when it comes to lean manufacturing we practice what we preach here at Jergens... Manufacturing Efficiency.





Jergens Company Profile

Jergens Inc. was founded in 1942 by Jack Schron, Sr. and his father Christy, to provide standard components for building jigs and fixtures. Today the fourth generation of family involvement continues stronger than ever. Throughout it's 75-year history the company has grown into four separate operating divisions: Tooling Component Division (TCD), Jergens Industrial Supply (JIS), Acme Industrial Company (AIC), and Advanced Systems Group (ASG) Division of Jergens. While all divisions are vital to the Jergens family, the TCD Division is the centerpiece of our manufacturing capabilities. In June 1999, Jergens moved into a new 110,000 square foot facility and prides itself by manufacturing over 80% of it's product offering, as well as setting the standard for producing the highest quality components in our industry.

Jergens Tooling Component Division comprises three distinct business units: Workholding Solutions, Lifting Solutions and Specialty Fasteners. Building on its reputation of uncompromising quality standards, Jergens is committed to helping its customers achieve leaner, more profitable manufacturing, and continues to add products and engineered solutions for an integrated approach to "Manufacturing Efficiency."

Today, you'll find our tooling components, fasteners and hoist rings at work in just about every industry on every continent. And our innovative Quick Change Workholding Solutions like Ball Lock® Mounting System, Fixture-Pro® 5-Axis Workholding and Zero Point Systems have changed the way manufacturers worldwide think about productivity.

Jergens actively supports global, multinational and internationally based customers with metric dimensioned product offerings as well as many inch threaded products that are common in aerospace and industrial applications around the world. In important manufacturing markets in Canada, Europe, Asia and Latin America, Jergens representatives and stocking distributors have represented Jergens for more than 30 years. Our international representatives are trained technically on our products and provide expertise to customers and sub dealers in applying Jergens technologies to local industries. In recent years, two wholly owned affiliates were formed to serve the Chinese and Indian markets. Jergens (Shanghai) Commercial Co., Ltd, opened in 2006 and Jergens India Private Ltd., Navi Mumbai India opened in 2009. These fully registered trading subsidiaries employ trained multi-lingual engineers and commercial managers who provide marketing and importing, warehousing, distribution and technical support to our customers, distributors and local representatives.

Additionally, we offer a wide range of metalworking tools, clamps, and supplies to manufacturers in Northeastern Ohio, through our JIS Division. Acme Industrial, located in Carpentersville, Illinois, is a premium manufacturer of precision drill bushings and keylocking thread inserts. Our ASG Division specializes in products for light assembly ranging from torque-controlled electric screwdrivers to automation systems.

In addition to our unique product designs, we lead the industry with unparalleled customer service and delivery. Our website is a good example of our commitment to be the most innovative company in our industry. Customers and distributors can check stock and order on-line, view the Jergens catalog, and even download 2D, 3D and solid model CAD drawings in a variety of formats. Visit our website at www.jergensinc.com for the latest news and product information, as well as links to our other divisions. The Jergens family thanks you for your business.

Distribution of Jergens Products
Jergens is proud to be represented by a network of qualified distributors throughout the world. If you do not know the name of the distributor nearest you, please call Jergens Customer Service at 1-877-486-1454 or visit www.jergensinc.com.

Quality Policy
Jergens, Inc. manufactures and supplies only *quality* products. Our quality system is ISO 9001: 2008 Certified. Center-Pull and Side-Pull Hoist Rings are CE Certified. If there is a problem with any of our products, please contact your local Jergens Distributor or contact our Customer Service Department.

Design Aids
Jergens, Inc. offers several CAD drawing formats for use in fixture design. Our internet site (www.jergensinc.com) offers our complete catalog with links to CAD drawings on most of our products. We also offer 3D solid models of our products via the internet.

Application Assistance
Jergens Inc. maintains a complete Technical Sales Department to work with you. Please feel free to call upon their knowledge and experience. Application videos are available for the Ball Lock® Mounting System, Fixture-Pro® 5-Axis and Hydraulic Vise Column products at www.jergensinc.com or you tube channel.

Engineering Changes
Product improvement is a continuing process at Jergens, Inc. Specifications and engineering data are subject to change without notice. **If current information is critical to your design, it is suggested that you contact the Jergens Customer Service Department, or download the most current drawing from our website*, to verify any dimensions or specifications**.

Bar Coding
Jergens' boxed and bagged products are fully bar coded for automatic identification. The bar code labels contain the ASCII Code 39 format, which was chosen as being suitable for most bar code readers. Jergens' bar codes will identify part numbers and manufacturer's codes.

Specials
Jergens, Inc. will modify any item that is similar to our standard component parts. Please contact your Jergens Distributor with your request for a quote. Prints or sketches should be furnished if possible.

TCMA Standards
Products throughout this catalog meet the standards of the Tooling Component Manufacturers' Association. The items are asterisked and are interchangeable with other tooling component manufacturer's products.

Material and Finish Specifications
Stressproof®: A severely cold worked, furnace treated steel bar. Produced by LaSalle patented process to obtain high strength, free machinability, good wear, and minimum warpage in the bar.

Alloy Steel - 4140 or equivalent

Low Carbon Steel - Free Machining 1215, 1018, or equivalent

52100: QQS-624

Zinc Plate: ASTM B633, Type III, Class FE/ZN 5

Cadmium Plate: AMS-QQ-P-416, Class 3, Type 1 & Type 2

Black Oxide: MIL-DTL-13924 and AMS-2485

Black Anodize: per Mil. Spec. MIL-A-8625, Type II, Class 2 and AMS-2472

Passivate: AMS 2700

Alternate Finishes available upon request.

*** 3D Solid Models are available in multiple formats from www.jergensinc.com**

Jergens, Inc.
Manufacturing Number: 697830
FSCM #94882

ISO 9001: 2008
Registration #00010133

Jergens BALL LOCK MOUNTING SYSTEM

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Jergens ZPS ZERO.POINT.SYSTEM

Zero Point Mounting System

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Jergens® MANUFACTURING EFFICIENCY

We Put It All Together… In Seconds.

Jergens BALL LOCK® MOUNTING SYSTEM

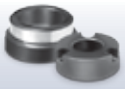
Maximize productivity levels and dramatically increase throughput with Ball Lock®.

Looking to realize the full benefits of lean manufacturing? Then you need the one system that puts it all together, so you can put it all together…and that's Ball Lock®.

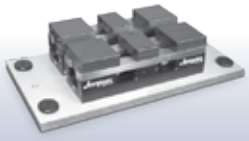
Ball Lock® is the industry's most popular quick-change, fixturing-flexible mounting system that can be configured to create lean-optimized solutions for your most demanding needs.

The original quick change system for fast set-ups and machine changeover.


SHANKS


RECEIVERS

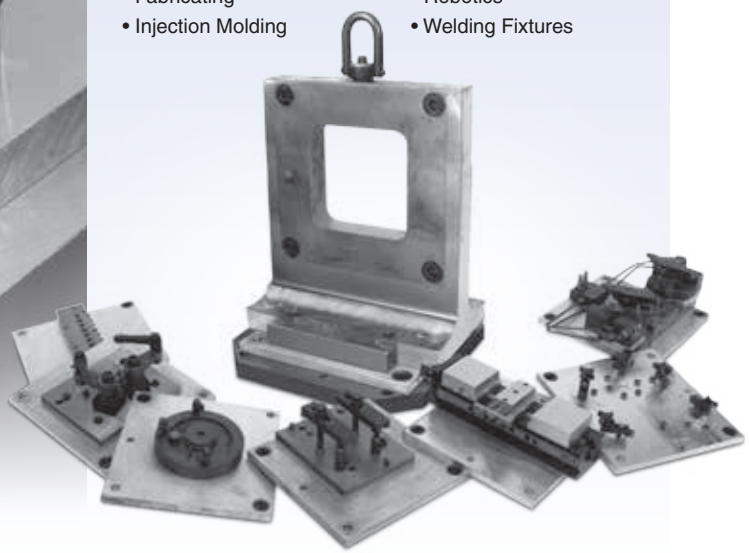

FIXTURE PLATES & SUBPLATES


VISES



The Ball Lock® Mounting System is used as a Quick Change Solution on the following:

- CNC Machines
- Palletized Fixtures
- Stamping
- Fabricating
- Injection Molding
- Packaging Machines
- Assembly Machines
- EDM
- Robotics
- Welding Fixtures



Lean Manufacturing and Set Up Reduction Applications

Accurately Locate and Lock Fixture Plates to Subplates in Seconds… With No Indicating Required.

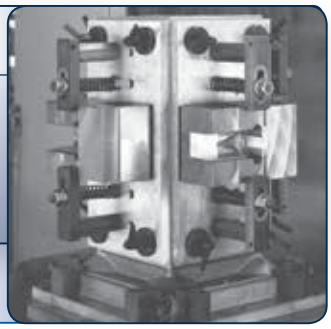
Machining Cast Part

Previous Set Up Method:
Located part with dowel pins, bolted part to tombstone fixture. Indicated part to zero datum point.

Set Up Using Ball Lock® System:
Mount parts to fixture plate while machining other parts. Mount fixture plate to tombstone using Ball Lock® shanks. No indicating required because system provides ±0.0005 (±0.013mm)repeatability.

Previous Set-Up Time:
15 minutes

Set Up Time With Ball Lock® System:
60 seconds



CNC Machine Base:

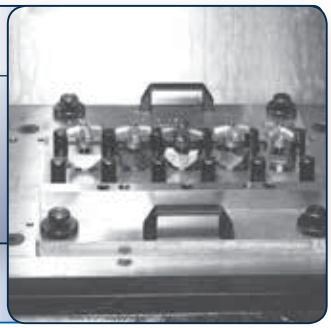
Drilling and reaming forged part.

Previous Set Up Method:
Fixture plate located with dowel pins bolted to machine base. Fixture plate and parts indicated.

Set Up Using Ball Lock® System:
Parts are pre-mounted on fixture plate, which is then mounted to machine base using Ball Lock® shanks. No need to indicate.

Previous Set Up Time:
7 minutes

Set Up Time with Ball Lock® System:
60 seconds



CNC Vertical Machining Center

Machining aircraft valve parts

Previous Set Up Method: New Project. New Machine.No Prior History.

Set Up Using Ball Lock® System: Using Ball Lock® Jig Saw Plate on Multi-Purpose Subplate enables operator to mount two more vises on the fixture. No indicating needed.

Previous Set Up Time:
New Set Up.

Set Up Time With Ball Lock® System:
80 seconds setting up six vises.



Two-Sided Tombstone

Drilling and tapping cylindrical bodies.

Previous Set Up Method:
Fixture located and bolted to tombstone. Had to be indicated.

Set Up Using Ball Lock® System:
Fixture plate mounted and located with Ball Lock® shanks. No need to indicate.

Previous Set Up Time:
12 minutes

Set Up Time with Ball Lock® System:
45 seconds

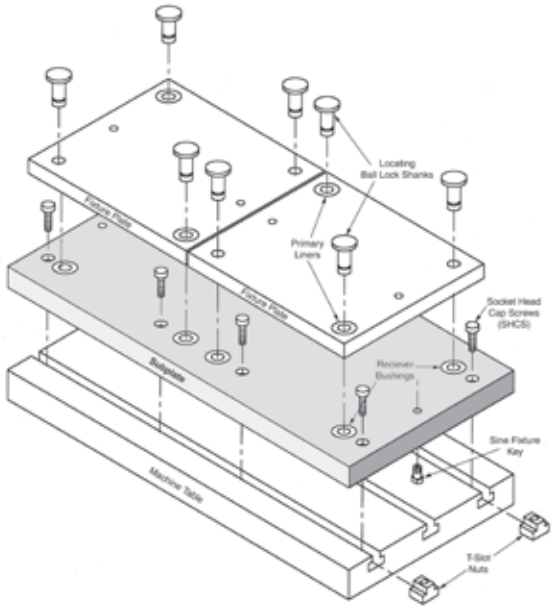


Locates

The Ball Lock® System accurately positions your fixtureplate with a repeatability of ±0.0005" (±0.013mm) or better, minimizing the need to indicate your fixture.

Locks

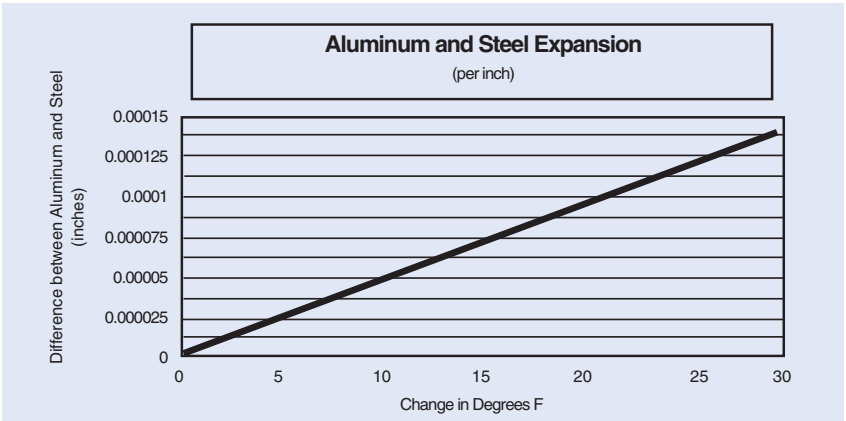
The Ball Lock® System securely holds fixture plates to subplates with up to 20,000 lbs. (9000 Kg) of hold-down force per shank.



The Ball Lock® Mounting System is designed to speed the accurate locating and locking of fixture plates to subplates. The system consists of three parts: a Locating Shank, a Liner Bushing, and a Receiver Bushing. Using the Ball Lock® Mounting System is a simple process: Install a subplate with receiver bushings on your machine table; add your fixture plate with two locating liner bushings; then insert two locating shanks through the liners and into the receiver bushings to provide accurate location. 2$^{1}/_{2}$ turns of the set screw in each of the locating shanks provides positive holding force. Additional Ball Lock® Shanks are inserted through clearance holes in the fixture plate and set screws tightened for additional holding force distributed across the fixture plate.

It is recommended that the use of the Ball Lock® Mounting System for locating and clamping of fixture plates be incorporated in a systematic process. All fixture plates should have two locating points positioned as far apart as possible. There

The Ball Lock® Mounting System provides a method of quickly and accurately locating fixtures onto machine tables. The Ball Lock® Mounting System has done for machining centers what the Japanese SMED concept did for presses. Instead of single minute exchange of dies, Ball Lock® provides single minute exchange of fixtures. Fixtures can often be exchanged in less than a minute and with position repeatability of ±0.0005" (±0.013mm). Fixtures can be exchanged between different machines when both are using the Jergens Ball Lock® Mounting System.



NOTE: Aluminum and steel expand at different rates. Please take this information into consideration when creating your own Ball Lock® fixture and subplates.

Commonly Asked Questions

Q. What is the Ball Lock® Mounting System?

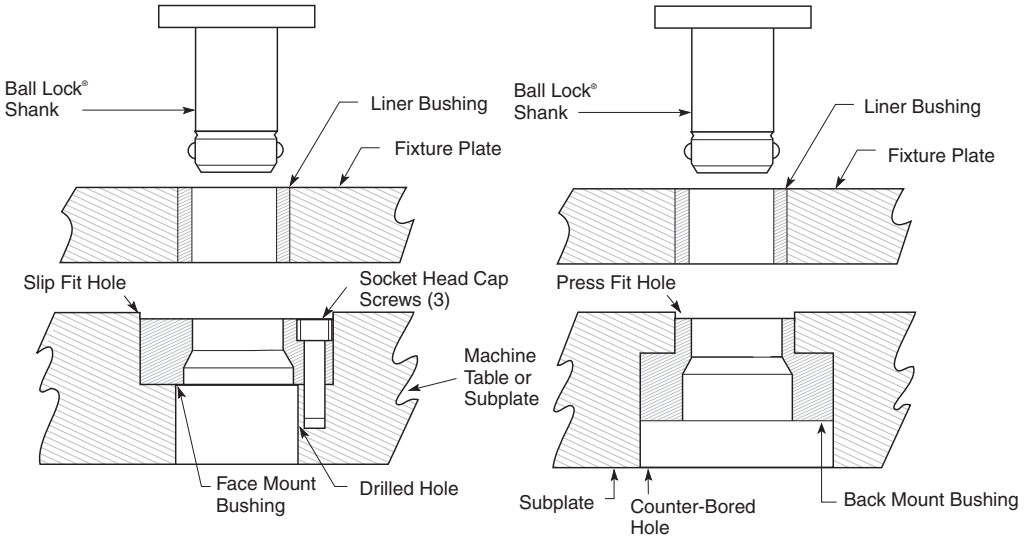
A. It is a means of locating and locking two flat surfaces together, normally a fixture plate and a sub-plate.

Q. How does it locate?

A. Similar to locating pins, two Ball Lock® shanks (pins) pass through two precision liner bushings on the fixture plate and into two precision receiver bushings on the subplate.

Q. How does it lock?

A. Inside the shank are three balls that expand into a tapered groove in the receiver bushing. This action draws the plates together. The locking balls are activated by turning a setscrew in the head of the shank, which pushes a 4th ball to distribute the clamping forces between the 3 locking balls.



Mounting Method With Face Mount Bushing

Mounting Method With Back Mount Bushing

is no advantage to having more than two locating points. If more than two flanged shanks are required to provide additional hold- down force, omit liner bushings in the additional holes in the fixture plate and allow 0.030" (0.76mm) over the nominal size. The additional clearance will insure that these holes have no influence on the locating holes.

How accurate should positioning be?
The center distance of the receiver bushings in the machine table, tombstone, or subplate should be as accurate as possible ±0.0002" (±0.005mm) recommended. Accurate location will assure interchangeability of numerous fixture plates. For accurate repeatability within ±0.0005" (±0.013mm) of true position, both liner bushings in the fixture plate should be *primary* liners and the center distance tolerance should be ±0.0002" (±0.005mm). For a slightly looser fit, repeatability within ±0.0015" (±0.04mm) of true position, use one *primary* and one *secondary* liner with a center distance tolerance of ±0.001" (±0.03mm).

Q. How many shanks are required to locate and lock each fixture?
A. Only two shanks, passing through bushings in the fixture plates, are required for location. However, additional shanks passing through clearance holes in the fixture plate will provide additional holding force distributed across the plate.

Q. Is there a preferable location for the liner bushing?
A. System repeatability is improved if the liners are located at opposite corners of a rectangular fixture plate. For consistency, we recommend locating the liner bushings at top left and bottom right.

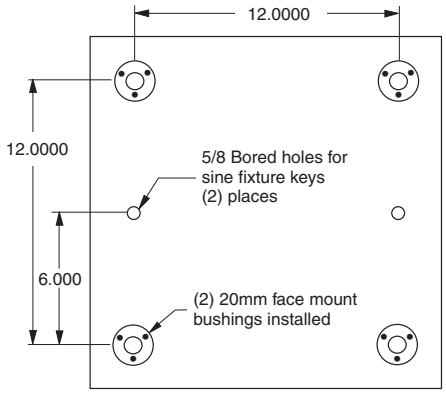
Q. What are the advantages of using the Ball Lock® System over the conventional method of dowel pins and cap screws?
A. Both locating and locking are accomplished in the same motion. Ball Lock® shanks require only 2.5 turns to lock a 1/2–13 (M12) screw with ¾" (18mm) of thread engagement require 10 turns to lock. On CNC machines, the repeatability of fixture locations makes indicating of the fixture unnecessary.

Q. How do I recess the fixtureplate for a clear surface?
A. Counterbore the fixture plate to a diameter large enough to allow easy removal of the shank.
Note: The thickness of the plate section under the head of the shank is critical and must conform to mounting instructions .

Q. What if my plate is thinner than the recommended thickness?
A. By adjusting the depth of the counterbore for the receiver bushing in the subplate, you can still use the Ball Lock® System. If there are any questions on this type of application, please call 1-877-426-2504.

Q. Can I use the shanks in a heated environment?
A. The shank is made of alloy steel, heat treated to 40-45 Rc and should with stand temperatures up to 400°F.(200°C).
Note: Thermal expansion of fixture plates may affect the center distance tolerance and repeatability.

Ball Lock® Standard Subplates

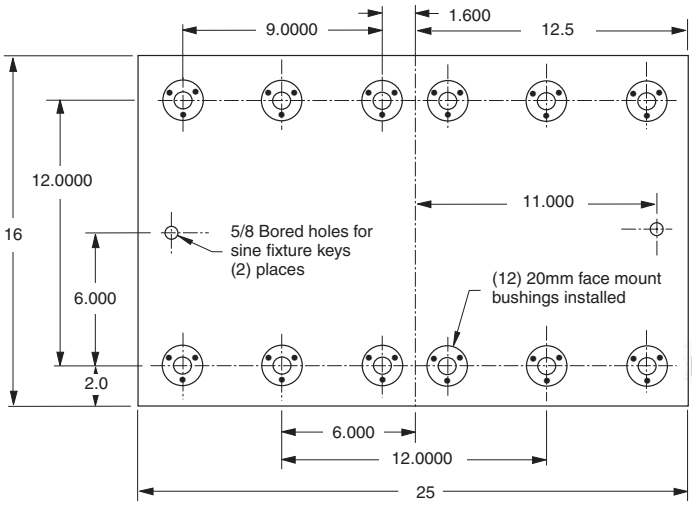


16x16 Subplate

Part Number	Wt (lbs)
49101	81

Equipped with four 20mm receiver bushings for use with 14x14 or 16x16 fixture plates. Ideal for horizontal machining centers or multiple pallet machining centers.

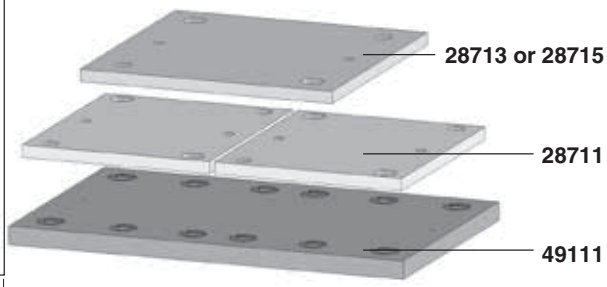
- Fremax™ 15 steel plate or equivalent
- Thickness: 1-1/8" ±0.005"
- Parallel within 0.001"



Aluminum Plate Part Number	Steel Plate Part Number	Number of Fixture Plates	Plate Width and Length
28713	28813	1	14"x14"
28715	28815	1	16"x16"
28711	28811	2	12"x14"

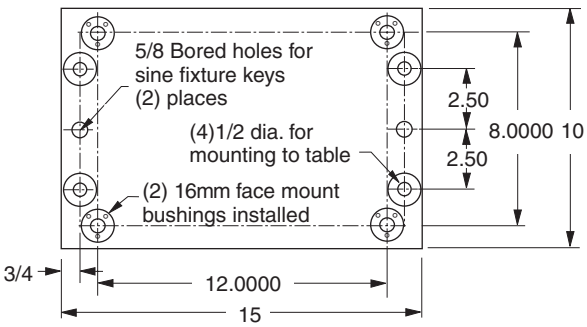
25x16 Dual Station Subplate

Part Number	Wt (lbs)
49111	128



Equipped with twelve installed 20mm receiver bushings to easily locate and mount Jergens Standard Fixture Plates:

- Fremax™ 15 steel plate or equivalent
- Thickness: 1-1/8" ±0.005"
- Parallel within 0.001"



15x10 Bridgeport™ – Style Subplate

Part Number	Wt (lbs)
49121	32

Equipped with four installed 16mm receiver bushings and 1/2" mounting holes. Used with the Bridgeport™ style fixture plates 28731 or 28831.

- Thickness: 3/4" ±0.005"
- Parallel within 0.001"

Ball Lock® Quick Change Kits include all components needed in a single package. See page 26 for details.

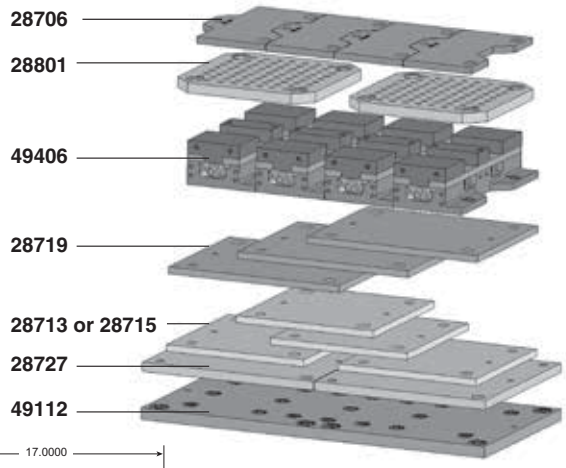
Multi-Purpose Subplates

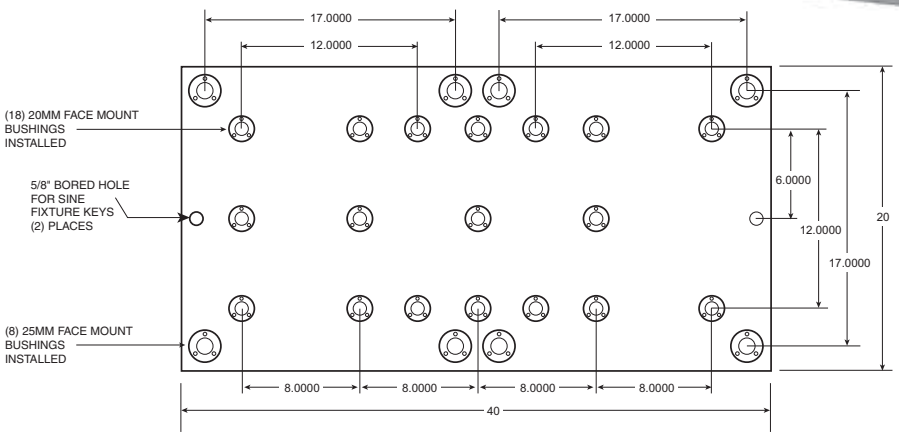
40x20 Multi-Purpose Subplate

Part Number	Wt. (lbs)
49112	285

The Jergens Multi-Purpose Subplate accommodates a wide variety of fixture plates and vises. This versatility facilitates using the same VMC for diverse products in repetitive runs, long and short batch sizes.

- FreMax™ 15 Steel or Equivalent
- Thickness: 1 1/4" ±0.005"
- Parallel within 0.001"





Fixture Plate Options for Multi-Purpose Subplates – Aluminum or Steel

Fixture Plate*/Vise Part Number	Thickness of Fixture Plate	Number of Fixture Plates/Vises That Mount on Multi-Purpose Subplate	Receiver Bushing Center Distance	Receiver Bushing Size	Required Ball Lock® Shank Part Number	Number of Shanks Required Per Fixture Plate/Vise
28713 (14 x 14) Fixture Plate	3/4"	2	12 x 12	20 mm	**49601**	4
28715 (16 x 16) Fixture Plate	3/4"	2	12 x 12	20 mm	**49601**	4
28801 (16 x 16) Modular Grid Plate	1 1/8"**	2	12 x 12	20 mm	**49602**	4
28706 Jigsaw Interlocking Plate	3/4"	4	8 x 12	20 mm	**49601**	3
28727 (20 x 20) Fixture Plate	1"	2	17 x 17	25 mm	**49612**	4
28719 (20 x 16) Fixture Plate	3/4"	1	16 x 12	20 mm	**49601**	4
49406 6" Jigsaw Base Vise	3/4"	4	8 x 12	20 mm	**49601**	3

* See next page for dimensional data on fixture plates. Part numbers shown for aluminum plates, also available in steel.
**Counterbored to 1" at mounting holes.

Fixture Plates

14x14x3/4" Fixture Plate

Aluminum Plate Part Number	Wt. (lbs)
28713	14

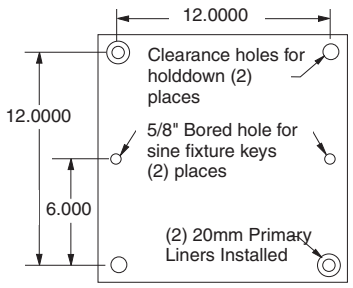
Steel Plate Part Number	Wt. (lbs)
28813	42

16x16x3/4" Fixture Plate

Aluminum Plate Part Number	Wt. (lbs)
28715	18

Steel Plate Part Number	Wt. (lbs)
28815	55

- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 3/4" ±0.005"
- Parallel within 0.001" Steel
- Mounts to subplates with Ball Lock® Shank 49601 (20 x 3/4")

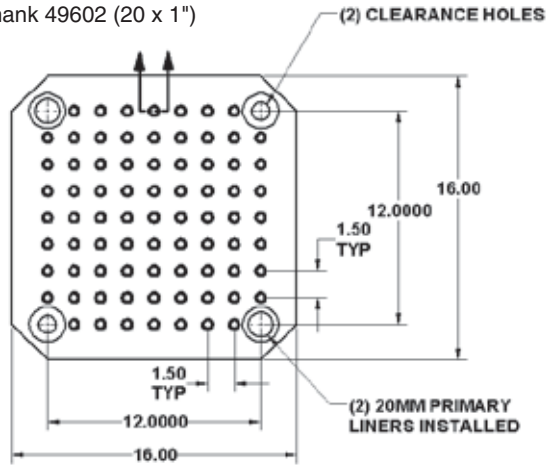


16x16 Modular Grid Fixture Plate

Steel Plate Part Number	Wt. (lbs)
28801	80



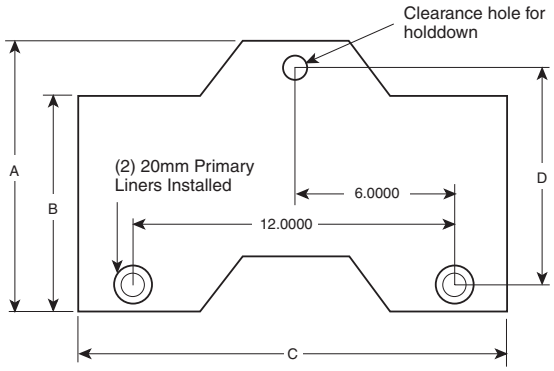
- FreMax™ 15 Steel or equivalent
- Thickness: 1 1/8" ±0.005"
- Parallel within 0.001"
- Mounts to subplates with Ball Lock® Shank 49602 (20 x 1")



Jigsaw Interlocking Fixture Plate

Aluminum Plate Part No	Wt.	Steel Plate Part No	Wt.	A	B	C	Jergens D	Vise P/N
28705	6	—	—	7.97	5.97	15.00	6.0000	49401
28706	11	28806	34	9.97	7.97	16.00	8.0000	49402

- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 3/4" ±0.005"
- Parallel within 0.001" Steel
- For use with narrow base 4" or 6" vise models
- Design allows close vise spacing for more parts per run
- Easily mounts to Subplates using the Ball Lock® Shank 49601 (20 x 3/4")
- Useful for high density fixturing of small parts

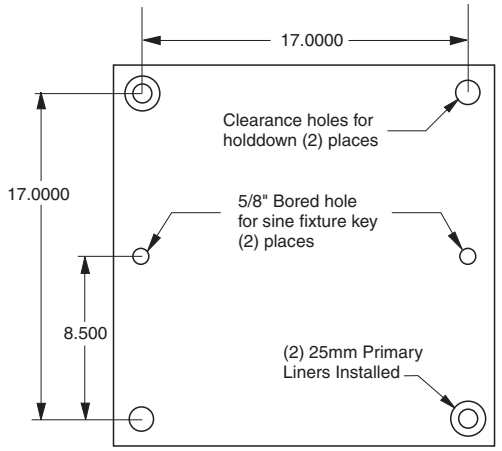


20x20x1" Fixture Plate

Aluminum Plate Part Number	Wt. (lbs)
28727	38

Steel Plate Part Number	Wt. (lbs)
28827	114

- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 1" ±0.005"
- Parallel within 0.001" Steel
- Mounts to subplates with Ball Lock® Shank 49612 (25 x 1")



Ball Lock® Fixture Plates

- Cast Aluminum or FreeMax™ 15 Steel or equivalent
- Thickness tolerance ±0.005"
- Parallel within 0.001" Steel
- 6061–T-651 Aluminum plates, within .001 available upon request

Aluminum Ball Lock® Fixture Plates with 2 Primary Liners Installed

Plate Part Number Aluminum	Weight (lbs)	Plate Part Number Steel	Weight (lbs)	Plate Dimensions (in.)	Plate Thickness (in.) ±0.005	Ball Lock®	
						Shank Size Dia. (mm)	Shank Part Number
28705	7	**28805**	19	7.97 x 15	3/4	20	**49601**
28706	9	**28806**	34	9.97 x 16	3/4	20	**49601**
28711	12	**28811**	36	12 x14	3/4	20	**49601**
28713	14	**28813**	42	14 x14	3/4	20	**49601**
28715	18	**28815**	55	16 x 16	3/4	20	**49601**
28722	16	**28822**	48	12 x 14	1	25	**49612**
28724	19	**28824**	56	14 x 14	1	25	**49612**
28726	24	**28826**	73	16 x 16	1	25	**49612**
28719	23	**28819**	68	20 x 16	3/4	20	**49601**
28727	38	**28827**	114	20 x 20	1	25	**49612**
28731	11	**28831**	32	15 x 10	3/4	16	**49608**
—	—	**28801**	80	16 x 16	1 1/8	20	**49602**
—	—	**28802**	80	16 x 16	1.378	20	**49601**

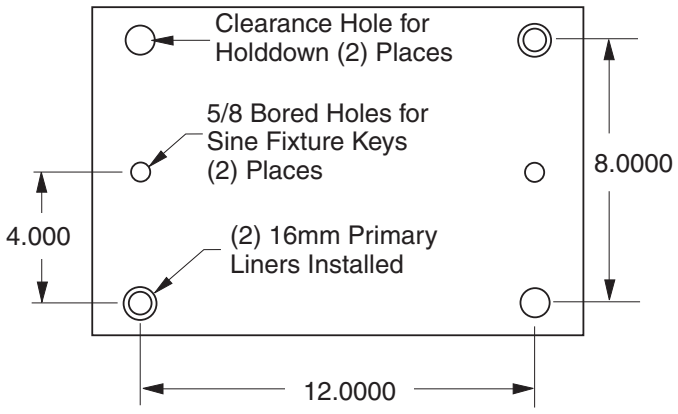
- Machined to close tolerances
- Repeatability ±0.0005" or better
- Reduces fixture set-up and assembly time
- Provided with 5/8" bored holes for sine fixture keys
- For horizontal or vertical machining centers, Tool Room Mills, or multiple pallet machining centers

Custom Sizes Available
Jergens will make Ball Lock® fixture plate or subplates to your specifications. Call 1-877-426-2504 for further information.

15x10x3/4" Fixture Plate Bridgeport™ Style

Aluminum Plate Part Number	Wt. (lbs)
28731	11

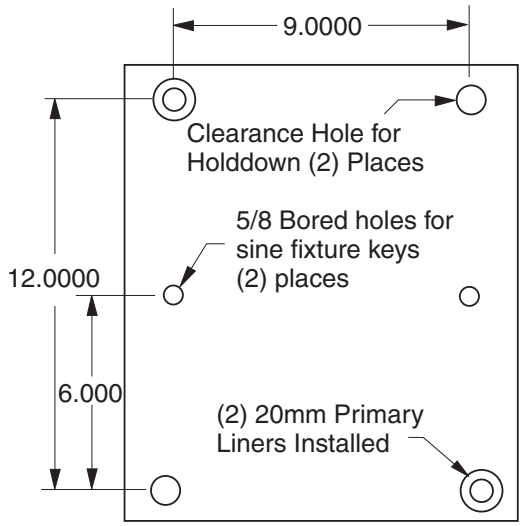
Steel Plate Part Number	Wt. (lbs)
28831	32



12x14x3/4" Fixture Plate

Aluminum Plate Part Number	Wt. (lbs)
28711	12

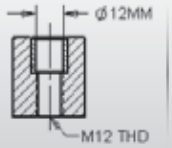
Steel Plate Part Number	Wt. (lbs)
28811	36



16x16 QLS Fixture Plate

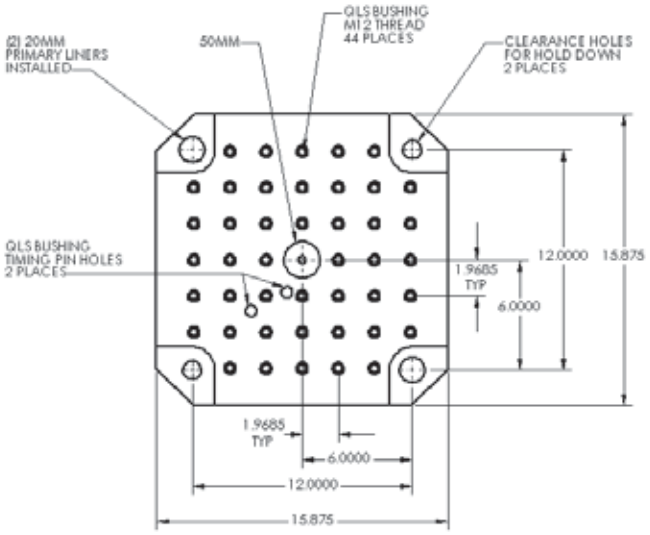
Steel Plate Part Number	Wt. (lbs)
28802	84

- FreMax™ 15 Steel or equivalent
- Thickness: 1.378" ± 0.002"
- Parallel within 0.001"
- Mounts to subplates with Ball Lock® Shank 49601 (20 x 3/4")

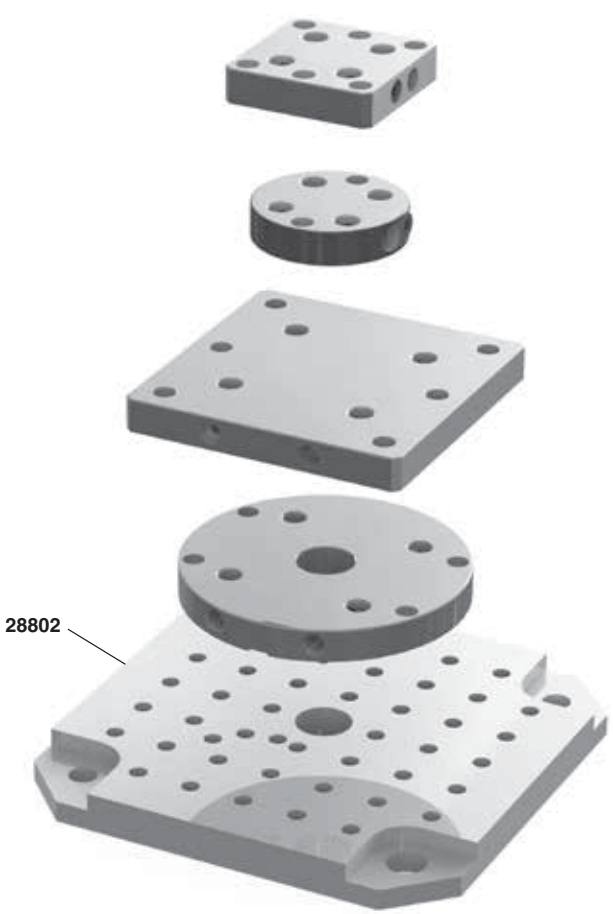


= Jergens QLS

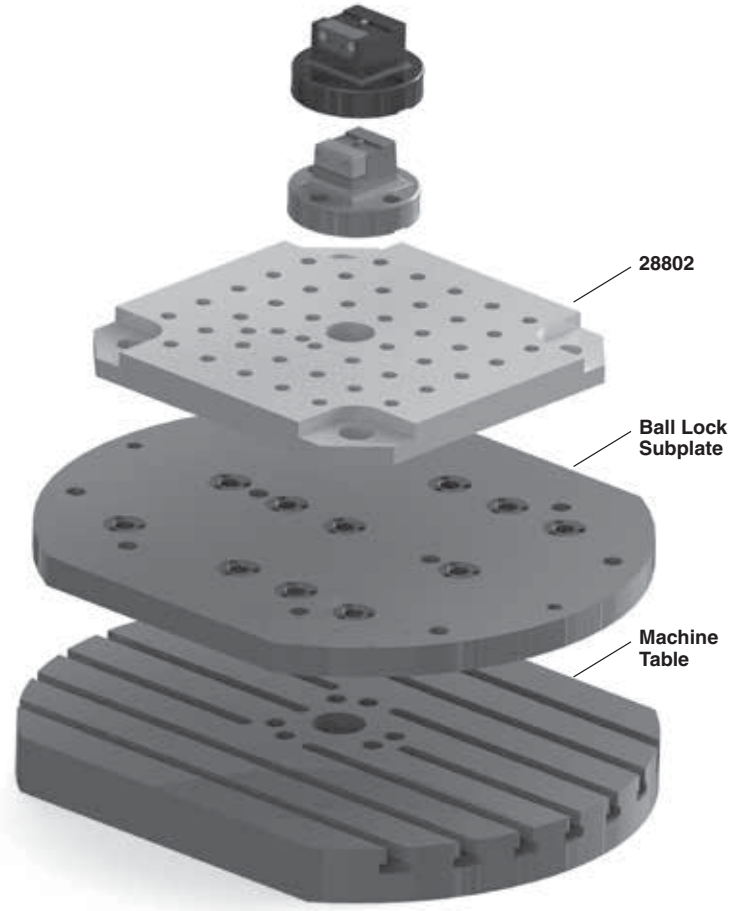
Quick Locating System (QLS) Bushings for shoulder screws that are hardened and ground to +/- 0.0003"



Configuration Options



Drop & Lock Pallet Changers
See pg. 75-76, 88-89

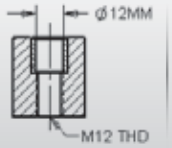


Dovetail Vises
See pg. 81

16x16 QLS Fixture Plate

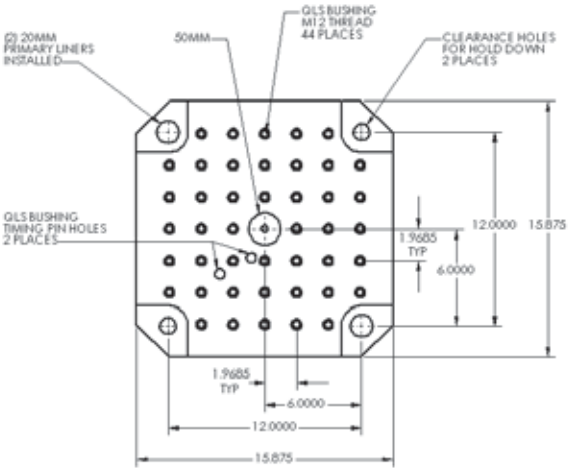
Steel Plate Part Number	Wt. (lbs)
28802	84

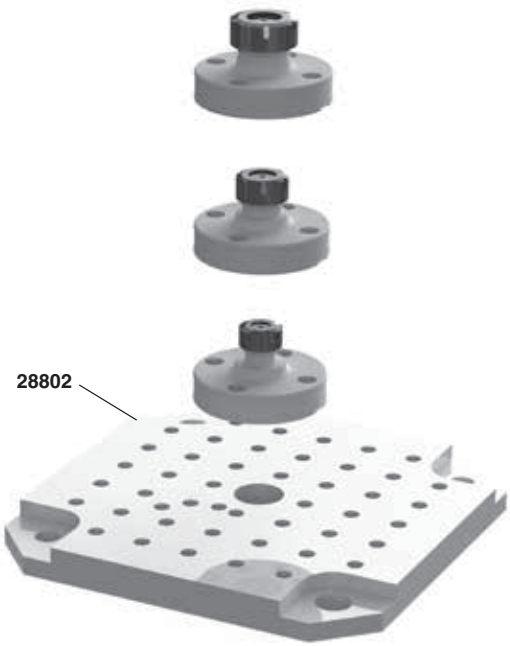
- FreMax™ 15 Steel or equivalent
- Thickness: 1.378" ± 0.002"
- Parallel within 0.001"
- Mounts to subplates with Ball Lock® Shank 49601 (20 x 3/4")



= Jergens QLS

Quick Locating System (QLS) Bushings for shoulder screws that are hardened and ground to +/- 0.0003"

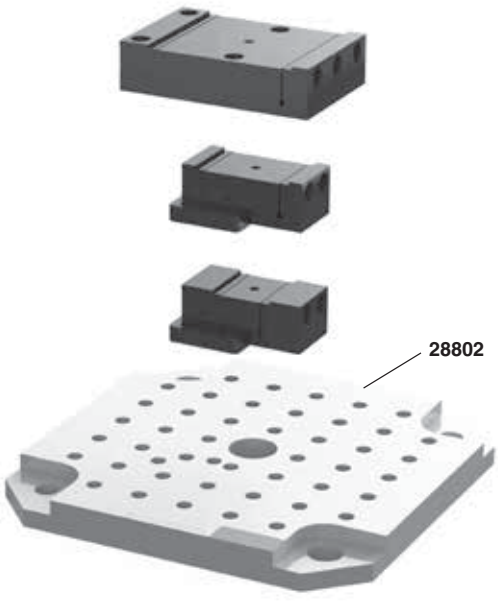




ER Collet Fixtures
See pg. 82



Risers
See pg. 70-71

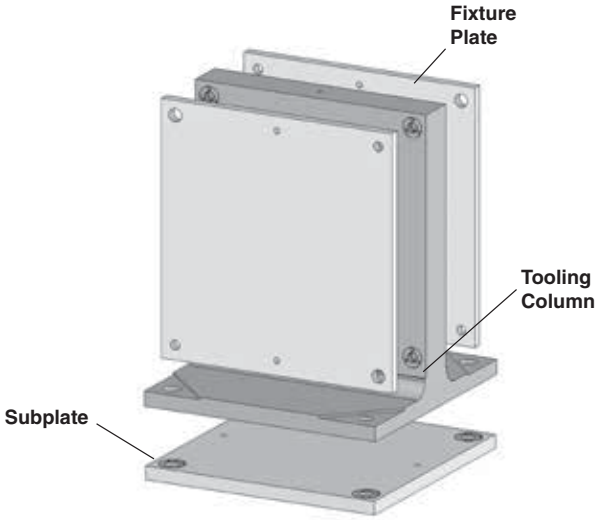


Block Dovetail Vises
See pg. 81

Ball Lock® T-Columns

- Class 40 Cast Iron
- Also available in Aluminum
- Ball Lock® Receiver Bushings and Liner Bushings installed
- Perpendicularity is 0.001" per foot

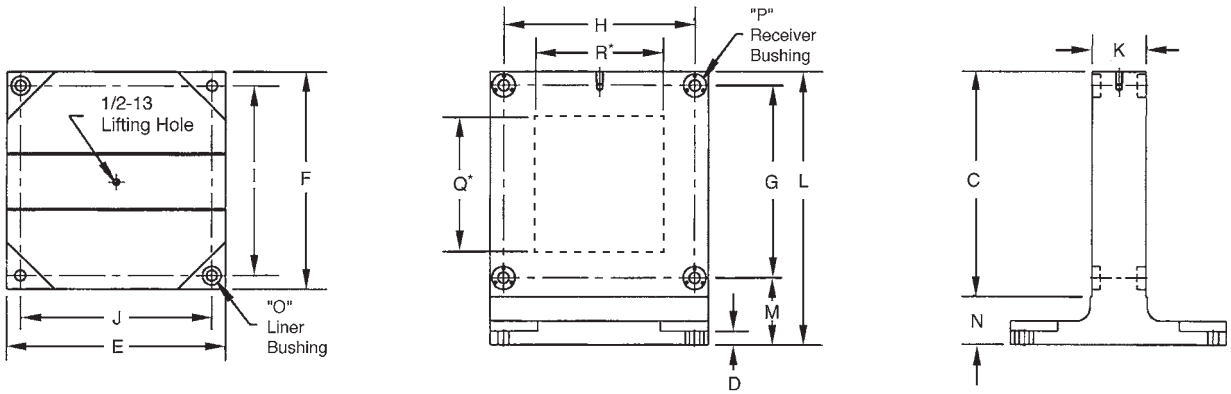
Custom Sizes Available with or without Ball Lock®
We are able to quote you on your special requirement with or without the Ball Lock® Mounting System. Call 1-877-426-2504 for design specification information.



Cast Iron T-Columns With Ball Lock® Receiver Bushings Installed

See page 18 for Fixture Plates and Subplates

Pallet Size (mm)	Part Number	C	D	E	F	G	H	I	J	K	L	M	N	O (mm)	P (mm)	Wt. (lbs)
400	**69101**	16.375	1	16	16	14	14	14	14	4	19.875	4.875	3.5	20	20	425
500	**69111**	22.375	1	20	20	19	17	17	17	4.7	25.875	5.375	3.5	25	25	700
630	**69121**	26.375	1.5	25	25	23	22	21	21	4	29.875	5.375	3.5	35	25	1125



***Note**: Window sections are also available on T-Columns. Specify window size and location (Q and R Dimensions).

Corresponding Fixture Plates, Subplates and Ball Lock® Shanks

Pallet Size (mm)	T-Column Part Number	Aluminum Fixture Plate Part Number	Steel Fixture Plate Part Number	Fixture Plate Size	Fixture Plate Ball Lock® Shank Part Number	Shank Size	Subplate Part Number	Subplate Ball Lock® Shank Part Number	Shank Size
400	**69101**	**28717**	**28817**	16 x 16	**49601**	20mm x 3/4	**49102**	**49602**	20mm x 1
500	**69111**	**28745**	**28845**	20 x 22	**49612**	25mm x 1	**49103**	**49612**	25mm x 1
630	**69121**	**28746**	**28846**	25 x 26	**49612**	25mm x 1	**49104**	**49633**	35mm x 1-1/2

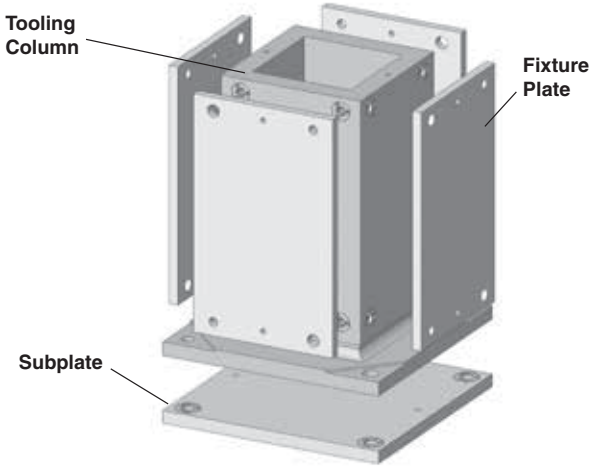
Use Hoist Ring **23411,** see page 528 for lifting and handling – Order separately.

Engineering Changes
Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change after publishing. Contact Jergens Technical Sales Department to verify any dimensions or specifications.

Ball Lock® 4-Sided Tooling Columns

- Class 40 Cast Iron
- Also available in Aluminum
- Ball Lock® Receiver Bushings and Liners installed
- Provides accurate fixturing base for CNC machining centers
- Perpendicularity is 0.001" per foot

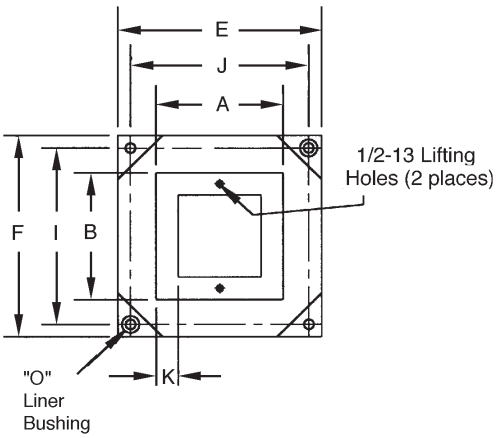
Custom Sizes Available with or without Ball Lock®
We are able to quote you on your special requirement with or without the Ball Lock® Mounting System. Call 1-877-426-2504 for design specification information.

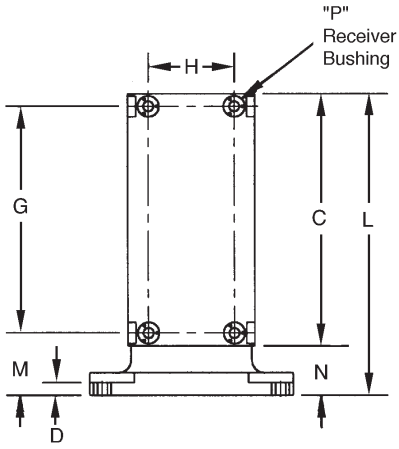


See page 18 for Fixture Plates and Subplates

Cast Iron 4-Sided Tooling Columns With Ball Lock® Receiver Bushings Installed

Pallet Size (mm)	Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O (mm)	P (mm)	Wt. (lbs)
400	**69001**	10	10	20	1	16	16	18	6.75	14	14	1.75	23.875	4.875	3.875	20	20	510
500	**69011**	12	12	25	1	20	20	22	8	17	17	1.625	28.875	5.375	3.875	25	25	736
630	**69021**	16	16	26	1.5	25	25	23	11.50	21	21	2	29.875	5.375	3.875	35	25	1122





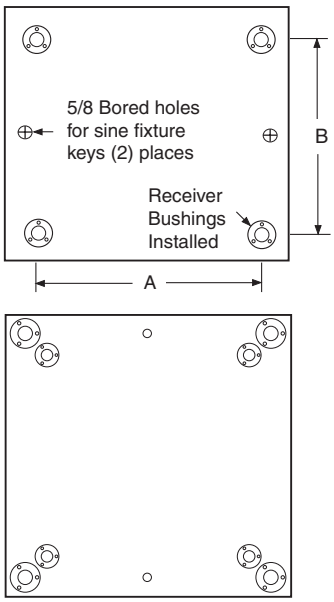
Corresponding Fixture Plates, Subplates and Ball Lock® Shanks

Pallet Size (mm)	T-Column Part Number	Aluminum Fixture Plate Part Number	Steel Fixture Plate Part Number	Fixture Plate Size	Fixture Plate Ball Lock® Shank Part Number	Shank Size	Subplate Part Number	Subplate Ball Lock® Shank Part Number	Shank Size
400	**69001**	**28741**	**28841**	10 x 20	**49601**	20mm x 3/4	**49102**	**49602**	20mm x 1
500	**69011**	**28742**	**28842**	12 x 25	**49612**	25mm x 1	**49103**	**49612**	25mm x 1
630	**69021**	**28743**	**28843**	16 x 26	**49612**	25mm x 1	**49104**	**49633**	35mm x 1-1/2

Use Hoist Ring **23411,** see page 528 for lifting and handling – Order separately.

Engineering Changes
Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change after publishing. Contact Jergens Technical Sales Department to verify any dimensions or specifications.

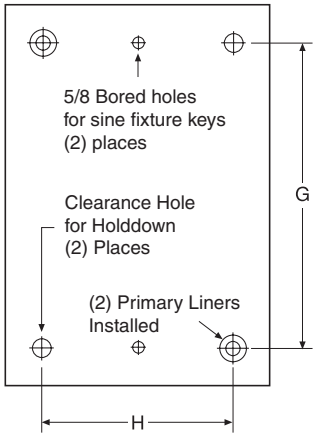
Subplates For Tooling Columns and Fixture Plates



Standard Steel Subplates for Tooling Columns

Subplate Mounting holes can be provided per customer specification.
Supplied with Ball Lock® Receiver Bushings installed.

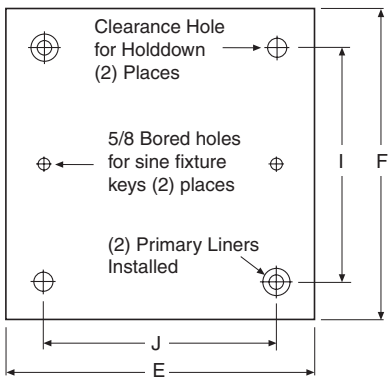
Part Number	Pallet Size (mm)	For Tooling Columns	Ball Lock® Pattern A (in.)	Ball Lock® Pattern B (in.)	Receiver Size (mm)	Thickness of Subplate (in.) ±0.005	Wt (lbs)
49102	400	**69001, 69101**	14	14	20	1 1/8	79
49103	500	**69011, 69111**	17	17	25	1 1/4	137
49103-C	500	**69101, 69001**	14/17	14/17	20/25	1 1/4	137
—	—	**69111, 69011**	Dual	Dual	Dual	1 1/4	—
49104	630	**69021, 69121**	21	21	35	1 3/8	240



Fixture Plates for Standard Tooling Columns and T-Columns

Supplied with 2 primary Ball Lock® Liner Bushings installed.

Pallet Size (mm)	Part Number Aluminum	(lbs)	Steel	(lbs)	For Tooling Columns	Type	Fixture Plate Size (in.)	Fixture Plate Thickness ±0.005"	Ball Lock® Pattern H (In.)	Ball Lock® Pattern G (In.)	Liner Size (mm)
400	**28741**	14	**28841**	43	**69001**	4-S	10x20	3/4	6.75	18	20
500	**28742**	28	**28842**	85	**69011**	4-S	12x25	1	8	22	25
630	**28743**	39	**28843**	118	**69021**	4-S	16x26	1	11.50	23	25
400	**28717**	18	**28817**	55	**69101**	T	16x16	3/4	14	14	20
500	**28745**	41	**28845**	125	**69111**	T	20x22	1	17	19	25
630	**28746**	61	**28846**	184	**69121**	T	25x26	1	22	23	25

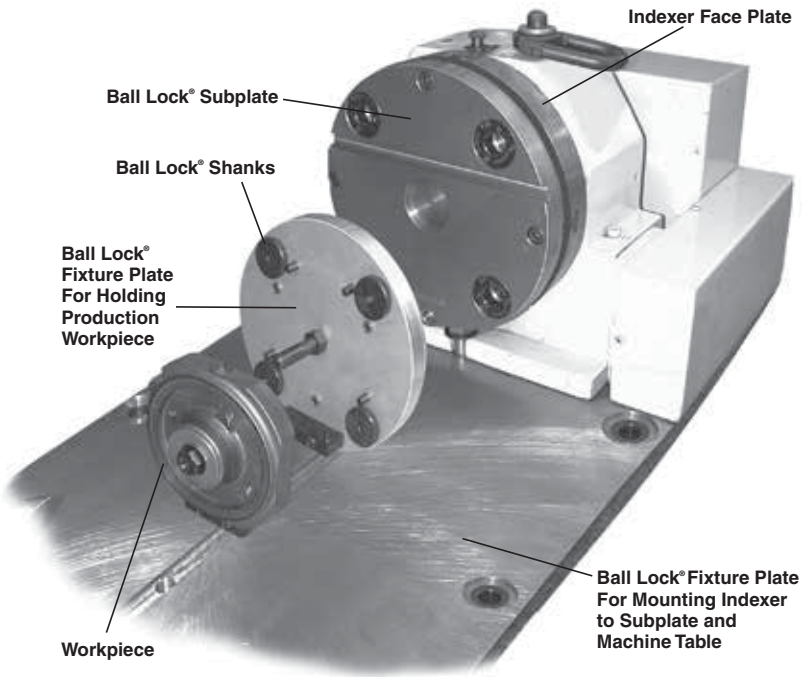


Fixture Plates for Tooling Column Subplates

Supplied with 2 primary Ball Lock® Liner Bushings installed.

Pallet Size (mm)	Part Number Aluminum	(lbs)	Steel	(lbs)	For Subplate	Plate Dim. E (In.)	Plate Dim. F (in.)	Fixture Plate Thickness ±0.005"	Ball Lock® Pattern I (In.)	Ball Lock® Pattern J (In.)	Liner Size (mm)
400	**28717**	18	**28817**	55	**49102**	16	16	3/4	14	14	20
500	**28727**	38	**28827**	114	**49103**	20	20	1	17	17	25
630	**28732**	58	**28832**	177	**49104**	25	25	1	21	21	35

Ball Lock® For 4th Axis Rotary Indexers



Problem:
Rotary indexers increase the versatility of vertical machining centers, yet they offer one major challenge: set-up is so time-consuming that it may limit a machine's flexibility. In many cases, machinists dedicate their 4th Axis tool to a single machine to avoid the agony of an extended set-up and changeover.

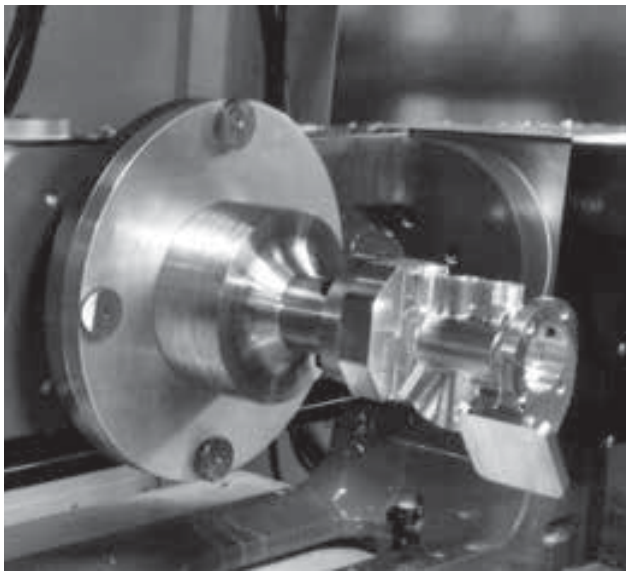
Benefits:
- Maximize indexer utilization
- Eliminate lengthy set-ups
- Accurate fixture plate changover in seconds

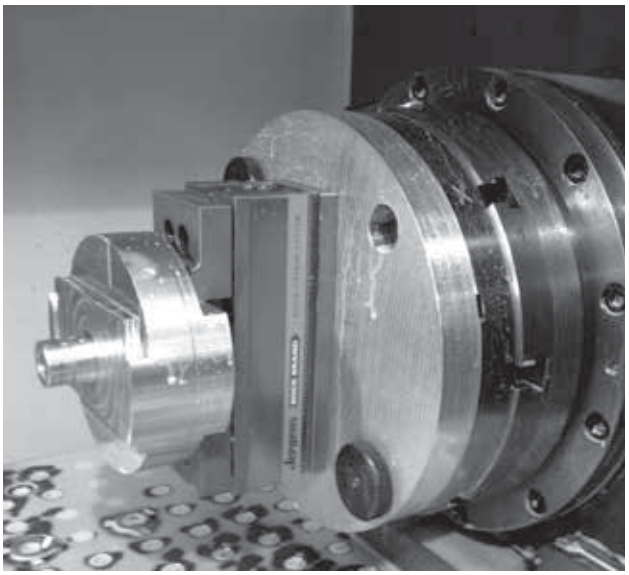
Jergens' Solution:
Ball Lock®Mounting System for Indexers provides a double solution.

First, Ball Lock®mounting plates free up your machine for additional work by allowing a fast and accurate installation and removal of the complete indexer. Avoid hours of set up. The Ball Lock®System does it in minutes, with repeatability at ±0.0005" (±0.013mm). Low profile, positive clamping, proven in over many years of field use.

Second, the Ball Lock®System provides your fixture plate changeover. By mounting the round subplate to the indexer faceplate, you'll "plug-in" new fixtures in record time (less than 60 seconds).

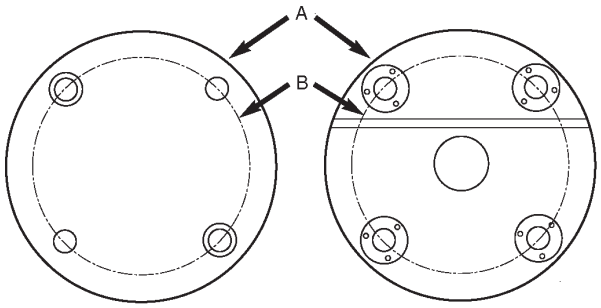
Subplates and fixture plates come with bushings pre-installed.





Round Ball Lock® Fixture Plates and Subplates

Standard Round



Fixture Plate Subplate

Cast Aluminum, FreeMax™ or Steel equivalent

Fixture Plate

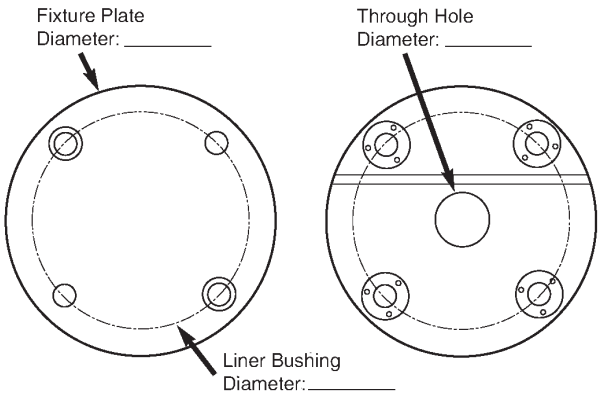
Part Number Alum.	Part Number Steel	A	B	Thick. ±0.005"	Ball Lock® Liner	Ball Lock® Shank	Weight (lbs) Alum.	Weight (lbs) Steel
28707	**28807**	8"	6"	3/4	16mm	**49608**	3.5	12.0
28708	**28808**	10"	8"	1	20mm	**49602**	7.0	28.0
28709	**28809**	12"	10"	1	20mm	**49602**	11.0	33.0

Subplate

Part Number Alum.	A	B	Thick. ±0.005"	Ball Lock® Receiver	Center Hole	Weight (lbs)
49107	8"	6"	3/4	16mm	1.00"	11.0
49108	10"	8"	1	20mm	2.00"	21.0
49109	12"	10"	1	20mm	2.00"	33.0

Metric sizes also available; please call for information.

Custom Round Plates



- Cast Aluminum or FreeMax™ is steel or equivalent
- Thickness ± 0.005"
- Paralell within 0.001" Steel

Indexer:

Make: _____

Model: _____

Diameter: _____

Light Duty or Heavy Duty: _____

Through Hole Bore: _____

CNC Machine:

Make: _____

Model: _____

Weight Capacity: _____

Indexer Faceplate:

T-Slot Size: _____

Configuration/Orientation: _____

or

Drilled Tapped Hole Size:

Configuration/Orientation: _____

Engineering Changes

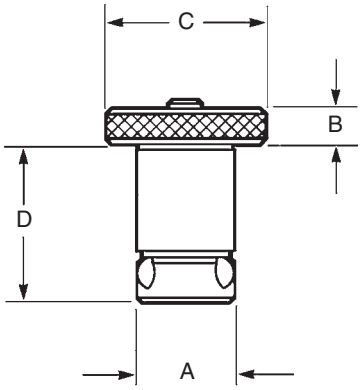
Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change without notice. If current information is critical to your design, it is suggested that you contact Jergens Technical Sales Department to verify any dimensions or specifications.

Locating and Clamping Shanks



- Material: Shank/Bushing, 4340
  Liner, 52100
- Finish: Black Oxide
- Heat Treat: Shanks, RC 40-45
  Bushings, RC 50-54
  Liners, RC 62-64
- Operating Temperature Range
  -20° to 400°F, -30° to 200°C

**Stainless Steel available.
See Page 23-24**



Ball Lock® Repair Kits



Each Kit Includes:
- Replacement Screw
- Locking Balls
- Drive Ball
- O-Ring

Any Ball Lock® application requires at least two sets of shanks, receiver bushings and liners. The liners are placed into the fixture plate to insure extremely accurate positioning. If more than two shanks are required (to provide additional hold down force), omit the liner bushing so that these additional holes will not interfere with your primary locating holes.

See page 25 for Fast Acting Shanks.

Locating and Clamping Shank Dimensions

Shank Diameter (mm) A	Fixture Plate Thickness ±0.005	Shank Part Number	Head of Shank		Length Under Head D	Hex Wrench Size for Set Screw	Maximum		Recommended		Shank Repair Kit Part Number
			Height B	Diameter C			Screw Torque (Ft/lb)	Hold-Down Force (lbs)	Screw Torque (Ft/lb)	Hold-Down Force (lbs)	
13	0.50	**49605**	0.25	0.87	1.08	3/32	1.2	750	1	625	**49905**
—	0.75	**49606**	—	—	1.33	—	—	—	—	—	**49906**
16	0.50	**49607**	0.32	1.50	1.15	1/8	3	1200	2	800	**49907**
—	0.75	**49608**	—	—	1.40	—	—	—	—	—	**49908**
20	0.75	**49601**	0.38	1.75	1.53	1/8	4	3000	3	2250	**49901**
—	1.00	**49602**	—	—	1.78	—	—	—	—	—	**49902**
25	0.75	**49611**	0.38	2.00	1.70	5/32	9	7000	7	5444	**49911**
—	1.00	**49612**	—	—	1.95	—	—	—	—	—	**49912**
30	0.75	**49621**	0.50	2.25	1.88	3/16	15	10000	12	8000	**49921**
—	1.00	**49622**	—	—	2.13	—	—	—	—	—	**49922**
35	0.75	**49631**	0.50	2.25	1.97	1/4	25	15500	19	11780	**49931**
—	1.00	**49632**	—	—	2.22	—	—	—	—	—	**49932**
—	1.50	**49633**	—	—	2.72	—	—	—	—	—	**49933**
—	2.00	**49634**	—	—	3.22	—	—	—	—	—	**49934**
50	0.75	**49641**	0.75	3.00	2.45	3/8	50	20000	38	15200	**49941**
—	1.00	**49642**	—	—	2.70	—	—	—	—	—	**49942**
—	1.50	**49643**	—	—	3.20	—	—	—	—	—	**49943**
—	2.00	**49644**	—	—	3.70	—	—	—	—	—	**49944**

Receiver Bushings



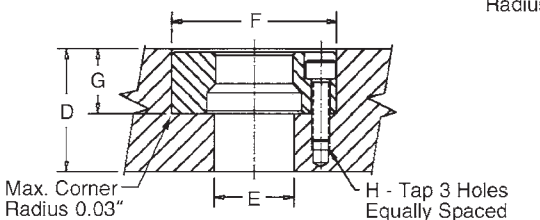
Face Mount



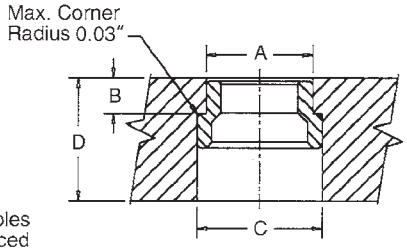
Back Mount

Two styles of receiver bushings are available. Generally, the face mount receiver bushing is utilized in blind hole applications (Slip Fit). The back mount receiver bushing is used in through hole applications (Light Press Fit).

Note: Installed bushings should be approximately .012" below subplate surface.
See reference below for installation of back mount style bushings.



Face Mount Bushing Installation Instructions



Back Mount Bushing Installation Instructions

Installation Dimensions

Face Mount

Shank Dia. (mm)	Face Mount Part Number	Actual O.D. +0.0000 -0.0004	Clearance Drill Diameter E	Bore +0.0005 -0.0000 F	Depth +0.002 -0.000 G	Tap Size & Depth[1] H	Bolt Circle Diameter 3 PL Equally Spaced	Min. Subplate Thickness D
13	**49506**	1.3750	11/16	1.3750	0.469	8-32x5/16	0.984	3/4
16	**49507**	1.4370	13/16	1.4370	0.469	8-32x5/16	1.125	3/4
20	**49501**	1.6873	13/16	1.6873	0.637	10-32x3/8	1.362	1
25	**49502**	2.0623	1	2.0623	0.799	1/4-28x1/2	1.644	1-1/4
30	**49503**	2.2654	1 3/16	2.2654	0.871	1/4-28x3/4	1.876	1-3/8
35	**49504**	2.6873	1 9/16	2.6873	0.904	5/16-24x7/8	2.178	1-1/2
50	**49505**	3.4998	2 5/32	3.4998	1.239	3/8-24x1	2.916	2

[1]Cap Screws Supplied with Face Mount Bushings.

Back Mount

Shank Dia. (mm)	Back Mount Part Number	Actual O.D. +0.0000 -0.0004 A	Depth +0.000 -0.002 B	C-Bore ±0.006 C	Min. Subplate Thickness D
13	**49516**	0.7870	.277	1.000	3/4
16	**49517**	0.8760	.285	1.155	3/4
20	**49511**	1.0950	.345	1.280	7/8
25	**49512**	1.3763	.416	1.593	1
30	**49513**	1.6264	.432	1.906	1-1/4
35	**49514**	1.8764	.493	2.155	1-5/16
50	**49515**	2.6269	.621	2.988	1-3/4

Liner Bushings for Fixture Plates



Locating repeatability will determine if one primary and one secondary or two primary liners are needed. With two primary liners, repeatability of ±0.0005" can be maintained if the two holes for receiver bushings are held to a centerline distance of ±0.0002" tolerance.

Note on Installation of Press Fit Liners & Back Mount Style Receiver Bushings:
To alleviate the possibility of binding the shank in the bore, the maximum interference fit between bore and bushing O.D. should not exceed .0005".

Liner Dimensions

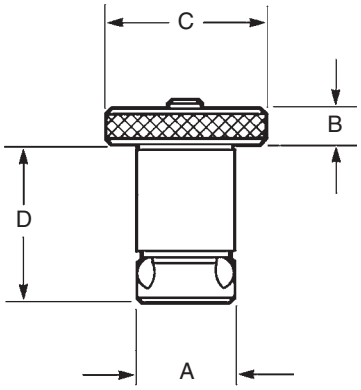
Fixture Plate Thickness ±0.005	Shank Diameter (mm)	Primary Liner Part Number	Secondary Liner Part Number	Liner O.D. +0.0000 -0.0004
.50	13	**49705**	**49805**	0.7518
.75	13	**49706**	**49806**	0.7518
.50	16	**49707**	**49807**	1.0018
.75	16	**49708**	**49808**	1.0018
.75	20	**49701**	**49801**	1.3772
1.00	20	**49702**	**49802**	1.3772
.75	25	**49711**	**49811**	1.3772
1.00	25	**49712**	**49812**	1.3772
.75	30	**49721**	**49821**	1.7523

Fixture Plate Thickness ±0.005	Shank Diameter (mm)	Primary Liner Part Number	Secondary Liner Part Number	Liner O.D. +0.0000 -0.0004
1.00	30	**49722**	**49822**	1.7523
.75	35	**49731**	**49831**	1.7523
1.00	35	**49732**	**49832**	1.7523
1.50	35	**49733**	**49833**	1.7523
2.00	35	**49734**	**49834**	1.7523
.75	50	**49741**	**49841**	2.5025
1.00	50	**49742**	**49842**	2.5025
1.50	50	**49743**	**49843**	2.5025
2.00	50	**49744**	**49844**	2.5025

Stainless Steel Locating and Clamping Shanks



- Material: 17-4 PH Stainless Steel
- Heat Treat: Rc 40-45



Ball Lock® Repair Kits



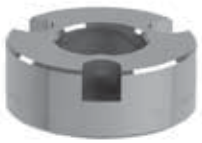
Each Kit Includes:
- Replacement Screw
- Locking Balls
- Drive Ball
- O-Ring

Any Ball Lock® application requires at least two sets of shanks, receiver bushings and liners. The liners are placed into the fixture plate to insure extremely accurate positioning. If more than two shanks are required (to provide additional hold down force), omit the liner bushing so that these additional holes will not interfere with your primary locating holes.

Stainless Steel Locating and Clamping Shank Dimensions

Shank Diameter (mm) A	Fixture Plate Thickness ±0.005	Shank Part Number	Head of Shank		Length Under Head D	Hex Wrench Size for Set Screw	Maximum		Recommended		Shank Repair Kit Part Number
			Height B	Diameter C			Screw Torque (Ft/lb)	Hold-Down Force (lbs)	Screw Torque (Ft/lb)	Hold-Down Force (lbs)	
13	0.50	**49605SS**	0.25	0.87	1.08	3/32	1.2	750	1	625	**49905SS**
—	0.75	**49606SS**	—	—	1.33	—	—	—	—	—	**49906SS**
16	0.50	**49607SS**	0.32	1.50	1.15	1/8	3	1200	2	800	**49907SS**
—	0.75	**49608SS**	—	—	1.40	—	—	—	—	—	**49908SS**
20	0.75	**49601SS**	0.38	1.75	1.53	1/8	4	3000	3	2250	**49901SS**
—	1.00	**49602SS**	—	—	1.78	—	—	—	—	—	**49902SS**
25	0.75	**49611SS**	0.38	2.00	1.70	5/32	9	7000	7	5444	**49911SS**
—	1.00	**49612SS**	—	—	1.95	—	—	—	—	—	**49912SS**
30	0.75	**49621SS**	0.50	2.25	1.88	3/16	15	10000	12	8000	**49921SS**
—	1.00	**49622SS**	—	—	2.13	—	—	—	—	—	**49922SS**
35	0.75	**49631SS**	0.50	2.25	1.97	1/4	25	15500	19	11780	**49931SS**
—	1.00	**49632SS**	—	—	2.22	—	—	—	—	—	**49932SS**
—	1.50	**49633SS**	—	—	2.72	—	—	—	—	—	**49933SS**
—	2.00	**49634SS**	—	—	3.22	—	—	—	—	—	**49934SS**
50	0.75	**49641SS**	0.75	3.00	2.45	3/8	50	20000	38	15200	**49941SS**
—	1.00	**49642SS**	—	—	2.70	—	—	—	—	—	**49942SS**
—	1.50	**49643SS**	—	—	3.20	—	—	—	—	—	**49943SS**
—	2.00	**49644SS**	—	—	3.70	—	—	—	—	—	**49944SS**

Stainless Steel Receiver Bushings



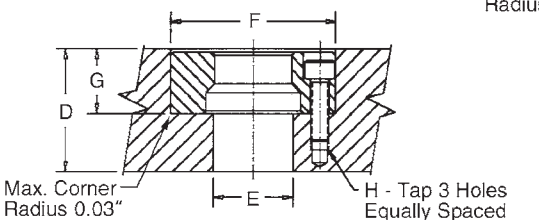
Face Mount



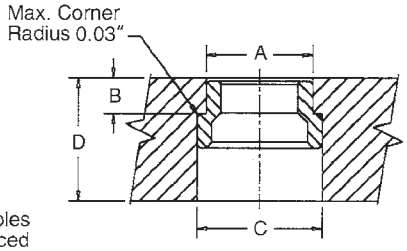
Back Mount

Two styles of receiver bushings are available. Generally, the face mount receiver bushing is utilized in blind hole applications (Slip Fit). The back mount receiver bushing is used in through hole applications (Light Press Fit).

Note: Installed bushings should be approximately .012" below subplate surface.
See reference below for installation of back mount style bushings.



Face Mount Bushing Installation Instructions



Back Mount Bushing Installation Instructions

Installation Dimensions

Face Mount

Shank Dia. (mm)	Face Mount Part Number	Actual O.D. +0.0000 -0.0004	Clearance Drill Diameter E	Bore +0.0005 -0.0000 F	Depth +0.002 -0.000 G	Tap Size & Depth[1] H	Bolt Circle Diameter 3 PL Equally Spaced	Min. Subplate Thickness D
13	**49506SS**	1.3750	11/16	1.3750	0.469	8-32x5/16	0.984	3/4
16	**49507SS**	1.4370	13/16	1.4370	0.469	8-32x5/16	1.125	3/4
20	**49501SS**	1.6873	13/16	1.6873	0.637	10-32x3/8	1.362	1
25	**49502SS**	2.0623	1	2.0623	0.799	1/4-28x1/2	1.644	1-1/4
30	**49503SS**	2.2654	1 3/16	2.2654	0.871	1/4-28x3/4	1.876	1-3/8
35	**49504SS**	2.6873	1 9/16	2.6873	0.904	5/16-24x7/8	2.178	1-1/2
50	**49505SS**	3.4998	2 5/32	3.4998	1.239	3/8-24x1	2.916	2

[1]Cap Screws Supplied with Face Mount Bushings.

Back Mount

Shank Dia. (mm)	Back Mount Part Number	Actual O.D. +0.0000 -0.0004 A	Depth +0.000 -0.002 B	C-Bore ±0.006 C	Min. Subplate Thickness D
13	**49516SS**	0.7870	.277	1.000	3/4
16	**49517SS**	0.8760	.285	1.155	3/4
20	**49511SS**	1.0950	.345	1.280	7/8
25	**49512SS**	1.3763	.416	1.593	1
30	**49513SS**	1.6264	.432	1.906	1-1/4
35	**49514SS**	1.8764	.493	2.155	1-5/16
50	**49515SS**	2.6269	.621	2.988	1-3/4

Stainless Steel Liner Bushings for Fixture Plates



Locating repeatability will determine if one primary and one secondary or two primary liners are needed. With two primary liners, repeatability of ±0.0005" can be maintained if the two holes for receiver bushings are held to a centerline distance of ±0.0002" tolerance.

Note on Installation of Press Fit Liners & Back Mount Style Receiver Bushings:
To alleviate the possibility of binding the shank in the bore, the maximum interference fit between bore and bushing O.D. should not exceed .0005".

Liner Dimensions

Fixture Plate Thickness ±0.005	Shank Diameter (mm)	Primary Liner Part Number	Secondary Liner Part Number	Liner O.D. +0.0000 -0.0004
.50	13	**49705SS**	**49805SS**	0.7518
.75	13	**49706SS**	**49806SS**	0.7518
.50	16	**49707SS**	**49807SS**	1.0018
.75	16	**49708SS**	**49808SS**	1.0018
.75	20	**49701SS**	**49801SS**	1.3772
1.00	20	**49702SS**	**49802SS**	1.3772
.75	25	**49711SS**	**49811SS**	1.3772
1.00	25	**49712SS**	**49812SS**	1.3772
.75	30	**49721SS**	**49821SS**	1.7523

Fixture Plate Thickness ±0.005	Shank Diameter (mm)	Primary Liner Part Number	Secondary Liner Part Number	Liner O.D. +0.0000 -0.0004
1.00	30	**49722SS**	**49822SS**	1.7523
.75	35	**49731SS**	**49831SS**	1.7523
1.00	35	**49732SS**	**49832SS**	1.7523
1.50	35	**49733SS**	**49833SS**	1.7523
2.00	35	**49734SS**	**49834SS**	1.7523
.75	50	**49741SS**	**49841SS**	2.5025
1.00	50	**49742SS**	**49842SS**	2.5025
1.50	50	**49743SS**	**49843SS**	2.5025
2.00	50	**49744SS**	**49844SS**	2.5025

Accessories

Tapered Caps and Plugs

Keep debris out of your subplate's receiver bushings when not in use. Polyethylene caps snap in and out easily.



Packaged 10 per pack.

Receiver Bushing Diameter	Part Number
13	**49201**
16	**49202**
20	**49203**
25	**49204**
30	**49205**
35	**49206**
50	**49207**



Lifting Handles

For easy handling of fixture plates up to 500 lbs.

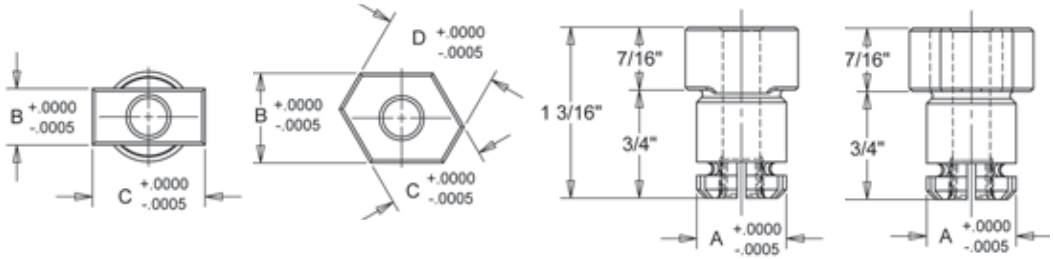
Part Number	Length	Ht.	W	Mounting Distance
33701	4.21	1.42	0.83	3.68

Multi-Slot Sine Fixture Keys



Locate subplates or fixture plates to slotted machine tables without having to slot the plate. Available in inch sizes from 1/2" to 7/8" slots, and in metric sizes from 14mm to 22mm slots.
NOTE: See page 230 for dimensions.

Part Number	Shank Size A	Key Width B	Key Width C	Key Width D	Wt. (lbs)	Recommended Hole Dia.	Previous Part Numbers
39520	0.625	0.4995	0.8745	-	0.09	0.625 Shank Size 0.6255 +/-0.0005	39501, 39507
39521	0.625	0.562	0.7495	-	0.09	0.625 Shank Size 0.6255 +/-0.0005	39502, 39505
39522	0.625	0.6245	0.687	0.812	0.09	0.625 Shank Size 0.6255 +/-0.0005	39503, 39504, 39506
39523	0.75	0.9995	1.062	-	0.19	0.750 Shank Size 0.7505 +/-0.0005	39509, 39510



Fast Acting Ball Lock® Shanks

Ball Lock® Shank Diameter (mm)	Fixture Plate Thickness (in.)	FAST ACTING: Jergens Ball Lock® Shank w/Jergens Thumb Screw — Part Number: Assembly	T-Screw	FAST ACTING: Jergens Ball Lock® Shank Adjustable Handle — Part Number: Assembly	Handle
13	1/2	**49605-S**	43900	N/A	—
—	3/4	**49606-S**	43900	N/A	—
16	1/2	**49607-S**	**43904**	**49607-H**	**34314**
—	3/4	**49608-S**	**43904**	**49608-H**	**34315**
20	3/4	**49601-S**	**43904**	**49601-H**	**34315**
—	1	**49602-S**	**43905**	**49602-H**	**34316**
25	3/4	**49611-S**	**43907**	**49611-H**	**34328**
—	1	**49612-S**	**43908**	**49612-H**	**34329**
30	3/4	**49621-S**	**43910**	**49621-H**	**34334**
—	1	**49622-S**	**43911**	**49622-H**	**34335**
35	3/4	**49631-S**	**43913**	**49631-H**	**34339**
—	1	**49632-S**	**43913**	**49632-H**	**34339**
—	1-1/2	**49633-S**	**43914**	N/A	—
—	2	**49634-S**	**43914**	N/A	—



- Fast acting thumb screws 2 1/2 turns. No tools needed.

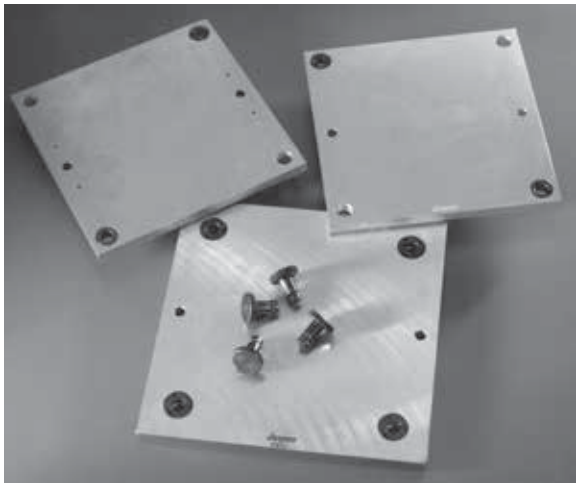
Thumb Screw



- Handle can be moved out of the work area to avoid interference.

Adjustable Handle

Quick Change Kits

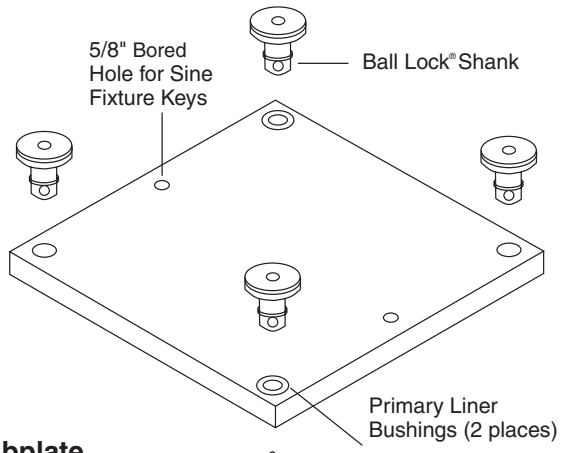


The Jergens Ball Lock® Quick Change Kits speed fixture changeover in all types of manufacturing operations. Each kit includes two aluminum fixture plates with two primary liner bushings installed; one steel subplate with receiver bushings installed, and four 20mm Ball Lock® shanks with working loads of 3000 lbs. each. While one fixture plate is on the machine, the operator can load parts on the other. This minimizes downtime for true set-up reduction. To enable the subplate to be mounted on a slotted table without the need to indicate the subplate, sine fixture keys can be used. The sine fixture key bored holes are oriented parallel to the receiver bushings on the subplate and to the liner bushings on the fixture plate. These also allow the fixture plate to be mounted on a toolroom mill without the need to indicate it. This is extremely useful when machining location points on your fixture.

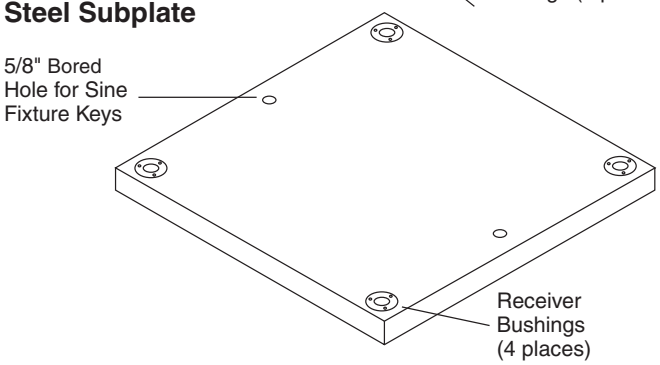
Jergens BALL LOCK MOUNTING SYSTEM

Everything You Need to Change Fixtures in Less Than One Minute

Aluminum Fixture Plate



Steel Subplate



Quick Change Kits

Part No.	Kit Includes
49001	2 - 28713 (14"x14"x3/4") aluminum fixture plates with 20mm liner bushings installed 1 - 49101 (16"x16"x1-1/8") steel subplate with receiver bushings installed 4 - 49601 (20mm) Ball Lock® Shanks
49002	2 - 28715 (16"x16"x3/4") aluminum fixture plates with 20mm liner bushings installed 1 - 49101 (16"x16"x1-1/8") steel subplate with receiver bushings installed 4 - 49601 (20mm) Ball Lock® Shanks
49004	Bridgeport™-Style 2 - 28731 (10"x15"x3/4") aluminum fixture plates with 16mm liner bushings installed 1 - 49121 (10"x15"x3/4") steel subplate with receiver bushings installed 4 - 49608 (16mm) Ball Lock® Shanks

Ball Lock® Selector Guides for Popular Machine Tools



Use these guides to quickly select the correct Ball Lock® Mounting System for your Machine Tool.

To view our Ball Lock® Selector Guides visit our website at www.jergensinc.com/showcase-balllock-selector-guides



We Put It All Together… In Seconds.

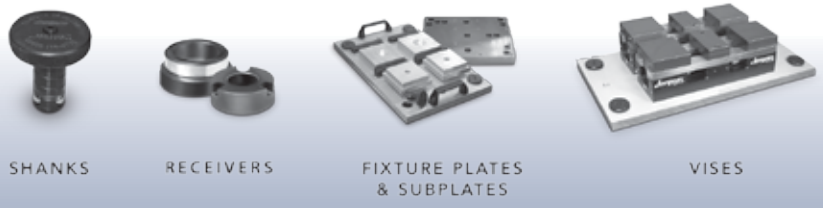
Jergens BALL LOCK® MOUNTING SYSTEM METRIC

Maximize productivity levels and dramatically increase throughput with Ball Lock®.

Looking to realize the full benefits of lean manufacturing? Then you need the one system that puts it all together, so you can put it all together…and that's Ball Lock®.

Ball Lock® is the industry's most popular quick-change, fixturing-flexible mounting system that can be configured to create lean-optimized solutions for your most demanding needs.

The original quick change system for fast set-ups and machine changeover.

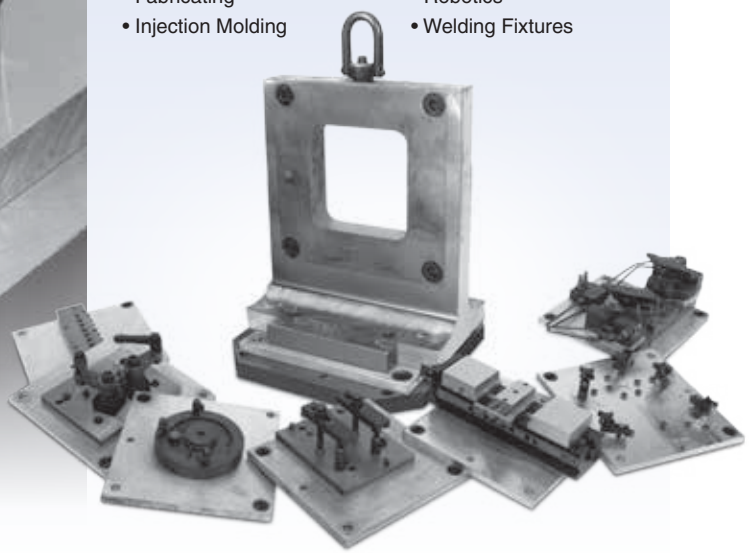


SHANKS | RECEIVERS | FIXTURE PLATES & SUBPLATES | VISES

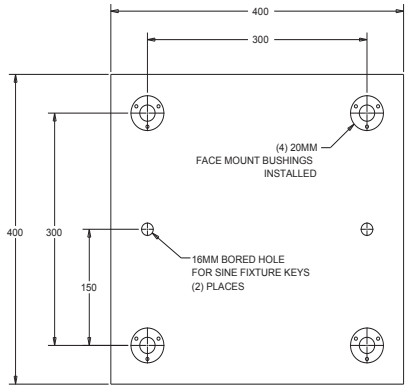


The Ball Lock® Mounting System is used as a Quick Change Solution on the following:

- CNC Machines
- Palletized Fixtures
- Stamping
- Fabricating
- Injection Molding
- Packaging Machines
- Assembly Machines
- EDM
- Robotics
- Welding Fixtures



Pre-Machined Ball Lock® Steel Subplate

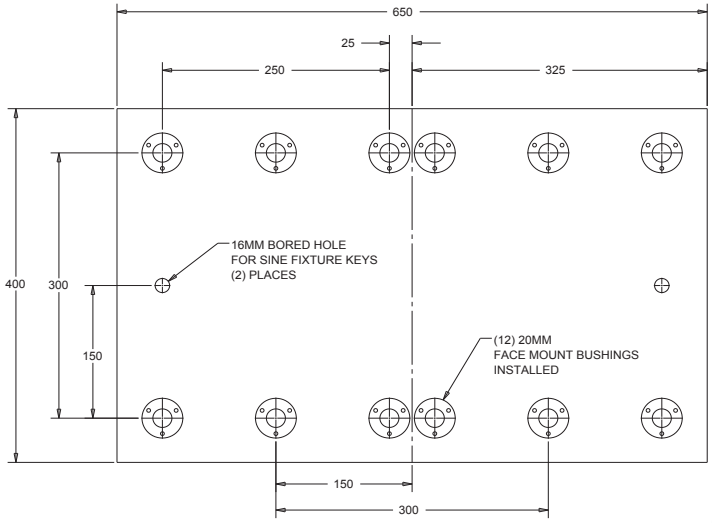


400 x400 Subplate

Part Number	Wt. (Kg)
59101	37

Equipped with four 20mm receiver bushings for use with 350x350 or 400x400 (mm) fixture plates. Ideal for horizontal machining centers or multiple pallet machining centers.

- FreMax™ 15 steel plate or equivalent
- Thickness: 28.57mm ±0.13mm
- Parallel within 0.025mm



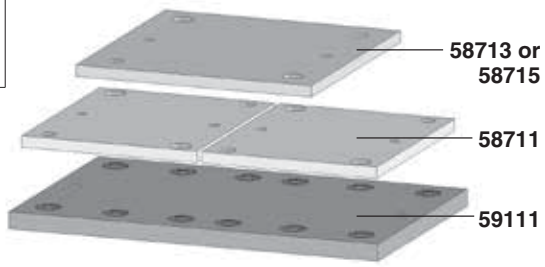
650x400 Dual Station Subplate

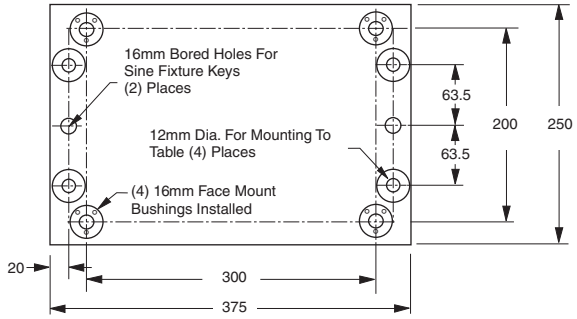
Part Number	Wt. (Kg)
59111	58

Equipped with twelve installed 20mm receiver bushings to easily locate and mount Jergens Standard Fixture Plates.

- Ideal for vertical machining centers
- Thickness: 28.57mm ±0.13mm
- Parallel within 0.025mm

Aluminum Plate Part Number	Steel Plate Part Number	Number of Fixture Plates	Plate Width and Length (mm)
58713	58813	1	350x350
58715	58815	1	400x400
58711	58811	2	300x350





250x375 Bridgeport™ - Style Subplate

Part Number	Wt. (Kg)
59121	15

Equipped with four installed 16mm receiver bushings and 12mm mounting holes. Used with the Bridgeport™ style fixture plates 58731 or 58831.

- Thickness: 19.05mm ±0.13mm
- Parallel within 0.025mm

Ball Lock® Quick Change Kits include all components needed in a single package. See page 43 for details.

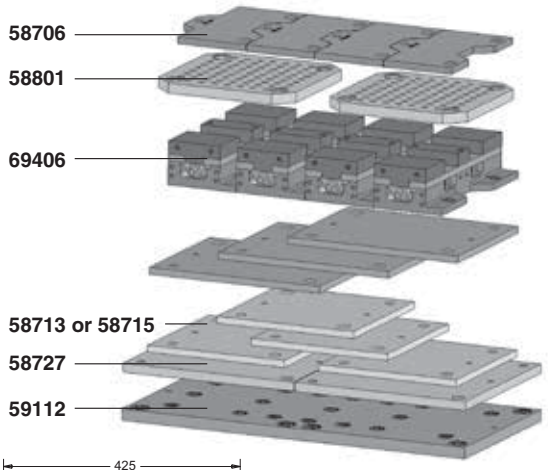
Multi-Purpose Subplates

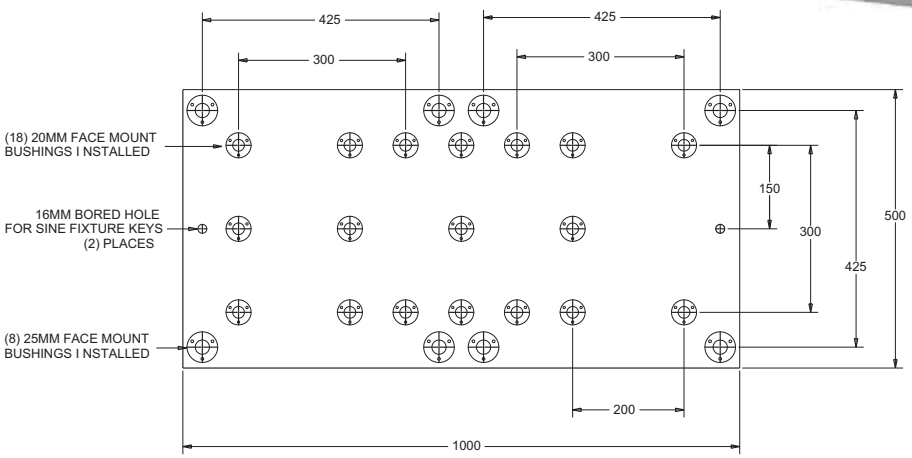
1000x500 Multi-Purpose Subplate

Part Number	Wt. (Kg)
59112	130

The Jergens Multi-Purpose Subplate accommodates a wide variety of fixture plates and vises. This versatility facilitates using the same VMC for diverse products in repetitive runs-long and short batch sizes.

- FreMax™ 15 Steel or Equivalent
- Thickness: 31.75mm ±0.13mm
- Parallel within 0.025mm





Fixture Plate Options for Multi-Purpose Subplates – Aluminum or Steel

Fixture Plate*/Vise Part Number	Thickness of Fixture Plate	Number of Fixture Plates/Vise That Mount on Multi-Purpose Subplate	Receiver Bushing Center Distance	Receiver Bushing Size	Required Ball Lock® Shank Part Number	Number of Shanks Required Per Fixture Plate/Vise
58713 (350 x 350) Fixture Plate	20mm	2	300 x 300	20 mm	**49651**	4
58715 (400 x 400) Fixture Plate	20mm	2	300 x 300	20 mm	**49651**	4
58801 (400 x 400) Modular Grid Plate	30mm**	2	300 x 300	20 mm	**49652**	4
58706 Jigsaw Interlocking Plate	20mm	4	300 x 200	20 mm	**49651**	3
58727 (500 x 500) Fixture Plate	25mm	2	425 x 425	25 mm	**49662**	4
69406 150mm Jigsaw Vise	20mm	4	300 x 200	20 mm	**49651**	3

* See next page for dimensional data on fixture plates. Part numbers shown for aluminum plates, also available in steel.
** Counterbored to 25mm at mounting holes.

Fixture Plates for Use on Multi-Purpose Subplate

350x350x20mm Fixture Plate

Aluminum Plate Part Number	Wt. (Kg)
58713	6

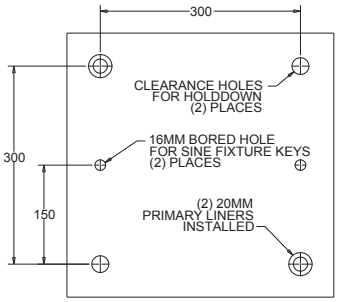
Steel Plate Part Number	Wt. (Kg)
58813	19

400x400 Fixture Plate

Aluminum Plate Part Number	Wt. (Kg)
58715	8

Steel Plate Part Number	Wt. (Kg)
58815	25

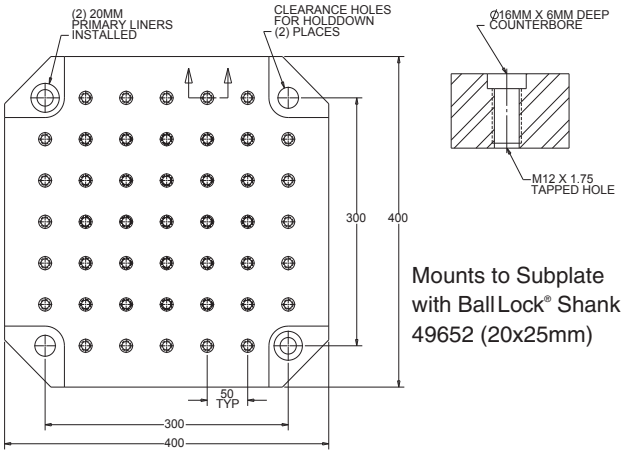
- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 20mm ±0.13mm
- Parallel within 0.025mm Steel
- Mounts to subplates with Ball Lock® Shank 49651 (20x20mm)



400x400 Modular Grid Fixture Plate

Aluminum Plate Part Number	Wt. (Kg)
58801	38

- FreMax™ 15 Steel or equivalent
- Thickness: 28.57mm ±0.13mm
- Parallel within 0.025mm Steel



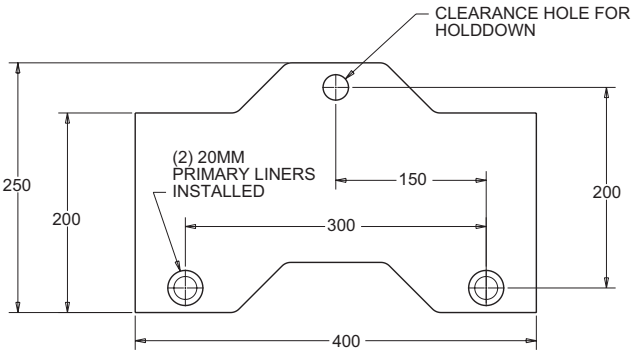
Mounts to Subplate with Ball Lock® Shank 49652 (20x25mm)

Jigsaw Interlocking FixturePlate

Aluminum Plate Part Number	Wt. (Kg)
58706	4

Steel Plate Part Number	Wt. (Kg)
58806	12

- Material: Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 20mm ±0.13mm
- Parallel within 0.025mm Steel
- For use with narrow base 100mm or 150mm vise models
- Design allows close spacing of vises for more parts per run
- Mounts to Subplates using Ball Lock® Shank 44651 (20x20mm)
- Useful for high density fixturing

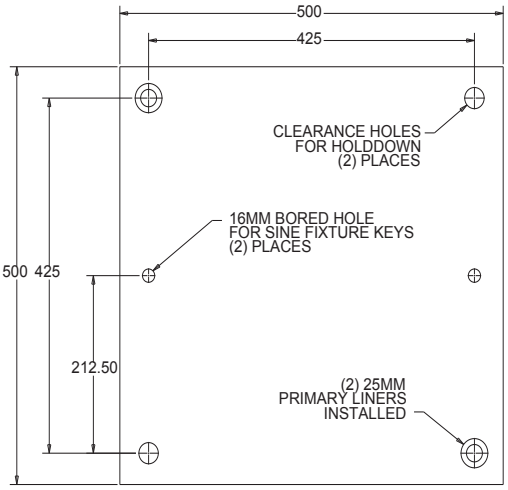


500x500x25mm Fixture Plate

Aluminum Plate Part Number	Wt. (Kg)
58727	17

Steel Plate Part Number	Wt. (Kg)
58827	48

- Cast Aluminum or FreMax™ 15 Steel or equivalent
- Thickness: 25mm ±0.13mm
- Parallel within 0.025mm Steel
- Mounts to Subplates using Ball Lock® Shank 49662 (25x25mm)



Ball Lock® Fixture Plates

- Cast Aluminum; or FreMax™ 15 Steel or equivalent
- Thickness ±0.13mm
- Parallel within .025mm Steel
- 6061–T-651 plates, flat within 0.03mm available upon request

Ball Lock® Fixture Plates with 2 Primary Liners Installed

Part Number				Plate Dimensions (mm)	Plate Thickness ±0.13(mm)	Ball Lock® Shank Size (mm)	Ball Lock® Shank Part Number
Aluminum	Weight (Kgs)	Steel	Weight (Kgs)				
58706	4	**58806**	12	250 x 400	20	20	**49651**
58711	5	**58811**	16	300 x 350	20	20	**49651**
58713	6	**58813**	19	350 x 350	20	20	**49651**
58715	8	**58815**	25	400 x 400	20	20	**49651**
58727	17	**58827**	48	500 x 500	25	25	**49662**
—	—	**58801**	38	400 x 400	28.57	20	**49652**
58731	5	**58831**	15	375 x 250	20	16	**49657**

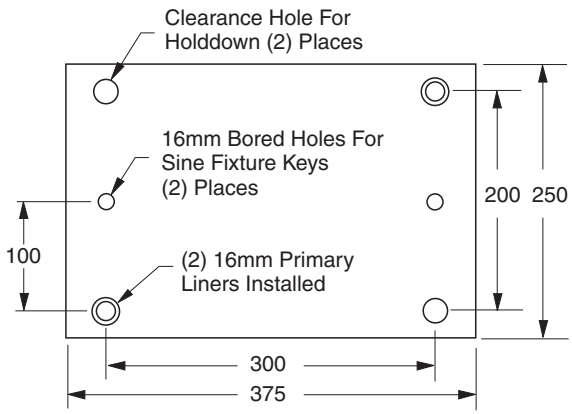
- Machined to close tolerances
- Repeatability ±0.013mm or better
- Reduces fixture set-up and assembly time
- Provided with 16mm bored holes for sine fixture keys
- For horizontal or vertical machining centers, Tool Room Mills machines, or multiple pallet machining centers

Custom Sizes Available
Jergens will make Ball Lock® fixture plates or subplates to your specifications. Call 1-877-426-2504 for further information.

375x250x20mm Fixture Plate Bridgeport™ Style

Aluminum Plate Part Number	Wt. (Kg)
58731	5

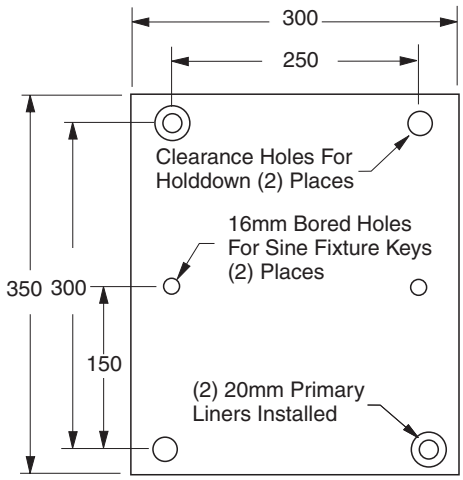
Steel Plate Part Number	Wt. (Kg)
58831	15



300x350x20mm Fixture Plate

Aluminum Plate Part Number	Wt. (Kg)
58711	5

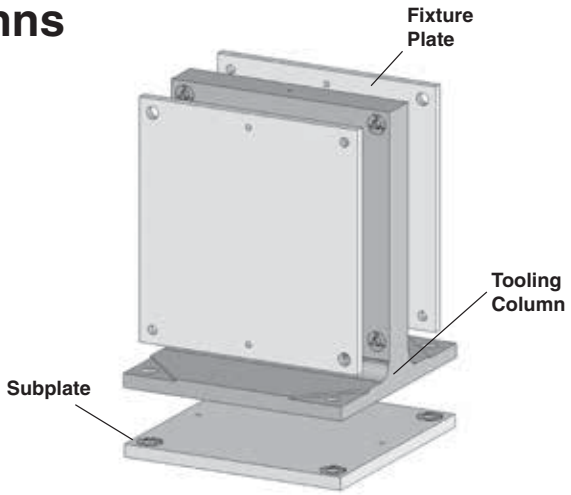
Steel Plate Part Number	Wt. (Kg)
58811	16



Pre-Machined Ball Lock® T-Columns

- Class 40 Cast Iron
- Also available in Aluminum
- Ball Lock® Receiver Bushings and Liners installed
- Provides accurate fixturing base for CNC machining centers
- Perpendicularity is 0.025 mm per 250 mm

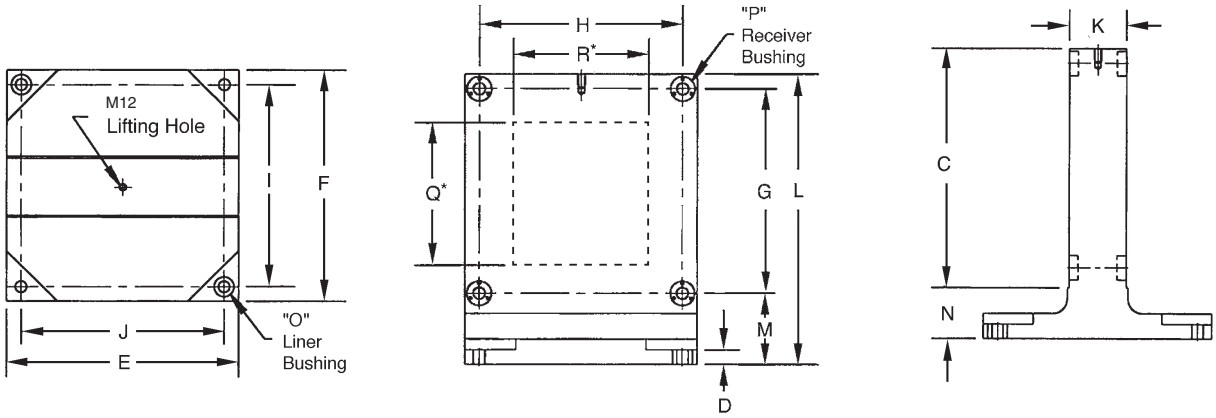
Custom Sizes Available with or without Ball Lock®
We are able to quote you on your special requirement with or without the Ball Lock® Mounting System.
Call 1-877-426-2504 for design specification information.



Cast Iron T-Columns With Ball Lock® Receiver Bushings Installed

See page 35 for Metric Fixture Plates and Subplates

Pallet Size (mm)	Part Number	C	D	E	F	G	H	I	J	K	L	M	N	O (mm)	P (mm)	Wt. (Kg)
400	**69151**	410	25	400	400	350	350	350	350	100	500	125	90	20	20	190
500	**69161**	560	25	500	500	475	425	425	425	120	650	137.5	90	25	25	310
630	**69171**	660	40	630	630	575	550	525	525	100	750	137.5	90	35	25	500



***Note**: Window sections are also available on T-Columns. Specify window size and location (Q and R Dimensions).

Corresponding Fixture Plates, Subplates and Ball Lock® Shanks

Pallet Size (mm)	T-Column Part Number	Aluminum Fixture Plate Part Number	Steel Fixture Plate Part Number	Fixture Plate Size	Fixture Plate Ball Lock® Shank Part Number	Shank Size	Subplate Part Number	Subplate Ball Lock® Shank Part Number	Shank Size
400	**69151**	**58717**	**58817**	400 x 400	**49651**	20 x 20	**59102**	**49652**	20 x 25
500	**69161**	**58745**	**58845**	500 x 550	**49662**	25 x 25	**59103**	**49662**	25 x 25
630	**69171**	**58746**	**58846**	625 x 650	**49662**	25 x 25	**59104**	**49683**	35 x 40

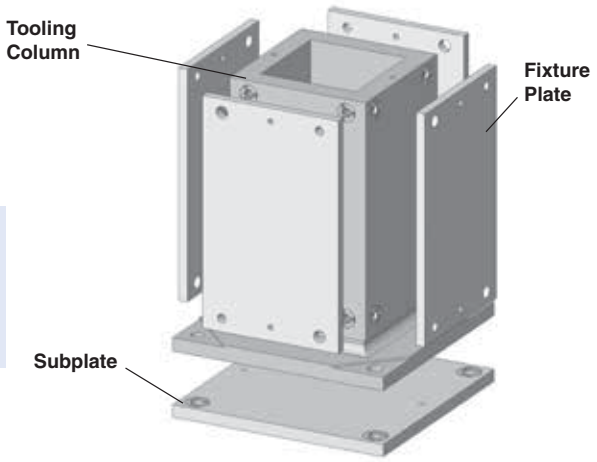
Use Hoist Ring **23462,** see page 529 for lifting and handling – Order separately.

Engineering Changes
Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change after publishing. Contact Jergens Technical Sales Department to verify any dimensions or specifications.

Pre-Machined Ball Lock® 4-Sided Tooling Columns

- Class 40 cast iron
- Also available in Aluminum
- Ball Lock® Receiver Bushings and Liner Bushings installed
- Provides accurate fixturing base for CNC machining centers
- Perpendicularity is 0.025 mm per 250 mm

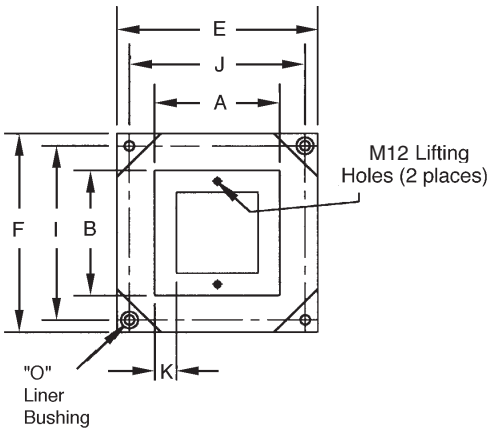
Custom Sizes Available with or without Ball Lock®
We are able to quote you on your special requirement with or without the Ball Lock® Mounting System.
Call 1-877-426-2504 for design specification information.

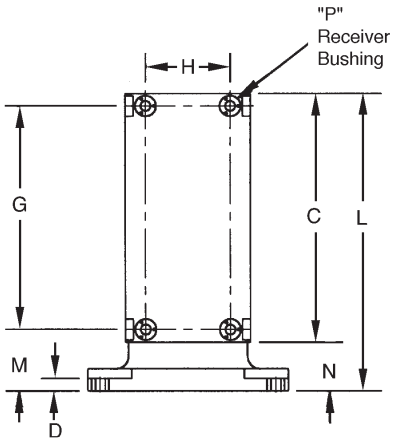


Cast Iron 4-Sided Tooling Columns With Ball Lock® Receiver Bushings Installed

See page 33 for Metric Fixture and Subplates

Pallet Size (mm)	Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O (mm)	P (mm)	Wt. (Kg)
400	**69051**	250	250	505	25	400	400	450	150	350	350	40	600	125	95	20	20	225
500	**69061**	300	300	630	25	500	500	550	175	425	425	40	725	137.5	95	25	25	320
630	**69071**	400	400	655	40	630	630	575	275	525	525	45	750	137.5	95	35	25	495





Corresponding Fixture Plates, Subplates and Ball Lock® Shanks

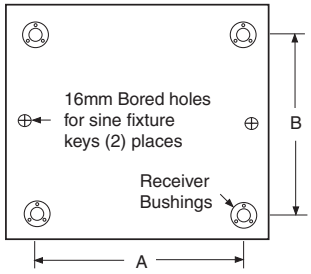
Pallet Size (mm)	T-Column Part Number	Aluminum Fixture Plate Part Number	Steel Fixture Plate Part Number	Fixture Plate Size	Fixture Plate Ball Lock® Shank Part Number	Shank Size	Subplate Part Number	Subplate Ball Lock® Shank Part Number	Shank Size
400	**69051**	**58741**	**58841**	250 x 500	**49651**	20 x 20	**59102**	**49652**	20 x 25
500	**69061**	**58742**	**58842**	300 x 625	**49662**	25 x 25	**59103**	**49662**	25 x 25
630	**69071**	**58743**	**58843**	400 x 650	**49662**	25 x 25	**59104**	**49683**	35 x 40

Use Hoist Ring **23462,** see page 529 for lifting and handling – Order separately.

Engineering Changes

Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change after publishing. Contact Jergens Technical Sales Department to verify any dimensions or specifications.

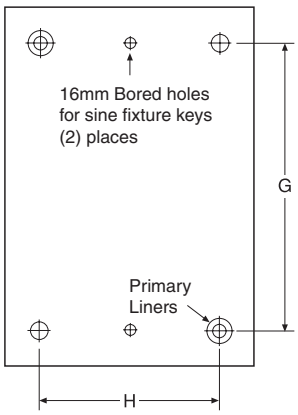
Subplates for Tooling Columns and Fixture Plates



Standard Steel Subplates for Tooling Columns

Subplate Mounting holes can be provided per customer specification.
Supplied with Ball Lock® Receiver Bushings installed.

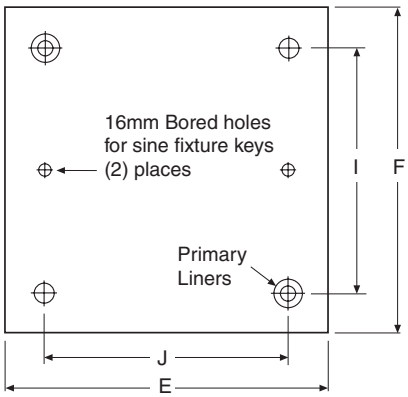
Part Number	Pallet Size (mm)	For Tooling Columns	Ball Lock® Pattern A (mm)	Ball Lock® Pattern B (mm)	Receiver Size (mm)	Thickness of Subplate (mm) ±0.13	Wt (Kgs)
59102	400	**69151, 69051**	350	350	20	28.57	31
59103	500	**69161, 69061**	425	425	25	31.75	59
59103-C	500	**69151, 69051**	350/425	350/425	20/25	31.75	59
—	—	**69161, 69061**	Dual	Dual	Dual	—	—
59104	630	**69171, 69071**	525	525	35	34.92	124



Fixture Plates for Standard Tooling Columns and T-Columns

Supplied with 2 primary Ball Lock® Liner Bushings installed.

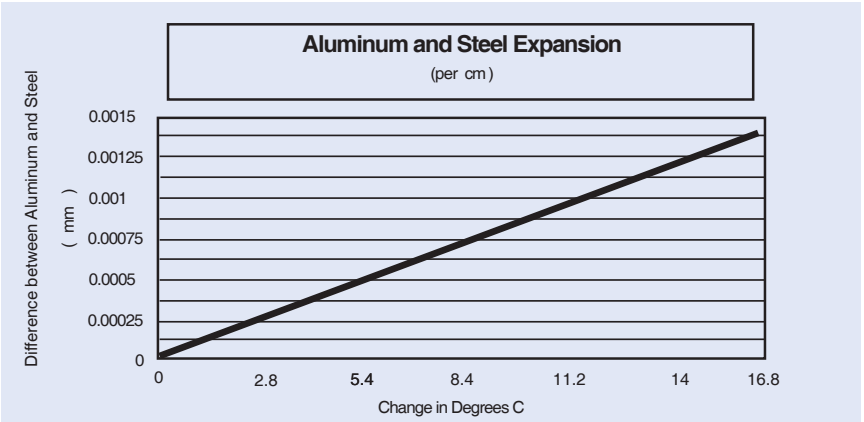
Pallet Size (mm)	Part Number Aluminum	(Kg)	Steel	(Kg)	For Tooling Columns	Type	Fixture Plate Size (mm)	Fixture Plate Thickness (mm) ±0.13	Ball Lock® Pattern H (mm)	Ball Lock® Pattern G (mm)	Liner Size (mm)
400	**58741**	7	**58841**	19	**69051**	4-S	250x500	20	150	450	20
500	**58742**	13	**58842**	36	**69061**	4-S	300x625	25	175	550	25
630	**58743**	18	**58843**	50	**69071**	4-S	400x650	25	275	575	25
400	**58717**	8	**58817**	25	**69151**	T	400x400	20	350	350	20
500	**58745**	19	**58845**	53	**69161**	T	500x550	25	425	475	25
630	**58746**	27	**58846**	63	**69171**	T	625x650	25	550	575	25



Fixture Plates for Tooling Column Subplates

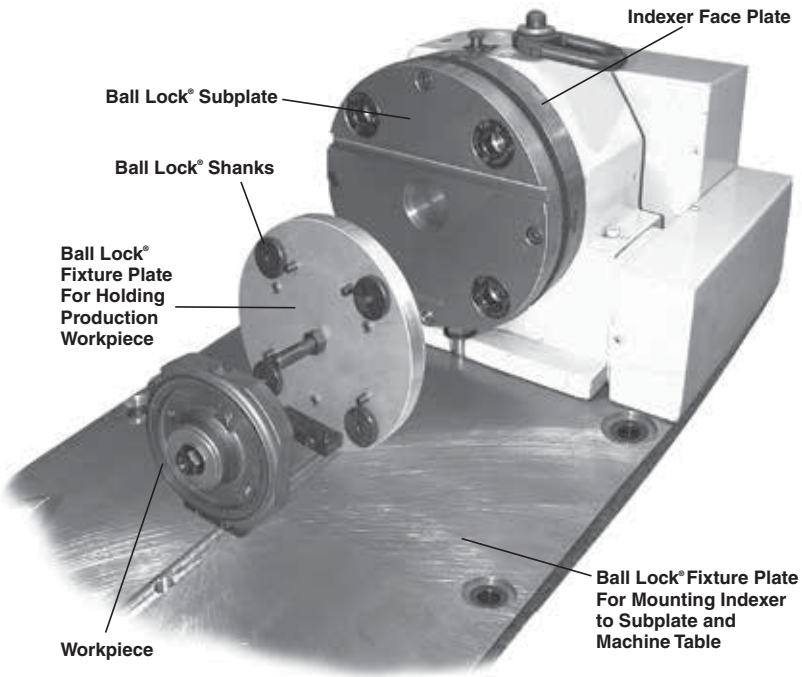
Supplied with 2 primary Ball Lock® Liner Bushings installed.

Pallet Size (mm)	Part Number Aluminum	(Kg)	Steel	(Kg)	For Subplate	Plate Dim. E (mm)	Plate Dim. F (mm)	Fixture Plate Thickness ±0.13 (mm)	Ball Lock® Pattern I (mm)	Ball Lock® Pattern J (mm)	Liner Size (mm)
400	**58717**	8	**58817**	25	**59102**	400	400	20	350	350	20
500	**58727**	17	**58827**	48	**59103**	500	500	25	425	425	25
630	**58732**	27	**58832**	76	**59104**	630	630	25	525	525	35



NOTE: Aluminum and steel expand at different rates. Please take this information into consideration when creating your own Ball Lock® fixture and subplates.

Ball Lock® For 4th Axis Rotary Indexers



Problem:
Rotary indexers increase the versatility of vertical machining centers, yet they offer one major challenge: set-up is so time-consuming that it may limit a machine's flexibility. In many cases, machinists dedicate their 4th Axis tool to a single machine to avoid the agony of an extended set-up and changeover.

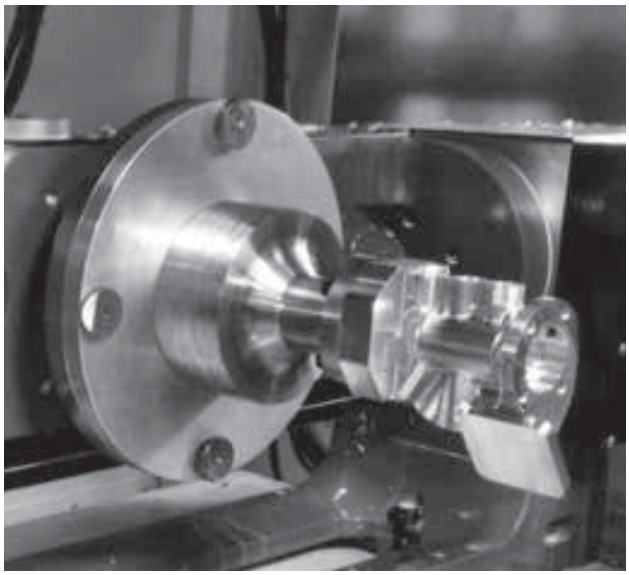
Benefits:
- Maximize indexer utilization
- Eliminate lengthy set-ups
- Accurate fixture plate changover in seconds

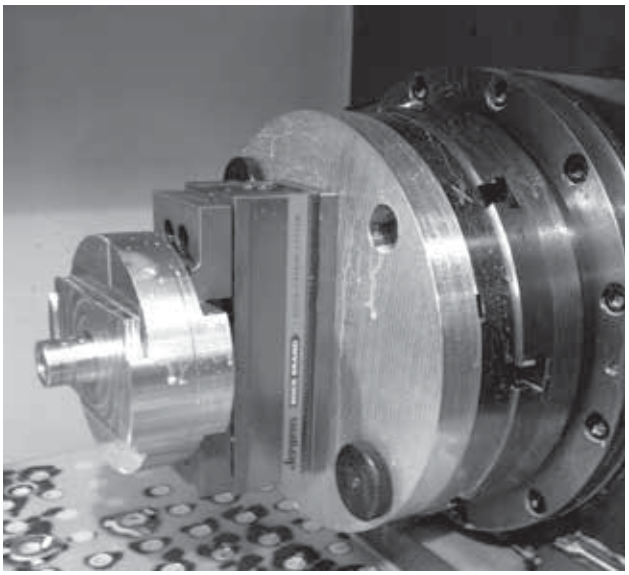
Jergens' Solution:
Ball Lock® Mounting System for Indexers provides a double solution.

First, Ball Lock® mounting plates free up your machine for additional work by allowing a fast and accurate installation and removal of the complete indexer. Avoid hours of set up. The Ball Lock® System does it in minutes, with repeatability at ±0.0005" (±0.013mm). Low profile, positive clamping, proven in over many years of field use.

Second, the Ball Lock® System provides your fixture plate changeover. By mounting the round subplate to the indexer faceplate, you'll "plug-in" new fixtures in record time (less than 60 seconds).

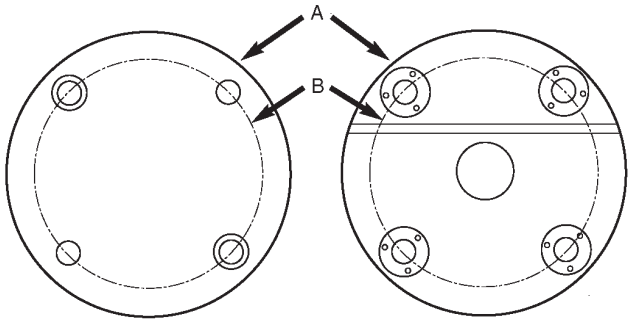
Subplates and fixture plates come with bushings pre-installed.





Round Ball Lock® Fixture Plates and Subplates

Standard Round



Fixture Plate Subplate

Cast Aluminum, FreeMax™ or Steel equivalent

Fixture Plate (mm)

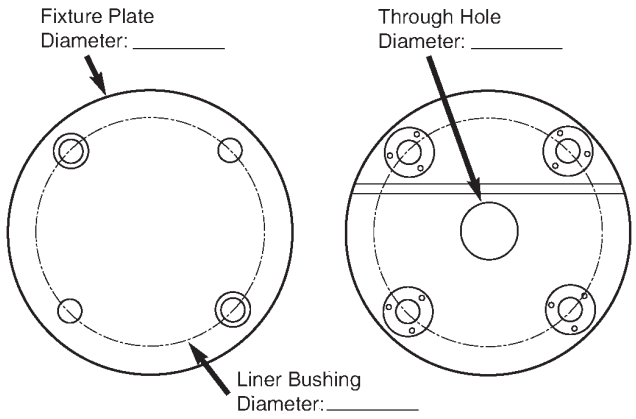
Part No.	A	B	Thickness	Ball Lock® Liner	Ball Lock® Shank	Weight (Kgs)
58707	200	150	20	16	49657	1.6
58708	250	200	25	20	49652	3.2
58709	300	250	25	20	49652	5.0

Subplate(mm)

Part No.	A	B	Thickness	Ball Lock® Receiver	Center Hole	Weight (Kgs)
59107	200	150	20	16	25	5.0
59108	250	200	25	20	50	9.6
59109	300	250	25	20	50	15.0

Note: Equivalent system available in inch dimensions.

Custom Round Plates



- Cast Aluminum or FreeMax™ is steel or equivalent
- Thickness ± 0.13"
- Paralell within 0.025" Steel

Indexer:

Make: _____

Model: _____

Diameter: _____

Light Duty or Heavy Duty: _____

Through Hole Bore: _____

CNC Machine:

Make: _____

Model: _____

Weight Capacity: _____

Indexer Faceplate:

T-Slot Size: _____

Configuration/Orientation: _____

or

Drilled Tapped Hole Size:

Configuration/Orientation: _____

Engineering Changes

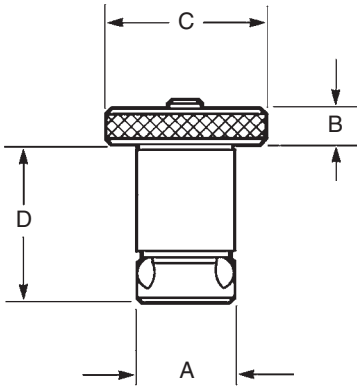
Product improvement is a continuing process at Jergens. Specifications and engineering data are subject to change without notice. If current information is critical to your design, it is suggested that you contact Jergens Technical Sales Department to verify any dimensions or specifications.

Locating and Clamping Shanks



U.S. Patents: 3,498,653
4,135,418

- Material: Shank/Bushing, AISI 4340
  Liner, 52100
- Finish: Black Oxide
- Heat Treat: Shanks, RC 40-45
  Bushings, RC 50-54
  Liners, RC 62-64
- Operating Temperature Range: -30°C to 200°C
- Stainless Steel available. See Page 40-41.



Repair Kits



Each Kit Includes:
- Replacement Screw
- Locking Balls
- Drive Ball
- O-Ring

Any Ball Lock® application requires at least two sets of shanks, receiver bushings and liners. The liners are placed into the fixture plate to insure extremely accurate positioning. If more than two shanks are required (to provide additional hold down force), omit the liner bushing so that these additional holes will not interfere with your primary locating holes.

See page 42 for Fast Acting Shanks.

Locating and Clamping Shank Dimensions

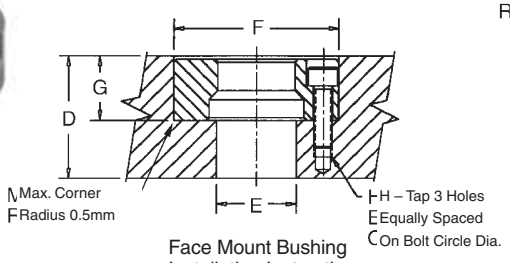
Shank Diameter (mm) A	Fixture Plate Thickness ±0.13mm	Shank Part Number	Head of Shank Height B	Head of Shank Diameter C	D	Hex Wrench Size For Set Screw	Maximum Screw Torque (N.m)	Maximum Holddown Force (KN)	Recommended Screw Torque (N.m)	Recommended Holddown Force (KN)	Shank Repair Kit Part Number
13	13	**49655**	6	22	27.6	2.5	1.2	3.3	1	2.7	**49955**
—	20	**49656**	—	—	34.6	—	—	—	—	—	**49956**
16	20	**49657**	8	32	36.5	3	4.5	5.3	3	3.5	**49957**
—	25	**49658**	—	—	41.5	—	—	—	—	—	**49958**
20	20	**49651**	10	40	39.5	3	5.3	13.3	4	10	**49951**
—	25	**49652**	—	—	44.5	—	—	—	—	—	**49952**
25	20	**49661**	10	45	44.0	4	11	30	9	23	**49961**
—	25	**49662**	—	—	49.0	—	—	—	—	—	**49962**
30	20	**49671**	13	50	49.0	5	18	44	15	35	**49971**
—	25	**49672**	—	—	54.0	—	—	—	—	—	**49972**
35	20	**49681**	13	60	51.0	6	33	68	25	52	**49981**
—	25	**49682**	—	—	56.0	—	—	—	—	—	**49982**
—	40	**49683**	—	—	71.0	—	—	—	—	—	**49983**
—	50	**49684**	—	—	81.0	—	—	—	—	—	**49984**
50	20	**49691**	20	75	64.0	10	65	88	50	67	**49991**
—	25	**49692**	—	—	69.0	—	—	—	—	—	**49992**
—	40	**49693**	—	—	84.0	—	—	—	—	—	**49993**
—	50	**49694**	—	—	94.0	—	—	—	—	—	**49994**

Receiver Bushings

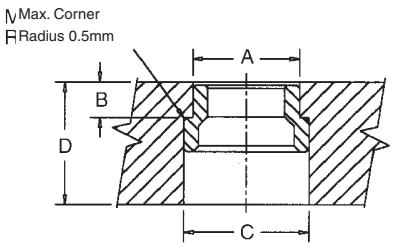
Two styles of receiver bushings are available. Installed bushings should be approximately 0.3mm below subplate surface.



Face Mount



Face Mount Bushing Installation Instructions



Back Mount Bushing Installation Instructions



Back Mount

Generally, the face mount receiver bushing is utilized in blind hole applications (Slip Fit).

The back mount receiver bushing is used in through hole applications (Light Press Fit).

Installation Dimensions

Face Mount

Shank Dia. (mm)	Face Mount Part Number	Actual O.D. -0.01 -0.02	Clearance Drill Diameter E	Bore +0.010 +0.003 F	Depth +0.025 -0.025 G	Tap Size & Depth[1] H	Bolt Circle Diameter 3 PL Equally Spaced	Min. Subplate Thickness D
13	**49556**	35	13.5	35	11.91	M4x0.7 x 7	25	20
16	**49557**	37	21.0	37	11.91	M4x0.7 x 7	29	20
20	**49551**	45	21.0	45	16.21	M5x0.8 x 9	35	25
25	**49552**	55	25.5	55	20.32	M6x1.0 x 10	42	30
30	**49553**	60	30.5	60	22.15	M6x1.0 x 11	48	35
35	**49554**	70	40.0	70	22.99	M8x1.25 x 17	56	40
50	**49555**	92	55.0	92	31.50	M10x1.5 x 18	75	50

[1]Cap Screws Supplied with Face Mount Bushings.

Back Mount

Shank Dia. (mm)	Back Mount Part Number	Actual O.D. +0.04 +0.03 A	Depth +0.025 -0.025 B	C-Bore ±0.15 C	Min. Subplate Thickness D
13	**49566**	20	6.92	26	20
16	**49567**	22	7.24	29	20
20	**49561**	28	8.74	33	25
25	**49562**	35	10.54	41	25
30	**49563**	42	10.95	49	30
35	**49564**	48	12.50	55	35
50	**49565**	67	15.75	76	45

Liner Bushings for Fixture Plates



Locating repeatability will determine if one primary and one secondary or two primary liners are needed. With two primary liners, repeatability of ±0.013 mm can be maintained if the two holes for receiver bushings are held to a centerline distance of ±0.005 mm tolerance.

Note on Installation of Press Fit Liners & Back Mount Style Receiver Bushings: To alleviate the possibility of binding the shank in the bore, the maximum interference fit between bore and bushing O.D. should not exceed 0.013 mm.

Liner Dimensions

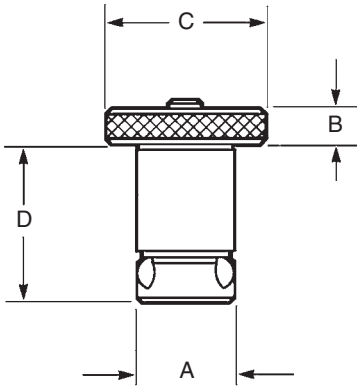
Shank Diameter (mm)	Fixture Plate Thickness +0.13 - 0.13	Primary Liner		Secondary Liner		Liner O.D. +0.00 - 0.01
		Part Number	I.D.	Part Number	I.D.	
13	13	**49755**	13.01	**49855**	13.04	19.040
—	20	**49756**	—	**49856**	—	19.040
16	20	**49757**	16.01	**49857**	16.04	25.042
—	25	**49758**	—	**49858**	—	25.042
20	20	**49751**	20.01	**49851**	20.04	35.042
—	25	**49752**	—	**49852**	—	35.042
25	20	**49761**	25.01	**49861**	25.04	35.042
—	25	**49762**	—	**49862**	—	35.042
30	20	**49771**	30.01	**49871**	30.04	45.042
—	25	**49772**	—	**49872**		45.042
35	20	**49781**	35.01	**49881**	35.04	45.042
—	25	**49782**	—	**49882**	—	45.042
—	40	**49783**	—	**49883**	—	45.042
—	50	**49784**	—	**49884**	—	45.042
50	20	**49791**	50.01	**49891**	50.04	63.546
—	25	**49792**	—	**49892**	—	63.546
—	40	**49793**	—	**49893**	—	63.546
—	50	**49794**	—	**49894**	—	63.546

Stainless Steel Locating and Clamping Shanks



U.S. Patents: 3,498,653
4,135,418

- Material: 17-4 PH Stainless Steel
- Heat Treat: Rc 40-45
- Operating Temperature Range: -30°C to 200°C



Replacement Kits



Each Kit Includes:
- Replacement Screw
- Locking Balls
- Drive Ball
- O-Ring

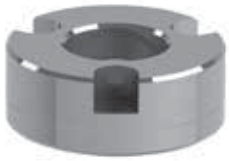
Any Ball Lock® application requires at least two sets of shanks, receiver bushings and liners. The liners are placed into the fixture plate to insure extremely accurate positioning. If more than two shanks are required (to provide additional hold down force), omit the liner bushing so that these additional holes will not interfere with your primary locating holes.

Stainless Steel Locating and Clamping Shank Dimensions

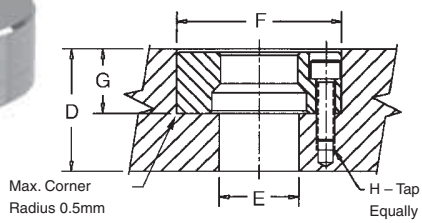
Shank Diameter (mm) A	Fixture Plate Thickness ±0.13mm	Shank Part Number	Head of Shank		D	Hex Wrench Size For Set Screw	Maximum		Recommended		Shank Repair Kit Part Number
			Height B	Diameter C			Screw Torque (N.m)	Holddown Force (KN)	Screw Torque (N.m)	Holddown Force (KN)	
13	13	**49655SS**	6	22	27.6	2.5	1.2	3.3	1	2.7	**49955SS**
—	20	**49656SS**	—	—	34.6	—	—	—	—	—	**49956SS**
16	20	**49657SS**	8	32	36.5	3	4.5	5.3	3	3.5	**49957SS**
—	25	**49658SS**	—	—	41.5	—	—	—	—	—	**49958SS**
20	20	**49651SS**	10	40	39.5	3	5.3	13.3	4	10	**49951SS**
—	25	**49652SS**	—	—	44.5	—	—	—	—	—	**49952SS**
25	20	**49661SS**	10	45	44.0	4	11	30	9	23	**49961SS**
—	25	**49662SS**	—	—	49.0	—	—	—	—	—	**49962SS**
30	20	**49671SS**	13	50	49.0	5	18	44	15	35	**49971SS**
—	25	**49672SS**	—	—	54.0	—	—	—	—	—	**49972SS**
35	20	**49681SS**	13	60	51.0	6	33	68	25	52	**49981SS**
—	25	**49682SS**	—	—	56.0	—	—	—	—	—	**49982SS**
—	40	**49683SS**	—	—	71.0	—	—	—	—	—	**49983SS**
—	50	**49684SS**	—	—	81.0	—	—	—	—	—	**49984SS**
50	20	**49691SS**	20	75	64.0	10	65	88	50	67	**49991SS**
—	25	**49692SS**	—	—	69.0	—	—	—	—	—	**49992SS**
—	40	**49693SS**	—	—	84.0	—	—	—	—	—	**49993SS**
—	50	**49694SS**	—	—	94.0	—	—	—	—	—	**49994SS**

Stainless Steel Receiver Bushings

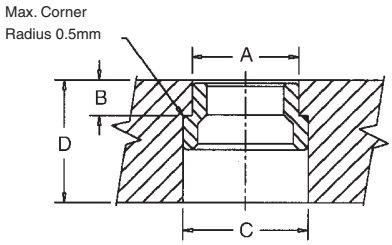
Two styles of receiver bushings are available. Installed bushings should be approximately 0.3mm below subplate surface.



Face Mount



Face Mount Bushing
Installation Instructions



Back Mount Bushing
Installation Instructions



Back Mount

Generally, the face mount receiver bushing is utilized in blind hole applications (Slip Fit).

The back mount receiver bushing is used in through hole applications (Light Press Fit).

Installation Dimensions

Face Mount

Shank Dia. (mm)	Face Mount Part Number	Actual O.D. -0.01 -0.02	Clearance Drill Diameter E	Bore +0.010 +0.003 F	Depth +0.025 -0.025 G	Tap Size & Depth[1] H	Bolt Circle Diameter 3 PL Equally Spaced	Min. Subplate Thickness D
13	**49556SS**	35	13.5	35	11.91	M4x0.7 x 7	25	20
16	**49557SS**	37	21.0	37	11.91	M4x0.7 x 7	29	20
20	**49551SS**	45	21.0	45	16.21	M5x0.8 x 9	35	25
25	**49552SS**	55	25.5	55	20.32	M6x1.0 x 10	42	30
30	**49553SS**	60	30.5	60	22.15	M6x1.0 x 11	48	35
35	**49554SS**	70	40.0	70	22.99	M8x1.25 x 17	56	40
50	**49555SS**	92	55.0	92	31.50	M10x1.5 x 18	75	50

Back Mount

Shank Dia. (mm)	Back Mount Part Number	Actual O.D. +0.04 +0.03 A	Depth +0.025 -0.025 B	C-Bore ±0.15 C	Min. Subplate Thickness D
13	**49566SS**	20	6.92	26	20
16	**49567SS**	22	7.24	29	20
20	**49561SS**	28	8.74	33	25
25	**49562SS**	35	10.54	41	25
30	**49563SS**	42	10.95	49	30
35	**49564SS**	48	12.50	55	35
50	**49565SS**	67	15.75	76	45

[1]Cap Screws Supplied with Face Mount Bushings.

Stainless Steel Liner Bushings for Fixture Plates



Locating repeatability will determine if one primary and one secondary or two primary liners are needed. With two primary liners, repeatability of ±0.013 mm can be maintained if the two holes for receiver bushings are held to a centerline distance of ±0.005 mm tolerance.

Note on Installation of Press Fit Liners & Back Mount Style Receiver Bushings:
To alleviate the possibility of binding the shank in the bore, the maximum interference fit between bore and bushing O.D. should not exceed 0.013 mm.

Liner Dimensions

Shank Diameter (mm)	Fixture Plate Thickness +0.13 - 0.13	Primary Liner		Secondary Liner		Liner O.D. +0.00 - 0.01
		Part Number	I.D.	Part Number	I.D.	
13	13	**49755SS**	13.01	**49855SS**	13.04	19.040
—	20	**49756SS**	—	**49856SS**	—	19.040
16	20	**49757SS**	16.01	**49857SS**	16.04	25.042
—	25	**49758SS**	—	**49858SS**	—	25.042
20	20	**49751SS**	20.01	**49851SS**	20.04	35.042
—	25	**49752SS**	—	**49852SS**	—	35.042
25	20	**49761SS**	25.01	**49861SS**	25.04	35.042
—	25	**49762SS**	—	**49862SS**	—	35.042
30	20	**49771SS**	30.01	**49871SS**	30.04	45.042
—	25	**49772SS**	—	**49872SS**		45.042
35	20	**49781SS**	35.01	**49881SS**	35.04	45.042
—	25	**49782SS**	—	**49882SS**	—	45.042
—	40	**49783SS**	—	**49883SS**	—	45.042
—	50	**49784SS**	—	**49884SS**	—	45.042
50	20	**49791SS**	50.01	**49891SS**	50.04	63.546
—	25	**49792SS**	—	**49892SS**	—	63.546
—	40	**49793SS**	—	**49893SS**	—	63.546
—	50	**49794SS**	—	**49894SS**	—	63.546

Accessories

Tapered Caps and Plugs

Keep debris out of your subplate's receiver bushings when not in use. Polyethylene caps snap in and out easily.



Packaged 10 per pack.

Receiver Bushing Diameter	Part Number
13	49201
16	49202
20	49203
25	49204
30	49205
35	49206
50	49207



Lifting Handles

For easy handling of fixture plates up to 500 lbs.

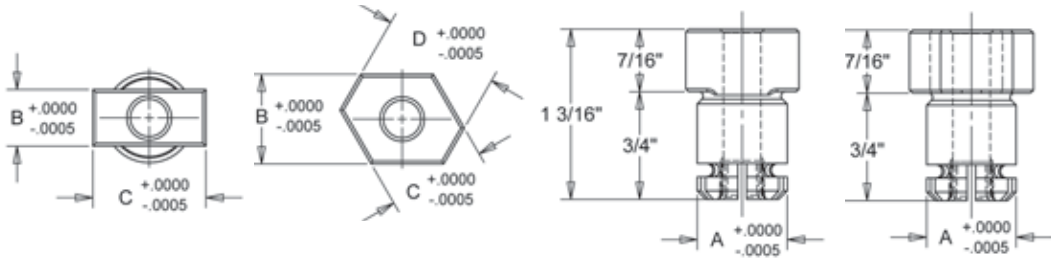
Part Number	Length	Ht.	W	Mounting Distance
33701	107mm	36mm	.38 Kg	93.47mm

Multi-Slot Sine Fixture Keys



Locate subplates or fixture plates to slotted machine tables without having to slot the plate. Available in sizes from 12mm to 32mm slots.

Part Number	Shank Size A	Key Width B	Key Width C	Key Width D	Wt. (lbs)	Recommended Hole Dia.	Previous Part Numbers
39525	16	10	20	-	0.04	16mm Shank Size 16.01 +/-0.01	39550, 39555
39526	16	12	22	-	0.04	16mm Shank Size 16.01 +/-0.01	39551, 39556
39527	16	14	16	18	0.04	16mm Shank Size 16.01 +/-0.01	39552, 39553, 39554
39528	20	24	28	32	0.09	20mm Shank Size 20.01 +/-0.01	39557, 39558, 39559



Fast Acting Ball Lock® Shanks

Ball Lock® Shank Diameter (mm)	Fixture Plate Thickness (mm)	FAST ACTING BALL LOCK® SHANKS			
		Shank with Thumb Screw		Shank with Adjustable Handle	
		Part Number		Part Number	
		Assenbly	T-Screw	Assenbly	Handle
13	13	49655-S	43971	49655-H	34360
—	20	49656-S	43972	49656-H	34361
16	20	49657-S	43974	49657-H	34365
—	25	49658-S	43975	49658-H	34365
20	20	49651-S	43974	49651-H	34365
—	25	49652-S	43975	49652-H	34365
25	20	49661-S	43977	49661-H	34378
—	25	49662-S	43978	49662-H	34379
30	20	49671-S	43980	49671-H	34385
—	25	49672-S	43980	49672-H	34385
35	20	49681-S	43985	49681-H	34393
—	25	49682-S	43985	49682-H	34393



Thumb Screw

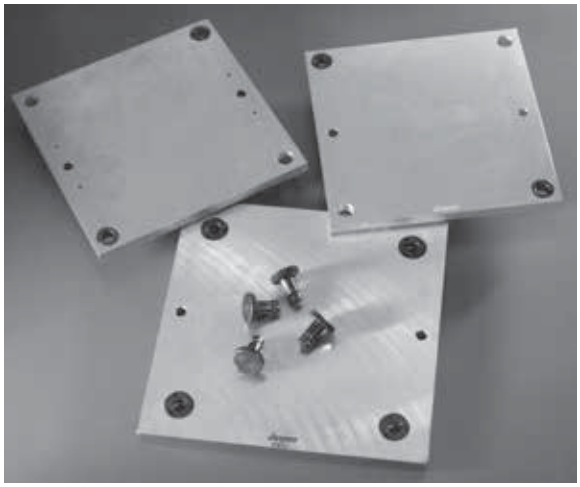
- Fast acting thumb screws 2 1/2 turns. No tools needed.



Adjustable Handle

- Handle can be moved out of the work area to avoid interference.

Quick Change Kits

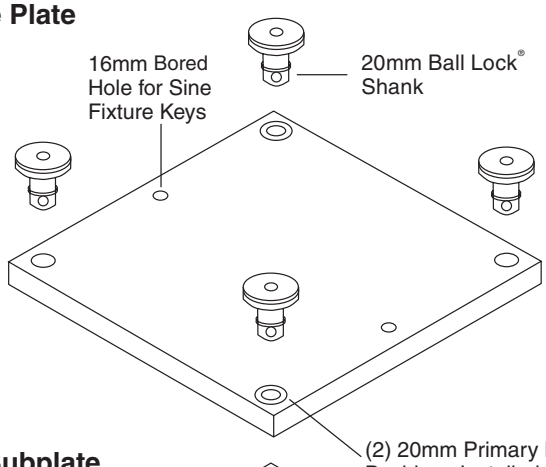


The Jergens Ball Lock® Quick Change Kits speed fixture changeover in all types of manufacturing operations. Each kit includes two aluminum fixture plates with 2 primary liner bushings installed; one steel subplate with receiver bushings installed, and four 20mm Ball Lock® shanks with working loads of 3000 lbs. each. While one fixture plate is on the machine, the operator can load parts on the other. This minimizes downtime for true set-up reduction. To enable the subplate to be mounted on a slotted table without the need to indicate the subplate, sine fixture keys can be used. The sine fixture key reamed holes are oriented parallel to the receiver bushings on the subplate and to the liner bushings on the fixture plate. These also allow the fixture plate to be mounted on a toolroom mill without the need to indicate it. This is extremely useful when machining location points on your fixture.

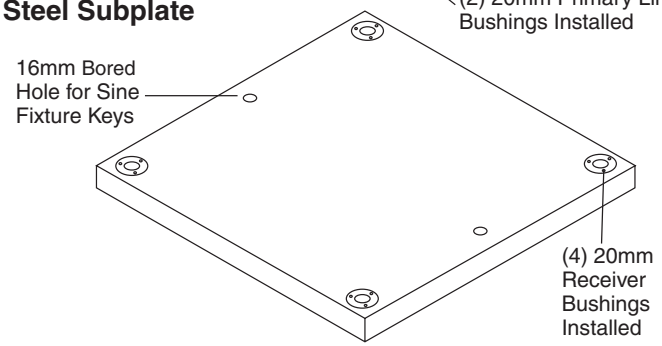
Jergens BALL LOCK MOUNTING SYSTEM

Everything You Need to Change Fixtures in Less Than One Minute

Aluminum Fixture Plate



Steel Subplate



Quick Change Kits

Part No.	Kit Includes
59002	2 - 58715 (400x400x20) aluminum fixture plates with 20mm liner bushings installed
	1 - 59101 (400x400x25) steel subplate with receiver bushings installed
	4 - 20mm Ball Lock® Shanks (49651)

Custom Kits Available

Jergens manufactures ready to use kits including Ball Lock® subplate and fixture plates.
For a special kit tailored to your CNC machine, please provide:

Name and Type of Machine _____
Travel of Machine Table (x, y, z) _____
Dimensions of Machine Table (x and y) _____
Maximum Weight allowed on Machine Table _____
T-slot Width and Center to Center Distance _____

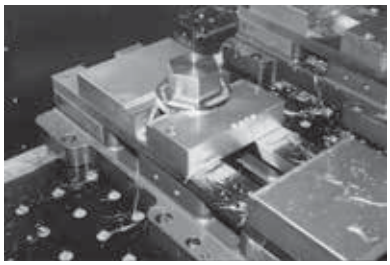
Bock Brand Locator Plate System

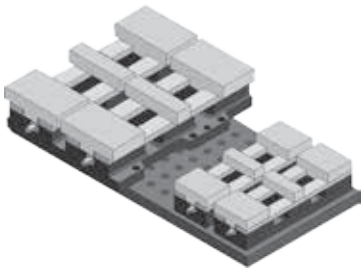
Bock Locator Plates give you the ability to mount and locate Bock Twin Vises, and to change their size, type, number and position in minutes. Using Bock's DexLoc™ Double-Expanding Locator Pins gives you repeatability of +/- .0005".

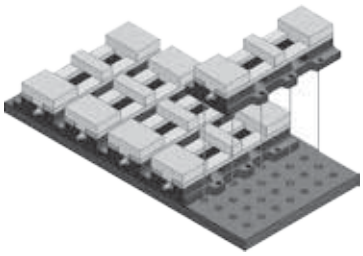
Bock Locator Plates are made from precision machined aluminum or steel with a grid of locating/mounting holes. Each hole is identified by a letter and a number.

Bock Twin Vises with standard interlocking base gives you great flexibility at tremendous setup speeds while Bock SlimLine Twin Vises give you the possibility to mount vises very close to each other for maximum number of parts in the machine.

Each Locator Plate is custom-made for your particular application. Need a prompt quote? Call (877) 426-2504 with your specifications.









Bock Brand Locator Plates



- Repeat setups to within +/- .001"
- Locator Plates are available in a wide array of sizes, both in inch and metric dimensions.
- Jergens Bock Brand Locator Plates are made of hard coated aluminum for a durable surface
- Alpha-numeric coded holes for an accurate and repeatable baseline reference
- Every hole precision bored to fit Dex-Loc™ locating pins and threaded through for maximum versatility
- Brass protection plugs included for every hole
- Eliminate time consuming "dialing in" for every setup

Part Number	Compatible Machine	Thickness (in)	Size (in)	Material
933804	HAAS VF-2	1.42	14 x 36	Aluminum
933956	Robodrill	1.42	15.35 x 27.5	Aluminum
934204	Mazak VTC200B	1.42	20 x 57.5	Aluminum
934340	HAAS VE-2YT	1.42	18 x 36	Aluminum

DexLoc™ Locator Pins



Patented DexLoc™ double-expanding locator pins allow for fast and accurate location of twin vises on locator plates.

- Self-centering pins relocate within +/- .0005"
- Available in a wide variety of standard sizes and materials

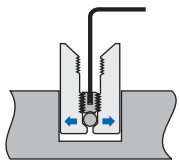
To order DexLoc™ Locator Pins in other sizes, please refer to page 221.

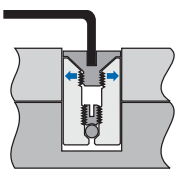
Standard

Part Number	Diameter	Height	Hex Key Size (in)	
			Top	Bottom
29404	5/8	1-1/4	7/32	3/16

Metric

Part Number	Diameter	Height	Hex Key Size (mm)	
			Top	Bottom
29454	16	32	6	5





Features of the Jergens Zero Point Mounting System

- **Positioning and clamping in one operation**
- **High repeatability and accuracy**
- **Low cost solution for quick pallet changing**



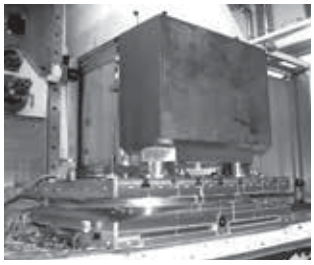
Typical applications for the Jergens Zero Point System:

- Milling
- Assembly
- Welding
- Injection Molding
- Grinding
- Measuring

Jergens ZPS ZERO.POINT.SYSTEM



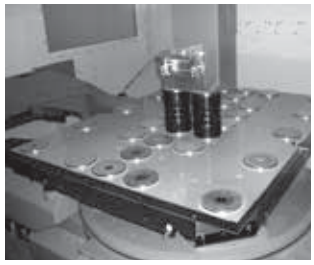
Pull Studs can also be installed directly into the workpieces, making 5-sided processing possible.



Best results with large and heavy workpieces.



Jergens Zero Point clamping systems are made exclusively of rust-free materials and so are ideally suited for use in the food-service area as well as in the pharmaceutical and chemical industry.



Through different dimensions, the advantage of the Zero Point clamping system are optimally used.

Pull Studs and Engagement Screws

Pages 51–52

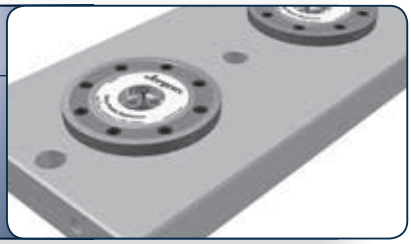
- Pull Studs: Hardened Stainless Steel for hydraulic and pneumatic clamping modules.
- Screws: For installation and surface mounting clamping modules.



Clamping Plates with Built-In Modules

Pages 49–50

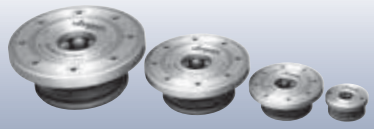
- 2 and 4-way clamping stations

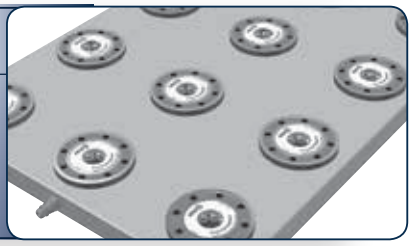


Clamping Modules

Pages 54–56

- Machine tables
- Plates
- 4-axis/5-axis machining
- Columns
- Pallets

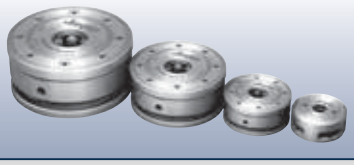


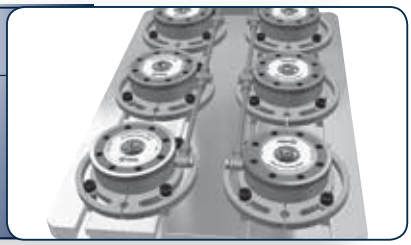


Surface/Mounted Clamping Modules

Pages 57–58

- For large & heavy workpieces
- Pull Studs installed directly into workpiece





Flange Type Module with Centering & Cover Rings

Page 59–60

- Used to fasten surface-mounted clamping modules on the machine table
- Hydraulic release with or without blowout



Manual ZPS

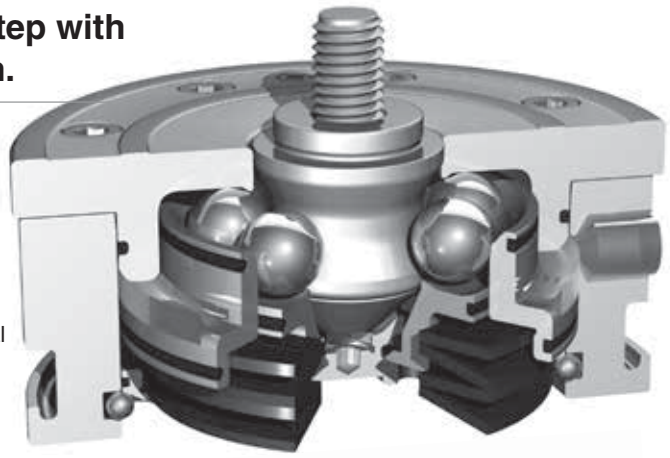
Page 61

- Ideal when pneumatic and hydraulic connections are not available.



Jergens' Zero Point Mounting System – Cut Set-up Times by Up to 90%.

Fix, Position and Clamp in a Single Step with Jergens' Zero Point Mounting System.



Jergens is proud to introduce the best-engineered Zero Point Mounting System (ZPS) on the market. This revolutionary technology cuts set-up time by up to 90% by combining fixing, positioning and clamping in a single operation. Available with either pneumatic or hydraulic release, these positive locking locating modules allow operators to quickly change out large and small machine fixtures with extreme accuracy and minimal effort. Other features include:

- **Repeatability <0.005mm (0.0002")**
- **Minimizes set-up time**
- **Hardened stainless (AISI 440B) steel construction**
- **Integrated safety system**
- **Compact design**
- **Positive locking**
- **High retaining force**



Pull-in / Locking Force up to 40kN / 9000lbs.

Pull-in / Locking Force up to 20kN / 4530lbs.

Pull-in / Locking Force up to 10kN / 2290lbs.

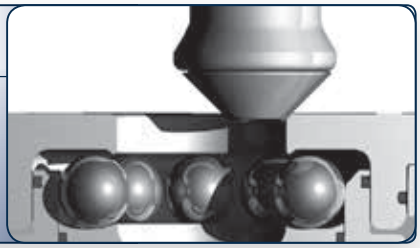
Pull-in / Locking Force up to 5kN / 1100lbs.

Smart Features for Process Improvement

Reduce set-up times and increase both accuracy and repeatability with design features exclusive to the Jergens ZPS:

Self Guiding

The self-guiding, tapered profile of the mounting stud allows heavy plates to be installed more easily.



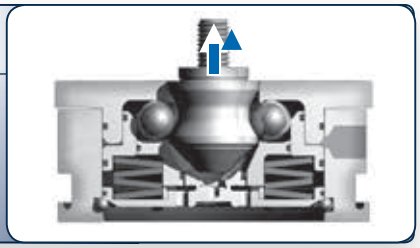
Alignment

Unique design eliminates the need for perfect lifts on entry and exit.



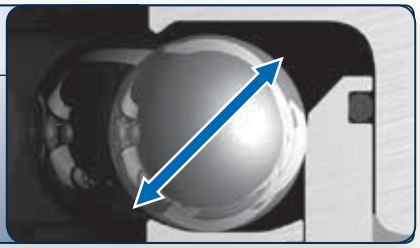
Mechanical Locking System

Experience high holding force without the need to maintain hydraulic pressure.



Large Ball Diameter

Provides increased strength and even load distribution.



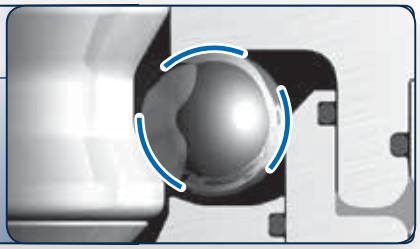
No Ball Cage

Free movement of the bearing balls reduces friction.



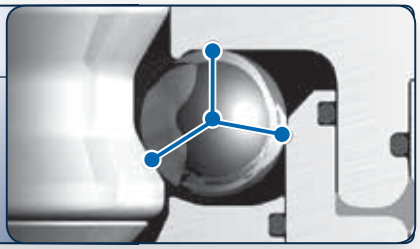
Form Fit Ball Channel

Tapered contact areas eliminate point loads and reduce failures.



Three-Point Load Distribution

Equal load spacing optimizes force distribution.



Integrated Safety System

Process-sure clamping module can always be opened, eliminating the need to forcibly remove modules if a failure should occur.

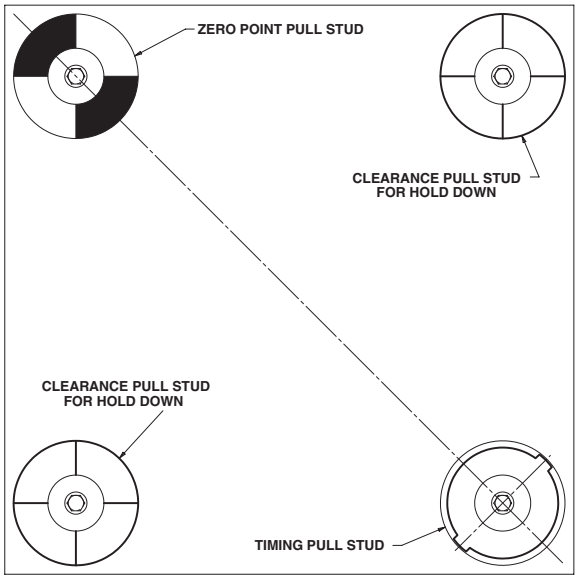


Clamping and Positioning

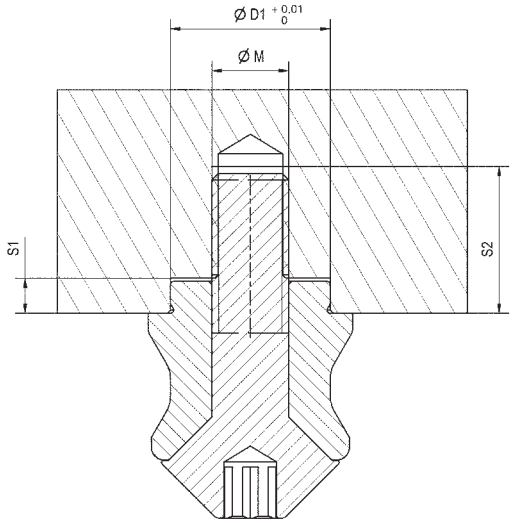
On each fixture use:

- 1 – Zero Point Pull Stud
- 1 – Timing Pull Stud
- The Zero Point and Timing Stud should be perpendicular
- Use any combination of clearance and/or protection Pull Stud





Dimensions for machining pull stud mountings



Size	ØD1	ØM	S1	S2
K5	10	M6	2.5	12
K10	15	M8	3.5	16
K20	25	M12	5.5	23
K40	25	M16	5.5	30

Note:

- Pull Stud with internal thread for clamping from above
- Pull Studs with different diameter D1, preventing interchange of the Zero Point, timing and clearance Pull Stud during installation.
- Pull Stud for series production, (notch type), Floating Pull Stud for compensation of thermal expansion
- Automatic lifting of the pallet / fixture

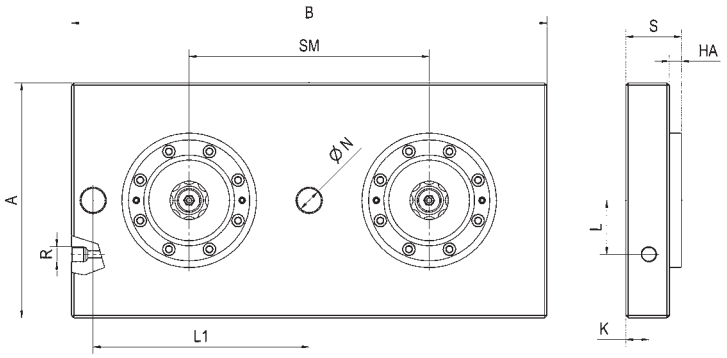
Figure:
Shown with Pull Stud and engagement screw

2-Way Clamping Station

Hydraulic Unlocking

Repeatability < 0.005 mm (0.0002")





Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	A	B	HA	K	L	L1	ØN	R	S	SM	Kg
303289	20	2 x 20 / (2 x 4500)	196	396	10	19	45	180	20	G1/4	46	200	21.9
303297	40	2 x 40 / (2 x 9000)	296	546	15	26	57	250	25	G1/4	61	320	59.5

All linear dimensions in (mm)

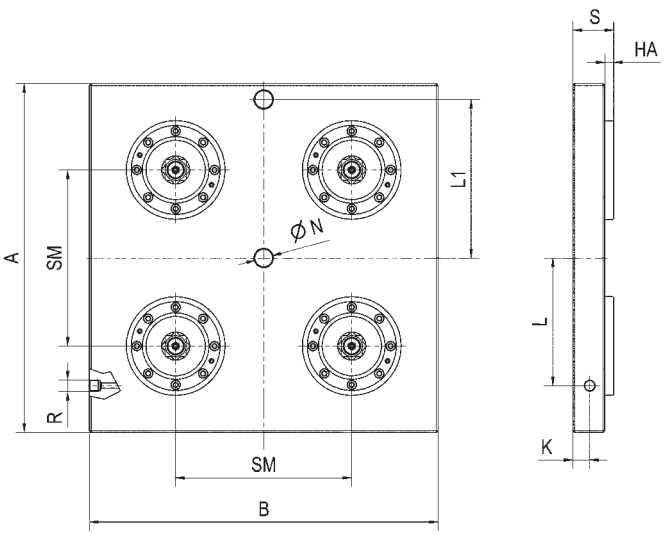
Note: On request, we can incorporate mounting holes to your requirements in the base plate. Other dimensions, gauges and number of clamping module layouts on request.

4-Way Clamping Station

Hydraulic Unlocking

Repeatability < 0.005 mm (0.0002")





Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	A	B	HA	K	L	L1	ØN	R	S	SM	Kg
303321	20	4 x 20 / (4 x 4500)	396	396	10	18	148	180	20	G1/4	46	200	44.0
303339	40	4 x 40 / (4 x 9000)	546	546	15	26	217	250	25	G1/4	61	320	110.0

All linear dimensions in (mm)

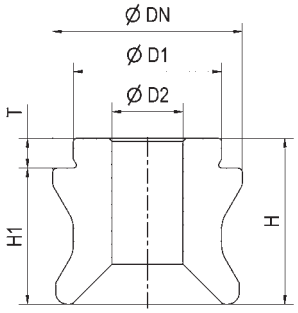
Note: On request, we can incorporate mounting holes to your requirements in the base plate. Other dimensions, gauges and number of clamping module layouts on request.

Pull Studs

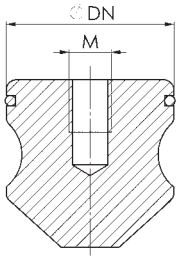
K5 Modules

Hardened Stainless Steel, for hydraulic and pneumatic clamping modules





Zero Point Timing Clearance



Protection Pull Stud

Part Number	Size	Description	ØDN	ØD1	ØD2	H	H1	M	T	g	Engagement Screw PN
306019	K5	Zero Point Stud	15.0	10	6	12.7	10.2	—	2.5	15	306092
306035	K5	Timing Stud	15.0	10	6	12.7	10.2	—	2.5	15	306092
306050	K5	Clearance Stud	14.8	10	6	12.7	10.2	—	2.5	15	306092
306076	K5	Protection Plug	14.8	—	—	10.2	—	M 6	8.0	12	—

K10 Modules

Hardened Stainless Steel, for hydraulic and pneumatic clamping modules

Part Number	Size	Description	ØDN	ØD1	ØD2	H	H1	M	T	g	Engagement Screw PN
303610	K10	Zero Point Stud	22.0	15	8	19	16	—	3	30	303578
303636	K10	Timing Stud	22.0	15	8	19	16	—	3	30	303578
304519	K10	Clearance Stud	21.8	15	8	19	16	—	3	30	303578
304535	K10	Protection Plug	21.8	—	—	16	—	M 8	12	30	—

K20 Modules

Hardened Stainless Steel, for hydraulic and pneumatic clamping modules

Part Number	Size	Description	ØDN	ØD1	ØD2	H	H1	M	T	g	Engagement Screw PN
303149	K20	Zero Point Stud	32.0	25	12	28	23	—	5	110	303222
303156	K20	Timing Stud	32.0	25	12	28	23	—	5	110	303222
303164	K20	Clearance Stud	31.8	25	12	28	23	—	5	110	303222
303172	K20	Protection Plug	31.8	—	—	23	—	M8	16	110	—

K40 Modules

Hardened Stainless Steel, for hydraulic and pneumatic clamping modules

Part Number	Size	Description	ØDN	ØD1	ØD2	H	H1	M	T	g	Engagement Screw PN
303180	K40	Zero Point Stud	40.0	25	16	34	29	—	5	180	303230
303198	K40	Timing Stud	40.0	25	16	34	29	—	5	180	303230
303206	K40	Clearance Stud	39.8	25	16	34	29	—	5	180	303230
303214	K40	Protection Plug	39.8	—	—	29	—	M8	20	180	—

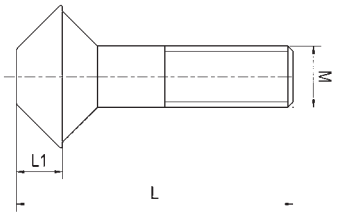
Engagement Screws For Pull Studs

Strength class 10.9

For installation and surface mounted clamping modules



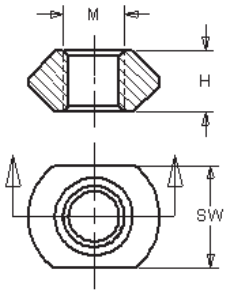
Part Number	Size	M	L	L1	g
306092	K5	M 6	25	3.4	18
303578	K10	M 8	37	6.0	30
303222	K20	M12	54	9.0	70
303230	K40	M16	69	10.0	130



Pull Stud Clamping Nuts



Part Number	Size	M	SW	H	Weight
429969	K5	M6	10	6	3
429985	K10	M8	14	8	8
430009	K20	M12	21	14	26
430025	K40	M16	28	17	50



1 = PULL STUD CLAMPING NUT
2 = PULL STUD
3 = SOCKET HEAD SCREW

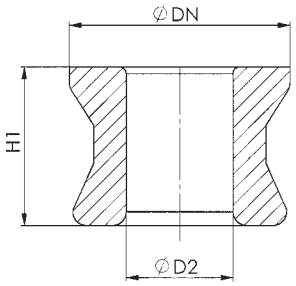
Floating Pull Stud

Hardened for hydraulic and pneumatic clamping modules



Part Number	Size	ØDN	ØD2	H1	g
340059	K10	21.8	12.0	16	25
305912	K20	31.8	15.5	23	80
426882	K40	39.8	20.0	29	160

Note: The floating pull stud is supported by bearings so that it is axially mobile and is used when large distance and angle tolerances between the stud holes have to be compensated. The stud has only a holding function and does not take on any lateral load.

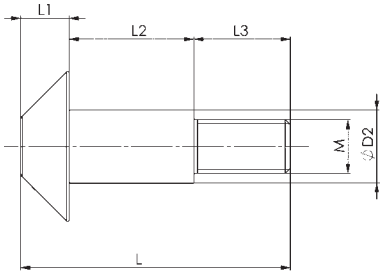


Engagement Screw For Floating Pull Stud

Strength class 10.9



Part Number	Size	ØD2	M	L	L1	L2	L3	g
340034	K10	11.0	M8	35	6	16.1	12.9	24
305938	K20	13.5	M10	50	9	23.1	17.9	55
426908	K40	17.0	M12	59	10	29.1	19.9	100

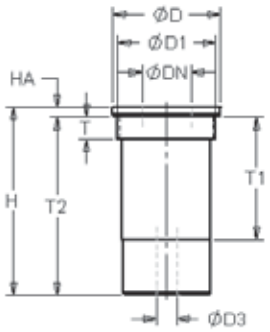


K2 Installation Clamping Module



The compact size of the Jergens Mini ZPS Module is perfect for applications where space is limited and accuracy and speed of changeover time is required.

- Mechanical Lock / Pneumatic Unlock
- Opening operating pressure: min. 6 bar - max. 14 bar (87psi - 203psi)
- Repeatability <0.02 mm (0.0008 in)
- Installation Diagrams Available by Request



Part Number	Size	Pull-in Locking Force up to N / (lbs)	Holding Force N / (lbs)	D	DN	D1	D2	D3	H	HA	T	T1	T2	Net Weight (kgs)
427286	K2	235 / (53)	6000 / 1349	22	10	M20 x 1.5	18	M5	38.5	2.05	4.5	25	36.45	0.048

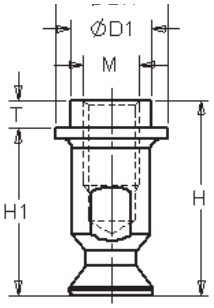
K2 Pull Stud

Hardened for pneumatic clamping module

- Installation Diagrams Available by Request



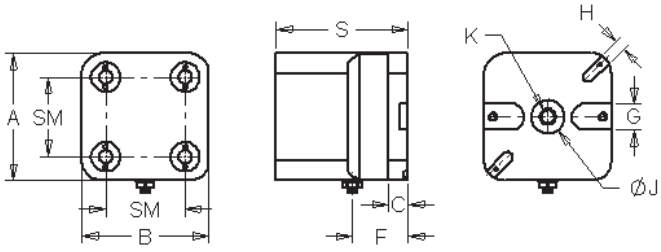
Part Number	Size	Version	DN	D1	H	H1	M	T	Net Weight (kgs)
427302	K2	Zero Point Stud	10	7.14	17.5	15	M5	2.5	0.004
427328	K2	Timing Stud	10	7.14	17.5	15	M5	2.5	0.004
427344	K2	Clearence Stud	9.95	7.14	17.5	15	M5	2.5	0.004



4-Way Clamping Station Pneumatic

Aluminum body, anodized
Repeatability <0.02 mm (0.0008 in





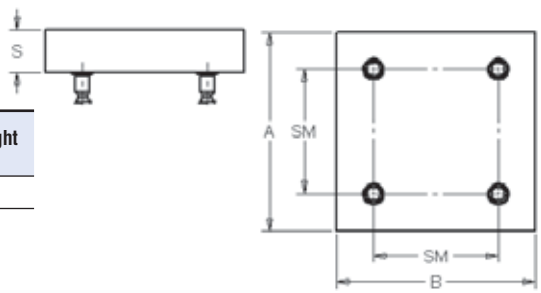
Part Number	Size	Opening	Pull-in Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	A	B	C	G	H	J dia.	K	S	SM	Net Weight (kgs)
533034	K2	Pneumatic	4 x .235 / (53)	4 x 6 / (1349)	96	96	15	20	8	25	M12	100	60	2.4

K2 Machineable Block

High-strength aluminum, anodized



Part Number	Size	A	B	S	SM	Net Weight (kgs)
533059	K2	96	96	20	60	0.53



Threaded Clamping Modules (K5)

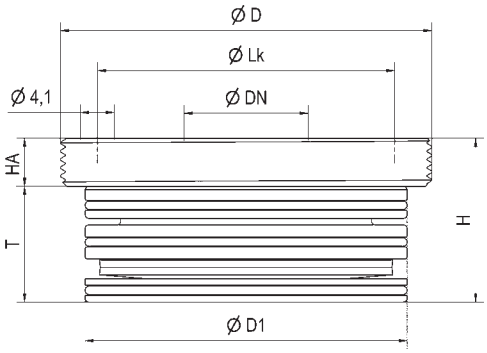
Screw-In Version
Hydraulic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



With a small footprint for installation in base plates, machine tables, clamping profiles, columns and towers, swivel bridges, machine pallets and clamping pallets.

- Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	ØD	ØDN	ØD1	H	HA	ØLK	T	g
480244	K5	5 / (1100)	13 / (2900)	M45 x 1	15	39	19.8	5.8	36	14	300

All linear dimensions in (mm)

Note: Threaded clamping module with a low installation height of 19.8 mm and an installation diameter of 45 mm (M45 x 1).
Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The threaded clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines or dangers of leakage. The contact surface is the upper surface of the housing. The hydraulic design has 1 connection: 1 x unclamping

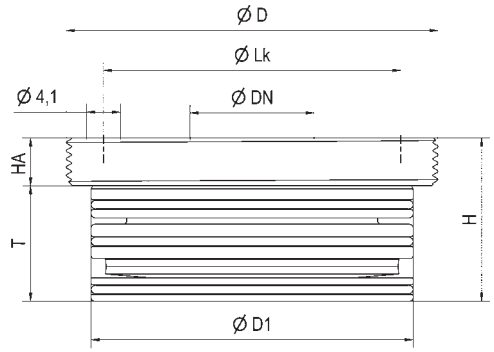
Screw-in Version
Pneumatic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



With a small footprint for installation in base plates, machine tables, clamping profiles, columns and towers, swivel bridges, machine pallets and clamping pallets. Pneumatic modules are optimally suited for use in the food, pharmaceutical and chemical industries, as well as in oil-free applications.

- Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	ØD	ØDN	ØD1	H	HA	ØLK	T	g
480343	K5	1.5 / (330)	13 / (2900)	M45 x 1	15	39	19.8	5.8	36	14	300

All linear dimensions in (mm)

Note: Threaded clamping module with a low installation height of 19.8 mm and an installation diameter of 45 mm (M45 x 1).
Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The threaded clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines or dangers of leakage. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

Installation Clamping Modules (K10, K20, K40)

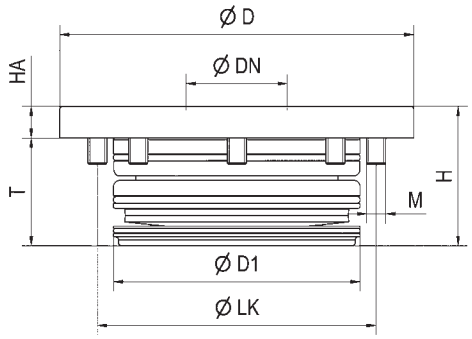
Hydraulic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



With a small foot-print for installation in base plates, machine tables, clamping profiles, columns and towers, swivel bridges, machine pallets and clamping pallets.

- Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-in/locking force up to kN / (lbs)	Holding force kN / (lbs)	Blow out	ØD	ØDN	ØD1	H	HA	ØLK	M	T	Kg
480228	K10	10 / (2250)	25 / (5620)	Yes	78	22	50	30	7	60	M5	23	0.45
480186	K20	20 / (4500)	55 / (12350)	Yes	112	32	78	44	10	88	M6	34	1.40
480525	K40	40 / (9000)	105 / (23600)	Yes	148	40	102	57	15	118	M8	42	3.40

All linear dimensions in (mm)

Note: Threaded installation clamping modules have high holding and pull-in forces with very small installation dimensions.
Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The threaded clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines or dangers of leakage. The contact surface is the upper surface of the housing. The hydraulic design has 1 connection: 1 x unclamping

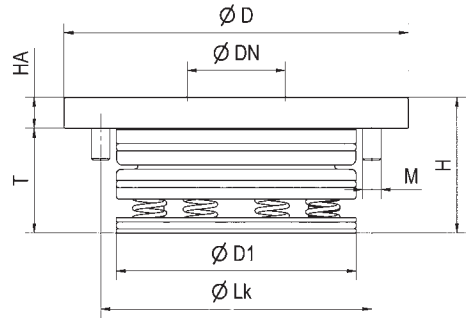
Pneumatic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



With a small footprint for installation in base plates, machine tables, clamping profiles, columns and towers, swivel bridges, machine pallets and clamping pallets.

- Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØD	ØDN	ØD1	H	HA	ØLK	M	T	Kg
480202	K10	8 / (1800)	25 / (5620)	Yes	78	22	50	30	7	60	M5	23	0.45
480160	K20	17 / (3800)	55 / (12350)	Yes	112	32	78	44	10	88	M6	34	1.40
480541	K40	30 / (6700)	105 / (23600)	Yes	148	40	102	57	15	118	M8	42	3.40

All linear dimensions in (mm)

Note: The installation clamping modules have high holding and pull-in forces with very small installation dimensions.
Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines or dangers of leakage. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

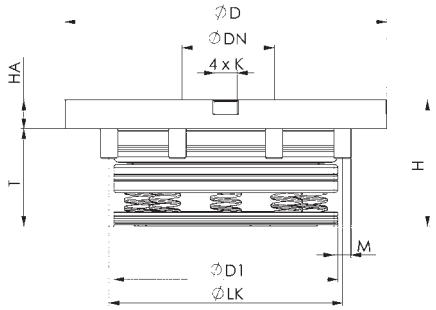
Installation Clamping Modules (K10, K20) with Indexing

Low Pressure Pneumatic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



With a small fooprint for installation in base plates, machine tables, clamping profiles, columns and towers, swivel bridges, machine pallets and clamping pallets



Part Number	Size	Pull-in Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	Unclamp Pressure	Blow Out	D	DN	D1	H	HA	K	LK	M	T	Net Weight (kgs)
511139	K10.3	10 / (2250)	25 / (5620)	72 psi (5 bar)	Yes	112	22	78	35	10	8x5	88	M6	25	1.4
511154	K20.3	17 / (3800)	55 / (12350)	66 psi (4.5 bar)	Yes	138	32	102	49	15	10x5	115	M6	34	2.6

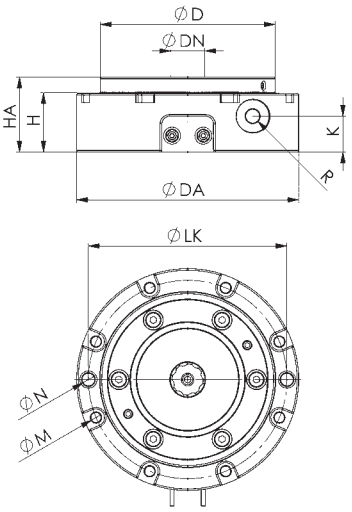
All linear dimensions in (mm)

Note: The installation clamping modules have high holding and pull-in forces with very small insatallation dimensions. Pneumatic pressure is needed for unclamping (min 4.5 bar/ 66 psi). The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines or dangers of leakage.

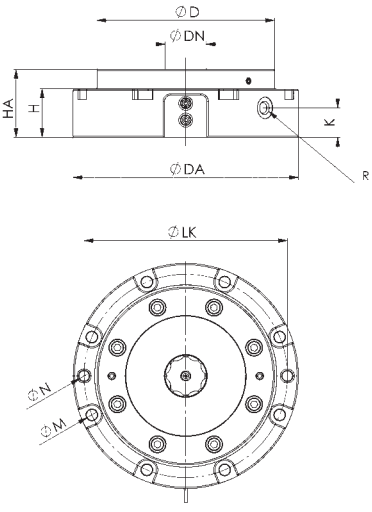
The pneumatic design has 1 connection for unclamping and 1 optional connection for blowout.

Clamping Modules with Sensors





553720



553721

Part Number	Size	Pull-in Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	DA	D	DN	H	HA	K	LK	M	MH7	R	Net Weight (kgs)
553720	10.3	10 (2250)	25 (5620)	142	112	22	38	48	23	127	6.6	8	G1/8	2.6
553721	20.3	17 (3800)	55 (12350)	175	138	32	38	53	23	158	8.4	8	G1/8	5

Surface/Mounted Clamping Modules (K5)

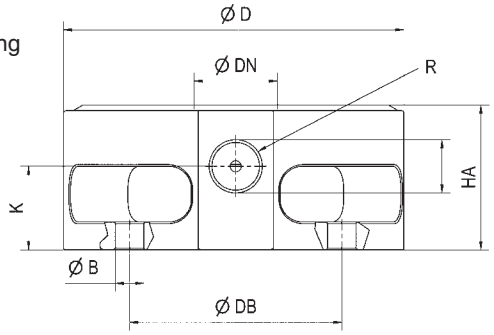
Hydraulic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



For mounting on machine tables, clamping profiles, columns and towers, measuring machines, assembly stations.

- Installation diagrams on request



Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	ØB	ØD	ØDB	ØDN	HA	K	R	g
480566	K5	5 / (1100)	13 / (2900)	5.8	62	54	15	26	15	G1/8	300

All linear dimensions in (mm)

Note: Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The contact surface is the upper surface of the housing. The hydraulic design has 1 connection: 1 x unclamping

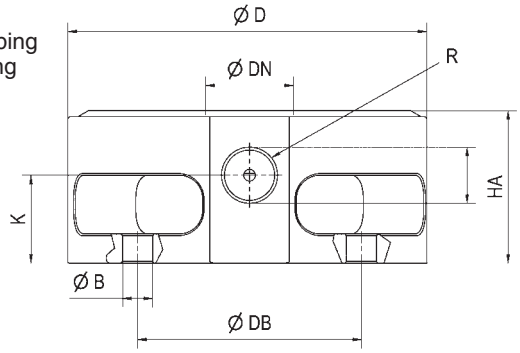
Pneumatic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



For mounting on machine tables, clamping profiles, columns and towers, measuring machines, assembly stations.

- Installation diagrams on request



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	ØB	ØD	ØDB	ØDN	HA	K	R	g
480582	K5	1.5 / (330)	13 / (2900)	5.8	62	54	15	26	15	G1/8	300

All linear dimensions in (mm)

Note: Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

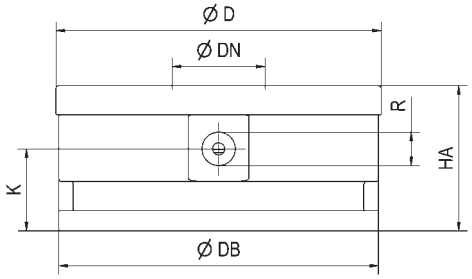
Surface/Mounted Clamping Modules (K10, K20, K40)

Hydraulic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



For mounting on machine tables, clamping profiles, columns and towers, measuring machines,assembly stations in connection with **clamping bracket** on page 59.



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØD	ØDB	ØDN	HA	K	R	Kg
480608	K10	10 / (2250)	25 / (5620)	Yes	78	77.5	22	30	16.50	G1/8	0.90
480624	K20	20 / (4500)	55 / (12350)	Yes	112	110.0	32	50	28.25	G1/4	2.70
480640	K40	40 / (9000)	105 / (23600)	Yes	148	146.0	40	62	32.50	G1/4	3.80

All linear dimensions in (mm)

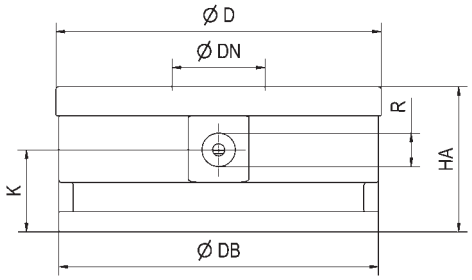
Note: Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. Further more, there are no cumbersome lines and no danger of leakage. The contact surface is the upper surface of the housing. The hydraulic design has 1 connection: 1 x unclamping

Pneumatic Unlocking

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")



For mounting on machine tables, clamping profiles, columns and towers, measuring machines,assembly stations in connection with **clamping bracket** on page 59.



Hardened Stainless Steel

Part Number	Size	Pull-In/Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØD	ØDB	ØDN	HA	K	R	Kg
480665	K10	8 / (1800)	25 / (5620)	Yes	78	77.5	22	30	16.50	G1/8	0.90
480681	K20	17 / (3800)	55 / (12350)	Yes	112	110.0	32	50	28.25	G1/4	2.60
480707	K40	30 / (6700)	105 / (23600)	Yes	148	146.0	40	62	32.50	G1/4	6.40

All linear dimensions in (mm)

Note: Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

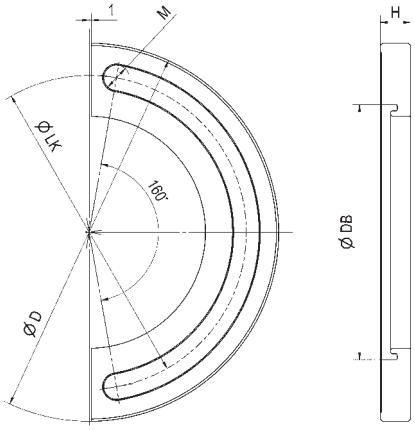
Clamping Bracket for Surface/Mounted Clamping Modules

Black Nitrided



Clamping flanges are used to fasten raised/mounted clamping modules on the machine table. See pages 57–58.

- Special clamping flanges for various T-slot tables
- Clamping flange and housing manufactured as a single piece



Stainless Steel

Part Number	Size	Pieces Per Module	ØD	ØDB	H	ØLK	M	g
303495	10	2	114	77.5	7.75	94	8.5	180
302901	20	2	164	110.0	13.00	136	11.0	400
302919	40	2	202	146.0	16.00	172	13.0	550

All linear dimensions in (mm)

Flange Type Installation Modules with Centering and Cover Rings

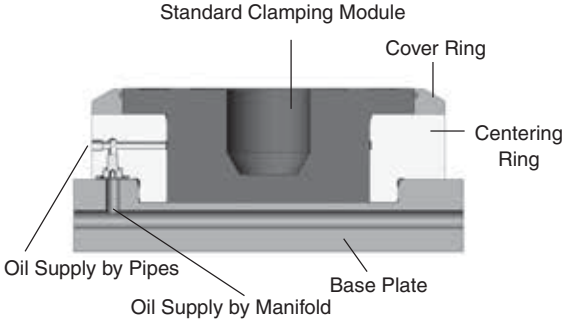


Features:

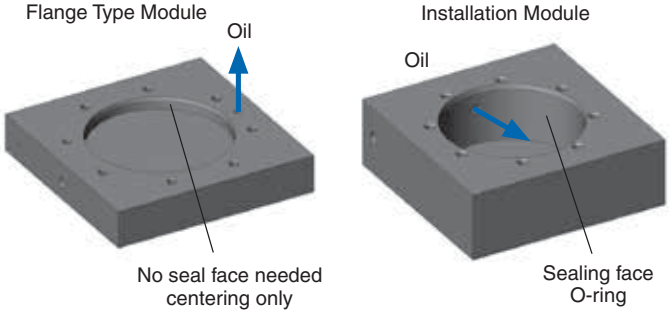
- Oil supply by pipes or manifolds
- Integrated centering
- Provided as assembled unit

Benefits:

- Simple design and manufacturing of adaptor plate
- Weight saving due to less thickness for adaptor plate
- Easy to adapt to existing mounting angles and cubes



Installation comparison

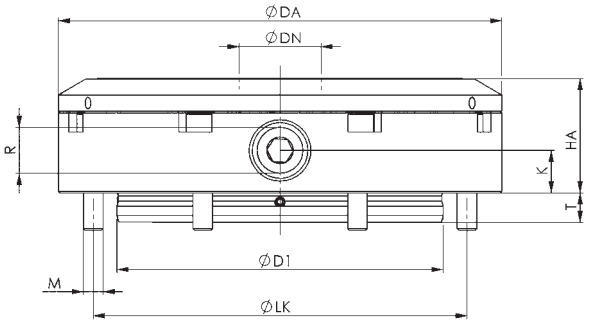


Flange Type Installation Modules with Centering and Cover Rings

Hydraulic Release

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")





Hardened Stainless Steel

Part Number	Size	Pull-In/Locking force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØDA	ØDN	ØD1	HA	K	ØLK	M	R	T	Kg
480301	K10	10 / (2250)	25 / (5620)	Yes	100	22	67	24	9	90	M5	G1/8	5.9	1.35
480269	K20	20 / (4500)	55 / (12350)	Yes	136	32	100	35	13	124	M6	G1/8	8.9	3.76
480723	K40	40 / (9000)	105 / (23600)	Yes	180	40	120	45	15	163	M8	G1/8	11.9	4.97

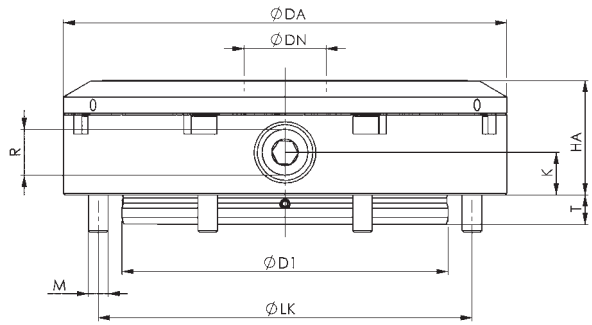
All linear dimensions in (mm)

Note: Combines features of the Threaded Module and Raised/Mounted module. Especially designed when installation space is limited and base plate or angle plate has relatively thin dimensions. The positioning of the module is simple and accurate when using the precision flange diameter. Hydraulic supply is possible by manifolds or pipes/hoses. Hydraulic supply and pressure is only needed for unclamping (min. 50 bar / 725psi, max. 60 bar / 870psi). The module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The hydraulic design has 1 connection: 1 x unclamping

Pneumatic Release

Cover and piston hardened.
Repeatability < 0.005 mm (0.0002")





Hardened Stainless Steel

Part Number	Size	Pull-In/Locking force up to kN / (lbs)	Holding Force kN / (lbs)	Blow out	ØDA	ØDN	ØD1	HA	K	ØLK	M	R	T	Kg
480327	K10	8 / (1800)	25 / (5620)	—	100	22	67	24	9	90	M5	G1/8	5.9	1.35
480285	K20	17 / (3800)	55 / (12350)	—	136	32	100	35	13	124	M6	G1/8	8.9	4.97
480749	K40	30 / (6700)	105 / (23600)	—	180	40	120	45	15	163	M6	G1/8	11.9	4.97

All linear dimensions in (mm)

Note: Combines features of the Threaded Module and Raised/Mounted module. Especially designed when installation space is limited and base plate or angle plate has relatively thin dimensions. The positioning of the module is simple and accurate when using the precision flange diameter. Pneumatic supply is possible by manifolds or pipes/hoses. Pneumatic pressure is needed for unclamping (min 8 bar/ 116 psi, max 12 bar/ 175 psi). For **clamping** process pneumatic pressure of min 5 bar / 75 psi, max 6 bar / 90 psi is required briefly in order to achieve defined pull-in force. The installation clamping module is mechanically locked in the clamped position. The unique mechanical locking system results in virtually no vibration even with extensive machining forces. The pneumatic design has 2 connections: 1 x unclamping / 1 x clamping.

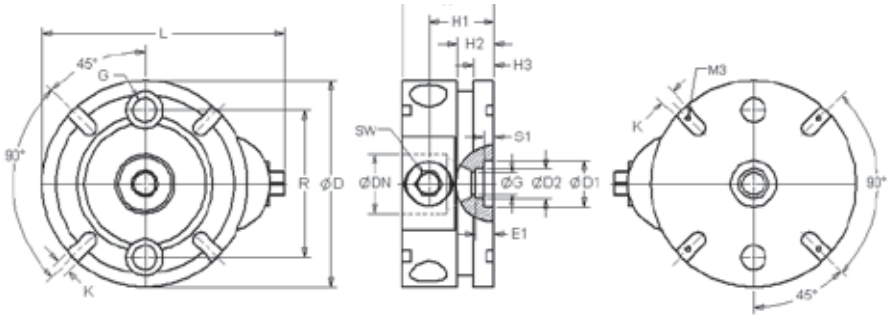
Manual ZPS

Ideal when Pneumatic and Hydraulic connections are not available

The manual ZPS modules provide locating and clamping with single bolt actuation. The indexing slots on the face of the modules allow workpieces to be indexed in 90° increments. Indexing slot plugs are available for applications where only specified slots are needed.

- to Mechanical clamping and unclamping
- Quenched and tempered steel
- Repeatability 0.01 mm (0.0004 in.)
- Single Hex Drive Actuation
- Flexible Mounting & Placement
- Two Sizes Available – K10 & K20
- Eliminates Need for Air or Hydraulic Connection





Part Number	Size	Pull-in / Locking Force kN / (lbs)	Holding Force kN / (lbs)	Tightening Torque Nm / (ft. lbs)	D	D1 ±.01	D2	DN	E1	G	H ±.01	H1	H2	H3	K F6	L	R	S1	SW	Weight (Kgs)
550820	K10	6 (1349)	25 (5620)	30 (22.1)	78	15	15	22	4,5	M8	32	22	-	-	8	93	50	-	10	1.03
550491	K20	10 (2248)	55 (12364)	30 (22.1)	112	25	16	32	10,0	M12	50	32,5	20	11	8	132	80	5,5	13	3.30

FIXTURE-PRO® MULTI-AXIS QUICK CHANGE FIXTURING

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Jergens®
MANUFACTURING EFFICIENCY

Fixture-Pro®: Completely Modular Workholding Systems for Multi-Axis Machining

With Fixture-Pro, workholding getting your spindle and cutting tool close to the work piece in the optimal machining position can be achieved regardless of your machine or workpiece. Fixture-Pro's modular approach allows you to select the combination of subplates, risers and top tooling that is right for your set up.

- **Flexible Multi-Axis Workholding**
  - Works on all applications 5 Axis, 3+2, 4+1
- **Rigid, modular design**
  - From light machining to heavy roughing
- **Rapid set up and part exchanges**
  - Reduced setup time saves money and keeps spindle running
- **Portability from machine to machine**
  - Easily transfer work to new machines or as demand dictates


60MM & 75MM VISES

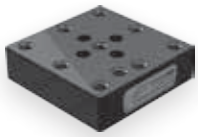

ER COLLET


130MM VISE


DOVETAIL VISE

Multiple Top Tooling options available for any part configurations.


VISE ADAPTER


SQUARE ADAPTER


DROP & LOCK

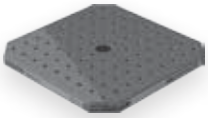
Adaptors and pallet changes to adapt vises, fixtures and quick change pallet changers.

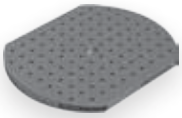

BARBELL RISER


TAPER RISER


STRAIGHT FLANGE RISER

Risers to accommodate any set up including multiple part set ups and long parts requiring multiple clamping locations.

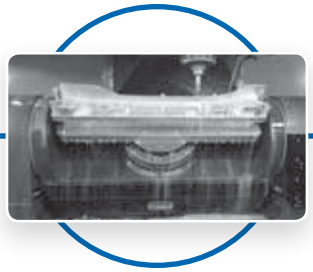

SQUARE

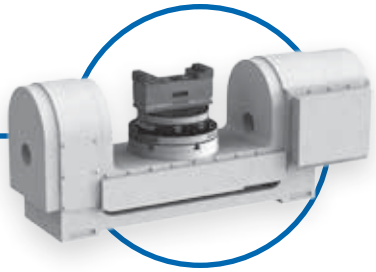

ROUND W/FLATS


ROUND

Standard Subplates for most popular machines. Custom designs are available.







How Fixture-Pro® Works

Unique, modular design offers maximum flexibility when choosing workholding for your job.

- Easily set up new or prototype jobs
- Move jobs from one machine to another
- Portability - Risers, adaptors, pallet changers and top tooling can be used on any machine
- Fixture-Pro grows with your machine tool investment

Machine Mounting Options

Option 1
QLS Mounting System

Jergens Quick Locating System or QLS allows for rapid and accurate location of QLS components on a QLS subplate.



Two precision ground shoulder bolts pass though precision ground liners to accurately locate and mount to the QLS grid.

Option 2
Centering Pin to QLS Grid

Utilizes center pin and standard SHCS to mount to the QLS Subplate. Diamond pin for radial location.



Central bore pin location standard on QLS subplates. Multiple center pin locations available on request.

Option 3
Direct to Table

Mount direct to table with center pin, keyways, SHCS and t-slot nuts.



Quickly direct mount for protoype work, long runs or to maximize Z travel.

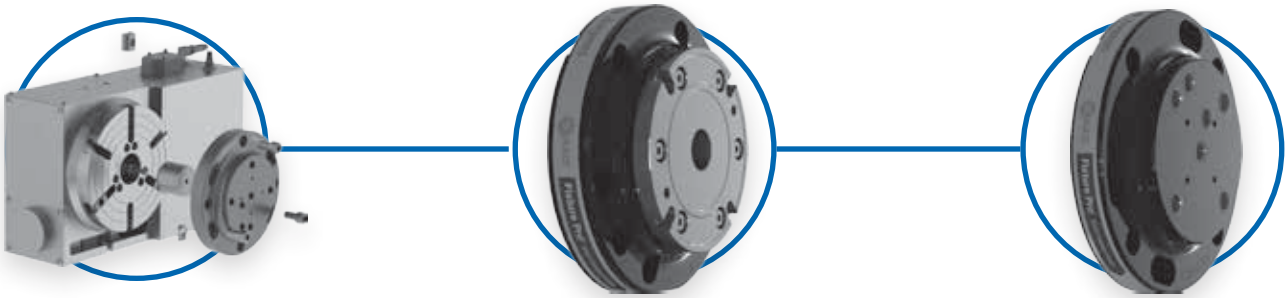
New Rotary Adaptors for QLS and ZPS

The new Fixture-Pro adaptor permits the easy mounting of Fixture-Pro system QLS based vises, dovetail vises, collet holders and the Drop & Lock™ pallet changers for quick, flexible multi axis workholding on popular rotary indexers and trunions.

Quickly add the QLS mounting Grid to most popular table configurations and utilize Fixture-Pro top tooling and Drop & Lock pallet changers.

ZPS systems from Jergens provide a single step to fix, position and clamp parts, reducing setup time by as much as 90%. At the same time, repeatability of +/- 0.0002" can be achieved.

See page 72 for more rotary adapter products, including risers and top plates.

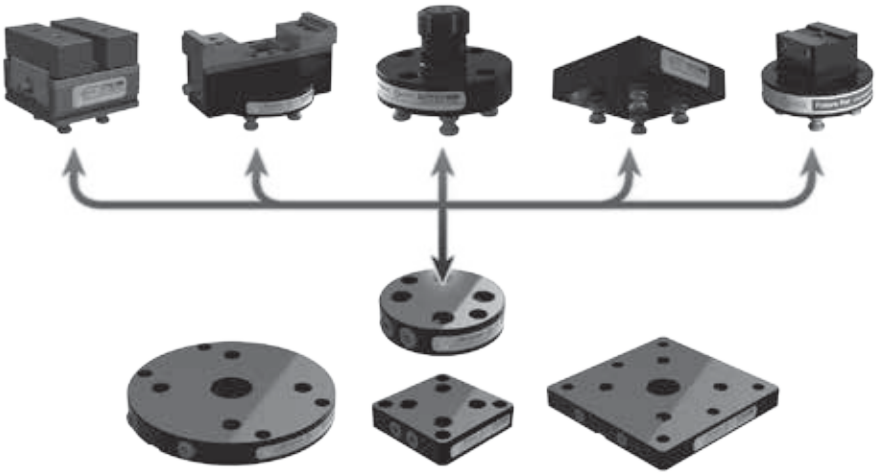


Jergens

DROP & LOCK™

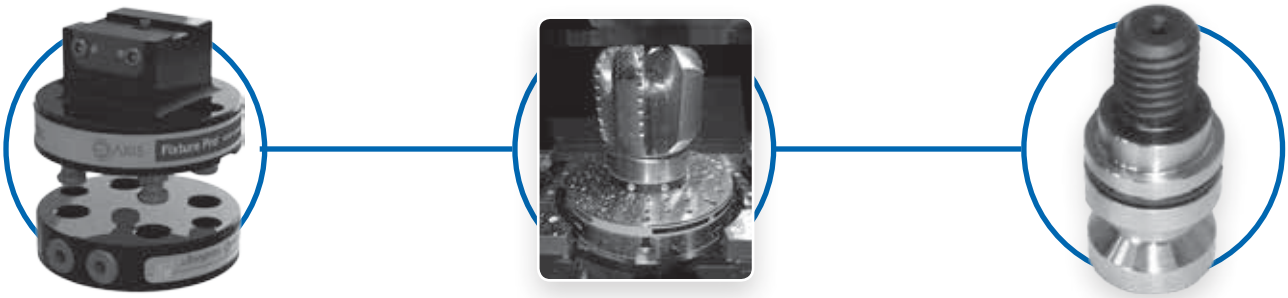
PALLET CHANGERS

Drop it, lock it and go!



Drop & Lock™ Pallet Changers provide the fastest, most accurate changeover of adaptors and top tooling. Quick change is made possible by pull studs and just two turns of a hex wrench as an alternative to traditional set screws.

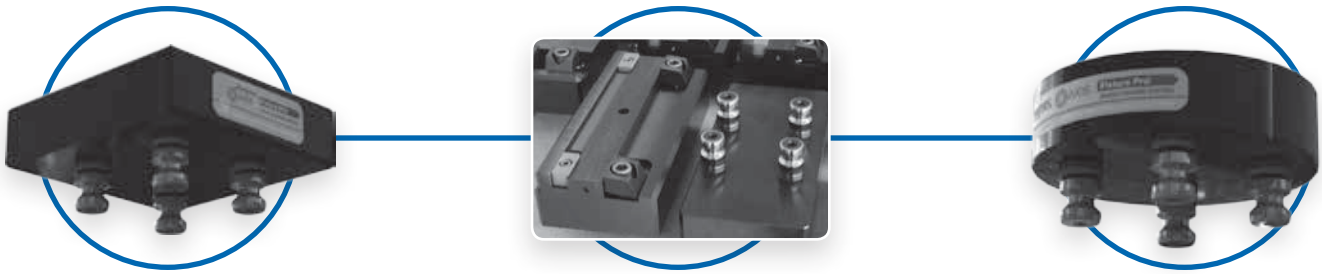
- Rapid part to part changeover during machining
- Two quick turns of locking wedges securely position and clamp repeatability to +/-0.0005”
- Secure, rigid clamping capable of high metal removal rates and difficult to machine materials
- A wide range of top tooling options available as standard in Drop & Lock design.
- Available in 130mm and 250mm configurations.
- Accurately transport parts while in the original clamping to secondary operations or for first article inspection on a CMM.
- Unique strong designed pull studs locked securely by two wedges



DIRECT TO PART STUD MOUNT

Jergens
DROP & LOCK™
PALLET CHANGERS

Versatility



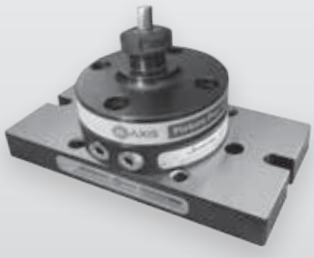
CUSTOM FIXTURE

Drop & Lock™ pallet changers and pull studs offer versatility in configuration as well as application, providing solutions on multi-axis machines as well as vertical and horizontal machining centers.

- Pull Studs can be mounted direct to the part to eliminate interference with vise jaws
- Utilize Machinable Blanks to create custom fixtures for 3, 4 and 5 axis applications
- Used on horizontal, vertical and other applications



4 Sided horizontal column with Drop and Lock pallets



Pallet changer on VMC riser with ER Collet Fixture



Tri column with Drop and Lock Pallets provides additional side clearance. Parts can be indexed in the pallet changer to machine 5 faces in Horizontal applications.

Top Tooling Solutions

The Industry's Most Complete Range of Standard Vises, Collets and Adapters



Rigid, high-strength multi-axis vises

- Self-centering and fixed jaw
- 40mm to 125mm widths
- Wide range of standard, reversible hard and soft jaws available



Drop & Lock™ style multi-axis

- Lower profile for increased "Z" travel
- 130mm square low profile on 5CV13012
- Direct mount to table with optional clamps



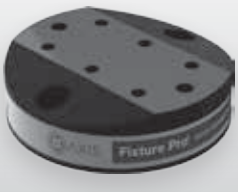
Dovetail Vises

- 130mm light and heavy duty standard dovetails
- 10 Degree dovetail angle permits high clamping force
- Heavy Duty Block Style dovetails for large parts and extreme cutting conditions



ER Style Collet Holders

- Excellent option for solid round and cylindrical parts
- Available for standard ER collets from size 16 to 40



Vise Adapters

- For QLS and Drop and Lock mounting of 5 Axis vises



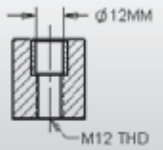
Drop and Lock™ Machinable Blanks

- Quickly design custom fixtures
- Utilize low profile clamping components

5-Axis Subplates

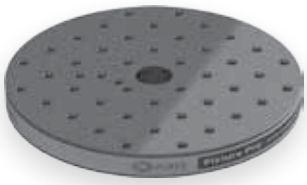
Standard subplates mount to machine table with center bore and do not include mounting holes.

- Material: 1018 Steel
- Thickness Tolerance ±0.005
- Flat & Parallel within .0005"/Ft. (.013mm)
- Includes Pre-Installed QLS Bushings

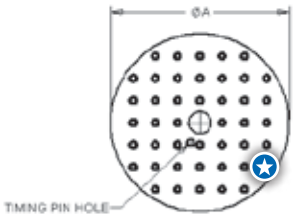


= Jergens QLS

Quick Locating System (QLS) Bushings for shoulder screws that are hardened and ground to +/- 0.0003"

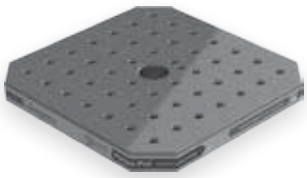


Round

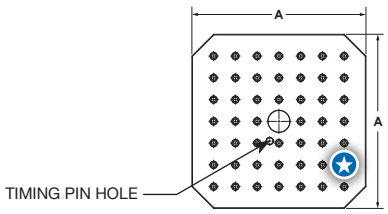


5-Axis Subplate

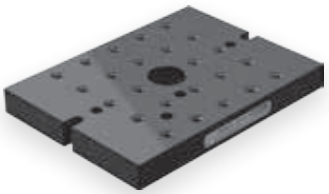
Part Number	Style	A (mm)	Thickness of Plate (mm)	Locating Method	Timing Pin	Mounting Type	Grid	Weight lbs (Kgs)
5SP130	Round	130	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	6.3 (2.86)
5SP160	Round	160	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	10.36 (4.7)
5SP210	Round	210	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	18.83 (8.54)
5SP250	Round	250	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	26.5 (12)
5SP310	Round	310	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	41.89 (19)
5SP400	Round	400	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	70.44 (31.95)
5SP500	Round	500	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	110.9 (50.3)
5SP630	Round	630	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	176.8 (80.2)
5SP800	Round	800	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	100mm x 100mm	296.3 (134.4)



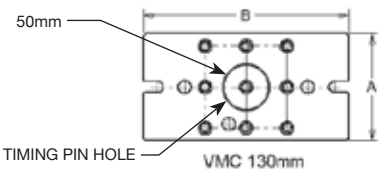
Square



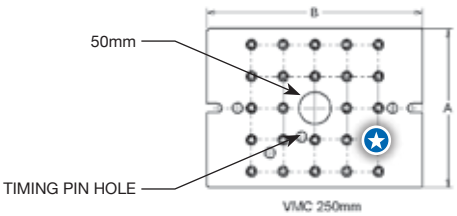
Part Number	Style	A (mm)	Thickness of Plate (mm)	Locating Method	Timing Pin	Mounting Type	Grid	Weight lbs (Kgs)
5SP400S	Square	400	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	88 (39.9)
5SP500S	Square	500	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	139.3 (63.2)



VMC



VMC 130mm



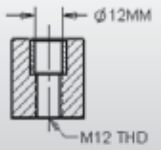
VMC 250mm

Part Number	Style	A (mm)	B (mm)	Thickness of Plate (mm)	Locating Method	Timing Pin	Mounting Type	Grid	Weight lbs (Kgs)
5QP130020	VMC	130	250	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	19.86 (9.01)
5QP250020	VMC	250	340	35	Center (50H7), Timing Pin	5LP1225001	12mm SHCS	50mm x 50mm	51.75 (23.47)

5-Axis Risers, Mini & Barbell Style – Steel or Aluminum

Fixture-Pro® 5-Axis Risers raise, position and locate the part off the machine or rotary table so the part is accessible for machining all 5 sides. Mounts direct to QLS grid or tables with Fixture-Pro® Locating Keys and LHCS. Mounts to Fixture-Pro® subplate with center bore, timing pin and LHCS or QLS shoulder screws.

- Material: 1018 Steel or Aluminum
- Thickness Tolerance ±0.002 (.05mm)
- Flat & Parallel within: .0005"/Ft. (.013mm)
- Finish: Black Oxide or Anodize



= Jergens QLS

Quick Locating System (QLS) Bushings for shoulder screws that are hardened and ground to +/- 0.0003”



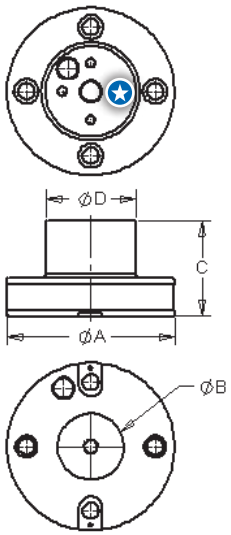
Mini Riser

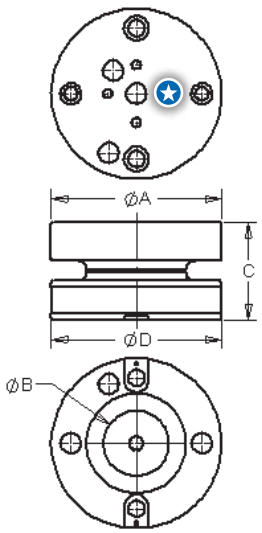


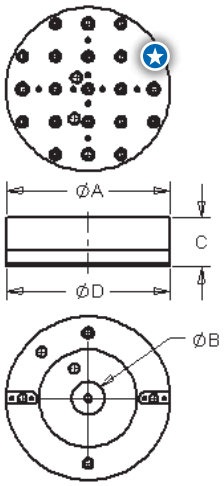
130mm Barbell



250mm Barbell







Mini Risers – Designed for use with small pallet machine tools and the 75mm platform top tooling.

Part Number Steel	Part Number Aluminum	Style	A (mm)	B (mm)	C (mm)	D (mm)	Bottom Center Bore	Mounting Type	Grid	Weight lbs (Kgs) Steel	Weight lbs (Kgs) Aluminum
5RS130001	5RS130004	Mini	130	50	75	70.3	50H7	QLS, 12mm LHCS	50mm x 50mm	8.21 (3.72)	2.84 (1.29)
5RS130002	5RS130005	Barbell Low	130	50	75	130	50H7	QLS, 12mm LHCS	50mm x 50mm	12.82 (5.82)	4.44 (2.01)
5RS130003	5RS130006	Barbell Tall	130	50	125	130	50H7	QLS, 12mm LHCS	50mm x 50mm	16.8 (7.62)	5.82 (2.64)
5RS250001	5RS250005	Barbell Low	250	50	75	250	50H7	QLS, 12mm LHCS	50mm x 50mm	88.6 (40.2)	20.5(9.3)
5RS250002	5RS250006	Barbell Tall	250	50	125	250	50H7	QLS, 12mm LHCS	50mm x 50mm	93.3 (42.3)	25.34 (11.5)

5-Axis Risers, Flanged, Rectangle or Square Style – Steel or Aluminum

Fixture-Pro® 5-Axis Risers raise, position and locate the part off the machine or rotary table so the part is accessible for machining all 5 sides. Mounts direct to QLS grid or tables with Fixture-Pro® Locating Keys and LHCS. Mounts to Fixture-Pro® subplate with center bore, timing pin and LHCS or QLS shoulder screws.

- Material: 1018 Steel or Aluminum
- Thickness Tolerance ±0.002 (.05mm)
- Flat & Parallel within: .0005"/Ft. (.013mm)
- Finish: Black Oxide or Anodize



= Jergens QLS

Quick Locating System (QLS) Bushings for shoulder screws that are hardened and ground to +/- 0.0003"

Square and Rectangle Risers – For use with 3-axis VMC's and 4-axis HMC's to reduce spindle dead zones. Mounts to table using T-Slots with SHCS & Jergens Sine Fixture Keys, or Fixture Pro® Locating Pins and Keys.



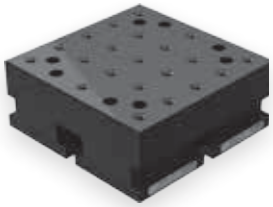
Tapered Flanged Riser



Straight Flanged Steel Riser



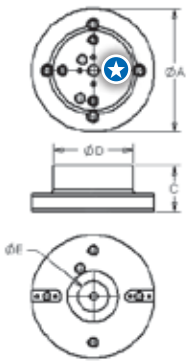
Tapered Flanged Steel Riser



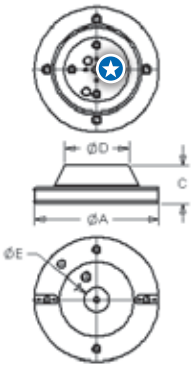
SQ Riser & Pallet



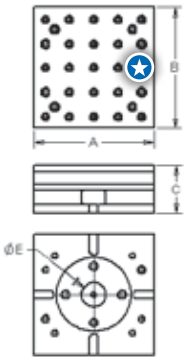
Rectangle Steel Riser



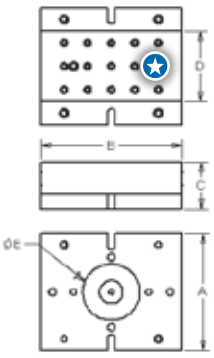
Straight Flanged Riser



Tapered Flanged Riser



Square Riser



Rectangle Riser

Part Number Steel	Part Number Aluminum	Style	A (mm)	B (mm)	C (mm)	D (mm)	E Bottom Center Bore	Mounting Type	Grid	Weight lbs (Kgs) Steel	Weight lbs (Kgs) Aluminum
5RS250003	**5RS250007**	Tapered Flanged	250	—	75	130	50H7	QLS, 12mm SHCS	50mm x 50mm	36.8 (16.7)	12.75 (5.78)
5RS250004	**5RS250008**	Tapered Flanged	250	—	125	130	50H7	QLS, 12mm SHCS	50mm x 50mm	53.2 (24.1)	18.42 (8.36)
5RS150001	**5RS150002**	Rectangle	250	300	100	150	50H7	QLS, 12mm SHCS	50mm x 50mm	87.0 (39.5)	30.67 (13.9)
5RS250009	**5RS250010**	Square	250	250	100	250	50H7	QLS, 12mm SHCS	50mm x 50mm	77.3 (35.1)	28.0 (12.7)
5RS200007*	**5RS200010***	Straight Flanged	200	—	75	130	50H7	QLS, 12mm SHCS	12mm x 50mm	24.0 (10.9)	8.4 (3.8)
5RS200008*	**5RS200011***	Straight Flanged	200	—	125	130	50H7	QLS, 12mm SHCS	12mm x 50mm	36.0 (16.4)	12.4 (5.6)

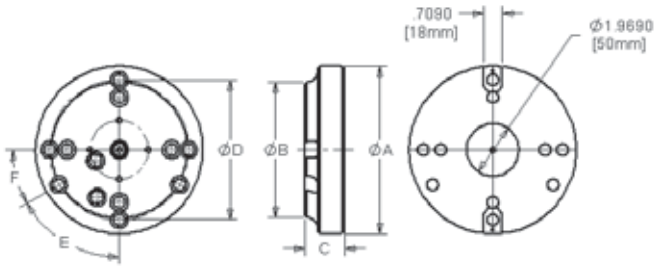
* 200mm risers are designed to work with rotary tables. If intended for use on Fixture-Pro® subplates, 4 extra mounting holes are needed. Call 877-426-2504 for assistance.

Universal Fixture-Pro® and ZPS Rotary Adapters

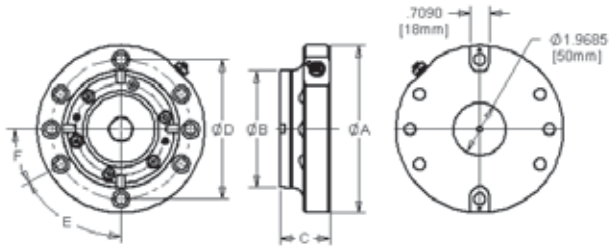


The new Fixture-Pro® Adaptor permits the easy mounting of Fixture-Pro® system QLS based vises, dovetail vises, collet holders and the Drop & Lock™ pallet changers for quick, flexible multi axis workholding on popular rotary indexers and trunions. ZPS systems from Jergens provide a single step to fix, position and clamp parts, reducing setup time by as much as 90%. At the same time, repeatability of +/- 0.0002" can be achieved.

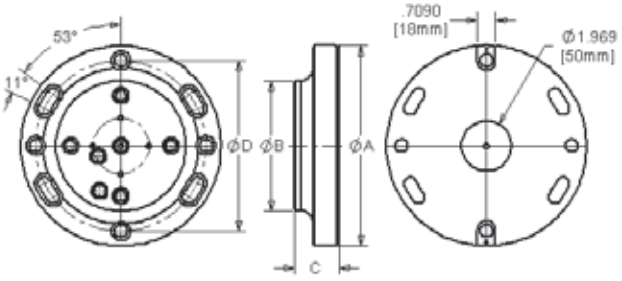
- Mounts to most rotary indexers face plates with 4 or 6 T-slots
- Fixture-Pro® model allows mounting of Jergens Fixture-Pro® top tooling
- ZPS model accepts air gun valve or standard fittings
- Material: Aluminum
- See page 51-52 for pull-studs and accessories.



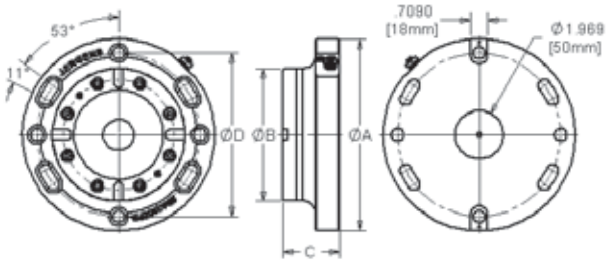
5RA160FP
ROATARY ADAPTER
Fixture-Pro



5RA160ZPS
ROTARY ADAPTER - ZPS



5RA200FP



5RA200ZPS

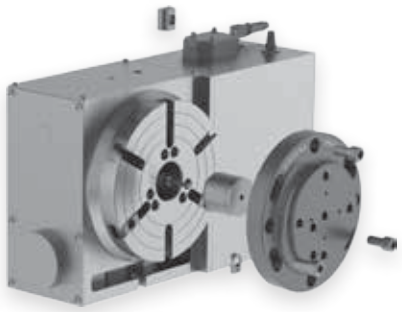
Part Number**	Type	A	B	C	D	E	F	Weight (LBS)
5RA160FP	Fixture Pro	160mm	130mm	38.1mm	133.4mm	60°	30°	3.62
5RA200FP	Fixture Pro	200mm	130mm	44.45	180mm	53°	11°	5.62

Part Number**	Type	A	B	C	D	E	F	Weight (LBS)
5RA160ZPS	ZPS	160mm	112mm	48.1mm	133.4m	60°	30°	5.9
5RA200ZPS	ZPS	200mm	138mm	59.45mm	170mm	53°	11°	10

***Center locator, timing key and mounting hardware sold separately*

Jergens-Haas Rotary Adapter Kits for 160mm and 210mm Platter Tables

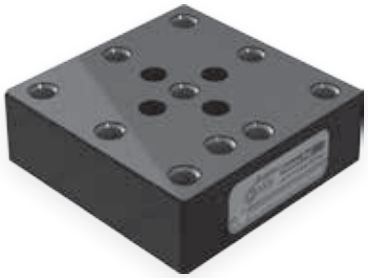
- Adapters available in multi-axis Fixture Pro® and ZPS
- Fixture-Pro® adapters are ideally suited for Jergens Drop & Lock™ pallet changers, vises or collet fixtures
- ZPS Adapters include low pressure ZPS clamping modules (51139; 51154)



Kit Part Number*	Description	Haas Rotary Tables	Table Size
5RA160FP-HAAS	160MM Fixture-Pro Adapter Kit	TR; HRT	160mm
5RA160ZPS-HAAS	160MM ZPS Adapter Kit	TR; HRT	160mm
5RA200FP-HAAS	200MM Fixture-Pro Adapter Kit	TR; HRC; HRT	210mm
5RA200ZPS-HAAS	200MM ZPS Adapter Kit	TR; HRC; HRT	210mm

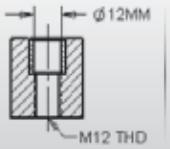
**All locating & mounting hardware for Haas kits included*

5-Axis Riser Top Plates



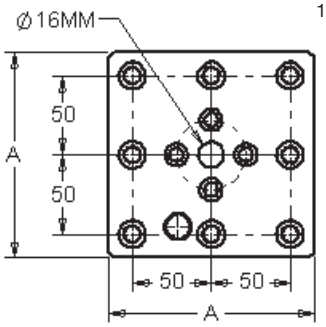
Convert the riser into a QLS grid for precision mounting of any workholding fixture, including the entire family of Fixture-Pro® Top Tooling. Available in square or round styles.

- Material: 1018 Steel
- Thickness Tolerance ±0.005 (.13mm)
- Flat & Parallel within: .0005"/ Ft. (.013mm)
- Includes: Hardened Bushings

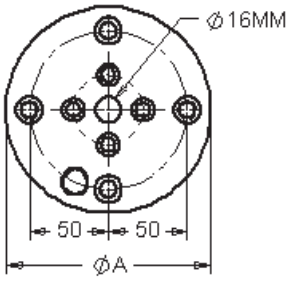


= Jergens QLS

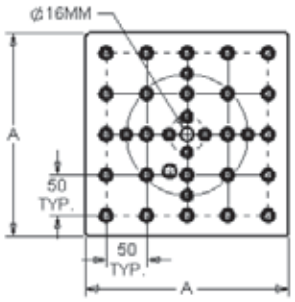
Quick Locating System (QLS) Bushings for shoulder screws that are hardened and ground to +/- 0.0003"

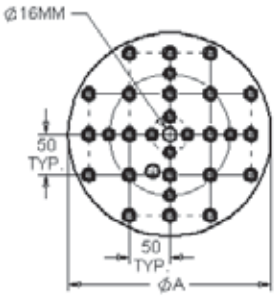


130mm



250mm





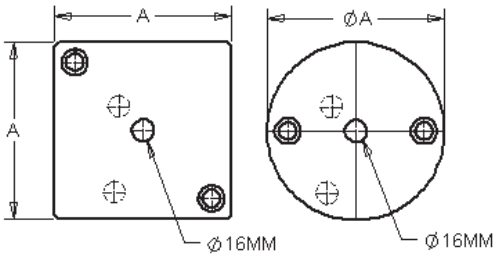
Part Number	Style	A (mm)	Thickness of Plate (mm)	Locating Method	Mounting Type	Mounting Grid	Weight lbs (Kgs)
5TP130002	Round	130	35	Center, Timing Pin	8mm SHCS	50mm x 50mm	7.09 (3.22)
5TP250002	Round	250	35	Center, Timing Pin	8mm SHCS	50mm x 50mm	27.02 (12.26)
5TP130001	Square	130	35	Center, Timing Pin	8mm SHCS	50mm x 50mm	8.97 (4.07)
5TP250001	Square	250	35	Center, Timing Pin	8mm SHCS	50mm x 50mm	34.81 (15.79)

5-Axis Blank Fixture Plates



Mount fixtures that already have mounting holes that do not match the QLS grid. Available in round and square styles.

- Material: 1018 Steel
- Thickness Tolerance ±0.005 (.13mm)
- Flat & Parallel within: .0005"/Ft. (.013mm)
- Includes: Hardened Bushings



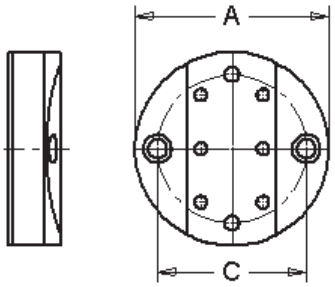
Part Number	Style	A (mm)	Thickness of Plate (mm)	Locating Method	Mounting Type	Weight lbs (Kgs)
5FP130002	Round	130	35	Center, Timing Pin	12mm SHCS	7.41 (3.36)
5FP250002	Round	250	35	Center, Timing Pin	12mm SHCS	28.65 (13)
5FP130001	Square	130	35	Center, Timing Pin	12mm SHCS	9.62 (4.36)
5FP250001	Square	250	35	Center, Timing Pin	12mm SHCS	36.78 (16.68)

5-Axis Vise Adapter Plates



Convert the Jergens 5-axis vise into a QLS grid for precision mounting of any Fixture-Pro® modular system part that requires a match with the QLS grid.

- Material: 1018 Steel
- Thickness Tolerance ±0.005 (.13mm)
- Flat & Parallel within: .0005"/Ft. (.013mm)
- Includes: Hardened Bushings
- Vise Adapter Plates Include:
  - 2 Vise Adapter Pins 5LP25M10
  - Vise Mounting Screws



Part Number	Style	A (mm)	B (Vise Part No.)	C (mm)	Thickness of Plate (mm)	Locating Method	Mounting Type	Weight lbs (Kgs)
5VA130001	Round	130	80001, 80401	100	35	QLS, Dowel Pin	12mm SHCS	6.9 (3.1)
5VA250001	Round	250	80101	200	35	Center, Timing, QLS	12mm SHCS	27 (12.2)
5VA130002	Round	130	80001, 80401	100	50	Quick Change Stud	20mm QCS	7.4 (3.4)
5VA250002	Round	250	80101	200	35	Quick Change Stud	20mm QCS	27.5 (12.5)

Vise Locator Adapter Pin 5LP25M10 Available. Please call 877-426-2504 for more information.

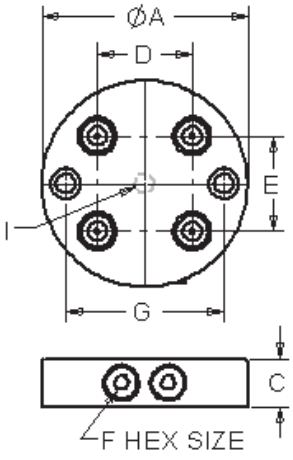
5-Axis Drop & Lock™ Pallet Changer - Round



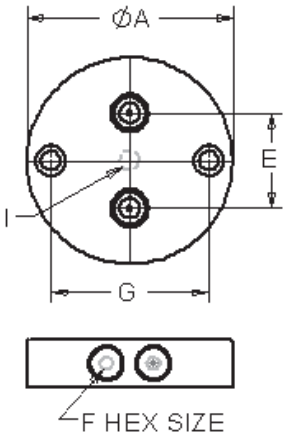
Mount parts or fixtures quickly to a machine. Available in Round and Square styles. Drop a fixture or vise into the Pallet Changer using the Fixture-Pro® pull stud system. With two quick turns of a hex wrench it's ready to machine. Drop it, Lock it, and go!

- Material: A2 Steel
- Hardness: 58-62 Rc
- Flatness: Ground .0002"/Ft.
- Thickness Tolerance: ±0.002
- Finish: Black Oxide

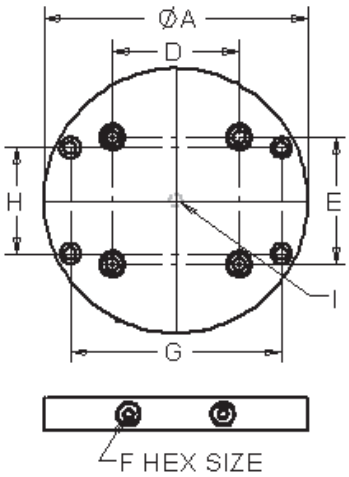
5QP130002
5QP130502



5QP130003



5QP250002
5QP250502



Metric Mounting

Part Number	Style	Configuration of Pins	A (mm)	C (mm)	D (mm)	E (mm)	Hex Size F (mm)	G (mm)	H (mm)	I (mm)	Locating	Mounting Type	Weight lbs (Kgs)	Pull Stud Size (mm)	Pull Stud Part No.
5QP130002	Round	4	130	30	60	60	8	100	-	12	Center Timing Pin, QLS	QLS, 12mm SHCS	5.8/2.6	20	5QP020
5QP250002	Round	4	250	30	120	120	8	200	100	12	Center Timing Pin, QLS	QLS, 12mm SHCS	23.9/10.8	20	5QP020
5QP130003	Round	2	130	30	60	60	8	100	-	12	Center Timing Pin, QLS	QLS, 12mm SHCS	6.0/2.7	20	5QP020

Inch Mounting

Part Number	Style	Configuration of Pins	A (in)	C (in)	D (in)	E (in)	Hex Size F (in)	G (in)	H (in)	I (in)	Locating	Mounting Type	Weight lbs (Kgs)	Pull Stud Size (mm)	Pull Stud Part No.
5QP130502	Round	4	5.118	1.181	2.362	2.362	0.315	4.000	-	0.5	Center Timing Pin, QLS	QLS, 1/2" SHCS	5.8/2.6	20	5QP020
5QP250502	Round	4	9.842	1.181	4.724	4.724	0.315	8.000	4.000	1.968	Center Timing Pin, QLS	QLS, 1/2" SHCS	27.0/12.2	20	5QP020

Note: 25 ft. lbs. max torque

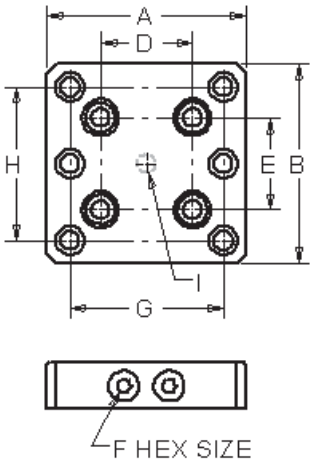
5-Axis Drop & Lock™ Pallet Changer - Square



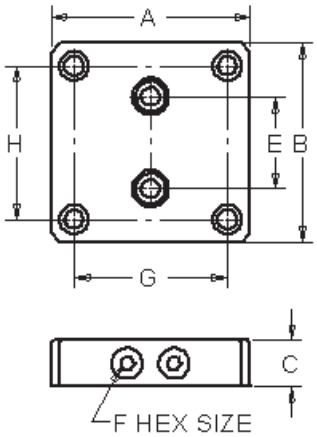
Mount parts or fixtures quickly to a machine. Available in Round and Square styles. Drop a fixture or vise into the Pallet Changer using the Fixture-Pro® pull stud system. With two quick turns of a hex wrench it's ready to machine. Drop it, Lock it, and go!

- Material: A2 Steel
- Hardness: 58-62 Rc
- Flatness: Ground .0002"/Ft.
- Thickness Tolerance: ±0.002
- Finish: Black Oxide

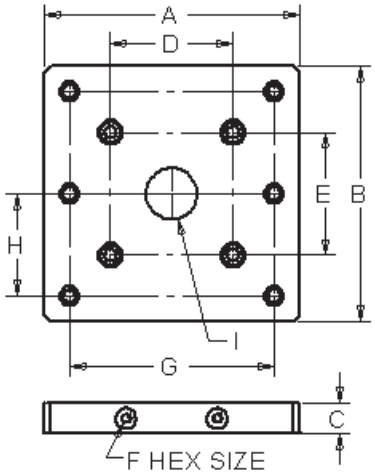
5QP130001
5QP130501



5QP130004



5QP250001



Metric Mounting

Part Number	Style	Configuration of Pins	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Hex Size F (mm)	G (mm)	H (mm)	I (mm)	Locating	Mounting Type	Weight lbs (Kgs)	Pull Stud Size (mm)	Pull Stud Part No.
5QP130001	Square	4	130	130	30	60	60	8	100	100	12	Center Timing Pin, QLS	QLS, 12mm SHCS	7.2/3.3	20	5QP020
5QP250001	Square	4	250	250	30	120	120	8	200	100	12	Center Timing Pin, QLS	QLS, 12mm SHCS	30.4/13.8	20	5QP020
5QP130004	Square	2	130	130	30	60	60	8	100	100	12	Center Timing Pin, QLS	QLS, 12mm SHCS	7.6/3.5	20	5QP020

Inch Mounting

Part Number	Style	Configuration of Pins	A (in)	B (in)	C (in)	D (in)	E (in)	Hex Size F (in)	G (in)	H (in)	I (in)	Locating	Mounting Type	Weight lbs (Kgs)	Pull Stud Size (mm)	Pull Stud Part No.
5QP130501	Square	4	5.118	5.118	1.181	2.362	2.362	0.315	4.000	4.000	0.500	Center Timing Pin, QLS	QLS, 1/2" SHCS	7.2/3.3	20	5QP020

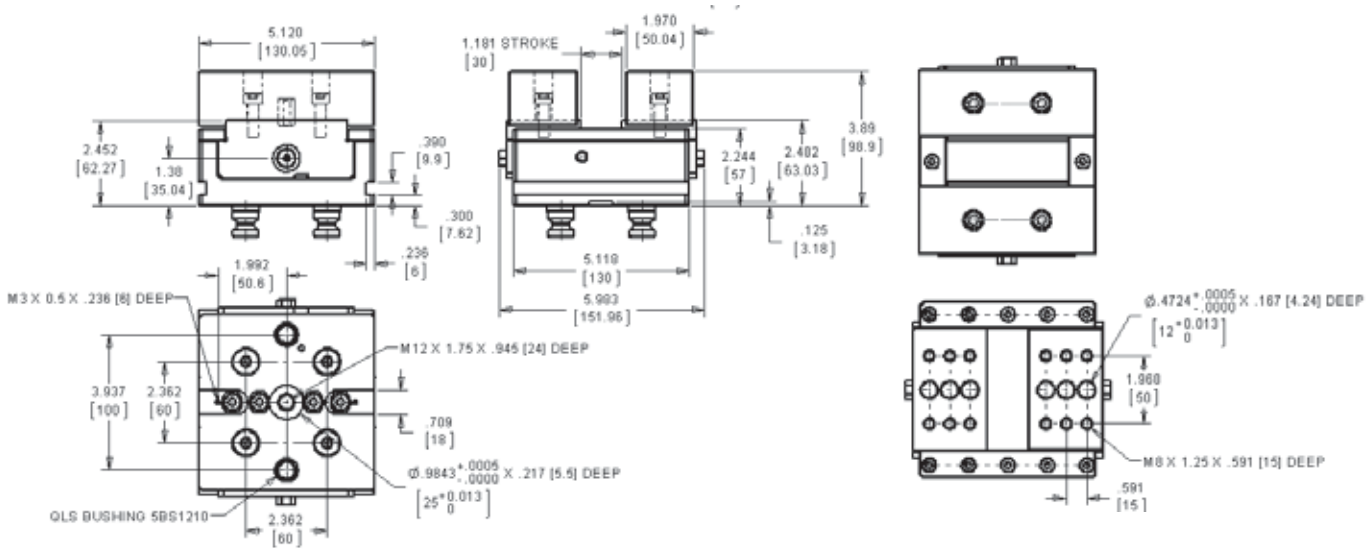
Note: 25 ft. lbs. max torque

5-Axis, Low Profile, 130mm Self-Centering Vise



Jergens' top tooling solutions now also include a 130 mm low profile vise for increased Z travel.

- Material: Steel
- Extends the work area for multiaxis applications
- Increases Z travel while maintaining the same characteristics as larger vises
- The rigid slide assembly design and sealed lead screw provide accuracy, repeatability and long service life
- Part of the industry-leading Fixture Pro® family
- Available in standard and Drop & Lock™ versions, for quickness and accuracy
- Full line of jaws and insert options on page 78



Part Number	Include Studs	Size	Weight	Clamping Force	Hex Wrench
5CV13011	No	130mm	12 lbs.	3400 # at 40 FP of Torque	12mm Included
5CV13012	Yes	130mm	12 lbs.	3400 # at 40 FP of Torque	12mm Included

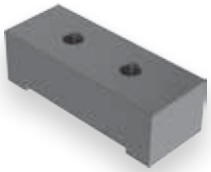
Note: One set of Aluminum Soft Jaws (5CV13011-ASJ) and wrench included with each vise.

5-Axis, Low Profile, 130mm Self-Centering Vise Accessories

Jaw Options



Aluminum Jaws



Soft Steel Jaws



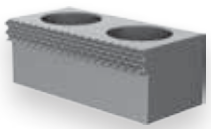
Hard Steel Insert Jaws

Part Number (set of 2 jaws)	Material	L (mm)	W (mm)	H (mm)	A (mm)	B (mm)	C* (mm)
5CV13011-ASJ	Blue Aluminum Jaw	50	130	40	50	4	12
5CV13011-SSJ	Soft Steel Jaw	50	130	40	50	4	12
5CV13011-SIJ	Hard Steel Insert Jaw	50	130	25	50	4	12

* Aluminum Jaws have external locator pin, Steel Jaws & Insert Jaws have hole 16mm deep. Jaws sold in sets of 2.

Jaw locator pin part number legend for above chart:
L=Length | W=Width | H=Height
A=Hole spacing | B=Bottom step | C=Jaw locator diameter

Insert Options



Serrated

Part Number	L (in)
5JISER.5	0.50
5JISER1.0	1.0
5JISER1.5	1.5

Inserts sold per each.



Peak

Part Number	L (in)
5JIDPK.5	0.50
5JIDPK1.0	1.0
5JIDPK1.5	1.5



Dovetail

Part Number	L (in)	Angle
5JIDOV.5	0.50	10°
5JIDOV1.0	1.0	10°
5JIDOV1.5	1.5	10°
5JIDOV30.5	.05	30°
5JIDOV301.0	1.0	30°
5JIDOV301.5	1.5	30°



Scalloped

Part Number	L (in)
5JISCA.5	0.50
5JISCA1.0	1.0
5JISCA1.5	1.5

Accessories



Hold Down

Part Number (set of 4)
5CV13011-HDC



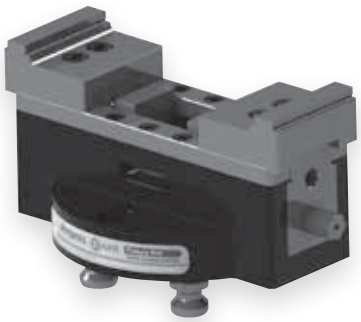
Side Stop Assembly

Part Number
5CV13011-SSA

* Screw size M12 not included

5-Axis, Low Profile, Heavy Duty, 60mm Self-Centering Vise

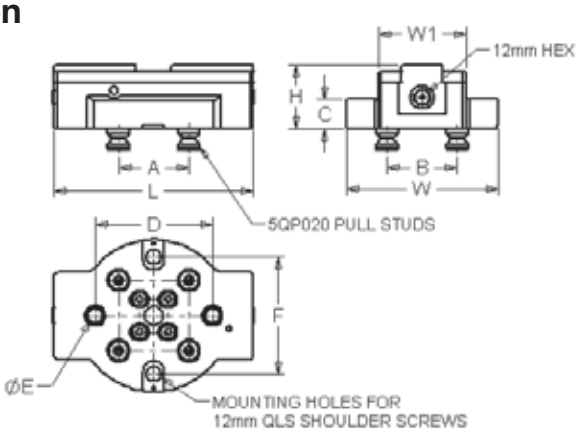
Quick change, high clamping force and precision



Ideal for maximizing machining capacity on vertical, horizontal and multi-axis machining centers, Jergens new quick change vises offer repeatability (+/- 0.0005") and multiple jaw and insert options.

Unique modular designs allow mounting styles including:

- Material: Steel
- Direct to Machine Table
- Fixture-Pro® Quick Change
- Drop & Lock™ Pallet Changers
- Zero Point System (ZPS)
- Jaws not included
- Full line of jaws on page 95-96
- Handle Included



Part Number	Include Studs	W1 Size	Clamping Force (kN/Torque Nm)	Weight (Kg)	L (mm)	W (mm)	H (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
5CV13001	—	60mm	15/50	5.6/2.5	170	130	67.6	60	60	25	100	16	100
5CV13002	Yes	60mm	15/50	5.6/2.5	170	130	67.6	60	60	25	100	16	100

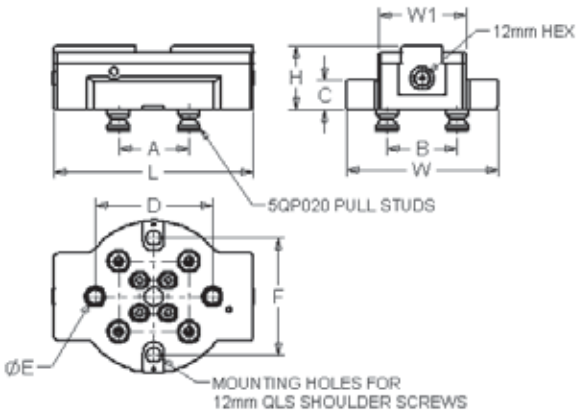
5-Axis, Low Profile, 75mm Self-Centering Vise



Ideal for maximizing machining capacity on vertical, horizontal and multi-axis machining centers, Jergens new quick change vises offer repeatability (+/- 0.0005") and multiple jaw and insert options.

Unique modular designs allow mounting styles including:

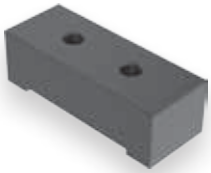
- Material: Steel
- Direct to Machine Table
- Fixture-Pro® Quick Change
- Drop & Lock™ Pallet Changers
- Zero Point System (ZPS)
- Aluminum jaws included
- Full line of jaws and insert options on page 80
- Handle Included



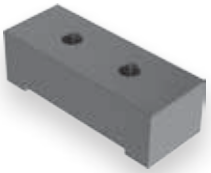
Part Number	Include Studs	W1 Size	Clamping Force (kN/Torque Nm)	Weight (Kg)	L (mm)	W (mm)	H (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
5CV13021	—	75mm	15.5/61	12/5.4	170	75	62	60	60	25	100	12	100
5CV13022	Yes	75mm	15.5/61	12/5.4	170	75	62	60	60	25	100	12	100

5-Axis, Low Profile, 75mm Self-Centering Vise Accessories

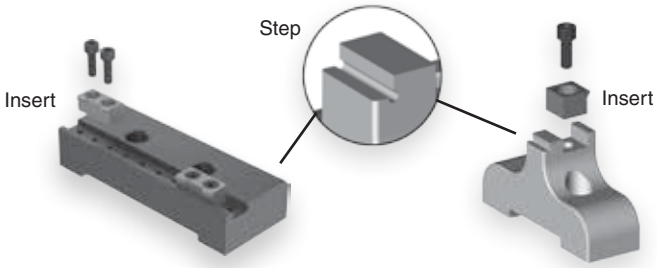
Jaw Options



Aluminum Jaws



Soft Steel Jaws



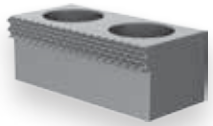
Hard Steel Insert Jaws

Part Number (set of 2 jaws)	Material	L (mm)	W (mm)	H (mm)	A (mm)	B (mm)	C* (mm)
5CV13021-ASJ	Blue Aluminum Jaw	50	75	40	26	4	12
5CV13021-SSJ	Soft Steel Jaw	50	75	40	26	4	12
5CV13021-SIJ	Hard Steel Insert Jaw	50	75	25	26	4	12
5CV13021-NIJ	Narrow Steel Insert Jaw	25	75	35	26	4	12

* Aluminum Jaws have external locator pin, Steel Jaws & Insert Jaws have hole 16mm deep. Jaws sold in sets of 2.

Jaw locator pin part number legend for above chart:
L=Length | W=Width | H=Height
A=Hole spacing | B=Bottom step | C=Jaw locator diameter

Insert Options



Serrated

Part Number	L (in)
5JISER.5	0.50
5JISER1.0	1.0



Peak

Part Number	L (in)
5JIDPK.5	0.50
5JIDPK1.0	1.0



Dovetail

Part Number	L (in)	Angle
5JIDOV.5	0.50	10°
5JIDOV1.0	1.0	10°
5JIDOV30.5	.05	30°
5JIDOV301.0	1.0	30°
5JIDOV301.5	1.5	30°



Scalloped

Part Number	L (in)
5JISCA.5	0.50
5JISCA1.0	1.0

Inserts sold per each.

Accessories



Side Stop Assembly

Part Number
5CV13011-SSA

* Screw size M12 not included

5-Axis Top Tooling – 130mm Dovetail Vises



Light Duty



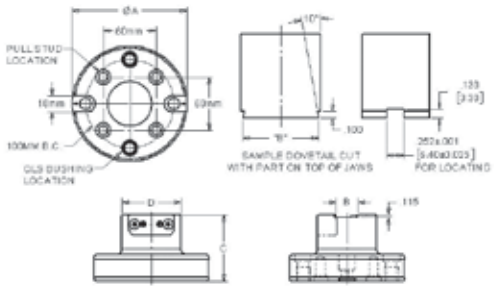
Heavy Duty

Mounts directly to a rotary table, Fixture-Pro® Riser or any QLS Grid. Reduces distortion of parts. Requires 0.060" or less material to clamp.

Cutting a 10° angle cut in the bottom surface of a machinable part allows for extremely high clamping forces while leaving all 5 sides accessible. The heavy duty 130mm version has higher torque and tilting moments than the standard 130mm Fixture-Pro® Dovetail Vise.

Dovetail cutter (part number 5DC3) available.

- Material: 1018 Steel
- Flat & Parallel within: .002"/Ft. (.05mm)
- Includes: Hardened Bushings
- Includes Center Locator Pin



Part Number	Pull Studs	Description	A (mm)	B (mm)	C (mm)	D (mm)	Locating	Mounting Type	Mounting Grid	Weight lbs (Kgs)	Dovetail Cutter P/N
5DV130002	—	130mm L.D. Dovetail Vise, Steel	130	25	75	50	Center, Timing Pin, QLS	12mm SHCS	12mm X 50mm	7.36 (3.34)	5DC3
5DV130003	—	130mm H.D. Dovetail Vise, Steel	130	28.6	75	65	Center, Timing Pin, QLS	12mm SHCS	12mm X 50mm	7.21 (3.27)	5DC3
5DV130004	4 Included	130mm H.D. Dovetail Vise, Steel	130	28.6	75	65	Center, Timing Pin, QLS (& Quick Change Stud)	12mm SHCS (& 20mm QCS)	12mm X 50mm (60mm X 60mm)	6.2 (2.8)	5DC3

5-Axis Top Tooling – Block Dovetail Vises





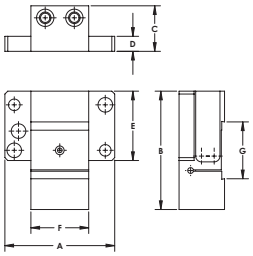
Mounts directly to a rotary table, Fixture-Pro® Riser or any QLS Grid. Reduces distortion of parts. Requires 0.060" or less material to clamp.

By cutting a 10° angle cut in the bottom surface of a machinable part it allows for extremely high clamping forces while leaving all 5 sides accessible.

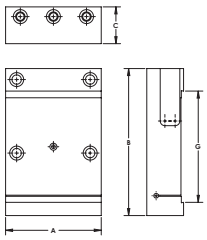
Dovetail cutter (part number 5DC3) available.

- Material: 1018 Steel
- Flatness: .002"/Ft.
- Flat & Parallel within: .002"/Ft. (.05mm)
- Includes: Hardened Bushings

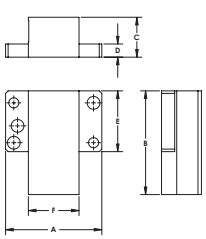
5DV200
5DV400



5DV600



5MB250

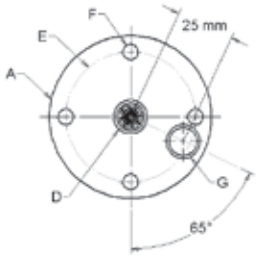


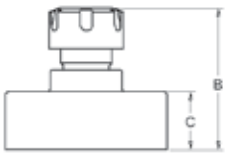
Part Number	Description	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Locating	Mounting Type	Mounting Grid	Weight lbs (Kgs)	Dovetail Cutter P/N
5DV200	Dovetail Pre-Cut Vise, Steel	120.7	130	50	16.5	76.2	63.5	62.5	Center, Timing Pin, QLS	12mm SHCS	12mm X 50mm	7.4 (3.3)	5DC3
5DV400	Dovetail Pre-Cut Vise, Steel	120.7	130	50	16.5	76.2	63.5	100.6	Center, Timing Pin, QLS	12mm SHCS	12mm X 50mm	7.2 (3.3)	5DC3
5DV600	Dovetail Pre-Cut Vise Steel	130	200	50	151.4	—	—	151.4	Center, Timing Pin, QLS	12mm SHCS	12mm X 50mm	19.7 (8.9)	5DC3
5MB250	Dovetail Machinable Vise Blank	120.7	130	50	16.5	76.2	63.5	—	Center, Timing Pin, QLS	12mm SHCS	12mm X 50mm	8.0 (3.6)	5DC3

5-Axis ER Collet Fixtures

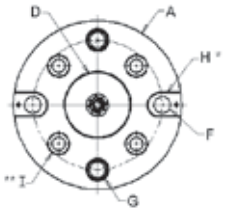


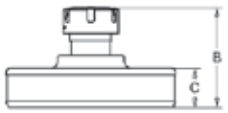
- Hardened alloy steel
- Excellent workholder for cylindrical parts
- Use with your existing ER Collets
- Direct interface with other Jergens Fixture-Pro® products
- Optional mounting styles available





ER70 Series





ER130 Series

** Holes for Drop & Lock pull stud 5QP020

Part Number	Collet Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	Wt. lbs. (kg)	Tightening (ft/lbs) over/under 1/16" (2 mm) Collets ID
5ER07001	16	70	61.0	25	12	56	M6	12	N/A	1.9 (0.9)	42/30
5ER07002	20	70	61.9	25	12	56	M6	12	N/A	1.9 (0.9)	59/24
5ER07003	25	70	62.4	25	12	56	M6	12	N/A	2.1 (0.9)	77/77
5ER13001	25	130	77.0	30	50	100	M12	12	18	6.3 (2.9)	77/77
5ER13002	32	130	78.0	30	50	100	M12	12	18	6.7 (3.0)	100/100
5ER13003	40	130	80.0	30	50	100	M12	12	18	7.3 (3.3)	130/130





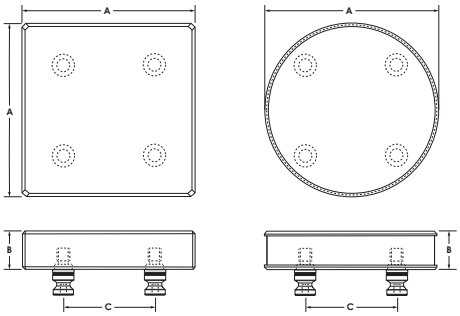
Please call 877-426-2504 for special order of Multi-Platform Fixture

5-Axis Machinable Blanks



Designed for 2nd operation machining. Blanks can be machined to accept parts and clamping systems.

- Material: 1018 Steel/6061 Aluminum
- Thickness: ±0.005 (.13mm)
- Pull Studs Included



Steel Part Number	Aluminum Part Number	Style	A (mm)	B (mm)	C (mm)	Locating	Mounting Type	Weight Steel (lbs /kg)	Weight Alum (lbs/kg)	Pull Stud Size	Pull Stud Part Number
5MB130002	**5MB130004**	Square	130	35	60	Quick Change Studs	20mm QCS	9.9 (4.5)	3.4 (1.6)	20	5QP020
5MB130003	**5MB130005**	Round	130	35	60	Quick Change Studs	20mm QCS	7.7 (3.5)	2.7 (1.2)	20	5QP020
5MB130008	-	Square	130	130	60	Quick Change Studs	20mm QCS	37.7 (17.1)		20	5QP020
-	**5MB130007**	Square	130	130	60	Quick Change Studs	20mm QCS	-	13.0 (5.9)	20	5QP020
5MB160002	**5MB160004**	Square	160	35	60	Quick Change Studs	20mm QCS	15.2 (6.9)	5.2 (2.4)	20	5QP020
5MB160003	**5MB160005**	Round	160	35	60	Quick Change Studs	20mm QCS	11.8 (5.4)	4.1 (1.8)	20	5QP020
5MB210002	**5MB210004**	Square	210	35	60	Quick Change Studs	20mm QCS	26.3 (11.9)	9.1 (4.1)	20	5QP020
5MB210003	**5MB210005**	Round	210	35	60	Quick Change Studs	20mm QCS	20.6 (9.3)	7.1 (3.2)	20	5QP020
5MB210006	**5MB210008**	Square	210	35	120	Quick Change Studs	20mm QCS	26.3 (11.9)	9.1 (4.1)	20	5QP020
5MB210007	**5MB210009**	Round	210	35	120	Quick Change Studs	20mm QCS	20.6 (9.3)	7.1 (3.2)	20	5QP020
5MB250002	**5MB250004**	Square	250	35	120	Quick Change Studs	20mm QCS	37.4 (17.0)	12.9 (5.9)	20	5QP020
5MB250003	**5MB250005**	Round	250	35	120	Quick Change Studs	20mm QCS	29.3 (13.3)	10.1 (4.6)	20	5QP020
5MB310002	**5MB310004**	Square	310	35	120	Quick Change Studs	20mm QCS	57.7 (26.2)	19.9 (9.0)	20	5QP020
5MB310003	**5MB310005**	Round	310	35	120	Quick Change Studs	20mm QCS	45.2 (20.5)	15.6 (7.1)	20	5QP020

Accessories
5-Axis Locating Pins

Locates subplates to machine rotary tables, risers to subplates, and mounts Fixture-Pro® Top Tooling directly to a rotary table.

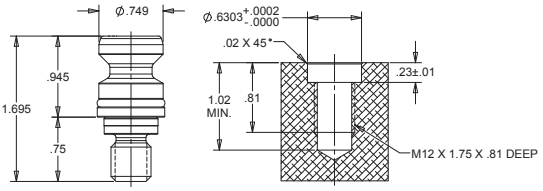
- Material: 1018 Steel
- Tolerance: ±0.0002 (.005mm)



Pull Studs

Adapt any machinable part or fixture directly to the part.
Use with our quick change Drop & Lock™ Pallet Changer.

Material	Hardness	Part Nnumber	Size	Weight (lbs / kg)
A2 Steel	50-54 Rc	5QP020	20mm	0.14 / 0.064



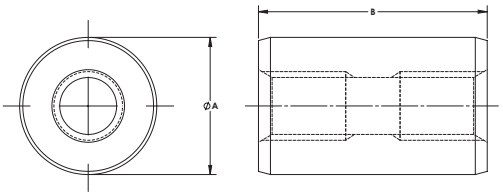


Center Locating Pins - Metric

Part Number	A (mm)	B (mm)	Thread	Weight lbs (Kgs)
5LP1220	12	20	M6	0.03 (.014)
5LP1225	12	25	M6	0.04 (.018)
5LP1230	12	30	M6	0.05 (.023)

Center Locating Pins - Inch

Part Number	A (mm)	B (mm)	Thread	Weight lbs (Kgs)	Extraction Tool
5LP50075	0.5	0.75	1/4-20	0.03 (.014)	5HW004
5LP500100	0.5	1	1/4-20	0.04 (.018)	5HW004
5LP500125	0.5	1.25	1/4-20	0.05 (.023)	5HW004

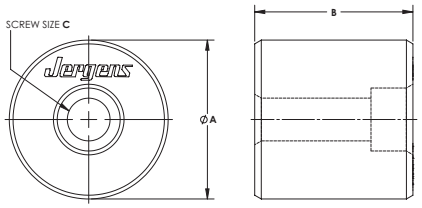


Center Locator Pins



Center Locator Pins, Long

Part Number	A (mm)	B (mm)	C Screw Size	Weight lbs (Kgs)
5LP5050	50	50	M12, 1/2 SHCS	1.49 (.68)
5LP5070	50	70	M12, 1/2 SHCS	2.11 (.96)
5LP5090	50	90	M12, 1/2 SHCS	2.73 (1.24)
5LP50110	50	110	M12, 1/2 SHCS	3.35 (1.52)



Center Locator Pins, Long

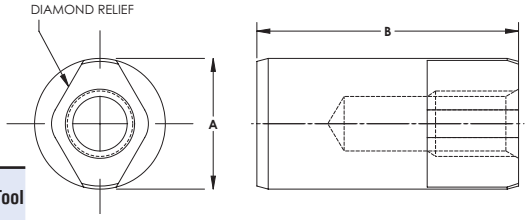


Diamond Timing Pins - Metric

Part Number	A (mm)	B (mm)	Thread	Weight lbs (Kgs)
5LP1220001	12	20	M6	0.03 (.014)
5LP1225001	12	25	M6	0.04 (.018)
5LP1230001	12	30	M6	0.05 (.023)

Diamond Timing Pins - Inch

Part Number	A (mm)	B (mm)	Thread	Weight lbs (Kgs)	Extraction Tool
5LP50075001	0.5	0.75	1/4-20	0.03 (.014)	5HW004
5LP500100001	0.5	1	1/4-20	0.04 (.018)	5HW004
5LP500125001	0.5	1.25	1/4-20	0.05 (.023)	5HW004

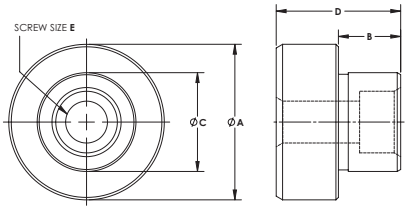


Diamond Timing Pins



Center Step Locator

Part Number	A (mm)	B (mm)	C in. (mm)	D (mm)	E Screw Size	Weight lbs (kg)
5LP1255020	50	20	1.25 (31.75)	40	M12, 1/2 SHCS	0.8 (.36)
5LP12512	1.25" (31.8 mm)	12	.472 (12)	27	N/A	0.2 (0.10)
5LP5050001	50	22	2.00 (50.8)	50	M12, 1/2 SHCS	1.5 (0.7)
5LP5050002	50	26	1.5 (38.1)	50	M12, 1/2 SHCS	1.2 (0.52)



Center Step Locator

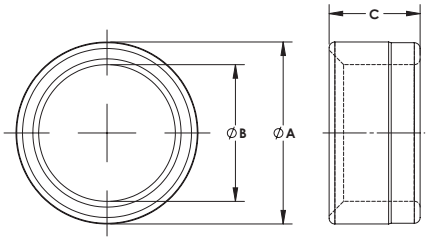
Accessories
5-Axis Quick Locating System (QLS) Bushings



Part Number	A (mm)	B (mm)	C (mm)	Weight lbs (Kgs)
5BS1210	16	12	10	.01 (.005)
5BS1212	16	12	12	.02 (.009)
5BS1216	16	12	16	.02 (.009)
5BS1232	16	12	32	.05 (.023)

Part Number	A (in)	B (in)	C (in)	Weight lbs (Kgs)
5BS500375	0.75	0.5	0.375	.01 (.005)
5BS500500	0.75	0.5	0.5	.02 (.009)
5BS500625	0.75	0.5	0.625	.02 (.009)
5BS5001375	0.75	0.5	1.375	.05 (.023)

- Steel Hardened and Ground
- Concentric within 0.0002" (0.005mm)



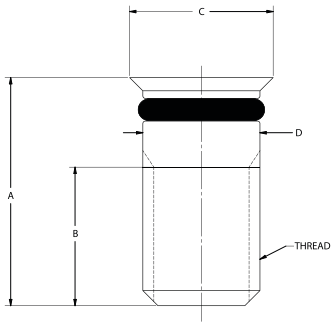
5-Axis Quick Locating System (QLS) Chip Plug*



Material: Brass
* O-ring included.

Part Number	A (mm)	B (mm)	C (mm)	D (mm)	Thread Size (mm)	Weight lbs (Kgs)
5PL12002	12	5.6	14	11.8	M12 X 1.75	.02 (.01)
5PL23002	23	14	14	11.8	M12 X 1.75	.04 (.02)
5PL30002	30	16	14	11.8	M12 X 1.75	.05 (.023)

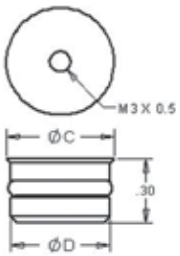
Part Number	A (in)	B (in)	C (in)	D (in)	Thread Size (in)	Weight lbs (Kgs)
5PL500001	0.5	0.3	0.57	0.50	1/2-13	.03 (.014)
5PL500002	1.0	0.6	0.57	0.50	1/2-13	.05 (.023)



Aluminum Chip Plug



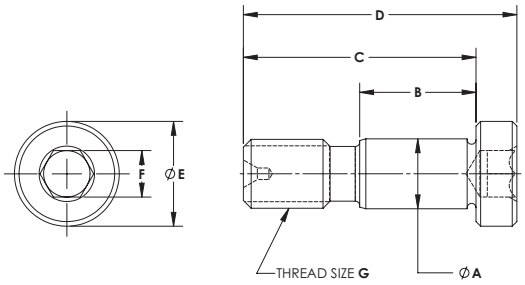
Part Number	C'Bore Hole Size (mm)	C (mm)	D (mm)	Weight (lbs/kgs)	Chip Plug Extractor Part Number
5PL12001	12	12.98	11.96	0.004 (0.002)	5HW004
5PL15001	15	15.98	14.96	0.007 (0.003)	5HW004
5PL16001	16	16.97	15.95	0.008 (0.004)	5HW004
5PL17001	17	18.01	16.99	0.009 (0.004)	5HW004
5PL18001	18	19.02	18.01	0.011 (0.005)	5HW004
5PL19001	19	20.02	19	0.012 (0.005)	5HW004
5PL20001	20	20.98	19.96	0.013 (0.006)	5HW004
5PL25001	25	25.98	24.97	0.021 (0.010)	5HW004



Accessories
5-Axis Quick Locating System (QLS) Shoulder Screws



- Steel Hardened and Ground
- "A" Diameter ±0.0003" (0.008mm)



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Hex Size F (mm)	Thread Size G (mm)	Weight lbs (Kgs)
5SH1220	12	20	40	47	18	8	M12 X 1.75	.09 (.04)
5SH1225	12	25	45	52	18	8	M12 X 1.75	.1 (.045)
5SH1230	12	30	50	57	18	8	M12 X 1.75	.11 (.05)
5SH1235	12	35	55	62	18	8	M12 X 1.75	.12 (.054)
5SH1240	12	40	60	67	18	8	M12 X 1.75	.13 (.06)
5SH1245	12	45	65	72	18	8	M12 X 1.75	.14 (.064)
5SH1250	12	50	70	77	18	8	M12 X 1.75	.15 (.07)

Part Number	A (in)	B (in)	C (in)	D (in)	E (in)	Hex Size F (in)	Thread Size G (in)	Weight lbs (Kgs)
5SH50075	0.5	0.75	1.375	1.625	0.74	0.313	1/2-13	.09 (.04)
5SH500100	0.5	1	1.625	1.875	0.74	0.313	1/2-13	.1 (.045)
5SH500125	0.5	1.25	1.875	2.125	0.74	0.313	1/2-13	.11 (.05)
5SH500150	0.5	1.5	2.125	2.375	0.74	0.313	1/2-13	.13 (.06)
5SH500175	0.5	1.75	2.375	2.625	0.74	0.313	1/2-13	.14 (.064)
5SH500200	0.5	2	2.625	2.875	0.74	0.313	1/2-13	.15 (.07)

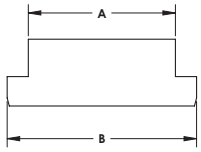
5-Axis Locating Keys

Part Number	Mounts to Riser Size (mm)	A in (mm)	B in (mm)	C (mm)	Weight lbs (kgs)
5LK1301812	130	.472 (12)	.709 (18)	25.26	.02 (.009)
5LK1301814	130	.551 (14)	.709 (18)	25.26	.02 (.009)
5LK1301816	130	.630 (16)	.709 (18)	25.26	.02 (.009)
5LK1301818	130	.709 (18)	.709 (18)	25.26	.03 (.014)
5LK13018500	130	.500 (12.7)	.709 (18)	25.26	.02 (.009)
5LK13018562	130	.562 (14.3)	.709 (18)	25.26	.02 (.009)
5LK13018625	130	.625 (15.9)	.709 (18)	25.26	.02 (.009)
5LK13018687	130	.687 (17.4)	.709 (18)	25.26	.03 (.014)
5LK2501812	250	.472 (12)	.709 (18)	48	.04 (.018)
5LK2501814	250	.551 (14)	.709 (18)	48	.05 (.023)
5LK2501816	250	.630 (16)	.709 (18)	48	.05 (.023)
5LK2501818	250	.709 (18)	.709 (18)	48	.06 (.027)
5LK25018500	250	.500 (12.7)	.709 (18)	48	.05 (.023)
5LK25018562	250	.562 (14.3)	.709 (18)	48	.05 (.023)
5LK25018625	250	.625 (15.9)	.709 (18)	48	.05 (.023)
5LK25018687	250	.687 (17.4)	.709 (18)	48	.06 (.027)

Used to adapt any of the Fixture-Pro® elements with bottom keyway slots for alignment to your machine table slots. Unique design accommodates socket head cap screws, which will tighten a T-nut to the T-slot in your machine.

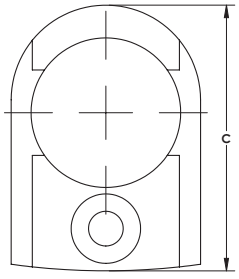


130





250

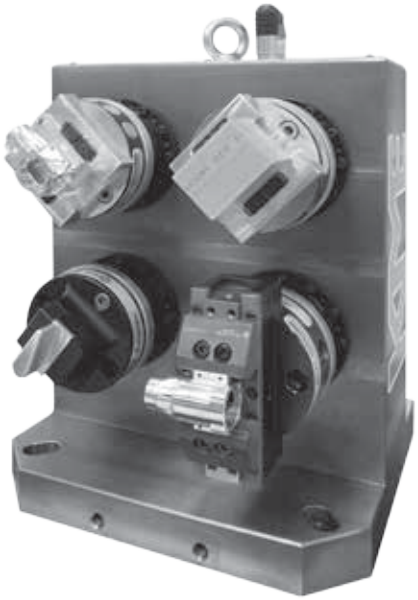


- Material: Steel, Case Hardened, 60 Rc
- Width (A) Tolerance: +0, -.0005
- Finish: Black Oxide
- Screws included

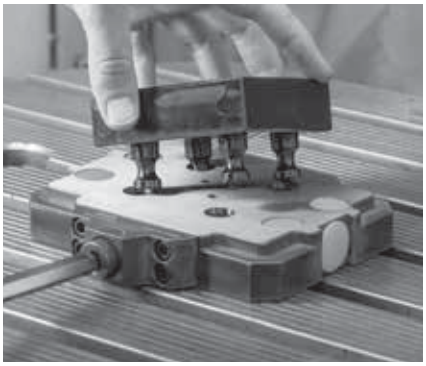
Fixture-Pro® components allow you to mount directly to a T-slot with our special through-hole machine keys, QLS bushings, and QLS shoulder screws. All hardware mounting methods can quickly be converted over and mounted to a different machine tool the next time you use the components.

Jergens – The Pallet Pros™

Offering the widest range of Manual Pallet Systems in the market



The most comprehensive range of manual pallet system solutions for quick change needs, with numerous key advantages that translate to increased productivity:



- Quick Set-Up
- Rapid Part Changeover
- Accurate & Repeatable
- 5 Axis Part Access
- Well-Suited for Custom Fixtures and Direct to Part Mounting
- Allow Parts to Remain in Original Clamping Through Multiple Operations
- Useful in Non-Cutting Operations
  - i.e. CMM – First Article Inspection

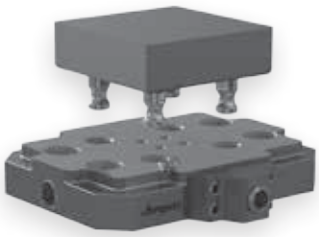
Drop & Lock™



QCB Series



Single Drive



Manual ZPS



Jergens Manual Pallet Systems

	Drop & Lock 130	Drop & Lock 250	QCB 1	QCB 2	4-Pin Pallet	Manual ZPS
Actuator	Double Hex Drive	Double Hex Drive	Single Hex Drive	Double Hex Drive	Single Hex Drive	Single Hex Drive
Clamping Pins	2 & 4 Pins	2 & 4 Pins	1 Pin	2 Pins	4 Pins	1 Pin
Mounting Pattern	Inch and Metric	Inch and Metric	Metric	Metric	Metric	Metric
Mounts to Fixture Pro® System	Yes	Yes	Yes	Yes	No	No
Mounting Pattern	100mm X 100mm	200mm X 100mm	200mm	100m X 200mm	120mm X 40mm	80mm
Pull-In/Locking Force 2 pin	6.2 kN (1,400 lbs)	6.2 kN (1,400 lbs)	N/A	N/A	6.5 kN (1,461 lbs)	10 kN (2250 lbs)
Pull-In/Locking Force 4 pin	7.6 kN (1,700 lbs)	7.6 kN (1,700lbs)				
Holding Force	133 kN (30,000 lbs)	134 kN (30,000 lbs)	12 kN (2,700 lbs)	40 kN (9,000 lbs)	50 kN (11,240 lbs)	55 kN (12,350 lbs)
Tightening Torque	33.9 Nm (25.0 lb/ft)	33.9 Nm (25.0 lb/ft)	20 Nm (14.8 lb/ft)	60 Nm (44.2 lb/ft)	80 Nm (59.0 lb/ft)	30 Nm (22.1 lb/ft)
Repeatability	+/- .013mm (0.0005)	+/- .013mm (0.0005)	+/- 0.04mm (0.0016)	+/- 0.04mm (0.0016)	+/- 0.005mm (0.0002)	+/- 0.01mm (0.0004)

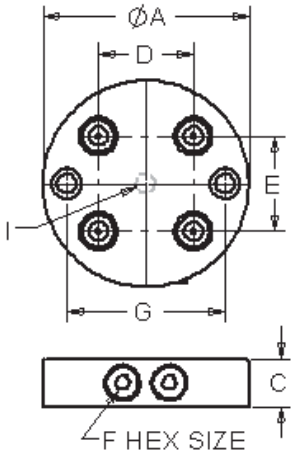
5-Axis Drop & Lock™ Pallet Changer - Round



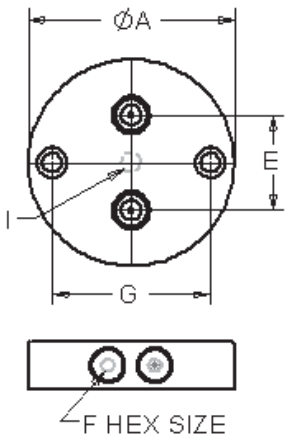
Mount parts or fixtures quickly to a machine. Available in Round and Square styles. Drop a fixture or vise into the Pallet Changer using the Fixture-Pro® pull stud system. With two quick turns of a hex wrench it's ready to machine. Drop it, Lock it, and go!Material: A2 Steel

- Hardness: 58-62 Rc
- Flatness: Ground .0002"/Ft.
- Thickness Tolerance: ±0.002
- Finish: Black Oxide

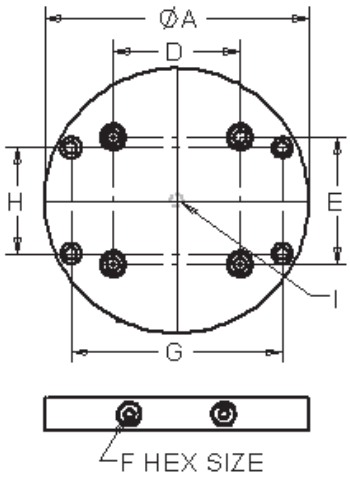
5QP130002
5QP130502



5QP130003



5QP250002
5QP250502



Metric Mounting

Part Number	Style	Configuration of Pins	A (mm)	C (mm)	D (mm)	E (mm)	Hex Size F (mm)	G (mm)	H (mm)	I (mm)	Locating	Mounting Type	Weight lbs (Kgs)	Pull Stud Size (mm)	Pull Stud Part No.
5QP130002	Round	4	130	30	60	60	8	100	-	12	Center Timing Pin, QLS	QLS, 12mm SHCS	5.8/2.6	20	5QP020
5QP250002	Round	4	250	30	120	120	8	200	100	12	Center Timing Pin, QLS	QLS, 12mm SHCS	23.9/10.8	20	5QP020
5QP130003	Round	2	130	30	60	60	8	100	-	12	Center Timing Pin, QLS	QLS, 12mm SHCS	6.0/2.7	20	5QP020

Inch Mounting

Part Number	Style	Configuration of Pins	A (in)	C (in)	D (in)	E (in)	Hex Size F (in)	G (in)	H (in)	I (in)	Locating	Mounting Type	Weight lbs (Kgs)	Pull Stud Size (mm)	Pull Stud Part No.
5QP130502	Round	4	5.118	1.181	2.362	2.362	0.315	4.000	-	0.5	Center Timing Pin, QLS	QLS, 1/2" SHCS	5.8/2.6	20	5QP020
5QP250502	Round	4	9.842	1.181	4.724	4.724	0.315	8.000	4.000	1.968	Center Timing Pin, QLS	QLS, 1/2" SHCS	27.0/12.2	20	5QP020

Note: 25 ft. lbs. max torque

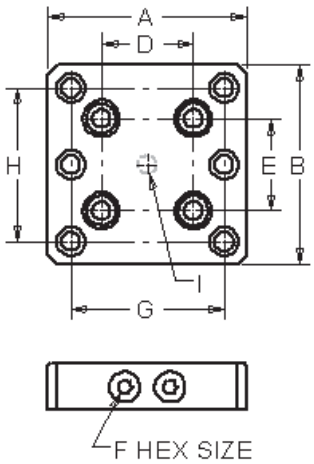
5-Axis Drop & Lock™ Pallet Changer - Square



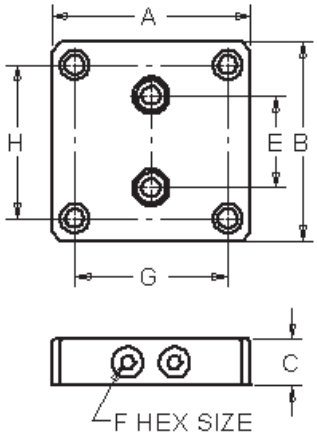
Mount parts or fixtures quickly to a machine. Available in Round and Square styles. Drop a fixture or vise into the Pallet Changer using the Fixture-Pro® pull stud system. With two quick turns of a hex wrench it's ready to machine. Drop it, Lock it, and go!

- Material: A2 Steel
- Hardness: 58-62 Rc
- Flatness: Ground .0002"/Ft.
- Thickness Tolerance: ±0.002
- Finish: Black Oxide

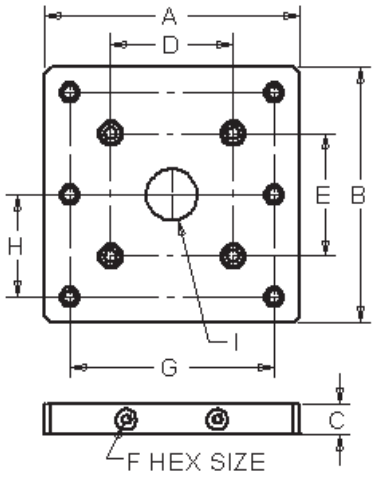
5QP130001
5QP130501



5QP130004



5QP250001



Metric Mounting

Part Number	Style	Configuration of Pins	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Hex Size F (mm)	G (mm)	H (mm)	I (mm)	Locating	Mounting Type	Weight lbs (Kgs)	Pull Stud Size (mm)	Pull Stud Part No.
5QP130001	Square	4	130	130	30	60	60	8	100	100	12	Center Timing Pin, QLS	QLS, 12mm SHCS	7.2/3.3	20	5QP020
5QP250001	Square	4	250	250	30	120	120	8	200	100	12	Center Timing Pin, QLS	QLS, 12mm SHCS	30.4/13.8	20	5QP020
5QP130004	Square	2	130	130	30	60	60	8	100	100	12	Center Timing Pin, QLS	QLS, 12mm SHCS	7.6/3.5	20	5QP020

Inch Mounting

Part Number	Style	Configuration of Pins	A (in)	B (in)	C (in)	D (in)	E (in)	Hex Size F (in)	G (in)	H (in)	I (in)	Locating	Mounting Type	Weight lbs (Kgs)	Pull Stud Size (mm)	Pull Stud Part No.
5QP130501	Square	4	5.118	5.118	1.181	2.362	2.362	0.315	4.000	4.000	0.500	Center Timing Pin, QLS	QLS, 1/2" SHCS	7.2/3.3	20	5QP020

Note: 25 ft. lbs. max torque

5-Axis Quick Clamping Block

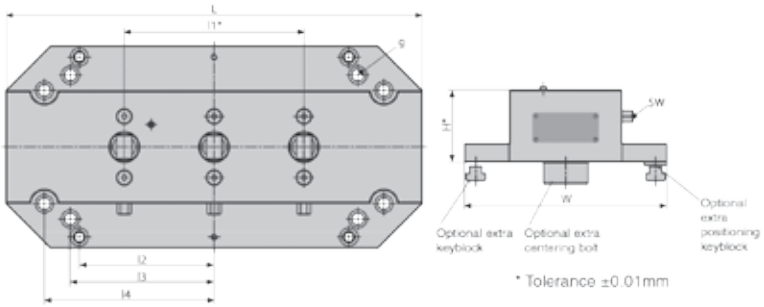


The Jergens 5-Axis Quick Change System (QCB) is an ideal partner for the Jergens 5-Axis Clamping System. The QCB changes the workpiece position on 5-Axis machining centers. This helps reduce interference for the tool.

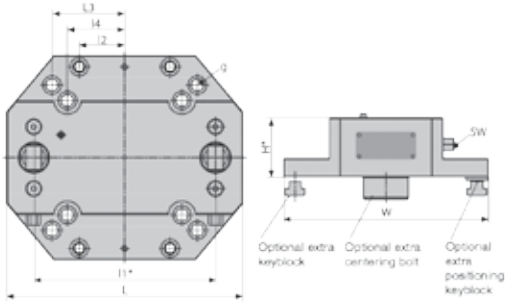
Rapid and precise change of clamping elements optimize efficiency. The QCB with its integral mechanical Zero-Point Clamping System provides you with the ability to increase productivity and lower costs.

Model	Part Number	L	W	H*	g	l1*	12	13	14	Socket Wrench	Feeding Force (kN/Nm)	Weight (Kg)
QCB 1	**80600**	225	80	72	KM12	100	100	–	–	8	12/60	9
QCB 2	**80700**	260	225	65	KM12	200	50	80	63	13	2x 20/80	18
QCB 3	**80800**	464	225	80	KM12	200	150	160	189	13	3x 20/80	42

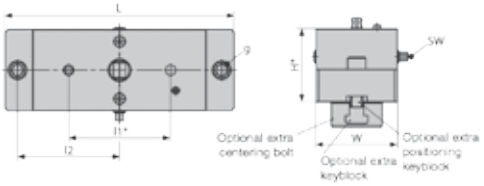
QCB 3



QCB 2



QCB 1



Fastening & Positioning Accessories

Centering Bolts for QCB 1, 2, 3

Part Number	Ø (mm)	L
80610	D 30 g6	15/38
80615	D 32 g6	15/38
80620	D 50 g6	25/48
80625	D 50 g6	18/41

Centering Bolts, Set

Part Number	Models
80630	QCB 1/80001 + 81001
80710	QCB 2/80101 + 81101
80810	QCB 3/80201

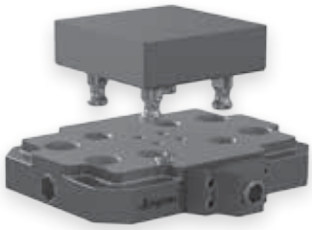
Positioning Keyblock with Screws for QCB 1, 2, 3

Part Number	T-Slot (mm)
80640 DIN 6322, 1 pc.	14

Keyblock with Screws for QCB 1, 2, 3

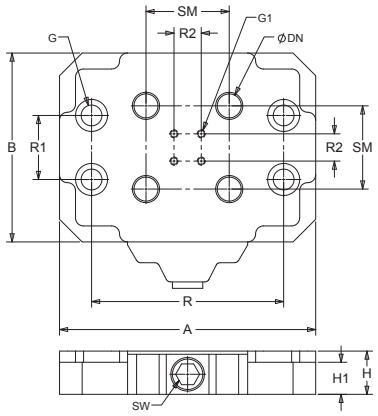
Part Number	T-Slot (mm)
80650 DIN 508, 4 pcs.	14

Manual 4-Pin Pallet



The Jergens 4-Pin Pallet is a quick and easy way to change fixtures or workpieces. The fixture or workpiece is outfitted with 4 pull studs that fit into the pallet changer. Rotating a single hex drive pulls down and locks the fixture or workpiece to the pallet. Pallets can be mounted to multiple machines allowing the fixture to be moved, located and clamped to each of the machine tools.

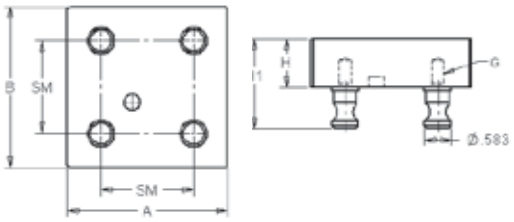
- Case-hardened steel Drive Actuation
- Repeatability 0.005mm (0.0002 in)
- Direct to Table Mounting
- Mechanical Clamping & Unclamping
- Accurate Four Pin Design
- Single Hex
- Utilize Available Machinable Blanks



Part Number	Size	Pull-in Locking Force up to kN / (lbs)	Holding Force kN / (lbs)	Tightening Torque Nm / (ft. lbs)	A	B	DN	G	G1	H ± .01	H1	R	R1	R2	SM	SW	Weight (kgs)
550492	52	6 / (1349)	50 / (11240)	20 / (15)	160	118	15	M12	M5	27	20	120	40	17	52	13	3.5

Machinable Pallet Blank with Pull Studs

- Steel, burnished.
- Complete with 4 Pull Studs
- Repeatability 0.005 mm. (0.0002 in.)

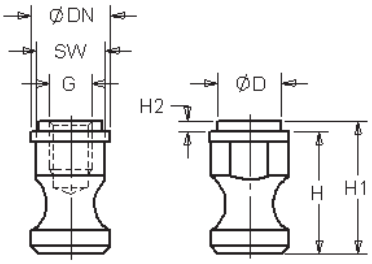


Part Number	Size	A	B	dia. DN	G	H	H1	SM	Weight (g)
535674	52	90	90	15	M8	27	50	52	1793

Pallet Pull Stud



- Tempered steel, burnished



Part Number	Size	dia. D	dia. D1	dia. DN	E	G	H	H1	H2	Screw ISO 4762	Screw DIN 933	SW	Weight (g)
535690	52	12	12	20	2,0	M8	24	25	2	M8	M8x20	13	21

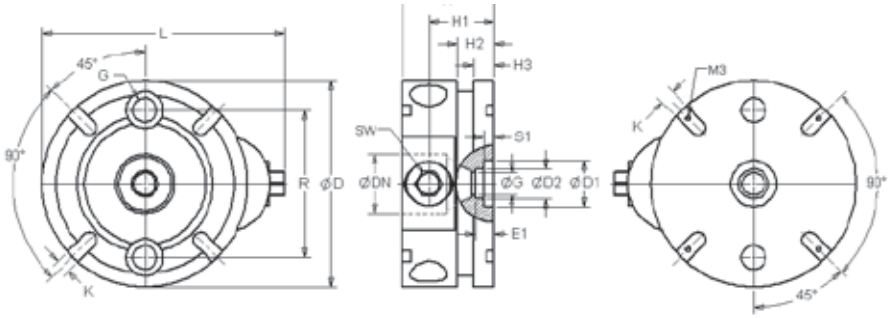
Manual ZPS

Ideal when Pneumatic and Hydraulic connections are not available

The manual ZPS modules provide locating and clamping with single bolt actuation. The indexing slots on the face of the modules allow workpieces to be indexed in 90° increments. Indexing slot plugs are available for applications where only specified slots are needed.

- Direct Quick Change Mounting to Mechanical clamping and unclamping
- Quenched and tempered steel
- Repeatability 0.01 mm (0.0004 in.)
- Single Hex Drive Actuation
- Flexible Mounting & Placement
- Two Sizes Available – K10 & K20
- Eliminates Need for Air or Hydraulic Connection



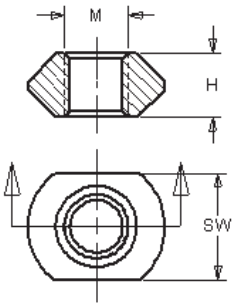


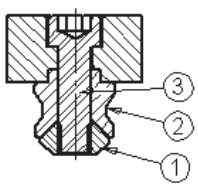
Part Number	Size	Pull-in / Locking Force kN / (lbs)	Holding Force kN / (lbs)	Tightening Torque Nm / (ft. lbs)	D	D1 ±.01	D2	DN	E1	G	H ±.01	H1	H2	H3	K F6	L	R	S1	SW	Weight (Kgs)
550820	K10	6 (1349)	25 (5620)	30 (22.1)	78	15	15	22	4,5	M8	32	22	-	-	8	93	50	-	10	1.03
550491	K20	10 (2248)	55 (12364)	30 (22.1)	112	25	16	32	10,0	M12	50	32,5	20	11	8	132	80	5,5	13	3.30

Pull Stud Clamping Nuts



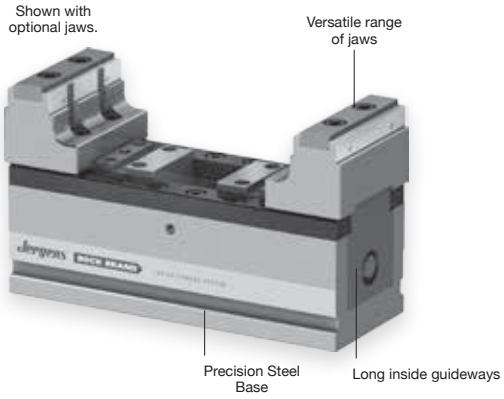
Part Number	Size	M	SW	H	Weight
429969	K5	M6	10	6	3
429985	K10	M8	14	8	8
430009	K20	M12	21	14	26
430025	K40	M16	28	17	50





1 = PULL STUD CLAMPING NUT
2 = PULL STUD
3 = SOCKET HEAD SCREW

5-Axis Self-Centering Vises



This series is suitable for many clamping tasks on 5-Axis machining centers and pallet systems. Whether the workpieces are angular or round, the concentric clamping system provides the same zero position.

The compact design, high stability and versatile selection of jaws (grip jaws, plain jaws, soft jaws, pendulum jaws, V-Type jaws) are additional features tailored for 5-Axis machining.

The 40, 60, 100 and 125 clamping systems are suitable for I.D. to O.D. clamping.

- Designed for 5-Axis machining
- Free access to the workpiece, allowing the use of short standard tools
- Simple, robust construction, smooth surfaces for easy cleaning
- Also suitable as a module for standard devices
- Comprehensive jaw selection sold separately on pages 95-96

Part Number	Size	Clamping Force: (kN/Torque Nm)	Weight (Kg)	Dimensions (mm)												Hex (mm)
				Stroke	L	W	H	d1	g	g1	g2	l1	l2	l3	l4	
81601	40mm	8.0 / 23 Nm	1.4	20	110	40	52	6H7			M6 x 7	80	40	28	15	6 Male
80001	60mm	15 / 50 Nm	6	30	170	60	70	10F7		M10 x 11	M8 x 12	100	36	42	35	12 Female
80101	100mm	25 / 80 Nm	18	50	260	100	100	25 x 5 / M10 x 14	M8 x 11		M10 x 14	200	80	70	30	14 Female
80201	125mm	30 / 200 Nm	50	100	465	125	130	25 x 5 / M10 x 14	M12 x 18		M12 x 16	200	82	66	83	19 Female

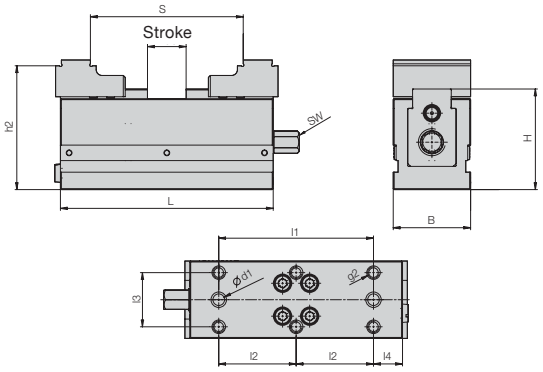
Note: Vise handles included with each Jergens 5-Axis Vise

* Tolerance ±0.01mm

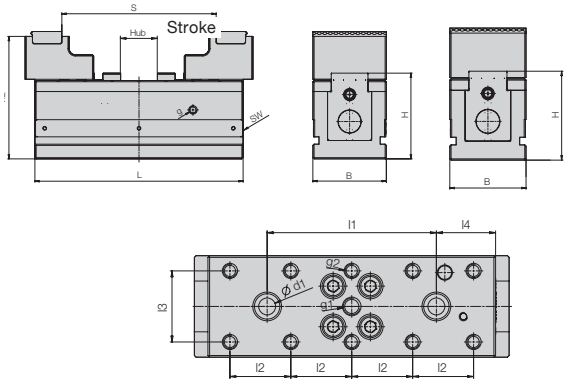
⁑ kN x 224.8=pound - force Nm x 8.85=in. lbs Kg x 2.205=lbs Bar x 14.5=psi

** Tolerance ±0.02mm

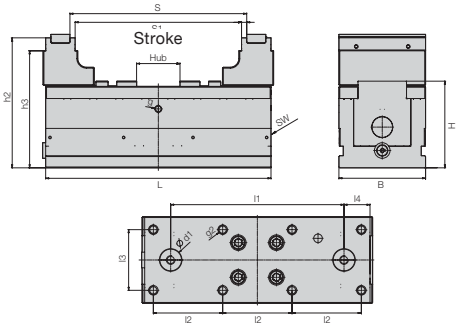
40mm



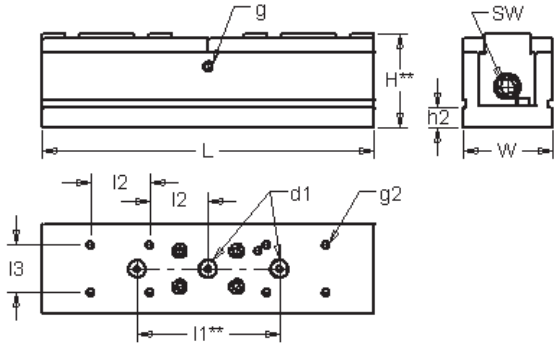
60mm



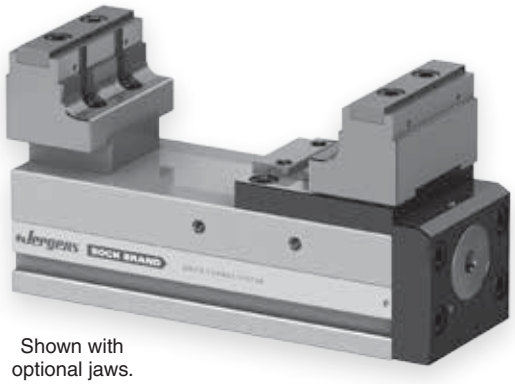
100mm



125mm



Jergens 5-Axis Fixed-Jaw Vise



Shown with optional jaws.

Designed especially for multi-face machining with a single clamping operation. Ideal for machining complicated workpieces in a single clamping operation, such as in mold making. These vises are small, but have a large holding capacity. A variety of jaw options increase the range of applications. Grip jaws and V-type jaws enhance the retention force of the workpiece. The hydraulic version provides automatic power clamping with exact force.

- Designed for 5-Axis machining
- Free access to the workpiece, allowing the use of short standard tools
- Simple and robust construction, smooth surfaces, easy cleaning
- Also suitable as a module for standard devices
- Comprehensive jaw selection sold separately on pages 95-96

Part Number	Size	Clamping Force‡ (kN/Torque Nm)	Weight (Kg)	Dimensions (mm)												Hex (mm)
				Stroke	L	W	H	d1	g	g1	g2	l1	l2	l3	l4	
80301	40mm	8 / 15 Nm	1.8	29	128	40	52	6H7	–	–	M6 x 7	80	40	28	15	6 Female
80401	60mm	15 / 25 Nm	5	44	187	60	70	10F7	M6 x 10	M10 x 11	M8 x 12	100	36	42	35	8 Female
80501	60mm Hyd	15 / 260 bar	5	4	204	60	70	10F7	M6 x 10	M10 x 11	M8 x 12	100	36	42	35	8 Female
80901	100mm	25 / 60Nm	20	96	285	100	100	25x5/M10x14	M10 x 16		M10 x 15	200	80	70	30	12 Female

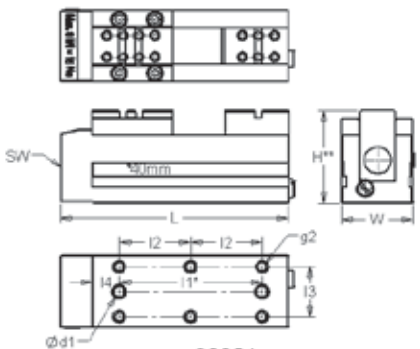
Note: Vise handles included with each Jergens 5-Axis Vise

‡ kN x 224.8=pound - force Nm x 8.85=in. lbs Kg x 2.205=lbs Bar x 14.5=psi

* Tolerance ±0.01mm

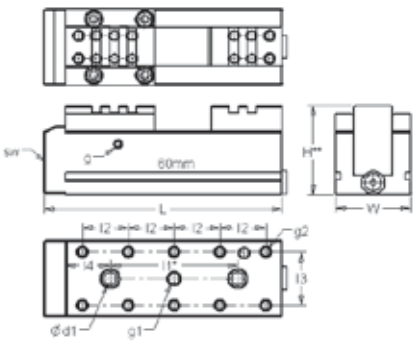
** Tolerance ±0.02mm

40mm



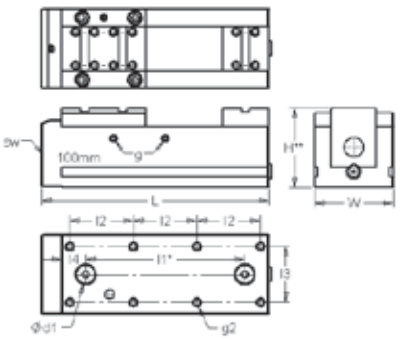
80301

60mm / 60mm Hyd



80401, 80501

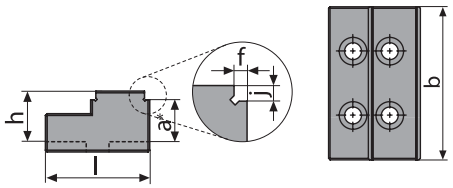
100mm



80901

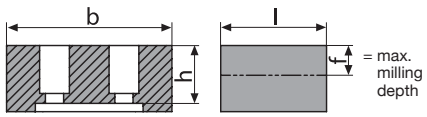
Accessories
Jaws / Jaw Inserts
Self-Centering and Fixed Jaw Vises

Reversible step jaw, 2 steps, hardened



Part Number	Vise(s)	Dimensions (mm)						Clamping Range min./max. (mm)
		l	w	h	a*	e	j	
80009	81601 / 80301	36	40	15	12	3	3	6 – 79
80010	80001 / 80401 / 80501	49	60	23	18	3	5	6 – 150
80110	80101 / 80901 / 80102	60	100	30	25	3	5	6 – 204
80211	80201	80	125	35	30	5	5	6 – 400

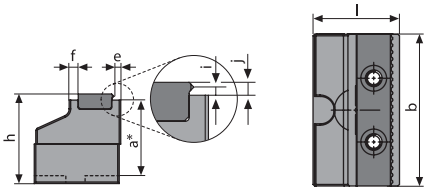
Soft jaw for milling workpiece contours



Part Number	Vise(s)	Dimensions (mm)				Material
		l	w	h	f	
80005	81601 / 80301	36	40	21	6	Steel
80015	80001 / 80401 / 80501	42	60	25	8	Steel
80115	80101 / 80102 / 80901	64	100	35	18	Steel
80215	80201	88	125	55	32	Steel
80013	80001 / 80401 / 80501	53	60	22	8	Aluminum

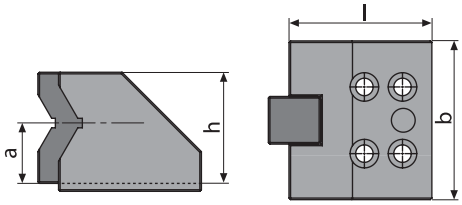
Pendulum jaw with interchangeable insert, hardened

For safe clamping of one workpiece with non-parallel clamping surfaces or two workpieces with different tolerances.



Part Number	Vise(s)	Dimensions (mm)								Clamping Range min./max. (mm)
		l	w	h	a**	e	f	l	j	
80120	80101 / 80102 / 80901	56	100	54	50	4.5	6	2.5	4	12 – 204
80220	80201	88	125	66	62	4.5	6	2.5	4	12 – 400

V-Type jaw with clamping inserts

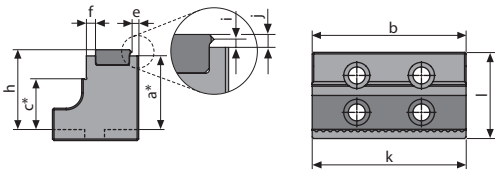


Part Number	Vise(s)	Dimensions (mm)				Clamping Range min./max. (mm)
		l	w	h	a	
80030	80001 / 80301	60	60	70	40	D10-76
80130	80101 / 80102 / 80901	64	100	70	38	D12-80

* Tolerance ±0.01mm
** Tolerance ±0.02mm

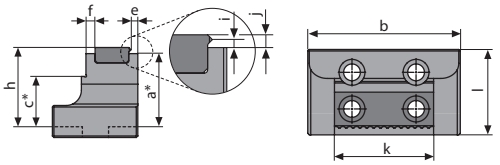
Accessories
Jaws / Jaw Inserts
Self-Centering and Fixed Jaw Vises

Step Jaw with Hardened Jaw Insert (Wide)



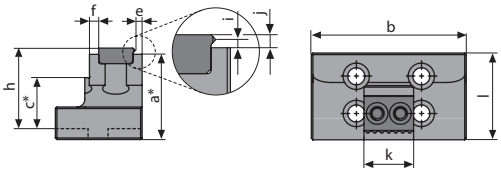
Part Number	Vise(s)	Dimensions (mm)										Clamping Range min./max. (mm)
		l	w	h	a*	c*	e	f	i	j	k	
80035	80001 / 80301	56	60	34	30		4.5	6	2.5	4	60	12 – 126
80135	80101 / 80901 / 80102	56	100	54	50	35	4.5	6	2.5	4	100	44 – 192
80235	80201	88	125	66	62	42	4.5	6	2.5	4	125	96 – 388

Step Jaw with Hardened Jaw Insert (Medium)



Part Number	Vise(s)	Dimensions (mm)										Clamping Range min./max. (mm)
		l	w	h	a*	c*	e	f	i	j	k	
80040	80001 / 80301	56	60	34	30		4.5	6	2.5	4	35	12 – 126
80140	80101 / 80901 / 80102	56	100	54	50	35	4.5	6	2.5	4	65	12 – 204
80240	80201	88	125	66	62	42	4.5	6	2.5	4	80	12 – 400

Step Jaw with Hardened Jaw Insert (Narrow)



Part Number	Vise(s)	Dimensions (mm)										Clamping Range min./max. (mm)
		l	w	h	a*	c*	e	f	i	j	k	
80145	80101 / 80901 / 80102	56	100	54	50	35	4.5	6	2.5	4	32	15 – 204

* Tolerance ±0.01mm

5-Axis Self-Centering Accessories



Positioning Pins, Various Diameters, for Grid Plate, set of 2

Part Number	Vise(s)	Ø (mm)
80060	80001	10/12
80160	80101 / 80201	25/12

Socket Wrench

Part Number	Vise(s)	SW
80531	80501	8

Torque wrench

Part Number	Vise(s)	Torque (Nm)
80070	80001/80101/80901	26.4/132.2
80170	80201	66.4/332
80072	81601/80301/80401	5.54/27.7

Socket / Hex Bit

Part Number	Vise(s)	Torque (Nm)
80071	80001 & 81500	12mm socket
80171	80101 & 81400	14mm socket
80271	80201	19mm socket
80380	80301	6mm hex bit
80430	80401 & 80501	8mm hex bit
81060	80901, 81000 & 81200	12mm hex bit
81160	81100 & 81300	14mm hex bit
81610	81601	10mm socket

Clamping Claws, Set of 4 w/Screws

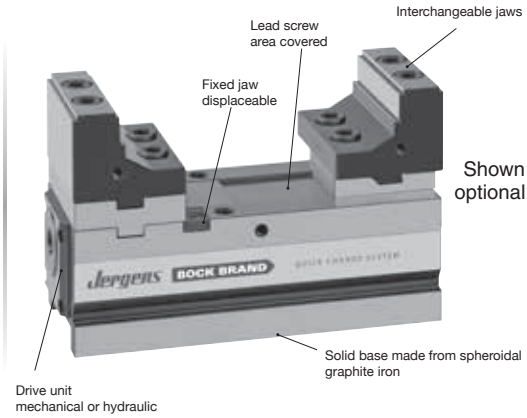
Part Number	Vise(s)	Thread
80050	80001 / 80301	M10
80053	80001 / 80301	M12
80150	80101 / 80901	M12
80250	80201	M12
80253	80201	M16

5-Axis Compact Vises

New machining technologies and manufacturing methods call for the development of new solutions in clamping technology. The Jergens 5-Axis Compact Vise, with its short base and easy movement of the fixed jaw, is ideal for 5-sided machining.

The well balanced design of the guide between the base and the moveable jaw allows the use of high clamping jaws, for performing machining operations close to the workpiece.

The base is made from cast steel for rigidity and dimensional stability. All sides are hardened and ground.



Shown with optional jaws.

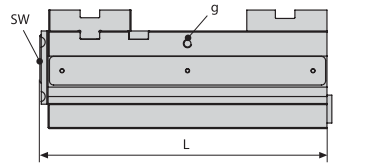
Part Number	Size	Clamping Force* (kN/Torque Nm)	Weight (Kg)	Dimensions (mm)												Hex (mm)
				Stroke	L	W	H*	d1*	g	g1	g2	h2	l1*	l2	l3	
81000	80mm Man	25/60 Nm	8.8	–	206	80	85	10F7	M6 x 10	M10 x 11	M10 x 16	18	100	60	60	12 Female
81100	120mm Man	40/100 Nm	18.4	–	260	120	100	25 x 5/ M10 x 14	M8 x 15		M12 x 18	18	200	100	80	14 Female
81200	80mm Hyd	20/310 bar	9.0	4	227	80	85	10F7	M6 x 10	M10 x 11	M10 x 16	18	100	60	60	12 Female
81300	120mm Hyd	40/270 bar	20.4	4	282	120	100	25 x 5/ M10 x 14	M8 x 15		M12 x 18	18	200	100	80	14 Female

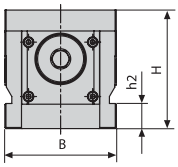
Note: Vise handles included with each Jergens 5-Axis Vise

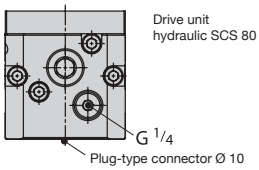
* Tolerance ±0.01mm

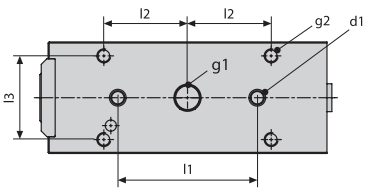
* kN x 224.8=pound - forceNm x 8.85=in. lbsKg x 2.205=lbsBar x 14.5=psi

80mm / 80mm Hyd







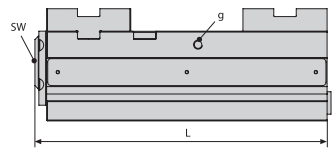


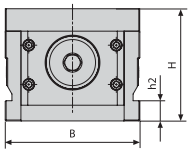
View from below

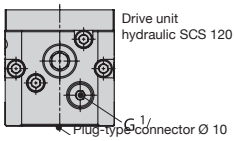
*Tolerance ±0.01 mm

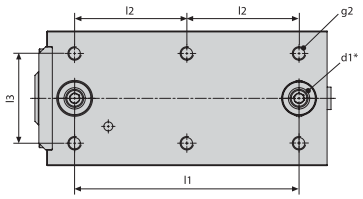
- High degree of freedom for spindle and tools; low risk of collision
- Well suited for short standard tools
- Repeatable and controllable clamping forces of up to 25 kN Compact 80 and 40 kN Compact 120
- Jaw with a special grip for maximum holding force (factor 3 as compared with standard jaw)
- Jaws sold separetely on page 98

120mm / 120mm Hyd





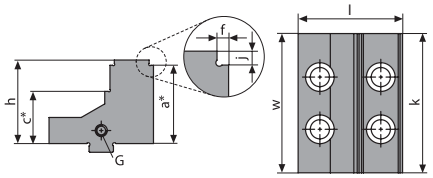




View from below

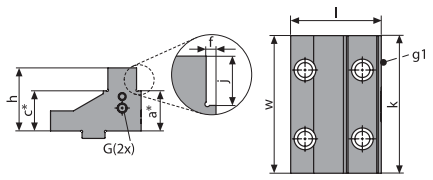
*Tolerance ±0.01 mm

Accessories
5-Axis Compact Vise Jaws & Inserts



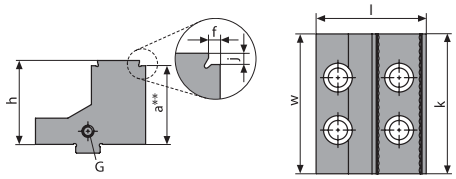
Precision Step Reversible Jaw for 81001 / 81200 (80mm)

Part Number	Dimensions mm									Clamping Range min./max.
	l	w	h	a*	c*	f	G	j	k	
81010	60	50	48	45	30	2.5	M6 x 10	3	25	5 – 155
81015	60	50	48	45	30	2.5	M6 x 10	3	50	5 – 155
81020	60	80	48	45	30	2.5	M6 x 10	3	80	5 – 155



Precision Step Reversible Jaw for 81100 / 81300 (120mm)

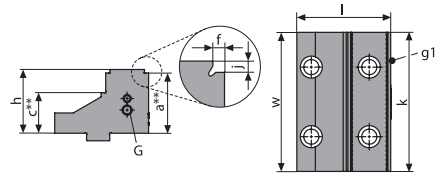
Part Number	Dimensions (mm)										Clamping Range min./max.
	l	w	h	a*	c*	f	G	g1	j	k	
81110	79	84	55	35	35	4	M8 x 14	M4 x 7	20	40	8 – 200
81120	79	84	55	35	35	4	M8 x 14	M4 x 7	20	84	8 – 200
81125	79	120	55	35	35	4	M8 x 14	M4 x 7	20	120	8 – 200



Special Grip Jaw for 81000 / 81200 (80mm)

Provides maximum retaining force

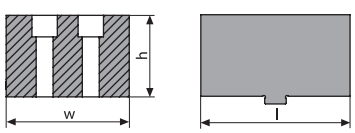
Part Number	Dimensions (mm)								Clamping Range min./max.
	l	w	h	a**	f	G	j	k	
81025	63	50	48	45	3.5	M6 x 10	3	25	7 – 151
81030	63	50	48	45	3.5	M6 x 10	3	50	7 – 151
81040	63	80	48	45	3.5	M6 x 10	3	80	7 – 151



Special Grip Jaw for 81100 / 81300 (120mm)

Provides maximum retaining force

Part Number	Dimensions (mm)										Clamping Range min./max.
	l	w	h	a**	c**	f	G	g1	j	k	
81130	81	84	55	52	35	3.5	M8 x 14	M4 x 7	3	40	7 – 195
81135	81	84	55	52	35	3.5	M8 x 14	M4 x 7	3	84	7 – 195
81140	81	120	55	52	35	3.5	M8 x 14	M4 x 7	3	120	7 – 195



Soft Jaws

Part Number	Vise(s)	Dimensions (mm)			Material
		l	w	h	
81045	81000 / 81200	97	80	53	Steel C 45
81050	81000 / 81200	97	80	53	Aluminium
81145	81100 / 81300	97	120	53	Steel C 45
81150	81100 / 81300	97	120	53	Aluminium

* Tolerance ±0.01mm
** Tolerance ±0.02mm

5-Axis Compact Vise Accessories



Positioning Pins, Various Diameters, for Grid Plate, Set of 2

Part Number	Vise(s)	Ø (mm)
80060	81000/81200	10/12
80160	81100/81300	25/12
80165	81100/81300	25/16

Positioning Pins, Various Diameters, for Table with T-Slots, Set of 2

Part Number	Vise(s)	Ø (mm)
80065	81000/81200	10/14
80260	81100/81300	25/14
80265	81100/81300	25/18

Clamping Claws, Set with M10 Fastening Screws

Part Number	Vise(s)	Qty.
81075	81000/81200	4
81180	81100/81300	6

Double Clamping Claws, Set with M10 Fastening Screws

Part Number	Vise(s)	Qty.
81080	81000/81200	4
81185	81100/81300	6

Torque Wrench

Part Number	Vise(s)	Clamping Force (Nm)
80070	81000/81100	26.4/132.2
80170	81100	66.4/332

Socket for Torque Wrench

Part Number	Vise(s)	SW
81060	81000	12, 3/8"
81160	81100	14, 1/2"



C80



C120

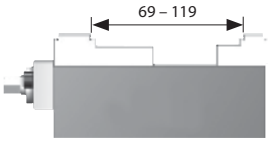
Workstops

Part Number	Vise(s)
81090	81000/81200
81195	81100/81300

Jergens 5-Axis Pallet Clamps

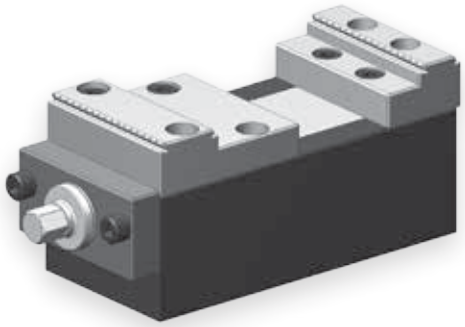
Jergens pallet clamps (comprised of clamping jaws with a grip structure) can be used either for concentric clamping or for clamping to the fixed jaw. These pallet clamps are an effective, affordable clamping solution.

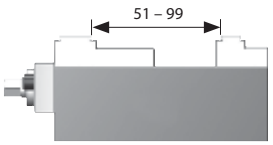
- 2 designs available: concentric clamping or clamping to a fixed jaw
- Highest quality, compact, all-steel construction
- Precise clamping
- Easy to dismantle and clean

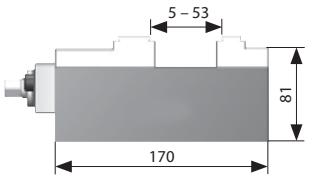


Fixed Pallet Clamp

Clamping to the fixed jaw
Clamping jaws with a grip structure





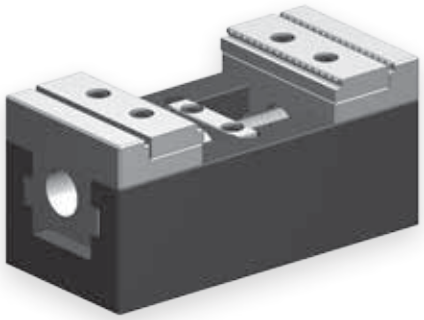


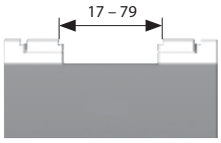
Part Number	Clamping Principle	Jaw Width (mm)	Clamping Force⁂ (kN)	Clamping Width (mm)	Clamping Step (mm)	Weight (Kg)
81400	Against the fixed jaw	80	20 at 60 Nm	5 – 119	4 x 4	6.9

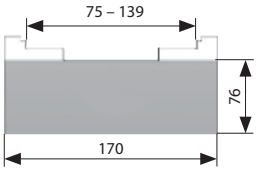
⁂ kN x 224.8=pound - force Nm x 8.85=in. lbs Kg x 2.205=lbs Bar x 14.5=psi

Concentric Pallet Clamp

Concentric clamping
Clamping jaws with a grip structure







Part Number	Clamping Principle	Jaw Width (mm)	Clamping Force (kN)	Clamping Width (mm)	Clamping Step (mm)	Weight (Kg)
81500	Concentric clamping	80	20 at 60 Nm	15 – 139	4 x 4	6.4

PRODUCTION VISES

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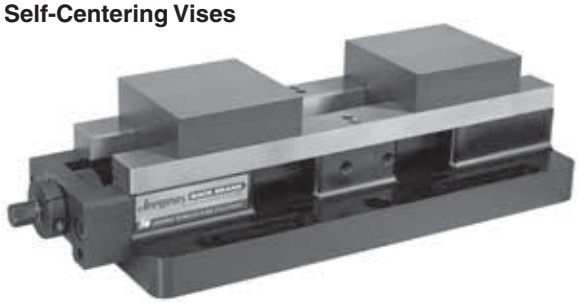
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Jergens®
MANUFACTURING EFFICIENCY

Jergens
WORKHOLDING SOLUTIONS GROUP

Jergens Production Vise System

Self-Centering Vises



• Quick, simple fixturing for concentric machining

Dual Station Vises



Maximum Holding Power

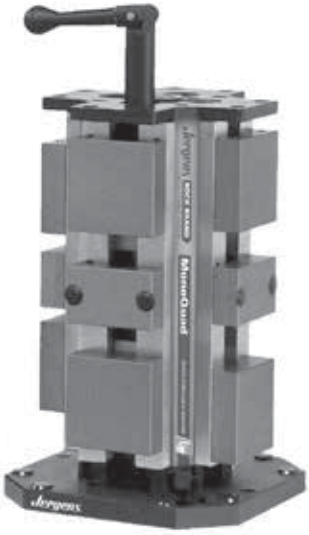
• Jaws machined to the contour of your workpiece maximizing holding force.

Production Vise Columns

2, 4, 6, 8, 12 and 16 station models available.



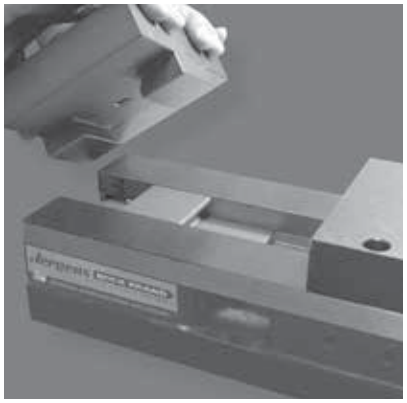
6" (150mm) MonoQuad



4" (100mm) MonoQuad

• Quick change reverseable soft jaws
• Single station adapter plate included
• Multiple base designs to meet any requirement

Fastest Quick Change Jaw System







Jergens Production Vises
Features and Benefits:

Wide/Full jaw travel

Benefit: Larger workpiece holding capacity

Easy to remove center fixed jaw

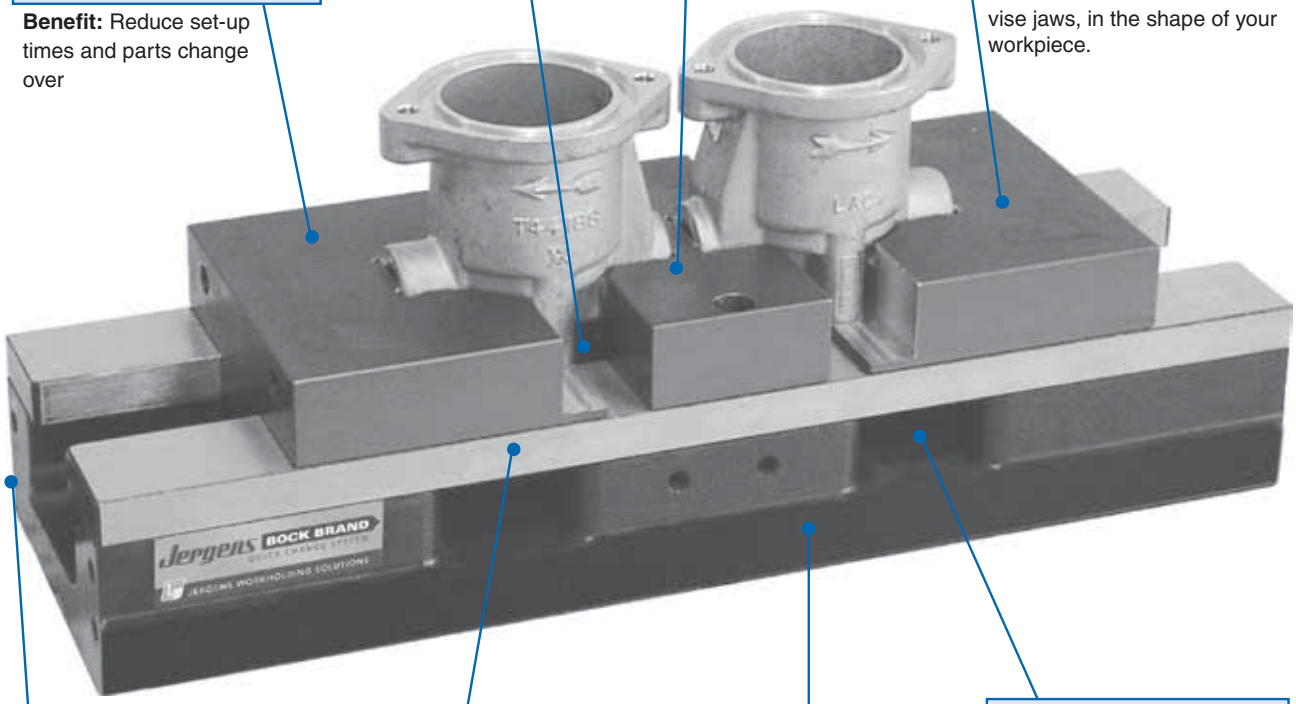
Benefit: Quick change over to single station vise for larger parts

Fully machinable and reversible jaws

Benefit: More workholding flexibility per jaw set. Machine "Pockets" into the vise jaws, in the shape of your workpiece.

Fastest quick change jaw system

Benefit: Reduce set-up times and parts change over



Chip and fluid flow through base

Benefit: Easier to keep clean, no more clogging

Rigid construction with hardened and ground stainless steel rails

Benefit: High accuracy and repeatability

Fully sealed lead screw assembly

Benefit: Lower maintenance and repair problems/cost

Multiple mounting base configurations available

Benefit: Increased flexibility and use with existing equipment and hardware

Vertical Machine Solutions



Narrow Base Production Vises
Pages 109 & 112

The small footprint allows maximum density of vises on your fixture or table. Best choice for applications where parts are held in multiple vises.



Ball Lock® Base Production Vises
Pages 108 & 114

The mounting flange is cut into a jigsaw pattern to allow vises to nest closely together. Designed for use with Jergens Ball Lock® Mounting System.



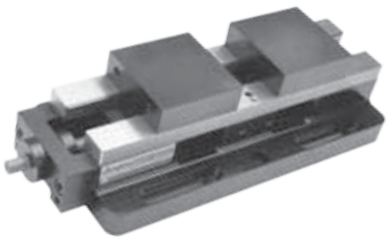
Universal Base Production Vises
Pages 109 & 115

The mounting flange has slotted holes to allow mounting on any machine table.



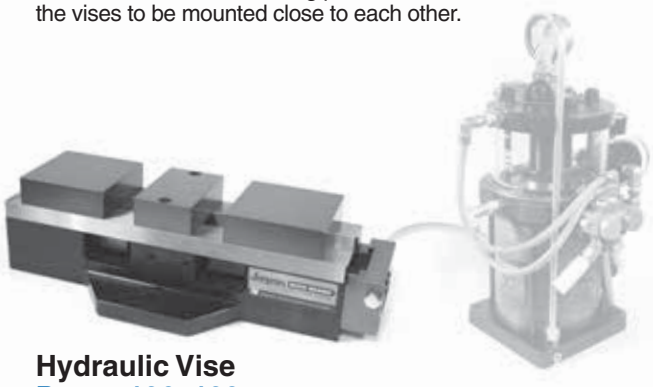
Interlocking Base Production Vises
Pages 110 & 113

This base has an interlocking pattern to allow the vises to be mounted close to each other.



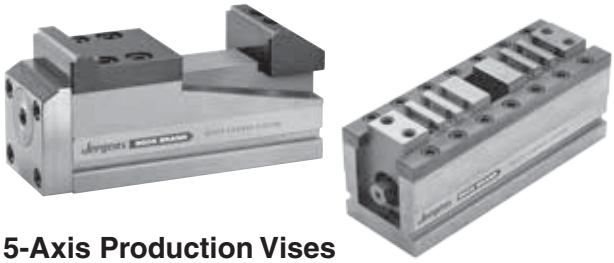
Self Centering Vises (3 Base Styles)
Pages 116–119

Self-Centering vises provide quick, simple fixturing for concentric machining of different sized workpieces.



Hydraulic Vise
Pages 126–128

Innovative compact design. Reduced set-up time. Internal Slide Assembly with Hydraulic Clamping Cylinder.



5-Axis Production Vises
Pages 138–145

5-Axis production vises and accessories rigidly clamp parts without obstructing access to multiple part faces.

Horizontal Machine Solutions



3-Sided Production Vise Columns
Pages 121 & 123

For machining 3 faces of production parts on HMC's. Large spindle noses can access the workpiece. **Allows for up to 240° workpiece accessibility.**



4-Sided Production Vise Columns
Pages 120 & 122

Available with bases to fit directly onto machine table pallets or to a Ball Lock® sub-plate.



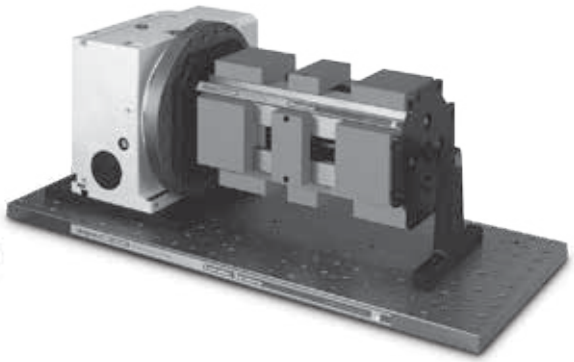
6-Sided Production Vise Columns
Page 124

Increase the number of parts per load, while maintaining a small footprint. Available with bases to fit directly onto machine tables or to a Ball Lock® sub-plate.

Multiple Column Configurations Available

Please call 1-877-426-2504 or email workholding@jergensinc.com for application engineering assistance.





Jergens WORKHOLDING SOLUTIONS GROUP

Ball Lock® Fixture Mounting System for Jergens Production Vises



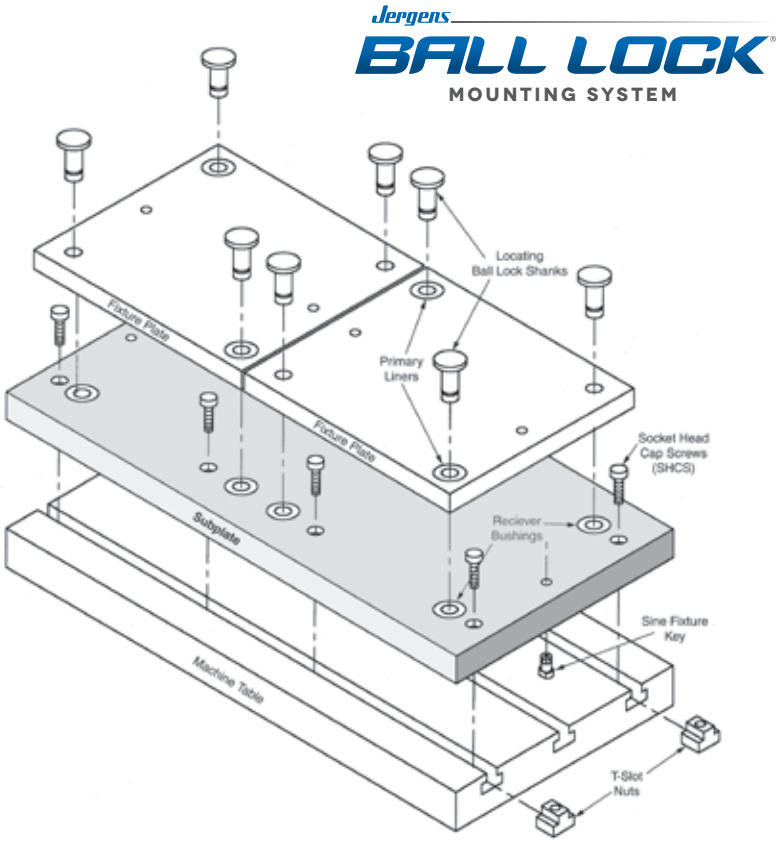
Locates

The Ball Lock® System accurately positions your fixture plate...to within ±0.0005" (±0.013mm) repeatability or better, minimizing the need to indicate your fixture.



Locks

The Ball Lock® System securely holds fixture plates to subplates with up to 20,000 lbs (88kN) of hold-down force per shank.



The Ball Lock® Mounting System provides a method of quickly and accurately locating fixtures onto machine tables. The Ball Lock® Mounting System has done for machining centers what the Japanese SMED (Single Minute Exchange of Die) concept did for presses. Instead of SMED, Ball Lock® provides single minute exchange of fixtures. Fixtures can often be exchanged in less than a minute with position repeatability of ±0.0005" (±0.013mm). Fixtures can be exchanged between different machines when both are using the Jergens Ball Lock® Mounting System.

Commonly Asked Questions

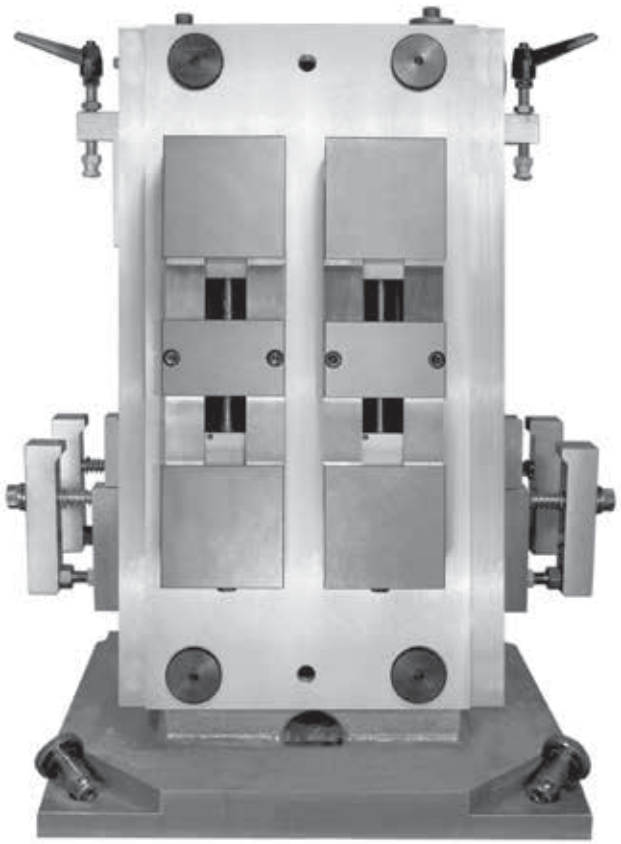
Q. What is the Ball Lock® Mounting System?
A. It is a means of locating and locking two flat surfaces together, normally a fixture plate to a sub-plate.

Q. How does it locate?
A. Similar to locating pins, two Ball Lock® shanks (pins) pass through two precision liner bushings on the fixture plate and into two precision receiver bushings on the subplate.

Q. How does it lock?
A. Inside the shank are three balls that expand into a tapered groove in the receiver bushing. This action draws the plates together. The locking balls are activated by turning a setscrew in the head of the shank, which pushes a 4th ball to distribute the clamping forces between the 3 locking balls.

Q. How many shanks are required to locate and lock each fixture?
A. Only two shanks, passing through bushings in the fixture plates, are required for location. However, additional shanks passing through clearance holes in the fixture plate will provide additional holding force distributed across the plate.

Unmatched Setup Speed and Workholding Flexibility



Q. Is there a preferable location for the liner bushing?
A. System repeatability is improved if the liners are located at opposite corners of a rectangular fixture plate. For consistency, we recommend locating the liner bushings at top left and bottom right.

Q. What are the advantages of using the Ball Lock® System over the conventional method of dowel pins and cap screws?
A. Both locating and locking are accomplished in the same motion. Ball Lock® shanks require only 2.5 turns to lock a 1/2–13 (M12) screw with ¾" (18mm) of thread engagement requires 10 turns to lock. On CNC machines, the repeatability of fixture locations makes indicating of the fixture unnecessary.

Q. How do I recess the fixtureplate for a clear surface ?
A. Counterbore the fixture plate to a diameter large enough to allow easy removal of the shank.

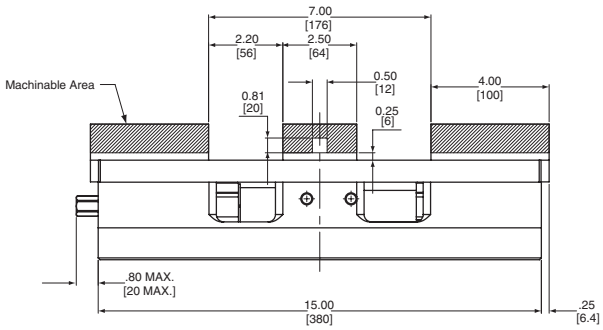
Note: The thickness of the plate section under the head of the shank is critical and must conform to mounting instructions .

Q. What if my plate is thinner than the recommended thickness?
A. By adjusting the depth of the counterbore for the receiver bushing in the subplate, you can still use the Ball Lock® System. If there are any questions on this type of application, please call 1-877-426-2504.

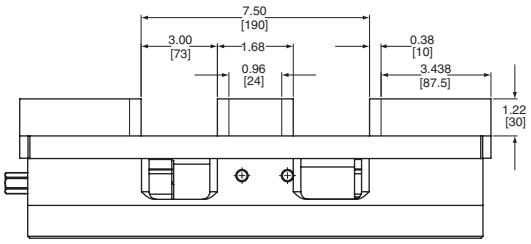
Q. Can I use the shanks in a heated environment?
A. The shank is made of alloy steel, heat treated to 40-45Rc and should with stand temperatures up to 400°F. (200°C).

Note: Thermal expansion of fixture plates may affect the center distance tolerance and repeatability.

Production Vises – 4" (100mm)



Vise With Machinable Soft Jaws



Vise With Hard Jaw Carrier Set and hardened steel inserts

Features and Benefits:

- Compact design in 3 extruded aluminum base styles for easy setup and to reduce weight on worktable.
- Fully sealed, patented lead screw assembly for long maintenance free service. Openings allow chips to flow out of the vise base.
- Hardened stainless steel rails, ground within ±0.001" (0.025mm) provide precise location, resist wear and provide strong support to jaws.
- Supplied with aluminum soft jaws, fully machineable and reversible. Additional jaws can be ordered separately, see page 132. Alternate jaw types can be ordered with the vise base by adding the following suffix to the part numbers:
  - **-H** for Jaw Carrier Set with Hardened Steel Inserts
  - **-S** for machineable Steel Jaws
  - **-T** for extra Tall aluminum jaws sets
  - **-W** for extra Wide aluminum jaw sets

Clamping Force
Jergens 4" (100mm)

Torque		Clamping Force	
ft. lbs	N•m	lbs	kgf
20	27	3,600	1,630
30	41	4,500	2,040
40	54	5,300	2,400
50	68	6,200	2,800
60	81	7,200*	3,250*

*Recommended Maximum

Maximum Clamping Range With Shaped Jaws
Dual Station: 6.75" (170mm)
Single Station: 14.40" (365mm)

Ball Lock® Base

The **Ball Lock® Base Vise** is for use with the Jergens Ball Lock® Quick Change Mounting System. The base has a "jig saw" pattern to allow the vises to be mounted close to each other. For more information about Ball Lock®, see pages 106–107.

Inch

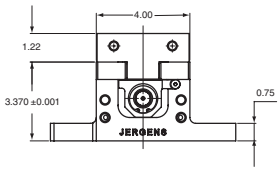
Part No.	Wt.	Ball Lock® Shank Part No.	Shank Size
49405	31 lbs	**49601**	20mm x 3/4"

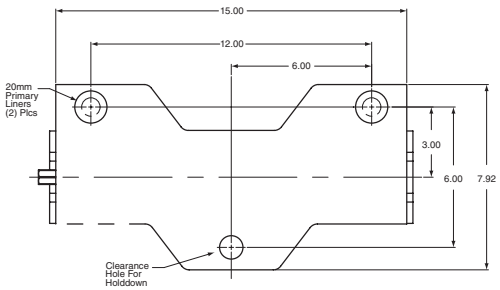


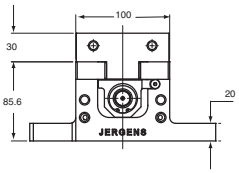
Metric

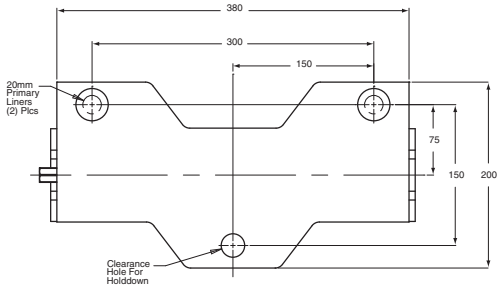
Part No.	Wt.	Ball Lock® Shank Part No.	Shank Size
69405	14 Kg	**49651**	20mm x 20mm

Mounting Dimensions





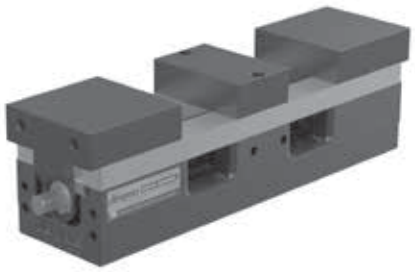




Production Vises – 4" (100mm)

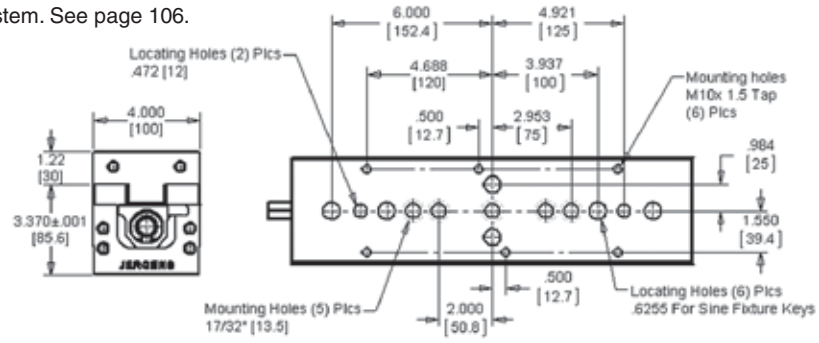
Narrow Base

Part Number	Wt. lbs/Kg
49401	30/14



The **Narrow Base Vise** can be mounted as a stand-alone vise with traditional strap clamps. The narrow base has 2 locating holes for 12mm dowel pins and 2 locating holes for sine fixture keys to align vise in T-slots. Keys for inch and metric T-slots shown on page 136. Recessed mounting holes (3) are also provided for top mounting to fixture plates with socket head cap screws. Tapped mounting holes (6) are provided for bottom mounting. The slim design allows a high density of vises on machine tables, tombstones, or columns. Maximize flexibility by utilizing the Jergens Ball Lock® Quick Change Mounting System. See page 106.

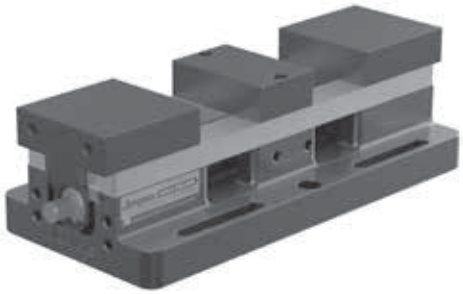
- Easy to mount to Ball Lock® or other fixture plates



Mounting Dimensions

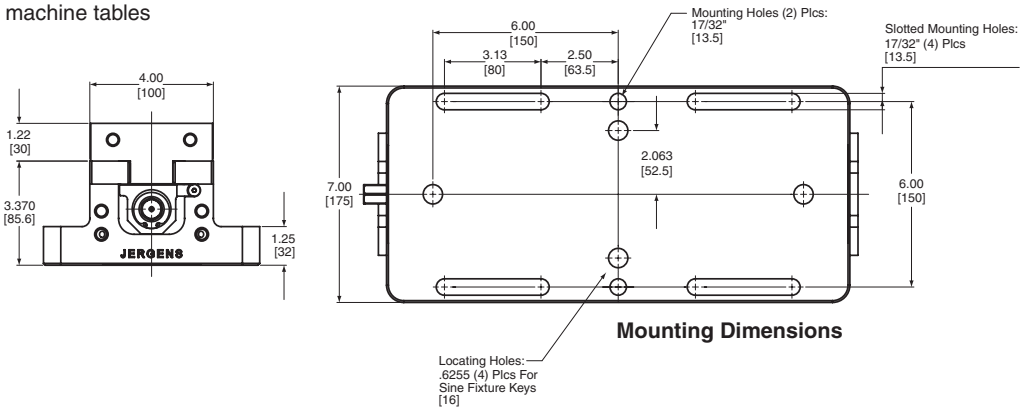
Universal Base

Part Number	Wt. lbs/Kg
49471	31/14



The **Universal Base Vise** is easily mounted directly to machine tool tables. Slotted mounting holes will match almost any table slot pattern. Location holes are provided for Jergens Sine Fixture Keys, to provide easy and accurate alignment with table slots.

- Easy to mount directly to machine tables



Mounting Dimensions

Interlocking Base - 4" (100mm)

The Jergens Interlocking Base Vise is for use with Jergens Bock Brand Locator Plates. The base has an interlocking pattern to allow the vises to be mounted close to each other. For more information about Bock Brand Locator Plates, see page 44.

Inch

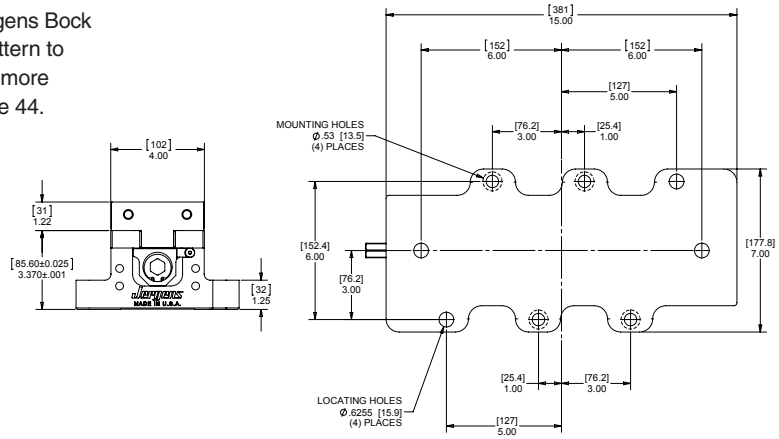
Part Number	Weight
TV4S	30 lbs

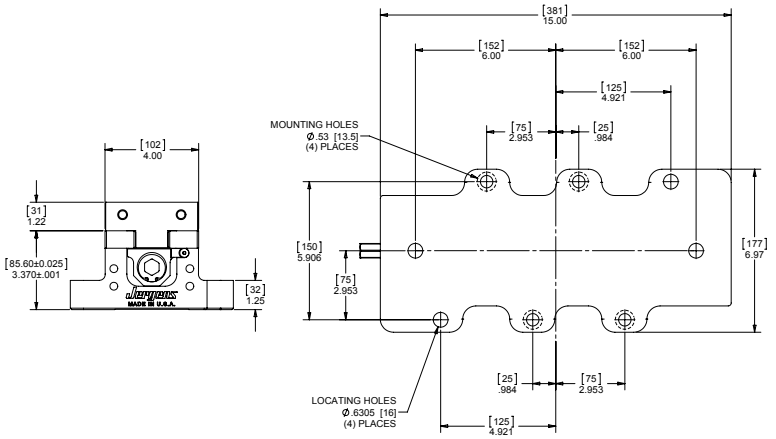


Metric

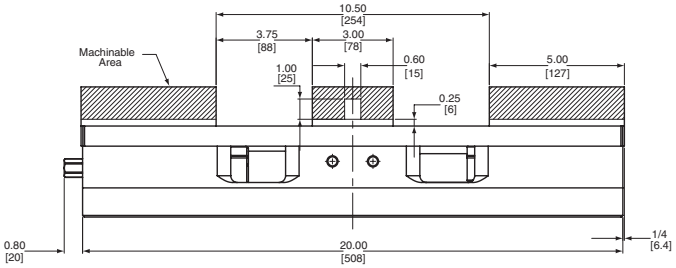
Part Number	Weight
TV100S	14 Kg

Mounting Dimensions

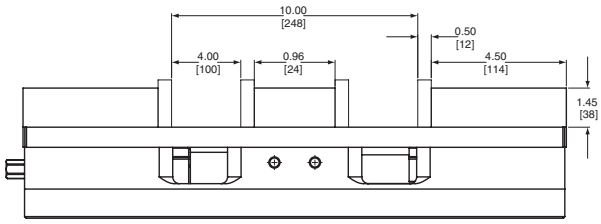




Production Vises – 6" (150mm)



Vise With Machinable Soft Jaws



Vise With Hard Jaws Carrier Set and hardened steel inserts

Features and Benefits:

- Compact design in 3 extruded aluminum base styles for easy setup and to reduce weight on worktable.
- Fully sealed, patented lead screw assembly for long maintenance free service. Openings allow chips to flow out of the vise base.
- Hardened stainless steel rails, ground within ±0.001" (0.025mm) provide precise location, resist wear and provide strong support to jaws.
- Supplied with aluminum soft jaws, fully machineable and reversible. Additional jaws can be ordered separately, see page 132. Alternate jaw types can be ordered with the vise base by adding the following suffix to the part numbers:
  - **-H** for Jaw Carrier Set with Hardened Steel Inserts
  - **-S** for machineable Steel Jaws
  - **-T** for extra Tall aluminum jaws sets
  - **-W** for extra Wide aluminum jaw sets

Clamping Force
Jergens 6" (150mm)

Torque		Clamping Force	
ft. lbs	N•m	lbs	kgf
20	27	3,600	1,630
30	41	4,500	2,040
40	54	5,300	2,400
50	68	6,200	2,800
60	81	7,200	3,250
70	95	8,400	3,800
80	108	9,200	4,150
90	122	10,100*	4,550*

*Recommended Maximum

Maximum Clamping Range With Shaped Jaws

Dual Station: 9.2" (233mm)
Single Station: 19.5" (495mm)

Ball Lock® Base

The **Ball Lock® Base Vise** is for use with the Jergens Ball Lock® Quick Change Mounting System. The base has a "jigsaw" pattern to allow the vises to be mounted close to each other. For more information about Ball Lock®, see pages 106–107.

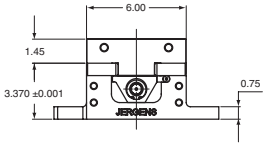
Inch

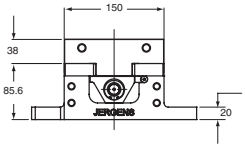
Part No.	Wt.	Ball Lock® Shank Part No.	Shank Size
49406	68 lbs	**49601**	20mm x 3/4"



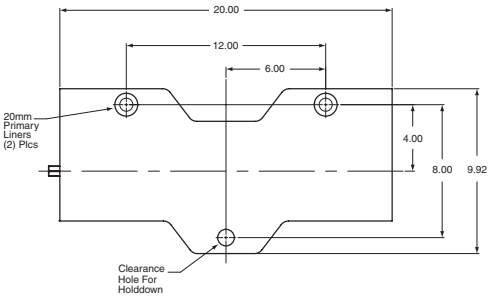
Metric

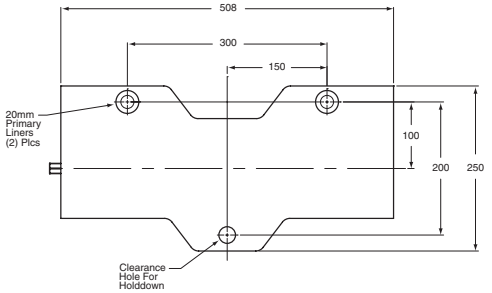
Part No.	Wt.	Ball Lock® Shank Part No.	Shank Size
69406	31 Kg	**49651**	20mm x 20mm





Mounting Dimensions





Production Vises – 6" (150mm)

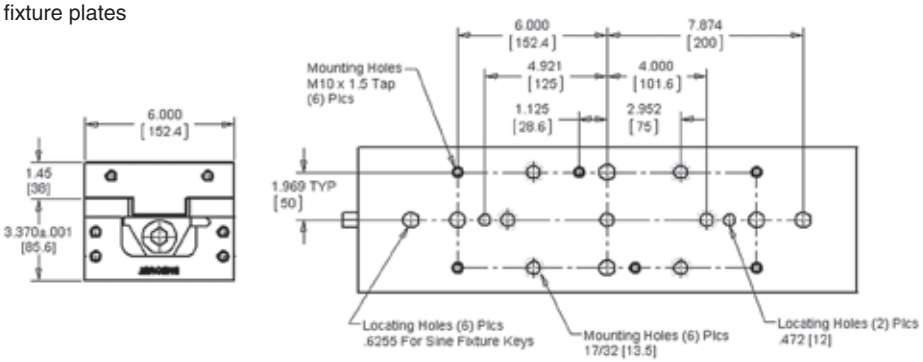
Narrow Base

Part Number	Wt. lbs/Kg
49402	66/30

The **Narrow Base Vise** can be mounted as a stand-alone vise or mounted to a fixture plate. The slim design allows a high density of vises on machine tables, tombstones, or columns. Maximize flexibility by utilizing the Jergens Ball Lock® Quick Change Mounting System. See pages 106–107.



- Easy to mount to Ball Lock® or other fixture plates



Mounting Dimensions

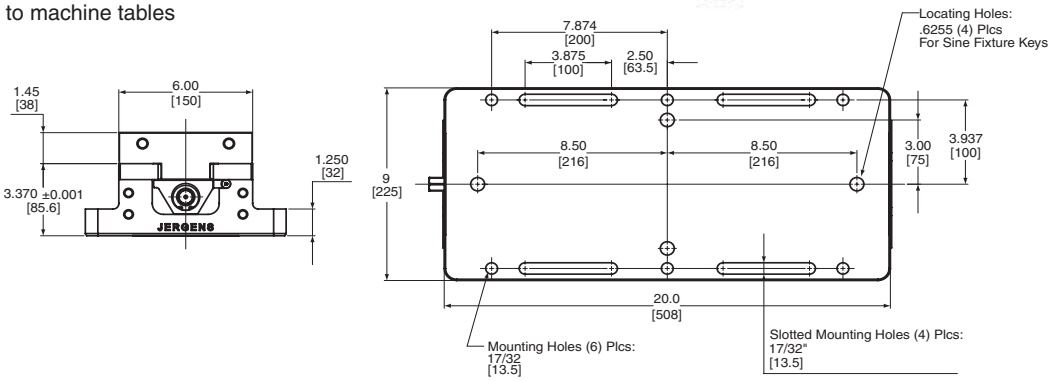
Universal Base

Part Number	Wt. lbs/Kg
49472	68/31

The **Universal Base Vise** is easily mounted directly to machine tool tables. Slotted mounting holes will match almost any table slot pattern. Location holes are provided for Jergens Sine Fixture Keys, to provide easy and accurate alignment with table slots.



- Easy to mount directly to machine tables



Mounting Dimensions

Interlocking Base - 6" (150mm)

The Jergens Interlocking Base Vise is for use with Jergens Bock Brand Locator Plates. The base has an interlocking pattern to allow the vises to be mounted close to each other. For more information about Bock Brand Locator Plates, see pages xx-xx.

Inch

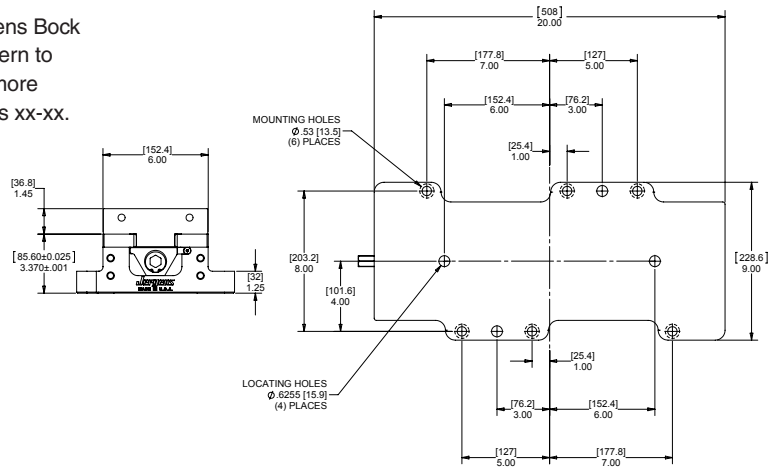
Part Number	Weight
TV6S	65 lbs

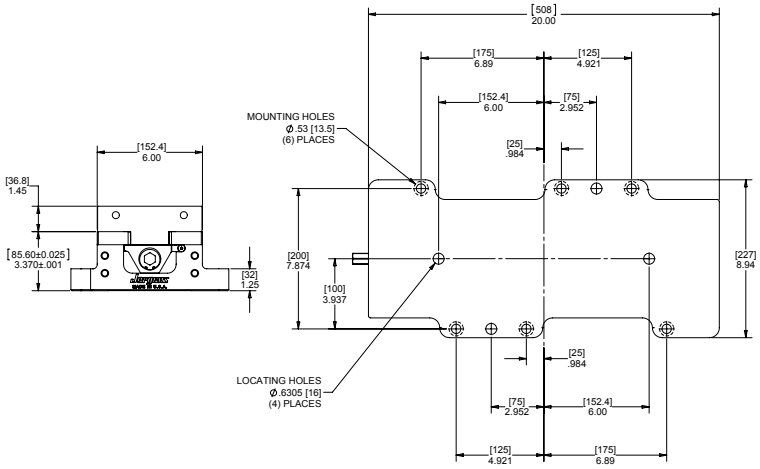


Metric

Part Number	Weight
TV100S	30 Kg

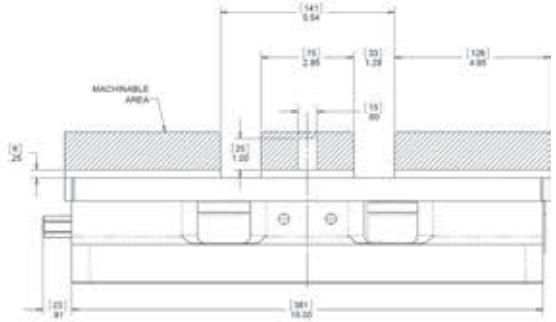
Mounting Dimensions



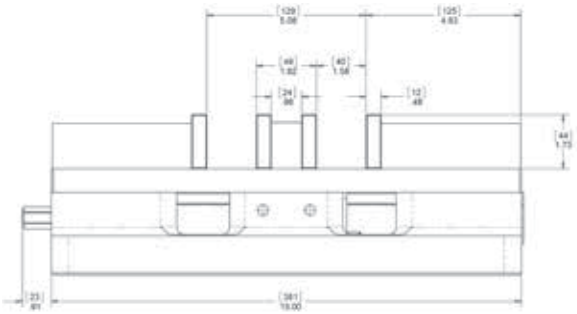


Jergens WORKHOLDING SOLUTIONS GROUP

Short 6" Production Vises



Vise With Machinable Soft Jaws



Vise With Hard Jaws Carrier Set and hardened steel inserts

Features and Benefits:

- Compact design in 3 extruded aluminum base styles for easy setup and to reduce weight on worktable.
- Fully sealed, patented lead screw assembly for long maintenance free service. Openings allow chips to flow out of the vise base.
- Hardened stainless steel rails, ground within ±0.001" (0.025mm) provide precise location, resist wear and provide strong support to jaws.
- Supplied with aluminum soft jaws, fully machineable and reversible. Additional jaws can be ordered separately, see page 132. Alternate jaw types can be ordered with the vise base by adding the following suffix to the part numbers:
  - **-H** for Jaw Carrier Set with Hardened Steel Inserts
  - **-S** for machineable Steel Jaws
  - **-T** for extra Tall aluminum jaws sets
  - **-W** for extra Wide aluminum jaw sets

Maximum Clamping Range With Shaped Jaws

Dual Station: 9.2" (233mm)
Single Station: 19.5" (495mm)

Clamping Force

Jergens 6" (150mm)

Torque (lbs.ft.)	Torque (N*m)	Clamping Force (approx) lbs.	Clamping Force (approx) kgf
20	27	3,600	1,630
30	41	4,500	2,040
40	54	5,300	2,400
50	68	6,200	2,800
60	81	7,200	3,250
70	95	8,400	3,800
80	108	9,200	4,150
90	122	10,100*	4,550*

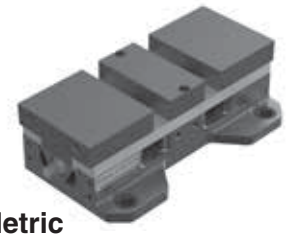
*Recommended Maximum

Ball Lock® Base

The **Ball Lock® Base Vise** is for use with the Jergens Ball Lock® Quick Change Mounting System. The base has a "jigsaw" pattern to allow the vises to be mounted close to each other. For more information about Ball Lock®, see pages 106–107.

Inch

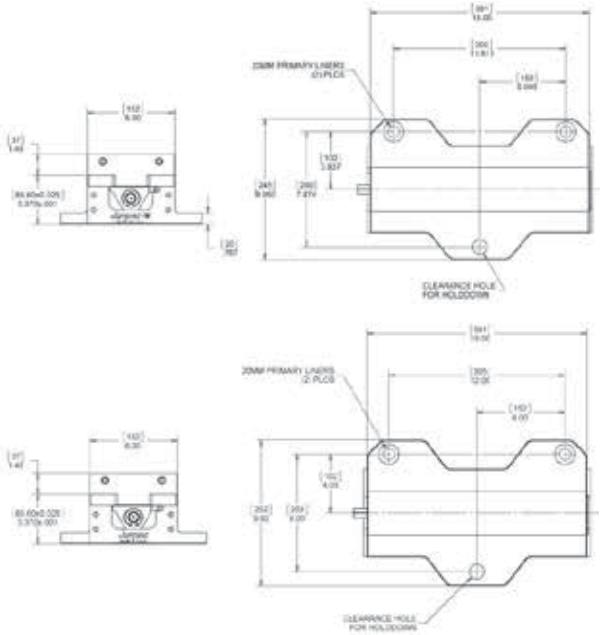
Part Number	Length (in)	Height (in)	Width (in)	Weight (lbs)	Ball-Lock® Shank Part Number	Shank Size
49496	15	3.370	9.92	47	49601	20mm x 3/4"



Metric

Part Number	Length (mm)	Height (mm)	Width (mm)	Weight (kg)	Ball-Lock® Shank Part Number	Shank Size
69496	381	85.6	250	21	49651	20mm x 3/4"

Mounting Dimensions

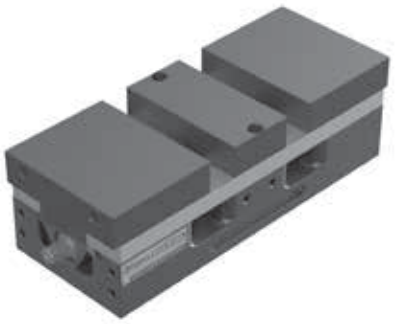


Short 6" Production Vises

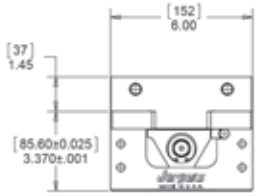
Narrow Base

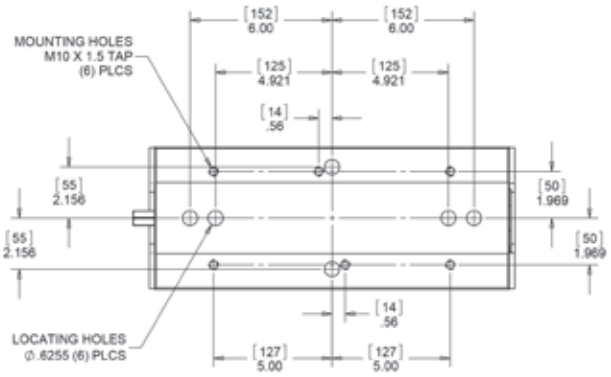
Part Number	Length (in)	Height (in)	Width (in)	Weight (lbs./kg)
49492	15	3.37	6	45/20

The **Narrow Base Vise** can be mounted as a stand-alone vise or mounted to a fixture plate. The slim design allows a high density of vises on machine tables, tombstones, or columns. Maximize flexibility by utilizing the Jergens Ball Lock® Quick Change Mounting System. See pages 106–107.



- Easy to mount to Ball Lock® or other fixture plates



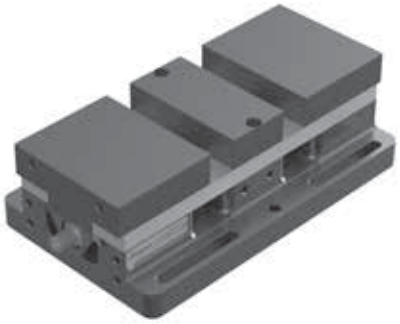


Mounting Dimensions

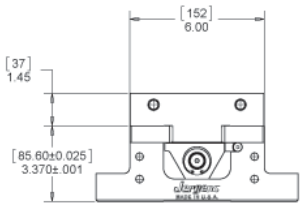
Universal Base

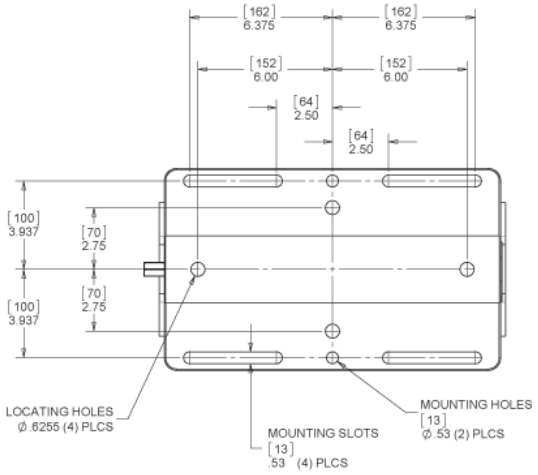
Part Number	Length (in)	Height (in)	Width (in)	Weight (lbs./kg)
49494	15	3.37	9	50/23

The **Universal Base Vise** is easily mounted directly to machine tool tables. Slotted mounting holes will match almost any table slot pattern. Location holes are provided for Jergens Sine Fixture Keys, to provide easy and accurate alignment with table slots.



- Easy to mount directly to machine tables

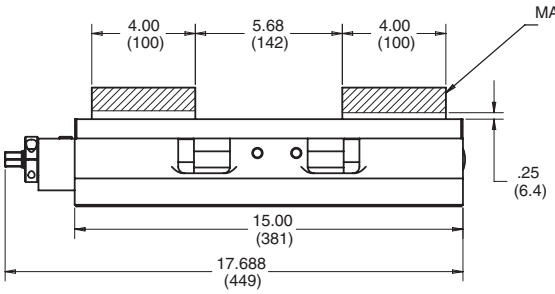




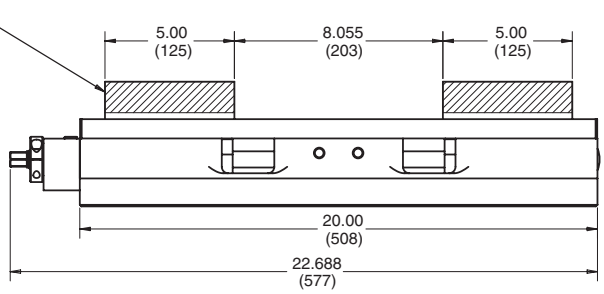
Mounting Dimensions

Jergens WORKHOLDING SOLUTIONS GROUP

Self-Centering Precision Production Vises



4" (100mm) Self-Centering Vises



6" (150mm) Self-Centering Vises

Features and Benefits:

- Self-Centering vises provide quick, simple fixturing for concentric machining of different sized workpieces.
- Adjustable gib design increases accurracy.
- Compact design in 3 extruded aluminum base styles for easy setup and to reduce weight on worktable.
- Fully sealed, patented lead screw assembly for long maintenance free service. Openings allow chips to flow out of the vise base.
- Hardened stainless steel rails, ground within ±0.001" (0.025mm) provide precise location, resist wear and provide strong support to jaws.
- Supplied with aluminum soft jaws, fully machineable and reversible. Additional jaws can be ordered separately, see page 132. Alternate jaw types can be ordered with the vise base by adding the following suffix to the part numbers:

Technical Specifications:

Maximum jaw opening (Unmachined jaws)
4" (100mm) model: 5.6" (142mm)
6" (150mm) model: 8" (200mm)
Repeatability: 0.0002" (0.005mm)
Maximum Clamping Force: 4600lbs (2000kgf)
Centering accuracy per 1 inch (25mm) of jaw travel: 0.0002" (0.005mm)

Maximum Clamping Range

With Shaped Jaws
4" Vise: 13" (330mm)
6" Vise: 17.5" (440mm)

Clamping Force

Jergens 4" (100mm) & 6" (150mm) Self-Centering Vises

Torque		Clamping Force	
ft. lbs	N•m	lbs	kgf
20	27	1100	500
30	41	1500	680
40	54	2200	1000
50	68	2700	1220
60	81	3100	1400
70	95	3800	1720
80	108	4200*	1900*

*Recommended Maximum

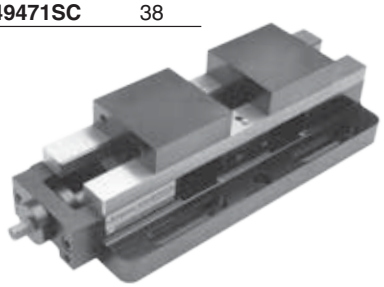
-H for Jaw Carrier Set with Hardened Steel Inserts
-S for machineable Steel Jaws
-T for extra Tall aluminum jaws sets
-W for extra Wide aluminum jaw sets

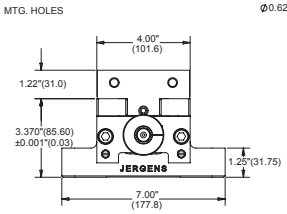
Self-Centering Vises – 4" (100mm)

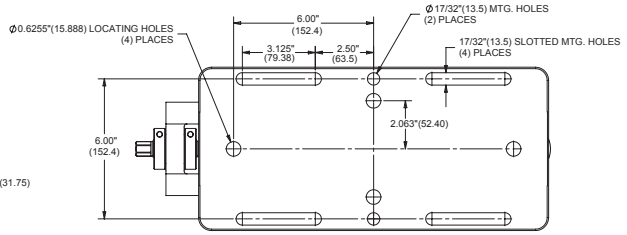
Universal Base

- Easy to mount directly to machine tables
- Slotted mounting holes fit most machinable centers

Part Number	Wt. (lbs)
49471SC	38





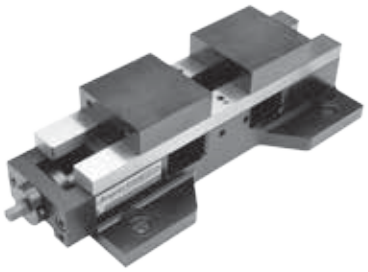


- **Shown in Universal Base, also available in Narrow Bases and Ball Lock® Mounting Base.**

Self-Centering Vises – 4" (100mm)

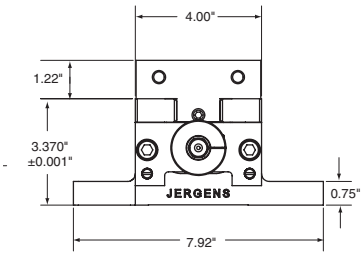
Ball Lock®

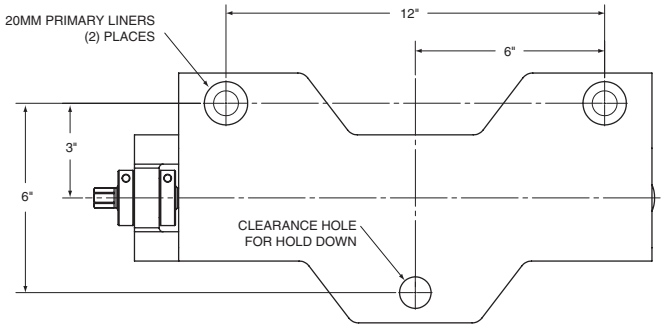
- Integrates with the Jergens Ball Lock® mounting system
- Jigsaw pattern allows for "nesting" on Jergens Ball Lock® subplates



Inch

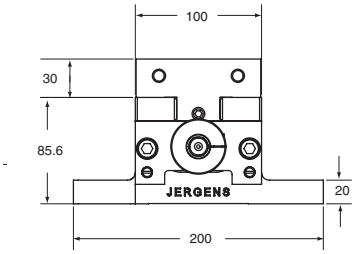
Part Number	Wt. lbs
49405SC	36

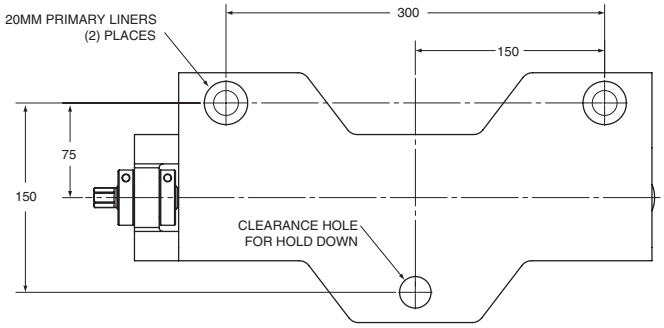




Metric

Part Number	Wt. Kg
69405SC	17

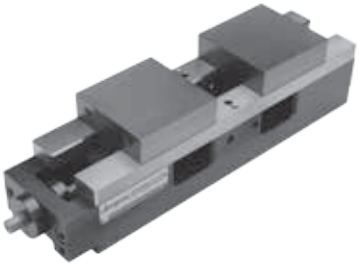


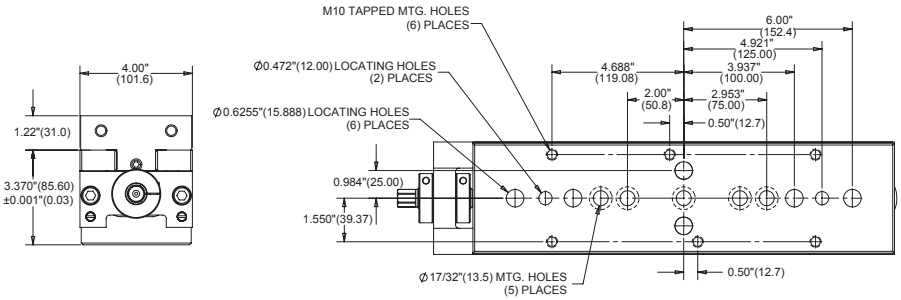


Narrow Base

- Designed for stand alone or fixture plate mounting
- Slim design enables high density mounting

Part Number	Wt. (lbs)
49401SC	34



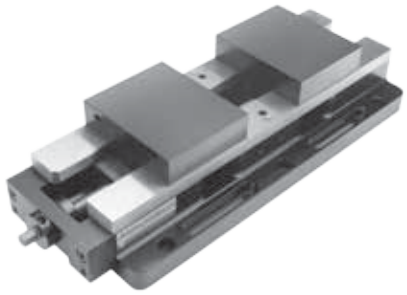


Jergens
WORKHOLDING SOLUTIONS GROUP

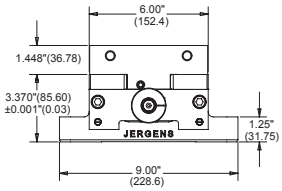
Self-Centering Vises – 6" (150mm)

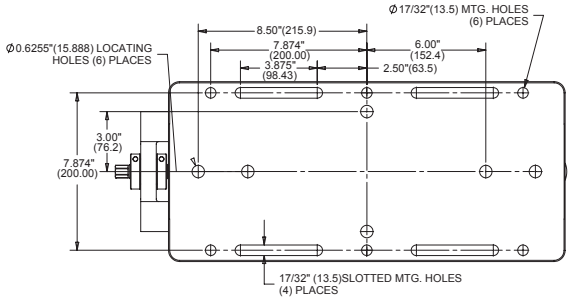
Universal Base

- Easy to mount directly to machine tables
- Slotted mounting holes fit most machinable centers



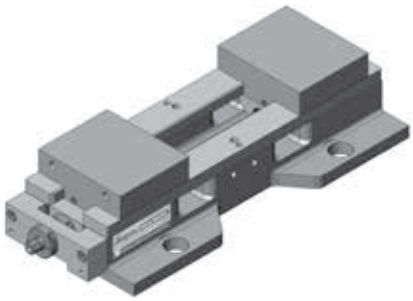
Part Number	Wt. (lbs)
49472SC	70





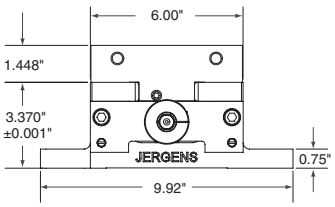
Ball Lock® Base

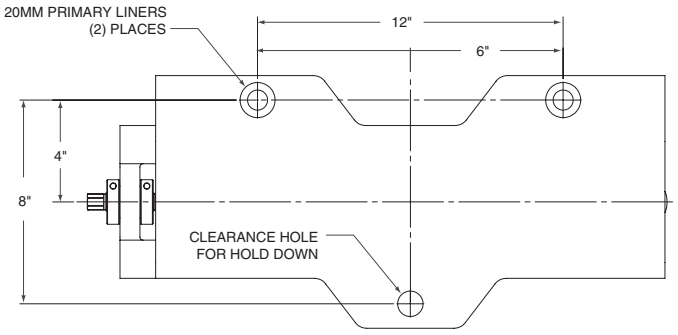
- Integrates with the Jergens Ball Lock® mounting system
- Jigsaw pattern allows for "nesting" on Jergens Ball Lock® subplates



Inch

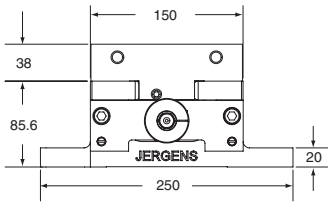
Part No.	Wt. lbs
49406SC	66

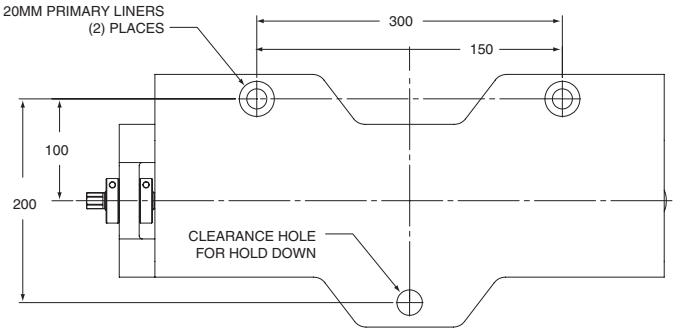




Metric

Part No.	Wt. Kg
69406SC	30

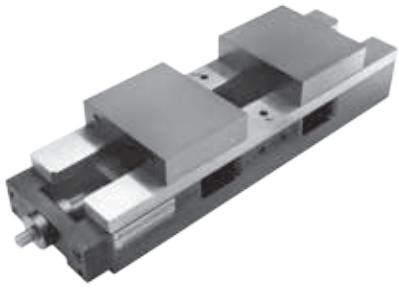




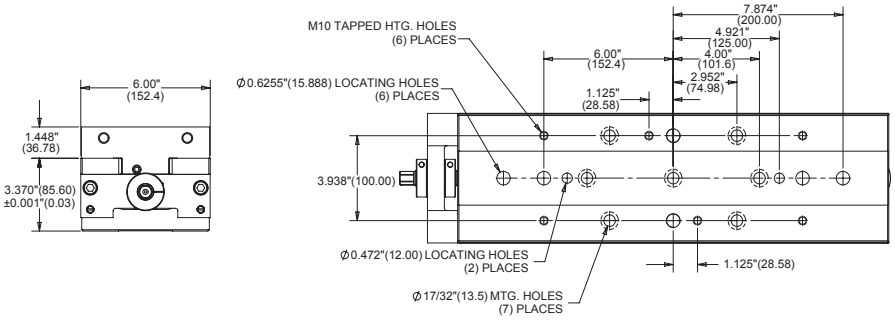
Self-Centering Vises – 6" (150mm)

Narrow Base

Part Number	Wt. (lbs)
49402SC	64



- Designed for stand alone or fixture plate mounting
- Slim design enables high density mounting

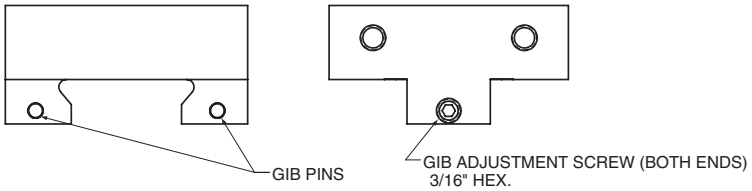


Self Centering Vise Accessories

Jaws with Adjustable Gib Screw*

• Better location accuracy than conventional Jergens Quick Change Vise Jaws

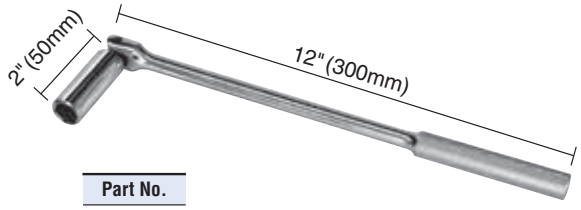




*Jergens Standard Jaws fully compatible, see complete selection on page 132.
To order Jergens Production Vise Jaws with Adjustable Gib Screw, use standard jaw part no. followed by "SC".

Handle

Self-Centering Vise Handle
One Piece Included with 4" (100mm) & 6" (150mm) Self-Centering Vises



Part No.
49442SC

- Ergonomic hinge handle.
- Specification: Chrome Plated Steel, 9/16 Hex Socket

Jergens WORKHOLDING SOLUTIONS GROUP

Production Vise Columns – 4" (100mm)

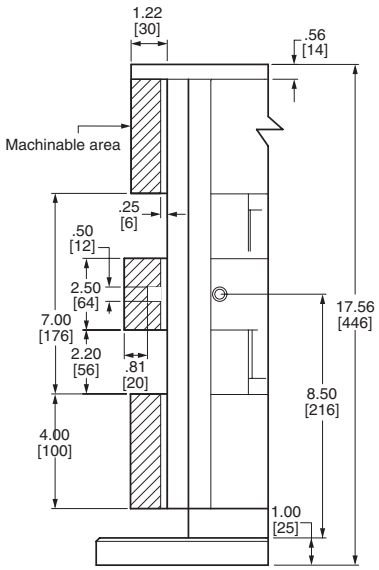
- 3 or 4-Sided Columns
- Multiple mounting systems
- Fastest quick-change jaw system
- Full jaw travel
- Hardened stainless steel rails support jaws and resist wear
- Fully sealed lead screw assembly
- Supplied with machinable soft jaws
- Available with hard jaws

Clamping Force

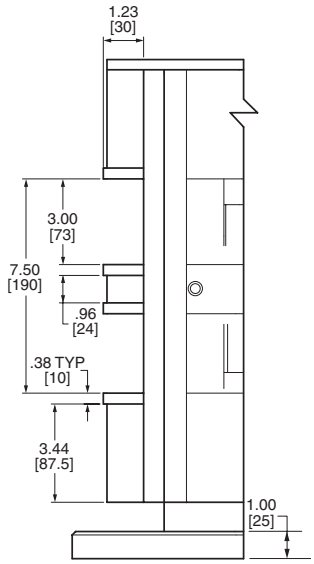
Jergens 4" (100mm)

Torque		Clamping Force	
ft. lbs	N•m	lbs	kgf
20	27	3,600	1,630
30	41	4,500	2,040
40	54	5,300	2,400
50	68	6,200	2,800
60	81	7,200*	3,250*

*Recommended Maximum



Column With Soft Jaws



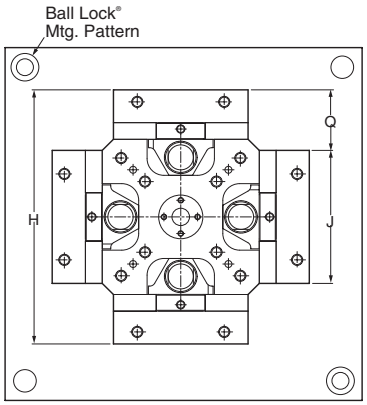
Column With Hard Jaws

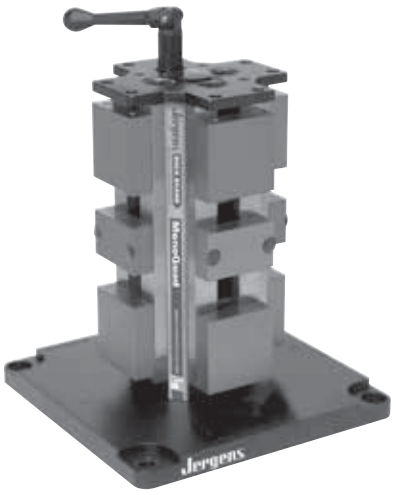
Production Vise Columns – 4" (100mm)

4-Sided

The 4-Sided Columns have eight stations for holding parts. Two standard bases and custom mounting patterns are available. The universal base mounts directly to most HMC tables using the provided mounting holes on 80mm or 100mm centers.

Further reduce set-up times by adding the Jergens Ball Lock® Mounting System to your HMC. Exchange your vise columns and any other fixture in less than a minute. Location of all fixtures will repeat within ±0.0005" (±0.013mm) or better. Please contact Jergens Customer Service for more information.





4-Sided 4" Vise Columns

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock® Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Mounting Pattern 3*	Weight (lbs)	Ball Lock® Part No.	Shank Size
Ball Lock®	**49403**	9.56	4.00	2.80	15.75	15.75	14 x 14	n/a	n/a	n/a	132	**49602**	20mm x 1"
Universal	**49475**	9.56	4.00	2.80	11.81	11.81	n/a	80mm	100mm	125mm	122	–	–

4-Sided 100mm Vise Columns Metric Bases

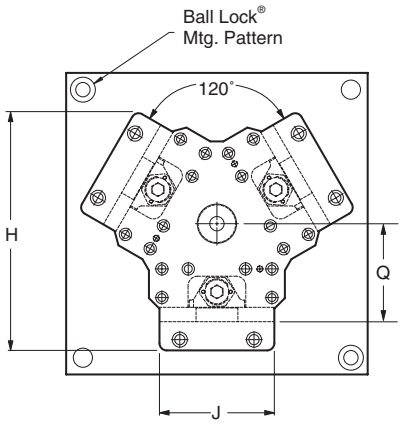
Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock® Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Mounting Pattern 3*	Weight (Kg)	Ball Lock® Part No.	Shank Size
Ball Lock®	**69403**	240	100	70	400	400	350 x 350	n/a	n/a	n/a	60	**49652**	20mm x 25mm
Universal	**49475**	240	100	70	300	300	n/a	80mm	100mm	125mm	55	–	–

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80mm and 100mm centers. Custom mounting patterns and base sizes are available upon request.

Production Vise Columns – 4" (100mm)
3-Sided

The 3-Sided Columns have six workstations, and may provide greater access to three or more sides of your work pieces. This design is especially beneficial on machining centers with large spindles. No need to sacrifice tool rigidity for access, by having tools extended too far from the tool holders. The universal base mounts directly to most HMC tables using the provided mounting holes on 80mm or 100mm centers.

Further reduce set-up time with the Jergens Ball Lock® Mounting System to your HMC. Exchange your vise columns and all other fixtures in less than a minute. Location of all fixtures will repeat within ±0.0005" (±0.013mm)or better.





Tri-column design allows up to 240° accessibility

3-Sided 4" Vise Columns

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock® Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Mounting Pattern 3*	Weight (lbs)	Ball Lock® Part No.	Shank Size
Ball Lock®	**49409**	9.55	4.00	4.22	15.75	15.75	14 x 14	n/a	n/a	n/a	125	**49602**	20mm x 1"
Universal	**49473**	9.55	4.00	4.22	11.81	11.81	n/a	80mm	100mm	125mm	115	–	–

3-Sided 100mm Vise Columns Metric Bases

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock® Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Mounting Pattern 3*	Weight (Kg)	Ball Lock® Part No.	Shank Size
Ball Lock®	**69409**	225	100	90	400	400	350 x 350	n/a	n/a	n/a	57	**49652**	20mm x 25mm
Universal	**49473**	225	100	90	300	300	n/a	80mm	100mm	125mm	52	–	–

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80mm and 100mm centers. Custom mounting patterns and base sizes are available upon request.

Jergens WORKHOLDING SOLUTIONS GROUP

Production Vise Columns – 6" (150mm)

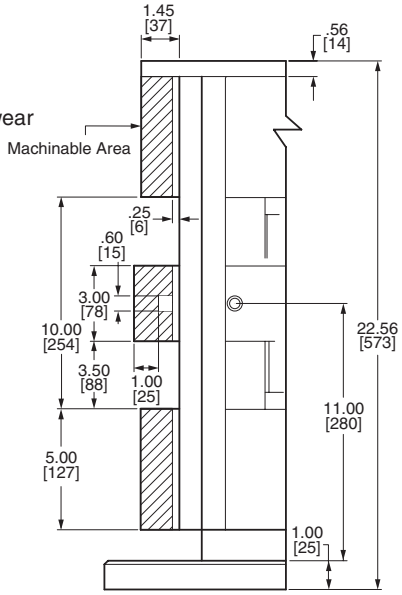
- 3 or 4-Sided Columns
- Multiple mounting systems
- Fastest quick-change jaw system
- Full jaw travel
- Hardened stainless steel rails support jaws and resist wear
- Fully sealed lead screw assembly
- Supplied with machinable soft jaws
- Available with hard jaws

Clamping Force

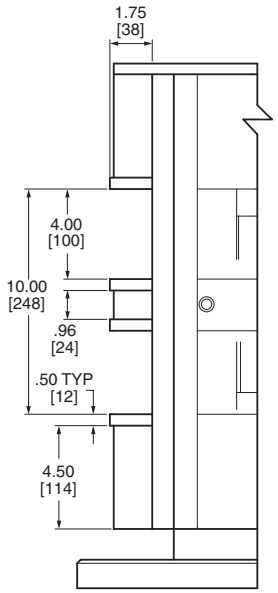
Jergens 6" (150mm)

Torque		Clamping Force	
lbs ft.	N•m	lbs	kgf
20	27	3,600	1,630
30	41	4,500	2,040
40	54	5,300	2,400
50	68	6,200	2,800
60	81	7,200	3,250
70	95	8,400	3,800
80	108	9,200	4,150
90	122	10,100*	4,550*

*Recommended Maximum



Column With Soft Jaws



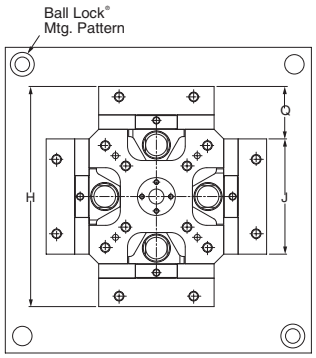
Column With Hard Jaws

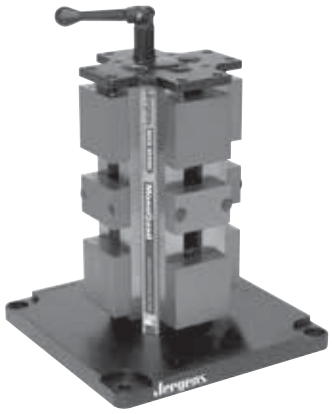
Production Vise Columns – 6" (150mm)

4-Sided

The 4-Sided Columns are the workhorses of the Jergens Production Vise Columns. They have eight stations for holding your parts. Two standard bases are available. The universal base will mount directly to most HMC tables, using the provided mounting holes on 80mm or 100mm centers.

Further reduce set-up times by adding the Jergens Ball Lock® Mounting System to your HMC. Exchange your vise columns and any other fixture in less than a minute. Location of all fixtures will repeat within ±0.0005" (±0.013mm) or better.





4-Sided 6" (150mm) Vise Columns

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock® Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Mounting Pattern 3*	Weight (lbs)	Ball Lock® Part No.	Shank Size
Ball Lock®	**49412**	11.50	6.00	2.75	15.75	15.75	14 x 14	n/a	n/a	n/a	244	**49602**	20mm x 1"
Ball Lock®	**49404**	11.50	6.00	2.75	19.68	19.68	17 x 17	n/a	n/a	n/a	258	**49612**	20mm x 1"
Universal	**49476**	11.50	6.00	2.75	15.75	15.75	n/a	80mm	100mm	125mm	235	–	–

4-Sided 150mm Vise Columns Metric Bases

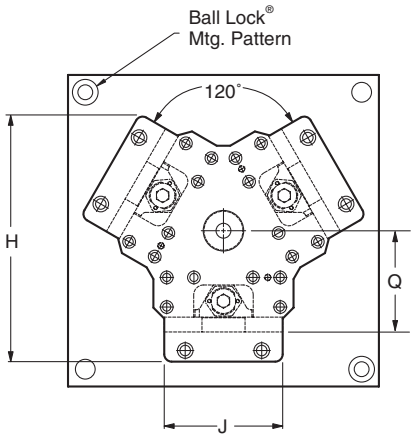
Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock® Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Mounting Pattern 3*	Weight (Kg)	Ball Lock® Part No.	Shank Size
Ball Lock®	**69412**	290	150	70	400	400	350 x 350	n/a	n/a	n/a	111	**49652**	20mm x 25mm
Ball Lock®	**69404**	290	150	70	500	500	425 x 425	n/a	n/a	n/a	117	**49662**	20mm x 25mm
Universal	**49476**	290	150	70	400	400	n/a	80mm	100mm	125mm	107	–	–

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80mm and 100mm centers. Custom mounting patterns and base sizes are available upon request.

Production Vise Columns – 6" (150mm)
3-Sided

The 3-Sided Columns have only six workstations, but provide much greater access to three or more sides of your work pieces. This design is especially beneficial on machining centers with large spindle noses. No need to sacrifice tool rigidity for access, by having tools extended too far from the tool holders. The universal base will mount directly to most HMC tables, using the provided mounting holes on 80mm or 100mm centers.

Further reduce your set-up time by adding the Jergens Ball Lock® Mounting system to your HMC. Exchange your vise columns and all other fixtures in less than a minute. Location of all fixtures will repeat within ±0.0005" (±0.013mm)or better.





Tri-column design allows up to 240° accessibility

3-Sided 6" Vise Columns

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock® Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Mounting Pattern 3*	Weight (lbs)	Ball Lock® Part No.	Shank Size
Ball Lock®	**49408**	12.57	6.00	5.12	15.75	15.75	14 x 14	n/a	n/a	n/a	252	**49602**	20mm x 1"
Ball Lock®	**49410**	12.57	6.00	5.12	19.68	19.68	17 x 17	n/a	n/a	n/a	266	**49612**	20mm x 1"
Universal	**49474**	12.57	6.00	5.12	19.68	19.68	n/a	80mm	100mm	125mm	240	–	–

3-Sided 150mm Vise Columns Metric Bases

Mounting	Part Number	H	J	Q	Base Width	Base Length	Ball Lock® Mtg Pattern	Mounting Pattern 1*	Mounting Pattern 2*	Mounting Pattern 3*	Weight (Kg)	Ball Lock® Part No.	Shank Size
Ball Lock®	**69408**	318	150	130	400	400	350 x 350	n/a	n/a	n/a	115	**49652**	20mm x 25mm
Ball Lock®	**69410**	318	150	130	500	500	425 x 425	n/a	n/a	n/a	121	**49662**	20mm x 25mm
Universal	**49474**	318	150	130	500	500	n/a	80mm	100mm	125mm	109	–	–

* Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80mm and 100mm centers. Custom mounting patterns and base sizes are available upon request.

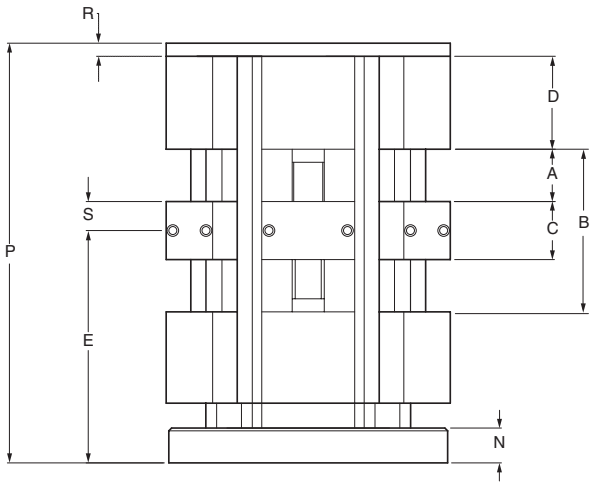
Production Vise Columns

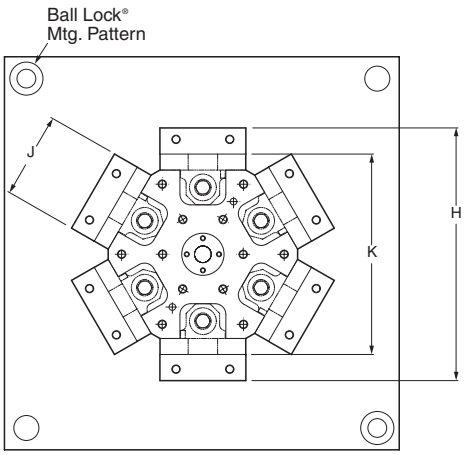
12 Station Hex

Jergens Hex Production Vise Columns provide 12 stations to maximize the number of parts per load. Available with bases to fit directly onto your machine table, or to a Ball Lock® sub-plate.

- Reduce part processing costs by machining 3 sides of 12 parts
- Increase unattended machine time
- Improve part throughput
- One piece column with hardened steel guide ways
- Full jaw travel permits clamping a larger variety of parts







Hex Production Vise Columns (Inch & Metric)

Dimensions		Ball Lock® Base		Universal Base		Ball Lock® Base		Universal Base	
		49413	49414	49477	49478	69413	69414	69477	69478
	Vise Size	4"/100mm	6"/150mm	4"/100mm	6"/150mm	100mm	150mm	100mm	150mm
A	Max Jaw Opening*	2.25	3.50	2.25	3.50	56	88	56	88
B	Max Jaw Opening (1 station)*	7.00	10.00	7.00	10.00	178	254	178	254
C	Fixed Jaw Width	2.50	3.00	2.50	3.00	64	78	64	78
D	Moveable Jaw Length	4.00	5.00	4.00	5.00	100	127	100	127
E	Base to Center of Fixed Jaw	8.50	11.00	8.50	11.00	241	305	241	305
H	Overall Width	11.81	16.91	11.81	16.91	300	432	300	432
J	Jaw Width	4.00	6.00	4.00	6.00	100	150	100	150
K	Outside Rail to Rail	9.37	14.01	9.37	14.01	238	356	238	356
N	Base Plate Thickness	1.00	1.00	1.00	1.00	25	25	25	25
P	Overall Height	17.56	22.56	17.56	22.56	446	573	446	573
R	Top Plate Thickness	0.56	0.56	0.56	0.56	14	14	14	14
S	Center to Face	1.25	1.50	1.25	1.50	32	39	32	39
	Base Length & Width	15.75	19.68	15.75	19.68	400	500	400	500
	Ball Lock® Mounting Pattern	14x14	17x17	n/a	n/a	350x350	425x425	n/a	n/a
	Mounting Pattern 1**	n/a	n/a	80mm	80mm	n/a	n/a	80mm	80mm
	Mounting Pattern 2**	n/a	n/a	100mm	100mm	n/a	n/a	100mm	100mm
	Weight	206 lbs	355 lbs	206 lbs	355 lbs	94 Kg	161 Kg	94 Kg	161 Kg

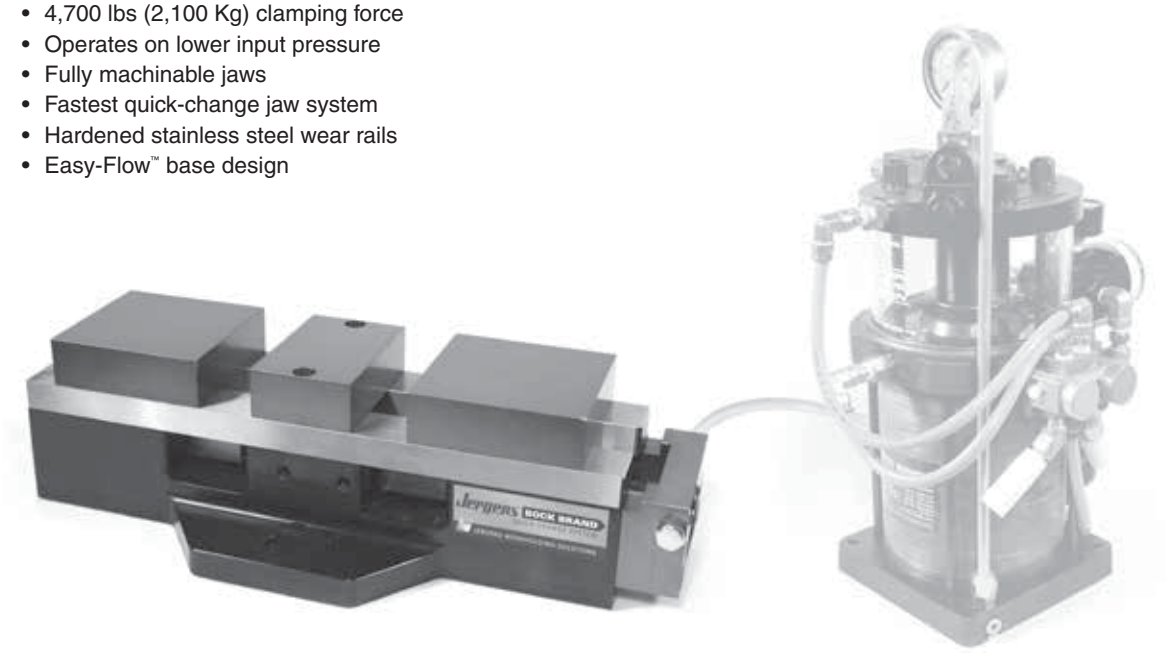
* Larger parts can be clamped by machining jaws to fit workpiece.

** Bases on Universal Columns are provided with two sets of mounting holes, to fit grids or T-Slots on 80mm and 100mm centers. Custom mounting patterns and base sizes are available upon request.

Hydraulic Production Vises

- Innovative compact design
- Internal hydraulics
- 4,700 lbs (2,100 Kg) clamping force
- Operates on lower input pressure
- Fully machinable jaws
- Fastest quick-change jaw system
- Hardened stainless steel wear rails
- Easy-Flow™ base design

Hydraulic Power Sources Available



Technical Specifications:

Hydraulic Clamping Stroke: 1/4" (6.3mm)
Operating Volume: 0.4 Cu In (6.7 cm^3)
Maximum Input Pressure: 4000 P.S.I. (275 bar)
Minimum Input Pressure: 500 P.S.I. (35 bar)
Input Port: #4 SAE (7/16-20 UNF-2B)

Clamping Force (lbs) = Input Pressure x 1.19
Clamping Force (Kg) = Input Pressure Bars x 7.67

Operation:

Using the Jergens Hydraulic Vise handle part number 49445, tighten vise jaws so the workpieces touch the fixed jaw. Next, turn the handle back 1/2 turn and activate the hydraulic cylinder. Handle included with vise.

Note: Only use the Jergens Hydraulic Vise Handle Part No. 49445 for adjustment purpose, do not use to operate vise.

Jergens hydraulic vises are available in 3 different base configurations. They offer the same unique features as Jergens manual vises.

Clamping Force

Input Pressure		Clamping Force	
PSI	Bars	lbs	kgf
500	35	595	268
1,000	70	1,190	537
2,000	140	2,380	1,075
3,000	210	3,570	1,612
4,000	275*	4,760*	2,110*

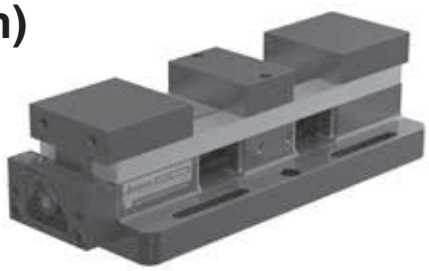
*Recommended Maximum

Jergens WORKHOLDING SOLUTIONS GROUP

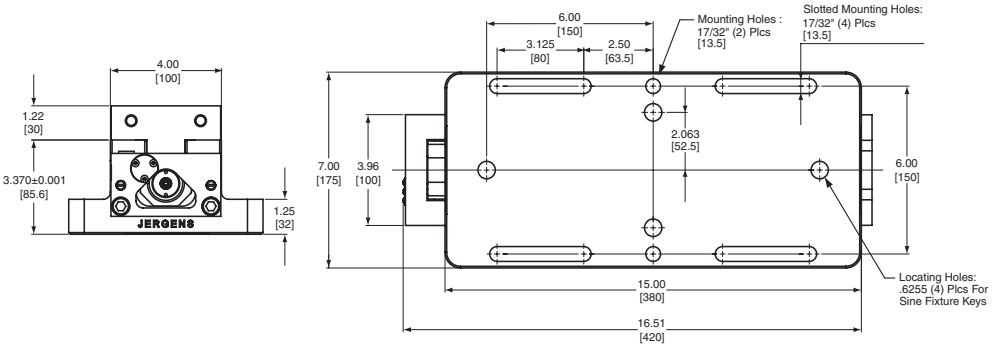
Hydraulic Production Vises – 4" (100mm)

Universal Base

Part Number	Wt. lbs/Kg
49483	35/16



- Easy to mount directly to machine tables
- Slotted mounting holes fit most machines



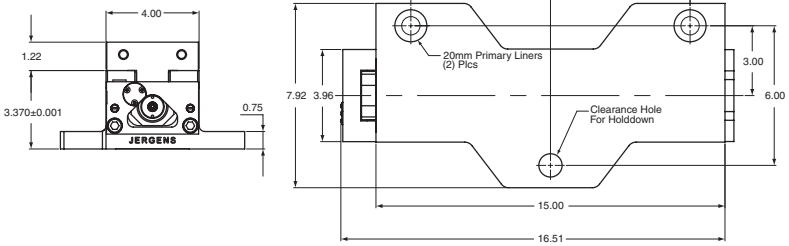
Ball Lock® Base

- Designed for use with the Jergens Ball Lock® mounting system
- Jigsaw pattern allows for "nesting" on Jergens Ball Lock® subplates



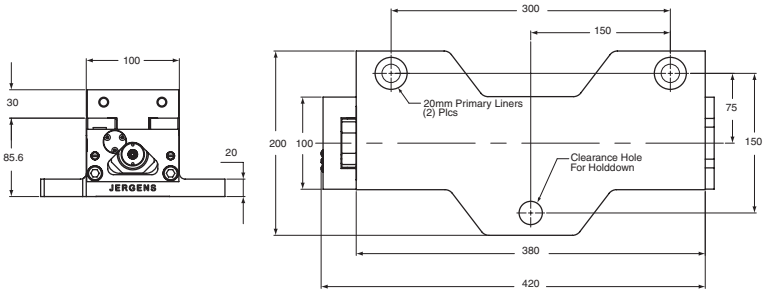
Inch

Part No.	Wt.	Ball Lock® Shank Part No.	Shank Size
49485	32 lbs	**49601**	20mm x 3/4"



Metric

Part No.	Wt.	Ball Lock® Shank Part No.	Shank Size
69485	15 Kg	**49651**	20mm x 20mm

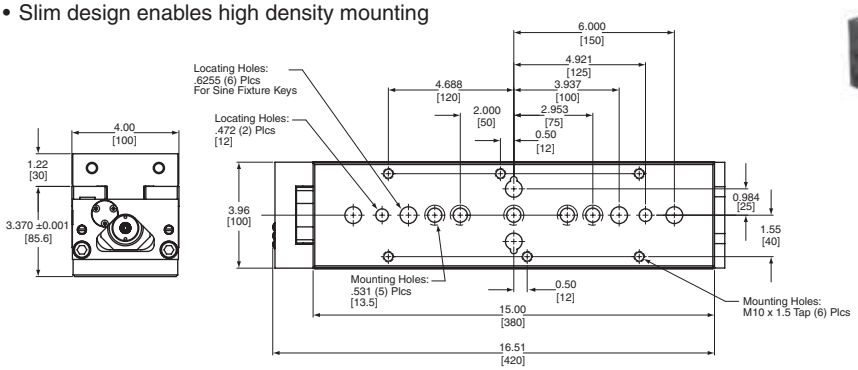


Hydraulic Production Vises – 4" (100mm)

Narrow Base

- Designed for stand alone or fixture plate mounting
- Slim design enables high density mounting





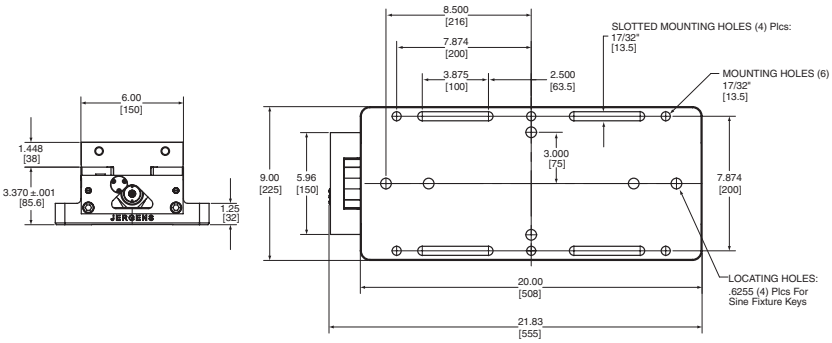
Part Number	Wt. lbs/Kg
49487	30/14

Hydraulic Production Vises – 6" (150mm)

Universal Base

- Easy to mount directly to machine tables
- Slotted mounting holes fit most machines



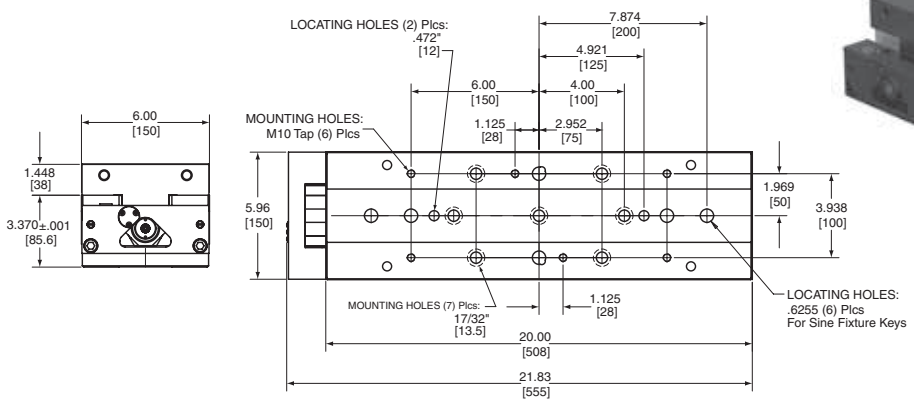


Part Number	Wt. lbs/Kg
49484	65/29

Narrow Base

- Designed for stand alone or fixture plate mounting
- Slim design enables high density mounting on fixture plates





Part Number	Wt. lbs/Kg
49488	60/27

Jergens WORKHOLDING SOLUTIONS GROUP

Hydraulic Production Vises – 6" (150mm)

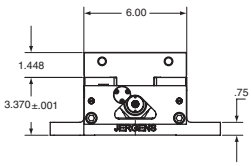


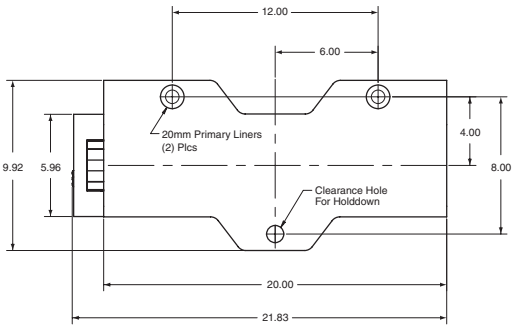
Ball Lock® Base

- Designed for use with the Jergens Ball Lock® mounting system
- Jigsaw pattern allows for "nesting" on Jergens Ball Lock® subplates

Inch

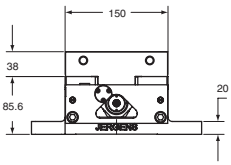
Part No.	Wt.	Ball Lock® Shank Part No.	Shank Size
49486	62 lbs	**49601**	20mm x 3/4"

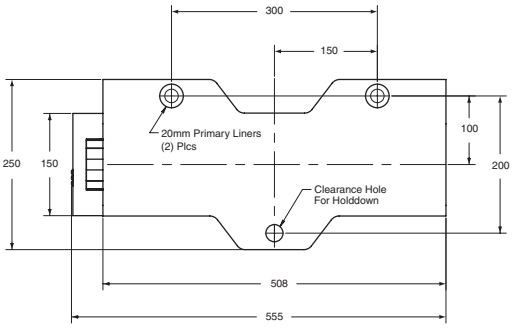




Metric

Part No.	Wt.	Ball Lock® Shank Part No.	Shank Size
69486	28 Kg	**49651**	20mm x 20mm





Hydraulic Production Vise Accessories

Pre-Fill Boosters Kit



Patent No. 3839866

Part Number
61725

Jergens Booster Kit provides a complete compact power source for hydraulic vises. The kit includes a Jergens 30:1 pre-fill self-bleeding booster with filter regulator, 4 way push button actuation valve, plumbed with all fittings and hoses.

This air operated booster provides enough hydraulic volume to power up to 6 Jergens Hydraulic vises.

- **Self Bleeding**
- **Easy View Reservoir**
- **30:1 Boost Ratios**

Kit 61725 Includes

- Jergens Pre-Fill Booster 61705 (see above)
- Filter Regulator
- Actuator Valve

Specifications

Part Number	61705
Reservoir Capacity (cu. in.) / Liters	50 / 0.8
High Pressure Volume (cu. in.) / cm^3	3 3/4 / 61
Minimum Input (psi) / bar	40 / 2.7
Maximum Input (psi) / bar	125 / 8.6
Boost Ratio	30:1 / 30:1
Maximum Output (psi) / bar	3,750 / 258.5
Weight (lbs) / Kg	28 / 13

Handle



Part Number
49445

- Ergonomic design
- Aluminum handle
- 1/4" Steel Drive Hex for Jergens Hydraulic Vises

Handle for Hydraulic Vises, 4" (100mm) and 6" (150mm)

Hydraulic Production Vise Accessories

Air-Powered Hydraulic Pumps

Shoebox™ Pumps



Part Number
61759

The "Shoebox" Pump is a low cost, compact unit used on smaller hydraulic circuits. Its small size offers the versatility of mounting on wheels (such as a workcart) and moving the pump from workstation to workstation. The "Shoebox" is a cost effective power source for hydraulic tooling column vises.

Kit Includes

61755 36:1 Pump

61643 Remote four-way zero-leakage valve with subplate

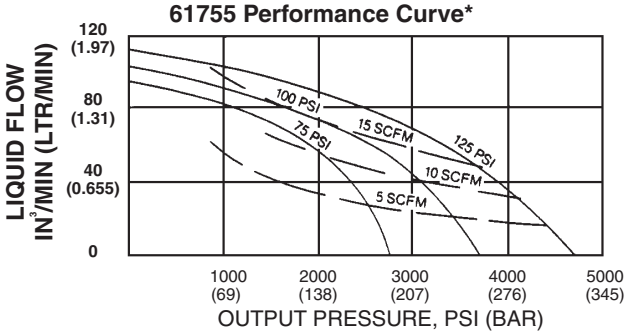
60703 6000psi (414 Bar) gauge

Specifications

Part Number	61755
Reservoir Capacity	300 cu. in. (4.9 liter)
Minimum Input	25 psi (1.7 Bar)
Maximum Input	125 psi (8.5 Bar)
Boost Ratio	36:1
Maximum Output	4500 psi (306 Bar)
Free Flow @ 100 psi (6.8 Bar)	100 cu.in./min. (1.64 liter/min.)
Weight	24 lbs (11Kg)

Note: Do not use more than 4,000 PSI input pressure on Jergens Vises

61755 Performance Curve*



Quick Disconnect Couplers

Hydraulic Coupler

Sleeve	Nipple
1/4 NPT Female	1/4 NPT Male
61916	**61966**

Hydraulic couplers have dual checks.

Air Couplers

Sleeve	Nipple
1/8 NPT Female	1/8 NPT Male
61904	**61950**
1/4 NPT Female	1/4 NPT Male
61905	**61951**
	1/4 NPT Female
	61954

Air couplers have checks on sleeves only.

Adapters & Elbows

Adapter for BSP	Elbows
1/4 Male NPT	1/4 NPT x 1/4 Tube
1/4 Female BSP	
60221	**61004**

Air Hose

Low pressure flexible PVC air hose is sold by the foot in bulk lengths. Order the total footage and number of push-on fittings required by using the number to the right.

Low Pressure Air Hose

Hose I.D.	1/4"	3/8"	1/2"
Hose Part Number	**61106**	**61108**	**61110**
Fitting Part Number	**61107**	**61109**	**61111**

Hydraulic Hose



High pressure hose is supplied assembled and to lengths indicated. Lengths are measured from end of coupling to end of coupling. Hose is 3/8" ID and available in 4000 psi or 7000 psi rating. 3/8" female tubing fittings on each end.

High Pressure Hydraulic Hose

Length	12"	18"	24"	36"	72"
Part Number 4000 psi	**61201**	**61202**	**61203**	**61204**	**61205**
Part Number 7000 psi	**61211**	**61212**	**61213**	**61214**	**61215**

*Also available in 5000 psi.

Hydraulic Hose (Build Your Own)

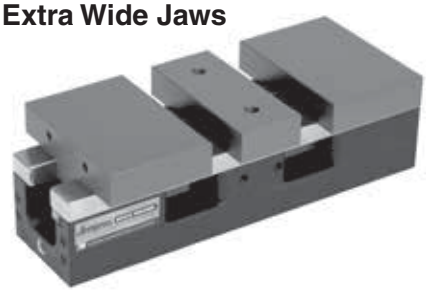
Length	25'	Hose Ends	Hose Ends
Part Number	**61221**	**61226**	**61227**
2750 psi	1/4 Hose	1/4 Npt Male	1/4 37° JIC Swivel Female

Jergens Production Vise System
Flexible Clamping – Flexible Production

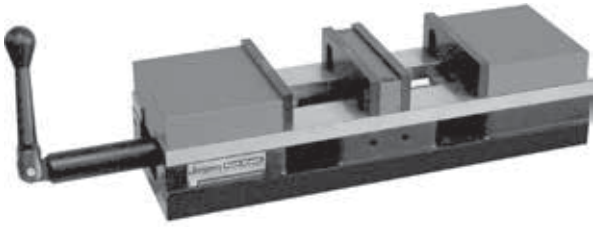
Variable batch sizes? Many different types of workpieces? Frequent set-ups?

The Jergens Production Vise System is the answer for these manufacturing flexibility issues!

Extra Wide Jaws



Dual Station with Hard Jaw



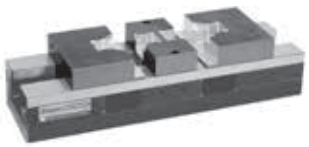
Full Face Vise Plate



Single Workpiece with Hard Jaws



Aluminum jaws can be completely milled, therefore a high degree of adaptability to the workpiece shape. For clamping, stop, and supporting surfaces.



Hard coated base made of high-strength, light-weight, aluminum extrusion. Guideway Rails made of hardened stainless steel.





Completely sealed lead screw assembly for trouble-free operation, power transmission through inserted steel nut, large slide stroke.



The clamping system consists of only a few components, for quick dismantling and minimum maintenance.

Aluminum or steel jaws suitable for milling:

- Milling of stop, supporting and clamping surfaces
- Quick set-up for formed parts and workpieces with complex clamping contours
- Significant reduction in expenditure on fixtures

Jaws change in a few seconds:

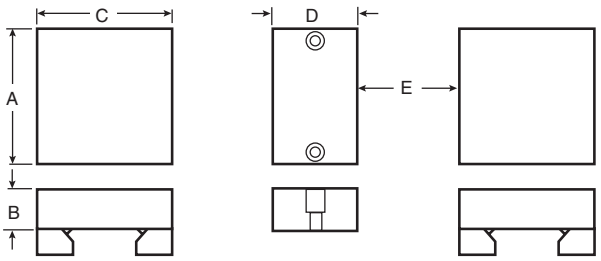
- Rapid changeover from one workpiece to the next
- Machine downtimes are minimized

High versatility:

- The clamping element can be made available for simple and complex clamping applications in a very short time

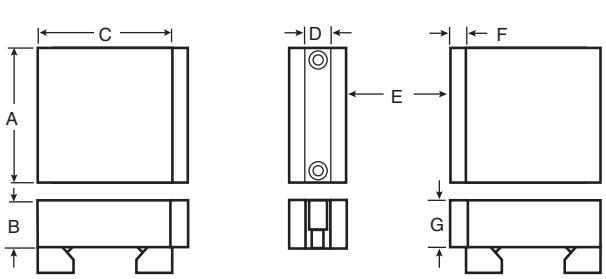
Jergens WORKHOLDING SOLUTIONS GROUP

Production Vise Jaws



Soft Jaws

• Standard Jaws are machinable aluminum.



Hard Jaw Carrier Set with hardened steel inserts

Jaws for 4" (100mm) Production Vises

Part Number	Description	A	B	C	D	E [1]	F	G
49420	Standard Machinable Soft Jaw Set (3pcs.)	3.95	1.22	4.00	2.50	2.20		
49421*	Pair of Std Moveable Jaws Only (2pcs.)	3.95	1.22	4.00				
49422	Std Fixed Jaw Only (1pc.)	3.95	1.22		2.50			
49423	Extra Wide Machinable Soft Jaw Set (3pcs.)	5.95	1.22	4.00	2.50	2.20		
49424*	Pair of Wide Moveable Jaws Only (2pcs.)	5.95	1.22	4.00				
49425	Wide Fixed Jaw Only (1pc.)	5.95	1.22		2.50			
49450	Extra Tall Machinable Soft Jaw Set (3pcs.)	3.95	2.00	5.00	2.50	1.70		
49451*	Pair of Tall Moveable Jaws Only (2pcs.)	3.95	2.00	5.00				
49452	Tall Fixed Jaw Only (1pc.)	3.95	2.00		2.50			
49426	Hard Jaw Carrier Set [2] (3pcs.)	3.95	1.22	3.44	.96	2.88		
	[2] Steel Jaw Plates not included							
49428*	Pair of Moveable Hard Jaws Only (2pcs.)	3.95	1.22	3.44				
49427	Fixed Hard Jaw Only (1pc.)	3.95	1.22		.96			
49429	Hardened Steel Jaw Insert [3] (4pcs.)	4.00					.35	1.23
	[3] Steel Jaw Plates have black-oxide finish, and are hardened to Rc 54/58.							

[1] Mounted Dimensions

Jaws for 6" (150mm) Production Vises

Part Number	Description	A	B	C	D	E [1]	F	G
49430	Standard Machinable Soft Jaw Set (3pcs.)	5.95	1.45	5.00	3.00	3.50		
49431*	Pair of Std Moveable Jaws Only (2pcs.)	5.95	1.45	5.00				
49432	Std Fixed Jaw Only (1pc.)	5.95	1.45		3.00			
49433	Extra Wide Machinable Soft Jaw Set (3pcs.)	7.95	1.45	5.00	3.00	3.50		
49434*	Pair of Wide Moveable Jaws Only (2pcs.)	7.95	1.45	5.00				
49435	Wide Fixed Jaw Only (1pc.)	7.95	1.45		3.00			
49455	Extra Tall Machinable Soft Jaw Set (3pcs.)	5.95	2.50	6.00	3.00	3.00		
49453*	Pair of Tall Moveable Jaws Only (2pcs.)	5.95	2.50	6.00				
49454	Tall Fixed Jaw Only (1pc.)	5.95	2.50		3.00			
49436	Hard Jaw Carrier Set [2] (3pcs.)	5.95	1.48	4.50	.96	4.00		
	[2] Steel Jaw Plates not included							
49438*	Pair of Moveable Hard Jaws Only (2pcs.)	5.95	1.48	4.50				
49437	Fixed Hard Jaw Only (1pc.)	5.95	1.48		.96			
49439	Hardened Steel Jaw Insert Set [3] (4pcs.)	6.00					.48	1.75
	[3] Steel Jaw Plates have black-oxide finish, and are hardened to Rc 54/58.							

[1] Mounted Dimensions

Note: Steel available for all soft jaw sets, add -S to the base part number. Example: 49420-S
*For Self Centering Vises. Moveable jaw sets available with gibs for tighter tolerances within rails. Add "SC" to part number. Example: 49421SC

Production Vise Accessories
Jaws & Fixture Plates

Jaws

- **Standard** fully machinable soft jaws, as supplied on the Production Vises and Columns
- **Extra Wide** fully machinable soft jaws. (-W)
- **Extra Tall** fully machinable soft jaws. (-T)
- **Hard Jaw Carriers** are drilled and tapped to accept hard jaw plates. (-H)
- **Hard Jaw Plates** are hardened steel plates that bolt onto the hard jaw carriers. (-H)

Jaws are offered three ways:

- **Jaw Sets** include two moveable jaws and one fixed jaw.
- **Moveable Jaws** are sold in pairs
- **Fixed Jaws** are sold separately.



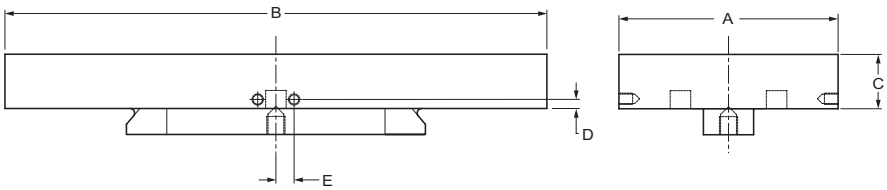
Machinable Soft Jaws
(Standard Sets included with Vises)



Hard Jaw Carriers
With Steel Inserts*

Quick Change Fixture Plates

Fixture plates provide an alternative to holding parts in the jaws. Build dedicated fixtures on the plates, and then just snap onto a vise or column. Switch between jaws and fixture plates without removing the vise or column from the machine.





Quick Change
Fixture Plate

Quick Change Fixture Plates for 4" (100mm) Production Vises

Part No.	Description	A	B	C	D	E
49446	Standard Fixture Plate	4	14.90	1.475	.25	.50
49448	Wide Fixture Plate	6	14.90	1.475	.25	.50

Quick Change Fixture Plates for 6" (150mm) Production Vises

Part No.	Description	A	B	C	D	E
49447	Standard Fixture Plate	6	19.90	1.475	.25	.688
49449	Wide Fixture Plate	8	19.90	1.475	.25	.688



Vise Handles

Part No.	Vise Size
49442	4"/100mm
49443	6"/150mm

- Ergonomic Design
- 5/8" Hex Size



Vise Work Stop

Part No.	Type
49444	Double Pivot
49459	Single Pivot

- Easily mounts to side of twin vise
- Allows for precise part location



Vise Conversion Plates

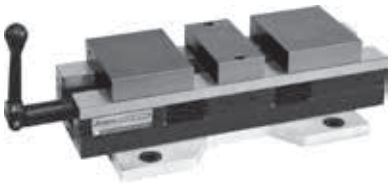
Part No.	Vise Size
49440	4"/100mm
49441	6"/150mm

NOTE: Conversion plates include mounting screws.

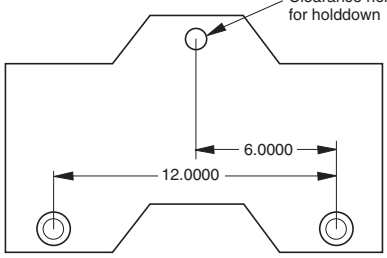
- Allows for easy conversion from twin station to single station vise
- Hard coat anodized aluminum

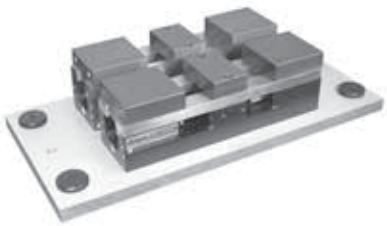
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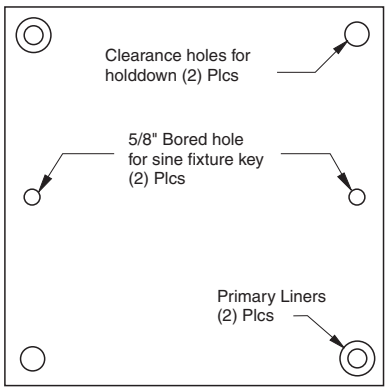
Production Vise Ball Lock® Accessories – Inch



Jigsaw Fixture Plate







Ball Lock® Shanks

Jergens BALL LOCK MOUNTING SYSTEM

Shank Diameter	Fixture Plate Thickness	Standard Shank	Shank with Thumbscrew
20	3/4	**49601**	**49601-S**
20	1"	**49602**	**49602-S**
25	3/4	**49611**	**49611-S**
25	1"	**49612**	**49612-S**



Standard Shank



Thumb Screw

Jigsaw Interlocking Fixture Plates

Plate Part No.	Jig Saw Pattern	Plate Thickness	Outer Dimensions	Use With Vise No.	Wt. (lbs)
28705	6 x 12	3/4	8 x 15	**49401**	9
28706	8 x 12	3/4	10 x 16	**49402**	9

Ball Lock® Fixture Plates for Multiple Production Vises

Jergens manufactures standard Ball Lock® Fixture Plates for various applications. A small sample is listed below. These fixture plates will accept multiple Jergens Production Vises. However, the Jergens Ball Lock® Mounting System can provide the greatest benefits, when designed for your specific applications and your machine tools. Please contact Jergens Technical Service to select the proper fixture and sub-plate for your applications.

Plate Part No.	Ball Lock® Pattern	Shank Diameter	Plate Thickness	Outer Dimensions	Vises/ Plate	Use With Vise No.	Wt. (lbs)
28713	12 x 12	20mm	3/4	14 x 14	2	**49401**	14
28715	12 x 12	20mm	3/4	16 x 16	2	**49401**	18
28727	17 x 17	25mm	1"	20 x 20	3	**49401**	38
28727	17 x 17	25mm	1"	20 x 20	2	**49402**	38
***28742**	8 x 22	25mm	1"	12 x 25	2	**49401**	28

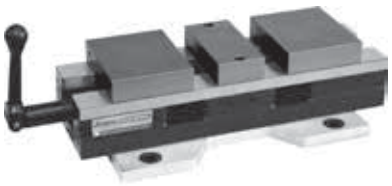
*Fits Jergens Tooling Column 69011

Ball Lock® Sub-Plates for Ball Lock® Vises, Columns, and Fixture Plates

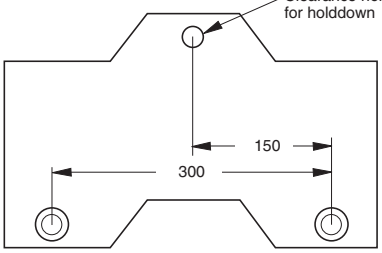
Jergens manufactures standard sub-plates for popular machine tools. Three standard plates are shown. These sub-plates will accept Jergens Ball Lock® Vises, Columns and Fixture Plates. Some of the sub-plates have multiple mounting patterns that will allow multiple sizes and styles of fixture plates and vises to be used on the same machine. However, the Jergens Ball Lock® Mounting System can provide the greatest benefits, when designed for your specific applications and your machine tools. Please contact Jergens Technical Service to select the proper sub-plate for your machine.

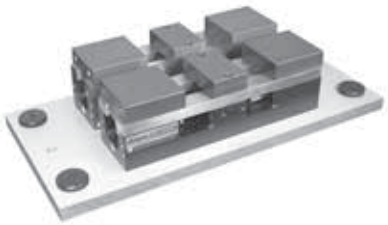
Plate Part Number	Machine Type	Table Size	Ball Lock® Pattern	Applications
49102	HMC	400mm	14x14	Vise Columns, Tooling Columns, Other
49103-C	HMC	500mm	17x17&14x14	Vise Columns, Tooling Columns, Other
49112	VMC	20x40	Multiple Patterns	Jigsaw Vises & Plates, Multiple Vise Fixtures, Other

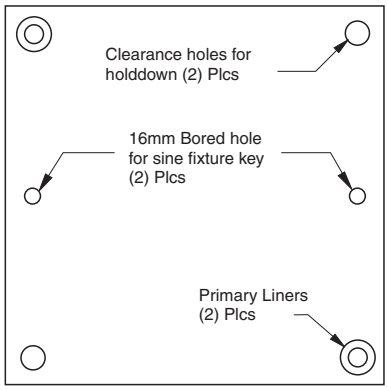
Production Vise Ball Lock® Accessories – Metric



Jigsaw Fixture Plate







Ball Lock® Shanks

Shank Diameter	Fixture Plate Thickness	Standard Shank	Shank with Thumbscrew
20	20	**49651**	**49651-S**
20	25	**49652**	**49652-S**
25	20	**49661**	**49661-S**
25	25	**49662**	**49662-S**



Standard Shank



Thumb Screw

Jigsaw Interlocking Fixture Plates

Plate Part No.	Jig Saw Pattern	Plate Thickness	Outer Dimensions	Use With Vise No.	Wt. (Kg)
58706	200 x 300	20	250 x 400	**49402**	4

Ball Lock® Fixture Plates for Multiple Production Vises

Jergens manufactures standard Ball Lock® Fixture Plates for various applications. A small sample is listed below. These fixture plates will accept multiple Jergens Production Vises. However, the Jergens Ball Lock® Mounting System can provide the greatest benefits, when designed for your specific applications and your machine tools. Please contact Jergens Technical Service to select the proper fixture and sub-plate for your applications.

Plate Part No.	Ball Lock® Pattern	Shank Diameter	Plate Thickness	Outer Dimensions	Vises/ Plate	Use With Vise No.	Wt. (Kg)
58713	300 x 300	20mm	20	350 x 350	2	**49401**	6
58715	300 x 300	20mm	20	400 x 400	2	**49401**	8
58727	425 x 425	25mm	25	500 x 500	3	**49401**	18
58727	425 x 425	25mm	25	500 x 500	2	**49402**	18
58742	175 x 550	25mm	25	300 x 625	2	**49401**	12

Ball Lock® Sub-Plates for Ball Lock® Vises, Columns, and Fixture Plates

Jergens manufactures standard sub-plates for popular machine tools. Three standard plates are shown. These sub-plates will accept Jergens Ball Lock® Vises, Columns and Fixture Plates. Some of the sub-plates have multiple mounting patterns that will allow multiple sizes and styles of fixture plates and vises to be used on the same machine. However, the Jergens Ball Lock® Mounting System can provide the greatest benefits, when designed for your specific applications and your machine tools. Please contact Jergens Technical Service to select the proper sub-plate for your machine.

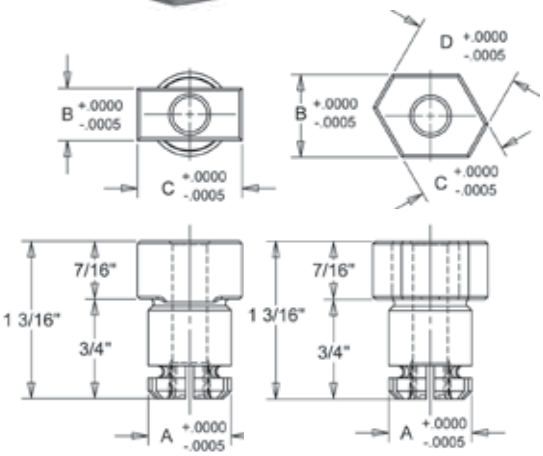
Plate Part Number	Machine Type	Table Size	Ball Lock® Pattern	Applications
59102	HMC	400mm	350 x 350	Vise Columns, Tooling Columns, Other
59103-C	HMC	500mm	350 x 350 425 x 425	Vise Columns, Tooling Columns, Other
59112	VMC	500 x 1000	Multiple Patterns	Jigsaw Vises & Plates, Multiple Vise Fixtures, Other

Jergens WORKHOLDING SOLUTIONS GROUP

Production Vise Accessories

Multi Slot Sine Fixture Keys





Locate subplates or fixture plates to slotted machine tables without having to slot the plate. Available in inch sizes from 1/2" to 7/8" slots, and in metric sizes from 14mm to 22mm slots.

NOTE: See page 230 for dimensions.

Inch

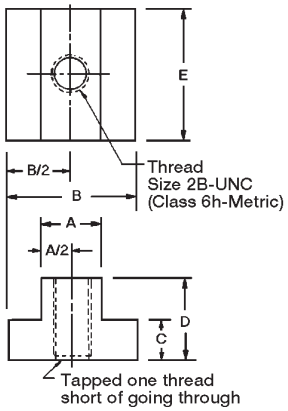
Part Number	Shank Size A	Key Width B	C	D	Wt. (lbs)	Recommended Hole Dia.	Previous Part Numbers
39520	0.625	0.4995	0.8745	-	0.09	0.625 Shank Size 0.6255 +/-0.0005	39501, 39507
39521	0.625	0.562	0.7495	-	0.09	0.625 Shank Size 0.6255 +/-0.0005	39502, 39505
39522	0.625	0.6245	0.687	0.812	0.09	0.625 Shank Size 0.6255 +/-0.0005	39503, 39504, 39506
39523	0.75	0.9995	1.062	-	0.19	0.750 Shank Size 0.7505 +/-0.0005	39509, 39510

Metric

Part Number	Shank Size A	Key Width B	C	D	Wt. (lbs)	Recommended Hole Dia.	Previous Part Numbers
39525	16	10	20	-	0.04	16mm Shank Size 16.01 +/-0.01	39550, 39555
39526	16	12	22	-	0.04	16mm Shank Size 16.01 +/-0.01	39551, 39556
39527	16	14	16	18	0.04	16mm Shank Size 16.01 +/-0.01	39552, 39553, 39554
39528	20	24	28	32	0.09	20mm Shank Size 20.01 +/-0.01	39557, 39558, 39559

T-Slot Nuts





Inch

Part Number	Thread	T-Slot Width A	B	C	D	E	Wt. (lbs) 10 Pcs.
43302*	3/8-16	7/16	11/16	7/32	1/2	7/8	0.50
43303*	3/8-16	1/2	7/8	9/32	1/2	7/8	0.70
43301	3/8-16	9/16	7/8	1/4	1/2	7/8	0.70
43305*	1/2-13	9/16	7/8	11/32	5/8	1 1/8	1.20
***43306**	1/2-13	5/8	1	11/32	5/8	1 1/8	1.50
***43304**	1/2-13	11/16	1 1/8	7/16	3/4	1 1/4	2.10
43308*	5/8-11	11/16	1 1/8	7/16	3/4	1 1/4	1.14
***43309**	5/8-11	3/4	1 1/4	15/32	3/4	1 1/4	1.60
***43307**	5/8-11	13/16	1 1/4	9/16	1	1 1/2	3.11

*Conforms to TCMA. **Not Hardened

Metric

Part Number	Thread	T-Slot Width A	B	C	D	E	Wt. (Kg) 10 pcs.
43372	M10 x 1.5	12	19	7	13	25	0.25
43373	M10 x 1.5	14	22	9	16	29	0.35
43374	M10 x 1.5	16	25	9	16	29	0.35
43375	M12 x 1.75	14	22	9	16	29	0.60
43376	M12 x 1.75	16	25	9	16	29	0.75
43377	M12 x 1.75	18	29	11	19	32	1.1
43378	M16 x 2.0	18	29	11	19	32	0.57
43379	M16 x 2.0	20	32	14	25	38	0.80
43380	M16 x 2.0	22	35	14	25	38	1.56

Note: Complete offering of T-Slot Nuts available on page 269

Heavy Duty Machine Vise



Characteristics

Jergens' newest machine vise is built to be more than tough enough for your most demanding, rugged applications, while delivering exacting precision and versatility.

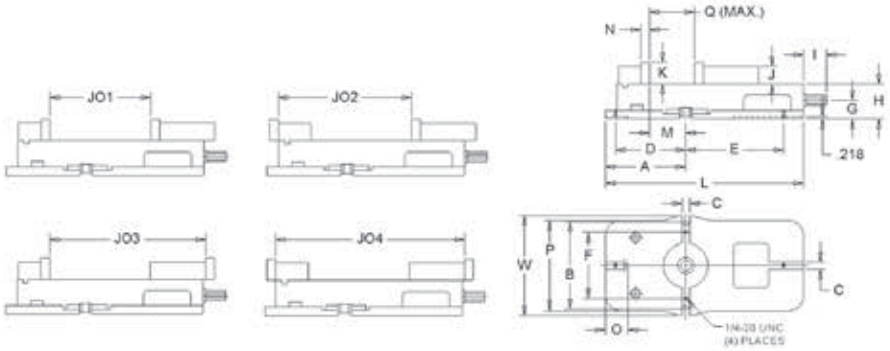
- Made in USA
- Single Station
- Available in 6" and 8"
- Cast Iron Base
- Soft jaws are interchangeable with common industry styles

Inch

Part Number	J01	J02	J03	J04
80075	8.000	10.750	13.500	16.250
80082	9.850	13.250	17.300	20.500

Metric

Part Number	J01	J02	J03	J04
80075	203	273	343	412
80082	250	336	439	520



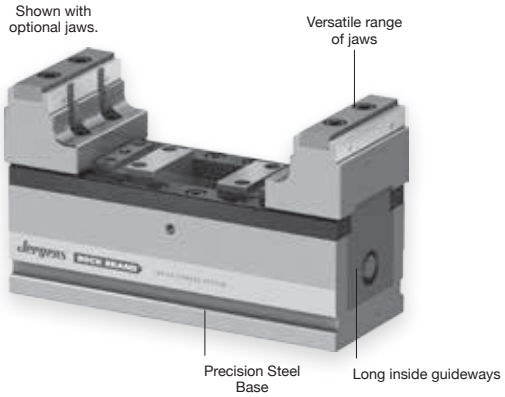
Inch

Part Number	Size	Full Opening	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	W
80075	6	7.9375	6.78	7.652	0.688	5.97	8.345	5.5	1.54	2.875	2	1.485	1.735	16.75	3	0.725	2	8.25	7.94	9
80082	8	10	8	7	0.812	6.5	11.5	7	1.865	3.312	2.875	1.965	2.22	21.625	3.675	10.75	3.06	11	10	11.5

Metric

Part Number	Size	Full Opening	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	W
80075	152	201	172	194	17.475	151.6	211.96	139.7	39.12	73.03	50.8	37.72	44.07	425.5	76.2	18.42	50.8	210	201	229
80082	203	254	203	178	20.625	165	292	178	47	84.1	73	49.91	56.4	549	93.35	273.1	77.7	279	254	292

5-Axis Self-Centering Vises



This series is suitable for many clamping tasks on 5-Axis machining centers and pallet systems. Whether the workpieces are angular or round, the concentric clamping system provides the same zero position.

The compact design, high stability and versatile selection of jaws (grip jaws, plain jaws, soft jaws, pendulum jaws, V-Type jaws) are additional features tailored for 5-Axis machining.

The 40, 60, 100 and 125 clamping systems are suitable for I.D. to O.D. clamping.

- Designed for 5-Axis machining
- Free access to the workpiece, allowing the use of short standard tools
- Simple, robust construction, smooth surfaces for easy cleaning
- Also suitable as a module for standard devices
- Comprehensive jaw selection sold separately on pages 140-141

Part Number	Size	Clamping Force: (kN/Torque Nm)	Weight (Kg)	Dimensions (mm)												Hex (mm)
				Stroke	L	W	H	d1	g	g1	g2	l1	l2	l3	l4	
81601	40mm	8.0 / 23 Nm	1.4	20	110	40	52	6H7			M6 x 7	80	40	28	15	6 Male
80001	60mm	15 / 50 Nm	6	30	170	60	70	10F7		M10 x 11	M8 x 12	100	36	42	35	12 Female
80101	100mm	25 / 80 Nm	18	50	260	100	100	25 x 5 / M10 x 14	M8 x 11		M10 x 14	200	80	70	30	14 Female
80201	125mm	30 / 200 Nm	50	100	465	125	130	25 x 5 / M10 x 14	M12 x 18		M12 x 16	200	82	66	83	19 Female

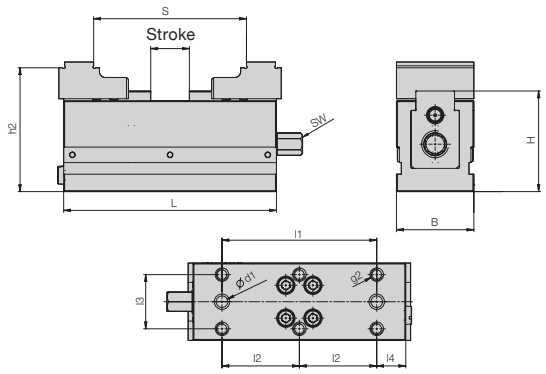
Note: Vise handles included with each Jergens 5-Axis Vise

* Tolerance ±0.01mm

⁑ kN x 224.8=pound - force Nm x 8.85=in. lbs Kg x 2.205=lbs Bar x 14.5=psi

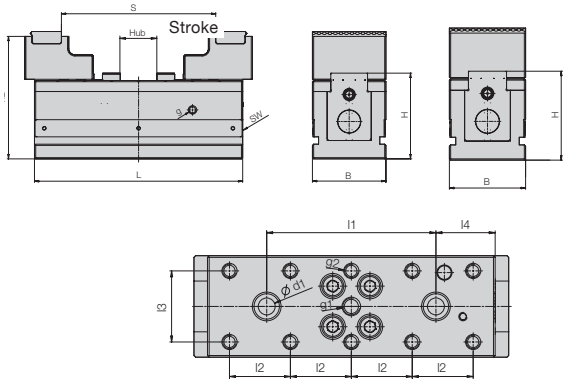
** Tolerance ±0.02mm

40mm



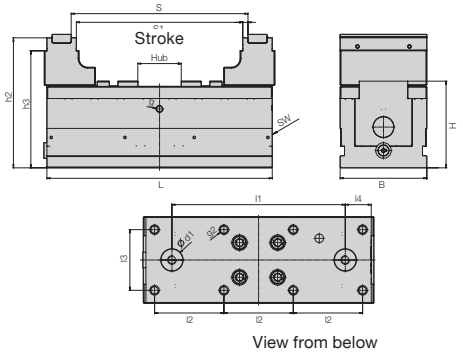
View from below

60mm



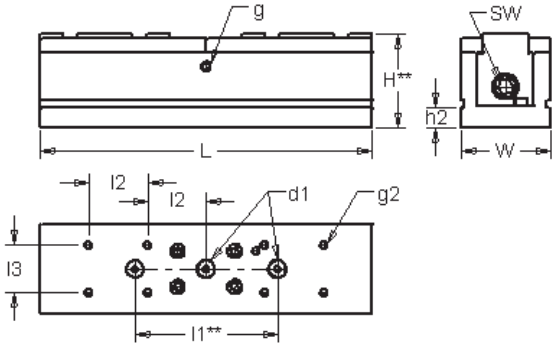
View from below

100mm

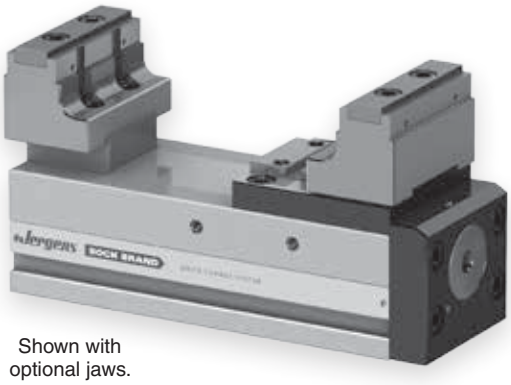


View from below

125mm



Jergens 5-Axis Fixed-Jaw Vise



Shown with optional jaws.

Designed especially for multi-face machining with a single clamping operation. Ideal for machining complicated workpieces in a single clamping operation, such as in mold making. These vises are small, but have a large holding capacity. A variety of jaw options increase the range of applications. Grip jaws and V-type jaws enhance the retention force of the workpiece. The hydraulic version provides automatic power clamping with exact force.

- Designed for 5-Axis machining
- Free access to the workpiece, allowing the use of short standard tools
- Simple and robust construction, smooth surfaces, easy cleaning
- Also suitable as a module for standard devices
- Comprehensive jaw selection sold separately on pages 140-141

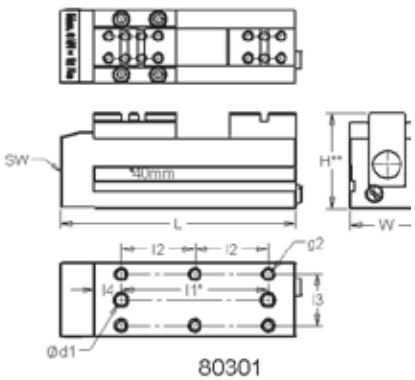
Part Number	Size	Clamping Force⁑ (kN/Torque Nm)	Weight (Kg)	Dimensions (mm)												Hex (mm)
				Stroke	L	W	H	d1	g	g1	g2	l1	l2	l3	l4	
80301	40mm	8 / 15 Nm	1.8	29	128	40	52	6H7	–	–	M6 x 7	80	40	28	15	6 Female
80401	60mm	15 / 25 Nm	5	44	187	60	70	10F7	M6 x 10	M10 x 11	M8 x 12	100	36	42	35	8 Female
80501	60mm Hyd	15 / 260 bar	5	4	204	60	70	10F7	M6 x 10	M10 x 11	M8 x 12	100	36	42	35	8 Female
80901	100mm	25 / 60Nm	20	96	285	100	100	25x5/M10x14	M10 x 16		M10 x 15	200	80	70	30	12 Female

Note: Vise handles included with each Jergens 5-Axis Vise

⁑ kN x 224.8=pound - force Nm x 8.85=in. lbs Kg x 2.205=lbs Bar x 14.5=psi

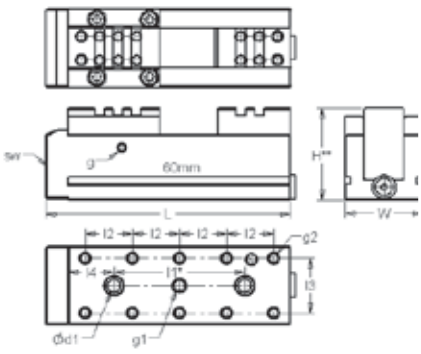
* Tolerance ±0.01mm
** Tolerance ±0.02mm

40mm



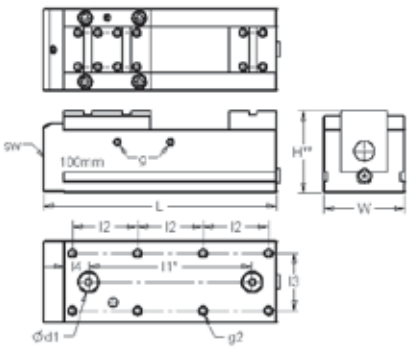
80301

60mm / 60mm Hyd



80401, 80501

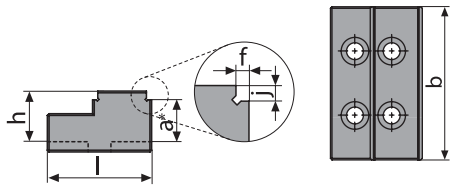
100mm



80901

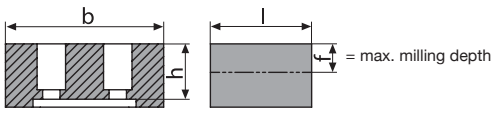
Accessories
Jaws / Jaw Inserts
Self-Centering and Fixed Jaw Vises

Reversible step jaw, 2 steps, hardened



Part Number	Vise(s)	Dimensions (mm)						Clamping Range min./max. (mm)
		l	w	h	a*	e	j	
80009	81601 / 80301	36	40	15	12	3	3	6 – 79
80010	80001 / 80401 / 80501	49	60	23	18	3	5	6 – 150
80110	80101 / 80901 / 80102	60	100	30	25	3	5	6 – 204
80211	80201	80	125	35	30	5	5	6 – 400

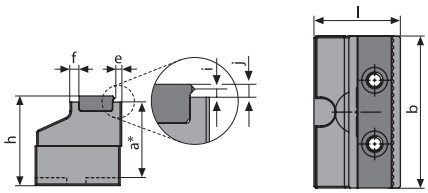
Soft jaw for milling workpiece contours



Part Number	Vise(s)	Dimensions (mm)				Material
		l	w	h	f	
80005	81601 / 80301	36	40	21	6	Steel
80015	80001 / 80401 / 80501	42	60	25	8	Steel
80115	80101 / 80102 / 80901	64	100	35	18	Steel
80215	80201	88	125	55	32	Steel
80013	80001 / 80401 / 80501	53	60	22	8	Aluminum

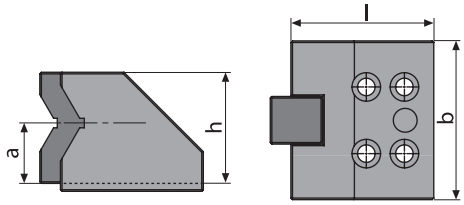
Pendulum jaw with interchangeable insert, hardened

For safe clamping of one workpiece with non-parallel clamping surfaces or two workpieces with different tolerances.



Part Number	Vise(s)	Dimensions (mm)								Clamping Range min./max. (mm)
		l	w	h	a**	e	f	l	j	
80120	80101 / 80102 / 80901	56	100	54	50	4.5	6	2.5	4	12 – 204
80220	80201	88	125	66	62	4.5	6	2.5	4	12 – 400

V-Type jaw with clamping inserts

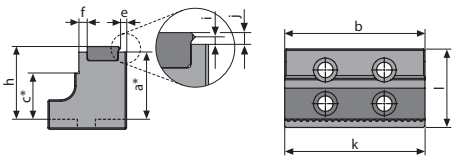


Part Number	Vise(s)	Dimensions (mm)				Clamping Range min./max. (mm)
		l	w	h	a	
80030	80001 / 80301	60	60	70	40	D10-76
80130	80101 / 80102 / 80901	64	100	70	38	D12-80

* Tolerance ±0.01mm
** Tolerance ±0.02mm

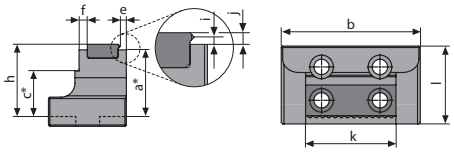
Accessories
Jaws / Jaw Inserts
Self-Centering and Fixed Jaw Vises

Step Jaw with Hardened Jaw Insert (Wide)



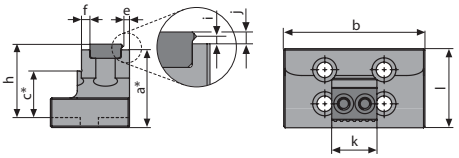
Part Number	Vise(s)	Dimensions (mm)										Clamping Range min./max. (mm)
		l	w	h	a*	c*	e	f	i	j	k	
80035	80001 / 80301	56	60	34	30		4.5	6	2.5	4	60	12 – 126
80135	80101 / 80901 / 80102	56	100	54	50	35	4.5	6	2.5	4	100	44 – 192
80235	80201	88	125	66	62	42	4.5	6	2.5	4	125	96 – 388

Step Jaw with Hardened Jaw Insert (Medium)



Part Number	Vise(s)	Dimensions (mm)										Clamping Range min./max. (mm)
		l	w	h	a*	c*	e	f	i	j	k	
80040	80001 / 80301	56	60	34	30		4.5	6	2.5	4	35	12 – 126
80140	80101 / 80901 / 80102	56	100	54	50	35	4.5	6	2.5	4	65	12 – 204
80240	80201	88	125	66	62	42	4.5	6	2.5	4	80	12 – 400

Step Jaw with Hardened Jaw Insert (Narrow)



Part Number	Vise(s)	Dimensions (mm)										Clamping Range min./max. (mm)
		l	w	h	a*	c*	e	f	i	j	k	
80145	80101 / 80901 / 80102	56	100	54	50	35	4.5	6	2.5	4	32	15 – 204

* Tolerance ±0.01mm

5-Axis Self-Centering Accessories



Positioning Pins, Various Diameters, for Grid Plate, set of 2

Part Number	Vise(s)	Ø (mm)
80060	80001	10/12
80160	80101 / 80201	25/12

Socket Wrench

Part Number	Vise(s)	SW
80531	80501	8

Torque wrench

Part Number	Vise(s)	Torque (Nm)
80070	80001/80101/80901	26.4/132.2
80170	80201	66.4/332
80072	81601/80301/80401	5.54/27.7

Socket / Hex Bit

Part Number	Vise(s)	Torque (Nm)
80071	80001 & 81500	12mm socket
80171	80101 & 81400	14mm socket
80271	80201	19mm socket
80380	80301	6mm hex bit
80430	80401 & 80501	8mm hex bit
81060	80901, 81000 & 81200	12mm hex bit
81160	81100 & 81300	14mm hex bit
81610	81601	10mm socket

Clamping Claws, Set of 4 w/Screws

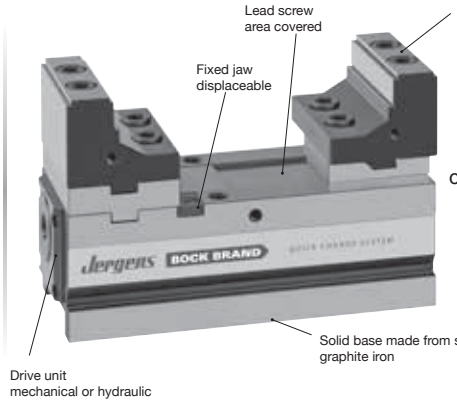
Part Number	Vise(s)	Thread
80050	80001 / 80301	M10
80053	80001 / 80301	M12
80150	80101 / 80901	M12
80250	80201	M12
80253	80201	M16

5-Axis Compact Vises

New machining technologies and manufacturing methods call for the development of new solutions in clamping technology. The Jergens 5-Axis Compact Vise, with its short base and easy movement of the fixed jaw, is ideal for 5-sided machining.

The well balanced design of the guide between the base and the moveable jaw allows the use of high clamping jaws, for performing machining operations close to the workpiece.

The base is made from cast steel for rigidity and dimensional stability. All sides are hardened and ground.



Shown with optional jaws.

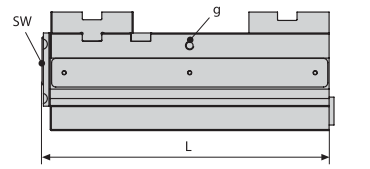
Part Number	Size	Clamping Force⁑ (kN/Torque Nm)	Weight (Kg)	Dimensions (mm)												Hex (mm)
				Stroke	L	W	H*	d1*	g	g1	g2	h2	l1*	l2	l3	
81000	80mm Man	25/60 Nm	8.8	–	206	80	85	10F7	M6 x 10	M10 x 11	M10 x 16	18	100	60	60	12 Female
81100	120mm Man	40/100 Nm	18.4	–	260	120	100	25 x 5/ M10 x 14	M8 x 15		M12 x 18	18	200	100	80	14 Female
81200	80mm Hyd	20/310 bar	9.0	4	227	80	85	10F7	M6 x 10	M10 x 11	M10 x 16	18	100	60	60	12 Female
81300	120mm Hyd	40/270 bar	20.4	4	282	120	100	25 x 5/ M10 x 14	M8 x 15		M12 x 18	18	200	100	80	14 Female

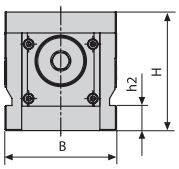
Note: Vise handles included with each Jergens 5-Axis Vise

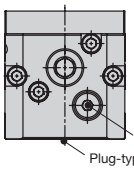
* Tolerance ±0.01mm

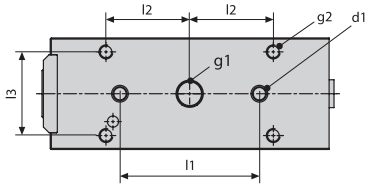
⁑ kN x 224.8=pound - force Nm x 8.85=in. lbs Kg x 2.205=lbs Bar x 14.5=psi

80mm / 80mm Hyd







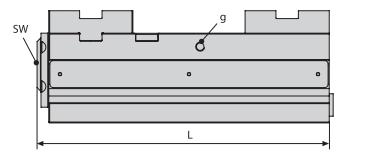


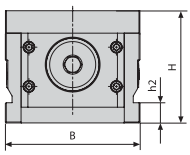
View from below

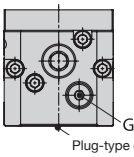
*Tolerance ±0.01 mm

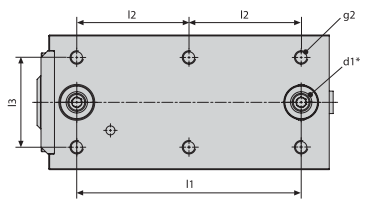
- High degree of freedom for spindle and tools; low risk of collision
- Well suited for short standard tools
- Repeatable and controllable clamping forces of up to 25 kN Compact 80 and 40 kN Compact 120
- Jaw with a special grip for maximum holding force (factor 3 as compared with standard jaw)
- Jaws sold separetely on page 143

120mm / 120mm Hyd



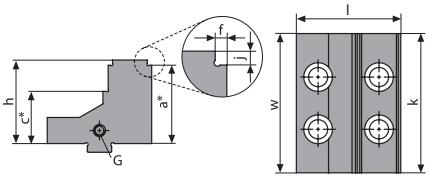






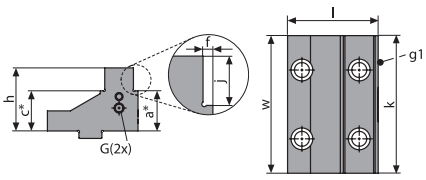
*Tolerance ±0.01 mm

Accessories
5-Axis Compact Vise Jaws & Inserts



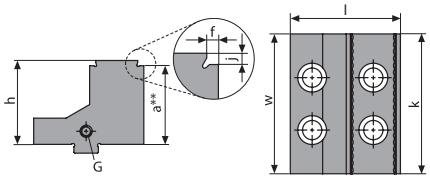
Precision Step Reversible Jaw for 81001 / 81200 (80mm)

Part Number	Dimensions mm									Clamping Range min./max.
	l	w	h	a*	c*	f	G	j	k	
81010	60	50	48	45	30	2.5	M6 x 10	3	25	5 – 155
81015	60	50	48	45	30	2.5	M6 x 10	3	50	5 – 155
81020	60	80	48	45	30	2.5	M6 x 10	3	80	5 – 155



Precision Step Reversible Jaw for 81100 / 81300 (120mm)

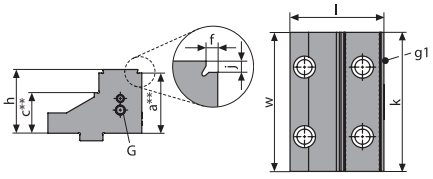
Part Number	Dimensions (mm)										Clamping Range min./max.
	l	w	h	a*	c*	f	G	g1	j	k	
81110	79	84	55	35	35	4	M8 x 14	M4 x 7	20	40	8 – 200
81120	79	84	55	35	35	4	M8 x 14	M4 x 7	20	84	8 – 200
81125	79	120	55	35	35	4	M8 x 14	M4 x 7	20	120	8 – 200



Special Grip Jaw for 81000 / 81200 (80mm)

Provides maximum retaining force

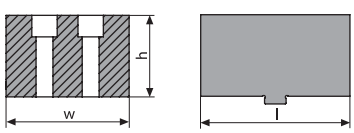
Part Number	Dimensions (mm)								Clamping Range min./max.
	l	w	h	a**	f	G	j	k	
81025	63	50	48	45	3.5	M6 x 10	3	25	7 – 151
81030	63	50	48	45	3.5	M6 x 10	3	50	7 – 151
81040	63	80	48	45	3.5	M6 x 10	3	80	7 – 151



Special Grip Jaw for 81100 / 81300 (120mm)

Provides maximum retaining force

Part Number	Dimensions (mm)										Clamping Range min./max.
	l	w	h	a**	c**	f	G	g1	j	k	
81130	81	84	55	52	35	3.5	M8 x 14	M4 x 7	3	40	7 – 195
81135	81	84	55	52	35	3.5	M8 x 14	M4 x 7	3	84	7 – 195
81140	81	120	55	52	35	3.5	M8 x 14	M4 x 7	3	120	7 – 195



Soft Jaws

Part Number	Vise(s)	Dimensions (mm)			Material
		l	w	h	
81045	81000 / 81200	97	80	53	Steel C 45
81050	81000 / 81200	97	80	53	Aluminium
81145	81100 / 81300	97	120	53	Steel C 45
81150	81100 / 81300	97	120	53	Aluminium

* Tolerance ±0.01mm
** Tolerance ±0.02mm

5-Axis Compact Vise Accessories



Positioning Pins, Various Diameters, for Grid Plate, Set of 2

Part Number	Vise(s)	Ø (mm)
80060	81000/81200	10/12
80160	81100/81300	25/12
80165	81100/81300	25/16

Positioning Pins, Various Diameters, for Table with T-Slots, Set of 2

Part Number	Vise(s)	Ø (mm)
80065	81000/81200	10/14
80260	81100/81300	25/14
80265	81100/81300	25/18

Clamping Claws, Set with M10 Fastening Screws

Part Number	Vise(s)	Qty.
81075	81000/81200	4
81180	81100/81300	6

Double Clamping Claws, Set with M10 Fastening Screws

Part Number	Vise(s)	Qty.
81080	81000/81200	4
81185	81100/81300	6

Torque Wrench

Part Number	Vise(s)	Clamping Force (Nm)
80070	81000/81100	26.4/132.2
80170	81100	66.4/332

Socket for Torque Wrench

Part Number	Vise(s)	SW
81060	81000	12, 3/8"
81160	81100	14, 1/2"



C80



C120

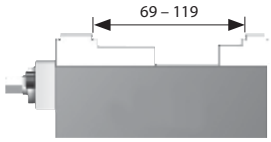
Workstops

Part Number	Vise(s)
81090	81000/81200
81195	81100/81300

Jergens 5-Axis Pallet Clamps

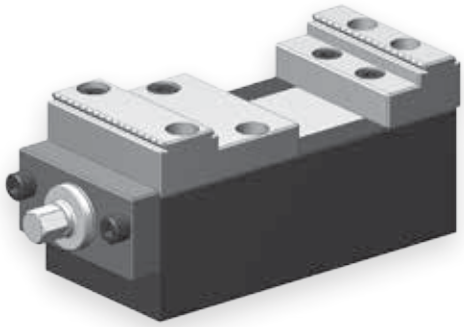
Jergens pallet clamps (comprised of clamping jaws with a grip structure) can be used either for concentric clamping or for clamping to the fixed jaw. These pallet clamps are an effective, affordable clamping solution.

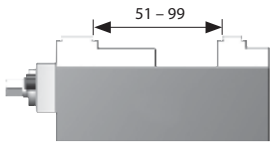
- 2 designs available: concentric clamping or clamping to a fixed jaw
- Highest quality, compact, all-steel construction
- Precise clamping
- Easy to dismantle and clean

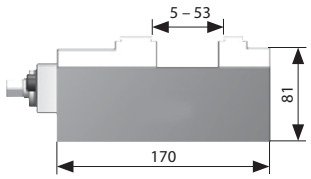


Fixed Pallet Clamp

Clamping to the fixed jaw
Clamping jaws with a grip structure





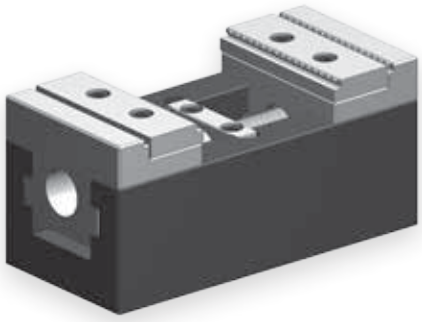


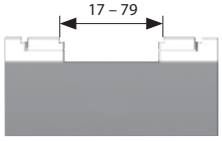
Part Number	Clamping Principle	Jaw Width (mm)	Clamping Force⁂ (kN)	Clamping Width (mm)	Clamping Step (mm)	Weight (Kg)
81400	Against the fixed jaw	80	20 at 60 Nm	5 – 119	4 x 4	6.9

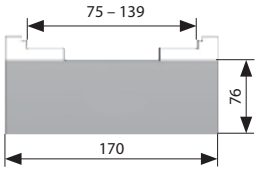
⁂ kN x 224.8=pound - force Nm x 8.85=in. lbs Kg x 2.205=lbs Bar x 14.5=psi

Concentric Pallet Clamp

Concentric clamping
Clamping jaws with a grip structure







Part Number	Clamping Principle	Jaw Width (mm)	Clamping Force (kN)	Clamping Width (mm)	Clamping Step (mm)	Weight (Kg)
81500	Concentric clamping	80	20 at 60 Nm	15 – 139	4 x 4	6.4

Power Clamping

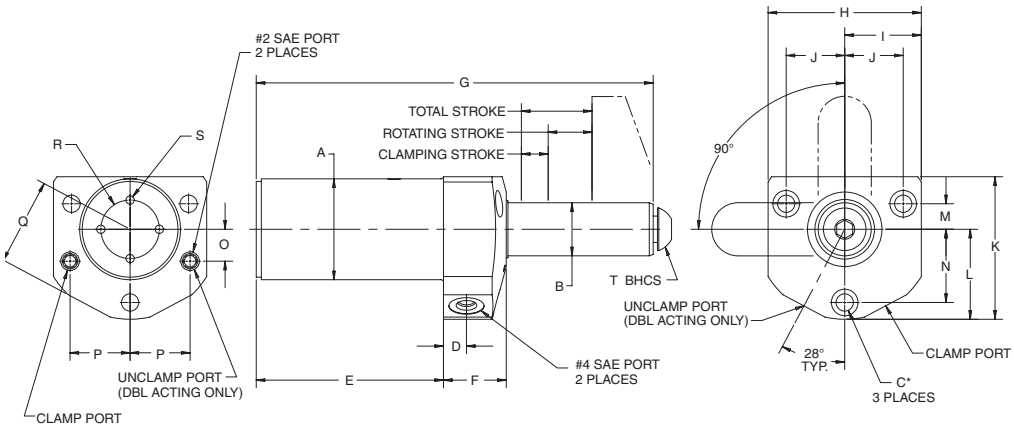
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Air-Powered Hydraulic Pumps 195–197
Block Clamp 184
Booster Clamping Kit 193
Boosters, High Pressure/Volume 191
Boosters Installation Kits 192
Boosters, Pre-Fill 188
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Pumps, C-Box 197
Pumps, Shoebox™ 195
Power Pac, Pre-Fill 193
Quick Disconnects Air & Hydraulic 212
Repair Kits 213
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Jergens®
MANUFACTURING EFFICIENCY

Swing Cylinder – Top Flange/Manifold Mount



The piston rotates 90° to the right, but may be ordered with 90° left rotation (add - LH to clamp part no.) or no rotation (add - SP to clamp part no.)



- Clamping capacity from 1,100-5,000 lbs. max.
- Versatile manifold mount or conventionally plumbed
- Single and Double Acting available
- Available in three body sizes
- Assortment of Clamping Arms (sold separately) See page 150
- Popular top flange mounting design

These popular and highly adaptable swing style cylinders contain built in features, which allow users to simplify the design process. They are directly interchangeable with competitive products.

Specifications	Single Acting			Double Acting		
	60660	60662	60664	60670	60672	60674
Maximum Output Force (lbs)	1100	2600	5000	1100	2600	5000
Stroke (in) Total	.79	1.16	1.66	.76	1.16	1.66
Rotating	.48	.66	1.03	.45	.64	1.03
Clamping	.31	.50	.63	.31	.52	.63
Operating Volume Clamp (cu in)	.23	.72	1.95	.23	.72	1.98
Operating Volume Unclamp (cu in)	N/A	N/A	N/A	0.46	1.43	4.00
Minimum Operating Pressure (psi)	750	750	750	500	500	500
Maximum Operating Pressure (psi)	5000	5000	5000	5000	5000	5000
Effective Piston Area (sq in)	.30	.62	1.18	.30	.62	1.18

CAUTION! DON'T ALLOW SWING ARM TO CONTACT THE WORKPIECE OR FIXTURE WHILE ROTATING.

Part No.		*Counter Bore Size
60660	60670	1/4" S.H.C.S.
60662	60672	5/16" S.H.C.S.
60664	60674	3/8" S.H.C.S.

* Mounting Hole Counter Bore

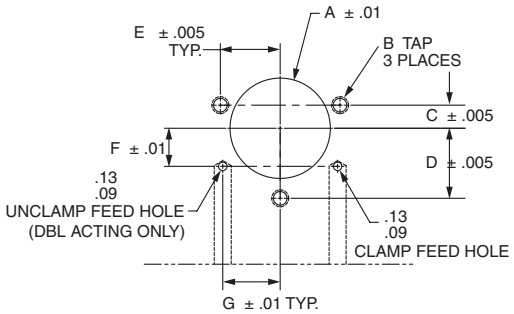
WARNING:
All swing cylinders must be used with flow limit valves to dampen the rotating action. Please see maximum flow rate shown below. See page 154.

Top Flange Mount

Single Acting Part No.	Double Acting Part No.	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
60660	60670	1.43	0.623	0.38	2.57	1.03	5.28	2.31	1.16	0.88	2.06	1.32	0.34	1.03	0.56	.845	1.23	0.66	0.136	3/8-24 x 5/8
60662	60672	1.75	0.874	0.41	3.35	1.06	6.78	2.69	1.35	1.00	2.53	1.63	0.44	1.25	0.53	1.05	1.53	1.00	0.196	1/2-20 x 3/4
60664	60674	2.37	1.247	0.54	4.40	1.48	9.33	3.60	1.80	1.38	3.35	2.12	0.60	1.72	0.75	1.41	2.04	1.38	0.196	5/8-18 x 1

Manifold Mounting Dimensions - Top Flange

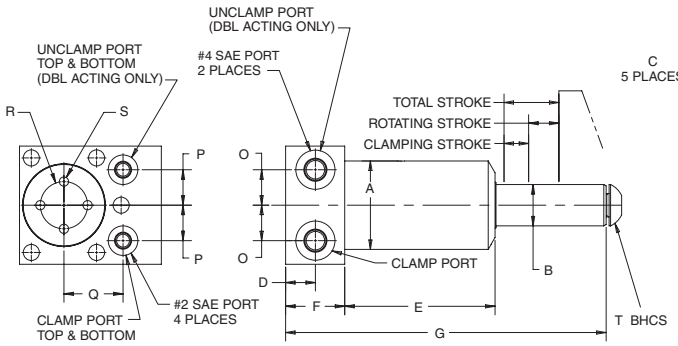
Single Acting Part No.	Double Acting Part No.	A	B	C	D	E	F	G
60660	60670	1.476	1/4-20	0.340	1.030	0.880	0.560	0.845
60662	60672	1.809	5/16-18	0.440	1.250	1.000	0.530	1.050
60664	60674	2.433	3/8-16	0.600	1.720	1.375	0.750	1.410



Inch to metric fittings available – see page 211.

Swing Cylinder – Bottom Flange/Manifold Mount



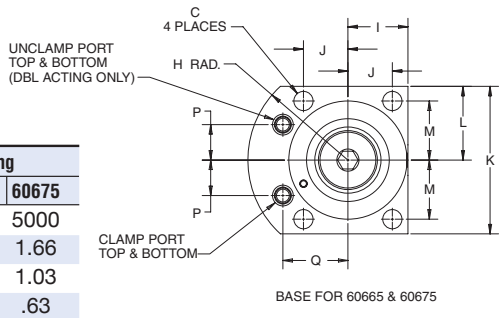


- Clamping capacity from 1,100-5,000 lbs. max.
- Manifold mounting or standard plumbing
- Single and Double Acting available
- Highly adaptable flange mount design

(Clamping Arms sold separately)

The piston rotates 90° to the right, but may be ordered with 90° left rotation (add - LH to clamp part no.) or no rotation (add - SP to clamp part no.)

Bottom Flange Swing Cylinders offer versatility as a through hole bottom mount or top plate mounting device.



BASE FOR 60665 & 60675

Specifications	Single Acting			Double Acting		
	60661	60663	60665	60671	60673	60675
Maximum Output Force (lbs)	1100	2600	5000	1100	2600	5000
Stroke (in) Total	.79	1.16	1.66	.76	1.16	1.66
Rotating	.48	.66	1.03	.45	.64	1.03
Clamping	.31	.50	.63	.31	.52	.63
Operating Volume Clamp (cu in)	.23	.72	1.96	.23	.72	1.98
Operating Volume Unclamp (cu in)	N/A	N/A	N/A	0.46	1.43	4.00
Minimum Operating Pressure (psi)	750	750	750	500	500	500
Maximum Operating Pressure (psi)	5000	5000	5000	5000	5000	5000
Effective Piston Area (sq in)	.30	.62	1.18	.30	.62	1.18

CAUTION! DON'T ALLOW SWING ARM TO CONTACT THE WORKPIECE OR FIXTURE WHILE ROTATING.

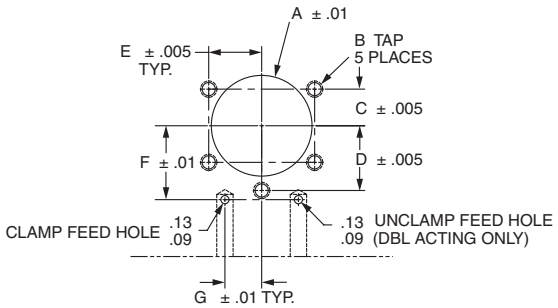
WARNING:
All swing cylinders must be used with flow limit valves to dampen the rotating action. Please see maximum flow rate shown below. See page 154.

Bottom Flange Mount

Single Acting Part No.	Double Acting Part No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
60661	**60671**	1.50	0.623	0.28	0.63	2.40	1.25	5.29	2.50	0.75	0.56	2.00	1.00	0.81	0.99	0.56	0.56	1.13	0.66	0.136	3/8-24 x 5/8
60663	**60673**	1.87	0.874	0.34	0.63	3.18	1.25	6.78	3.00	0.94	0.69	2.50	1.25	1.00	1.21	0.75	0.75	1.25	1.00	0.196	1/2-20 x 3/4
60665	**60675**	2.50	1.247	0.41	0.74	4.39	1.50	9.34	3.39	1.27	0.94	3.12	1.56	1.25	–	–	0.75	1.38	1.38	0.196	5/8-18 x 1

Manifold Mounting Dimensions - Bottom Flange

Single Acting Part No.	Double Acting Part No.	A	B	C	D	E	F	G
60661	**60671**	1.540	1/4-20	0.560	0.990	0.810	1.130	0.562
60663	**60673**	1.920	5/16-18	0.690	1.210	1.000	1.250	0.750
60665	**60675**	2.550	3/8-16	0.940	–	1.250	1.375	0.750



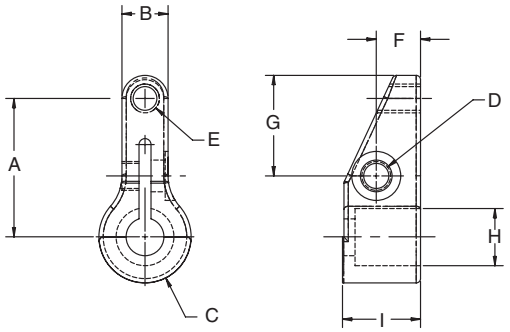
Inch to metric fittings available – see page 211.

Jergens WORKHOLDING SOLUTIONS GROUP

Swing Cylinder Arms



- Material: Cast 4140
- Heat Treatment: Hardened and Drawn Rc 32-36

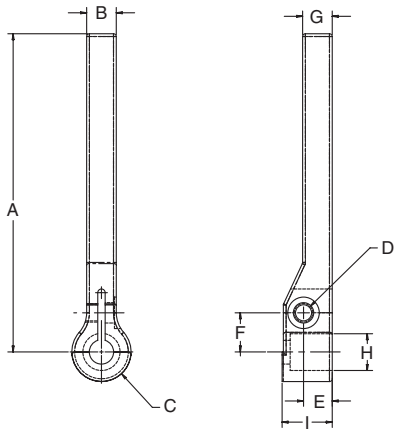


Single Arms - Standard Length

Part No.	A	B	C	D	E	F	G	H	I
60930	1 1/2	1/2	1	5/16-24	5/16-18	31/64	1 3/32	.6255/.6275	27/32
60931	2	3/4	1 3/8	3/8-24	3/8-16	43/64	1 9/16	.8755/.8775	1 5/32
60932	2 1/2	1 1/4	1 7/8	5/8-18	5/8-11	7/8	1 7/8	1.2505/1.2525	1 21/32



- Material: Cast 4140
- Heat Treatment: Hardened and Drawn Rc 32-36

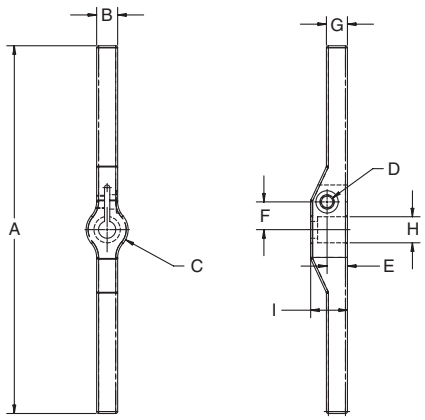


Single Arms - Long

Part No.	A	B	C	D	E	F	G	H	I
60933	5 3/8	1/2	1	5/16-24	31/64	21/32	1/2	.6255/.6275	27/32
60934	6 3/8	3/4	1 3/8	3/8-24	43/64	13/16	5/8	.8755/.8775	1 5/32
60935	6 1/2	1 1/4	1 7/8	5/8-18	7/8	1 1/4	3/4	1.2505/1.2525	1 21/32



- Material: Cast 4140
- Heat Treatment: Hardened and Drawn Rc 32-36



Double Arms - Long

Part No.	A	B	C	D	E	F	G	H	I
60936	8 3/4	1/2	1	5/16-24	31/64	21/32	1/2	.6255/.6275	7/8
60937	10 3/4	3/4	1 3/8	3/8-24	43/64	13/16	5/8	.8755/.8775	1 13/64
60938	11	1 1/4	1 7/8	5/8-18	7/8	1 1/4	3/4	1.2505/1.2525	1 45/64

Swing Cylinder - Application Information

- Arm length can effect clamping pressure - See Chart and Data
- Weight should be considered when utilizing modified or special arms, other than those provided by Jergens. Excessive weight and length may damage external rotating components.
- Speed of operation is a major consideration. All swing cylinders **MUST BE USED WITH FLOW LIMIT VALVES** to show the rotation action.
- Full second rotation time is recommended.
- Care should be used when select hydraulic power sources - be aware of maximum operating pressures.

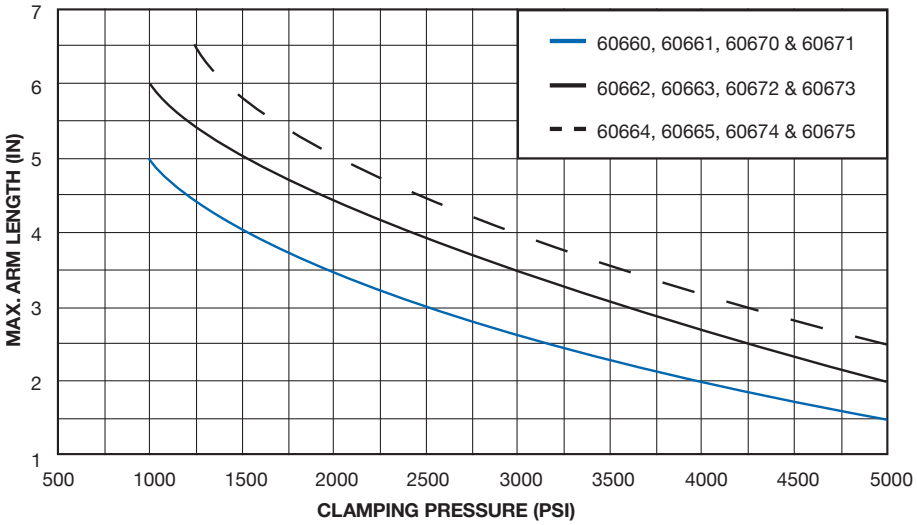
Swing Cylinder Arm Ratings

Small Cylinders (1,100#) p/n's 60660, 60670, 60661, & 60671	
input pressure (psi)	max. arm length (in)
1,500	5.0
1,750	4.3
2,000	3.8
2,250	3.3
2,500	3.0
2,750	2.7
3,000	2.5
3,250	2.3
3,500	2.1
3,750	2.0
4,000	1.9
4,250	1.8
4,500	1.7
4,750	1.6
5,000	1.5

Medium Cylinders (2,600#) p/n's 60662, 60672, 60663, & 60673	
input pressure (psi)	max. arm length (in)
1,666	6.0
1,750	5.7
2,000	5.0
2,250	4.4
2,500	4.0
2,750	3.6
3,000	3.3
3,250	3.1
3,500	2.9
3,750	2.7
4,000	2.5
4,250	2.4
4,500	2.2
4,750	2.1
5,000	2.0

Large Cylinders (5,000#) p/n's 60664, 60674, 60665, & 60675	
input pressure (psi)	max. arm length (in)
1,923	6.5
2,000	6.3
2,250	5.6
2,500	5.0
2,750	4.5
3,000	4.2
3,250	3.8
3,500	3.6
3,750	3.3
4,000	3.1
4,250	2.9
4,500	2.8
4,750	2.6
5,000	2.5

Max. Arm Length vs. Pressure



Swing Cylinders

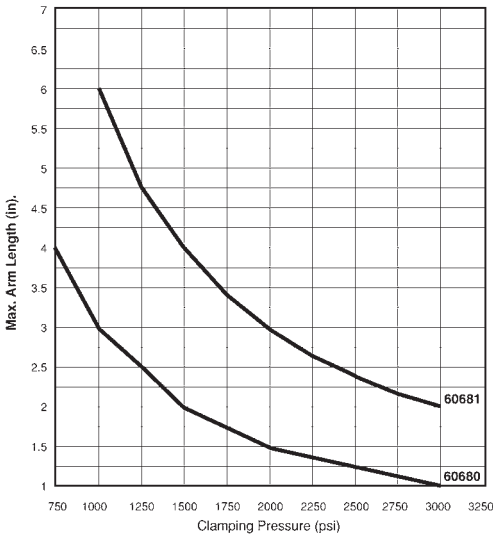


These versatile swing cylinders/clamps can be used as single or double acting rotating clamps, or push/pull cylinders. The piston in the Swing Cylinders rotate 90° to the right, but may easily be changed to 90° left rotation, or to no rotation at all.

WARNING:
All swing cylinders must be used with flow limit valves to dampen the rotating action. Please see maximum flow rate shown below. See page 154.

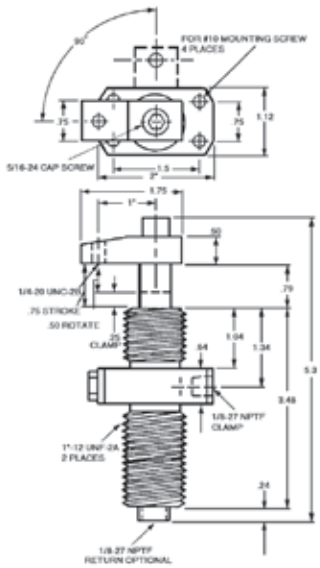
- Standard with an arm
- Can be mounted using four #10 cap screws or the 1"-12 thread on the O.D. of the cylinder
- Optional components include the threaded mounting bracket and jam nut shown below
- Can be used as a non-rotating clamp
- Maximum recommended flow rate is 20 cubic inches per minute per clamp (approximately 1 second clamp time)
- **Note: Arm length can affect clamping pressures. See chart at right for more information.**
- Available in Fixture Pro® Design Software

Maximum Arm Length Vs. Pressure
Swing Cylinder with Single Arm



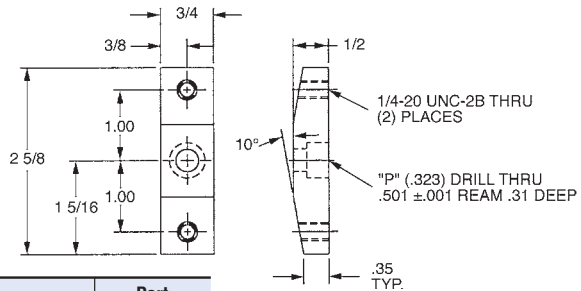
Specifications

60680 Swing Cylinder	Clamp (pull)	Return (push)
Operating Volume (cu in)	.18	.33
Effective Piston Area (sq in)	.24	.44
Minimum Operating Pressure (psi)	120	–
Maximum Operating Pressure (psi)	3000	3000
Maximum Output Force (lbs)	730	1320
Stroke (in): Full	.75	.75
Rotating	.50	.50
Clamping	.25	.25
Weight (lbs)	1	1



Accessories

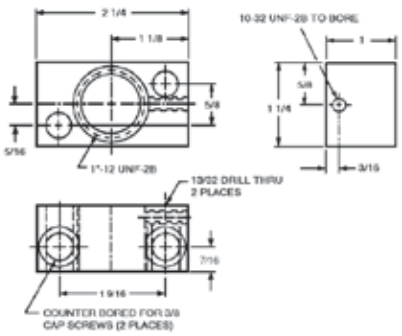
Double Arm



Description	Part Number
Mounting Block	**60953**
Hex Jam Nut	**60964**
Optional Double Arm	**60923**

See page 165.

Mounting Block



Inch to metric fittings available – see page 211.

Swing Cylinders
Large

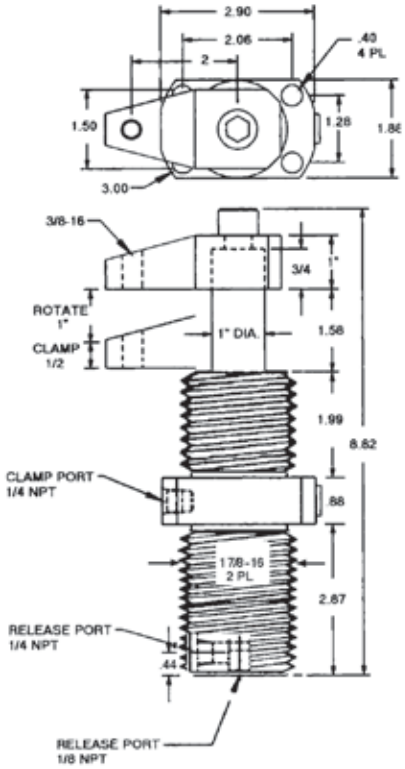


- Standard without an arm.
- Socket Head Cap Screw is included.
- Single or double arms are available.
- Can be mounted using four 3/8" cap screws, or the 1 7/8"-16 O.D. thread of the cylinder.
- Optional components include a jam nut or a mounting bracket to replace old Jergens part number 60621.
- Can be used as a non-rotating clamp.
- Maximum recommended flow rate is 90 cubic inches per minute per clamp. (Approximately 1 second clamp time.)
- **Note: Arm length can affect clamping pressures. See chart, page 152, for more information.**
- Available in Fixture Pro® Design Software

WARNING:
All swing cylinders must be used with flow limit valves (see page 154) to dampen the rotating action. Please see maximum flow rate shown above.

Specifications

60681 Swing Cylinder	Clamp (pull)	Return (push)
Operating Volume (cu in)	1.5	2.7
Effective Piston Area (sq in)	.98	1.77
Minimum Operating Pressure (psi)	200	—
Maximum Operating Pressure (psi)	3000	3000
Maximum Output Force (lbs)	2900	5300
Stroke (in): Full	1.5	1.5
Rotating	1	1
Clamping	.50	.50
Weight (lbs)	5	5

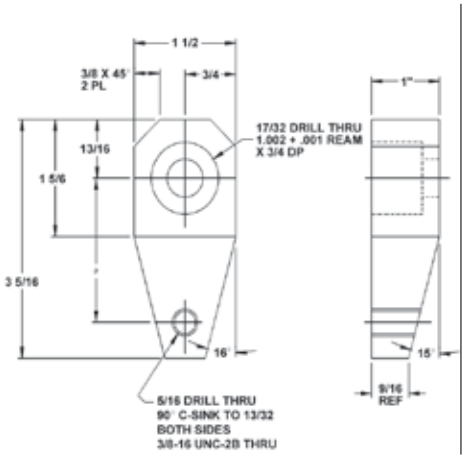


Jam Nut Part Number
60967

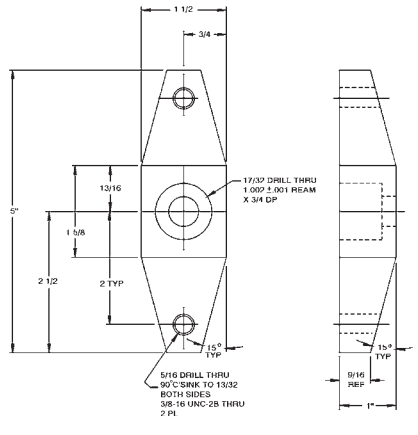
See page 165.

Accessories

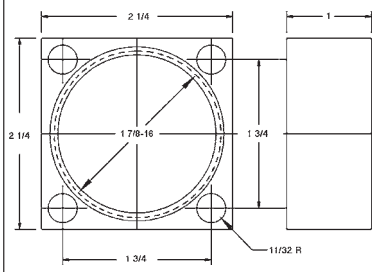
Single Arm Part Number
60921



Double Arm Part Number
60922



Mounting Bracket Part Number
60954



Inch to metric fittings available – see page 211.

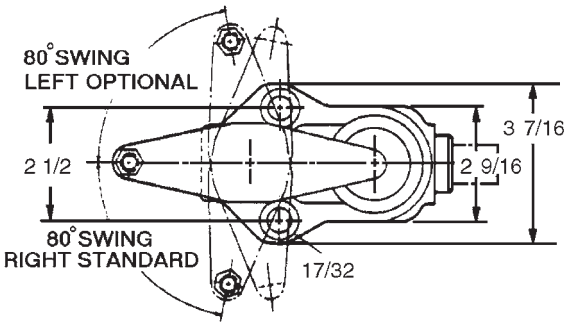
Jergens WORKHOLDING SOLUTIONS GROUP

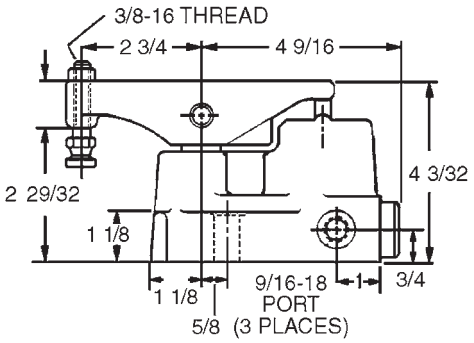
Swing Clamps



Jergens Swing Clamps are designed to swing 80° away from the workpiece to allow easy accessibility for part insertion or removal. Swing Clamps may be used in any attitude. The clamping arm may be positioned to swing either to the left or right by repositioning one cap screw. The right hand swing is standard.

- Right or Left Hand Swing
- 4800 lbs. Clamping Force
- Operates in any position
- Clamp arm has 1/4" of vertical travel
- Can be used with flood coolant
- Available in Fixture Pro® Design Software





Specifications

Part Number	60685
Operating Volume (Cu. In.)	1.6
Minimum Operating Pressure (psi)	80*
Maximum Operating Pressure (psi)	3000
Maximum Output Force (lbs.)	4800
Weight (lbs.)	9.25

*80 psi to swing, 200 psi to clamp.

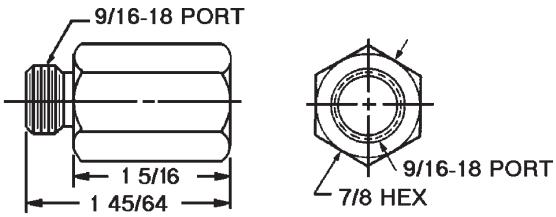
IMPORTANT:
Jergens Swing Clamps are built to operate on pre-fill systems allowing much larger circuits to be used. To use a Jergens Swing Clamp with a standard booster or with any other power source you ***must*** use the Flow Limit Valve shown below.

Flow Limit Valves



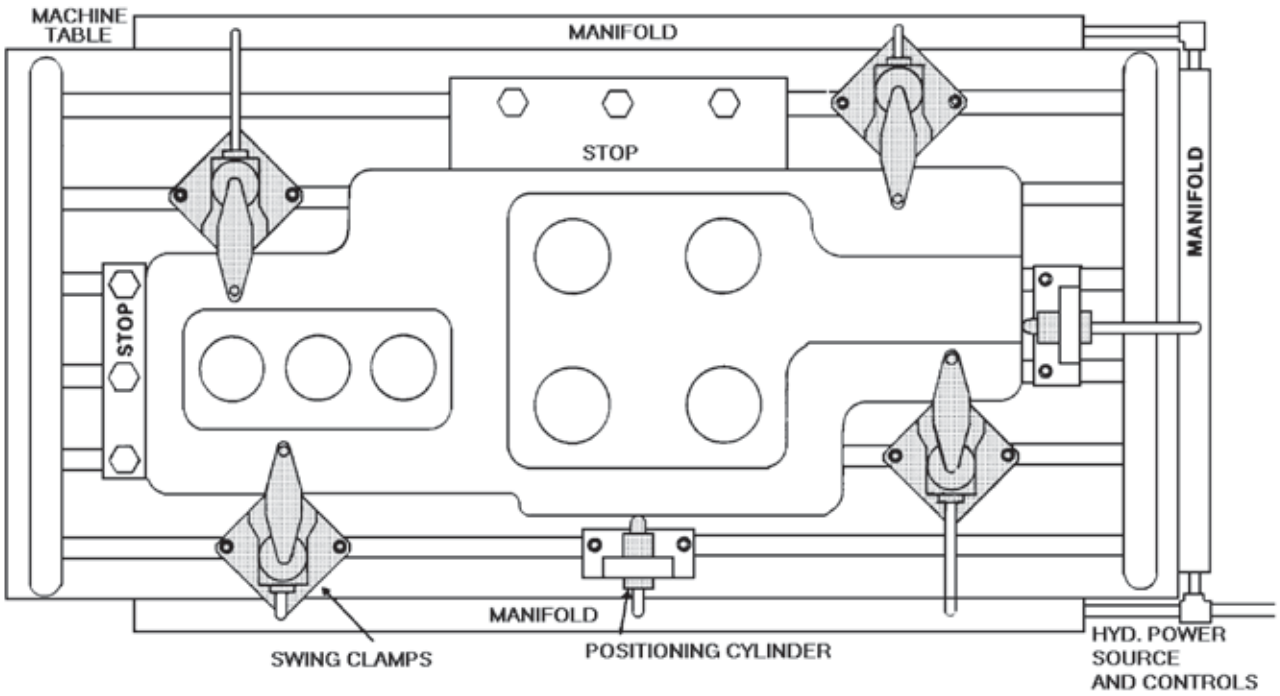
The Flow Limit Valve restricts the flow of oil to dampen the rotating action of the Swing Clamp. Flow Limit Valves are not needed with 36:1 or 71:1 Air Powered Hydraulic Pumps. (Part Number **61755** or **61756**).

Part Number
61648



Inch to metric fittings available – see page 211.

Swing Clamp
Application

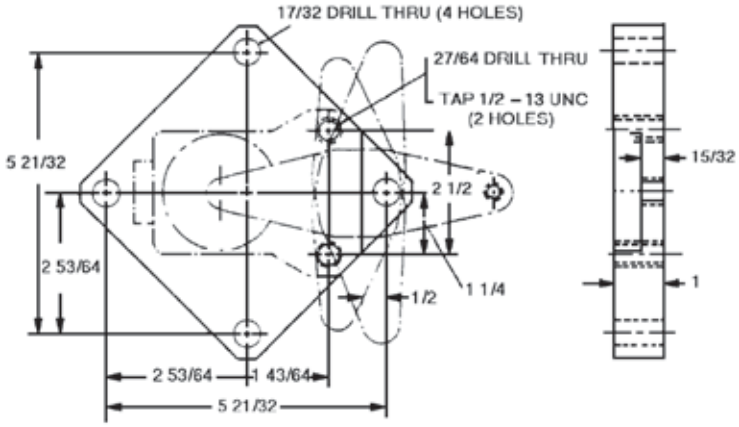


For hydraulic clamping directly on the machine table, use Jergens Swing Clamps and Mounting Plates. The workpiece is positioned using Threaded Cylinders and fixed stops. Manifolds at the edges of the table, with hydraulic quick disconnects, allow any number of clamps to be used.

Mounting Plates



- Material: Low Carbon Steel
- Finish: Black Oxide
- Available in Fixture Pro® Design Software



Part Number
60971

Mounting plates are subplates for Swing Clamps and are designed to save fixturing cost and allow versatility in set-ups. Mounting Plates may be bolted directly to your machine table and moved to any location on the table. Each mounting plate has pre-drilled mounting holes or can be easily adapted to your machine table or application.

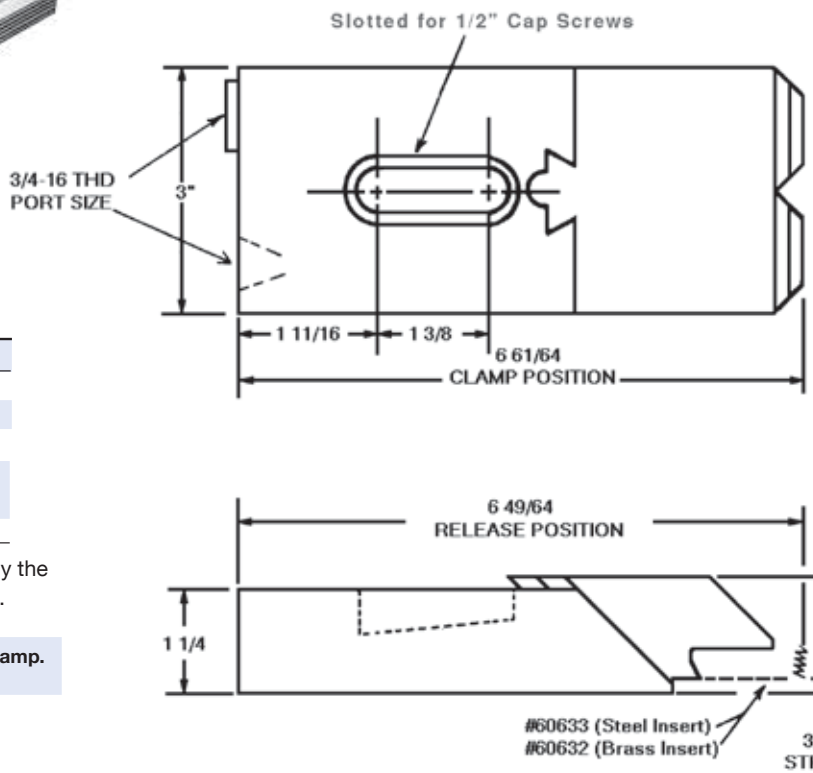
Toe Clamps



U.S. Patents:
No. 4406445

Features

- Single Acting
- Low Profile
- Direct Mounting
- 3/16" Stroke
- 3000 lbs. Force
- Steel or Brass Toe Insert Available
- Available in Fixture Pro® Design Software



Specifications

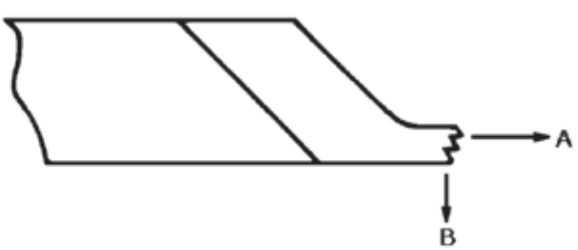
Part Number	60631
Operating Volume (cu. in.)	.115
Minimum Operating Pressure (psi)	200
Maximum Output Force (lbs.)	3000
Overall Stroke	3/16

A washer (60636), to prevent damage by the cap screw, is included with each clamp.

Toe Insert is not supplied with the Toe Clamp. See below to order the Toe Inserts.

Toe Inserts

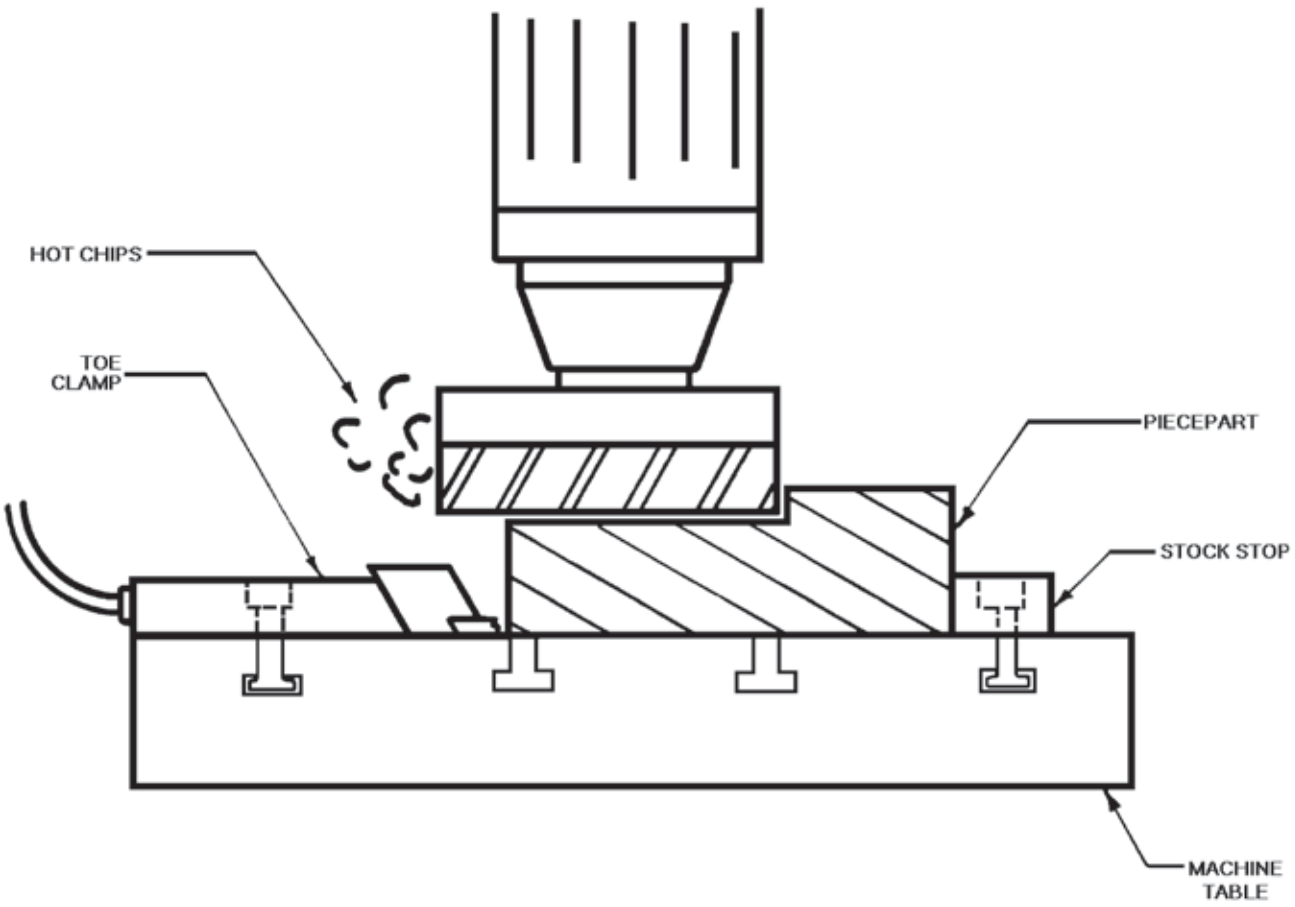
Part Number	Insert
60633	Steel
60632	Brass



Hydraulic Pressure	Force in Pounds	
	A	B
1500	900	750
3000	1800	1500
5000	3000	2500

Inch to metric fittings available – see page 211.

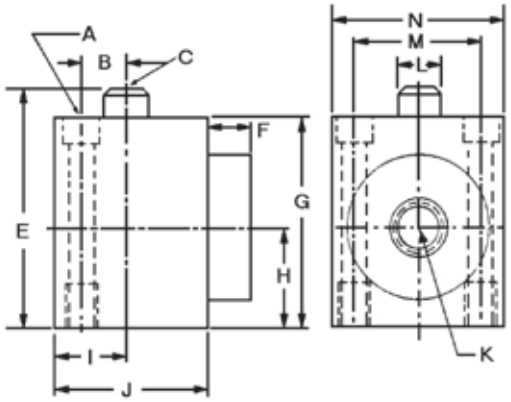
Toe Clamp
Application



A Toe Clamp is used in applications where clamps cannot be on top of the workpiece due to the fact that the cutter must pass over that area. The clamp holds the workpiece against stop and down on the table. T-Slot mounting gives clamping versatility.

Work Supports





Part Number	Bolt Size Thru A	Bolt Size Tapped A	B	Tap C	Height E Min	Height E Max	F	G	H	I	J	Port K	L	M	N
60513	1/4	5/16-24	.50	1/4-20	2.45	2.70	.49	2.36	1.12	.81	1.75	9/16-18	.5	1.5	2

Hydraulically-locked Work Supports differ from clamps and vises in that they do not actually exert force upon the workpiece. Rather, they are used to support the part being machined, offering resistance to any clamping forces acting counter to the direction of travel of the piston.

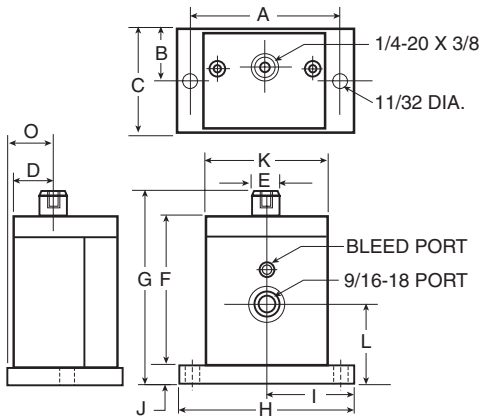
In a typical application, a large, thin casting is located on several tooling point pads for positioning. Work Supports will automatically adjust to support the delicate sections of the casting. When hydraulic pressure is applied, the floating pistons within the Work Support are locked in position and resist any downward movement exerted on the casting. After the casting is removed, the floating pistons return to their fully-raised position.

Specifications

Part Number		60513	60512
Operating Volume (cu. in.)		.04	.06
Support to Pressure Ratio		1.6:1	3.3:1
Minimum Operating Pressure (psi)		500	500
Maximum Operating Pressure (psi)		3000	3000
Maximum Support Capacity (lbs.)		5000	10000
Plunger Spring Force (lbs.)	Start	2	14
	Finish	7	40
Weight (lbs.)		2.0	5.5



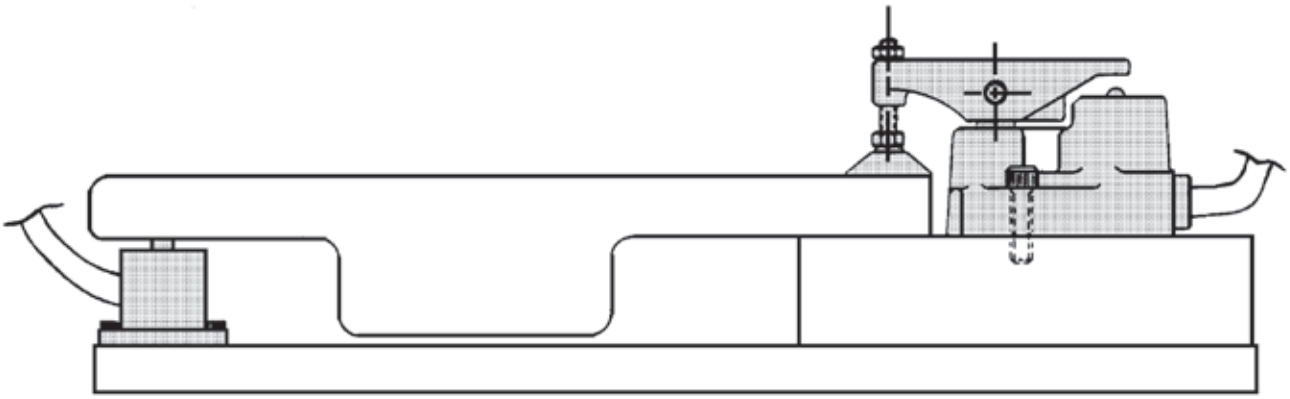
- Available in Fixture Pro® Design Software



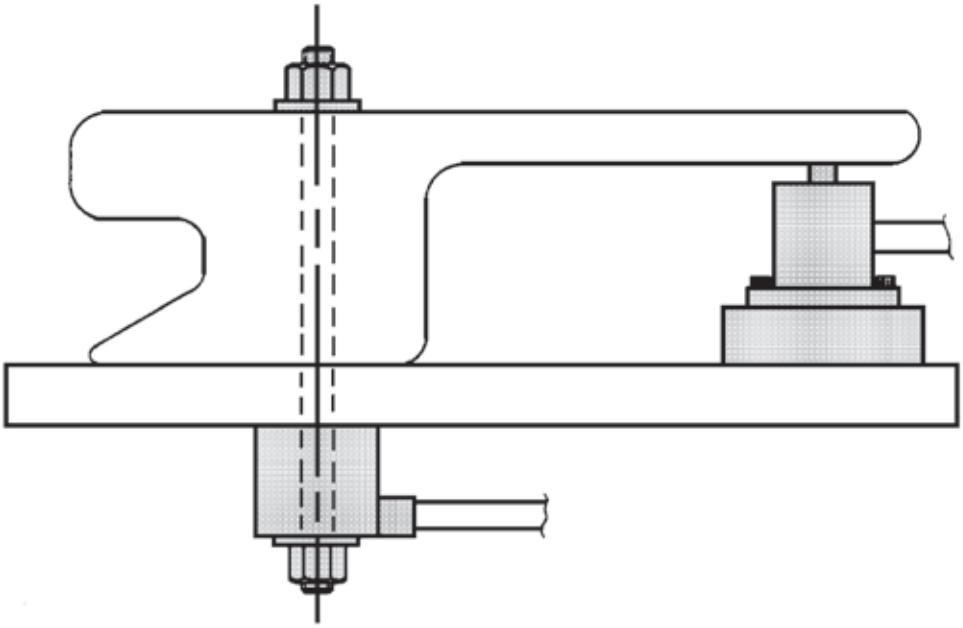
Part Number	A	B	C	D	E	F	G Min	G Max	H	I	J	K	L	O
60512	3 9/16	1 3/8	2 3/4	.990	5/8	3.69	4.15	4.65	4 3/16	2 3/32	3/8	3	1 7/8	1.07

Inch to metric fittings available – see page 211.

Work Support
Applications



The workpiece is located and clamped on the right end by a Jergens Swing Clamp. The Work Support resists the machining forces applied to the other end of the casting. Variations between castings are compensated for by the floating support plunger in the Work Support.

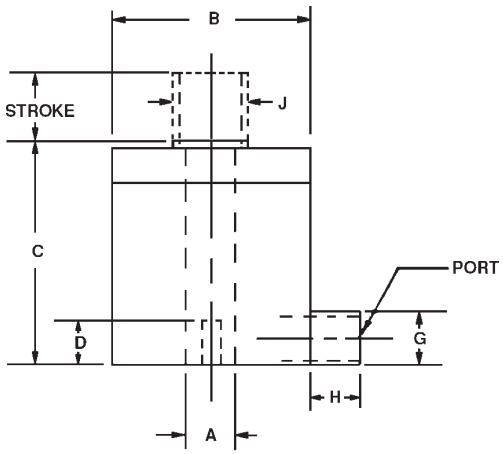


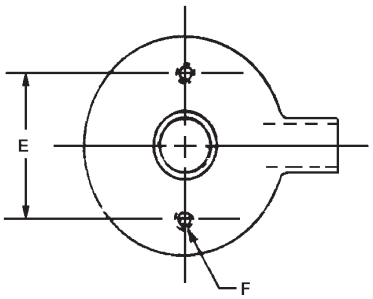
The top and bottom surfaces of the large casting must be machined to be flat, parallel, and at a fixed distance from each other. Jergens Work Supports eliminate deflection at the outer edge while compensating for variations between castings. A Jergens Hollow Rod Cylinder, stud and “C” washer are used to hold the casting.

Hollow Rod Cylinders



Hollow Rod Cylinders are ideal for converting existing fixtures to power clamping. Replaces clamps which use double cams, flange nuts, draw bars, or other mechanical devices. Generally, no special machining is required, just a longer stud.





Specifications

Specifications \ Part Number	60403 60404 60413 60414	60401 60402 60410 60411 60412	60405
Operating Stroke (in.)	.24	.31	.64
Operating Volume (cu. in.)	.3	.7	3.2
Effective Piston Area (sq. in.)	.96	1.9	5
Min. Oper. Pressure (psi)*	100	100	100
Max. Oper. Pressure (psi)	5000	5000	5000
Max Output Force (lbs.)	4800	9850	25000

* With Spring Installed

Hollow Rod Cylinders can either push or pull. Two styles are available, either Through Hole or Tapped Hole. In the Through Hole style, the piston rod is hollow to accept a bolt. The Tapped Hole cylinders accept a bolt threaded into the piston. Because of the piston design, the Tapped Hole style cannot gain stroke. Removing the return springs make the Hollow Rod Cylinders suitable for air operation.

- Available in Fixture Pro® Design Software

Through Hole Cylinders

Part Number	A	B	C†	D	E	F	G	H	Rod Dia. J	Port Size	Wt. (lbs)
*60403	13/32	1 15/16	1 7/8	5/16	1 5/8	10-32	3/4	1/2	7/8	7/16-20	1.0
*60404	17/32	1 15/16	1 7/8	5/16	1 5/8	10-32	3/4	1/2	7/8	7/16-20	1.0
60401	21/32	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	3/8	1 1/4	9/16-18	2.5
60402	25/32	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	7/8	1 1/4	9/16-18	2.5
60405	1 1/64	4	3 9/16	5/8	3 1/2	1/4-28	No Boss		2 1/8	9/16-18	10.5

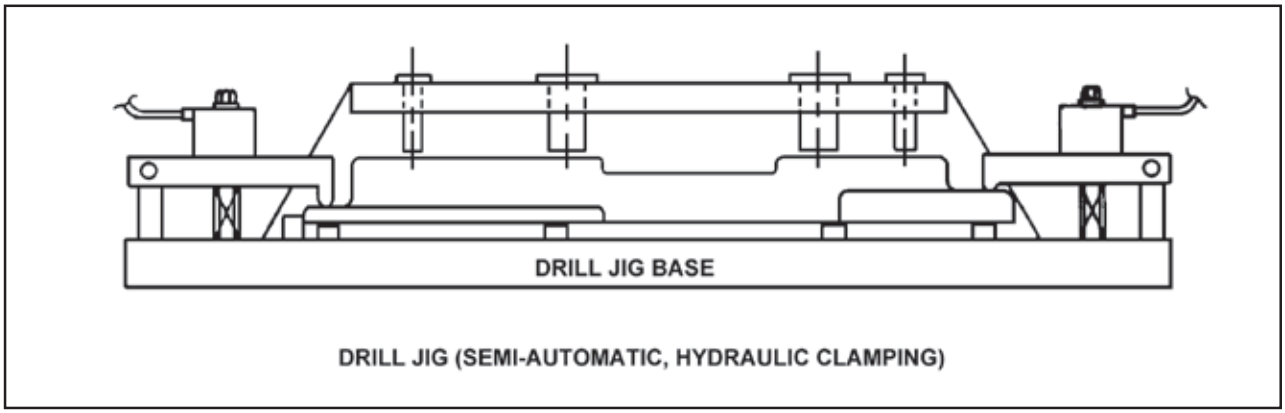
*Cannot increase stroke
† Measured over piston in the retracted position.

Tapped Hole Cylinders

Part Number	A	B	C	Thd. Depth D	E	F	G	H	J	Port Size	Wt. (lbs)
60413	3/8-16	1 15/16	1 13/16	5/16	1 5/8	10-32	3/4	1/2	7/8	7/16-20	1.0
60414	1/2-13	1 15/16	1 13/16	5/16	1 5/8	10-32	3/4	1/2	7/8	7/16-20	1.0
60410	1/2-13	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	7/8	1 1/4	9/16-18	2.5
60411	5/8-11	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	7/8	1 1/4	9/16-18	2.5
60412	3/4-10	2 1/2	2 3/16	5/16	2 7/32	10-32	7/8	7/8	1 1/4	9/16-18	2.5

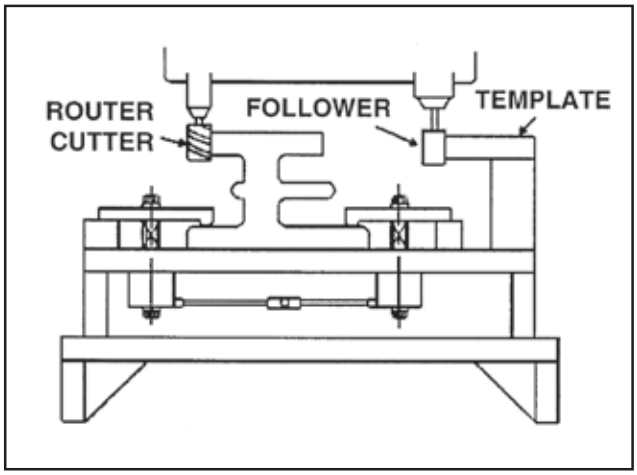
Inch to metric fittings available – see page 211.

Hollow Rod Cylinder
Applications



DRILL JIG (SEMI-AUTOMATIC, HYDRAULIC CLAMPING)

Typical, low cost conversion from manual clamping to Hollow Rod Cylinders can be accomplished by using the existing drill jig clamps and changing the stud to a longer length. Besides clamping faster than the manual method, the Hollow Rod Cylinders allow for uniform clamping forces on all strap clamps.



The Hollow Rod Cylinder is ideal for “close to the machine base” strap clamping. By mounting the clamps under the work table, a manual clamping set-up can be easily and economically converted to hydraulic clamping.

Threaded Cylinders
Pressure Points

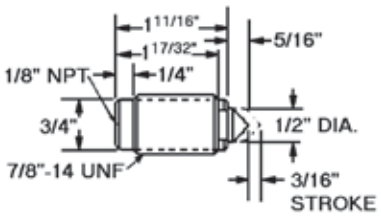


Jergens Pressure Points may be used with any power source and are designed to be used in restricted areas where space is at a minimum. Pressure Points can be used to eliminate part distortion during machining operations or to hold large diameter castings or rings in place while machining the upper surface. Pressure Points have hardened tool steel tips (50-60Rc). Jam nuts are included. Not suitable for air operation.

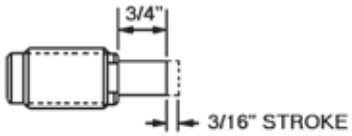
- Available in Fixture Pro® Design Software

Specifications

Part Number	61512	61514
Operating Stroke (in.)	3/16	3/16
Operating Volume (cu. in.)	.037	.037
Effective Piston Area (sq. in.)	.20	.20
Minimum Operating Pressure (psi)	400	400
Maximum Operating Pressure (psi)	5000	5000
Maximum Output Force (lbs.)	1000	1000
Weight (lbs.)	.5	.6



Part Number
61512



Part Number
61514

Miniature Cylinders

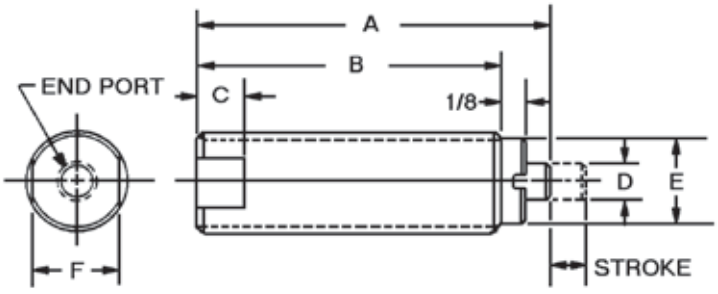


Small, fully-threaded bodies ensure easy mounting and simple length adjustments. Their small size provides high workholding forces in tight places. Threaded Cylinders have hardened piston rods, steel bodies, alloy springs and Teflon® back-up rings which ensure trouble-free operation and long life. Not suitable for air operation. For mounting, see brackets on page 168. Jam nuts are included.

- Available in Fixture Pro® Design Software

Specifications

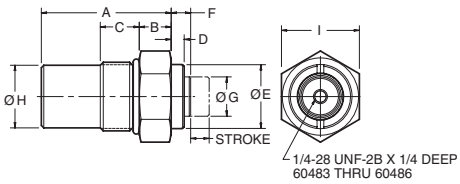
Part Number	60461	60462
Operating Stroke (in.)	3/16	1/2
Operating Volume (cu. in.)	.018	.049
Effective Piston Area (sq. in.)	.096	.196
Minimum Operating Pressure (psi)	200	300
Maximum Operating Pressure (psi)	10000	10000
Maximum Output Force (lbs.)	960	1960
Weight (lbs.)	.5	.7



Part Number	Stroke	Body Thread	A	B	C	D	E	F	End Port
60461	3/16	1/2-20	1 13/16	1 9/16	1/4	3/16	3/8	7/16	1/16-27 NPTF
60462	1/2	3/4-16	2 3/8	2	5/16	1/4	21/32	5/8	1/8-27 NPTF

Manifold Mount Cylinders



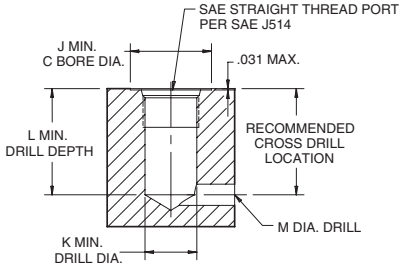


- Provides for clean installation
- Eliminates exposed fittings and plumbing
- Well suited for use in custom design fixtures

Specifications

Part Number	60481	60482	60483	60484	60485	60486
Operating Stroke (in.)	3/16	1/2	1/2	1	1/2	1
Operating Volume (cu. in.)	0.017	0.098	0.393	0.785	0.884	1.767
Effective Piston Area (sq. in.)	0.093	0.196	0.785	0.785	1.767	1.767
Minimum Operating Pressure (psi)	200	200	200	200	200	200
Maximum Operating Pressure (psi)	5000	5000	5000	5000	5000	5000
Maximum Output Force (lbs.)	465	980	3925	3925	8835	8835
Weight (lbs.)	0.5	0.7	1	1.5	2	2.5

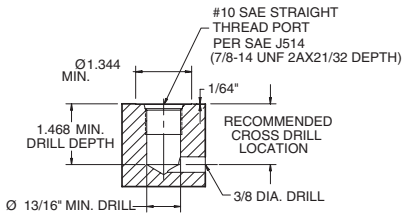
Part No.	Body Thread	Stroke	A	B	C	D	E Dia.	F	G Dia.	H Dia.	I Hex.
60481	9/16-18 UNF	3/16	1 13/32	.375	1/2	1/8	3/8	1/4	3/16	.48	3/4
60482	3/4-16 UNF-2A	1/2	1 23/32	.375	9/16	1/8	41/64	3/8	1/4	.66	7/8
60483	1 5/16-12 UN-2A	1/2	2 1/2	.615	3/4	1/4	1 7/32	5/16	3/4	1.19	1 1/2
60484	1 5/16-12 UN-2A	1"	3	.615	3/4	1/4	1 7/32	5/16	3/4	1.19	1 1/2
60485	1 7/8-12 UN-2A	1/2	2 1/2	.615	3/4	1/4	1 47/64	5/16	1 1/4	1.75	2 1/8
60486	1 7/8-12 UN-2A	1"	3	.615	3/4	1/4	1 47/64	5/16	1 1/4	1.75	2 1/8

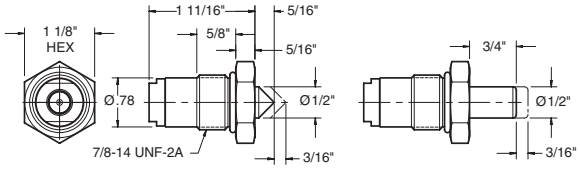


Part No.	SAE No.	Thread Size	Thread Depth	J	K	L	M
60481	6	9/16-18 UNF	1/2	.970	1/2	1.09	1/4
60482	8	3/4-16 UNF-2A	9/16	1.19	11/16	1.41	5/16
60483	16	1 5/16-12 UN-2A	3/4	1.91	1 7/32	2.00	1/2
60484	15	1 5/16-12 UN-2A	3/4	1.91	1 7/32	2.50	1/2
60485	24	1 7/8-12 UN-2A	3/4	2.56	1 13/16	2.00	9/16
60486	24	1 7/8-12 UN-2A	3/4	2.56	1 13/16	2.50	9/16

Pressure Points





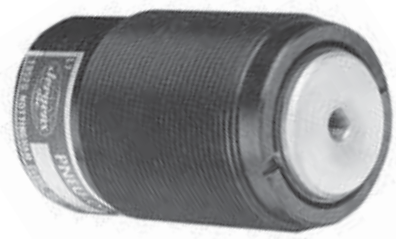


61522 61524

Specifications

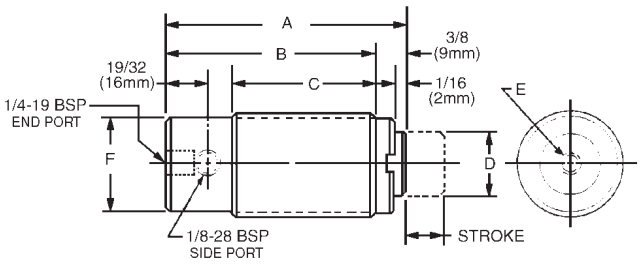
Part Number	61522	61524
Operating Stroke (in.)	3/16	3/16
Operating Volume (cu. in.)	0.049	0.049
Effective Piston Area (sq. in.)	0.261	0.261
Minimum Operating Pressure (psi)	400	400
Maximum Operating Pressure (psi)	5000	5000
Maximum Output Force (lbs.)	1305	1305
Weight (lbs.)	0.5	0.5

Threaded Cylinders
Heavy-Duty



Full-threaded bodies ensure easy mounting and simple length adjustments. Their small size provides high work holding forces in tight places. Threaded Cylinders have hardened piston rods, steel bodies, alloy springs and Teflon® back-up rings which ensure trouble-free operation and long life. Not suitable for air operation. For mounting, see bracket and jam nuts on page 165.

- Compact Design
- Easy Installation
- Side and Rear Ports
- Tapped Piston



Specifications - Inch

Part Number	60463	60464	60465	60466
Operating Stroke (in.)	1/2	1	1/2	1
Operating Volume (cu. in.)	.392	.785	.883	1.767
Effective Piston Area (sq. in.)	.785	.785	1.767	1.767
Minimum Operating Pressure (psi)	200	200	200	200
Maximum Operating Pressure (psi)	5000	5000	5000	5000
Maximum Output Force (lbs.)	3925	3925	8835	8835
Weight (lbs.)	1.0	1.5	2.0	2.5

Specifications - Metric

Part Number	63213	63214	63215	63216
Operating Stroke (mm)	13	25	13	25
Operating Volume (cu. Cm.)	6.4	12.8	14.5	29
Effective Piston Area (cm^2)	5	5	11.4	11.4
Maximum Oper. Pressure (bars)	340	340	340	340
Minimum Oper. Pressure (bars)	14	14	14	14
Maximum Output Force (kg)	1780	1780	4007	4007
Weight (kg)	.45	.68	.90	1.13

Inch

Part Number	Stroke	Body Thread	A	B	C	D	E	F	Input Ports End	Input Ports Side
60463	1/2	1 5/16-16	3 1/4	2 7/8	2	3/4	1/4-28 x 1/4	1 7/32	7/16-20 SAE	1/8-NPT
60464	1	1 5/16-16	3 3/4	3 3/8	2 1/2	3/4	1/4-28 x 1/4	1 7/32	7/16-20 SAE	1/8-NPT
60465	1/2	1 7/8-16	3 1/4	2 7/8	2	1 1/4	1/4-28 x 1/4	1 25/32	7/16-20 SAE	1/8-NPT
60466	1	1 7/8-16	3 3/4	3 3/8	2 1/2	1 1/4	1/4-28 x 1/4	1 25/32	7/16-20 SAE	1/8-NPT

Cylinders are supplied with a plug installed in the side port.
To use side port, remove plug and install part number 61060 (7/16-20 pipe plug) to plug end port.

Metric

Part Number	Stroke	Body Thread	A	B	C	D	E	F	Input Ports End	Input Ports Side
63213	13	M36 x 1.5	82	73	51	19	M6 x 1.0 x 6	31	1/4 - 19 BSP	1/8 - 28 BSP
63214	25	M36 x 1.5	95	86	64	19	M6 x 1.0 x 6	31	1/4 - 19 BSP	1/8 - 28 BSP
63215	13	M48 x 1.5	82	73	51	32	M6 x 1.0 x 6	44	1/4 - 19 BSP	1/8 - 28 BSP
63216	25	M48 x 1.5	95	86	64	32	M6 x 1.0 x 6	44	1/4 - 19 BSP	1/8 - 28 BSP

Cylinders are supplied with a plug installed in the side port.

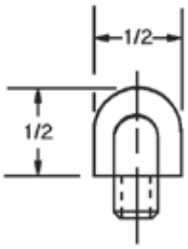
Threaded Cylinders

Piston Buttons

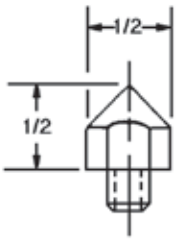
1/4 - 28 Thread



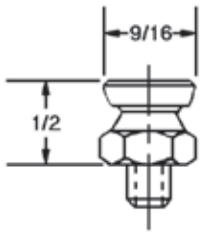
Hardened steel buttons for use on 60463 thru 60466 cylinders.



60471



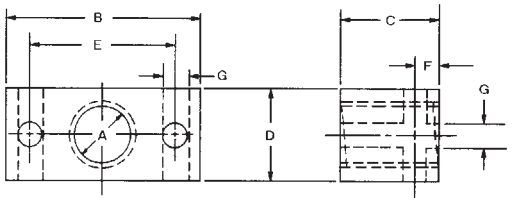
60472



60473

Threaded Cylinders

Block Mountings





- Material: Low Carbon Steel
- Finish: Black Oxide

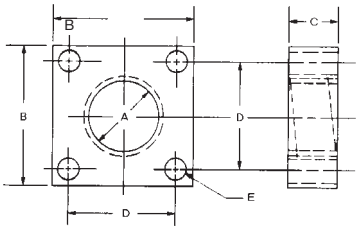
Inch

Part Number	A	B	C	D	E	F	G	Wt. (lbs)
60950	1/2-20	1 3/8	3/4	5/8	15/16	1/4	1/4	.125
60951	3/4-16	1 5/8	1 1/8	1	1 1/8	1/4	1/4	.375
60959	7/8-14	2	3/4	1 1/2	1 1/2	3/8	21/64	.40
60956	1 5/16-16	3	1 1/4	1 13/16	2 1/8	7/16	25/64	1.27
60957	1 9/16-16	3 1/4	1 1/2	2	2 7/16	7/16	25/64	1.95
60958	1 7/8-16	4	2	2 3/8	3	1/2	33/64	—

Metric

Part Number	A	B	C	D	E	F	G	Wt. (kg)
60997	M36 x 1.5 6H	82.6	38.1	50.8	62	12	10.8	.86
60998	M48 x 1.5 6H	101.6	38.1	60.3	76	12	13	1.13

Flange Mountings





- Material: Low Carbon Steel
- Finish: Black Oxide

Inch

Part Number	A	B	C	D	E	Wt. (lbs)
60952	1 5/16-16	1 5/8	1/2	1 1/4	17/64	.18
60955	1 9/16-16	2	1	1 1/2	17/64	.56
60954	1 7/8-16	2 1/4	1	1 3/4	21/64	.625

Metric

Part Number	A	B	C	D	E	Wt. (kg)
60995	M36 x 1.5 6H	50.8	25.4	38	6.7	.30
60994	M48 x 1.5 6H	63.5	25.4	50	8.8	.42

Jam Nuts



Part Number	60961	60962	60963	60964	60965	60966	60967
Thread	1/2-20	3/4-16	7/8-14	1-12	1 5/16-16	1 9/16-16	1 7/8-16
Thickness	5/16	3/8	5/16	35/64	25/64	25/64	7/16
Width Across Flats	3/4	1 1/8	1 5/16	1 5/8	1 7/8	2 1/4	3

Standard Cylinders
Single Acting

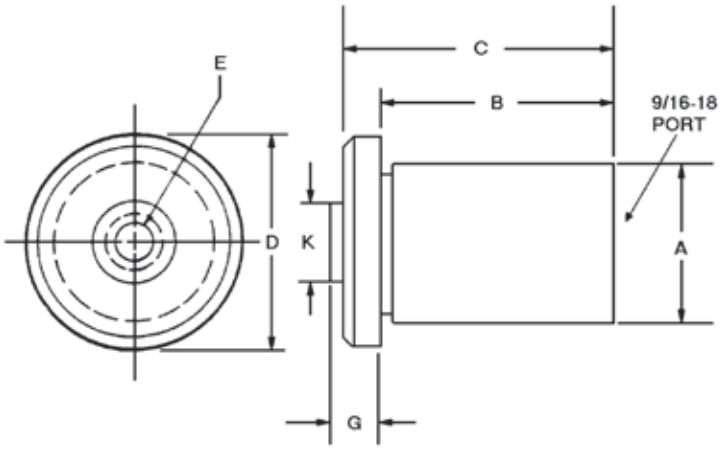


These single-acting, spring-return cylinders will operate on air or oil; all have a 1" stroke.

Single-acting cylinders are especially applicable to large circuits where cylinders are plumbed into the air side of the circuit and used to align parts in the fixture prior to hydraulic clamping. These applications are primarily pushing type operations where the cylinder return spring pulls only the piston rod.

- Available in Fixture Pro® Design Software

NOTE: Not recommended for applications where coolant or chips are prevalent. Use double acting style (next page) for these applications



Specifications

Part Number	60301	60307	60303
Operating Stroke (in.)	1	1	1
Operating Volume (cu. in.)	.44	1.22	3.14
Effective Piston Area (sq. in.)	.44	1.22	3.14
Minimum Operating Pressure (psi)	32	25	25
Maximum Operating Pressure (psi)	3000	3000	3000
Maximum Output Force (lbs.)	1320	3660	9300
Weight (lbs.)	.5	1	3

Bore Tolerances: +.0005
-.0010

Dimensions

Part Number	A	B	C	D	Tap E	G	K
60301	1.000	2 3/8	2 5/8	1 15/64	1/4-20 x 1/2	7/16	3/8
60307	1.500	2 3/8	2 5/8	1 47/64	3/8-16 x 3/4	7/16	1/2
60303	2.500	2 3/8	2 5/8	2 47/64	3/8-16 x 3/4	7/16	3/4

Inch to metric fittings available – see page 211.

Standard Cylinders
Double Acting

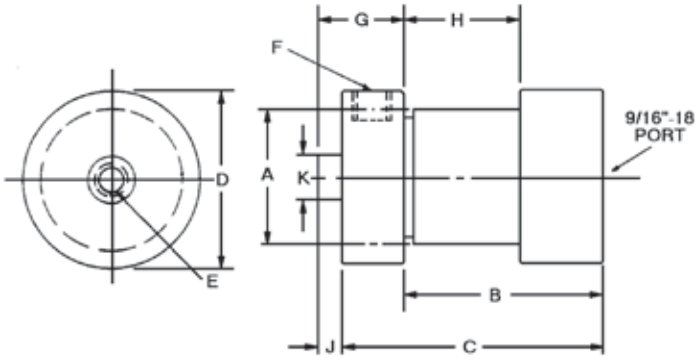


Double Acting Cylinders can be used for clamping, holding positioning, staking, punching...anywhere that a heavy duty cylinder is needed. If the cylinder is mounted in the fixture (as opposed to using mounting brackets), the fixture should be bored to between .0005 and .0010 over the "A" dimension. Doing so will prevent an out-of-round condition of the cylinder body which could damage the piston. They may be returned by air or by hydraulic pressure.

- Available in Fixture Pro® Design Software

Specifications

Part Number		60345	60341	60350	60351	60360	60361
Operating Stroke (in.)		1	1	2	2	3	3
Operating Volume (cu. in.)		1.1	3.14	2.2	6.28	3.31	9.42
Effective Piston Area (sq. in.)	-Push	1.1	3.14	1.1	3.14	1.1	3.14
	-Pull	.912	2.699	.956	2.699	.956	2.699
Minimum Operating Pressure (psi)		20	20	20	20	20	20
Maximum Operating Pressure (psi)		3000	3000	3000	3000	3000	3000
Maximum Output Force (lbs.)		3300	9300	3300	9300	3300	9300
Weight (lbs.)		2.5	4.5	3.5	6.0	4.75	6.2



Dimensions

Part Number	A	B	C	D	Tap E	Return Port F	G	H	J	K
60345	1.500	2 7/16	3 1/8	2 15/32	3/8-16 x 3/4	7/16-20	31/32	1 9/32	1/4	1/2
60341	2.500	2 11/16	3 3/8	2 31/32	3/8-16 x 3/4	7/16-20	31/32	1 9/32	1/4	3/4
60350	1.500	3 1/2	4 1/2	2 15/32	1/4-20 x 1/2	9/16-18	1 7/32	2 11/32	1/4	7/16
60351	2.500	3 3/4	4 23/32	2 31/32	3/8-16 x 3/4	9/16-18	1 3/16	2 11/32	1/4	3/4
60360	1.500	4 1/2	5 1/2	2 15/32	1/4-20 x 1/2	9/16-18	1 7/32	3 11/32	1/4	7/16
60361	2.500	4 3/4	5 23/32	2 31/32	3/8-16 x 3/4	9/16-18	1 3/16	3 11/32	1/4	3/4

Inch to metric fittings available – see page 211.

Standard Cylinders
Mounting Brackets





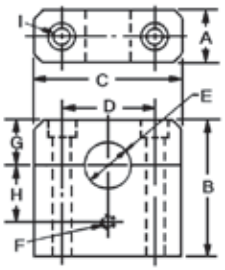
Mounting Brackets are designed to save you time and money when laying out your fixture.

All Mounting Brackets are made of low carbon steel, which is not heat-treated. This allows you to custom fit or weld the brackets into your fixture. The cylinder clamping area is concentric to the OD of the various cylinders to avoid distortion of the cylinder walls which may cause damage to the piston.

Spacers may be used to add height to the cylinders when using Jergens Mounting Brackets.

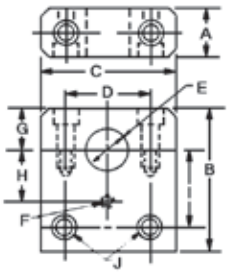
- Material: Low Carbon Steel
- Finish: Black Oxide
- Bore Tolerances: +.0005
  -.0010
- Available in Fixture Pro® Design Software

Part Number	A	B	C	D	E	Tap F	G	H	(2 Bolts Supplied) I	Wt. (lbs)
60901	1 1/4	3 3/4	2 3/8	1 1/2	1.00	1/2-13	3/4	2	3/8-16 x 4	2.75
60902	1 1/4	4	3 1/2	2 1/8	1.50	3/4-10	1	2	1/2-13 x 4 1/2	3.5
60903	1 1/4	4 1/2	4 3/8	3 1/4	2.50	3/4-10	1 1/2	2	5/8-11 x 5	4.75



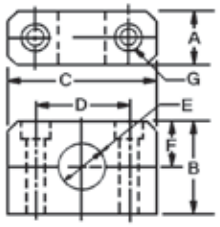


Part Number	A	B	C	D	E	Tap F	G	H	I	(2 Bolts Supplied) J	Wt. (lbs)
60904	1 1/4	3 3/4	2 3/8	1 1/2	1.00	1/2-13	3/4	2	2 9/16	3/8-16 x 1 1/2	2.7
60905	1 1/4	4	3 1/8	2 1/8	1.50	3/4-10	1	2	2 1/2	1/2-13 x 1 1/2	3.5
60906	1 1/4	4 1/2	4 3/8	3 1/4	2.50	3/4-10	1 1/2	2	2 7/16	5/8-11 x 1 1/2	4.7





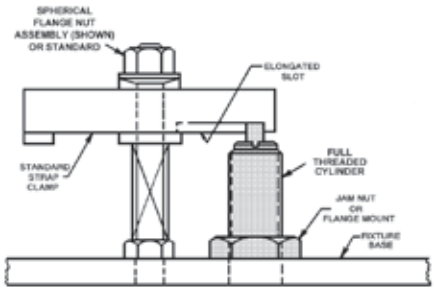
Part Number	A	B	C	D	E	F	(2 Bolts Supplied) G	Wt. (lbs)
60907	1 1/4	1 1/2	2 3/8	1 1/2	1.00	3/4	3/8-16 x 1 3/4	.95
60908	1 1/4	2	3 1/8	2 1/8	1.50	1	1/2-13 x 2 1/4	1.50
60909	1 1/4	3	4 3/8	3 1/4	2.50	1 1/2	5/8-11 x 3 1/4	2.75

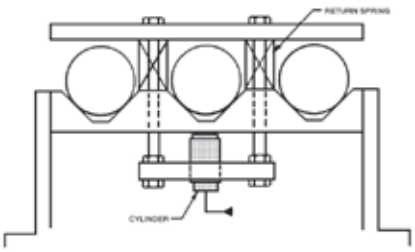


Threaded Cylinder
Applications

By replacing step blocks or similar mechanical devices with a threaded cylinder, manual clamping is easily adaptable into a more productive hydraulic clamping set-up.

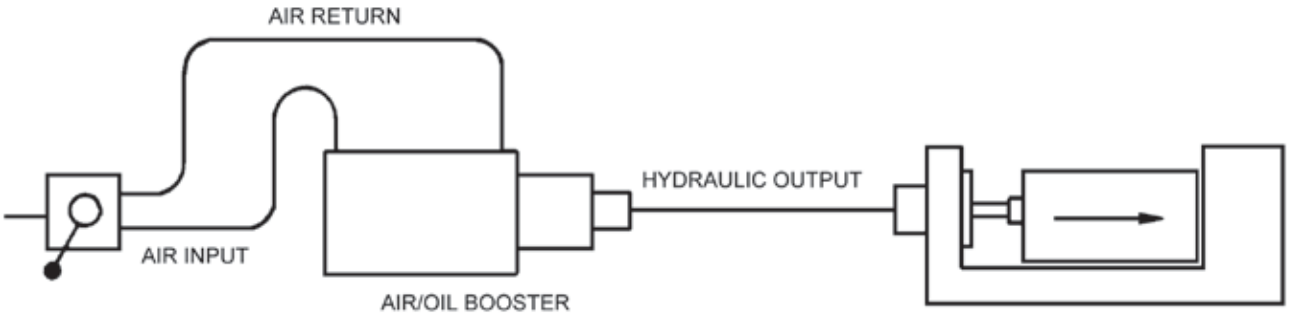
This principle of "building block" components can be combined with various Jergens cylinders, standard components and mounting blocks or strap clamps; thus allowing an almost infinite method of production clamping.



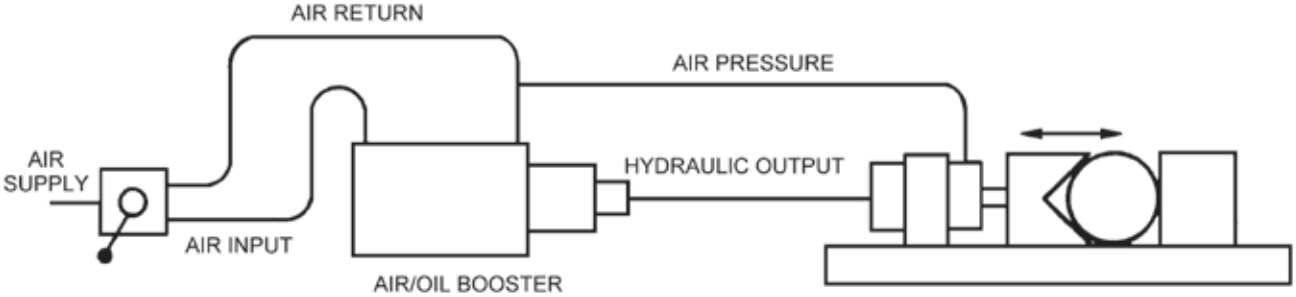


Standard Cylinder
Applications

Holding Fixture
A Single Acting Cylinder is used to locate and clamp the workpiece in a channel fixture. The cylinder rod automatically returns when the booster pressure is released.

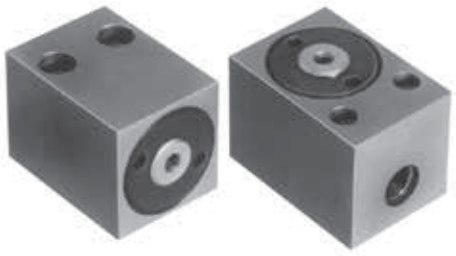


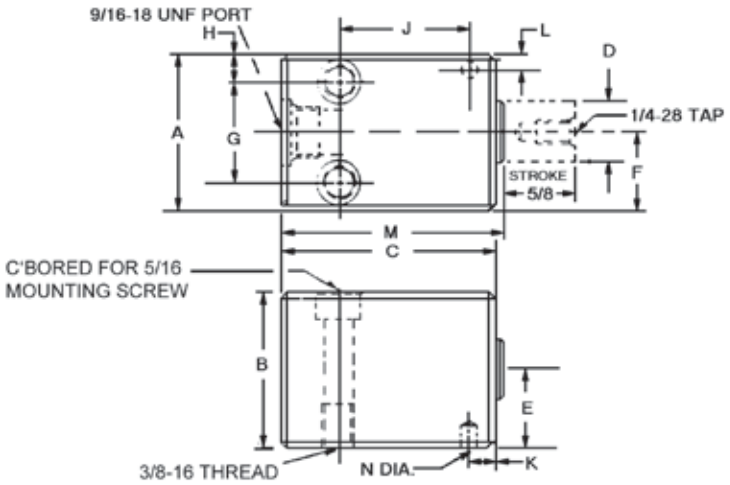
Vise Fixture
A Double Acting Cylinder is being used to operate a Vee Jaw in the above fixture. Hydraulic pressure is used to clamp and unclamp the jaw. Air pressure, used to return the Double Acting Cylinder, is connected to the air return line of the Booster. Jergens Double Acting Cylinders will operate with as little as 10 psi of air pressure or up to 3000 psi of hydraulic pressure.



Block Cylinders

Single Acting Horizontal





- Vertical and Horizontal Styles
- Simple Mounting
- Compact Design

Dimensions (Horizontal Style)

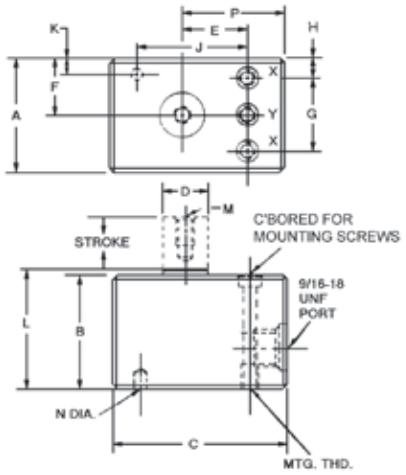
Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N
60372*	1 3/4	1 3/4	2 7/16	11/16	7/8	7/8	1	3/8	1 15/32	9/32	3/16	2 1/2	.194

Dimensions (Vertical Style)

Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Mtg. Screw Size	Mtg. Thread
60371*	1 3/4	1 3/4	2 1/2	11/16	1	7/8	1 1/8	5/16	1 11/16	1/4	1 13/16	1/4-28 UNF	.194	1 9/16	#10	1/4-20 UNC
60373	2 1/2	2 1/2	3 3/16	1 1/2	1 11/32	1 1/4	—	—	2 3/32	7/16	2 11/16	3/8-24 UNF	.257	1 15/16	5/16	3/8-16 UNC
60374	3 1/2	3	4	2	1 1/2	1 3/4	1 3/4	7/8	—	—	3 3/8	1/2-20 UNF	—	2 1/4	5/16	3/8-16 UNC

*Not recommended for applications where coolant or chips are prevalent.

Single Acting Vertical



Specifications (Both Styles)

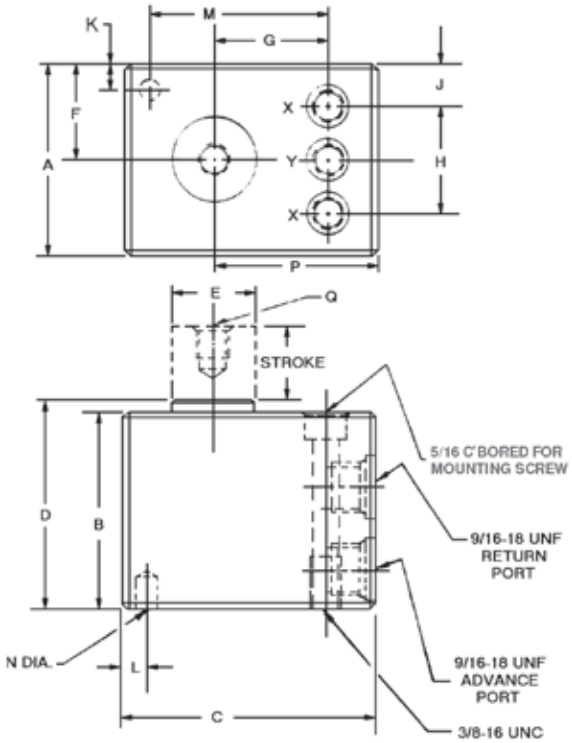
Part Number	60371	60372	60373	60374
Operating Stroke (in.)	5/8	5/8	1/2	1/2
Operating Volume (cu. in.)	.77	.77	1.1	1.96
Effective Piston -Push	1.22	1.22	1.77	3.14
Area (sq. in) -Pull	Spring Return	Spring Return	Spring Return	Spring Return
Maximum Operating Pressure (psi)	5000	5000	5000	5000
Maximum Output Force (lbs.)	6100	6100	8850	15700
Weight (lbs.) Approx.	2	2	5	11
Mounting Location	X Position	As Shown	Y Position	X Position

"X" refers to double mounting hole style.
"Y" refers to single mounting hole style.

Inch to metric fittings available – see page 211.

Block Cylinders
Heavy Duty Double Acting





- Simple Mounting
- Compact Design
- High Output Forces

Specifications

Part Number	60381	60382	60383	60384
Operating Stroke (in.)	1/2	1	1/2	1
Operating Volume (cu. in.)	.88	1.77	1.57	3.14
Effective Piston -Push	1.77	1.77	3.14	3.14
Area (sq. in) -Pull	.98	.98	1.37	1.37
Minimum Operating Pressure (psi)	20	20	20	20
Maximum Operating Pressure (psi)	5000	5000	5000	5000
Maximum Output Force (lbs.)	8850	8850	15700	15700
Weight (lbs.) Approx.	4	4.8	10.5	12.1
Mounting Location	Y Position		X Position	

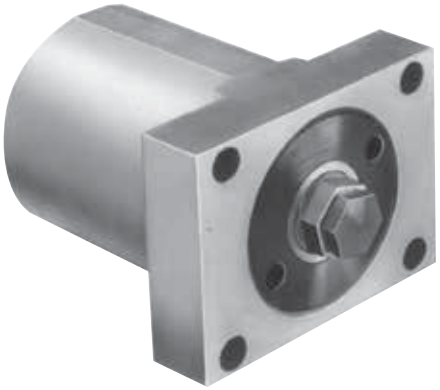
"X" refers to double mounting hole style.
"Y" refers to single mounting hole style.

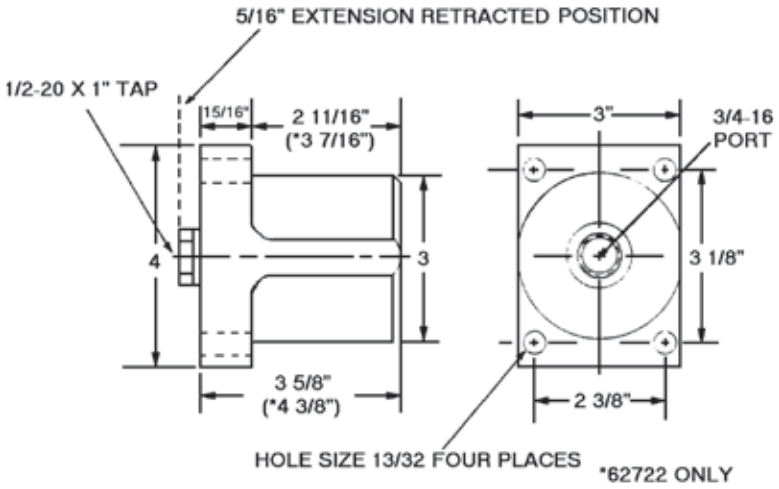
Dimensions

Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Stroke	Q
60381	2 1/4	2 5/16	3	2 7/16	1	1 1/8	1 11/32	—	—	5/16	5/16	2 3/32	.257	1 15/16	1/2	3/8-24 UNF-2B
60382	2 1/4	2 13/16	3	2 15/16	1	1 1/8	1 11/32	—	—	5/16	5/16	2 3/32	.257	1 15/16	1	3/8-24 UNF-2B
60383	3 1/4	3 1/4	3 3/4	3 3/8	1 1/2	1 5/8	1 1/2	1 3/4	3/4	—	—	—	—	2 1/4	1/2	1/2-20 UNF-2B
60384	3 1/4	3 3/4	3 3/4	3 7/8	1 1/2	1 5/8	1 1/2	1 3/4	3/4	—	—	—	—	2 1/4	1	1/2-20 UNF-2B

Inch to metric fittings available – see page 211.

Flange Mount Cylinders





- Easy Mounting
- Heavy Duty
- High Output Forces
- Long Lasting
- Available in Fixture Pro® Design Software

The Jergens Heavy Duty Flange Mount Cylinders mount through holes on the flange of the cylinder body. This feature eliminates the need for separate mounting brackets. The cylinders can provide high forces for clamping, lifting and pressing. Not recommended with flood coolant applications.

Specifications

Part Number	62721	62722
Operating Stroke (in.)	1/2	1
Operating Volume (cu. in.)	1.9	3.9
Effective Piston Area (sq. in.)	3.9	3.9
Minimum Operating Pressure (psi)	100	100
Maximum Operating Pressure (psi)	5000	5000
Maximum Output Force (lbs.)	19880	19880
Weight (lbs.)	5.0	6.5

Inch to metric fittings available – see page 211.

Intensifier Cylinders



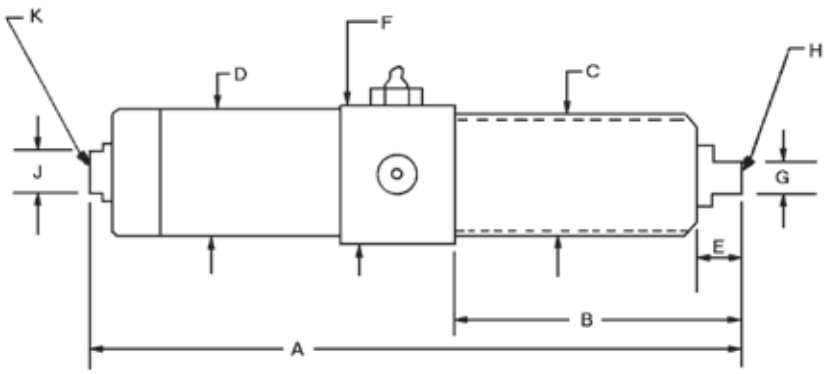
Intensifier Cylinders are combination air-hydraulic cylinders. An air powered cylinder is driven into a small oil reservoir which produces a nominal 8:1 or 30:1 power boost ratio, depending upon air pressure and the cylinder used. These miniature, self-contained power sources are ideal where fast action (100 operations per minute), a short stroke and high power are needed.

- 8:1 and 30:1 Boost Ratios
- Self-Contained
- Fast Acting
- Air Controlled
- Easy Recharge Without Disassembly
- Available in Fixture Pro® Design Software

For Mounting Brackets see page 168.

Specifications

Part Number	60596	60598
Operating Stroke (in.)	1/4	1/4
Force (lbs.) at Inlet Air Pressure 125 psi Max.	950	3700
100 psi	700	2900
75 psi	450	2100
50 psi	250	1300
25 psi Min.	50	450
Weight (lbs.)	2.2	4.5
Ratio	8:1	30:1

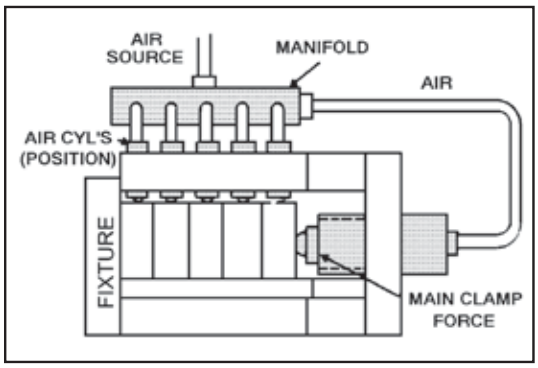


Dimensions

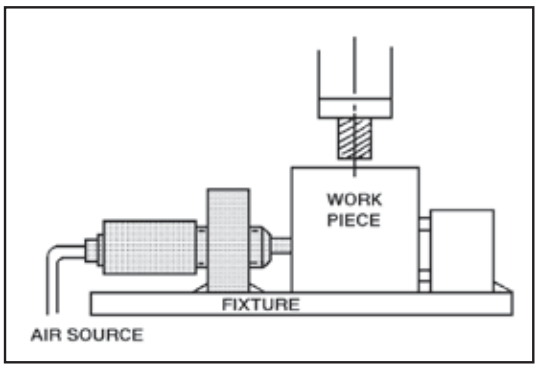
Part Number	A	B	Thread C	D	E	F	Across Flats G	Tap H	Across Flats J	Port K
60596	7 1/4	2 13/16	1 9/16-16	1 3/4	23/32	2	3/4	5/16-24 x 1/2	7/8	9/16-18
60598	9 5/16	3 15/16	1 7/8-16	2 1/2	23/32	2 1/2	3/4	5/16-24 x 1/2	7/8	9/16-18

Inch to metric fittings available – see page 211.

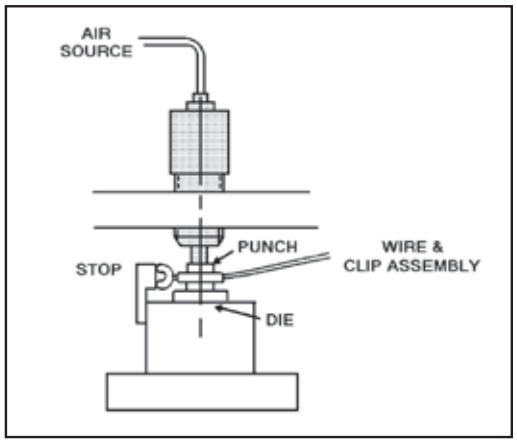
Intensifier Cylinder
Applications



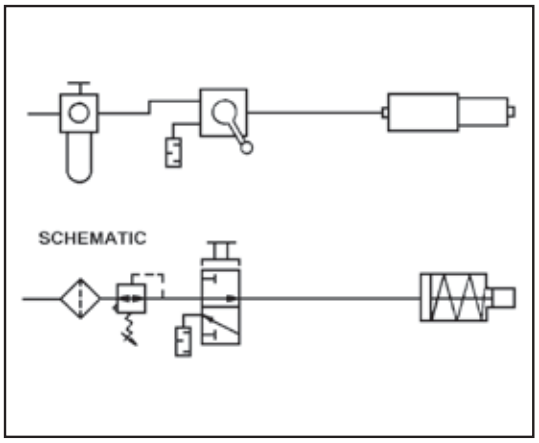
Positioning
A series of plates are gang loaded into the fixture. Air operation of the intensifier assures fast and positive positioning of the plates, after which the multiple hydraulic cylinders are used to clamp.



Clamping
Installed in a Jergens Mounting Bracket, the Intensifier Cylinder provides efficient, versatile, yet economical clamping.



Crimping
The intensifiers may be installed at any attitude. Mounted in a vertical attitude (as shown), up to 1 1/2 tons of force is available for crimping, punching, or notching.



Circuit Diagrams
A filter/regulator and a 3-way hand valve are all that is required to control an Intensifier Cylinder. Installation is as simple as an air cylinder but the resulting force is much greater.

How to Design Your Own Hydraulic System

1. Calculate the force used to hold the workpiece during machining.
   To convert the torque applied to a fastener into holding force use the following formula:

$$P = \frac{T}{KD}$$

Where: P = Holding Force (lbs.)
T = Torque (in. lbs.)
D = Nominal Thread Diameter (in.)
K = Friction Factor
(K Varies with material, finish, and lubrication, .19 to .25)

Example: 1/2-13 bolt tightened to 30 ft. lbs
(360 in. lbs.) provides 3600 lbs. of force.

$$P = \frac{360}{(.2 \times .5)} = 3600$$

2. Calculate the force required at each work unit.

$$\frac{\text{Total Force}}{\text{Number of work units}} = \text{Force per unit}$$

3. Select the style of work unit to be used at each location. Select units which can be easily mounted and will allow access for loading and unloading of the workpiece.

4. Compare the force required by each work unit with the maximum force available from the unit selected. If the required force is greater than the available force, substitute larger work units or increase the number of work units to be used.

5. Calculate the hydraulic pressure required to provide the force needed at each work unit. To determine pressure, divide the force required at the work unit by the effective piston area of the unit selected.

$$\frac{\text{Force}}{\text{Area}} = \text{Pressure}$$

   The unit requiring the highest pressure determines the requirement for the entire system.

6. Determine the total volume of oil required to operate all of the work units (Volume = Piston Area x Stroke). Operating volume requirements for work units are listed in the specifications chart for the item.

7. Select a power source which will provide the required pressure, using the available air pressure. To determine if a power source will provide the required pressure from available air pressure, multiply the available air pressure by the boost ratio of the power source.

   Example: (90 psi air pressure) (15:1 boost ratio) = 1350 psi hydraulic pressure

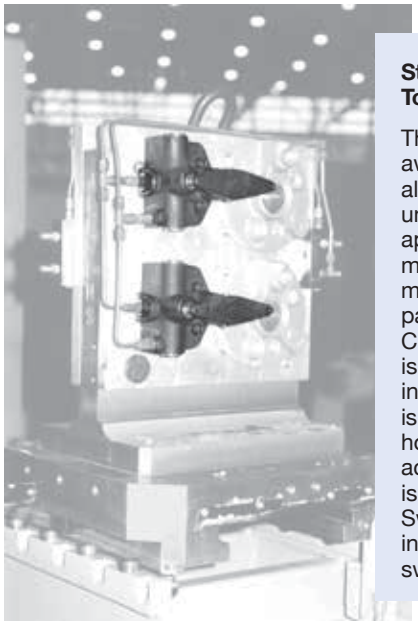
   The power source must also provide the total volume of oil required by the system. When using a standard booster, the high pressure volume of the unit must exceed the system requirement.

8. If you need help, call Jergens Technical Sales at: 1-877-426-2504.

Jergens WORKHOLDING SOLUTIONS GROUP

Staylock Clamps

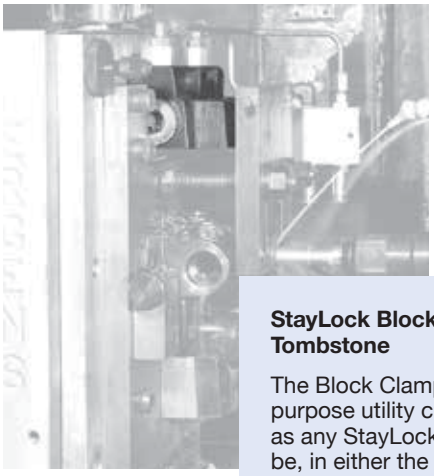
Stays Mechanically Locked– Even When Disconnected from Hydraulic Pressure



StayLock Swing Clamp on a Tombstone Fixture

The Swing Clamp rotates 80° away from the workpiece, allowing easy loading and unloading of the part. In this application, the tombstone is mounted on a double pallet machining center. When the pallet rotates, the StayLock Clamp remains clamped. There is no need for an accumulator in the hydraulic system. Nor is there a chance of hydraulic hoses getting tangled or accidentally cut while the part is being machined. StayLock Swing Clamps are available in left-hand or right-hand swing styles.

StayLock Clamps ...the Hydraulic clamp with the mechanical advantage! With conventional power clamping, when pressure is put to the clamp, it clamps... take the pressure away (on purpose or not), it unclamps. With the StayLock Clamp's patented internal locking mechanism, hydraulic pressure is needed to clamp...and to unclamp!

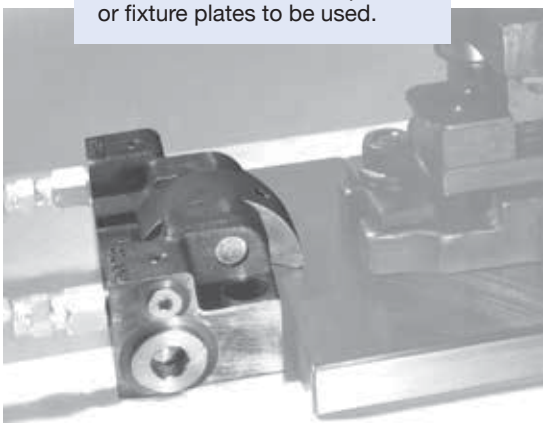


StayLock Block Clamp on a Tombstone

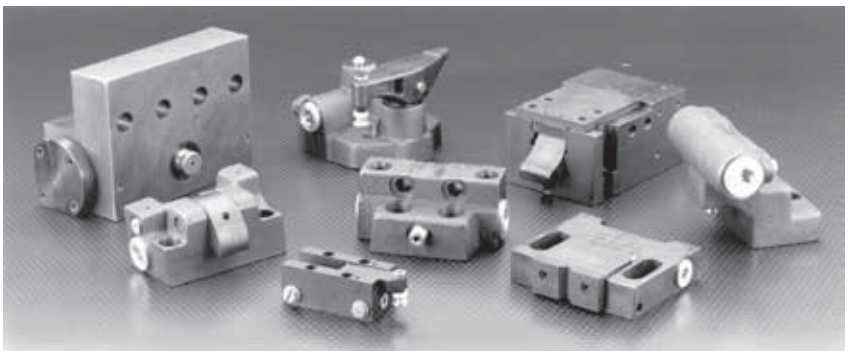
The Block Clamp is a multi-purpose utility clamp, utilized, as any StayLock Clamp can be, in either the horizontal or vertical clamping positions. In this application, the Block Clamp (at the top of the tombstone) is replacing step blocks and tedious manual clamping.

StayLock Rocker Clamp Holding a Die

The Rocker Clamp is ideal for quick change clamping on dies, molds, and fixture plates where a standard height subplate is employed. Because of the unique body design of the Rocker Clamp, it can easily be adapted with a T-slot nut mounted on the bottom. This enables the Rocker Clamp to slide in and out, making part removal easier, plus it allows for various widths of subplates or fixture plates to be used.



Staylock Clamps



Positive Mechanical Lock

Jergens StayLock Clamps offer a breakthrough in clamping flexibility! These mechanically locked clamps are activated and released by hydraulic pressure. Once activated, the clamps automatically lock and will not release until hydraulic pressure is applied to the release port.

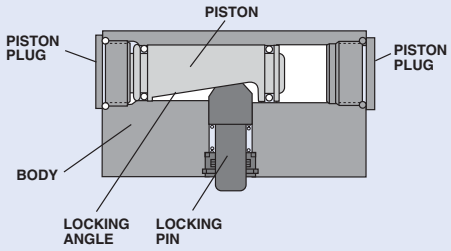
Once clamped, you can:
- disconnect your hydraulic power source
- move the fixture, with the part still clamped, to other machines
- not worry about your part unclamping due to hydraulic power failure, a cut line, or leaks in the hydraulic system

Patented positive mechanical lock minimizes:
- reclamping
- set-up costs
- parts accidentally becoming unclamped

Jergens StayLock Clamps can provide solutions to many clamping problems. They are designed for use on:
- palletized fixtures
- transfer machines
- machining centers
- any power clamping application
- quick change on molds and dies

Use the StayLock Clamps with Jergens Air-Operated Hydraulic Pumps (described on pages 195–196). One Hydraulic Pump can service several machines because there is no need to maintain hydraulic pressure when clamping StayLock Clamps. Once StayLock Clamps are in a clamping position, the hydraulic hoses can be disconnected, and the part will remain clamped indefinitely. Once the machining cycle is completed, applying hydraulic pressure to the release port unclamps the part.

CUT AWAY VIEW OF TYPICAL STAY LOCK CLAMP



Most Commonly Asked Questions

Q. Does the StayLock Clamp lose pressure?

A. No, it does not. Because of a patented mechanical lock, a positive locking wedge is activated when pressure is applied to the clamp port. There is no need to maintain hydraulic pressure; therefore, the power source can be disconnected. There is no pressure to lose.

Q. How do I lock StayLock Clamps in place?

A. Applying hydraulic pressure to the clamp port of a StayLock Clamp drives two internal wedges together. The two wedges form a mechanical lock and will not retract until hydraulic pressure is applied to the release port.

Q. Can these clamps be used with air?

A. No. Air pressure does not apply enough force to lock or unlock the internal wedge mechanism.

Q. How much hydraulic pressure is needed to activate the clamps?

A. The minimum pressure required on most of the StayLock Clamps is 500 psi. The minimum and maximum pressure requirements are specified for each clamp on the following pages.

Q. What is needed to set up a hydraulic system using StayLock Clamps?

A. Typically, a system includes several clamps (depending on individual requirements); a power source; a four-way, three-position, zero-leakage control valve (see page 199); and hydraulic hose and fittings. There is no need for an accumulator in the system.

Q. Can an air/oil booster be used with StayLock Clamps?

A. No. Boosters typically are used with standard hydraulic clamps because pressure is needed to activate and maintain the clamp in the clamping position. With a Booster set-up, there is only one hydraulic line that provides the pressure needed. StayLock Clamps need pressure to clamp and unclamp; therefore, a Booster would not provide the needed pressure to the release port to unclamp the part.

Q. Can I get technical assistance from Jergens when designing a StayLock Clamping system?

A. Yes. Jergens will assist you by providing a CAD schematic drawing of your system, including all of the part numbers needed to order the system.

For assistance, call 1-877-426-2504.

Jergens WORKHOLDING SOLUTIONS GROUP

Staylock Clamps

Die/Mold Clamps

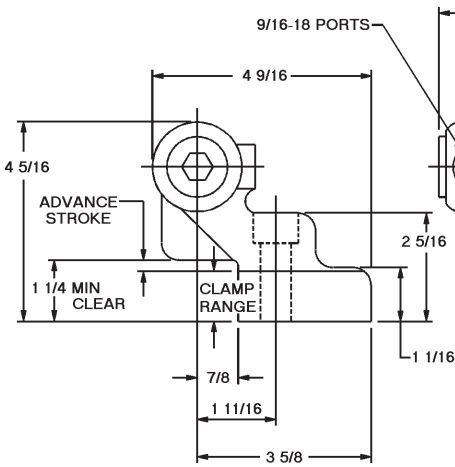
Four models of Die/Mold Clamps are available. Part number 62801 provides 4000 lbs. of output pressure. It is only available in the T-Slot mounting style. The T-Slot mount allows the clamp to be mounted on a machine base via a T-Slot nut, thus allowing the clamp to slide to and from the workpiece. Part number 62802 provides 10,000 lbs. of clamping force. It employs standard mounting bolts for permanent mounting to the machine base, subplate, or fixture plate. Part number 62803 also provides 10,000 lbs. of clamping force. This clamp is provided with a Sensor Interlock which, when wired to a control panel, indicates whether the clamp is locked or not. Sensor Interlocks are available as an accessory for part numbers 62801 and 62802. Part number 62804 is similar to part number 62802, except it has a greater clamping range. It does not have mounting holes for the Sensor Interlock. Die/Mold Clamps are available with Viton® seals for high temperature applications.

Ideal for:

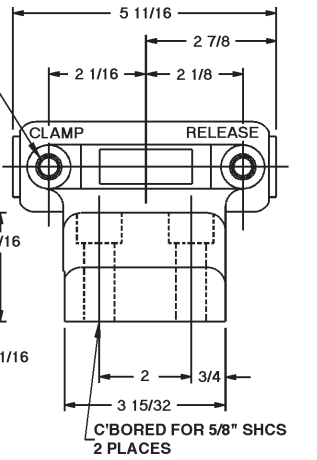
- Injection molding machines
- Die casting machines
- Punch presses
- Machining centers



U.S. Patents:
No. 4,511,127
No. 4,471,293



Part Number
62802

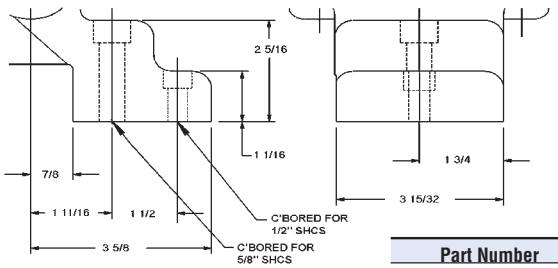


Part Number
62803 with Sensor Interlock

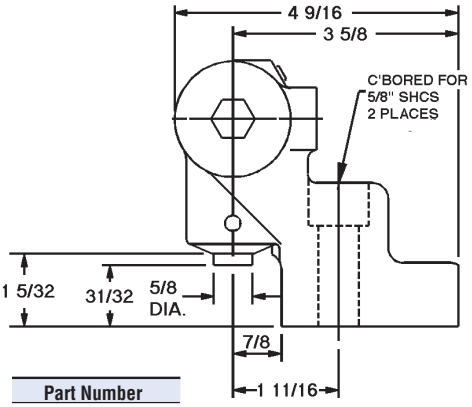
Specifications

Part Number	62801	62802	62803	62804
Operating Volume (cu. in.)	1	1	1	1
Min Operating Pressure (psi)	500	500	500	500
Max Operating Pressure (psi)	2000	5000	5000	5000
Force to Pressure Ratio	2:1	2:1	2:1	2:1
Clamping Range (in.)	1.03/.95	1.03/.95	1.03/.95	1.15/.97
Max Output Force (lbs)	4000	10000	10000	10000
Weight (lbs)	9.5	9.5	9.5	9.5

- Available in Fixture Pro® Design Software



Part Number
62801 T-Slot Style



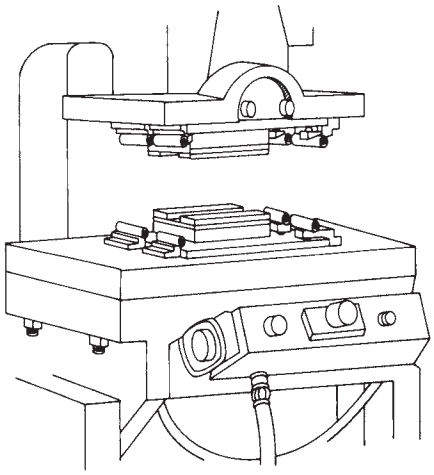
Part Number
62804

Inch to metric fittings available – see page 211.

Staylock Clamps

Die/Mold StayLock® Clamp Applications

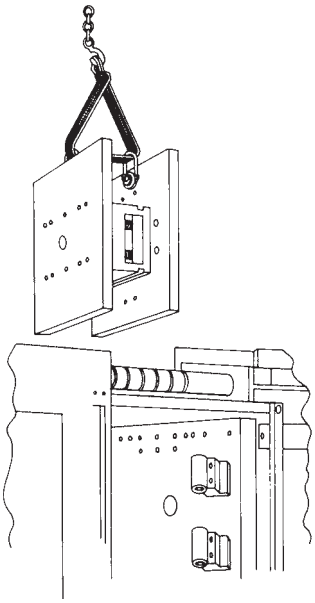
Punch Press



The Die/Mold Clamp is mounted (either permanently, or by using T-Slots) on the injection molding machine platen. The mold is mounted on subplates. By standardizing on subplates with the same height and width, several different molds can be used on one injection molding machine. The mold is lowered into the machine, the Die/Mold Clamps are activated, hydraulic connections are removed, and the job is run. A Sensor Interlock can be added to indicate to the operator that the Die/Mold Clamp is clamping. If molds are used that have a clamping slot, either a StayLock Retractable Clamp or a StayLock Rocker Clamp can be used.
Die/Mold Clamps are mounted on the Punch Press table either permanently or by using T-Slots. The top and bottom dies are slid into place, hydraulic connections are removed and the job is run.

At changeover time, the hydraulic quick disconnect fittings are reconnected, the die is removed and replaced with the next die, and the process is repeated. In some applications on punch presses, the Die/Mold Clamp may create a shut height problem. If this is the case, the StayLock Rocker Clamp is an excellent substitute.

Injection Molding Press



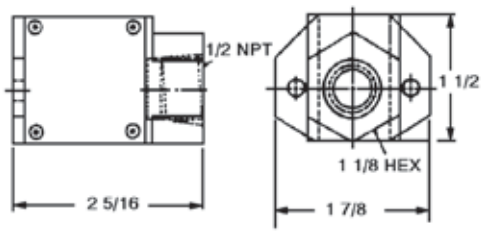
Sensor Interlock



- Available in Fixture Pro® Design Software

The Sensor Interlock (62816) can be mounted on the Die/Mold Clamp and is used to indicate that the clamping piston is engaged or disengaged. Because of the minimal movement of the clamping piston, some applications may require more than a visual method of determining if the Die/Mold Clamp is in the clamping position. The Sensor Interlock is a normally open, 110 volt, 6 amp switch. It is supplied with a six foot long wire and mounting hardware to mount in the control panel of a machine. The switch contacts on the Sensor Interlock will only close when the clamping piston is within the clamping range of the Die/Mold Clamp. It is included with Part Number 62803.

Part Number
62816

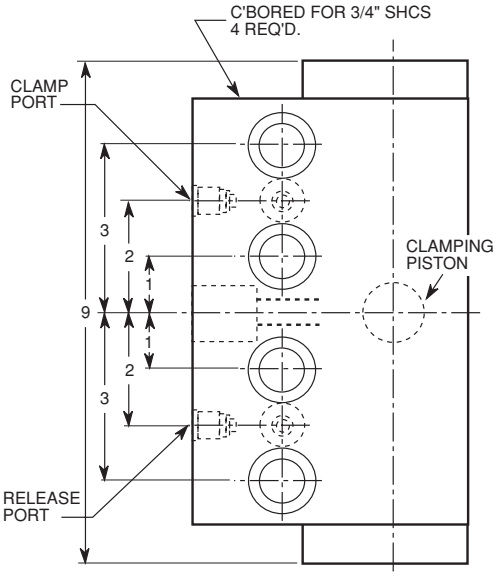


Staylock Clamps

Large Capacity Mold Clamp

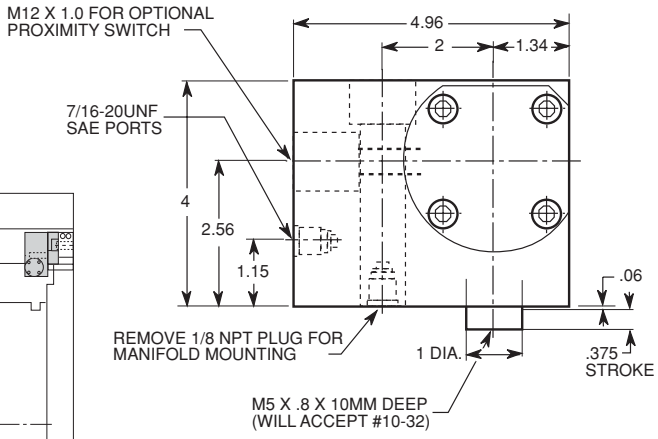
The Jergens Large Capacity Mold Clamp is used on molding machines and wherever heavy clamping forces are required. It has a clamping force of 28,000 lbs. The clamp can be mounted either individually or in series on a manifold.

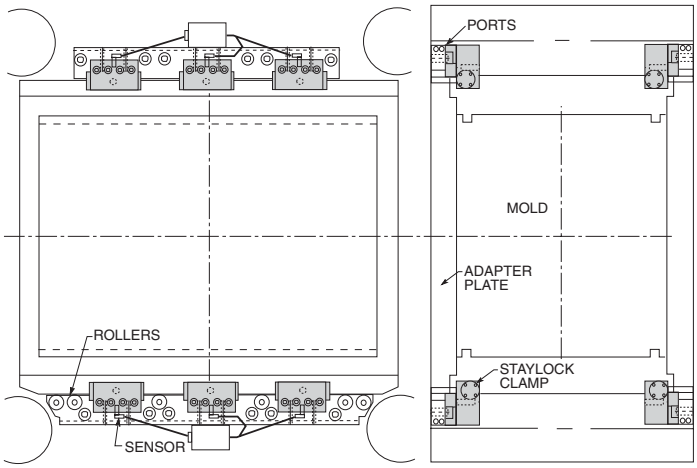




Specifications

Part Number	62806
Operating Volume (cu. in.)	7
Minimum Operating Pressure (psi)	500
Maximum Operating Pressure (psi)	3500
Force to Pressure Ratio	8:1
Clamping Stroke	.38
Maximum Output Force (lbs.)	28,000
Weight (lbs.)	43





Typical StayLock Manifold Layout on Injection Molding Machine



Part Number
62817

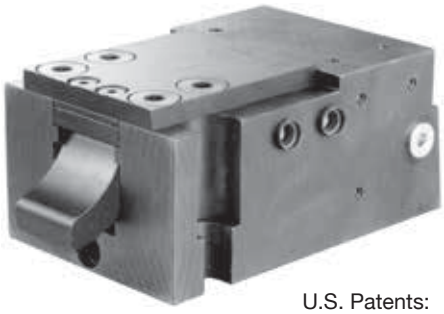
Proximity Switch

The Proximity Switch indicates the clamp's piston position. A single switch is required for each Large Capacity Clamp. Stainless steel construction with 16' cord, 10-30 VDC.

Inch to metric fittings available – see page 211.

Staylock Clamps

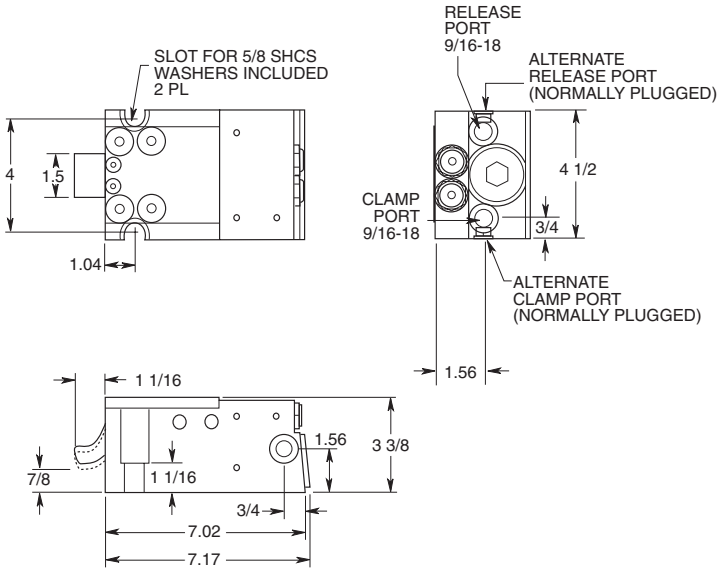
Retractable Clamps



U.S. Patents:
No. 4,511,127
No. 4,471,293

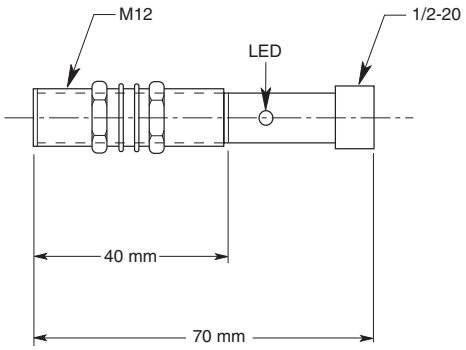
Jergens StayLock Retractable Clamps are designed to allow quick change of molds in injection molding machines and die casting machines. The locking arm, which retracts into the clamp body for easy loading and unloading of a mold, is adaptable to clamp many standard mold slots. The Retractable Clamp is double acting and includes alternate clamp and release ports for easier hydraulic plumbing set-up. A Proximity Switch, which indicates the Retractable Clamp is in the extended or retracted position, is also available (see below).

High temperature version available, contact Technical Sales for more information



Specifications

Part Number	62852
Operating Volume (in^3)	1.6
Minimum Operating Pressure (psi)	500
Maximum Operating Pressure (psi)	2500
Force to Pressure Ratio	2:1
Clamping Stroke	.13
Maximum Output Force (lbs.) @ 2500 (psi)	5000
Weight (lbs.)	23



Proximity Switch

The Proximity Switch senses the position of the clamping arm within the Retractable Clamp. Two Proximity Switches are required for each clamp. They have a stainless steel housing and are mounted in the Retractable Clamp. One Switch senses the arm extended; the other, the arm retracted. A sixteen foot cord is included with each Proximity Switch, 35-250 VAC.

Part Number
62857

Inch to metric fittings available – see page 211.

Jergens WORKHOLDING SOLUTIONS GROUP

Staylock Clamps

Rocker Clamps

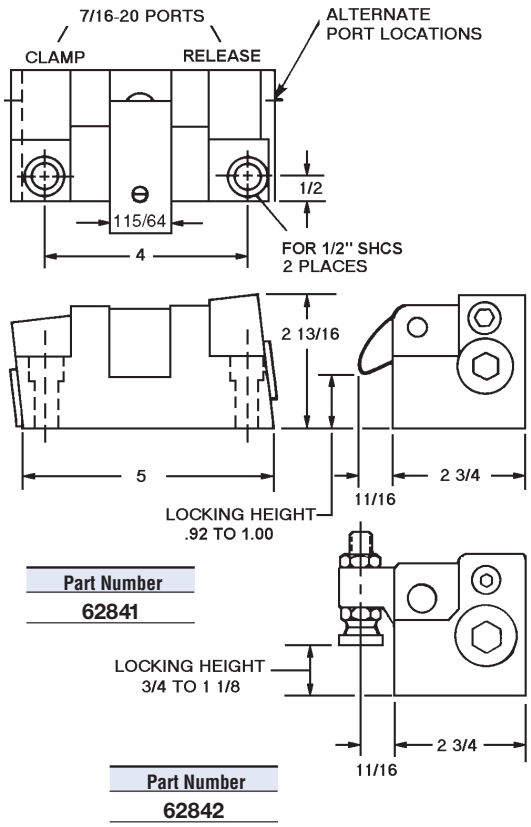


Part Number
62841

U.S. Patents:
No. 4,511,127
No. 4,471,293



Part Number
62842



Part Number
62841

Part Number
62842

Inch to metric fittings available – see page 211.

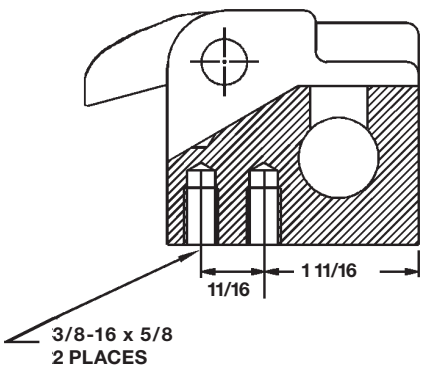
Compact design and dual mounting capability make the Jergens StayLock Rocker Clamp versatile for many applications. The Rocker Clamps come in two styles. Part number 62841 is typically used with standard height subplates upon which the die, mold, or fixture plate is mounted. Part number 62842 has an adjustable spindle which adapts to the height of the workpiece. Both styles of Rocker Clamps have drilled and tapped holes on the bottom of the clamp for mounting T-Slot nuts for use on slotted tables. This method of mounting allows the operator to slide the clamp to and from the workpiece for easier part loading and unloading. Bolt down mounting holes are also provided. For mounting applications, contact the Jergens Technical Sales Department. Ideal for:

- Holding dies on punch presses
- Molds on injection molding machines
- Dies on die casting machines
- Use on hydraulic fixtures
- Available in Fixture Pro® Design Software

Specifications

Part Number	62841	62842
Operating Volume (cu. in.)	.67	.67
Minimum Operating Pressure (psi)	500	500
Maximum Operating Pressure (psi)	2,000	2,000
Force to Pressure Ratio	1.9:1	1.9:1
Clamping Range (in.)	.92 to 1.00	.10*
Maximum Output Force (lbs.) @2,000 psi	3,800	3,800
Weight (lbs.)	7.5	7.6

*After adjustment for height.



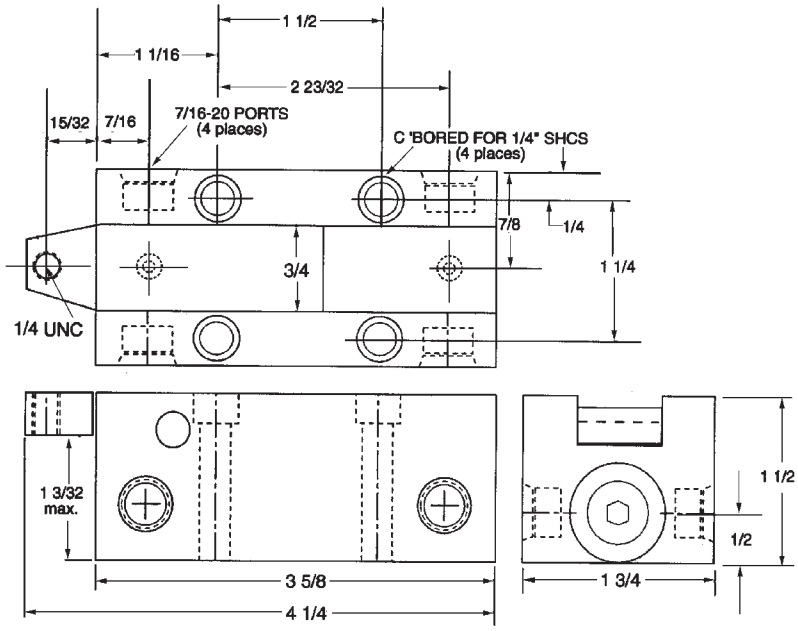
Mounting holes for T-Slot applications.

Staylock Clamps

Mini-Rocker Clamps



The StayLock Mini-Rocker Clamp is designed for small parts workholding. Like the other StayLock Clamps, the Mini-Rocker can be mounted at any angle. Clamping forces range from 200 lbs. to 700 lbs. The Mini-Rocker can be used as a single clamp; or because of its unique port arrangement, it can be manifold mounted.





Socket Toggle Screw

Part Number
33302

Set Screw/Jam Nut not included.

See page 251.



Optional Toggle Pad
(Shown in picture)

Part Number
43502

See page 252.

Specifications

Part Number	62845*	62846**
Operating Volume (cu. in.)	.08	.08
Minimum Operating Pressure (psi)	500	500
Maximum Operating Pressure (psi)	3,500	3,500
Force to Pressure Ratio	.2:1	.2:1
Clamping Range	.09	.09
Clamping Force @ 3500 psi	700 lbs	700 lbs
Clamping Force @ 1000 psi	200 lbs	200 lbs
Weight (lbs.)	2.1	2.1

* Includes four plugs & two O-Rings, SAE style, for manifold mounting

** Includes two plugs

Inch to metric fittings available – see page 211.

Jergens WORKHOLDING SOLUTIONS GROUP

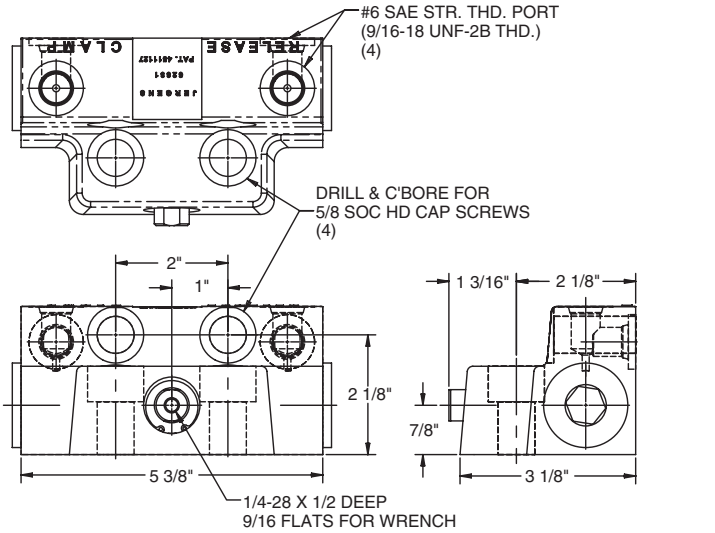
Staylock Clamps
Block Clamps

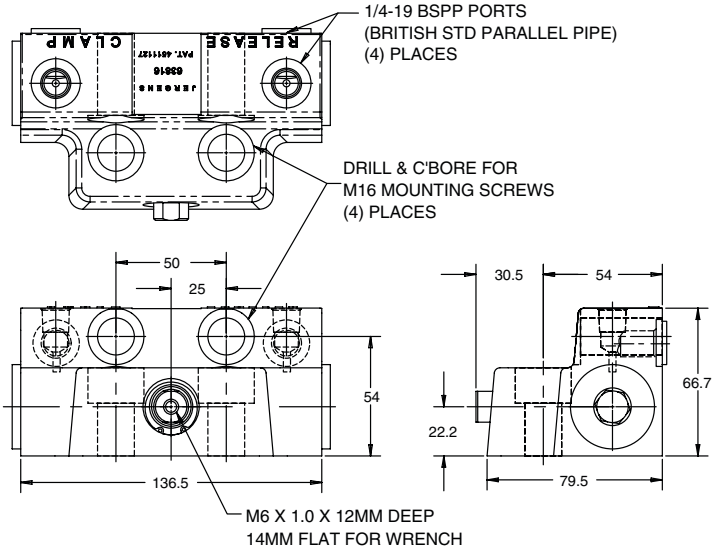


U.S. Patents:
No. 4,511,127
No. 4,471,293

Jergens StayLock Block Clamps are multi-purpose utility clamps designed for many versatile applications. Block Clamps may be mounted for either vertical or horizontal clamping. They may be used with strap clamps or similar workholding devices for maximum adaptability (see illustration below). The Block Clamp plunger has a 1/4 - 28 thread on the I.D. for use with various contact points.

- Available in Fixture Pro® Design Software





Specifications — Inch

Part Number	62831
Operating Volume (cu. in.)	1.1
Minimum Operating Pressure (psi)	500
Maximum Operating Pressure (psi)	5,000
Force to Pressure Ratio	2:1
Clamping Stroke (in.)	.18
Maximum Output Force (lbs.) @ 5,000 psi	10,000
Weight (lbs.)	6.5

Specifications — Metric

Part Number	63816
Operating Volume (cu. cm)	18
Minimum Operating Pressure (kg/cm²)	14
Maximum Operating Pressure (kg/cm²)	350
Force to Pressure Ratio	12.8:1
Clamping Stroke (mm)	4.7
Maximum Output Force (kg) @ 351(kg/cm²)	4,500
Weight (kg)	2.93

Inch to metric fittings available – see page 211.

Staylock Clamps

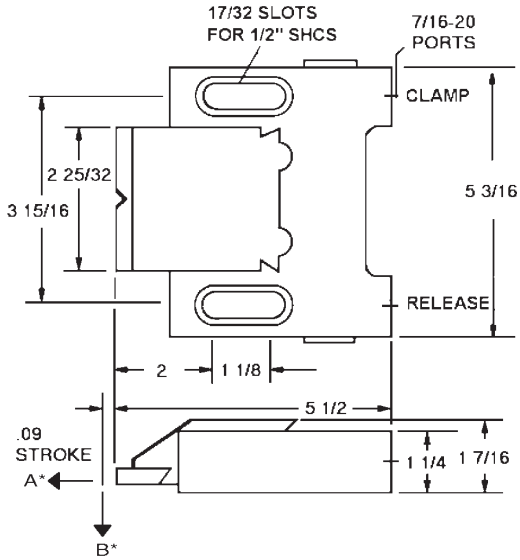
Toe Clamps



Low Toe Style

U.S. Patents:
No. 4,511,127
No. 4,471,293

Part Number
62811



Specifications

Part Number		62811
Part Number		62812
Operating Volume (cu. in.)		.5
Minimum Operating Pressure (psi)		500
Maximum Operating Pressure (psi)		3,000
Hydraulic	Force in Pounds	
Pressure (psi)	A*	B*
1,500	1,200	800
3,000	2,500	1,800
Clamping Stroke		.09
Maximum Output Force (lbs.) @3,000 psi		2,500
Weight (lbs.)		6.7

- Two special washers which prevent damage by the cap screws are included with each toe clamp. To order washers separately, order Part Number 60636.
- Toe is moved back by spring.
- Available in Fixture Pro® Design Software

Jergens StayLock Toe Clamps are designed for edge gripping of parts when the clamp height must be kept at a minimum, such as in a milling operation. They are available in Low Toe (62811) or High Toe (62812) styles.

Toe Clamps provide two directional clamping forces: one pushes the work-piece against a positive stop, the other pushes it down against the table or fixture. A brass or steel insert is available on the low toe style Toe Clamp. The inserts must be ordered separately.

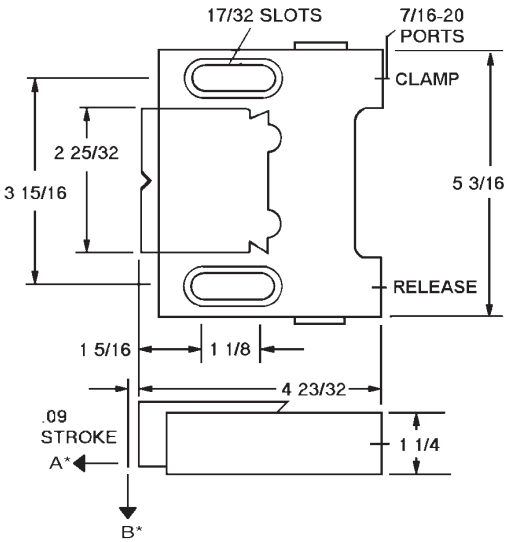
IMPORTANT: Jergens 62811 Toe Clamp is supplied without toe insert. Please order one of the inserts below.

Part Number	Insert
60633	Steel
60632	Brass



High Toe Style

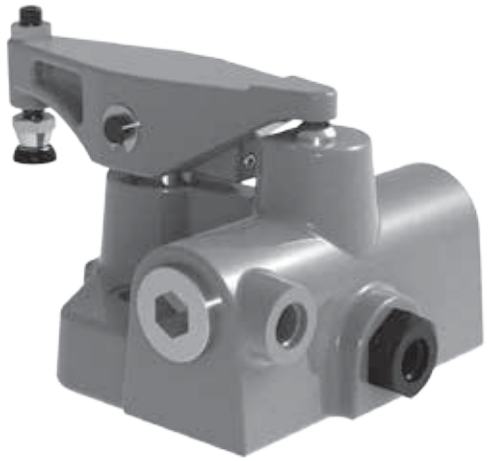
Part Number
62812



Inch to metric fittings available – see page 211.

Staylock Clamps

Swing Clamps (Metric)



U.S. Patents:
No. 4,511,127
No. 4,471,293

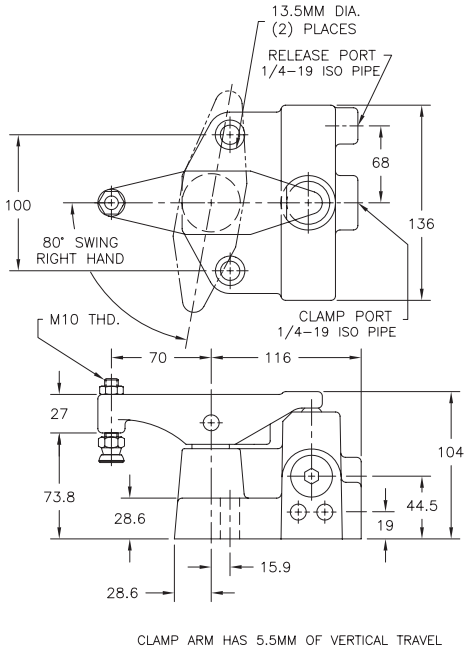
Specifications

Part Number (Right Swing)	63801
Part Number (Left Swing)	63802
Operating Volume (cm^3)	20.5
Minimum Operating Pressure (bar)	6*/7
Maximum Operating Pressure (bar)	200
Force to Pressure Ratio	8.5:1
Clamping Stroke (mm)	5.5
Maximum Output Force (kN) @ 200 bar	18
Effective Piston Area (cm^2)	8.6
Weight (kg)	5.5

*5.4 bar to swing, 7 bar to clamp.

Jergens StayLock Swing Clamps are designed to be used when accessible loading and unloading of a workpiece is required. The clamping arm rotates 80° away from the workpiece. The Swing Clamp operates in any position and is sealed so it can be used with coolant applications.

Important: When using the High Volume Air-Powered Hydraulic Pumps (61761 and 61762), the Flow Limit Valve (shown below) must be used to limit the flow of hydraulic oil going to the clamp port of the Swing Clamp. This will extend the life of the clamp by minimizing the clamp arm from slamming into the clamping position.



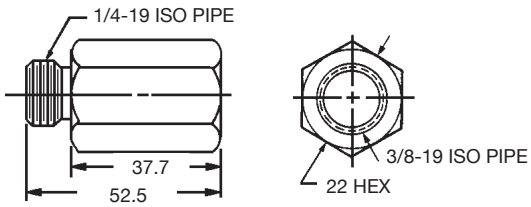
CLAMP ARM HAS 5.5MM OF VERTICAL TRAVEL

The Flow Limit Valve restricts the flow of oil to dampen the rotating action of the Swing Clamp. It is recommended that the Flow Limit Valve be used with the High Volume Air-Powered Hydraulic Pump (61761 or 61762). It is not needed with the lower volume “Shoebox” Pumps (61755 or 61756).

Flow Limit Valves



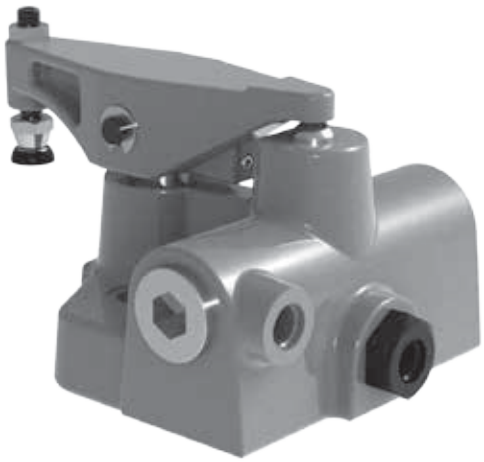
Part Number
63603



- Available in Fixture Pro® Design Software

Staylock Clamps

Swing Clamps



U.S. Patents:
No. 4,511,127
No. 4,471,293

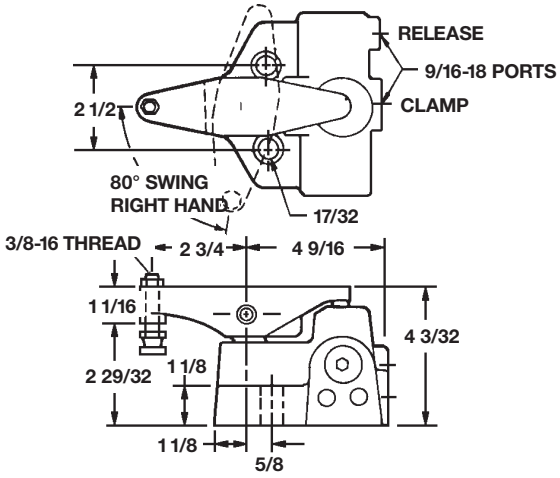
Specifications

Part Number (Right Swing)	62823
Part Number (Left Swing)	62824
Operating Volume (cu. in.)	1
Minimum Operating Pressure (psi)	80*/300
Maximum Operating Pressure (psi)	3,000
Force to Pressure Ratio	1.3:1
Clamping Stroke (in.)	.18
Maximum Output Force (lbs.) @ 3,000 psi	3,900
Weight (lbs.)	11

*80 psi to swing, 300 psi to clamp.

Jergens StayLock Swing Clamps are designed to be used when accessible loading and unloading of a workpiece is required. The clamping arm rotates 80° away from the workpiece. The Swing Clamp operates in any position and is sealed so it can be used with coolant applications.

Important: When using the High Volume Air-Powered Hydraulic Pumps (61761 and 61762), the Flow Limit Valve (shown below) must be used to limit the flow of hydraulic oil going to the clamp port of the Swing Clamp. This will extend the life of the clamp by minimizing the clamp arm from slamming into the clamping position.



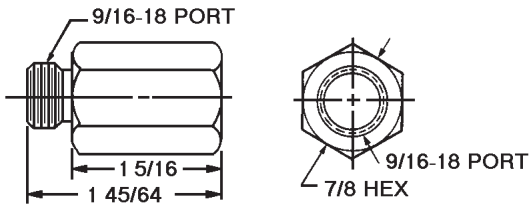
Clamp Arm Has 3/16" Of Vertical Travel

The Flow Limit Valve restricts the flow of oil to dampen the rotating action of the Swing Clamp. It is recommended that the Flow Limit Valve be used with the High Volume Air-Powered Hydraulic Pump (61761 or 61762). It is not needed with the lower volume "Shoebox" Pumps (61755 or 61756).

Flow Limit Valves



Part Number
61648



- Available in Fixture Pro® Design Software

Pre-Fill Boosters



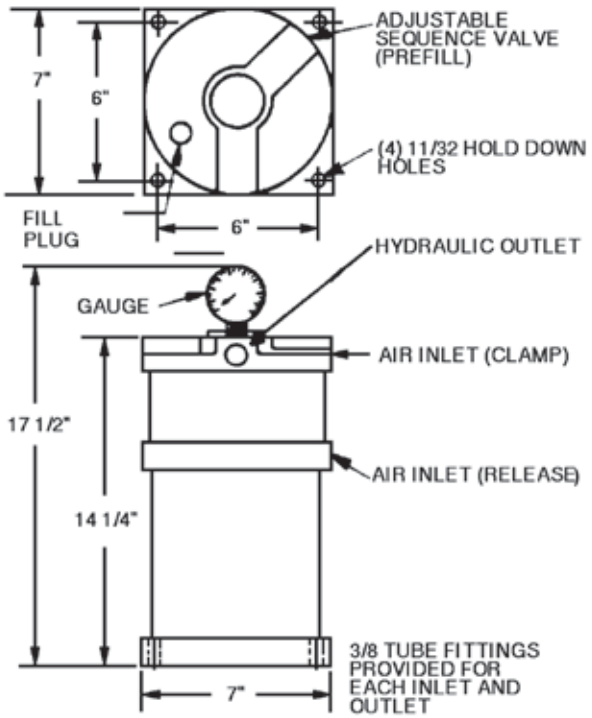
- **Self Bleeding**
- **Easy View Reservoir**
- **15:1, 30:1, and 54:1 Boost Ratios**

These units offer many more advantages than conventional boosters, while maintaining the same basic simplicity. The pre-fill booster has two automatic cycles. The first cycle pre-fills the work circuit using low pressure with a large reservoir to provide volume. The second cycle then automatically provides high pressure, as needed. These units also provide automatic bleeding of the work circuit. This self-bleeding feature negates the need to "bleed the lines" after it is set up.

The pre-fill booster is ideal for any general use production system requiring maximum efficiency with minimum effort! Pre-fill boosters must be used in the upright (vertical) position.

- Installation Kits Available. See page 192.
- See page 189 for Rapid Exhaust and Rapid Advance Kits, Handles, and Mounting Bases.

Patent No. 3839866



Specifications

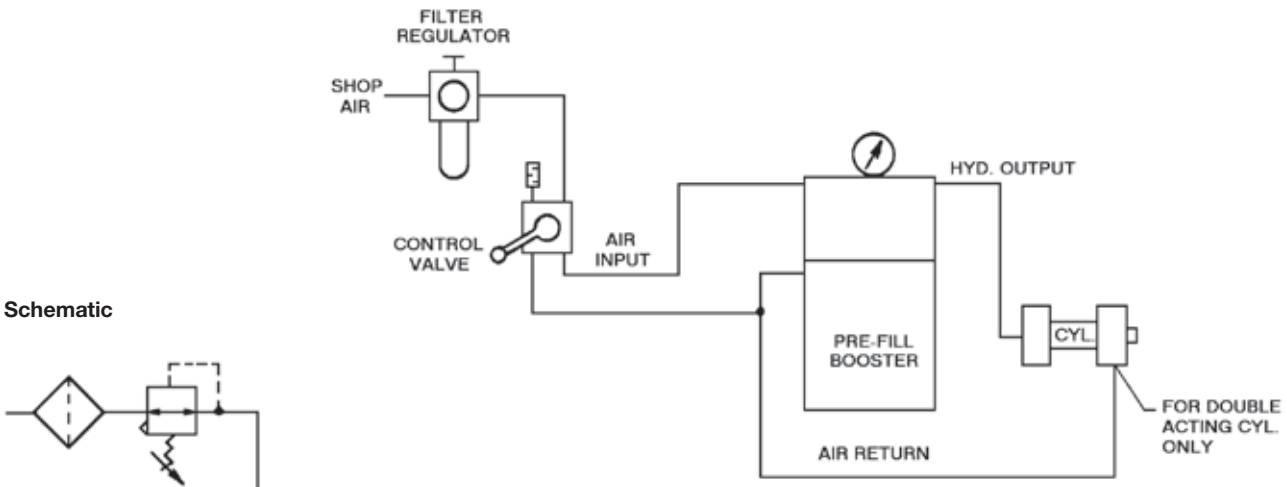
Part Number	61704	61705	61706
Reservoir Capacity (cu. in.)	50	50	55
High Pressure Volume (cu. in.)	7 1/2	3 3/4	2
Minimum Input (psi)	40	40	40
Maximum Input (psi)	125	125	75
Boost Ratio	15:1	30:1	55:1
Maximum Output (psi)	1875	3750	4100
Weight (lbs.)	28	28	28

Inch to metric fittings available – see page 211.

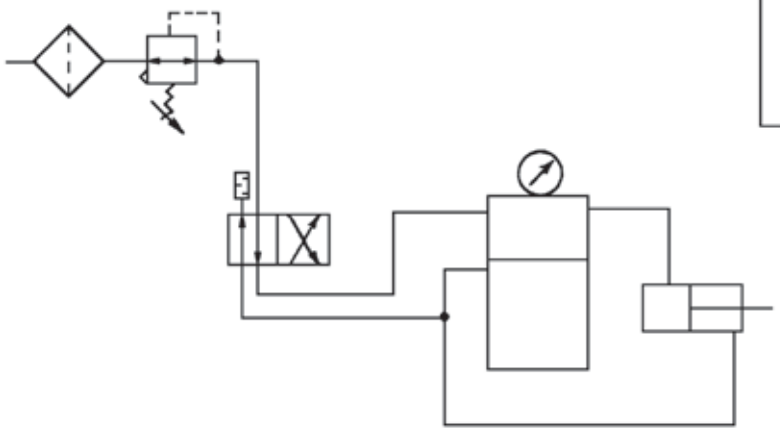
Boosters

Circuit Diagrams

Graphic



Schematic



Accessories

Rapid Exhaust and Advance Kits



Rapid Exhaust Part Number	Rapid Advance Part Number
62214	62215

These kits include everything needed to convert a standard Pre-Fill Booster to high speed operation. Fittings, pre-bent tubing, and the quick exhaust valve are included.

Valve Only
61641

Handle



Part Number
62621

Convert your Pre-Fill Booster to a portable power source. The 62621 handle is for use when the hydraulic gage is mounted on the top of the booster.

Jergens WORKHOLDING SOLUTIONS GROUP

Standard Boosters



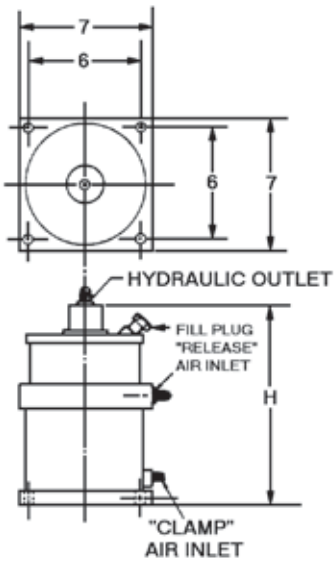
Standard Boosters are ideal for permanent fixtures, special machines or O.E.M. applications.

The volume of oil available to operate the work circuit depends upon the high pressure capacity of the booster. Work circuits using standard boosters require manual bleeding.

- Easy to view reservoir
- 15:1 and 30:1 boost ratios
- May be mounted vertically or horizontally

Specifications

Part Number	61709	61710	61711
Reservoir Capacity (cu. in.)	15	15	18
High Pressure Volume (cu. in.)	4	7 1/2	3 3/4
Minimum Input (psi)	20	20	20
Maximum Input (psi)	125	125	125
Boost Ratio	15:1	15:1	30:1
Maximum Output (psi)	1875	1875	3750
Weight (lbs.)	20	24	22
Height (H)	10 7/16	14 7/16	14 7/16



3/8" TUBE FITTING PROVIDED FOR EACH INLET AND OUTLET PORT.

Accessories

Mounting Bases



Part Number
60973

Base 60973 can be used to mount Jergens Boosters 61709 thru 61711 in a horizontal position.

Rapid Exhaust Kit



Part Number
62215

The Rapid Exhaust Kit includes a valve, muffler, and fittings needed to convert Booster numbers 61709 thru 61711 to high speed operation.

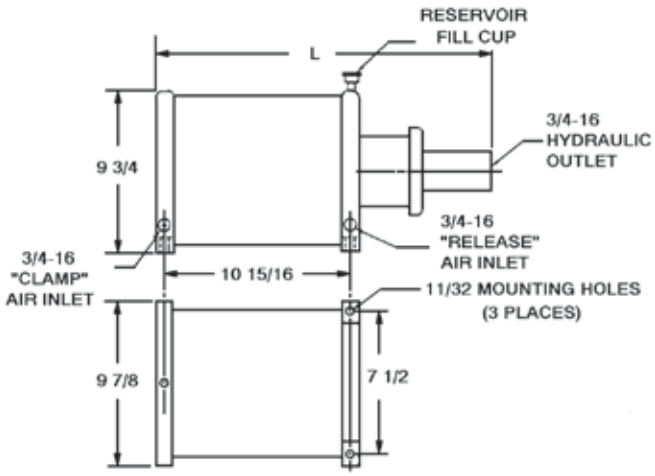
Valve Only
61641

Installation Kits See page 192

Inch to metric fittings available – see page 211.

High Pressure/Volume Boosters





- Available in 26:1, 37:1, and 64:1 boost ratios.
- High output pressure
- High pressure volume

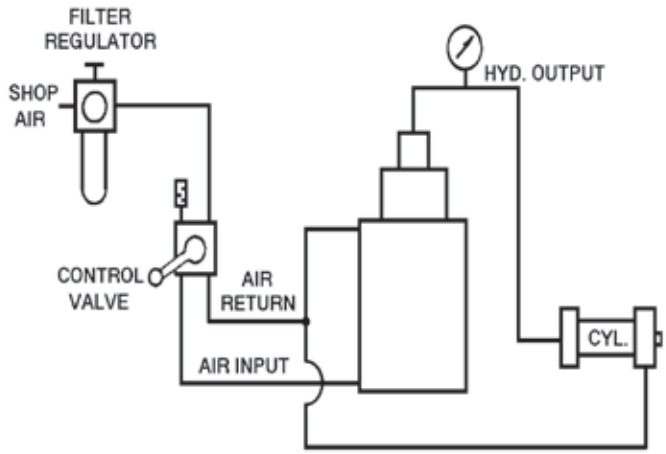
Unit must be used only in the **horizontal position**

Specifications

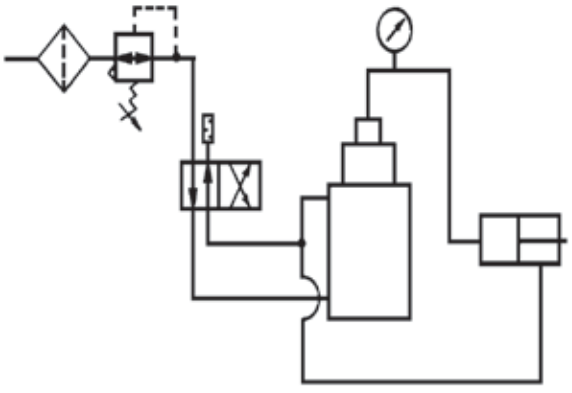
Part Number	61720	61721	61722
Reservoir Capacity (cu. in.)	17	17	17
High pressure Volume (cu. in.)	12.9	9.1	5.3
Minimum Input (psi)	10	10	10
Maximum Input (psi)	125	125	125
Boost Ratio	26:1	37:1	64:1
Maximum Output (psi)	3250	4625	8000
Length (L)	19 11/16	19 5/8	19 1/2
Weight (lbs.)	28	28	28

Circuit Diagrams

GRAPHIC



SCHEMATIC



Inch to metric fittings available – see page 211.

Jergens WORKHOLDING SOLUTIONS GROUP

Boosters Installation Kits

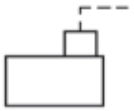
Jergens offers four kits to simplify the installation of your Jergens booster. The kits may be used with any Jergens booster.

62203 — This kit is recommended for most applications. The kit includes everything needed to connect your air line to the booster and everything needed to connect the booster to your fixture.

62204 — This kit should be used when the protection of a pilot check valve is not required, as in punching or staking applications.

62205 — This kit is the same as kit 62203 except the hand valve has been eliminated. Use this kit when the system will be activated by a foot valve, solenoid or pilot operated valve.

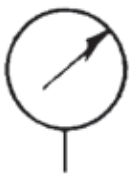
62206 — This kit should be used for punching or other applications where no check valve is required and the system will be activated by a foot valve.

							
Filter/ Regulator 61617 (1)	4-Way Hand Valve 61615 (2)	Muffler 62613 (3)	Air Hose (18 Ft.) 61108 (4)	Pilot Check Valve 61629 (5)	Hydraulic Hose (6 Ft.) 61205 (6)	Quick Disconnect Couplings 61915 61965 (7)	Fittings as Req'd. (8)
See page 201	See page 202	See page 201	See page 212	See page 206	See page 212	See page 212	

Selection Data

Part Number	Items Included In Kit
62203	1, 2, 3, 4, 5, 6, 7, 8
62204	1, 2, 3, 4, 6, 7, 8
62205	1, 3, 4, 5, 6, 7, 8
62206	1, 3, 4, 6, 8

Jergens recommends the use of a gage kit with any standard booster.



Gage Kit

Part Number	PSI
60711	3000 psi
60712	6000 psi
60713	10000 psi

3 Second Clamping Kit



To simplify the installation of Jergens power clamps, Jergens offers its 3 SECOND Clamping Kit. The Kits contain everything required to convert your shop air pressure to hydraulic power for your clamping fixture.

61717 —This kit contains a 61711 booster, control valve, gage, hoses and fittings. This kit should be used for fixtures which will remain on a machine for long periods of time, such as a vise on a milling machine.

61719 —This kit contains a 61705 booster, control valve, filter-regulator, pilot check valve, quick disconnects and all hose and fittings required. This kit should be used on machines where the fixture changes frequently. The 61705 booster eliminates the need to bleed each fixture after it is connected. To change the fixture, simply switch the hydraulic hose from one fixture to the other using quick disconnect fittings.

Selection Data

Part Number	Included in Kit	
	Booster	Accessories*
61717	**61711**	2, 3, 4, 6, 8, 9
61719	**61705**	1, 2, 3, 4, 5, 6, 7, 8
61716	**61710**	2, 3, 4, 6, 8, 9
61718	**61704**	1, 2, 3, 4, 5, 6, 7, 8

*As shown on page 188.

Pre-Fill Power Pacs



Jergens Pre-Fill Power Pacs provide a complete portable power source. Everything required to power and control your hydraulic fixture is included. Connect your shop air to the filter/regulator, and your fixture to the hydraulic hose. The self bleeding feature and the hydraulic quick disconnects (provided) make these units the ideal power sources for job shops and production lines.

- Completely Assembled
- Self Contained
- Portable
- Self Bleeding
- Fast Set-Up

Selection Data

Part Number	Included In Power Pac	
	Booster	Accessories*
61714	**61704**	1, 2, 3, 5, 6, 7, 8
61715	**61705**	1, 2, 3, 5, 6, 7, 8

*As shown on page 188.

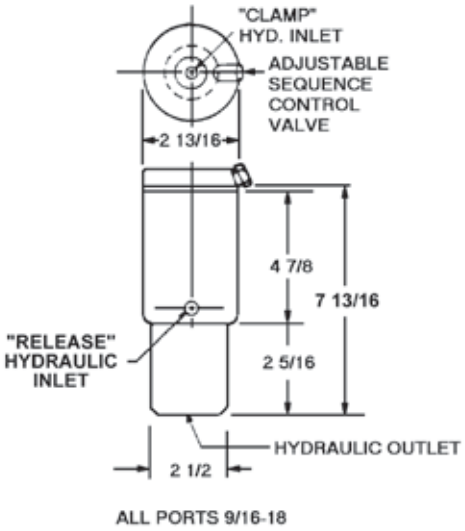
Hydraulic Intensifier



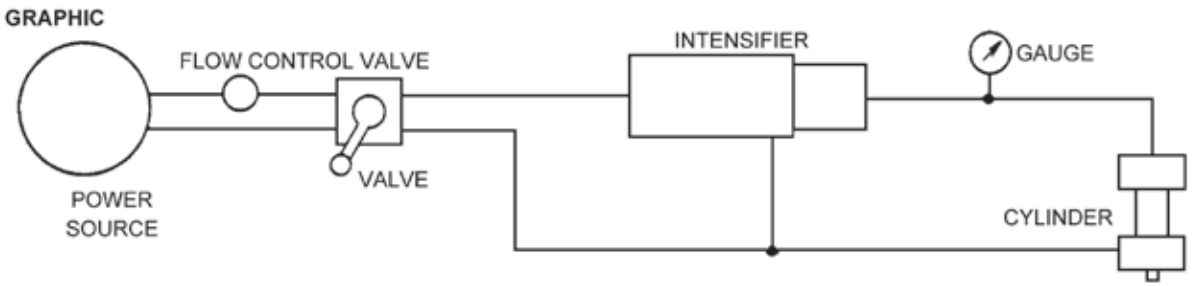
This unit is designed to be used on any machine tool with its own hydraulic system where higher pressures are needed. Jergens Intensifiers will pre-fill your circuit at approximately 200 psi maximum. Once the Intensifier sequences over to its high pressure mode, it will deliver one cubic inch of working oil at seven times the input pressure.

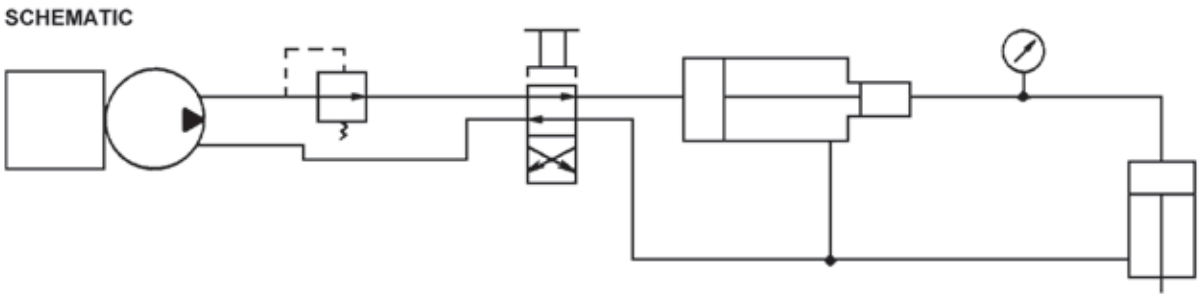
Specifications

Part Number	61701
High Pressure Volume (cu. in.)	1
Minimum Input (psi)	50
Maximum Input (psi)	710
Boost Ratio	7:1
Maximum Output (psi)	5000
Prefill (psi) Adjustments	50-200
Weight (lbs.)	4.4



Circuit Diagrams





Inch to metric fittings available – see page 211.

Air-Powered Hydraulic Pumps

Shoebox™ Pumps



The "Shoebox" Pump is a low cost, compact unit used on smaller hydraulic circuits. Its small size offers the versatility of mounting on wheels (such as a workcart) and moving the pump from workstation to workstation. Like the High Volume Pump, this pump allows independent control of multiple workstations.

Jergens Air-Powered Hydraulic Pumps are used as a power source to activate Hydraulic Clamps. Shop air is introduced into the Filter/Regulator and converted to hydraulic pressure. These pumps are available in two styles: the High Volume Pump (61761 and 61762) with Boost Ratios of 20:1 and 50:1 and the standard, more compact "shoebox" pump (61755 and 61756) with Boost Ratios of 36:1 and 71:1. The Air-Powered Hydraulic Pumps are easy to use, energy efficient, versatile and affordable. They are completely self-contained and do not require any external reservoirs or motors.

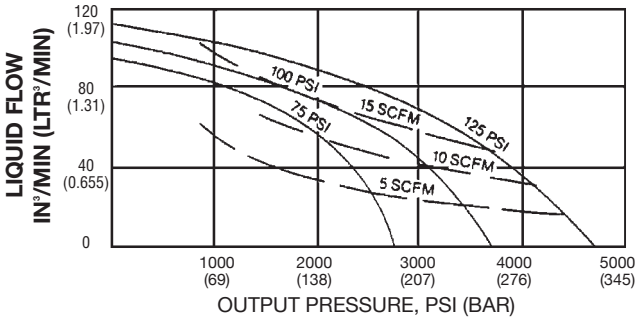
NOTE: See page 199 for Valve and Subplate options.

Specifications

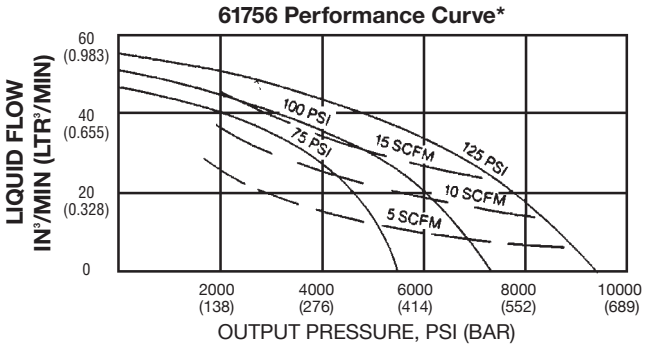
Part Number	61755	61756
Reservoir Capacity (cu.in.)	300	300
Minimum Input (psi)	25	25
Maximum Input (psi)	125	85
Boost Ratio	36:1	71:1
Maximum Output	4500	6000
Free Flow (psi) @100 psi (cu.in./min.)	100	50
Weight (lbs.)	24	24

A ten cubic inch accumulator (Part Number 62601) is available to increase the clamping speed if needed. Contact our Technical Sales Department for details.

61755 Performance Curve*



61756 Performance Curve*



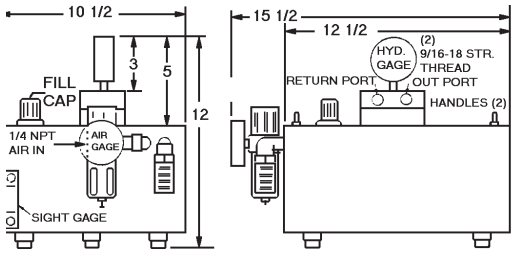
* Air Drive Pressure (SOLID Lines) /
Air Drive Flow (DASHED Lines)

Pump Kits

The 61757 Pump Kit includes a 61755 Pump (36:1 Ratio), a 61642 Four-Way, Zero-Leakage Valve, a 61647 Subplate, and a 60703 gauge (6000 psi). The valve, subplate and gauge are supplied mounted on the pump.

The 61758 Pump Kit includes a 61756 Pump (71:1 Ratio), a 61642 Four-Way, Zero-Leakage Valve, a 61647 Subplate, and a 60706 gauge (10,000 psi). The valve, subplate and gauge are supplied mounted on the pump.

Part Number 61757 includes:		Part Number 61758 includes:	
61755	36:1 Pump	**61756**	71:1 Pump
61642	Four-way, zero-leakage valve	**61642**	Four-way, zero-leakage valve
61647	Subplate	**61647**	Subplate
60703	6000 psi gauge	**60706**	10,000 psi gauge



Inch to metric fittings available – see page 211.

Air-Powered Hydraulic Pumps
Breadbox™ Pumps



High Volume Air-Powered Hydraulic Pump

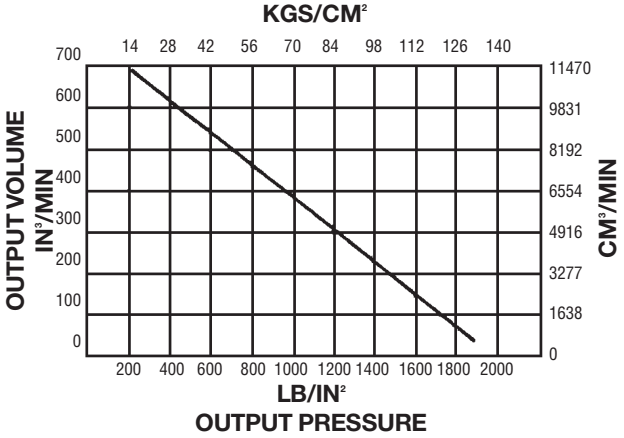
The Jergens High Volume Air-Powered Hydraulic Pump converts standard and accessible low pressure shop air to hydraulic pressure up to 5000 psi. These pumps offer large reservoir capacities and allow independent control of multiple work stations. They are designed to provide high volume output throughout the pump's entire pressure range.

Specifications

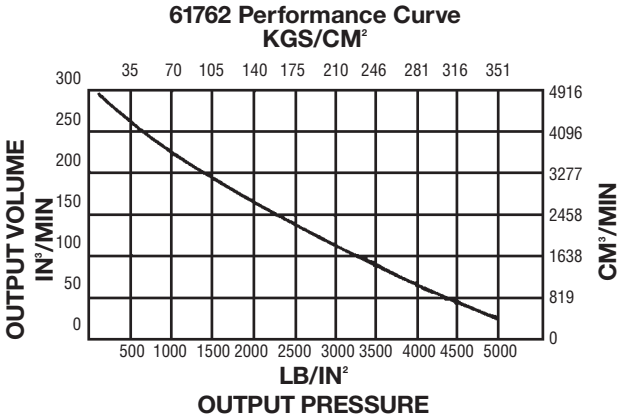
Part Number	61761	61762
Reservoir Capacity (cu.in.)	440	440
Minimum Input (psi)	40	40
Maximum Input (psi)	125	100
Boost Ratio	20:1	50:1
Maximum Output (psi)	2500	5000
Free Flow @ 100 psi (cu.in./min.)	700	300
Weight (lbs)	100	100

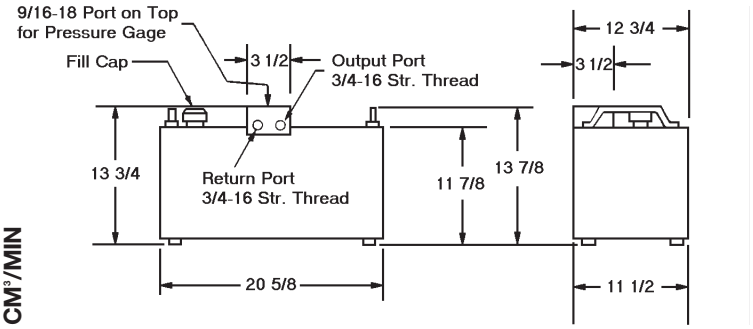
A ten cubic inch accumulator (Part Number 62601) is available to increase the clamping speed if needed. Contact our Technical Sales Department for details.

61761 Performance Curve



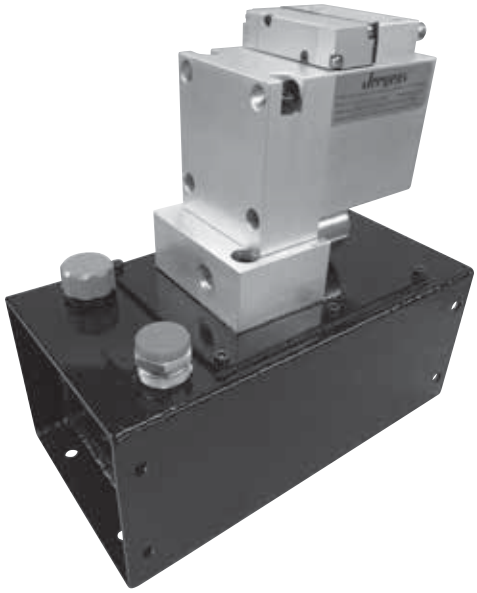
61762 Performance Curve

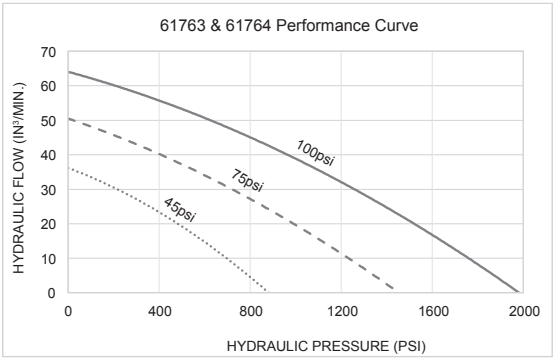


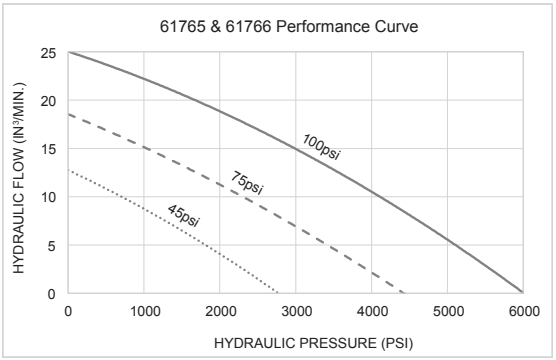


Inch to metric fittings available – see page 211.

Air-Powered Hydraulic Pumps
C-Box Pumps







Inch to metric fittings available – see page 211.

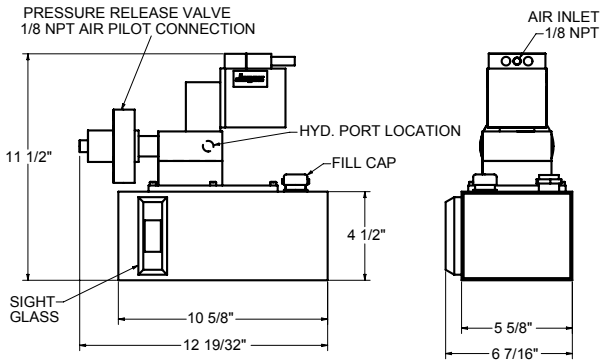
C-Box Air-Powered Hydraulic Pump

- An economical and compact power source ideal for operating small volume hydraulic systems.
- Available in 20:1 or 60:1 Boost Ratios.
- Part No.'s 61763 & 61765 are specifically designed for operating single acting hydraulic systems. These models feature an air piloted pressure release valve. This allows a single acting hydraulic system to be controlled remotely with a simple 4-way air valve.
- All models include an air set-up kit (Filter-Regulator, Hose, Fittings). Part No.'s 61763 & 63765 also include a 4-way air valve.

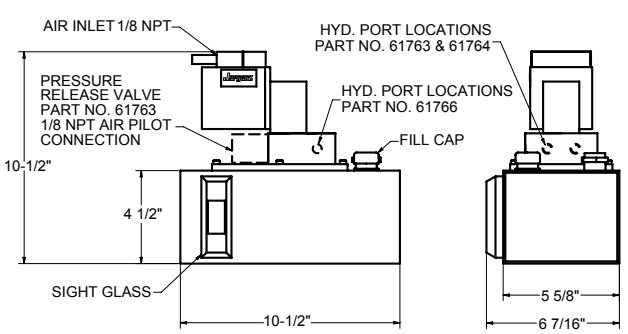
Specifications

Part Number	61763	61764	61765	61766
Reservoir Capacity (cu. in.)	115	115	115	115
Minimum Air Input (psi)	20	20	20	20
Maximum Air Input (psi)	100	100	100	100
Boost Ratio	20:1	20:1	60:1	60:1
Maximum Hyd. Output (psi)	2,000	2,000	6,000	6,000
Maximum Flow (cu. in./min.)	65	65	25	25
Hyd. Output Pressure Port	9/16-18 (#6 SAE)	9/16-18 (#6 SAE)	1/4 NPT	1/4 NPT
Hyd. Return Tank Port	n/a	9/16-18 (#6 SAE)	n/a	1/4 NPT
Weight (lbs)	17	17	17	17

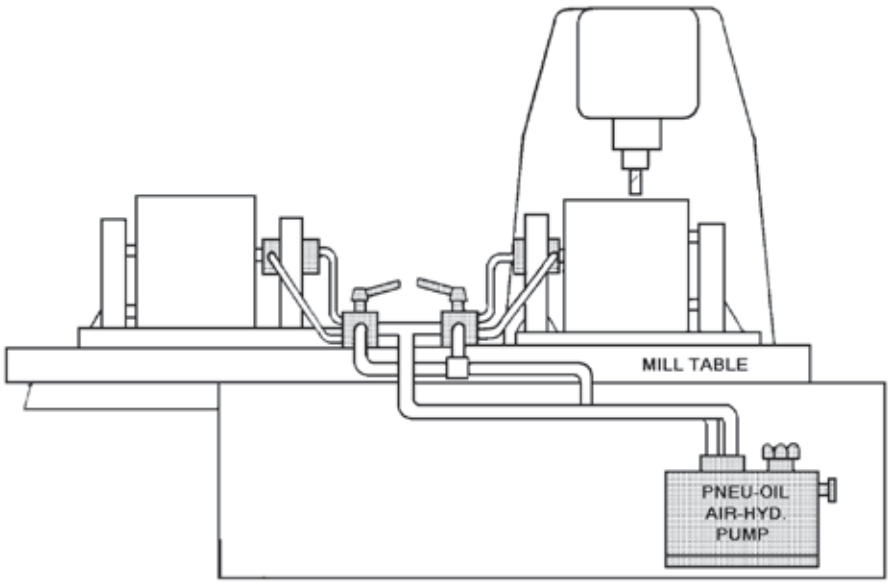
PART NO. 61765



PART NO.'S 61763, 61764, & 61766

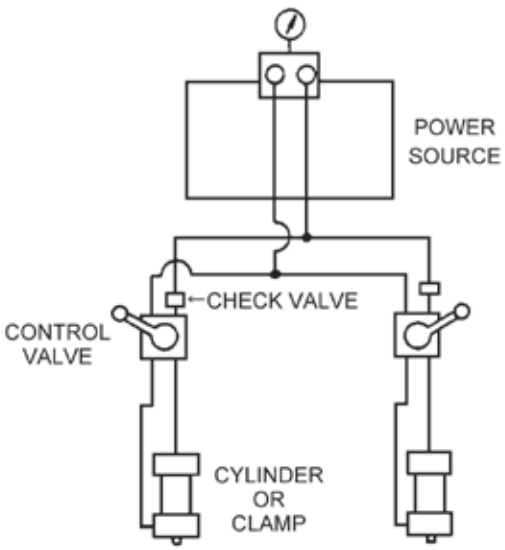


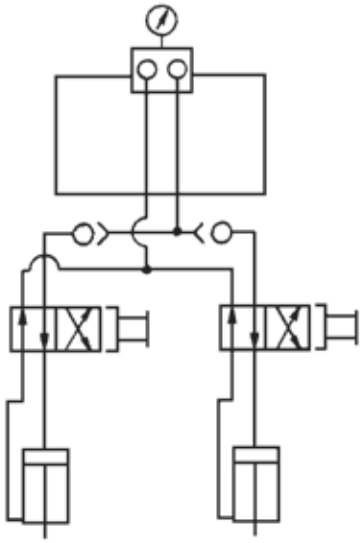
Typical Hydraulic Circuit
Application



Typical Installation — Two Station Milling Operation

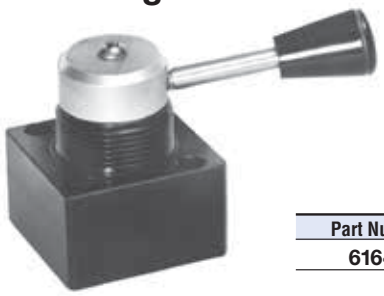
Circuit Diagram





Valves and Subplates for Air Powered Hydraulic Pumps

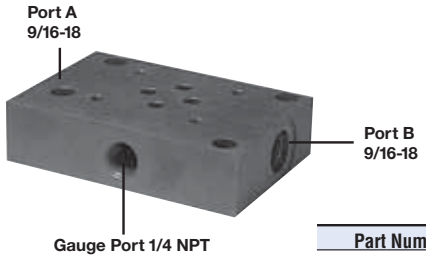
Zero-Leakage Valve



Part Number
61642

For inline applications, use the 61642 Valve mounted on a 61646 Subplate (Order Part Number 61643). This set-up is also recommended for use with High Volume Air-Powered Hydraulic Pumps (61761, 61762) in StayLock and standard applications. For D03 manifold mounting, directly on the pump, the 61647 Subplate and 61642 Valve are recommended. Because the Jergens Air-Powered Hydraulic Pump provides only the necessary hydraulic pressure to clamp and unclamp the StayLock Clamps, the Four-Way, Zero-Leakage Valve is recommended to prevent the unnecessary running of the pump, thus minimizing pump maintenance and wear.

Subplate for Shoebox Pump



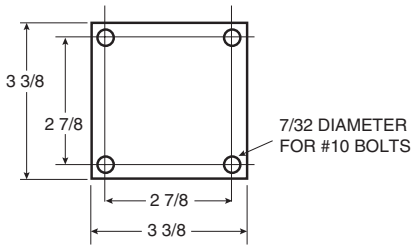
Part Number
61647

- For 61642 (D03 Pad)

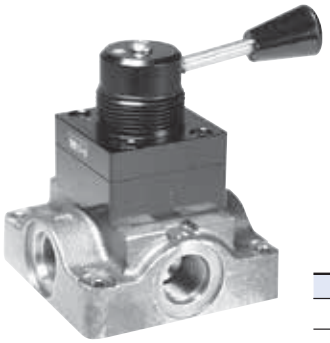
Inline Subplate



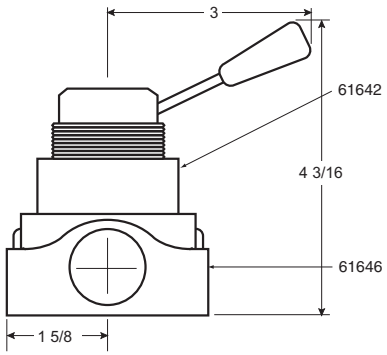
Part Number
61646



Valve and Inline Subplate Assembly

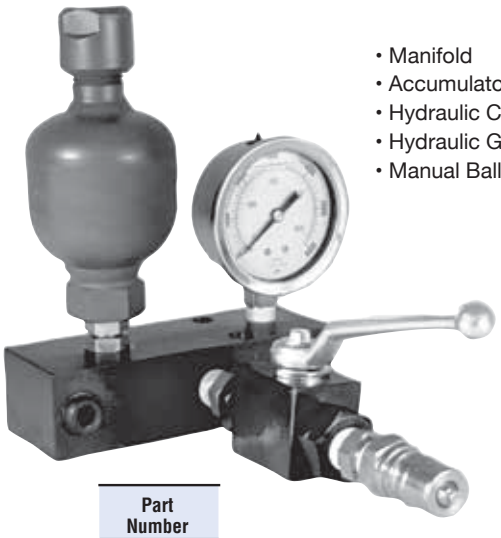


Part Number
61643



Inch to metric fittings available – see page 211 (except 61642).

Pallet Decoupler Valve



Part Number
62605

- Manifold
- Accumulator
- Hydraulic Connections
- Hydraulic Gauge
- Manual Ball Valve

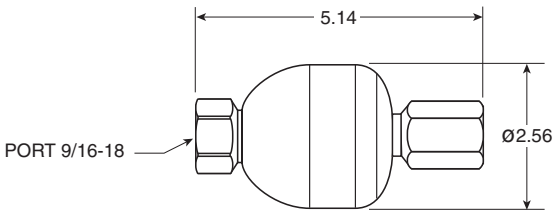
The Pallet Decoupler Valve allows hydraulically clamped tooling fixtures to maintain pressure when disconnected from their power source. The built-in pre-charged accumulator maintains pressure within a hydraulic system, compensating for slow leaks. The Pallet Decoupler Valve adds a level of security to fixtures that must be disconnected from a power source while being moved. Ideal for use with palletized fixtures and machining centers.

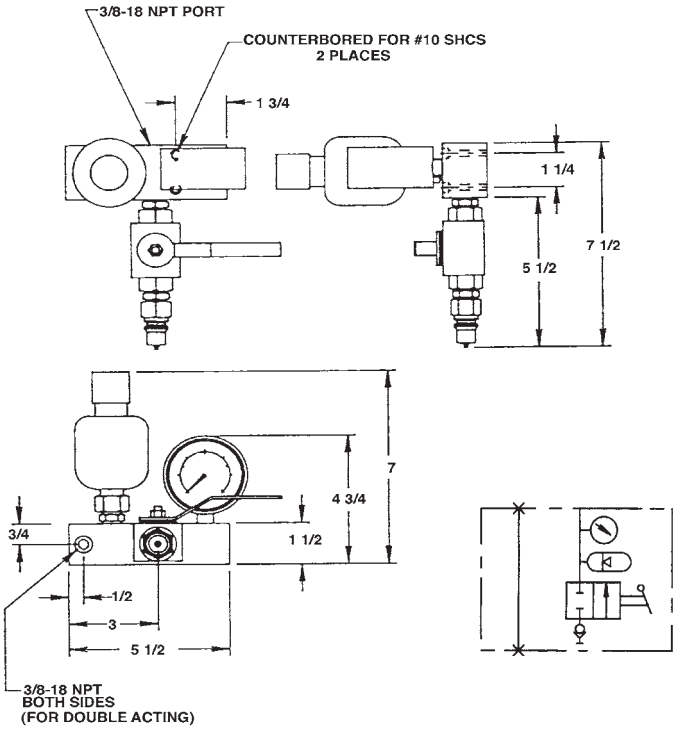
Part Number	Description
62605	Pallet Decoupler Valve Assy
62607	Pallet Decoupler Valve Kit, Single Acting Metric, Convert 62605 From Inch To Metric Fittings
62608	Pallet Decoupler Kit, To Add Quick Disconnects For Double Acting Inch Circuits
62609	Pallet Decoupler Kit, Double Acting, Converts 62605 Fitting And Disconnects From Inch To Metric

Accumulator

Part Number	Max. Pressure	Pre-Charge Pressure	Volume	Weight (lbs)
62603	3600 psi	1500 psi	5 cu. in.	1.5

*Other Accumulators and pre-charge pressure are available upon request.



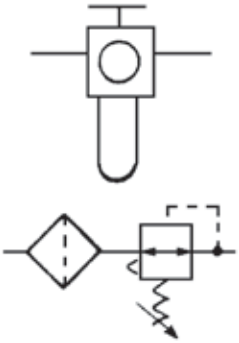


To order components separately

Ball Valve	Male Quick Disconnect	Coupler Sleeve	Hydraulic Gage
61639	61965	61915	60703

Air Circuit Controls

Filter/Regulators



The filter element removes the solid impurities and condensates before the compressed air enters the regulator. The regulator valve supplies a preset pressure regardless of main circuit pressure as long as pressure in the main circuit is higher than that in the secondary.

Specifications

Part Number	61616	61617
Port Size	1/4 NPT	3/8 NPT
SCFM Rating	53 SCFM	80 SCFM
Weight (lbs)	1.6	3.2

Gauges



When sizing a pressure gauge, the maximum output of the system should be approximately 2/3 of the gauge capacity.

Specifications

	160 PSI		
Part Number	60701	60702	60705
Thread Size	1/8 NPT	1/4 NPT	1/4 NPT
Location	Back	Bottom	Back
Weight (lbs)	.16	.25	.25

Mufflers

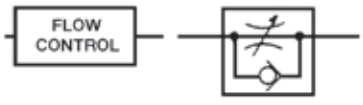


Used to reduce air flow noise. Installation is recommended at exhaust ports of Air Control Valves.

Specifications

Part Number	62612	62613
Thread Size	1/4 NPT	3/8 NPT
Weight (lbs)	.06	.22

Flow Control Valve



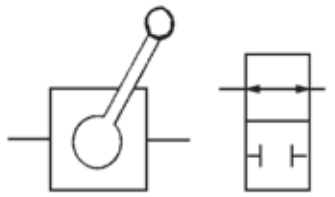
Manually adjusted control of input pressures. Allows the regulation of pressures into a work circuit. Reverse flow is unrestricted. Used for throttling or metering a circuit so that actuator speed meets work requirements.

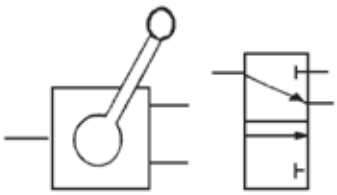
Specifications

Part Number	61603
Port Size	1/4 NPT
Weight (lbs)	.31

Air Circuit Controls

2-Way and 3-Way Valves



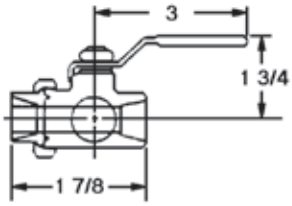


Specifications

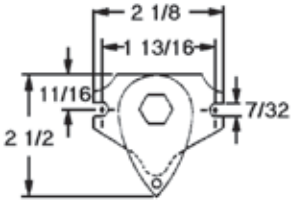
Part Number	61601	61634
Type	2-way	3-way
Port Size	3/8 NPT	1/8 NPT
Weight (lbs)	.81	.22

2-way valves are in-line ball valves. They are used as a shut-off valve in simple circuits.

3-way valves are similar to 2-way valves but have a third port which is generally used as a vent or exhaust.

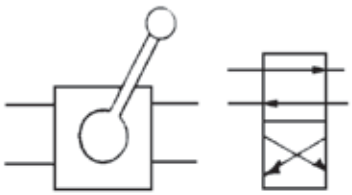


Part Number
61601



Part Number
61634

4-Way Valves

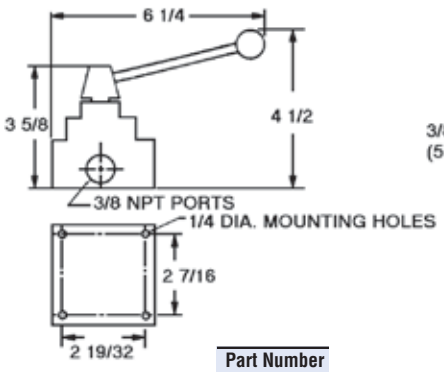


A variety of directional control valves are offered. Manual valves are normally two position, detented. Solenoid valves are 115V-60 Hz; other voltages are available.

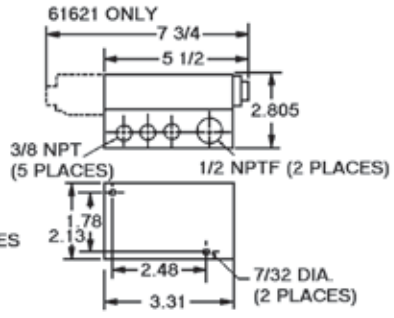
Specifications

Part Number	61615	61620	61621	61630	61631*
Actuator Type	Hand	Solenoid	Solenoid	Treadle	Pedal
Return Actuator	Hand	Spring	Solenoid	Treadle	Spring
Port Size	3/8 NPT	3/8 NPT	3/8 NPT	3/8 NPT	3/8 NPT
CV Rating	1.5	1.0	1.0	2.3	2.3
Weight (lbs)	2.75	5.0	5.5	4.0	3.5

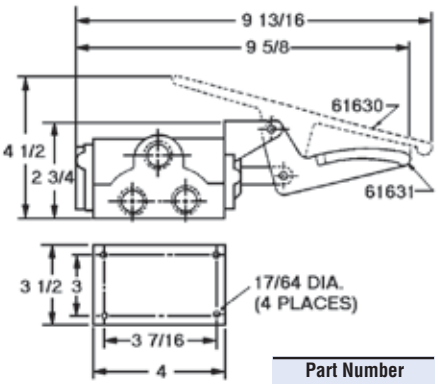
*Foot Guard for 61631 Valve; Part Number 61632



Part Number
61615



Part Number
61620 & 61621



Part Number
61630 & 61631

Air Circuit Controls
2-Hand No Tie Down

Requires the operator to use both hands when activating a work circuit. Two counterbored finger buttons are installed at a minimum center distance.

Specifications

Part Number	61304
Medium	Clean, dry compressed air only
Working Range	50 to 100 psi
TemperatureRange	-30° to 180°F
Air Flow (with Modular Valves)	10 CFM at 100 psi
Exhaust	To atmosphere through holes in plate
Mounting	7/32 holes provided in subplate
Materials	Clear Acrylic, brass
Filtration	40 Micron required
Lubrication	Recommended

Hydraulic Circuit Controls
Gauges



Recommended as a visual pressurized monitoring gauge to be used on all pressuring systems.

When sizing a pressure gauge, the maximum output of the system should equal approximately 2/3 of the gauge capacity.

Gauges are filled with glycerine in order to dampen internal movement.

Gauge blocks facilitate the installation of pressure gauges on standard boosters.

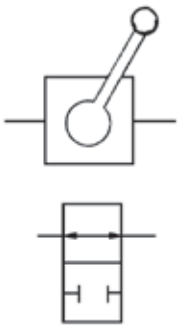
Selection Data

	Part Number		
	3000 Psi	6000 Psi	10000 Psi
Gauge Only	**60704**	**60703**	**60706**
Block Only	**61055**	**61055**	**61055**
Gauge Kit*	**60711**	**60712**	**60713**

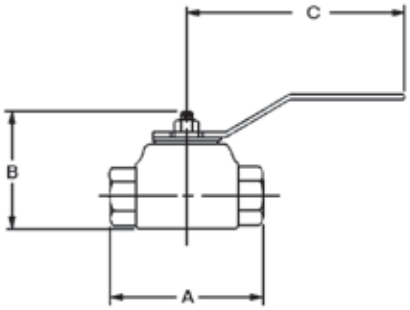
* Gauge, Block and Fittings included in kits. All Gauges 1/4" NPT, bottom ported.

Hydraulic Circuit Controls

2-Way Valves



2-way valves are in-line ball valves. They are used as a shut-off valve in simple circuits.



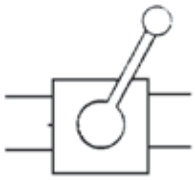
Specifications

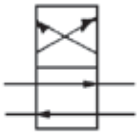
Part Number	61610	61639
Port Size	1/4 NPT	3/8 NPT
Pressure Rating (psi)	3000	5000

Dimensions

Part Number	A	B	C
61610	2 11/16	2 5/8	5 1/4
61639	3	2	4 1/4

4-Way Valves



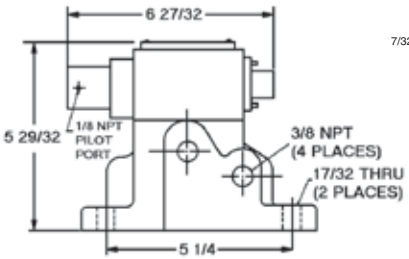


For 4-Way, Zero Leakage Valves, see page 199.

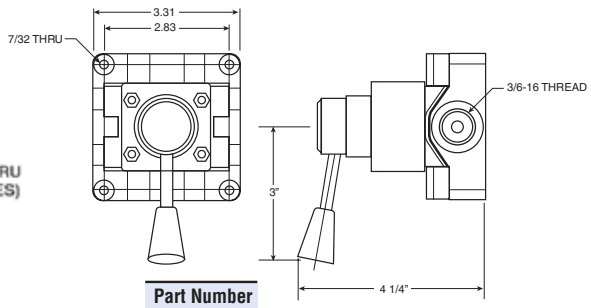
A variety of directional control valves are offered. Manual valves are normally two position, detented. Solenoid valves are 115V-60 Hz; other voltages are available.

Specifications

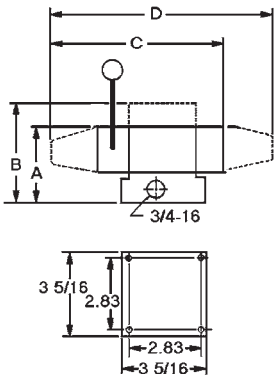
Part Number	61643	61644	61636	61637	61638
Actuator Type	Hand	Solenoid (115 VAC)	Solenoid (115 VAC)	Solenoid (115 VAC)	Air
Return Actuator	Hand	Solenoid (115 VAC)	Spring	Solenoid (115 VAC)	Spring
Port Size	3/4-16	DO3 MT6	3/4-16	3/4-16	3/8 NPT
Flow Rating	5 GPM	3 GPM	5 GPM	5 GPM	12 GPM
Pressure Rating (psi)	5000	6000	5000	5000	5000
Weight (lbs)	3.75	3	6.75	7.3	17.5



Part Number
61638



Part Number
61643



Dimensions

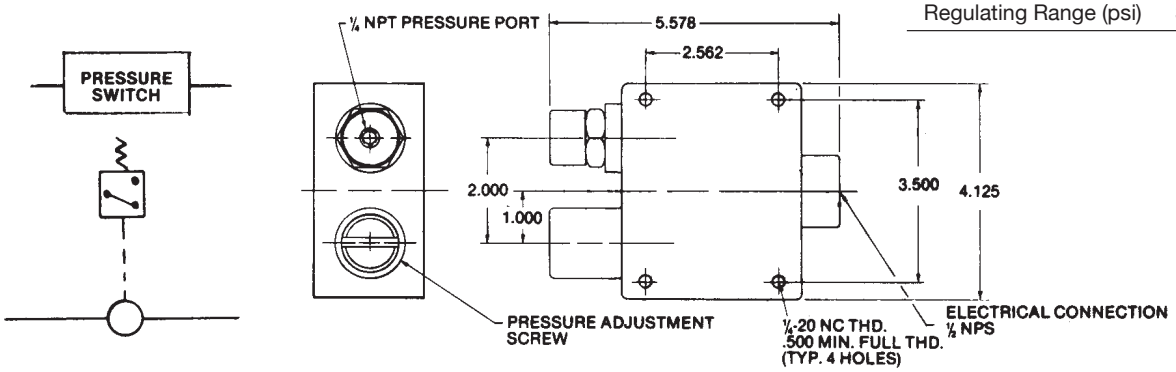
Part Number	A	B	C	D
61636	3 1/4	5 5/64	5 21/32	—
61637	3 1/4	5 5/64	—	8 3/8
61644	2 3/8	—	—	8 3/16

Pressure Switch

Senses pressure in a circuit and may be used to start or shut down a system. A pressure switch can be used to remove the cutting tool and turn off machine in the event of loss of clamping pressure.

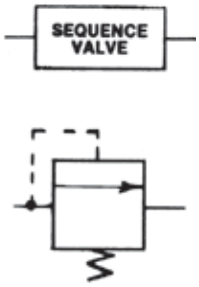
Specifications

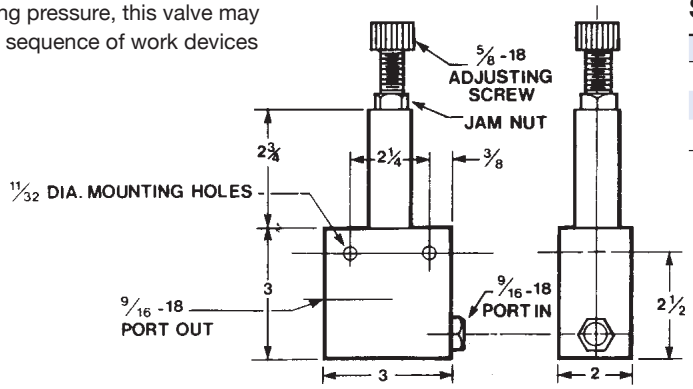
Part Number	61633
Port Size	1/4 NPT
Pressure Rating (psi)	10000
Regulating Range (psi)	350-5000



Sequence Valve

With adjustable opening pressure, this valve may be used to control the sequence of work devices in a common circuit.





Specifications

Part Number	61640
Port Size	9/16-18
Pressure Rating (psi)	5000
Sequence Range* (psi)	500-3000

* Factory Adjusted to sequence at 1000 psi.

Pilot Operated Check Valve

Specifications

Part Number	61629
Hydraulic	
Ports	3/4-16
Pilot Port	7/16-20
Pressure	
Rating (psi)	5000

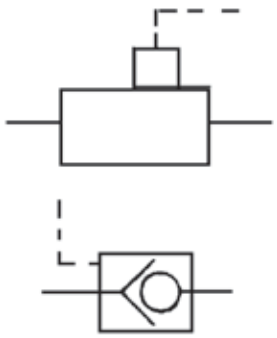
- Minimum operating pressure 500 psi
- 50:1 differential pressure
- Pilot not to exceed 125 psi

A two-way valve used to lock pressure in a working circuit. Automatic free return flow is provided via air pilot operation. Designed so that loss of shop air line pressure will have no effect on the hydraulic circuit in booster applications.

Specifications

	Part Number
Valve only	**61629**
Valve with Installation Kit	**62211***

* Includes hose, fittings and valves



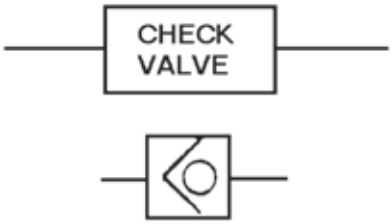
Hydraulic Circuit Controls

Check Valve

Specifications

Part Number	61607
Port Size	3/8 NPT
Pressure	
Rating (psi)	5000
Flow Rating	CV .83
Weight (lbs)	.63

Allows pressure flow in one direction only.



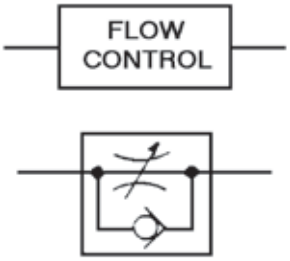
Flow Control Valve

Specifications

Part Number	61609
Port Size	3/8 NPT
Pressure	
Rating (psi)	5000
Flow Rating	CV .78
Weight (lbs)	.63

- Recommended for use with Jergens Swing Clamps

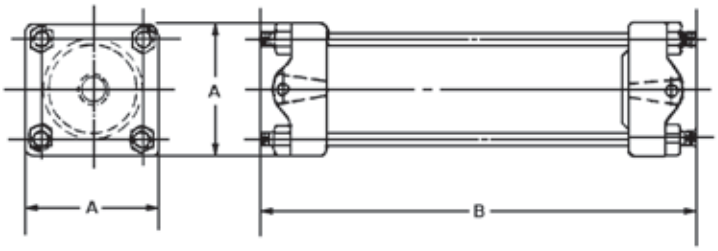
Used to control the flow of pressure in a system, to slow the movement of individual cylinders, or decrease shock.



Oil Reservoirs



Can be used with air pressure on top of oil to do work in your system, such as returning double acting cylinders with hydraulic pressure. The acrylic reservoir allows easy monitoring of oil level. Special baffle plates in the top of the reservoir distribute incoming air pressure evenly against the top surface of the oil.



Part Number	A	B	Capacity (Cu. In.)	Side Ports	End Ports	Wt (lbs)
61750	2 7/8	9 1/2	18	9/16-18	9/16-18	3.0
61751	4 13/16	8 1/2	55	NONE	9/16-18	6.8

• Maximum air operating pressure rating 125 PSI.

Inch to metric fittings available – see page 211.

Hydraulic Fluids

Hydraulic Oil
Jergens Hydraulic Oil is specially formulated to minimize foaming and to protect metal parts from rust. It is an aircraft type oil with high wetting out and film strength characteristics.

Its viscosity is 170/190 at 100˚F and it maintains functional characteristics down to 25˚F below zero.

One Quart.....**60801**
One Gallon.....**60802**
Five Gallon..... **60803**
55 Gallon Drum **60804**

Food Grade Hydraulic Oil
Jergens Food Grade Hydraulic Oil is a blend of food grade lubricants designed for use as a hydraulic media in food packaging and other similar equipment. It is composed of 100% chemically produced synthetic lubricants and contains no petroleum hydrocarbons.

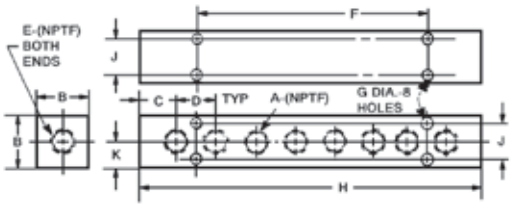
Its viscosity is 140 SUS at 100˚F and 725 SUS at 35˚F.

One Quart.....**60813**
One Gallon.....**60812**
55 Gallon Drum **60811**

Manifold

Strip





Dimensions

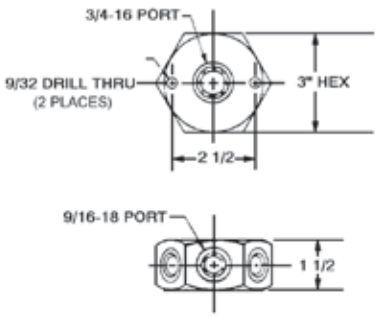
Part Number	Number Of Side Ports	Ports A	B	C	D	End Ports E	F	G	H	J	K	Wt. (lbs)
61801	4	1/4	1 1/2	5/8	7/8	3/8	1 3/4	13/64	3 7/8	1 1/64	3/4	.75
61802	8	1/4	1 1/2	5/8	7/8	3/8	5 1/4	13/64	7 3/8	1 1/64	3/4	1.50

NOTE: Maximum operating pressure is 3000 PSI for all aluminum manifolds.

Hex



- Material: Aluminum
- Finish: Black Oxide



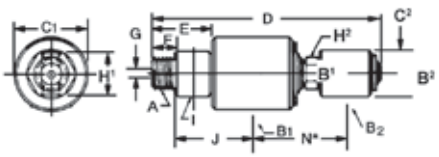
The six port hex manifold, with SAE straight thread ports, can be mounted in the center of several work units or used with a **61031** union (see page 211) to mount the manifold directly to the output port of your Jergens Booster.

Part Number
61805

Rotary Coupler

Single and Dual Passage





*N on 61998 is 3 3/16

Specifications

Maximum Air Pressure (psi)	150
Maximum Vacuum (Hg.)	28"
Maximum Hydraulic Pressure (psi)	3000
Maximum Temperature	250°F
Maximum Speed (rpm)	250

Dimensions

Part Number	Rotor Thread A	Tap B1	Tap B2	C1	C2	D	E	F	Rotor Port G	Hex H1	Hex H2	Tap I	Lockup J	Wt. (lbs)
61997	3/8 NPT	1/4 NPT	—	1 1/2	—	3 1/4	1 1/8	5/8	5/16	7/8	—	—	1 25/32	.5
61998	3/4 NPT	1/2 NPT	1/4 NPT	2 3/4	1 1/2	7 11/16	1 15/16	7/8	1/4	1 3/8	7/8	1/4 NPT	2 7/8	3.0

Installation Tips for Plumbing Hydraulic Systems

Hose

The use of hydraulic hose is only recommended when the need for flexibility exists. Generally, the only hydraulic hose in an application is that used to connect the power source to the fixture.

All hydraulic hoses expand under pressure. This uses costly energy as well as volume. Some hoses expand at a greater rate than others, even though size remains the same.

Generally speaking, an 8 foot length of hydraulic hose will expand at a rate absorbing one cubic inch of high pressure oil at 3000 p.s.i.

When applying hose, the following is recommended:

Do Not:
- Overextend bend radius of hose.
- Put unnecessary strain at fitting ends.
- Subject hose to abrasive conditions.
- Use hose that hasn't been identified.

Do:
- Use a minimum size of 3/8" I.D.
- Check with factory for alternate brands.
- Use firesleeve protective covering in applications where flame is present (like weld fixtures).
- Make sure power source has enough high pressure volume to compensate for hose expansion.

Tubing

Whenever possible use 3/8" diameter steel fluid line tubing for hydraulic lines. This is a low carbon, soft tube and readily available. Depending on the application, two types are recommended:

- 3/8" diameter x .049 wall thickness for pressures to 3000 p.s.i.
- 3/8" diameter x .065 wall thickness for pressures to 5000 p.s.i.

When rigid tubing is applied to air circuitry, use copper tube. This will reduce the corrosive effect of water most likely found in your air lines. Caution: Do not use copper in a high pressure hydraulic circuit!

Fittings

Pipe Thread Fittings

Upon installation, apply a good sealing compound on threads of fitting only. When Teflon tape is used, overlap threads 1-1/2 to two turns tightly in direction of thread. Be careful not to extend tape over end of fitting. Do not overtighten pipe threads as they may put unnecessary strain on pressure vessels.

Straight Thread Fittings (SAE J514)

These fittings require no sealing material as the built-in o-ring provides a positive seal. The threads are a Class 2 straight thread with no taper. Before installation, be sure to lubricate the o-ring. Tighten these fittings to approximately 50-150 ft./lbs.

The Tube Flare

Cut tube squarely and remove any burrs. Split flares may be caused by the tube being too hard, opening up of scratches and draw marks, or failure to deburr tube end.

Place nut, then sleeve onto tube with open end of nut and toe end of sleeve toward end of tube.

Flare to standard 37° angle (maximum diameter of flare is equal to maximum diameter of sleeve). A correct flare should extend beyond the inside diameter of toe on sleeve but not beyond outside diameter of toe on sleeve.

Never attempt to spring tube to force alignment using the fitting installed. This can damage the flare and wrinkle, kink or flatten the tube. This can be avoided by using the correct tools.

Fittings



37° Flare Fittings

Sleeve

Part Number	Item	Tube
61001	Sleeve	1/4
61015	Sleeve	3/8
61049	Sleeve	1/2



Nuts

Part Number	Item	Tube
61002	Nuts	1/4
61016	Nuts	3/8
61050	Nuts	1/2

Caps

Part Number	Item	Tube
61056	Caps	1/4
61057	Caps	3/8



Plugs

Part Number	Item	Tube
61058	Plugs	1/4
61059	Plugs	3/8

Reducer

Part Number	Item	Tube
61063	Reducer	1/4 Tube 3/8 Female



Tee Nut Fittings

Part Number	Thread	Tube
61051	Swivel Nut Branch Tees	1/4
61062	Swivel Nut Branch Tees	3/8
61023	Union Tee	3/8



Male Connectors

Part Number	Thread Type	Thread/ Tube
61007	Pipe	1/8 NPT x 1/4 Tube
61054	Pipe	1/8 NPT x 3/8 Tube
61008	Pipe	1/4 NPT x 1/4 Tube
61020	Pipe	1/4 NPT x 3/8 Tube
61028	Pipe	3/8 NPT x 1/4 Tube
61034	Pipe	3/8 NPT x 3/8 Tube
61048	Pipe	3/8 NPT x 1/2 Tube
61009	Straight	7/16-18 x 1/4 Tube
61030	Straight	9/16-18 x 1/4 Tube
61021	Straight	9/16-18 x 3/8 Tube
61046	Straight	3/4-16 x 3/8 Tube
61047	Straight	3/4-16 x 1/2 Tube



Male Elbows

Part Number	Type	Thread/ Tube
61003	Pipe Thread	1/8 NPT x 1/4 Tube
61004	Pipe Thread	1/4 NPT x 1/4 Tube
61017	Pipe Thread	1/4 NPT x 3/8 Tube
61064	Pipe Thread	3/8 NPT x 3/8 Tube
61045	Pipe Thread	3/8 NPT x 1/2 Tube
61072	45 Elbow	3/8 NPT x 3/8 Tube
61005	Straight Thread	7/16-20 x 1/4 Tube
61029	Straight Thread	9/16-18 x 1/4 Tube
61018	Straight Thread	9/16-18 x 3/8 Tube
61044	Straight Thread	3/4-16 x 1/2 Tube



Male Branch Tees

Part Number	Type	Thread/ Tube
61014	Pipe Thread	1/8 NPT x 1/4 Tube
61027	Pipe Thread	1/4 NPT x 3/8 Tube
61043	Pipe Thread	3/8 NPT x 1/2 Tube
61040	Straight Thread	7/16-20 x 1/4 Tube
61041	Straight Thread	9/16-18 x 3/8 Tube
61042	Straight Thread	3/4-16 x 1/2 Tube
61032	Male Run Tees	7/16-20 x 1/4 Tube
61061	Male Run Tees	9/16-18 x 3/8 Tube

Flareless Fittings



These fittings are the most common types needed to plumb Pressure Points and Screw Pumps. Use 1/8" Heavy Duty High Pressure, Fluid Line Steel Tube.

Ferrule 1/8 Tube	Nut 1/8 Tube	Male Connector 1/8 NPT x 1/8 Tube	Male Elbow 1/8 Tube	Union Tee 1/8 Tube
60201	60202	60204	60205	60207

Fittings



Adapters

Part Number	Thread Type	Male	Female
61075	Pipe	1/16 NPT	1/4 NPT
61076	Pipe	1/8 NPT	1/4 NPT
60221	Mixed	1/4 NPT	1/4 BSPP
61082	Mixed	7/16-20	1/4 NPT
61081	Mixed	9/16-18	1/4 NPT
60211	Mixed	9/16-18	3/8 Tube
60217	Mixed	3/8 Tube	1/4 NPT
60222	Mixed	3/8 NPT	3/8 BSPP
61035	Mixed	3/4-16	1/4 NPT
61036	Mixed	3/4-16	3/8 NPT
61077	Metric	7/16-20	1/8 ISO
61078	Metric	9/16-18	1/4 ISO
61079	Metric	3/4-16	3/8 ISO
61150	Mixed	7/16-20	1/8 BSPP
61151	Mixed	7/16-20	1/4 BSPP
61153	Mixed	9/16-18	3/8 BSPP
61152	Mixed	9/16-18	1/4 BSPP
61154	Mixed	3/4-16	1/4 BSPP
61155	Mixed	3/4-16	3/8 BSPP



Elbows

Part Number	Thread	
61095	1/8 NPT Female	—
61070	1/8 NPT Straight	—
61096	1/4 NPT Female	—
61071	1/4 NPT Straight	—
61097	3/8 NPT Female	—
61066	3/8 NPT Male	—
61098	1/2 NPT Female	—
61065	3/4-16 Male	3/8 NPT Female



Tees

Part Number	Thread
61087	1/8 NPT Female
61088	1/4 NPT Female
61089	3/8 NPT Female
61090	1/2 NPT Female



Reducers/Expanders

Part Number	Thread Type	Male	Female
61074	Pipe	1/4 NPT	1/8 NPT
61025	Pipe	3/8 NPT	1/4 NPT
61038	Pipe	1/2 NPT	3/8 NPT
61067	Pipe	3/4 NPT	3/8 NPT
61039	Pipe	3/4 NPT	1/2 NPT
61033	Straight	9/16-18	7/16-20
61080	Straight	7/16-20	9/16-18
61037	Straight	3/4-16	9/16-18



Nipples

Part Number	Thread
61083	1/8 NPT
61084	1/4 NPT
61085	3/8 NPT
61086	1/2 NPT
61052	1/8 NPT x 3/8 NPT
61053	1/4 NPT x 3/8 NPT
60210	9/16-18 Union
61031	3/4-16 Union



Plugs

Part Number	Thread
61091	1/8 NPT
61092	1/4 NPT
61093	3/8 NPT
61094	1/2 NPT
61060	7/16-20
61068	9/16-18
61069	3/4-16

Quick Disconnect Couplers

Hydraulic Coupler

Sleeve	Nipple
3/8 NPT Female **61915**	3/8 NPT Female **61965**
1/4 NPT Female **61916**	1/4 NPT Male **61966**

Hydraulic couplers have dual checks.

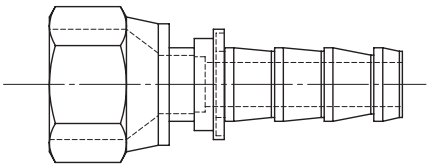
Air Couplers

Sleeve	Nipple
1/8 NPT Female **61904**	1/8 NPT Male **61950**
1/4 NPT Female **61905**	1/4 NPT Male **61951**
	1/4 NPT Female **61954**

Air couplers have checks on sleeves only.

Flexible Hose

Low pressure air hose is sold by the foot in bulk lengths. Order the total footage and number of push-on fittings required by using the number to the right.



Low Pressure Air Hose

Hose I.D.	1/4	3/8	1/2
Hose Part Number	**61106**	**61108**	**61110**
Fitting Part Number	**61107**	**61109**	**61111**
Thread Size	7/16-20	9/16-18	3/4-16

Hydraulic Hose



High pressure hose is supplied assembled and to lengths indicated. Lengths are measured from end of coupling to end of coupling. Hose is 3/8" ID and available in 4000 psi or 7000 psi rating. 3/8" female tubing fittings on each end.

High Pressure Hydraulic Hose

Length	12"	18"	24"	36"	72"
Part Number 4000 psi	**61201**	**61202**	**61203**	**61204**	**61205**
Part Number 7000 psi	**61211**	**61212**	**61213**	**61214**	**61215**

*Also available in 5000 psi.

Hydraulic Hose (Build Your Own)

Length	25'	Hose Ends	Hose Ends
Part Number	**61221**	**61226**	**61227**
2750 psi	1/4 Hose	1/4 Npt Male	1/4 37° JIC Swivel Female

Simple Tools: Adjustable wrench and saw with steel blade.

Steel Tubing

Whenever possible, 3/8" diameter steel tubing should be used for hydraulic lines. Jergens tubing is low carbon soft tube with .065 wall thickness. The tubing is rated at 5000 psi.

Steel Tubing

Part Number	Description
60209	3/8 DIA. x 5 Ft.

Hydraulic Product Repair Kits with Replacement Seals

Hydraulic Part Number	Repair Kit Number	Hydraulic Part Number	Repair Kit Number	Hydraulic Part Number	Repair Kit Number	Hydraulic Part Number	Repair Kit Number	Hydraulic Part Number	Repair Kit Number
60302	62102	60414	62195	—	62162 (3)	61705	62108	62823	62184
60303	62103	60461	62125	60651	62105 (2)	61709	62109	62824	62184
60307	62102	60462	62126	—	62162 (3)	61710	62109	62831	62187
60340	62104	60463	62127	60660	62360	61711	62110	62841	62185
60341	62105	60464	62128	60661	62360	61714	62107	62842	62185
60345	62189	60465	62129	60662	62362	61715	62108	62845	62303
60350	62120	60466	62130	60663	62362	61720	62173	62846	62303
60351	62121	60511	62139	60664	62364	61721	62174	62852	62199
60360	62120	60512	62140	60665	62364	61722	62175	63101	62101
60361	62121	60513	62194	60670	62360	61736	62159	63103	62103
60371	62167	60554	62151	60671	62360	61737	62160	63107	62102
60372	62167	60555	62151	60672	62362	61755	62197	63113	62105
60373	62168	60593	62145 (1)	60673	62362	61756	62198	63117	62104
60374	62169	60594	62146 (1)	60674	62364	61761	62144	63123	62106
60381	62170	60595	62147 (1)	60675	62364	61762	62144	63201	62134
60382	62170	60596	62177	60680	62190	61997	62165	63202	62134
60383	62171	60597	62178	60681	62196	61998	62166	63212	62126
60384	62171	60598	62179	60685	62131	62721	62161	63213	62127
60401	62106	60601	62102 (2)	61501	62133	62722	62161	63214	62128
60402	62106	—	62162 (3)	61512	62134	62801*	62172	63215	62129
60403	62195	60602	62103 (2)	61514	62134	62802*	62172	63216	62130
60404	62195	—	62162 (3)	61623	62163	62803*	62172	63302	62140
60405	62124	60621	62154	61629	62123	62804*	62172	63303	62194
60410	62106	60622	62155	61640	62164	62805	62301	63801	62184
60411	62106	60631	62156	61642	62192	62806	62302	63802	62184
60412	62106	60650	62104 (4)	61701	62132	62811	62183	—	—
60413	62195	—	62189 (5)	61704	62107	62812	62183	—	—

(1) Special tools required: use 62148 tool for 60556, use 62149 tool for 60597 or 60598.
(2) Cylinder Kit (3) Mechanical Kit (4) Kit for cylinder with 3/8" piston (5) Kit for cylinder with 1/2" piston
(*) Tool kit 62176 required for 62801, 62802, 62803, 62804

Recommendation – when replacing seals in hydraulic cylinders, we recommend replacing all seals at the same time.

Technical Assistance



Jergens maintains a qualified staff whose primary responsibility is to provide technical assistance to our distributors and customers.

Your direct connection number for dimensional questions, circuit assistance and troubleshooting is:

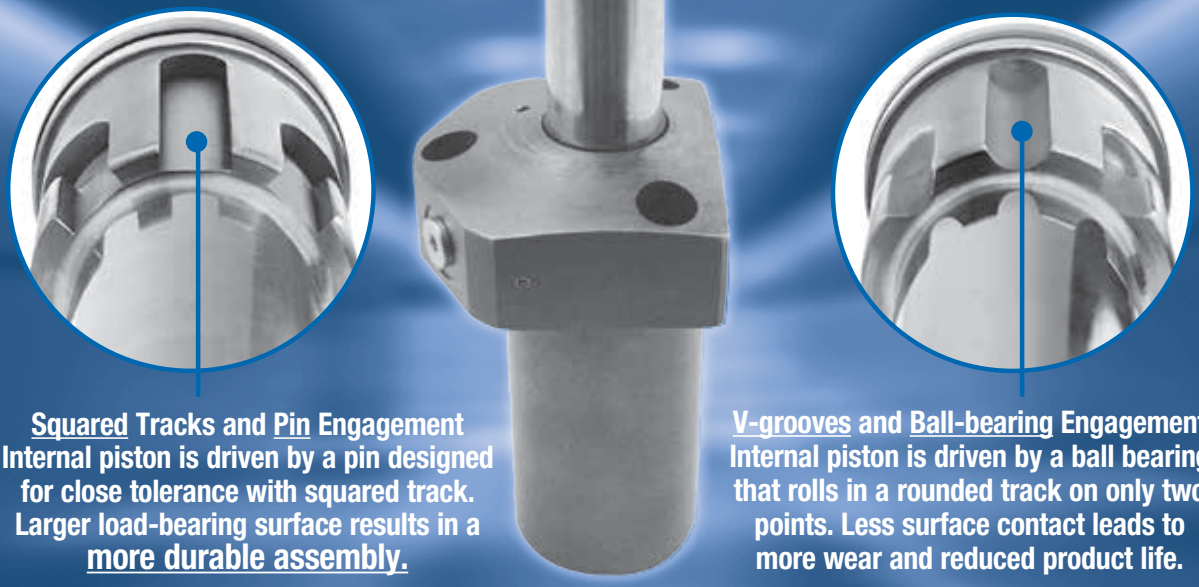
1-877-426-2504

OR

E-mail: workholding@jergensinc.com

THE Jergens DIFFERENCE

Swing Cylinders



Squared Tracks and Pin Engagement
Internal piston is driven by a pin designed for close tolerance with squared track. Larger load-bearing surface results in a more durable assembly.

V-grooves and Ball-bearing Engagement
Internal piston is driven by a ball bearing that rolls in a rounded track on only two points. Less surface contact leads to more wear and reduced product life.

JERGENS CLAMPING SWING CYLINDERS	VS.	OTHER CLAMPING SWING CYLINDERS
Precision machined for close tolerance between piston groove and pin. Better fit results in smoother motion and a more durable swing cylinder assembly.		Less surface area between bearing and track combined with severe conditions within the clamp body result in deforming of the bearing and assembly breakdown.
Free-floating pin design matches the shape of the groove. More contact area and less wear "keeps the pin in the pocket."		Ball bearings can "pop out" of the track—a common failure of traditional swing clamps—causing the piston to seize.
Heavy-duty, low-friction rod seal features "double-lip" sealing—virtually leak-free even under severe operating conditions. Plus, lubricant is retained in the cavity formed by secondary lip—increases performance and quiets operation.		Seals may be more prone to wear and "dry run." Failure of traditional seals is the primary failure of swing cylinder clamps.
High-pressure, low-friction, bi-directional piston seal is easier to turn and reduces leaks.		Breakdown of traditional seals is the primary failure of swing cylinder clamps. Galled seals cause contaminants, accelerating breakdown and increasing downtime.

Jergens

The Standard Components with the Highest Standards™

15700 S. Waterloo Road • Cleveland, OH 44110 • 877-426-2504 • www.jergensinc.com

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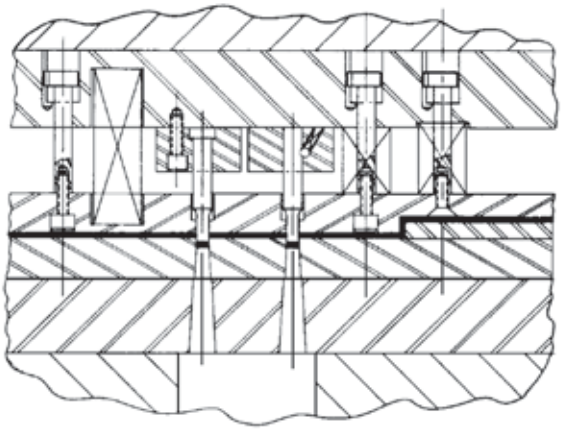
Jergens®
MANUFACTURING EFFICIENCY

Kwik-Strip® Stripper Bolts

A New Perspective on Stripper Plates

Today's more complex dies require more time to service. The advantage of time saving devices such as ball and roll lock punches is minimized unless the stripper plate can be removed first.

The patented Jergens Kwik-Strip Stripper Bolts provide an inexpensive, simple method of stripper plate removal. The stripper can be removed with the die still mounted in the press!



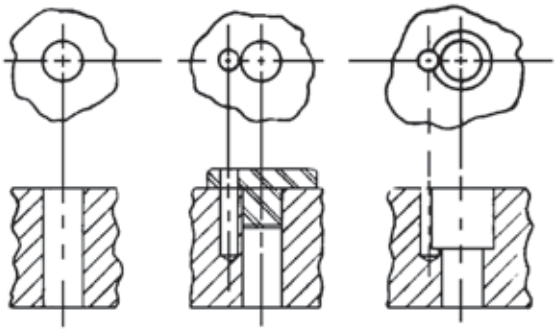
Installation

Step 1: Drill a through hole 1/32" larger than the nominal body diameter of the bolt to be used.

Step 2: Using a Jergens Drill Jig, drill the auxiliary 1/4" hole. The 1/4" hole may be located radially at any position on the periphery of the body hole. Drill the 1/4" hole slightly deeper than the proposed counterbore.

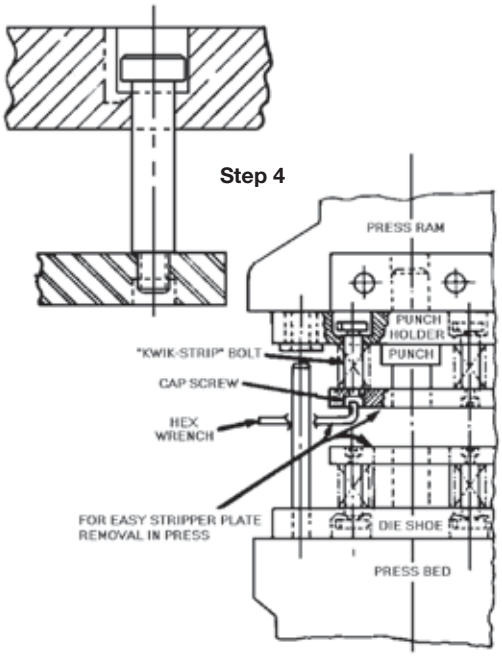
Step 3: Using a standard counterboring tool, counterbore to required depth. See counterbore selection chart for proper size.

Step 4: Drill and counterbore the stripper plate for a socket head cap screw.



Installation in Existing Dies

To convert an existing die for use with Jergens Kwik-Strip Stripper Bolts, simply mill a 1/4" slot down the side of the stripper counterbore, then drill and counterbore the stripper plate. If the same size thread must be maintained, the through hole and counterbore in the punch holder will have to be increased.

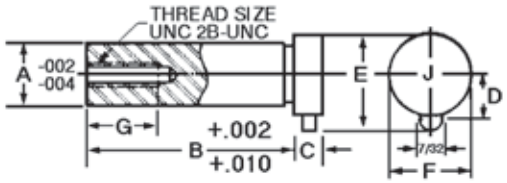


Disassembly in the Press

Block the stripper plate in position, remove the cap screws using a hex wrench, then carefully remove stripper plate. Replace stripper plate after completion of required service.

Kwik-Strip® Stripper Bolts





- Material: Alloy Steel
- Heat Treat: Rc 32-36
- Available in Fixture Pro® Design Software

Selection of Sizes

Size selections should be based upon thread size. For example, if your application calls for a 1/2" stripper bolt (with a 3/8" thread) use a 5/8" Kwik-Strip bolt (with a 3/8" thread). Kwik-Strip bolts may be shortened by 1/4" and still have sufficient thread depth for the cap screw.

Part Number	A	B	C	D	E	F	G	Thread Size	Wt. (lbs)
46601	1/2	2	5/16	.409	57/64	3/4	1	5/16-18	.14
46602	1/2	2 1/2	5/16	.409	57/64	3/4	1	5/16-18	.17
46603	1/2	3	5/16	.409	57/64	3/4	1	5/16-18	.20
46604	1/2	3 1/2	5/16	.409	57/64	3/4	1	5/16-18	.23
46605	1/2	4	5/16	.409	57/64	3/4	1	5/16-18	.26
46606	1/2	4 1/2	5/16	.409	57/64	3/4	1	5/16-18	.29
46607	1/2	5	5/16	.409	57/64	3/4	1	5/16-18	.32
46608	5/8	2	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.18
46609	5/8	2 1/2	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.23
46610	5/8	3	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.27
46611	5/8	3 1/2	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.32
46612	5/8	4	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.36
46613	5/8	4 1/2	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.41
46614	5/8	5	3/8	.472	1 1/64	7/8	1 1/8	3/8-16	.45
46615	3/4	2	1/2	.534	1 9/64	1	1 1/4	1/2-13	.26
46616	3/4	2 1/2	1/2	.534	1 9/64	1	1 1/4	1/2-13	.33
46617	3/4	3	1/2	.534	1 9/64	1	1 1/4	1/2-13	.39
46618	3/4	3 1/2	1/2	.534	1 9/64	1	1 1/4	1/2-13	.46
46619	3/4	4	1/2	.534	1 9/64	1	1 1/4	1/2-13	.52
46620	3/4	4 1/2	1/2	.534	1 9/64	1	1 1/4	1/2-13	.59
46621	3/4	5	1/2	.534	1 9/64	1	1 1/4	1/2-13	.65

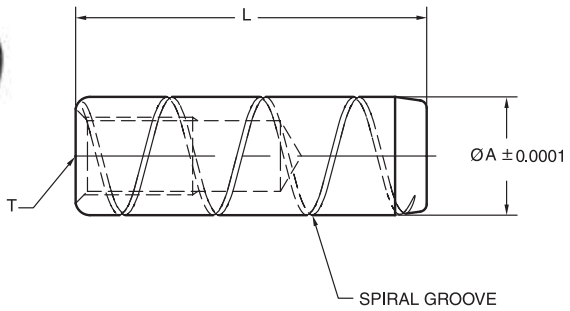
Jergens WORKHOLDING SOLUTIONS GROUP

Alloy Steel Pull Dowel Pins

Jergens Offers 3 Styles of Precision Ground Pull Dowels

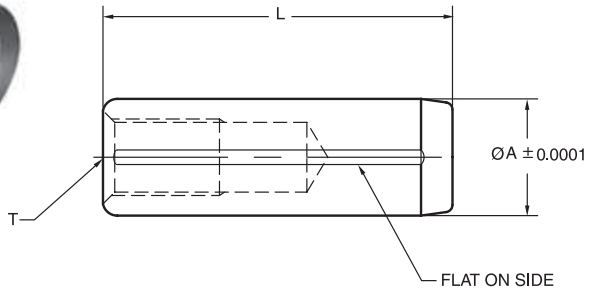


Spiral Groove
(Grooves Help to Relieve Trapped Air)



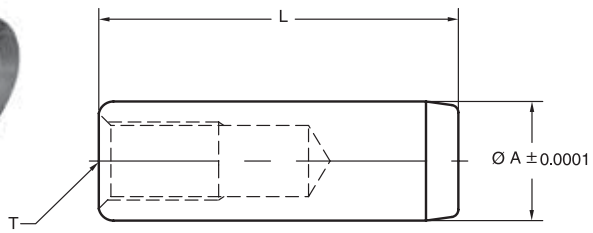


Flat Vent
(Ground Flat Helps to Relieve Trapped Air)





Standard Round
(Non-Vented)



Features, Applications & Benefits

- Internally threaded hole allows removal of pull dowels with a standard screw.
- Standard Round Pull Dowels are typically used in applications featuring a through hole.
- Spiral Groove Pull Dowels feature a groove cut to allow trapped air to be released.
- Flat Vent Pull Dowels feature a ground flat on one side to release trapped air.
- Spiral Groove and Flat Vent Pull Dowels are typically used in blind hole applications.
- All of Jergens Precision Ground Pull Dowels are constructed of heat treated alloy steel.

Precision Ground Pull Dowels

Spiral Groove	Flat Vent	Standard Round	Nominal	Actual	Length	Internal Thread
31800	31400	31600	1/4	.2502	1/2	8 - 32
31801	31401	31601	1/4	.2502	3/4	8 - 32
31802	31402	31602	1/4	.2502	1	8 - 32
31803	31403	31603	1/4	.2502	1-1/4	8 - 32
31804	31404	31604	1/4	.2502	1-1/2	8 - 32
31805	31405	31605	1/4	.2502	1-3/4	8 - 32
31806	31406	31606	1/4	.2502	2	8 - 32
31807	31407	31654	1/4	.2502	2-1/4	8 - 32
31808	31408	31607	1/4	.2502	2-1/2	8 - 32
31809	31409	31608	5/16	.3127	3/4	10 - 32
31810	31410	31609	5/16	.3127	1	10 - 32
31811	31411	31610	5/16	.3127	1-1/4	10 - 32
31812	31412	31611	5/16	.3127	1-1/2	10 - 32
31813	31413	31612	5/16	.3127	2	10 - 32
31814	31414	31613	5/16	.3127	2-1/4	10 - 32
31815	31415	31614	5/16	.3127	2-1/2	10 - 32
31816	31416	31615	3/8	.3752	3/4	10 - 32
31817	31417	31616	3/8	.3752	1	10 - 32
31818	31418	31617	3/8	.3752	1-1/4	10 - 32
31819	31419	31618	3/8	.3752	1-1/2	10 - 32
31820	31420	31619	3/8	.3752	1-3/4	10 - 32
31821	31421	31620	3/8	.3752	2	10 - 32
31822	31422	31621	3/8	.3752	2-1/4	10 - 32
31823	31423	31622	3/8	.3752	2-1/2	10 - 32
31824	31424	31623	3/8	.3752	3	10 - 32
31825	31425	31624	7/16	.4377	1	1/4 - 20
31826	31426	31625	7/16	.4377	1-1/2	1/4 - 20
31827	31427	31626	7/16	.4377	2	1/4 - 20
31828	31428	31627	1/2	.5002	3/4	1/4 - 20
31829	31429	31628	1/2	.5002	1	1/4 - 20
31830	31430	31629	1/2	.5002	1-1/4	1/4 - 20
31831	31431	31630	1/2	.5002	1-1/2	1/4 - 20
31832	31432	31631	1/2	.5002	1-3/4	1/4 - 20
31833	31433	31632	1/2	.5002	2	1/4 - 20
31834	31434	31633	1/2	.5002	2-1/4	1/4 - 20
31835	31435	31634	1/2	.5002	2-1/2	1/4 - 20
31836	31436	31635	1/2	.5002	3	1/4 - 20
31837	31437	31636	1/2	.5002	3-1/2	1/4 - 20
31838	31438	31637	1/2	.5002	4	1/4 - 20
31839	31439	31638	5/8	.6252	1-1/4	1/4 - 20
31840	31440	31639	5/8	.6252	1-1/2	1/4 - 20
31841	31441	31640	5/8	.6252	2	1/4 - 20
31842	31442	31641	5/8	.6252	2-1/4	1/4 - 20
31843	31443	31642	5/8	.6252	2-1/2	1/4 - 20
31844	31444	31643	5/8	.6252	3	1/4 - 20
31845	31445	31644	5/8	.6252	4	1/4 - 20
31846	31446	31645	3/4	.7502	1-1/2	5/16 - 18
31847	31456	31655	3/4	.7502	1-3/4	5/16 - 18
31848	31447	31646	3/4	.7502	2	5/16 - 18
31849	31448	31647	3/4	.7502	2-1/2	5/16 - 18
31850	31449	31648	3/4	.7502	3	5/16 - 18
31851	31450	31649	3/4	.7502	4	5/16 - 18
31856*	31451	31656	1	1.0002	1-3/4	5/16 - 18
31852*	31452	31650	1	1.0002	2	5/16 - 18
31853*	31453	31651	1	1.0002	2-1/2	5/16 - 18
31854*	31454	31652	1	1.0002	3	5/16 - 18
31855*	31455	31653	1	1.0002	4	5/16 - 18

*3/8-16 Internal Thread

Technical Data

Material:
Alloy Steel

Length Tolerance:
± .010"

Core Hardness:
47 - 58 Rockwell C

Diameter Tolerance:
± .0001"

Surface Hardness:
60 - 64 Rockwell C

Recommended Hole Size:
.0005" under Nom. Dia.

Surface Finish:
8 Micro-Inch

Specification:
ASME B18.8.2

Spiral Groove



Flat Vent



Standard Round

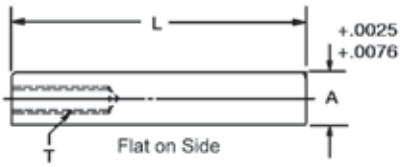


Pull Dowels
Metric



- Material: Low Carbon Steel
- Heat Treat: Case Hardened
- Available in Fixture Pro® Design Software

Flat ground on the side for air release in blind holes.



Part Number	A	L	T
31751	8	20	M5 x 1.0
31753	8	30	M5 x 1.0
31755	8	40	M5 x 1.0
31759	10	20	M6 x 1.0
31761	10	30	M6 x 1.0
31763	10	40	M6 x 1.0
31765	10	50	M6 x 1.0
31767	10	70	M6 x 1.0
31769	12	20	M6 x 1.0
31771	12	30	M6 x 1.0
31773	12	40	M6 x 1.0

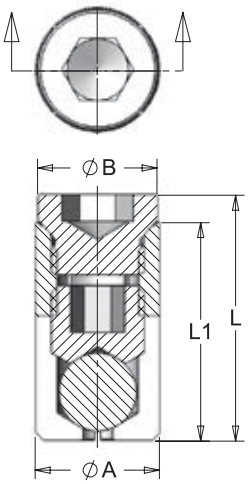
Part Number	A	L	T
31775	12	50	M6 x 1.0
31776	12	60	M6 x 1.0
31777	12	70	M6 x 1.0
31780	16	40	M8 x 1.25
31782	16	50	M8 x 1.25
31783	16	60	M8 x 1.25
31784	16	70	M8 x 1.25
31787	20	50	M10 x 1.6
31788	20	60	M10 x 1.6
31789	20	70	M10 x 1.6

Button head screw not included.

Precision Expanding Dowels



- Material: Alloy Steel, case hardened to 50-55 Rockwell C
- Self-Centering and Repeatable within +/- 0.0005" (0.013mm)
- Top and bottom half of dowel expand seperately
- Patented



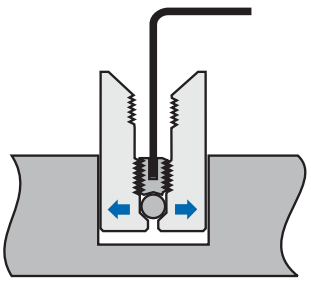
Inch

Part Number	Nominal Diameter Inch	Nominal Length (L) Inch	Recommended Hole Diameter				Hex Key Sizes	
				A Diameter	B Diameter	L1	Bottom	Top
			+0.001/-0.000"	+0.000/-0.001"	+0.000/-0.010"	±0.005"	Step 1	Step 2
29401	1/4	1/2	0.250	0.249	0.245	0.428	5/64	3/32
29402	3/8	3/4	0.375	0.374	0.370	0.634	1/8	5/32
29403	1/2	1	0.500	0.499	0.495	0.881	5/32	3/16
29404	5/8	1 1/4	0.625	0.624	0.620	1.162	3/16	7/32
29405	3/4	1 1/2	0.750	0.749	0.745	1.390	1/4	5/16
29406	1	2	1.000	0.999	0.995	1.758	3/8	1/2

Metric

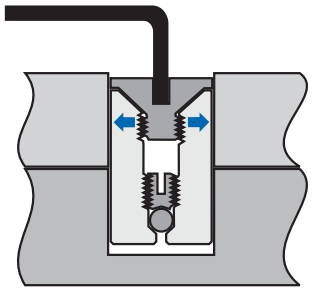
Part Number	Nominal Diameter (mm)	Nominal Length (L) (mm)	Recommended Hole Diameter				Hex Key Sizes	
				A Diameter	B Diameter	L1	Bottom	Top
			+0.025/-0.00mm	+0.00/-0.025mm	+0.00/-0.254mm	±0.13mm	Step 1	Step 2
29451	10	20	10	9.98	9.88	17.45	3	4
29452	12	25	12	11.98	11.89	22.48	4	5
29453	14	28	14	13.97	13.89	24.74	4	5
29454	16	32	16	15.98	15.90	29.51	5	6
29455	20	38	20	19.98	19.89	35.31	6	8

Installation Instructions



Step 1

Remove the top screw, insert the dowel into the locating hole of the first part, and expand the bottom half with a hex wrench.



Step 2

Replace the top screw, slide the locating hole of the second part over the dowel and expand top half with a hex wrench.

Slotted Locator Bushing

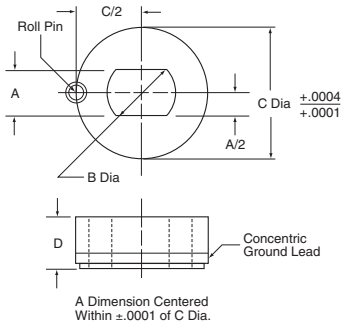


- Use with L Pins to align two holes without binding.
- Available for 3/16" through 1" diameter pins (6mm-25mm in metric sizes).
- Tool Steel, heat treated to Rc 58-62
- Supplied with Roll Pin: Locate within ±.002" of slot centerline.



Press Fit

Part Number	Pin Dia	A	Dia B	Dia C	D
24301	3/16	.1876/.1882	0.312	0.75	0.400
24302	1/4	.2501/.2507	0.375	0.75	0.400
24303	1/4	.2501/.2507	0.375	1	0.400
24304	5/16	.3126/.3132	0.437	1	0.400
24305	3/8	.3751/.3757	0.5	1	0.400
24306	1/2	.5001/.5007	0.625	1	0.400
24307	1/2	.5001/.5007	0.625	1	0.900
24308	5/8	.6251/.6257	0.75	1.25	0.900
24309	3/4	.7501/.7510	0.812	1.5	1.0000
24310	7/8	.8751/.8760	1	1.5	1.0000
24311	1	1.0001/1.0010	1.062	1.5	1.0000

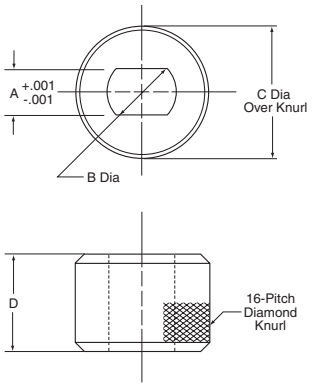


Press Fit Metric

Part Number	Pin Dia	A	Dia B	Dia C	D
24351	6mm	6.00/6.03	9.0	20.000	9.0
24352	8mm	8.00/8.03	11.0	24.000	9.0
24353	10mm	10.00/10.03	13.0	24.000	9.0
24354	12mm	12.00/12.03	15.0	24.000	14.0
24355	16mm	16.00/16.03	18.0	30.000	12.0
24356	20mm	20.00/20.03	22.0	35.999	19.0
24357	25mm	25.00/25.03	27.0	40.000	19.0

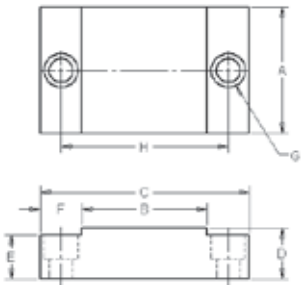
Knurled

Part Number	Pin Dia	A	Dia B	Dia C	D
24331	3/16	0.188	0.312	0.565	.50
24332	1/4	0.25	0.375	0.64	.50
24333	5/16	0.313	0.437	0.765	.50
24334	3/8	0.375	0.5	0.89	.50



Rest Pad





Jergens Feature:

By holding close tolerances on the "D" dimension, when replacement becomes necessary, your original tolerances are maintained within .0005 (.013)

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 75-77 R30N
- Available in Fixture Pro® Design Software

Rest Pads are designed to be used when you need a larger hardened wearing surface for heavy duty applications. Rest Pads can also be used as hardened work rests or as wear plates on your jigs and fixtures.

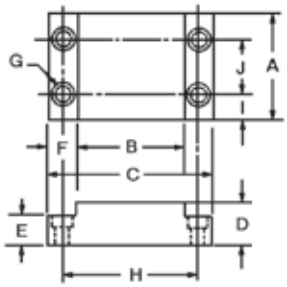
Part Number	A	B	C	+0.0005 -0.000 D	E	F	G	H	No. of Holes	Wt. (lbs)
35901	1	1	2	.475	3/8	1/2	#10	1 1/2	2	.22
35902	1 1/2	1 1/2	2 1/2	.600	1/2	1/2	1/4	2	2	.58
35904	1	2	3 1/2	.720	5/8	3/4	5/16	2 3/4	2	.63
35905	1	3	4 1/2	.720	5/8	3/4	5/16	3 3/4	2	.84
35906	1	4	5 1/2	.720	5/8	3/4	5/16	4 3/4	2	1.06

Metric

Part Number	A	B	C	+0.013 -0.000 D	E	F	G	H	No. of Holes	Wt. (kgs)
35951	25	25	50	12	10	13	M5	38	2	0.10
35952	25	38	64	15	13	13	M6	50	2	0.26
35954	25	50	89	18	16	19	M8	70	2	0.28

Rest Pad





Rest Pads are designed to be used when you need a larger hardened wearing surface for heavy duty applications. Rest Pads can also be used as hardened work rests or as wear plates on your jigs and fixtures.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 75-77 R30N
- Available in Fixture Pro® Design Software

Part Number	A	B	C	+0.0005 -0.000 D	E	F	G	H	I	J	No. of Holes	Wt. (lbs)
35903	2	2	3	.725	1/2	1/2	1/4	2 1/2	1/2	1	4	1.06

Metric

Part Number	A	B	C	+0.013 -0.000 D	E	F	G	H	I	J	No. of Holes	Wt. (kgs)
35953	50	50	75	18	12	13	M6	64	13	25	4	0.48

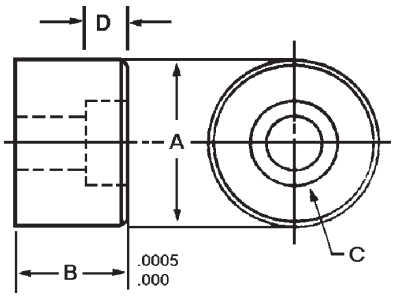
Jig Feet



- Material: Low Carbon Steel
- Finish: Black Oxide
- Cap Screw included
- Heat Treat: Case Hardened
  75-77 R30N
- Available in Fixture Pro® Design Software

Jergens Feature:

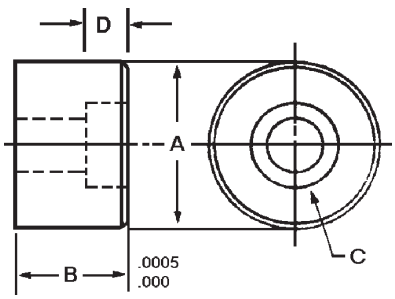
By holding close tolerances on the "B" dimension, when replacement becomes necessary, your original tolerances are maintained within .0005 (.013)



Part Number	A	+0.0005 -0.000 B	Socket Head Capscrew C	D	Wt. (lbs) 10 Pcs.
25701*	5/8	3/8	1/4-20 x 3/8	9/32	.31
25702*	5/8	1/2	1/4-20 x 1/2	9/32	.31
25703*	5/8	5/8	1/4-20 x 5/8	9/32	.47
25704*	5/8	3/4	1/4-20 x 3/4	9/32	.55
25705	5/8	7/8	1/4-20 x 7/8	9/32	.62
25706	5/8	1	1/4-20 x 1	9/32	.78
25707*	7/8	1/2	5/16-18 x 1/2	11/32	.78
25708*	7/8	5/8	5/16-18 x 5/8	11/32	.94
25709*	7/8	3/4	5/16-18 x 3/4	11/32	1.03
25710	7/8	7/8	5/16-18 x 7/8	11/32	1.12
25711*	7/8	1	5/16-18 x 1	11/32	1.15
25712	7/8	1 1/8	5/16-18 x 1 1/4	11/32	1.17
25713	7/8	3/4	3/8-16 x 3/4	13/32	1.11
25714*	1 1/4	3/4	3/8-16 x 3/4	13/32	2.50
25715	1 1/4	7/8	3/8-16 x 7/8	13/32	2.70
25716*	1 1/4	1	3/8-16 x 1	13/32	3.30
25717*	1 1/4	1 1/2	3/8-16 x 1 1/2	13/32	5.00
25718	1 1/4	2	3/8-16 x 2	13/32	6.60
25719	1 5/8	1 1/4	1/2-13 x 1 1/2	17/32	7.00
25720	1 5/8	1 3/4	1/2-13 x 1 3/4	17/32	9.80
25721	1 5/8	2 1/4	1/2-13 x 2 1/2	17/32	13.75

*Conforms to TCMA

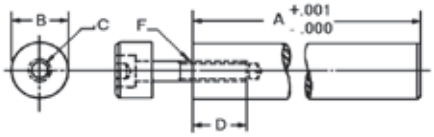
Metric Jig Feet



Part Number	A	+0.013 -0.000 B	Socket Head Capscrew C	D
25751	16	10	M6 x 10	7
25752	16	12	M6 x 12	7
25754	16	20	M6 x 20	7
25757	22	12	M8 x 12	9
25759	22	20	M8 x 20	9
25761	22	24	M8 x 25	9
25766	32	24	M10 x 25	11

Jig Legs





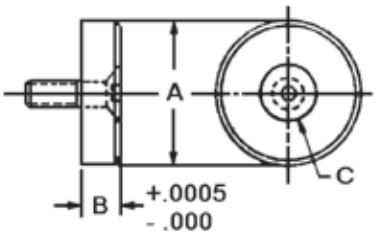
The Jergens Jig Legs are ideal for cutting costs in simple jig plates. They assure lasting accuracy in your jig plate with a larger bearing surface at the top the the leg. The large diameter rest button provides more bearing surface for spot facing or counterboring on the bottom side. Both legs and rest buttons are hardened for long life.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 75-77 R30N
- Cap Screw Included
- Available in Fixture Pro® Design Software

Part Number	A	B	C	D	Cap Screw F	Wt. (lbs)
25301	1	5/8	1/4-20	5/8	1/4-20 x 1	.13
25302	2	5/8	1/4-20	5/8	1/4-20 x 1	.20
25303	3	5/8	1/4-20	5/8	1/4-20 x 1	.28
25304	4	7/8	3/8-16	7/8	3/8-16 x 1 3/4	.81
25305	5	7/8	3/8-16	7/8	3/8-16 x 1 3/4	1.00
25306	6	7/8	3/8-16	7/8	3/8-16 x 1 3/4	1.10

Flat Feet





- Material: Low Carbon Steel
- Heat Treat: Case Hardened 75-77 R30N
- Cap Screw Included
- Available in Fixture Pro® Design Software

Jergens Feature:

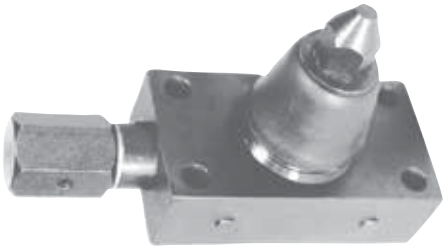
By holding close tolerances on the "B" dimension, when replacement becomes necessary, your original tolerances are maintained within .0005 (.013mm)

Part Number	A	+0.0005 -0.000 B	Flat Head Screw C	Wt. (lbs) 10 Pcs
19301	1/2	1/8	8-32 x 3/8	.06
19302	1/2	1/4	8-32 x 1/2	.16
19303	5/8	1/4	10-32 x 5/8	.21
19304	7/8	3/8	1/4-20 x 3/4	.62
19305	1 1/4	3/8	5/16-18 x 3/4	1.25
19306	1 5/8	3/8	3/8-16 x 3/4	2.20

Metric

Part Number	A	+0.013 -0.000 B	Flat Head Screw C	Wt. (Kg) 10 Pcs
19351	13	3	M4 x 10	.03
19352	13	6	M4 x 12	.09
19353	16	6	M5 x 16	.11
19354	22	10	M6 x 20	.33
19355	31	10	M8 x 20	.47

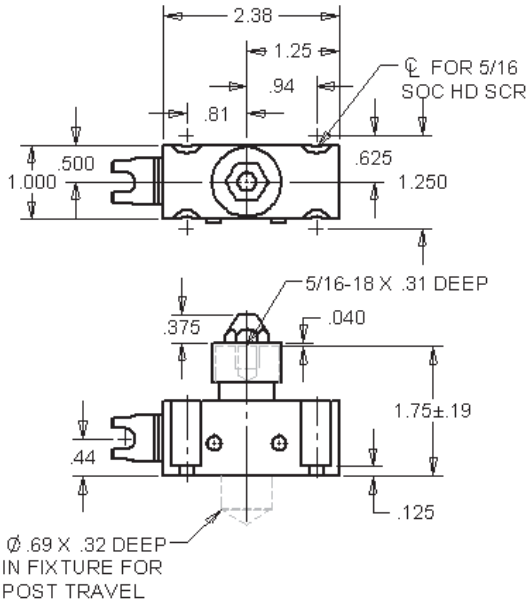
Work Support Jacks

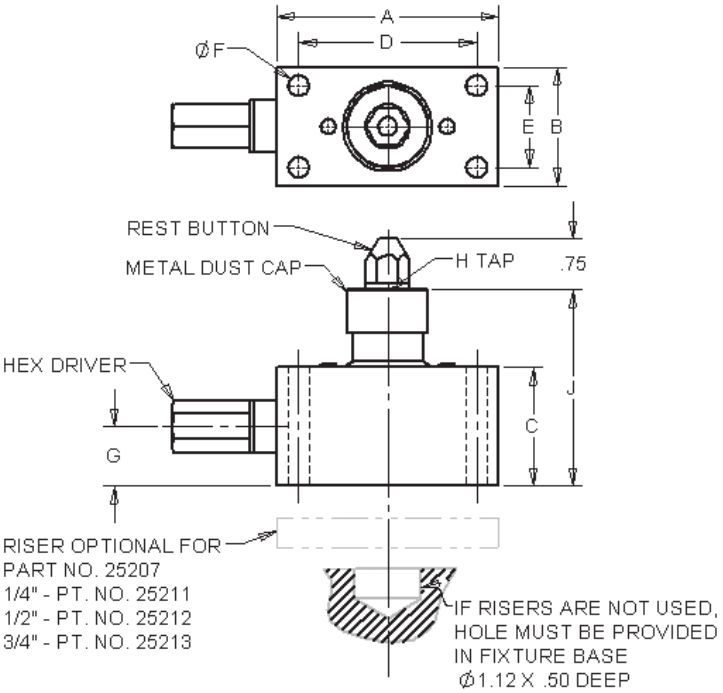


The Jergens Spring Loaded Work Jacks provide consistent support and rigidity to odd shaped workpieces. They are designed to prevent workpiece deflection under forces created during machining operations. Precision mated locking jaws grip the jackpost from both sides creating a vise-like action.

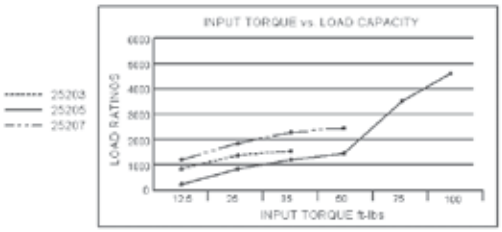
- Load capacities 300-4500 lbs.
- Rugged design
- Quality construction
- Dual jaw locking action
- Rubber boot or dust cap models available

Riser Optional on Part Number 25207 & 25208	
1/4"	**25211**
1/2"	**25212**
3/4"	**25213**





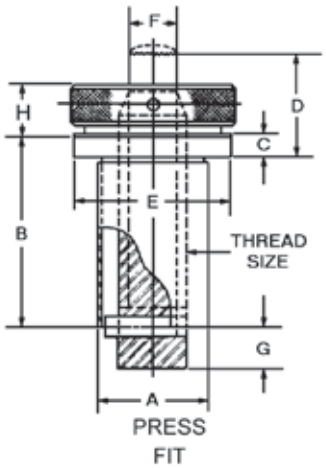
PART NO. 25201



Part Number	Load Rating	Type Of Dust Protector	Type Of Driver	A	B	C	D	E	Dia. F	G	Tap H	Jackpost J	
												Mean Ht.	Travel
25201 Torque	300 lbs at 10 ft-lbs	Cap	Slotted, See Detailed View for Dimensions									1.75	±.19
25203	1400 lbs	Cap	.750 Hex	3.75	2.00	2.00	3.00	1.38	11/32	1.13	3/8-16 .44 Deep	3.31	±.25
25207	2500 lbs	Cap	.750 Hex	3.75	2.00	1.12	3.00	1.38	11/32	.56	3/8-16 .44 Deep	2.38	±.25
25205	4500 lbs	Cap	.937 Hex	4.54	2.50	2.50	3.50	1.88	13/32	1.63	1/2-13 .59 deep	4.13	±.38

Fixture Jacks





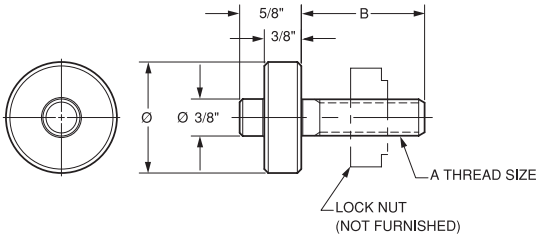
Designed as a positive locking jack for irregular clamping to achieve various heights requiring a positive pressure stop. Adjustable to fit height irregularities of milling operations. Available in either a smooth radius head or a hardened tool steel serrated gripping surface. Elevates vertically, no rotation. Outer diameter of bushing ground for press-fit.

- Material: Bushing, Low Carbon Steel
  Radius Stem, Low Carbon Steel
  Serrated Stem, 4140
- Finish: Bushing, Black Oxide
  Radius Stem, Black Oxide
  Serrated Stem, Black Oxide
- Heat Treat: Bushing, Case Hardened
  74-77 R30N
  Radius Stem, Case Hardened
  Serrated Stem, Rc 45-48
- Available in Fixture Pro® Design Software

Part Number Radius	Part Number Serrated	Press Fit A	B	C	D		E	F	G	H	Thread Size	Wt. (lbs)
					Min.	Max.						
24901	**25101**	5/8	1 3/16	3/16	9/16	1 1/2	1	1/4	5/32	3/8	3/8-16	.19
24902	**25102**	1	1 5/8	3/16	7/8	2 7/16	1 5/16	15/32	7/16	7/16	5/8-11	.55
24903	**25103**	1 1/2	2 3/4	3/16	7/8	3 1/2	1 3/4	13/16	1/2	9/16	1-8	1.90

Adjustable Jack Screws



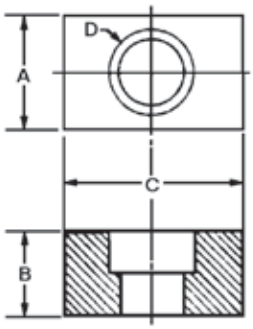


- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Screw/Stem Case Hardened 87-92 R15N

Part Number	A	B	C	Wt. (lbs)	Lock Nut (Not Included)
25001	3/8-16	1-1/4	1-1/8	0.15	28101
25003	3/8-16	2	1-1/8	0.18	28101
25005	1/2-13	1-5/8	1-1/8	0.20	28102
25007	1/2-13	2-1/2	1-1/8	0.25	28102
25009	5/8-11	2	1-3/8	0.34	28103
25011	5/8-11	3	1-3/8	0.43	28103

Standard Fixture Keys





- Material: C-1018
- Finish: Black Oxide
- Heat Treat: Case Hardened 74-77 R30N
- Available in Fixture Pro® Design Software

Part Number	-0.0005 -0.0010 A	B	C	Socket Head Screw D	Wt. (lbs) 10 Pcs.
19701*	.5000	1/2	3/4	1/4	.14
19702*	.5625	1/2	3/4	1/4	.65
19703*	.6250	1/2	3/4	5/16	.68
19704*	.6875	1/2	1	5/16	.98
19705	.7500	1/2	1 1/4	5/16	1.10
19706	.8125	1/2	1 1/4	5/16	1.25

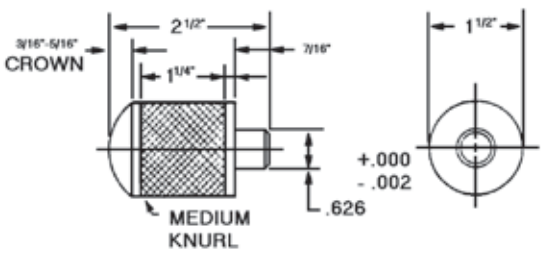
*Conforms to TCMA

Metric

Part Number	-0.0013 -0.0026 A	B	C	Socket Head Screw D
19751	12	13	19	M5
19752	14	14	22	M6
19753	16	13	22	M6
19754	18	14	22	M6
19755	20	13	22	M6
19756	22	13	32	M6

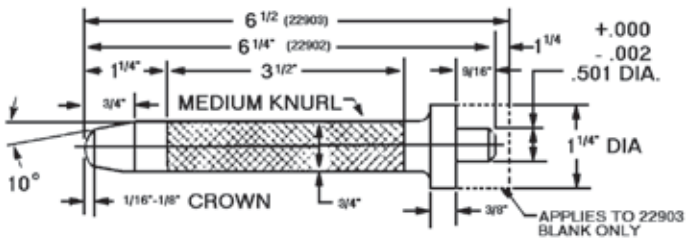
Drift Handles





Part Number	Wt. (lbs)
22901	1.0

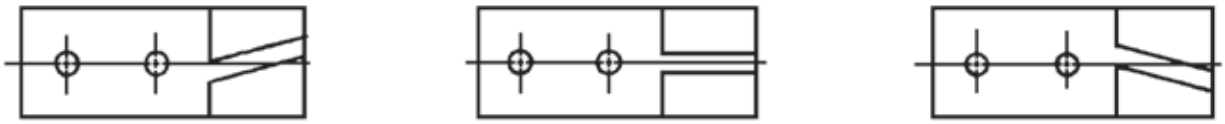
- Material: AISI-S7
- Finish: Black Oxide
- Heat Treat: Rc 44-48
- Available in Fixture Pro® Design Software



Part Number	Wt. (lbs)
22902	1.1
22903	1.2

Compare The Jergens Sine Fixture Key Method To The Standard Method

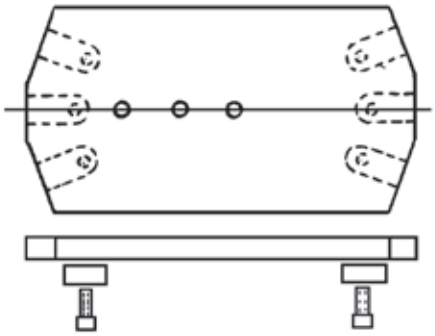
Construct a fixture to mill slots in castings A, B, and C. The locator pins to be common.



A B C

Present Method

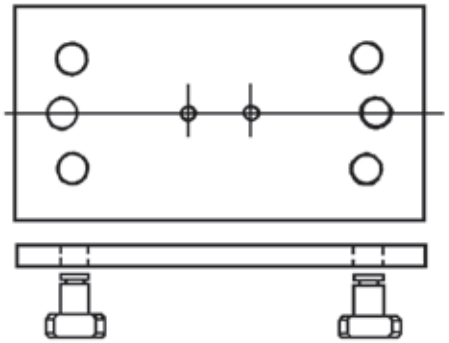
A total of 11.2 hours was required to complete this fixture base with finished edge, milled fixture key slots, bored locator pin holes and drilled and tapped set screw holes.



PRESENT METHOD	TIME
1. Finish one edge.	.5 hours
2. Locate on jig bore and bore locating point and two locator pin holes	1.75 hours
3. Relocate, position and mill two fixture key slots.	1.75 hours
4. Relocate and, by use of sine bar or other positioning device, establish and mill two fixture key slots.	2.35 hours
5. For opposite slots-same as above	2.35 hours
6. Drill and tap six holes for holding fixture keys in slots.	1.5 hours
7. Set up and perform inspection-if inaccurate, reroute for reworking.	1.0 hours
TOTAL TIME REQUIRED	11.2 hours

Jergens Method

It took only 5 1/2 hours to complete this fixture with bored sine fixture key holes and bored locator pin holes



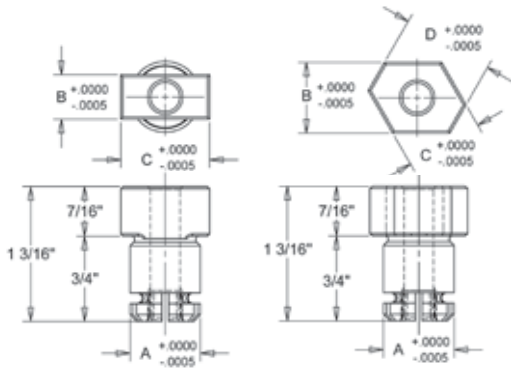
JERGENS METHOD	TIME
1. Eliminated.	
2. One set-up serves for establishing locator holes and sine fixture keys.	4.5 hours
3. Eliminated.	
4. Eliminated	
5. Eliminated.	
6. Eliminated.	
7. Inspect on original set-up.	1.0 hours
TOTAL TIME REQUIRED	5.5 hours

ON THIS PARTICULAR FIXTURE - SAVE OVER 50% OF SET-UP TIME!

Multi-Slot Sine Fixture Keys Inch



- One key fits multiple table slots
- Material: AISI 4140 Alloy Steel
- Heat Treat: Through Hardened to Rc 26-30
- Reduce fixture costs
- Cut set-up time
- Interchangeable with other Sine Fixture Keys
- Replacement screw for all sine fixture keys is PN 710190



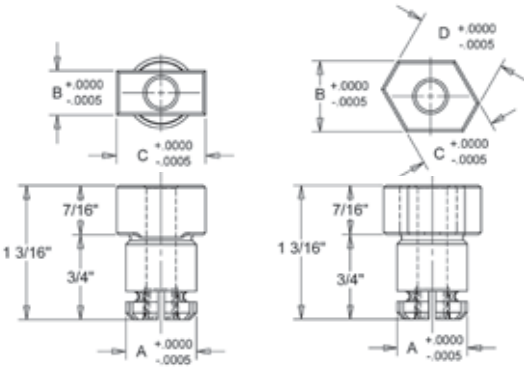
Jergens Feature:

Full 360° contact for more accurate locating.

One key fits multiple table slots! Sine Fixture Keys locate jig and fixtures on machine tool tables and position the part to be machined in one operation.They eliminate the need to slot fixture bases, make step fixture keys, or drill and tap keys. All you need to do is ream two 5/8" or 3/4" holes, depending upon the table size. The wide range of Sine Fixture Key sizes adapts to the various table slot widths. Sine Fixture Keys with a metric slot size and inch shank size are now available. The tapered expansion screw allows the key to be locked in the fixture from either the top or the bottom by using a standard 3/32 or 4mm hex wrench.

Part Number	Shank Size A	Key Width B	C	D	Wt. (lbs)	Recommended Hole Dia.	Previous Part Numbers
39520	0.625	0.4995	0.8745	-	0.09	0.625 Shank Size 0.6255 +/-0.0005	39501, 39507
39521	0.625	0.562	0.7495	-	0.09	0.625 Shank Size 0.6255 +/-0.0005	39502, 39505
39522	0.625	0.6245	0.687	0.812	0.09	0.625 Shank Size 0.6255 +/-0.0005	39503, 39504, 39506
39523	0.75	0.9995	1.062	-	0.19	0.750 Shank Size 0.7505 +/-0.0005	39509, 39510

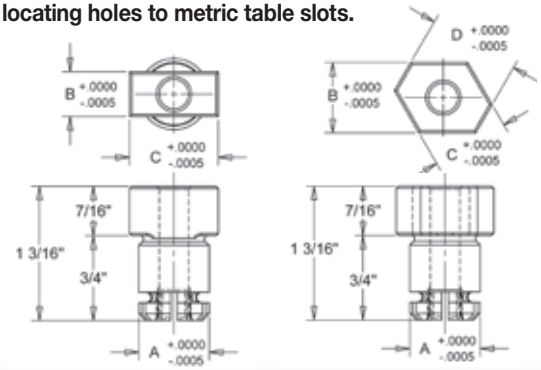
Multi-Slot Sine Fixture Keys Metric



Part Number	Shank Size A	Key Width B	C	D	Wt. (lbs)	Recommended Hole Dia.	Previous Part Numbers
39525	16	10	20	-	0.04	16mm Shank Size 16.01 +/-0.01	39550, 39555
39526	16	12	22	-	0.04	16mm Shank Size 16.01 +/-0.01	39551, 39556
39527	16	14	16	18	0.04	16mm Shank Size 16.01 +/-0.01	39552, 39553, 39554
39528	20	24	28	32	0.09	20mm Shank Size 20.01 +/-0.01	39557, 39558, 39559

Multi-Slot Sine Fixture Keys Inch/Metric

Used primarily for adapting existing fixtures with inch locating holes to metric table slots.

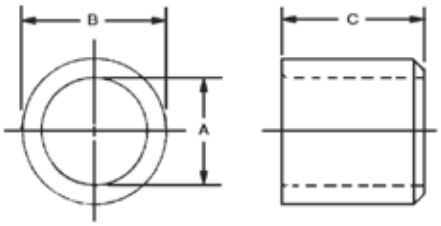


Part Number	Shank Size A	Key Width B	C	D	Wt. (lbs)	Recommended Hole Dia.	Previous Part Numbers
39530	0.625	10	20	-	0.08	0.625 Shank Size 0.6255 +-0.0005	39565
39531	0.625	12	22	-	0.09	0.625 Shank Size 0.6255 +-0.0005	39561, 39566
39532	0.625	14	16	18	0.09	0.625 Shank Size 0.6255 +-0.0005	39562, 39563, 39564

Locating Pin Liners



- Material: 52100 Steel

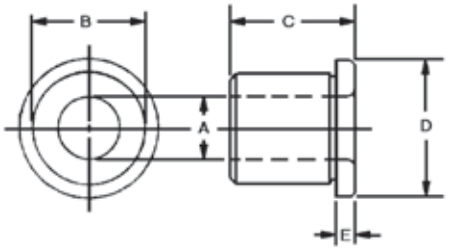


Part Number	A	B	C	Wt. (lbs) 10 Pcs.
28501	.3129 .3126	.5017 .5014	1/2	.16
28502	.5005 .5002	.7518 .7515	3/4	.47
28503	.7506 .7503	1.0018 1.0015	1	.94
28504	1.0007 1.0004	1.3772 1.3768	1 3/8	2.80

Locating Pin Shoulder Liners



- Material: 52100 Steel

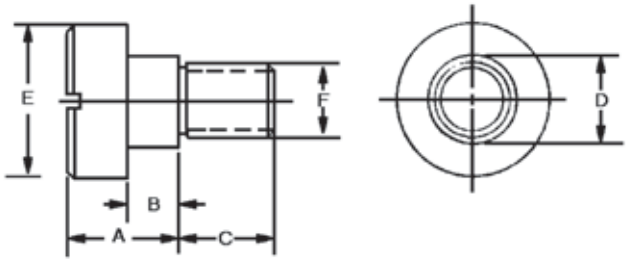


Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
40901	.3129 .3126	.5017 .5014	1/2	5/8	3/32	.16
40902	.5005 .5002	.7518 .7515	3/4	7/8	3/32	.47
40903	.7506 .7503	1.0018 1.0015	1	1 1/8	1/8	.94
40904	1.0007 1.0004	1.3772 1.3768	1 3/8	1 1/2	1/8	2.65

Locating Pin Lock Screws



- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2A-UNC

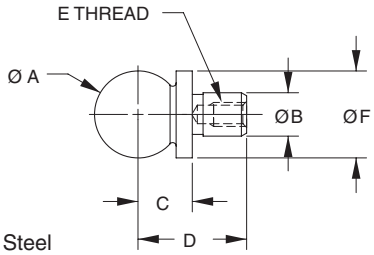


Part Number	A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
10101	1/4	.135	3/8	3/8	5/8	5/16-18	.16

Inspection Balls

Premium Short Shank



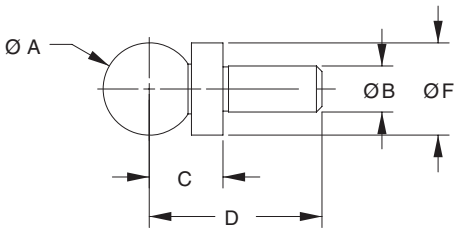


- Material: 8620 Steel
- Case Hardened
- Used as reference points for inspection applications in conjunction with Coordinate Measuring Machines to accurately measure the workpiece.
- Concentricity of Ball to Shank - 0.0001 T.I.R.
- One-piece construction

Part Number	+0.0000 -0.0002 A	+0.0000 -0.0002 B	±0.0002 C	D	Thread E	Dia. F	Weight (lbs) 10 Pcs.
29060	0.2500	0.1247	0.2000	0.58		1/4	.1
29061	0.3750	0.1872	0.3000	0.75		3/8	.1
29062	0.3750	0.3125	0.3000	0.74	8-32	1/2	.3
29063	0.5000	0.2497	0.3125	0.63	6-32	1/2	.3
29064	0.5000	0.2497	0.4000	0.93	6-32	1/2	.3
29065	0.5000	0.2497	0.5000	0.88	6-32	1/2	.3
29066	0.5000	0.3750	0.3750	1.31	10-24	5/8	.6
29067	0.6250	0.3122	0.4500	1.08	8-32	5/8	.6
29068	0.6250	0.3750	0.4500	1.42	10-24	5/8	.7
29069	0.6875	0.3750	0.5000	1.47	10-24	3/4	.9
29070	0.7500	0.3750	0.5625	1.53	10-24	3/4	1.3
29071	1.0000	0.5000	0.7000	1.64	10-24	1	2.5

Precision Slip Fit





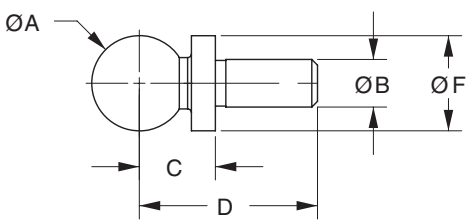
- Used as reference points for inspection applications in conjunction with Coordinate Measuring Machines to accurately measure the workpiece.
- Concentricity of Ball to Shank - 0.0002 T.I.R.
- Hardened and ground steel (440 Stainless)
- Two-piece construction

Part Number	±0.0005 A	+0.0000 -0.0002 B	±0.0002 C	D	Dia F	Weight (lbs) 10 Pcs.
29075	0.2500	0.1247	0.2000	9/16	1/4	.1
29076	0.3750	0.1872	0.3000	3/4	3/8	.1
29077	0.5000	0.2497	0.4000	15/16	1/2	.3
29078	0.6250	0.3122	0.4500	1 1/16	5/8	.6
29079	0.7500	0.3747	0.5000	1 1/4	3/4	1.0
29080	0.8750	0.4372	0.6000	1 7/16	3/4	.7
29081	1.0000	0.4997	0.7000	1 5/8	1	2.4

One Piece with Shoulder



- One Piece Construction
- Close Tolerances – 0.0002 T.I.R.
- 8620 Steel Hardened



Slip Fit

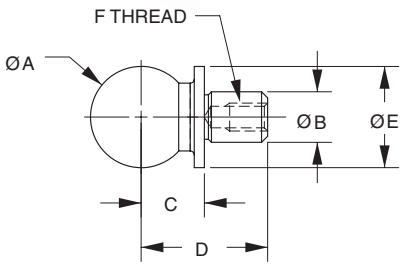
Part Number	±0.0002 A	+0.0000 -0.0004 B	±0.0002 C	D	Dia F	Weight (lbs) 10 Pcs.
29041	.2500	.1250	.2000	9/16	1/4	.1
29042	.3750	.1875	.3000	3/4	3/8	.1
29043	.5000	.2500	.4000	15/16	1/2	.3
29044	.5000	.2500	.5000	1 3/8	1/2	.4
29045	.7500	.3750	.5000	1 1/4	3/4	1.0

Press Fit

Part Number	±0.0002 Dia A	+0.0003 -0.0000 B	±0.0002 C	D	Dia F	Wt. (lbs) 10 Pcs.
29085	0.2500	.1253	.2000	9/16	1/4	.1
29086	0.3750	.1878	.3000	3/4	3/8	.1
29087	0.5000	.2503	.4000	15/16	1/2	.3
29088	0.5000	.2503	.5000	1 3/8	1/2	.4
29089	0.7500	.3753	.5000	1 1/4	3/4	1.0

Construction Balls-Tapped, One-Piece Construction





- Heavy-Duty, Resists Lateral Forces
- Close Tolerances – 0.0002 T.I.R.
- 8620 Steel Hardened

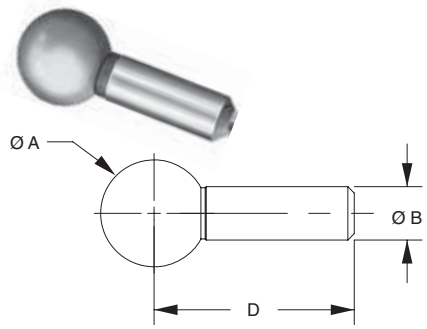
Inch

Part Number	±0.0002 A	+0.0000 -0.0004 B	±0.0002 C	D	Dia. E	F	Weight (lbs) 10 Pcs
29051	0.5000	0.2500	.3125	5/8	.490	6-32 x 1/4	.3
29052	0.5000	0.2500	.3125	5/8	.490	Not Tapped	.3

Metric

Part Number	±0.005mm A	+0.000 -0.010mm B	±0.005mm C	D	Dia. E	F	Weight (kgs) 10 Pcs
29090	6mm	3mm	6mm	16mm	6mm	Not Tapped	.05
29091	10mm	5mm	10mm	20mm	10mm	Not Tapped	.15
29092	12mm	6mm	12mm	22mm	12mm	Not Tapped	.15

Tooling Balls - Standard Tolerance, One-Piece Construction

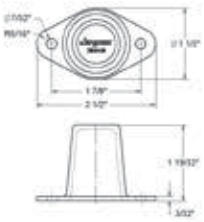


- One Piece Construction
- Close Tolerances – 0.0002 T.I.R.
- 8620 Steel Hardened

Part Number	±0.0002 A	+0.0000 -0.0004 B	D	Weight (lbs) 10 Pcs
29031	.2500	.1250	9/16	.1
29032	.3750	.1875	3/4	.1
29033	.5000	.2500	15/16	.3
29034	.5000	.2500	1 1/2	.3
29035	.5000	.3750	1 1/2	.8

Tooling/Inspection Ball Covers





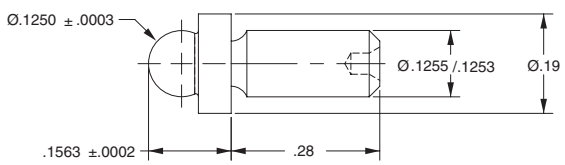
- Mounts directly to the fixture with two number 10 (M4) screws.
- Fits most tooling balls up to 3/4".

Part Number	Mounting Hole-Center to Center ±0.005	Mounting Hole Diameter	Overall Height
29049	1.875	7/32	1.590

Carbide

Part Number
29099





- Two-piece construction
- Used as reference points for inspection applications in conjunction with Coordinate Measuring Machines to accurately measure the workpiece.
- Concentricity of Ball to Shank - 0.0002 T.I.R.
- Hardened and ground
- Material: Ball - Carbide
  Shank - 440 Stainless
- Weight per 10 pcs. 0.1 lbs.

Tooling Balls

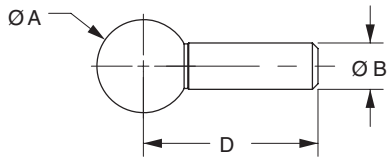


Fixture Balls (plain shank)

These Tooling balls are assembled by a welding technique that retains the initial high precision and fine finish of the balls.

- Material: Type 440-C Stainless Steel hardened
- Eccentricity, ball to shank, 0.0002 T.I.R. maximum
- Two Piece Welded Construction

NOTE: The weld between the ball and the shank is made so that the ball will drop off if subjected to unusually heavy lateral forces. This prevents setup and inspection errors that might occur because of accidental bending of the shank.



Part Number	A ±0.0001	B +0.0000 -0.0003	C ±0.005
29001	0.2500	0.1247	0.560
29002	0.3750	0.1872	0.750
29003	0.5000	0.2497	0.940
29004	0.6250	0.3122	1.060
29005	0.7500	0.3747	1.250
29006	0.8750	0.4372	1.440
29007	1.0000	0.4997	1.620

*Metric available if requested

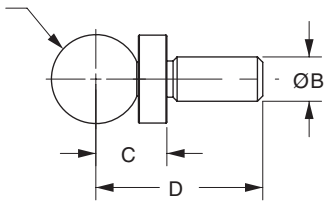


Checking Balls (with reference shoulders)

High precision stainless steel checking balls are made to closer tolerances and avoid excessive side forces. The accurately located shoulder provides for positive positioning, re-positioning, or replacement.

- Material: Type 440-C Stainless Steel hardened
- Eccentricity, ball to shank, 0.0002 T.I.R. maximum
- Two Piece Welded Construction

A DIM
1/8 thru 5/8 ±.00002
3/4 thru 1" ±.00005



Part Number	A	B +0.0000 -0.0002	C ±0.0002	D -0.005
***29010**	0.1250	0.1255	0.0938	0.375
29011	0.2500	0.1247	0.2000	0.560
29012	0.3750	0.1872	0.3000	0.750
29013	0.5000	0.2497	0.4000	0.940
29014	0.6250	0.3122	0.4500	1.060
29015	0.7500	0.3747	0.5000	1.250
29016	0.8750	0.4372	0.6000	1.440
29017	1.0000	0.4997	0.7000	1.620

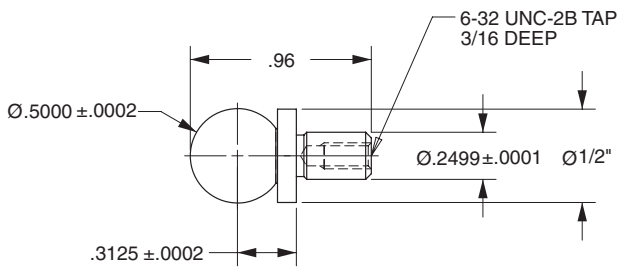
*29010 is supplied with tungsten carbide ball only, with Rockwell hardness 91.5 - 92.5
**Metric available if requested



Checking Balls (with reference shoulder and tapped shank)

This Checking Ball can be pulled into a hole or bushing from below without applying pressure on the ball (accomplished by using a cap screw in the tapped hole in the shank).

- Material: Type 440-C Stainless Steel hardened
- Eccentricity, ball to shank, 0.0002 TIR max.
- Two Piece Welded Construction



Part Number
29021

Jergens
WORKHOLDING SOLUTIONS GROUP

Jergens Workolding Solutions Group... Your Uptime Consultants

To compete in today's global industry you need to accommodate shorter lead times, smaller batch sizes and frequent set up changes.

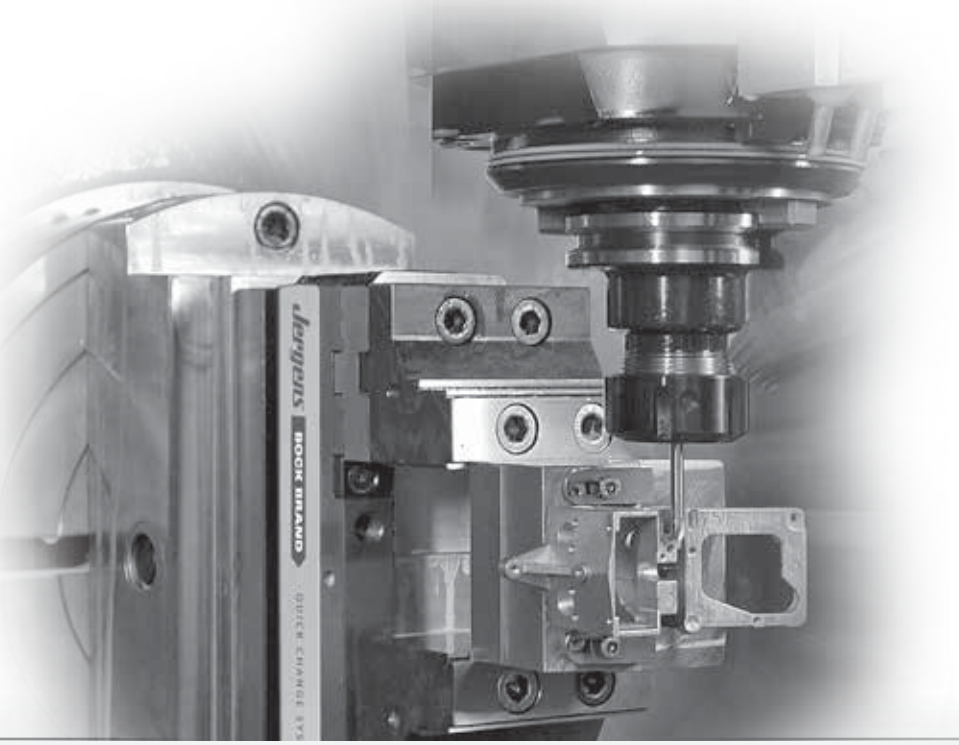
Get more savings by changing what's UNDER the spindle, not ON it.

Shave 90% from your set up times by implementing a quick change fixturing system for a fraction of the cost of your cutting tool investment. Jergens' workholding efficiency improvement process helps:

- **Increase spindle uptime**
- **Speed implementation of lean manufacturing**
- **Improve productivity**
- **Optimize workholding**
- **Reduce downtime**
- **Maximize cost savings**
- **Eliminate setup errors and inefficiencies**
- **Faster part-to-part changeover**

Jergens® SAVINGS UNDER THE SPINDLE





"The applications of the Ball Lock® System are basically limitless – you're completely free from the design limitations of common tooling. We have increased utilization rates 75% – 90%."

Jergens Ball Lock® Customer

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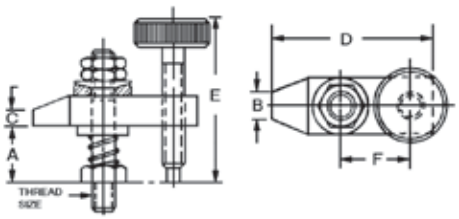
Jergens®
MANUFACTURING EFFICIENCY

Clamp Assemblies

Miniature Flat



Fast-acting clamp for light-duty holding. Includes strap, knurled thumb screw, spherical washer, stud, plain flat washer, three hex jam nuts and spring. Features free swinging adjustments for positioning the assembly without interference.

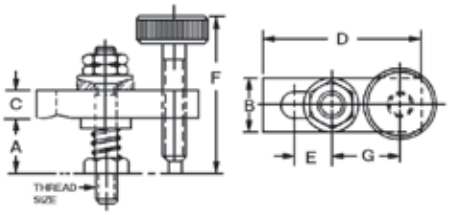


Part Number	A	B	C	D	E	F	Thread Size	Wt. (lbs)
12901	5/8	1/4	1/8	1 1/2	1 9/16	11/16	10-24	.19
12902	5/8	1/4	1/8	2	1 9/16	15/16	1/4-20	.22
12903	9/16	1/4	1/8	2 1/2	1 9/16	1 3/16	1/4-20	.25

Miniature Radius



A light-duty clamp assembly for clamping close to the edge. Complete with radius strap, double jam nuts with spherical washers, finger tip, quick-action knurled thumb screw heel rest, stud, spring and washer. The latter allows free swinging and lateral adjustments for easier set-ups.

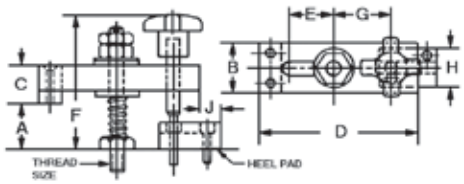


Part Number	A	B	C	D	E	F	G	Thread Size	Wt. (lbs)
13101	1/2	1/2	1/4	1 1/2	7/16	1 9/16	9/16	10-24	.20
13102	1/2	1/2	1/4	1 3/4	9/16	1 9/16	11/16	10-24	.22
13103	1/2	1/2	1/4	2	11/16	1 9/16	13/16	10-24	.24

Heel Pad



In one movement this clamp assembly can be moved into place and tightened; recommended where hand pressure clamping is suitable for the application.

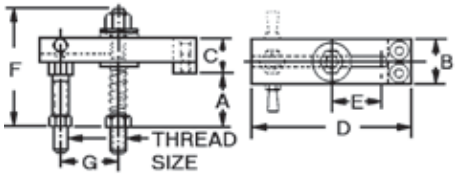


Part Number	A	B	C	D	E	F	G	H	Heel Pad	J	Thread Size	Wt. (lbs)
13301	5/8	5/8	1/2	2	5/8	1 15/16	25/32	3/4	13701	1/2	1/4-20	.38
13312	9/16	7/8	11/16	2 1/2	3/4	2 9/16	15/16	1	13703	5/8	5/16-18	.69
13306	13/16	1 1/4	7/8	3 1/2	1	2 7/8	1 7/16	1	13703	1/2	3/8-16	1.38
13308	13/16	1 1/4	7/8	4 1/2	1 5/8	2 7/8	1 13/16	1	13703	1/2	3/8-16	1.68
13313	1 1/4	1 1/2	1	4 1/2	1 1/4	3 7/8	1 15/16	1 1/2	13705	1 1/8	1/2-13	2.20

Clamp Assemblies

Flange Nut





Use where great clamping pressures are needed and vibration is a problem.

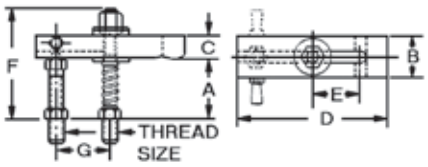
Heavy-duty clamping with spherical flange nut and spherical washer for greater flexibility. Extra long, true milled slot allows more clearance for placing and removing work. Brass and plastic pads are available, see page 243.

Part Number	A	B	C	D	E	F	G*	Thread Size	Wt. (lbs)
12701†	3/4	5/8	1/2	2	5/8	1 5/8	7/8	1/4-20	.27
12703	1 1/2	1 1/4	7/8	3 1/2	1 1/8	2 15/16	1 7/16	3/8-16	1.12
12705	1 1/2	1 1/4	7/8	4 1/2	1 5/8	2 15/16	1 15/16	3/8-16	1.38
12707	1 1/8	1 1/2	1 1/8	4 1/2	1 1/4	3	2 1/8	1/2-13	2.12
12710	1 1/8	1 1/2	1 1/8	6	2	3	2 7/8	1/2-13	2.62
12711	2 5/8	1 3/4	1 3/8	5	1 1/2	5 1/16	2 1/8	5/8-11	3.50
12713	2 5/8	1 3/4	1 3/8	7	2 1/2	5 1/16	3 1/8	5/8-11	4.12
12714	1 3/4	1 3/4	1 1/2	5	1 1/2	4 3/8	2 1/8	3/4-10	4.12
12716	1 3/4	1 3/4	1 1/2	7	2 1/2	4 3/8	3 1/8	3/4-10	4.87

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 242.

Radius End Flange Nut





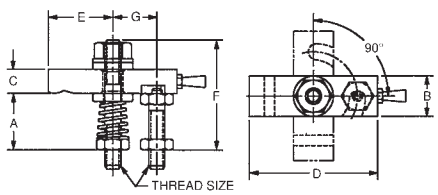
Heavy-duty clamping of plain surfaces with spherical flange nut and spherical washer for angular flexibility. Long, true milled slot allows greater clearance for placing and removing work. Spring-loaded stud for quick release.

Part Number	A	B	C	D	E	F	G*	Thread Size	Wt. (lbs)
14103†	7/8	5/8	3/8	2	5/8	1 5/8	7/8	1/4-20	.25
14104†	7/8	5/8	3/8	2 1/2	1	1 5/8	7/8	1/4-20	.28
14117†	1 1/8	7/8	1/2	2 1/2	3/4	2 1/4	15/16	5/16-18	.75
14118†	1 1/8	7/8	1/2	3 1/2	1 1/4	2 1/4	15/16	5/16-18	.85
14105	1 3/4	1 1/4	5/8	3 1/2	1 1/8	2 15/16	1 7/16	3/8-16	1.10
14119	1 3/4	1 1/4	5/8	4 1/2	1 5/8	2 15/16	1 7/16	3/8-16	1.20
14108	1 1/2	1 1/2	3/4	4 1/2	1 1/4	3	1 7/8	1/2-13	2.00
14110	1 1/2	1 1/2	3/4	6	1 1/2	3	1 7/8	1/2-13	2.44
14111	3 1/8	1 3/4	7/8	5	1 1/2	5 1/16	2	5/8-11	3.25
14113	3 1/8	1 3/4	7/8	7	2 1/2	5 1/16	2	5/8-11	3.88
14114	2 1/4	1 3/4	1	5	1 1/2	4 3/8	2 1/8	3/4-10	3.88
14116	2 1/4	1 3/4	1	7	2 1/2	4 3/8	2 1/8	3/4-10	4.85

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 242.

Radius Swing Clamp





Features fast-action, light-duty holding of plain surface work where quick movements are required in a restricted space. Radial milled slots allows for 90° swing. Ideally suited for placing and removing workpiece.

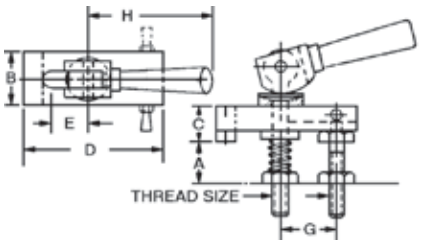
Part Number	Thread Size	A	B	C	D	E	F	G	Wt. (lbs)
14123*	1/4-20	7/8	5/8	3/8	2	1	1 5/8	11/16	.25
14125	3/8-16	1 3/4	1 1/4	5/8	3 1/2	1 1/2	2 15/16	1 1/4	1.10
14128	1/2-13	1 1/2	1 1/2	3/4	4 1/2	1 13/16	3	1 15/16	2.00
14131	5/8-11	3 1/8	1 3/4	7/8	5	2 1/16	5 1/16	2 3/16	3.25
14134	3/4-10	2 1/4	1 3/4	1	5	2 1/16	4 3/8	2 3/16	3.88

*Does not include finger handle. See page 242.

Clamp Assemblies

Double Cam





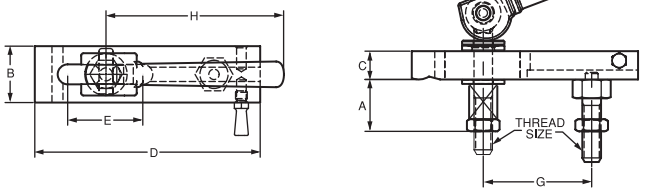
Features fast-action, light-duty holding of plain surface work where quick movements are required in a restricted space. Long end slot for lateral adjustment. Spring-loaded stud member under sturdy double-cam lever. Plastic and brass pads available for protecting workpiece, see page 243.

Part Number	A	B	C	D	E	G*	H	Thread Size	Wt. (lbs)
12501†	5/8	5/8	1/2	2	5/8	7/8	2 1/2	1/4-20	.40
12502	1 5/16	1 1/4	7/8	3 1/2	1 1/8	1 7/16	3 7/16	3/8-16	1.50
12503	1	1 1/2	1 1/8	4 1/2	1 1/4	1 7/8	5	1/2-13	3.00
12504	2 1/8	1 3/4	1 3/8	5	1 1/2	1 15/16	5 1/16	5/8-11	4.70

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 242.

Double Cam Clamp Assemblies W/Radius Nose Strap





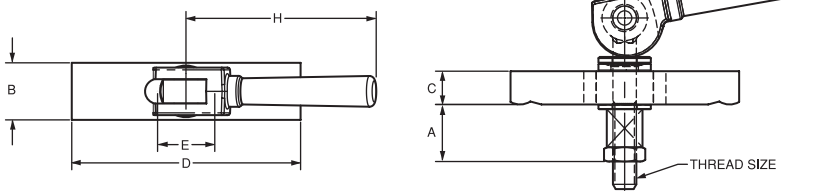
Same fast-action as Standard Double Cam Clamp but with a radius strap.

Part Number	A	B	C	D	E	G*	H	Thread Size	Wt. (lbs)
12511†	3/4	5/8	3/8	2	5/8	7/8	2 1/2	1/4-20	0.35
12512†	3/4	5/8	3/8	2 1/2	1	7/8	2 1/2	1/4-20	0.40
12513†	1 1/8	7/8	1/2	2 1/2	3/4	1 1/4	3 7/16	5/16-18	1.25
12514†	1 1/8	7/8	1/2	3 1/2	1 1/4	1 1/4	3 7/16	5/16-18	1.40
12515	1 1/2	1 1/4	5/8	3 1/2	1 1/8	1 7/16	3 7/16	3/8-16	1.50
12516	1 1/2	1 1/4	5/8	4 1/2	1 5/8	1 7/16	3 7/16	3/8-16	1.80
12517	1 3/8	1 1/2	3/4	4 1/2	1 1/4	1 7/8	5	1/2-13	3.00
12518	1 3/8	1 1/2	3/4	6	2	1 7/8	5	1/2-13	3.40
12519	1 5/8	1 3/4	7/8	5	1 1/2	1 15/16	5 1/16	5/8-11	4.70

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 242.

Double Cam Clamp Assemblies W/Double End Radius Nose Strap





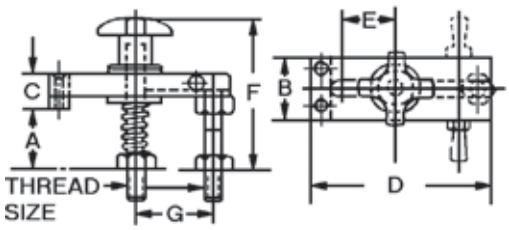
Double Cam Clamp featuring a radius at both ends of the strap.

Part Number	A	B	C	D	E	H	Thread Size	Wt. (lbs)
12523	1 3/8	1 1/2	3/4	4	1 1/4	5	1/2-13	2.50
12524	1 3/8	1 1/2	3/4	5	1 1/4	5	1/2-13	3.00
12526	1 5/8	1 5/8	7/8	6	1 1/2	5 1/16	5/8-11	5.30

Clamp Assemblies

Knob





Designed for light-duty clamping, the hand knob eliminates wrenching for faster work changes. Spherical washer allows for clamping irregular surfaces.

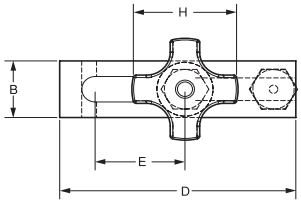
- Interchangeable pad option
- Steel pad standard, brass and plastic pads are available, see page 243
- Pads machinable to part configuration

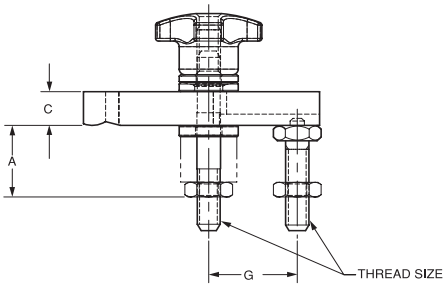
Part Number	A	B	C	D	E	F	G*	Thread Size	Wt. (lbs)
13501†	3/4	5/8	1/2	2	5/8	2 5/16	1	1/4-20	.35
13503	1 1/2	1 1/4	7/8	3 1/2	1 1/8	3 19/32	1 7/16	3/8-16	1.22

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 242.

Knob Clamp Assemblies W/Radius Nose Strap







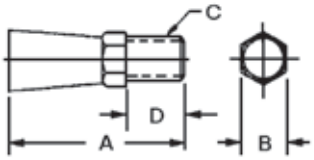
Part Number	A	B	C	D	E	G*	H	Thread Size	Wt. (lbs)
13512†	7/8	5/8	3/8	2 1/2	1	2 1/4	7/8	1/4-20	.32
13515	1 3/4	1 1/4	5/8	3 1/2	1 1/8	3 1/2	1 7/16	3/8-16	1.10
13516	1 3/4	1 1/4	5/8	4 1/2	1 5/8	3 1/2	1 7/16	3/8-16	1.30

*G dimension represents an optimum dimension.
† Does not include finger handle. See page 242.

Clamp Assemblies Components

Finger Handles



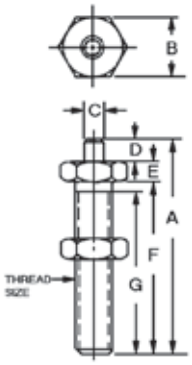


Part Number	A	B	C	D	Wt. (lbs) 10 Pcs.
19501	3/4	1/4	10-32	1/4	.08
19502	1 3/16	3/8	5/16-18	5/16	.31

- Material: Low Carbon Steel
- Finish: Black Oxide

Clamp Rests

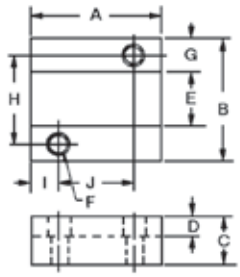




- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2A-UNC

Part Number	A	B	C	D	E	F	G	Thread Size	Wt. (lbs) 10 Pcs.
21301	3/4	3/8	5/32	5/64	11/64	1/2	13/32	10-24	.19
21302	1 1/4	7/16	5/32	5/64	11/64	1	29/32	1/4-20	.22
21307	1 7/8	1/2	7/32	3/16	7/32	1 15/32	1 5/16	5/16-18	.60
21308	3 1/4	1/2	7/32	3/16	7/32	2 27/32	2 11/16	5/16-18	1.25
21303	2 1/2	9/16	11/32	5/32	11/32	2	1 13/16	3/8-16	.70
21313	3 7/8	9/16	11/32	5/32	11/32	3 3/8	3 3/16	3/8-16	2.80
21304	2 3/8	7/8	11/32	3/16	1/2	1 11/16	1 1/2	1/2-13	1.88
21314	3 7/8	7/8	11/32	3/16	1/2	3 3/16	3	1/2-13	3.50
21315	2 5/8	7/8	11/32	3/16	1/2	1 15/16	1 11/16	5/8-11	2.25
21305	3 27/32	7/8	11/32	3/16	1/2	3 5/32	2 15/16	5/8-11	3.60
21316	2 3/4	7/8	11/32	3/16	1/2	2 1/16	1 7/8	3/4-10	2.75
21306	3 1/2	7/8	11/32	3/16	1/2	2 13/16	2 3/8	3/4-10	4.70

Clamp Assembly Guide Blocks



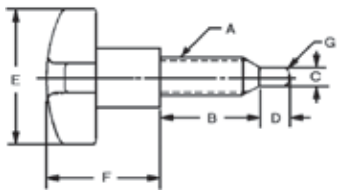
Part Number	A	B	C	D	E	Soc. Hd. Cap F	G	H	I	J	Wt. (lbs) 10 Pcs.
13701	7/8	3/4	5/16	1/8	7/32	5-40	1/8	1/2	3/16	1/2	.06
13703	1 1/8	1	1/2	3/16	9/32	8-32	3/16	5/8	1/4	5/8	.12
13705	1 5/8	1 1/2	5/8	1/4	13/32	1/4-20	1/4	1	3/8	7/8	.38

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened 74-77 R30N
- Mounting Screws Supplied with Heel.

Hand Knob Screws



- Material: Stem, Stressproof®
  Head, Cast Iron
- Finish: Stem, Black Oxide
  Head, Zinc Plate
- Thread: 2A-UNC

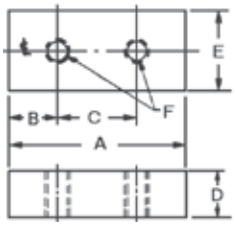


Part Number	A	B	C	D	E	F	Radius G	Wt. (lbs) 10 Pcs.
13901	1/4-20	3/4	11/64	1/4	1 1/8	7/8	1/8	.78
13902	5/16-18	1 1/16	7/32	5/16	1 1/2	1	1/4	1.57
13903	3/8-16	1 3/16	1/4	5/16	2	1 1/8	1/4	1.87
13904	1/2-13	1 5/8	3/8	3/8	2 1/2	1 1/2	3/8	4.00
13905	5/8-11	1 3/4	15/32	3/8	3	2	3/8	12.50

Designed for applications where thumb screws are too light, and a heavier, larger unit is needed. Cast iron knob, dog point end.

Strap Pads-Steel, Plastic & Brass





- Material: Steel, Low Carbon Steel
  Plastic, Paper Filled Bakelite
  Brass
- Finish: Steel Pad Only, Black Oxide
- Heat Treat: Steel Pad Only,
  Case Hardened 74-77 R30N

Plastic Pads
Resistant to oil and cutting fluids, allows high clamping pressures, yet protects the soft materials from being scratched or marred.

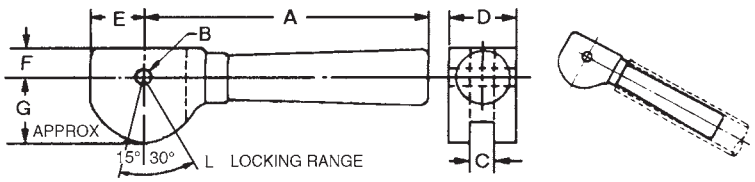
Steel Pads		Plastic Pads		Brass Pads							
Part Number	Wt. (lbs) 10 Pcs.	Part Number	Wt. (lbs) 10 Pcs.	Part Number	Wt. (lbs) 10 Pcs.	A	B	C	D	E	F
17101	.05	**17102**	.02	**17103**	.06	5/8	9/64	11/32	1/8	1/4	5-40
17104	.16	**17105**	.03	**17106**	.18	7/8	3/16	1/2	3/16	3/8	8-32
17107	.40	**17108**	.08	**17109**	.43	1 1/4	5/16	5/8	1/4	1/2	10-24
17110	.90	**17111**	.16	**17112**	.93	1 1/2	3/8	3/4	3/8	5/8	1/4-20
17113	1.50	—	—	—	—	1 3/4	1/2	3/4	1/2	3/4	1/4-20

Double Cams



Slip standard pipe over handle for more leverage. Snug fit at handle collar and end.

- Finish: Black Oxide
- Material: C1020
- Heat Treat: Case Hardened 74-77 R30N

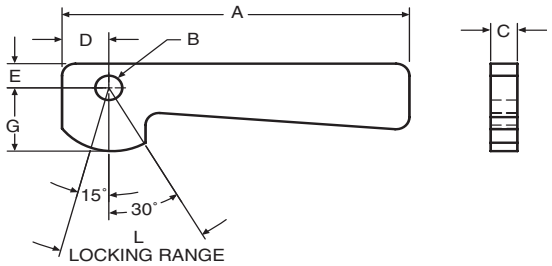


Forged, heat-treated for abrasion-resistance and longer life. Designed for quick change clamping which requires greater holding pressures than are available with single cams. Mean clamping point pressure angle is from 3 1/2° to 4°, which makes for stronger workholding.

Part Number	A	B	C	D	E	F	G	L	Wt. (lbs)
18101	2 1/2	3/16	17/64	5/8	3/8	1/4	.437	.015	.14
18102	3 7/16	5/16	25/64	7/8	19/32	23/64	.679	.019	.34
18103	5	3/8	33/64	1 1/8	5/8	15/32	.755	.031	.83
18104	5 1/16	5/8	41/64	1 1/4	7/8	5/8	1.040	.043	1.00

Single Cams





- Finish: Black Oxide
- Material: 1018
- Heat Treat: Case Hardened Rc 58-62

Part Number	A	B	C	D	E	G	L	Wt. (lbs)
12101	2 3/8	5/32	3/16	3/8	3/16	17/32	.015	0.62
12102	3 1/4	1/4	1/4	7/16	1/4	21/32	.022	1.40
12103	4 1/2	5/16	3/8	3/4	3/8	29/32	.031	4.00
12104	5	3/8	1/2	7/8	7/16	1 5/64	.031	6.90

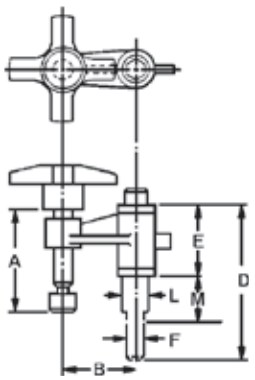
Revolving Clamp Assemblies

Quick hold-down of workpiece with hand tightening, then loosen and revolve out of the way. Saves time for moderate-duty clamping.

Malleable cast iron body. Case-hardened swivel pad uses "tru-center" feature to maintain even, in-line pressure on workpiece.

Long Bushing Type



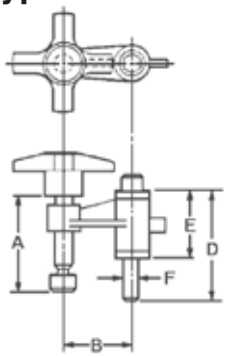


- Body Material: Malleable ASTM A47, GR32510
- Finish: Black Oxide
- Bushings: Hardened & Ground Rc 56-60

Part Number	A	B	D	E	F	L	M	Wt. (lbs)
35119	2	1 1/2	3	1 1/2	5/16-18	.5610/ .5595	5/8	0.8
35103	2	1 1/2	3 1/4	1 1/2	3/8-16	.6235/ .6220	3/4	0.8
35116	3 3/8	3	5	2 1/4	1/2-13	.8735/ .8720	1 1/4	4.5
35106	3 3/4	3	5	2 1/4	5/8-11	1.1235/ 1.1220	1 1/2	4.8
35109	3 3/4	4	5	2 1/4	5/8-11	1.1235/ 1.1220	1 1/2	5.0

Short Bushing Type





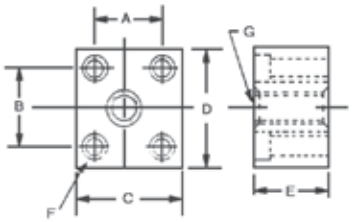
- Body Material: Malleable ASTM A47, GR32510
- Finish: Black Oxide
- Bushings: Hardened & Ground Rc 56-60

Part Number								
Clamp Only	Clamp w/ Base	A	B	D	E	F	Wt. (lbs)	Base Part Number
35117	**35118**	2	1 1/2	2	1 1/2	5/16-18	0.7	**35113**
35101	**35102**	2	1 1/2	3 1/4	1 1/2	3/8-16	0.7	**35110**
35114	**35115**	3 3/8	3	5	2 1/4	1/2-13	4.3	**35112**
35104	**35105**	3 3/4	3	3	2 1/4	5/8-11	4.5	**35111**
35107	**35108**	3 3/4	4	5	2 1/4	5/8-11	4.8	**35111**

Revolving Clamp Base

(for use with Short Bushing Type only)



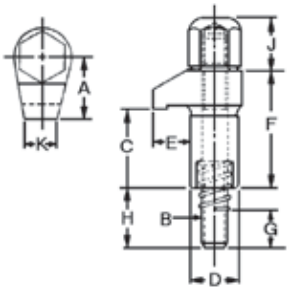


- Stop pin supplied with each base.

Part Number	A	B	C	D	E	F	Mtg. Bold Size G	Wt (lbs)
35113	3/4	1	1 7/16	1 1/2	1	#10	5/16-18	0.5
35110	7/8	1	1 7/16	1 1/2	1	#10	3/8-16	0.6
35112	1 1/8	1 3/8	2 1/4	2 1/4	1 1/4	1/4	1/2-13	1.2
35111	1 1/4	1 1/2	2 1/4	2 1/4	1 1/4	3/8	5/8-11	1.7

Hook Clamp Assemblies





Moderate to heavy-duty holding power in close quarters. When released, the hook clamp swings quickly and easily out of the way for fast maneuvering of work. Spring-loaded shank for speedy clamp release.

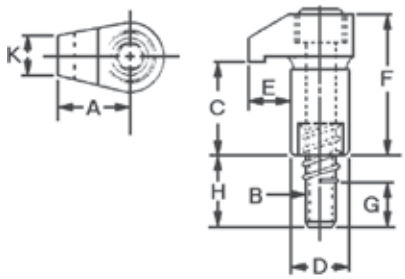
- Material: Cast Steel Body, 4140
- Finish: Black Oxide
- Heat Treat: Rc 42-46
- Stud: Furnished

Part Number	A	Stud Size B	C	D	E	F	G	H	J	K	Wt. (lbs)	Max. Torque (Ft/lbs)
41901*	11/16	5/16-18 x 2 1/2	7/8	.624/.625	3/8	1 3/8	5/16	3/4	5/8	3/8	.21	25
41908	1	3/8-16 x 4	1 5/8	.874/.875	9/16	2 1/4	3/4	1 1/4	3/4	5/8	.59	40
41902*	1	1/2-13 x 4	1 5/8	.874/.875	9/16	2 1/4	5/8	1 1/8	15/16	5/8	.64	100
41903	1 7/16	5/8-11 x 5	1 13/16	1.124/1.125	7/8	2 3/4	7/8	1 3/8	1 3/16	3/4	1.38	180

*Conforms to TCMA

Hook Clamp Assemblies





Alternative to the above assembly, features flush-mounted socket screw instead of acorn nut. Designed for limited space applications and moderate holding power.

- Material: Cast Steel Body, 4140
- Finish: Black Oxide
- Heat Treat: Rc 42-46
- Screw: Furnished

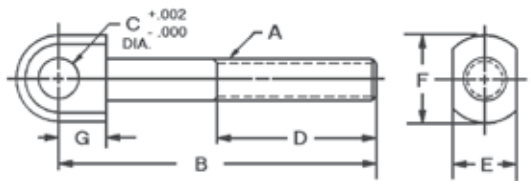
Part Number	A	Cap Screw B	C	D	E	F	G	H	K	Wt. (lbs)	Max. Torque (Ft/lbs)
41904*	11/16	5/16-18 x 1 3/4	7/8	.624/.625	3/8	1 3/8	1/4	5/8	3/8	.14	25
41905*	1	3/8-16 x 3	1 5/8	.874/.875	9/16	2 1/4	5/8	1 1/16	5/8	.44	40
41907	1	1/2-13 x 3	1 5/8	.874/.875	9/16	2 1/4	5/8	1 1/8	5/8	.47	100
41906	1 7/16	5/8-11 x 3 1/2	1 13/16	1.124/1.125	7/8	2 3/4	13/16	1 9/16	3/4	1.00	180

*Conforms to TCMA

Swing Bolts (Latch Bolt)



- Material: 4140
- Finish: Black Oxide
- Heat Treat: Rc 36-40
- Thread: Class 2A-UNC



Part Number	Thread Size A	B	C	D	E	F	G	Wt. (lbs) 10 Pcs.
29501*	3/8-16	2 1/2	3/8	1 3/8	1/2	3/4	3/8	.93
29502	3/8-16	3 1/4	3/8	1 3/4	1/2	3/4	3/8	1.25
29513	1/2-13	2 5/8	3/8	1 1/2	5/8	1	7/16	1.95
29504*	1/2-13	3 1/8	1/2	1 3/4	5/8	1	7/16	2.04
29505	1/2-13	4 1/8	1/2	2 1/4	5/8	1	7/16	2.64
29516	5/8-11	3 3/4	1/2	2	3/4	1 1/8	1/2	3.64
29507	5/8-11	3 1/2	5/8	1 3/4	3/4	1 1/8	1/2	3.67
29508	5/8-11	4 3/4	5/8	2 1/2	3/4	1 1/8	1/2	4.75
29509	3/4-10	4 3/8	3/4	2 1/2	7/8	1 3/8	11/16	6.10
29510	3/4-10	6 1/2	3/4	3 1/4	7/8	1 3/8	11/16	8.85

*Conforms to TCMA.

Not to be used for lifting.

Swing Bolts (Latch Bolt)
Stainless Steel

- Material: 303 Stainless
- Thread: Class 2A-UNC

Part Number	Thread Size A	B	C	D	E	F	G	Wt. (lbs) 10 Pcs.
29601	3/8-16	2 1/2	3/8	1 3/8	1/2	3/4	1/2	1.1
29602	3/8-16	3 1/2	3/8	2	1/2	3/4	1/2	1.4
29603	1/2-13	3 1/8	1/2	1 5/8	5/8	1	5/8	2.6
29604	1/2-13	4-1/8	1/2	2 1/2	5/8	1	5/8	3.0
29605	5/8-11	3 1/2	5/8	1 5/8	3/4	1 1/4	3/4	4.6
29606	5/8-11	4 3/4	5/8	2 1/2	3/4	1 1/4	3/4	5.5

*B dimension indicates minimum length.

Not to be used for lifting.

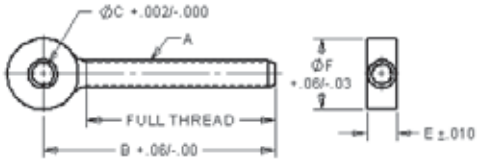
Rod Ends
Threaded



- Material: Alloy Steel
- Finish: Black Oxide
- Heat Treat: 32-36 Rc
- Thread: Class 2A-UNC

* 150,000 PSI Tensile

Rod Ends are forged and finished for applications not requiring flat contact with the head. All holes are reamed. Rod Ends can be used with spherical flange assemblies, flange nuts and clamp assemblies.



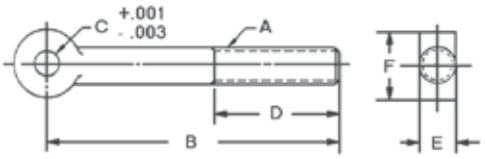
Part Thread Number	A	B	C	E	F	Wt. (lbs)
35301*	1/4-20	2	3/16	1/4	39/64	.04
35302	1/4-20	2	1/4	1/4	–	.03
35318*	5/16-18	3	1/4	5/16	43/64	.08
35319*	5/16-18	3	5/16	5/16	–	.08
35303*	3/8-16	3	5/16	3/8	13/16	.11
35320	3/8-16	4	5/16	3/8	–	.11
35304	3/8-16	2 3/16	3/8	3/8	–	.08
35305*	3/8-16	3	3/8	3/8	–	.11
35306*	3/8-16	5	3/8	3/8	–	.12
35307*	1/2-13	3 3/4	3/8	1/2	1 1/32	.25
35308	1/2-13	2 11/16	1/2	1/2	–	.19
35309	1/2-13	3 3/4	1/2	1/2	–	.24
35310	1/2-13	5	1/2	1/2	–	.31
35311	5/8-11	3 11/16	5/8	5/8	1 5/16	.40
35312*	5/8-11	4 1/2	5/8	5/8	–	.46
35314*	5/8-11	6	5/8	5/8	–	.60
35315*	3/4-10	4 1/2	3/4	3/4	1 9/16	.73
35321*	3/4-10	6	3/4	3/4	–	1.00
35317	1-8	8	1	1	2 3/32	2.25

***Not to be used for lifting.**

Rod Ends
Stainless Steel



- Material: 303 Stainless
- Thread Class 2A-UNC

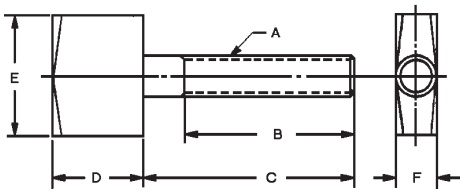


Part Number	Ref. A	B	Ref. C	D	E	F
35721	1/4-20	2 1/8	3/16	7/8	1/4	1/2
35722	1/4-20	2 1/8	1/4	7/8	1/4	1/2
35723	5/16-18	3 1/2	1/4	1 1/2	5/16	5/8
35724	5/16-18	3 1/2	5/16	1 1/2	5/16	5/8
35725	3/8-16	3 1/2	3/8	1 1/2	3/8	3/4
35726	3/8-16	5	3/8	2 1/2	3/8	3/4
35727	1/2-13	3 3/4	1/2	1 1/2	1/2	1
35728	1/2-13	5	1/2	2	1/2	1
35729	5/8-11	4 1/2	5/8	2	5/8	1 1/4
35730	5/8-11	6	5/8	3	5/8	1 1/4
35731	3/4-10	4 1/2	3/4	2	3/4	1 1/2
35732	3/4-10	6	3/4	2 1/2	3/4	1 1/2

Not to be used for lifting.

Quarter Turn Screws





The diamond on all four corners of the Jergens Quarter Turn and Half Turn Screws, makes the opening and closing of jig lids easier. Ideally suited for clamping lids, covers and swing-away type bushing arms. Quarter Turn and Half Turn Screws may be machined for finishing requirements.

Part Number	A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
34501*	10-32	7/8	1	1/2	1/2	3/16	.31
34502*	1/4-20	1	1 1/4	5/8	3/4	1/4	.47
34503	1/4-20	1 1/2	1 3/4	5/8	3/4	1/4	.48
34504*	5/16-18	1 1/4	1 1/2	3/4	1	5/16	.90
34505	5/16-18	1 3/4	2	3/4	1	5/16	1.10
34506*	3/8-16	1 1/4	1 1/2	1	1	3/8	1.25
34507	3/8-16	1 3/4	2	1	1	3/8	1.45
34508*	1/2-13	1 1/2	1 3/4	1	1 1/4	1/2	2.35
34509	1/2-13	2	2 1/4	1	1 1/4	1/2	2.65

*Conforms to TCMA

- Material: Stem, Low Carbon Steel
  Head, Low Carbon Steel
- Finish: Black Oxide
- Thread: 2A-UNC (inch); Class 6g (Metric)
  2A-UNF (10-32)

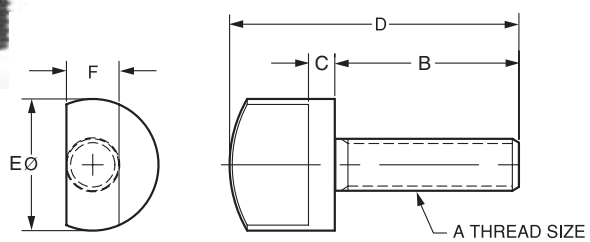
Part Number	A	B	C	D	E	F	Wt. (kg) 10 Pcs.
34571	M5 x 0.8	22	25	13	13	5	.14
34573	M6 x 1.0	25	32	16	19	6	.21
34575	M8 x 1.25	32	38	19	25	8	.41
34577	M10 x 1.5	32	38	25	25	10	.57
34579	M12 x 1.75	38	44	25	32	13	1.06

Half Turn Screws



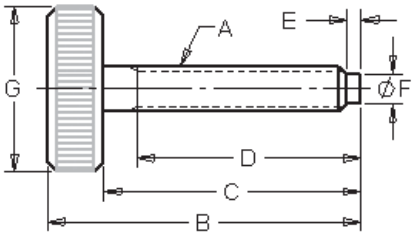
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 2A-UNF (10-32)
  2A-UNC (other sizes)

Part Number	Thread A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
34521	10-32	1	3/16	1-11/16	3/4	3/16	.3
34522	1/4-20	1-1/4	3/16	2	3/4	1/4	.3
34523	5/16-18	1-1/4	3/16	2-1/16	1	5/16	.3
34524	3/8-16	1-3/4	1/4	1-11/16	1-1/16	3/8	.3
34525	1/2-13	1-3/4	1/4	2-3/4	1-1/4	1/2	.3



Screws
Thumb Screws





- Materials: 1215 Steel with black oxide finish, 303 Stainless
- Thread: 2A-UNC
  2A-UNF (10-32)

The half-dog point protects the threads in case of peening.

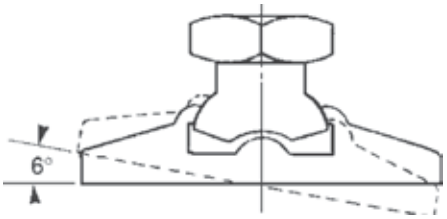
Part No. Steel	Part No. Stainless	A	B	C	D	E	F	G	Wt. (lbs)
43901	—	10-24	1 9/16	1 1/4	1 1/16	3/64	1/8	3/4	.44
43902	—	10-24	1 5/16	1 5/8	1 7/16	3/64	1/8	3/4	.47
43903*	—	10-24	2 5/16	2	1 13/16	3/64	1/8	3/4	.48
—	**44001**	10-32	1 3/16	1	3/4	7/32	3/16	3/4	.45
—	**44002**	10-32	1 7/16	1 1/4	1	7/32	3/16	3/4	.45
43900	—	10-32	1-3/4	1 1/2	1 3/8	7/32	3/16	3/4	.45
—	**44004**	1/4-20	1 5/16	1	25/32	3/32	11/64	1	.75
43904*	**44005***	1/4-20	1 13/16	1 1/2	1 1/4	1/16	5/32	1	.78
43905*	**44006**	1/4-20	2 5/16	2	1 3/4	1/16	5/32	1	.86
43906*	—	1/4-20	2 13/16	2 1/2	2 1/4	1/16	5/32	1	.91
43907	**44008**	5/16-18	2 1/8	1 3/4	1 7/16	5/64	13/64	1 1/8	1.30
43908	**44009**	5/16-18	2 5/8	2 1/4	1 15/16	5/64	13/64	1 1/8	1.36
43909	**44010**	5/16-18	3 1/8	2 3/4	2 7/16	5/64	13/64	1 1/8	1.50
43910*	**44011**	3/8-16	2 7/16	2	1 5/8	3/32	1/4	1 1/4	1.93
43911*	**44012***	3/8-16	2 15/16	2 1/2	2 1/8	3/32	1/4	1 1/4	2.00
43912*	**44013***	3/8-16	3 7/16	3	2 5/8	3/32	1/4	1 1/4	2.20
43913	—	1/2-13	2 15/16	2 1/2	2 1/8	1/8	11/32	1 1/4	2.55
—	**44014**	1/2-13	3	2 1/2	2	1/4	3/8	1 1/4	2.55
43914*	—	1/2-13	3 7/16	3	2 5/8	1/8	11/32	1 1/4	2.80
—	**44015**	1/2-13	3 1/2	3	2 1/2	1/4	3/8	1 1/4	3.00
43915*	—	1/2-13	3 15/16	3 1/2	3 1/8	1/8	11/32	1 1/4	3.10
—	**44016**	1/2-13	4	3 1/2	3	1/4	3/8	1 1/4	3.10

* Conforms to TCMA

Metric

Part Number	A	B	C	D	E	F	G	Wt. (Kg)
43971	M5x0.8	30	25	20	1.2	3	20	0.20
43972	M5x0.8	45	40	35	1.2	3	20	0.21
43973	M5x0.8	55	50	45	1.2	3	20	0.22
43974	M 6 x 1.0	50	40	35	1.5	4	25	0.35
43975	M 6 x 1.0	60	50	45	1.5	4	25	0.39
43976	M 6 x 1.0	75	65	55	1.5	4	25	0.41
43977	M8 x 1.25	50	40	35	2.4	5	30	0.59
43978	M8 x 1.25	60	50	45	2.4	5	30	0.62
43979	M8 x 1.25	75	65	60	2.4	5	30	0.68
43980	M10 x 1.5	60	50	45	2.4	6	30	0.88
43981	M10 x 1.5	75	65	60	2.4	6	30	0.91
43982	M10 x 1.5	85	75	70	2.4	6	30	1.00
43983	M 12 x 1.75	90	75	70	3	11	30	1.27
43984	M 12 x 1.75	105	90	85	3	11	30	1.41
43985	M 12 x 1.75	80	65	55	3	11	30	1.25

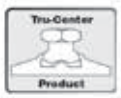
Tru-Center™ Toggle Products



The Jergens patented "Tru-Center" products are the only pad type on the market to provide true center line clamping. The cut-away drawing illustrates how this works. The center line of the pad and the center line of the nut always intersect at the point of contact between the pad and the workpiece.

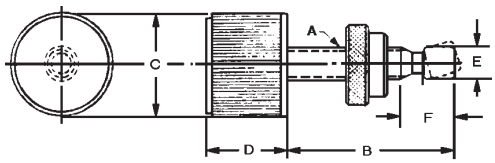
Adjustable Torque Toggle Screws





Perfect for delicate and fine clamping. Once the end holding force is reached, the head breaks free. Larger radius, straight knurled head for easy turning.

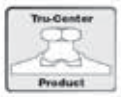
- Material: Stem, Stressproof®
  Pad, 4140
- Finish: Stem, Black Oxide
  Head, Chrome Plate
- Thread: 2A-UNC
- Pad: Angular movement either side of center (total 16°)



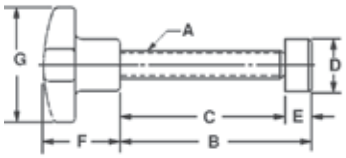
Part Number	A	B	C	D	E	F	End Force (lbs)	Wt. (lbs) 10 Pcs.
31101	10-24	1 1/4	1	23/32	.140	3/16	0-50	1.7
31102	1/4-20	1 1/2	1	23/32	.185	15/64	0-50	1.7
31103	1/4-20	2 1/2	1	23/32	.185	15/64	0-50	1.8
31104	5/16-18	1 3/4	1	23/32	.240	9/32	0-50	1.9
31105	5/16-18	2 3/4	1	23/32	.240	9/32	0-50	2.1
31106	3/8-16	2	1 1/4	25/32	.294	11/32	0-60	3.0
31107	1/2-13	3	1 1/4	25/32	.400	7/16	0-60	4.2

Hand Knob Toggle Screws





For clamping of irregular surfaces while the swivel shoe prevents marring of polished surfaces. Shoe is hardened for longer life. The cast iron hand knob is included for hand tightening. To remove pad for installation, pull and turn counter-clockwise.



- Material: Stem, Stressproof®
  Pad, 4140
  Head, Cast Iron
- Finish: Stem, Black Oxide
  Pad, Zinc Plate
  Head, Cadnium Plate
- Thread: 2A-UNC
- Pad: Angular movement either side of center (total 16°)

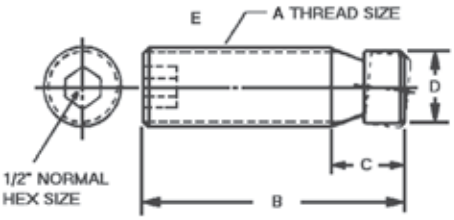
Part Number	A	B	C	D	E	F	G	Wt. (lbs) 10 Pcs.
36301	3/8-16	2	1 21/32	11/16	3/8	1 1/8	2	.21
36302	3/8-16	2 3/4	2 13/32	11/16	3/8	1 1/8	2	.24
36303	3/8-16	3 5/8	3 9/32	11/16	3/8	1 1/8	2	.25
36304	1/2-13	2 1/8	1 21/32	13/16	15/32	1 1/2	2 1/2	.44
36305	1/2-13	2 3/4	2 9/32	13/16	15/32	1 1/2	2 1/2	.48
36306	1/2-13	3 3/8	2 29/32	13/16	15/32	1 1/2	2 1/2	.52
36307	1/2-13	4	3 17/32	13/16	15/32	1 1/2	2 1/2	.55
36308	5/8-11	3	2 17/32	15/16	1/2	2	3	1.38
36309	5/8-11	3 3/4	3 9/32	15/16	1/2	2	3	1.50
36310	3/4-10	4 7/8	4 11/32	1 1/8	19/32	2	3	1.56

Tru-Center™ Toggle Products

Socket Toggle Screws



- Material: 4140
- Finish: Black Oxide
- Heat Treat: 38-42 Rc
- Screws may be inserted without removing pads.



Part Number	Thread Size A	B	C	D	E Hex Size	Wt. (lbs) 10 Pcs.
33301*	1/4-20	1/2	15/64	.185	1/8	.03
33302*	1/4-20	1	15/64	.185	1/8	.09
33303*	5/16-18	3/4	9/32	.240	5/32	.09
33304*	5/16-18	1 1/2	9/32	.240	5/32	.24
33305*	3/8-16	1	11/32	.294	3/16	.20
33306*	3/8-16	2	11/32	.294	3/16	.45
33307*	1/2-13	1	7/16	.400	1/4	.30
33308*	1/2-13	2	7/16	.400	1/4	.78
33310*	5/8-11	2	17/32	.507	5/16	1.25

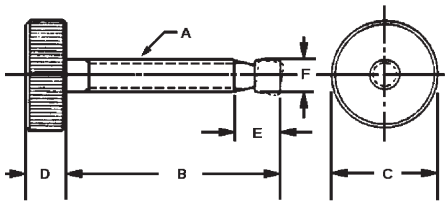
*Conforms to TCMA

Toggle Thumb Screws



Same as our standard Thumb Screw only with the addition of our patented swivel pad on the end.

- Material: Stem and Head 1215, Pad, 4140
- Finish: Black Oxide
- Thread: 2A-UNC



Part Number	Thread Size A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
33501	10-24	1	3/4	5/16	3/16	.140	.31
33502	10-24	1 1/2	3/4	5/16	3/16	.140	.47
33503*	1/4-20	1 1/2	1	5/16	15/64	.185	.78
33504*	1/4-20	2	1	5/16	15/64	.185	.94
33505*	5/16-18	1 1/2	1 1/8	3/8	9/32	.240	1.05
33506*	5/16-18	2	1 1/8	3/8	9/32	.240	1.25
33507*	5/16-18	2 1/2	1 1/8	3/8	9/32	.240	1.40
33508*	3/8-16	1 1/2	1 1/4	7/16	11/32	.294	1.70
33509*	3/8-16	2	1 1/4	7/16	11/32	.294	1.88
33510*	3/8-16	2 1/2	1 1/4	7/16	11/32	.294	2.04
33511*	3/8-16	3	1 1/4	7/16	11/32	.294	2.20

*Conforms to TCMA

Plastic Pad Covers



- Material: Nylon

Where soft material with fine finished surfaces must be clamped with relatively high pressures, we recommend the use of the Jergens Plastic Pad Covers. Resistant to oils and cutting compounds, they snap over the swivel end of our Hand KnobToggle Screws, Socket Toggle Screws, Toggle Thumb Screws, Toggle Pads and adjustable Torque Thumb Screws.

Part Number	To Fit Over O.D. of Pad	O.D. of Plastic Pad
32901	.140	.250
32902	.185	.250
32903	.240	.312
32904	.294	.375
32905	.400	.500

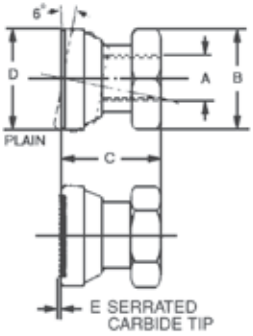
Part Number	To Fit Over O.D. of Pad	O.D. of Plastic Pad
32907	9/16	.625
32908	5/8	.750
32909	11/16	.875
32910	13/16	.937
32911	15/16	1.062

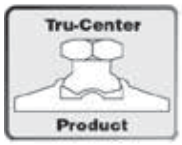
Plastic Pad Covers snap over outside diameter of Jergens swivel pads.

Tru-Center™ Toggle Products

Toggle Pads







Carbide Tipped Toggle Pads provide multiple point contact to compensate for surfaces that are rough or out-of-round. Points will embed themselves in the workpiece, which assures positive gripping. It eliminates possible radial load on the workpiece.

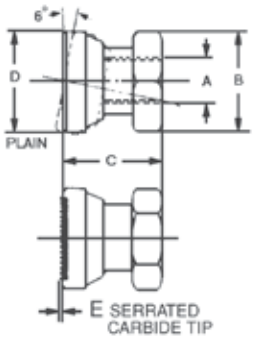
- Material: 4140 or Carbide Insert Tip
- Finish: Black Oxide
- Heat Treat: Plain Pad Rc 36-40
- Thread: 2B-UNC

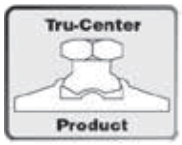
Part Number		Thread Size	Across Flats	Plain	Serrated			Wt. (lbs)
Plain	Serrated	A	B	C	C	D	E	10 Pcs.
43502	**43702**	1/4-20	1/2	1/2	9/16	9/16	.055	.20
43503	**43703**	5/16-18	9/16	11/16	3/4	5/8	.055	.28
43504	**43704**	3/8-16	5/8	53/64	3/4	11/16	.055	.41
43505	**43705**	1/2-13	3/4	7/8	15/16	13/16	.055	.62
43506	**43706**	5/8-11	7/8	1	1 1/32	15/16	.086	.94
43507*	**43707**	3/4-10	1 1/16	1 5/32	1 1/4	1 1/8	.086	1.60

*Plastic Pad is not available for this item.

Toggle Pads Metric







- Material: 4140 or Carbide Insert Tip
- Finish: Black Oxide
- Heat Treat: Plain Pad Rc36-40
- Thread class: 6h

Part Number		Thread Size	Across Flats	Plain	Serrated			Wt. (kg)
Plain	Serrated	A	B	C	C	D	E	10 Pcs.
43552	**43752**	M6 x 1.0	12	13	14.4	14	1.4	.09
43553	**43753**	M8 x 1.25	14	17	18.4	16	1.4	.13
43554	**43754**	M10 x 1.5	16	18	20.4	18	1.4	.19
43555	**43755**	M12 x 1.75	22	22	23.4	21	1.4	.28
43556	**43756**	M16 x 2.0	26	25	26.4	24	2.2	.43
43557	**43757**	M20 x 2.5	30	29	31.2	28	2.2	.73

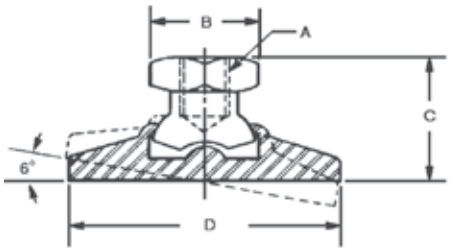
Note: Metric Toggle Pads have two flats instead of a hex configuration on the head.

Leveling Pads

Provides a greater surface area where heavy loads are to be applied or where heavy pressures must be exerted on flexible or softer materials. Pad face swivels and aligns with no damage to the uneven surfaces.

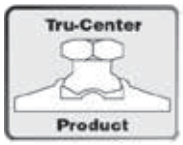
Tapped





SWIVELS 6° EACH SIDE OF CENTER

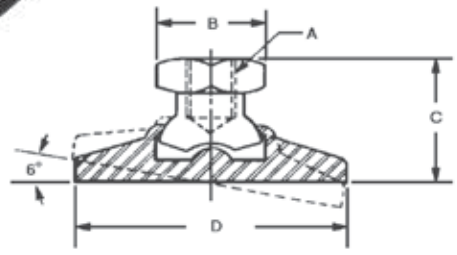
- Material: 4140
- Finish: Zinc Plated
- Heat Treat: Rc 36-40
- Thread: UNC-2B



Part Number	Thread Size A	Across Flats B	C	D	Load Capacity (lbs)	Wt. (lbs)
32501	3/8-16	5/8	3/4	1 1/4	2300	.10
32502	1/2-13	3/4	1	1 7/8	4200	.22
32503	5/8-11	7/8	1 1/8	2 1/4	6600	.42
32504	3/4-10	1 1/16	1 7/16	3	10,000	.84

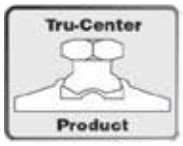
Metric Tapped





SWIVELS 6° EACH SIDE OF CENTER

- Material: 4140
- Finish: Zinc Plated
- Heat Treat: Rc36-40
- Thread class: 6h



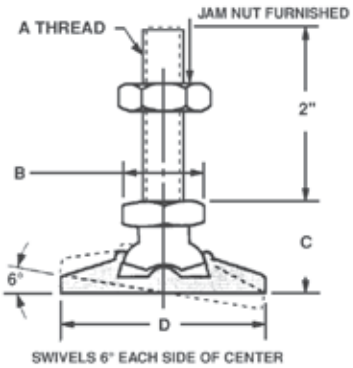
Part Number	Thread Size A	Across Flats B	C	D	Load Capacity (kg)	Wt. (kg)
32551	M10 x 1.5	16	21	32	1000	.05
32552	M12 x 1.75	22	27	48	1900	.10
32553	M16 x 2.0	26	31	57	2900	.19
32554	M20 x 2.5	30	39	76	4500	.38

Note: Metric Toggle Pads have two flats instead of a hex configuration on the head.

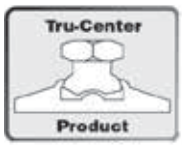
Leveling Pads

Threaded





- Material: 4140
- Finish: Zinc Plated Pad
- Heat Treat: Rc 36-40
- Thread: UNC-2A

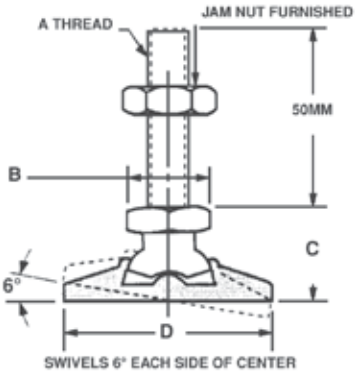


Part Number	Thread Size A	Across Flats B	C	D	Load Capacity (lbs)	Wt. (lbs)
32521	3/8-16	5/8	3/4	1 1/4	2300	.16
32522	1/2-13	3/4	1	1 7/8	4200	.37
32523	5/8-11	7/8	1 1/8	2 1/4	6600	.58
32524	3/4-10	1 1/16	1 7/16	3	10,000	1.22

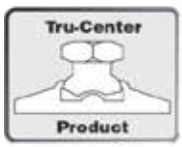
Jam nut is furnished.

Metric Threaded





- Material: 4140
- Finish: Zinc Plated
- Heat Treat: Rc36-40
- Thread class: 6g



Part Number	Thread Size A	Across Flats B	C	D	Load Capacity (kg)	Wt. (kg)
32571	M10 x 1.5	16	21	32	1000	.07
32572	M12 x 1.75	22	27	48	1900	.17
32573	M16 x 2.0	26	31	57	2900	.26
32574	M20 x 2.5	30	39	76	4500	.55

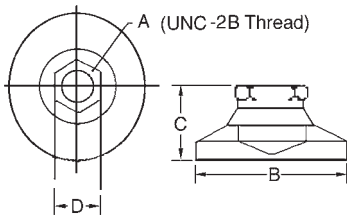
Note: Metric Toggle Pads have two flats instead of a hex configuration on the head.

Leveling Mounts

- Material: 1214 Steel
- Zinc-plated, yellow finish
- Non-Skid Material: Neoprene
- Case hardened, file hard
- Swivels 20°, ±10° from center in all directions
- Available with non-skid on base
- Available in stainless steel, or with a delrin pad, and in larger sizes upon request.

Tapped



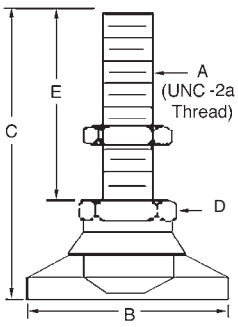


Part Number					Across Flats	Maximum Load (lbs)	
Standard	Non-skid	A	B	C*	D	Standard	Non-skid
32601	**32651**	10-32	3/4	17/32	3/8	700	550
32602	**32652**	1/4-20	1	45/64	1/2	1000	825
32606	**32656**	3/8-16	1 1/4	7/8	5/8	3750	2820
32608	**32658**	1/2-13	1 7/8	1 1/8	3/4	5000	3750
32610	**32660**	5/8-11	2 1/2	1 1/4	7/8	6000	5000
32612	**32662**	3/4-10	3	1 1/2	1 1/16	7400	6000
32616	**32666**	1-8	4	1 7/8	1 3/8	21000	16500

*Add 1/8" to C Dimension for non-skid style.

Threaded



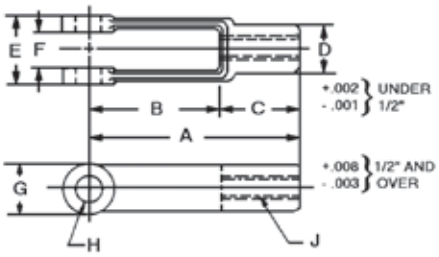


Part Number					Across Flats		Maximum Load (lbs)	
Standard	Non-skid	A	B	C*	D	E	Standard	Non-skid
32621	**32671**	10-32	3/4	1 17/32	3/8	1	700	550
32623	**32673**	1/4-20	1	1 61/64	1/2	1 1/4	1000	825
32626	**32676**	3/8-16	1 1/4	2 7/8	5/8	2	3750	2850
32629	**32679**	1/2-13	1 7/8	3 1/8	3/4	2	5000	3750
32632	**32682**	5/8-11	2 1/2	3 1/4	7/8	2	6000	4350
32635	**32685**	3/4-10	3	3 1/2	1 1/16	2	7400	5500
32640	**32690**	1-8	4	5 3/8	1 3/8	3 1/2	20000	16500

*Add 1/8" to C Dimension for non-skid style.

Yokes
Tapped





- Material: C-1021 Forging
- Finish: Black Oxide
- Thread: 2B

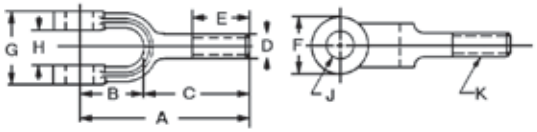
Jergens offers these yokes for attaching to threaded linkage at stem end. The forged holes are reamed and faced-off parallel inside and outside the yoke ends.

Part Number Coarse Pitch	UNC J	Part Number Fine Pitch	UNF J	A	B	C	D	E	F	G	H	Wt. (lbs) 10 Pcs.
		45501	10-32	1 9/16	1	9/16	5/16	7/16	3/16	3/8	3/16	.21
45302	1/4-20	**45502**	1/4-28	2	1 1/4	3/4	7/16	5/8	9/32	1/2	1/4	.62
45303	5/16-18	**45503**	5/16-24	2 1/4	1 7/16	13/16	1/2	3/4	11/32	19/32	5/16	.94
45304	3/8-16	**45504**	3/8-24	2 1/2	1 5/8	7/8	5/8	7/8	7/16	11/16	3/8	1.45
45305	7/16-14	**45505**	7/16-20	2 7/8	1 7/8	1	23/32	1	1/2	13/16	7/16	2.35
45306	1/2-13	**45506**	1/2-20	3	1 7/8	1 1/8	13/16	1 1/8	9/16	15/16	1/2	3.10
45307	1/2-13	**45507**	1/2-20	4 3/16	3 1/16	1 1/8	13/16	1 1/8	9/16	15/16	1/2	4.35
45308	5/8-11	**45508**	5/8-18	4 15/16	3 11/16	1 1/4	1 1/16	1 3/8	11/16	1 3/16	5/8	8.10
45309	3/4-10	**45509**	3/4-16	4	2 3/4	1 1/4	1 1/8	1 1/2	11/16	1 3/8	5/8	7.50
45310	3/4-10	—	—	6 1/16	4 9/16	1 1/2	1 1/4	1 5/8	13/16	1 7/16	3/4	15.00
45312	1-8	—	—	8	6	2	1 5/8	2 1/8	1 1/16	1 15/16	1	32.50

Yokes

Threaded





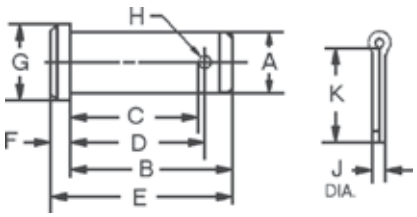
- Material: C-1021 Forging
- Finish: Black Oxide
- Thread: 2A-UNC

This style yoke is similar to the tapped yoke except the stem is threaded for attaching to tapped linkage.

Part Number	K	A	B	C	D	E	F	G	H	J	Wt. (lbs) 10 Pcs.
45902	1/4-20	1 3/4	5/8	1 1/8	1/4	3/4	1/2	5/8	9/32	1/4	.47
45903	5/16-18	2	3/4	1 1/4	5/16	3/4	19/32	3/4	11/32	5/16	.85
45904	3/8-16	2 1/8	27/32	1 9/32	3/8	3/4	11/16	7/8	7/16	3/8	1.10
45906	1/2-13	2 1/2	1 1/8	1 3/8	1/2	3/4	15/16	1 1/8	9/16	1/2	2.35
45907	5/8-11	2 7/8	1 7/16	1 7/16	5/8	3/4	1 3/16	1 3/8	11/16	5/8	4.20
45908	3/4-10	3 5/8	1 11/16	1 15/16	3/4	1 1/4	1 7/16	1 5/8	13/16	3/4	7.35
45910	1-8	4 1/2	2 1/2	2	1	1 1/8	1 15/16	2 1/8	1 1/16	1	17.50

Clevis Pins



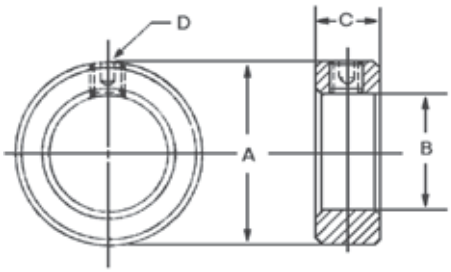


- Material: Low Carbon Steel
- All Clevis Pins supplied with cotter pins.

Part Number	A	B	C	D	E	F	G	H	J	K	Wt. (lbs) 10 Pcs.
32701	3/16	37/64	29/64	31/64	41/64	1/16	5/16	5/64	1/16	1/2	.08
32702	1/4	49/64	41/64	43/64	55/64	3/32	3/8	5/64	1/16	1/2	.15
32703	5/16	15/16	49/64	13/16	1 1/32	3/32	7/16	7/64	3/32	1/2	.30
32704	3/8	1 1/16	57/64	15/16	1 3/16	1/8	1/2	7/64	3/32	5/8	.45
32705	7/16	1 3/16	1 1/64	1 1/16	1 11/32	5/32	9/16	7/64	3/32	5/8	.60
32706	1/2	1 23/64	1 9/64	1 13/64	1 33/64	5/32	5/8	9/64	1/8	1	1.00
32707	5/8	1 39/64	1 25/64	1 29/64	1 13/16	13/64	13/16	9/64	1/8	1	1.18
32708	5/8	1 3/4	1 33/64	1 19/32	1 63/64	13/64	13/16	9/64	1/8	1	1.82
32709	3/4	1 29/32	1 41/64	1 23/32	2 5/32	1/4	15/16	11/64	5/32	1 1/2	3.00
32711	1	2 13/32	2 9/64	2 7/32	2 3/4	11/32	1 3/16	11/64	5/32	1 1/2	7.00

Steel Shaft Collars



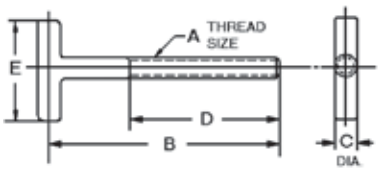


- Material: Low Carbon Steel
- Finish: Zinc Plate
- Set Screws Furnished
- Tolerances on I.D. +.005
  -.000

Part Number	A	B	C	D	Wt. (lbs) 10 Pcs.
40101	5/8	1/4	3/8	10-32	0.21
40102	5/8	5/16	3/8	10-32	0.21
40103	3/4	3/8	7/16	1/4-28	0.4
40104	7/8	1/2	1/2	1/4-28	0.6
40105	1 1/8	5/8	1/2	1/4-28	0.94
40106	1 1/4	3/4	1/2	5/16-18	1
40107	1 3/8	7/8	9/16	5/16-18	1.13
40108	1 1/2	1	9/16	5/16-18	1.5
40109	1 3/4	1 1/8	9/16	5/16-18	2
40110	2	1 1/4	11/16	3/8-16	3.5
40111	2 1/4	1 3/8	3/4	3/8-16	4
40112	2 1/4	1 1/2	3/4	3/8-16	4.3
40113	2 7/8	1 3/4	7/8	1/2-13	10.9
40114	3	2	7/8	1/2-13	9.5

Tee Strap Bolts



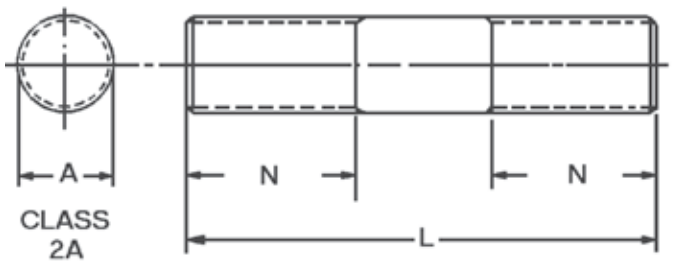


- Material: C-1021 Forging
- Finish: Black Oxide
- Thread: 2A-UNC

Part Number	Thread Size A	B	C	D	E	Wt. (lbs)
43101	1/4-20	2 1/2	1/4	1 1/2	1 1/4	.09
43102	3/8-16	5	3/8	4	1 3/4	.19
43103	1/2-13	6	1/2	5	3	.44

Alloy Steel Studs





- Material: Stressproof® (125,000 psi Min.) Tensile (100,000 psi Min.)Yield
- Finish: Black Oxide
- Available in metric sizes. See the next page.

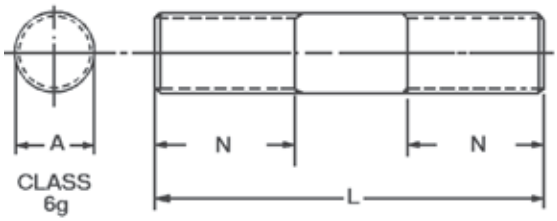
Longer or special studs are available upon request. Please send your print or sketch to our Customer Service Department.

Thread A	L	Part Number	N	Wt. (lbs) 10 Pcs
1/4-20	1 1/2	**37720**	7/16	.21
1/4-20	2	**37721**	11/16	.28
1/4-20	2 1/2	**37722**	15/16	.35
1/4-20	3	**37723**	1	.42
1/4-20	3 1/2	**37724**	1	.49
1/4-20	4	**37725**	1	.56
5/16-18	1 1/2	**37920**	7/16	.33
5/16-18	2	**37921**	11/16	.44
5/16-18	2 1/2	**37922**	15/16	.55
5/16-18	3	**37923**	1 1/8	.66
5/16-18	3 1/2	**37924**	1 1/8	.77
5/16-18	4	**37925**	1 1/8	.88
3/8-16	1 1/2	**38120**	3/8	.54
3/8-16	2	**38121**	5/8	.62
3/8-16	2 1/2	**38122**	7/8	.77
3/8-16	3	**38123**	1 1/8	.93
3/8-16	3 1/2	**38124**	1 1/4	1.10
3/8-16	4	**38125**	1 1/4	1.24
3/8-16	4 1/2	**38126**	1 1/4	1.39
3/8-16	5	**38127**	1 1/4	1.55
3/8-16	5 1/2	**38128**	1 1/4	1.71
3/8-16	6	**38129**	1 1/4	1.86
3/8-16	7	**38131**	1 1/4	2.27
3/8-16	8	**38133**	1 1/4	2.48
1/2-13	2	**38321**	5/8	1.10
1/2-13	2 1/2	**38322**	7/8	1.37
1/2-13	3	**38323**	1 1/8	1.65
1/2-13	3 1/2	**38324**	1 3/8	1.92
1/2-13	4	**38325**	1 1/2	2.20
1/2-13	4 1/2	**38326**	1 1/2	2.47
1/2-13	5	**38327**	1 1/2	2.75
1/2-13	5 1/2	**38328**	1 1/2	3.02
1/2-13	6	**38329**	1 1/2	3.30
1/2-13	7	**38331**	1 1/2	3.85
1/2-13	8	**38333**	1 1/2	4.40
1/2-13	9	**38334**	1 1/2	4.95
1/2-13	10	**38335**	1 1/2	5.50
1/2-13	12	**38336**	1 1/2	6.60

Thread A	L	Part Number	N	Wt. (lbs) 10 Pcs.
5/8-11	2 1/2	**38520**	13/16	2.12
5/8-11	3	**38521**	1 1/16	2.55
5/8-11	3 1/2	**38522**	1 5/16	2.97
5/8-11	4	**38523**	1 9/16	3.40
5/8-11	4 1/2	**38524**	1 3/4	3.82
5/8-11	5	**38525**	1 3/4	3.25
5/8-11	5 1/2	**38526**	1 3/4	4.68
5/8-11	6	**38527**	1 3/4	5.10
5/8-11	7	**38529**	1 3/4	5.90
5/8-11	8	**38531**	1 3/4	6.80
5/8-11	9	**38532**	1 3/4	7.60
5/8-11	10	**38533**	1 3/4	8.50
5/8-11	12	**38534**	1 3/4	10.20
3/4-10	3	**38721**	15/16	3.75
3/4-10	3 1/2	**38722**	1 3/16	4.35
3/4-10	4	**38723**	1 7/16	5.00
3/4-10	4 1/2	**38724**	1 11/16	5.60
3/4-10	5	**38725**	1 15/16	6.20
3/4-10	5 1/2	**38726**	2	6.90
3/4-10	6	**38727**	2	7.50
3/4-10	7	**38729**	2	8.75
3/4-10	8	**38731**	2	10.00
3/4-10	10	**38733**	2	12.50
3/4-10	12	**38734**	2	15.00
7/8-9	4	**38922**	1 13/32	6.80
7/8-9	5	**38923**	1 29/32	8.50
7/8-9	6	**38924**	2 1/4	10.20
7/8-9	8	**38925**	2 1/4	13.60
7/8-9	10	**38926**	2 1/4	17.00
7/8-9	12	**38927**	2 1/4	20.40
1-8	4	**39122**	1 3/8	8.80
1-8	5	**39123**	1 7/8	11.00
1-8	6	**39124**	2 3/8	13.20
1-8	8	**39125**	2 1/2	17.60
1-8	10	**39126**	2 1/2	22.00
1-8	12	**39127**	2 1/2	26.40

Studs
Metric





- Material: Stressproof®
  862 Tensile (MPa)
  689 Yield (MPa)
- Finish: Black Oxide
- Longer or special studs are available on request

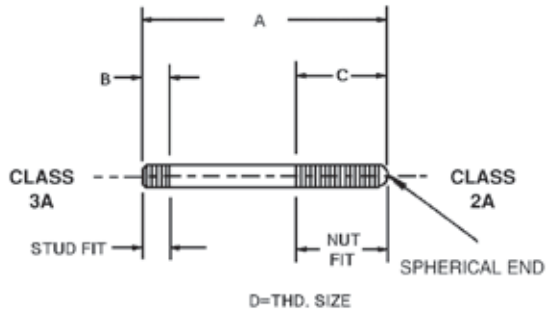
Thread A	L	Part Number	N	Wt. kg
M6 x 1.0	50	**37771**	18	.04
M6 x 1.0	66	**37772**	25	.06
M6 x 1.0	81	**37773**	28	.06
M6 x 1.0	96	**37774**	28	.09
M8 x 1.25	50	**37971**	18	.09
M8 x 1.25	66	**37972**	25	.11
M8 x 1.25	81	**37973**	32	.13
M8 x 1.25	96	**37974**	32	.15
M8 x 1.25	111	**37975**	32	.18
M10 x 1.5	50	**38171**	16	.13
M10 x 1.5	66	**38172**	23	.18
M10 x 1.5	80	**38173**	30	.20
M10 x 1.5	95	**38174**	35	.24
M10 x 1.5	110	**38175**	35	.29
M10 x 1.5	125	**38176**	39	.31
M10 x 1.5	140	**38177**	39	.35
M10 x 1.5	155	**38178**	39	.40
M12 x 1.75	50	**38371**	16	.18
M12 x 1.75	66	**38372**	23	.24
M12 x 1.75	81	**38373**	31	.29
M12 x 1.75	95	**38374**	40	.33
M12 x 1.75	111	**38375**	40	.40
M12 x 1.75	125	**38376**	40	.46
M12 x 1.75	141	**38377**	40	.53
M12 x 1.75	156	**38378**	40	.55
M16 x 2.0	80	**38571**	29	.51
M16 x 2.0	95	**38572**	36	.59
M16 x 2.0	110	**38573**	44	.70
M16 x 2.0	125	**38574**	47	.81
M16 x 2.0	150	**38575**	47	1.00
M16 x 2.0	175	**38576**	47	1.17
M16 x 2.0	200	**38577**	47	1.36
M20 x 2.5	81	**38771**	30	.84
M20 x 2.5	96	**38772**	37	1.0
M20 x 2.5	111	**38773**	45	1.14
M20 x 2.5	126	**38774**	52	1.25
M20 x 2.5	151	**38775**	48	1.54
M20 x 2.5	176	**38776**	56	1.85
M20 x 2.5	201	**38777**	56	2.16

All Dimensions in Millimeters.

Fixture Studs
Stainless Steel



• Material: 303 Stainless

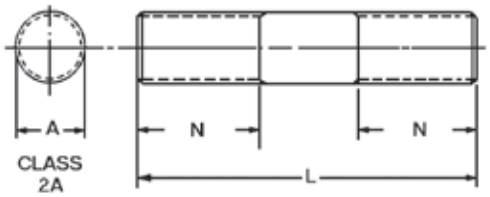


Part Number	A	Stud Fit B	Nut Fit C	Thread
37601	1	7/32	1/2	10-32
37602	1 1/2	7/32	3/4	10-32
37603	2	7/32	3/4	10-32
37802	1 1/2	9/32	5/8	1/4-20
37804	2	9/32	3/4	1/4-20
37806	2 1/2	9/32	3/4	1/4-20
37808	3	9/32	1	1/4-20
38002	1 1/2	11/32	5/8	5/16-18
38004	2	11/32	1	5/16-18
38006	2 1/2	11/32	1 1/4	5/16-18
38008	3	11/32	1 3/8	5/16-18
38009	3 1/2	11/32	1 1/2	5/16-18
38010	4	11/32	1 1/2	5/16-18
38201	1 5/8	11/32	3/4	3/8-16
38202	2	11/32	1	3/8-16
38204	2 1/2	11/32	1 1/4	3/8-16
38206	3	11/32	1 3/8	3/8-16
38207	3 1/2	11/32	1 1/2	3/8-16
38208	4	11/32	1 1/2	3/8-16

Set-Up Studs
Stainless Steel



• Material: 303 Stainless



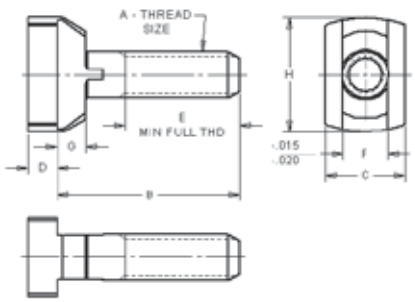
Part Number	Thread A	L	N
38421	1/2-13	2	3/4
38422	1/2-13	2 1/2	1 1/8
38423	1/2-13	3	1 3/8
38424	1/2-13	3 1/2	1 1/2
38425	1/2-13	4	1 1/2
38426	1/2-13	4 1/2	1 1/2
38427	1/2-13	5	1 1/2
38428	1/2-13	5 1/2	1 1/2
38429	1/2-13	6	1 1/2
38431	1/2-13	7	1 1/2
38433	1/2-13	8	1 1/2
38434	1/2-13	9	1 1/2
38435	1/2-13	10	1 1/2
38436	1/2-13	12	1 1/2

Part Number	Thread A	L	N
38620	5/8-11	2 1/2	1 1/8
38621	5/8-11	3	1 3/8
38622	5/8-11	3 1/2	1 3/4
38623	5/8-11	4	1 3/4
38624	5/8-11	4 1/2	1 3/4
38625	5/8-11	5	1 3/4
38626	5/8-11	5 1/2	1 3/4
38627	5/8-11	6	1 3/4
38629	5/8-11	7	1 3/4
38631	5/8-11	8	1 3/4
38632	5/8-11	9	1 3/4
38633	5/8-11	10	1 3/4
38634	5/8-11	12	1 3/4

Part Number	Thread A	L	N
38821	3/4-10	3	1 3/8
38822	3/4-10	3 1/2	1 1/2
38823	3/4-10	4	1 3/4
38824	3/4-10	4 1/2	2
38825	3/4-10	5	2
38826	3/4-10	5 1/2	2
38827	3/4-10	6	2
38829	3/4-10	7	2
38831	3/4-10	8	2
38833	3/4-10	10	2
38834	3/4-10	12	2

T-Slot Bolts





Jergens Feature:

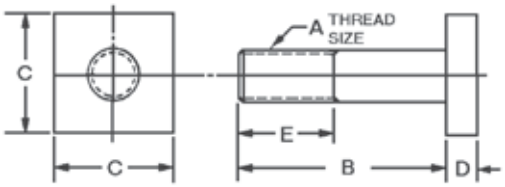
Protect your expensive machine table slots with Jergens T-Slot Bolts. The completely finished machined head provides at least 50% more bearing surface under your table slot. T-Slot Bolts outlast T-Bolts in wearability in most applications.

- Material: Alloy Steel
- Finish: Black Oxide
- Heat Treat: Rc 34-38
- Thread: 2A-UNC
- Available in lengths up to 24"

Part Number	Thread Size A	B	C	D	E	F	G	H	Wt. (lbs)
44101	1/2-13	2	7/8	5/16	1 1/4	1/2	9/32	1 1/4	.22
44102	1/2-13	2 1/2	7/8	5/16	1 3/4	1/2	9/32	1 1/4	.25
44103	1/2-13	3	7/8	5/16	2 1/4	1/2	9/32	1 1/4	.27
44104	1/2-13	3 1/2	7/8	5/16	2 3/4	1/2	9/32	1 1/4	.30
44105	1/2-13	4	7/8	5/16	3 1/4	1/2	9/32	1 1/4	.33
44106	1/2-13	5	7/8	5/16	4 1/4	1/2	9/32	1 1/4	.37
44107	1/2-13	6	7/8	5/16	5 1/4	1/2	9/32	1 1/4	.44
44108	1/2-13	8	7/8	5/16	7 1/4	1/2	9/32	1 1/4	.53
44301	5/8-11	2	1 1/8	3/8	1 1/8	5/8	3/8	1 1/2	.39
44302	5/8-11	2 1/2	1 1/8	3/8	2 5/8	5/8	3/8	1 1/2	.41
44303	5/8-11	3	1 1/8	3/8	2 1/8	5/8	3/8	1 1/2	.44
44304	5/8-11	3 1/2	1 1/8	3/8	2 5/8	5/8	3/8	1 1/2	.50
44305	5/8-11	4	1 1/8	3/8	3 1/8	5/8	3/8	1 1/2	.55
44306	5/8-11	5	1 1/8	3/8	4 1/8	5/8	3/8	1 1/2	.62
44307	5/8-11	6	1 1/8	3/8	5 1/8	5/8	3/8	1 1/2	.72
44308	5/8-11	8	1 1/8	3/8	7 1/8	5/8	3/8	1 1/2	.85
44309	5/8-11	10	1 1/8	3/8	9 1/8	5/8	3/8	1 1/2	1.00
44310	5/8-11	12	1 1/8	3/8	11 1/8	5/8	3/8	1 1/2	1.25
44502	3/4-10	2 1/2	1 5/16	7/16	1 1/2	3/4	7/16	1 3/4	.64
44503	3/4-10	3	1 5/16	7/16	2	3/4	7/16	1 3/4	.70
44504	3/4-10	3 1/2	1 5/16	7/16	2 1/2	3/4	7/16	1 3/4	.77
44505	3/4-10	4	1 5/16	7/16	3	3/4	7/16	1 3/4	.85
44506	3/4-10	5	1 5/16	7/16	4	3/4	7/16	1 3/4	.95
44507	3/4-10	6	1 5/16	7/16	5	3/4	7/16	1 3/4	1.05
44508	3/4-10	8	1 5/16	7/16	7	3/4	7/16	1 3/4	1.25
44509	3/4-10	10	1 5/16	7/16	9	3/4	7/16	1 3/4	1.45
44510	3/4-10	12	1 5/16	7/16	11	3/4	7/16	1 3/4	1.75
44701	1-8	3 1/2	1 11/16	1/2	2 1/2	1	1/2	2 1/4	1.25
44702	1-8	4	1 11/16	1/2	3	1	1/2	2 1/4	1.50
44703	1-8	4 1/2	1 11/16	1/2	3 1/2	1	1/2	2 1/4	1.62
44704	1-8	5	1 11/16	1/2	4	1	1/2	2 1/4	1.75
44705	1-8	6	1 11/16	1/2	5	1	1/2	2 1/4	2.00
44706	1-8	8	1 11/16	1/2	7	1	1/2	2 1/4	2.40
44707	1-8	10	1 11/16	1/2	9	1	1/2	2 1/4	2.75
44708	1-8	12	1 11/16	1/2	11	1	1/2	2 1/4	3.10

T-Bolts





- Material: Alloy Steel
- Finish: Black Oxide
- Heat Treat: Rc 34-38
- Thread: 2A-UNC
- Available in lengths up to 24"

Part Number	Thread Size A	B	C	D	E	Wt. (lbs)
42101	3/8-16	1 1/2	11/16	1/4	3/4	.07
42102	3/8-16	2	11/16	1/4	1 1/4	.08
42103	3/8-16	2 1/2	11/16	1/4	1 1/4	.09
42104	3/8-16	3	11/16	1/4	1 1/2	.11
42105	3/8-16	3 1/2	11/16	1/4	1 1/2	.12
42106	3/8-16	4	11/16	1/4	1 1/2	.14
42301	1/2-13	1 1/2	7/8	1/4	3/4	.12
42302	1/2-13	2	7/8	1/4	1 1/4	.14
42303	1/2-13	2 1/2	7/8	1/4	1 1/4	.17
42304	1/2-13	3	7/8	1/4	1 1/2	.20
42305	1/2-13	3 1/2	7/8	1/4	1 1/2	.22
42306	1/2-13	4	7/8	1/4	2	.25
42307	1/2-13	4 1/2	7/8	1/4	2	.27
42308	1/2-13	5	7/8	1/4	2	.30
42309	1/2-13	5 1/2	7/8	1/4	2	.33
42310	1/2-13	6	7/8	1/4	2	.36
42502	5/8-11	2	1 1/8	3/8	1 1/4	.28
42503	5/8-11	2 1/2	1 1/8	3/8	1 1/4	.33
42504	5/8-11	3	1 1/8	3/8	1 1/2	.37
42505	5/8-11	3 1/2	1 1/8	3/8	1 1/2	.41
42506	5/8-11	4	1 1/8	3/8	1 1/2	.44
42507	5/8-11	5	1 1/8	3/8	1 1/2	.53
42508	5/8-11	6	1 1/8	3/8	1 1/2	.61
42509	5/8-11	8	1 1/8	3/8	3	.78
42510	5/8-11	10	1 1/8	3/8	3	.97
42511	5/8-11	12	1 1/8	3/8	3	1.13

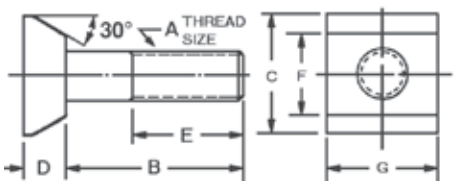
Part Number	Thread Size A	B	C	D	E	Wt. (lbs)
42701	3/4-10	2 1/2	1 1/4	1/2	1 1/4	.48
42702	3/4-10	3	1 1/4	1/2	1 1/2	.55
42703	3/4-10	3 1/2	1 1/4	1/2	1 1/2	.61
42704	3/4-10	4	1 1/4	1/2	1 1/2	.66
42705	3/4-10	5	1 1/4	1/2	1 1/2	.78
42706	3/4-10	6	1 1/4	1/2	1 1/2	.90
42707	3/4-10	8	1 1/4	1/2	3	1.17
42708	3/4-10	10	1 1/4	1/2	3	1.38
42709	3/4-10	12	1 1/4	1/2	3	1.62
42901	1-8	4	1 11/16	11/16	2 1/2	1.25
42902	1-8	5	1 11/16	11/16	2 1/2	1.50
42903	1-8	6	1 11/16	11/16	2 1/2	1.75
42911	1-8	7	1 11/16	11/16	2 1/2	1.88
42904	1-8	8	1 11/16	11/16	3	2.00
42912	1-8	9	1 11/16	11/16	3	2.25
42905	1-8	10	1 11/16	11/16	3	2.50
42906	1-8	12	1 11/16	11/16	3	3.00
42907	1-8	14	1 11/16	11/16	3	3.50
43003	1 1/4-7	8	1 7/8	7/8	5	3.65
43004	1 1/4-7	9	1 7/8	7/8	5	4.00
43005	1 1/4-7	10	1 7/8	7/8	5	4.35
43006	1 1/4-7	12	1 7/8	7/8	5	5.05
43007	1 1/4-7	14	1 7/8	7/8	5	5.75
43008	1 1/4-7	16	1 7/8	7/8	5	6.45
43009	1 1/4-7	18	1 7/8	7/8	5	7.15
43011	1 1/4-7	22	1 7/8	7/8	5	8.20
43012	1 1/4-7	24	1 7/8	7/8	5	9.25

Dovetail Bolts



Dovetail Bolts can be used for clamping guide members on the front of press brakes.

- Material: Alloy Steel
- Finish: Black Oxide
- Heat Treat: Rc 34-38
- Thread: 2A-UNC



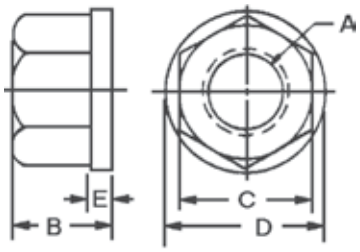
Part Number	Thread Size A	B	C	D	E	F	G	Wt. (lbs) 10 Pcs.
17901	5/8-11	1 1/4	1 1/16	3/8	3/4	3/4	1 1/8	2.00
17902	5/8-11	2	1 1/16	3/8	1 1/8	3/4	1 1/8	2.30
17903	5/8-11	2 3/4	1 1/16	3/8	1 1/2	3/4	1 1/8	3.10
17904	5/8-11	3 3/4	1 1/16	3/8	1 1/2	3/4	1 1/8	5.15

Flange Nuts



Where heavy clamping pressures and vibrations could cause trouble, the wide face surface of the flange nut holds through with greater friction.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC



Carbon Steel

Part Number	Course Pitch A	B	C	D	E	Wt. (lbs) 10 pcs.
19904*	3/8-16	1/2	11/16	7/8	1/8	0.51
19906*	1/2-13	11/16	7/8	1 1/8	5/32	1.10
19907*	5/8-11	13/16	1 1/16	1 3/8	3/16	1.75
19908*	3/4-10	1	1 1/4	1 5/8	1/4	3.20
19909*	7/8-9	1 1/8	1 7/16	1 3/4	1/4	4.20
19910*	1-8	1 1/4	1 5/8	2	1/4	6.00
19911	1 1/8-7	1 3/8	1 13/16	2 1/4	1/4	8.00
19912	1 1/4-7	1 3/8	1 13/16	2 1/4	1/4	7.60
19913	1 1/2-6	1 1/2	2 3/16	2 3/4	1/4	11.90

*Conforms to TCMA

- Material: 303 Stainless Steel

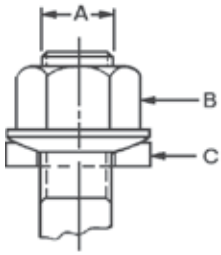
Stainless Steel

Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
20002	1/4-20	5/16	1/2	5/8	3/32	.15
20003	5/16-18	3/8	9/16	3/4	3/32	.19
20004	3/8-16	1/2	11/16	7/8	1/8	.51
20006	1/2-13	11/16	7/8	1 1/8	5/32	1.10
20007	5/8-11	13/16	1 1/16	1 3/8	3/16	1.75
20008	3/4-10	1	1 1/4	1 5/8	1/4	3.20

Spherical Flange Assemblies



Same advantages as Spherical Washers but with the addition of a nut to replace the top section of the washers. Convex bottom of nut nests into the concave bottom section for full floating action.



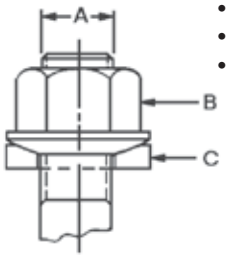
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened

Part Number	A	Nut P/N B	Washer P/N C	Wt. (lbs) 10 Pcs.
39301	10-24	**39701**	**41301**	.12
39302	1/4-20	**39702**	**41302**	.16
39303	5/16-18	**39703**	**41303**	.31
39304	3/8-16	**39704**	**41304**	.65
39305	1/2-13	**39705**	**41305**	1.45
39306	5/8-11	**39706**	**41306**	2.44
39307	3/4-10	**39707**	**41307**	4.10
39308	7/8-9	**39708**	**41308**	6.00
39309	1-8	**39709**	**41309**	8.10
39311	1 1/4-7	**39711**	**41311**	13.40
39312	1 1/2-6	**39712**	**41312**	15.70

Spherical Flange Assemblies

Metric



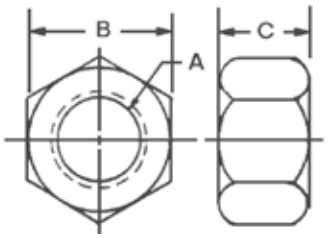


- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened

Part Number	A	Across Flats B	Washer P/N C	Wt. (kg) 10 pcs.
39352	M6 x 1.0	10	**41302**	.07
39353	M8 x 1.25	13	**41303**	.14
39354	M10 x 1.5	17	**41304**	.30
39355	M12 x 1.75	19	**41305**	.66
39356	M16 x 2.0	24	**41306**	1.10
39357	M20 x 2.5	30	**41357**	1.80

Heavy Duty Hex Nuts



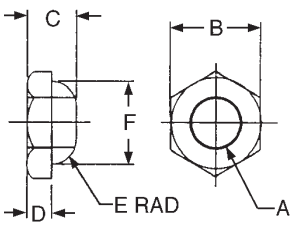


- Finish: Black Oxide
- Grade 8, Hardness HRC of 28-38

Part Number	A	B	C	Wt. (lbs) 100 Pcs.
20711	1/4-20	7/16	7/32	.74
20712	5/16-18	1/2	17/64	1.10
20713	3/8-16	9/16	21/64	1.60
20714	1/2-13	3/4	7/16	3.75
20716	5/8-11	15/16	35/64	7.33
20717	3/4-10	1 1/8	41/64	11.90
20718	7/8-9	1 5/16	3/4	19.00
20719	1-8	1 1/2	55/64	28.30

Stainless Steel Hex Head Equalizing Nuts





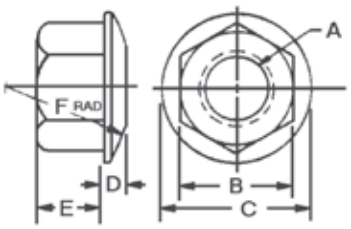
Part Number	A	B	C	D	E	F
12311	10-32	7/16	5/16	5/32	1/8	3/8
12312	1/4-20	1/2	5/16	5/32	1/8	7/16
12313	5/16-18	9/16	5/16	5/32	1/8	1/2
12314	3/8-16	11/16	3/8	3/16	3/16	5/8

- Material: 303 Stainless

Spherical Flange Nuts



- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC, Class 6h



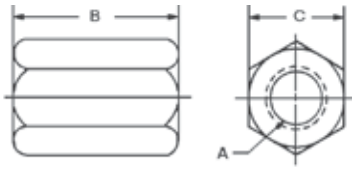
Part Number	A	B	C	D	E	F	Wt. (lbs) 10 Pcs.
39701	10-24	3/8	1/2	3/32	1/4	3/4	.10
39702*	1/4-20	1/2	5/8	3/32	1/4	1	.12
39703*	5/16-18	9/16	3/4	1/8	9/32	1	.21
39704*	3/8-16	11/16	7/8	1/8	13/32	1 1/2	.50
39705*	1/2-13	7/8	1 1/8	3/16	1/2	2	1.00
39706*	5/8-11	1 1/16	1 3/8	7/32	5/8	2 1/4	1.82
39707*	3/4-10	1 1/4	1 5/8	1/4	3/4	2 1/2	3.10
39708*	7/8-9	1 7/16	1 3/4	1/4	7/8	2 1/2	4.35
39709*	1-8	1 5/8	2	1/4	1	3 1/2	5.90
39711	1 1/4-7	1 13/16	2 1/4	5/16	1 1/16	4	7.20
39712	1 1/2-6	2 3/16	2 3/4	5/16	1 3/16	4 1/2	11.60

*Conforms to TCMA.

Part Number	A	B	C	D	E	F	Wt. (kg) 10 pcs.
39752	M6 x1.0	10	16	2	6	25	.05
39753	M8 x 1.25	13	19	3	7	25	.10
39754	M10 x 1.5	17	22	4	10	38	.23
39755	M12 x 1.75	19	25	5	13	51	.50
39756	M16 x 2.0	24	32	6	16	57	.83
39757	M20 x 2.5	30	38	6	19	64	1.41

Coupling Nuts





- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC

Part Number	A	B	C	Wt. (lbs) 10 Pcs.
18711*	3/8-16	1	11/16	.94
18712*	1/2-13	1 1/4	7/8	2.00
18713*	5/8-11	1 5/8	1 1/16	3.40
18714*	3/4-10	1 7/8	1 1/4	5.65
18715	7/8-9	2 1/4	1 7/16	8.60
18716	1-8	2 1/2	1 5/8	12.50

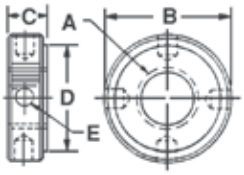
*Conforms to TCMA.

Metric

Part Number	A	B	C	Wt. (kg) 10 Pcs.
18761	M10	25	16	.05
18762	M12	32	19	.81
18763	M16	41	24	1.55
18764	M20	51	27	2.6

Knurled Lock Nuts





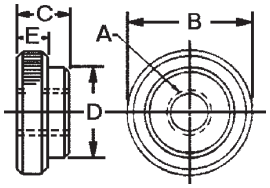
Most convenient for quick thread locking on your jig and fixture work. Straight knurled radius provides sure, non-slip finger grip in oily conditions. Faces are square with threads which assures a large locking surface.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC

Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
28101	3/8-16	1	3/8	3/4	.188	.62
28102	1/2-13	1 1/4	7/16	1	.257	1.10
28103	5/8-11	1 3/8	7/16	1 1/8	.257	1.10
28104	3/4-10	1 3/4	9/16	1 1/2	.316	2.50
28105	1-8	2	9/16	1 3/4	.316	3.10

Check Nuts





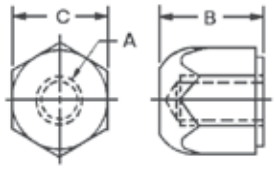
Multi-use Locknut for hand tightening applications

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC

Part Number	A	B	C	D	E	Wt. (lbs) 10 Pcs.
16901	10-24	3/4	7/32	1/2	5/32	.15
16902	1/4-20	3/4	7/32	1/2	5/32	.15
16903	5/16-18	3/4	5/16	1/2	1/4	.21
16904	3/8-16	3/4	5/16	1/2	1/4	.21
16905	1/2-13	1	3/8	3/4	1/4	.47

Acorn Nuts





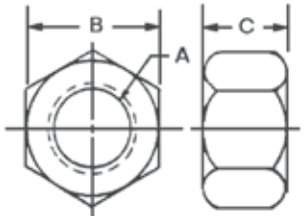
Acorn nuts are used to cover threaded ends to protect them from dirt, grit or damage to the thread.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Thread: 2B-UNC

Part Number	A	B	C	Wt. (lbs) 10 Pcs.
10501	5/16-18	5/8	5/8	.44
10502	3/8-16	3/4	3/4	.78
10503	1/2-13	15/16	7/8	1.25
10504	5/8-11	1 3/16	1 1/16	2.35

Stainless Steel Nuts



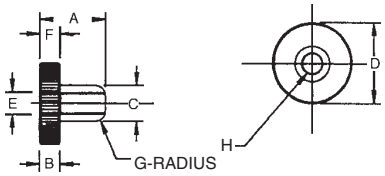


- Material: 300 Series Stainless Steel

Part Number	A	B	C
12321	10-32	3/8	1/8
12322	1/4-20	7/16	3/16
12323	5/16-18	1/2	9/32
12324	3/8-16	9/16	11/32

Stainless Steel Knurled Equalizing Nuts



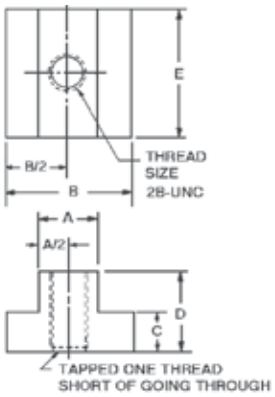


For use with stainless steel equalizing "C" washer. See page 271.

Part Number	A	B	C	D	E	F	G	H
12301	3/4	3/16	3/8	3/4	13/64	1/4	1/8	10-32
12302	13/16	1/4	7/16	1	17/64	1/4	1/8	1/4-20

T-Slot Nuts





- Material: Low Carbon Steel, 303 Stainless
- Finish: Black Oxide
- Threads: 2B-UNC (Inch); Class 6h (Metric)
- Heat Treat: Case Hardened
- Available in metric sizes. See below.

Part Number	Thread	T-slot Width A	B	C	D	E	Wt. (lbs) 10 Pcs.
*43302**	3/8-16	7/16	11/16	7/32	1/2	7/8	0.50
*43303**	3/8-16	1/2	7/8	9/32	1/2	7/8	.070
43301	3/8-16	9/16	7/8	1/4	1/2	7/8	0.70
*43305**	1/2-13	9/16	7/8	11/32	5/8	1 1/8	1.20
*43306	1/2-13	5/8	1	11/32	5/8	1 1/8	1.50
*43304	1/2-13	11/16	1 1/8	7/16	3/4	1 1/4	2.10
*43308**	5/8-11	11/16	1 1/8	7/16	3/4	1 1/4	1.14
*43309	5/8-11	3/4	1 1/4	15/32	3/4	1 1/4	1.60
*43307	5/8-11	13/16	1 1/4	9/16	1	1 1/2	3.11
*43311**	3/4-10	13/16	1 1/4	9/16	1	1 1/2	3.60
43312	3/4-10	7/8	1 1/2	9/16	1	1 1/2	4.10
*43310	3/4-10	1 1/16	1 5/8	1 1/16	1 1/4	2	7.20
43313**	7/8-9	1	1 5/8	5/8	1 1/4	2	7.30
43314	7/8-9	1 1/16	1 3/4	5/8	1 1/4	2	8.00

*Conforms to TCMA.
**Not Hardened

Jergens Feature:

Jergens Table-Saver design provides a safety-stop feature to prevent turning stud into tableways.

Metric

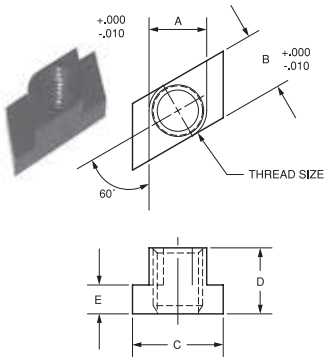
Part Number	Thread	T-slot Width A	B	C	D	E	Material
43372	M10x1.5	12	19	7	13	25	Steel
43373	M10x1.5	14	22	9	16	29	Steel
43374	M10x1.5	16	25	9	16	29	Steel
43375	M12x1.75	14	22	9	16	29	Steel
43376	M12x1.75	16	25	9	16	29	Steel
43377	M12x1.75	18	29	11	19	32	Steel
43378	M16x2.0	18	29	11	19	32	Steel
43379	M16x2.0	20	32	14	25	38	Steel
43380	M16x2.0	22	35	14	25	38	Steel
43381	M20x2.5	22	35	14	25	38	Steel
43382	M20x2.5	24	38	16	25	44	Steel
43383	M20x2.5	28	41	18	29	51	Steel

Stainless Steel

Part Number	Thread	T-slot Width A	B	C	D	E
43402	3/8-16	7/16	3/4	7/32	1/2	1
43403	3/8-16	1/2	7/8	1/4	5/8	7/8
43405	1/2-13	9/16	7/8	5/16	3/4	1 1/4
43406	1/2-13	5/8	1	3/8	3/4	1 1/4
43408	5/8-11	11/16	1 1/4	15/32	1	1 1/2
43409	5/8-11	3/4	1 1/4	17/32	1 1/4	1 1/2
43411	3/4-10	13/16	1 1/2	9/16	1	1 3/4
43410	3/4-10	1 1/16	1 5/8	9/16	1	1 3/4

Kwik-Turn T-Slot Nuts

- 1/4 turn design allows the Kwik-Turn to be installed from the top of the T-Slot, in order to avoid uninstallation of set-ups when additional nuts and studs are required
- Material: Low Carbon Steel,
- Finish: Black Oxide
- Threads: 2B-UNC (Inch)
- Heat Treat: Case Hardened



Part Number	Thread	T-Slot	A	B	C	D	E	Wt. (lbs) 10 pcs
43332**	3/8-16	7/16	.432	.432	11/16	1/2	7/32	0.27
43333	3/8-16	1/2	.495	.495	7/8	1/2	9/32	0.45
43334**	1/2-13	11/16	.683	.683	1-1/8	3/4	7/16	0.58
43335	1/2-13	9/16	.562	.562	7/8	5/8	11/32	0.79
43336	1/2-13	5/8	.620	.620	1	5/8	11/32	1.26
43338**	5/8-11	11/16	.683	.683	1-1/8	3/4	7/16	1.08
43339	5/8-11	3/4	.745	.745	1-1/4	3/4	15/32	1.44
43345	3/4-10	1	.995	.995	1-5/8	1	5/8	3.50

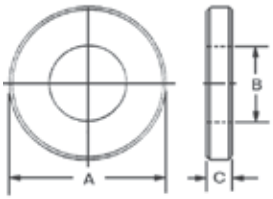
**Not Hardened

Jergens Feature:

Jergens Table-Saver design provides a safety-stop feature to prevent turning stud into tableways.

Flat Washers





- Material: Cold Rolled Low Carbon Steel, 303 Stainless
- Finish: Black Oxide
- Heat Treat: Carbon Nitride to 60
- Flat and parallel within .005" (0.13mm)

Part Number	A	B	C	Bolt Size	Wt. (lbs) 10 Pcs.
31901	1/2	13/64	3/32	3/16	.04
31902*	5/8	9/32	1/8	1/4	.05
31903*	3/4	11/32	1/8	5/16	.10
31904*	7/8	13/32	1/8	3/8	.21
31905*	1 1/8	17/32	1/8	1/2	.42
31906*	1 3/8	21/32	1/8	5/8	.63
31907*	1 5/8	25/32	5/32	3/4	1.10
31908*	1 3/4	29/32	5/32	7/8	1.20
31909*	2	1 1/32	3/16	1	1.70
31910	2 1/2	1 9/32	9/32	1 1/4	2.20

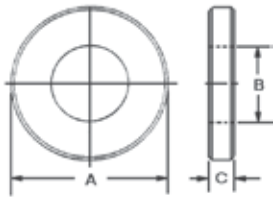
*Conforms to TCMA

Stainless Steel

Part Number	A	B	C	Bolt Size
32001	7/16	.196	5/64	3/16
32002	5/8	17/64	3/32	1/4
32003	11/16	11/32	1/8	5/16
32004	7/8	25/64	1/8	3/8
32005	1 1/8	17/32	1/8	1/2
32006	1 1/4	21/32	1/8	5/8
32007	1 1/2	25/32	5/32	3/4

Heavy Duty Flat Washers





Jergens Feature:

Made from high-carbon through- hardened steel which makes them up to 50% stronger than standard heavy duty washers. Also more fracture resistant under heavy loads.

- Material: High Carbon Steel
- Finish: Black Oxide
- Heat Treat: Rc 40-45 (Through Hardened)
- Flat & Parallel within .005" (.01mm)

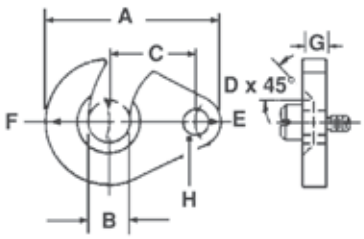
Part Number	A	B	C	Bolt Size	Wt. (lbs) 10 Pcs.
31967	5/8	9/32	3/16	1/4	0.72
31968	3/4	11/32	3/16	5/16	0.79
31969	7/8	13/32	3/16	3/8	0.87
31960	1 1/2	17/32	7/32	1/2	1.00
31961	1 1/2	21/32	7/32	5/8	0.88
31962	1 7/8	25/32	1/4	3/4	1.61
31963	2 1/8	29/32	1/4	7/8	2.31
31964	2 1/2	1 1/16	1/4	1	3.56
31965	2 1/2	1 5/16	1/4	1 1/4	3.98
31966	2 3/4	1 9/16	1/4	1 1/2	4.20

Metric Dimensions

Part Number	A	B	C	Bolt Size	Wt. (kg) 10 Pcs.
31961	38	17	5.5	16	0.40
31962	48	20	6.5	18	0.73
31963	54	23	6.5	20	1.05
31964	64	27	6.5	24	1.62

Equalizing Swing "C" Washer
Stainless Steel



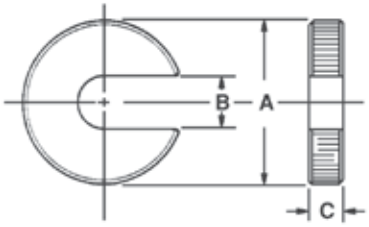


Part Number	A	B	C	D	Radius E	Radius F	+.0000 -.0015 G	+.0005 -.0000 H
12341	1 1/8	13/64	9/16	5/64	3/16	3/8	.1870	.1875
12342	1 1/4	17/64	5/8	3/32	3/16	7/16	.1870	.1875
12343	1 1/2	21/64	3/4	1/8	1/4	1/2	.2495	.250
12344	1 3/4	25/64	7/8	1/8	1/4	5/8	.2495	.250

• Material: 303 Stainless

Equalizing "C" Washers
Stainless Steel





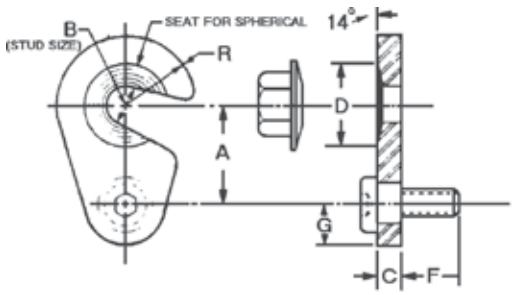
Part Number	A	B	C	Wt. lbs
12331	3/4	7/32	3/16	.02
12332	7/8	9/32	3/16	.04
12333	1	11/32	1/4	.04
12334	1 1/4	13/32	5/16	.04

• Material: 303 Stainless

Washers

Swing "C" Washer Assembly





The Swing "C" Washer has a concave center for self-locating around the stud, which prevents creeping while tightening, and allows acceptance of the mating spherical flange nuts. The Spherical Flange Nut assures that the washer cannot back out either during clamping or due to vibration during the operation. The shoulder screw has a nylon lock to prevent loosening of the screw during operation.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened

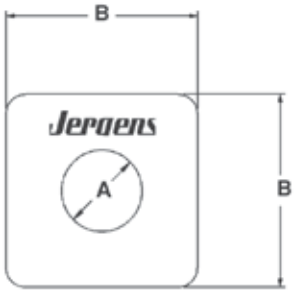
Part Number	A	Stud Size B	C	D	E	F	G	R	Part Number Spherical Flange Nut	Wt. (lbs)
37301*	1	3/8	1/4	13/16	5/16-18	1/2	3/8	3/4	**39704**	.12
37302	1 1/4	1/2	3/8	1 1/8	5/16-18	1/2	1/2	1	**39705**	.30
37303*	1 1/2	5/8	3/8	1 5/16	3/8-16	5/8	9/16	1 1/8	**39706**	.39
37304*	1 3/4	3/4	1/2	1 9/16	3/8-16	5/8	5/8	1 1/4	**39707**	.72

*Conforms to TCMA

Heavy Duty Square Washers



- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened



Part Number	±.010 A	±.010 B	Bolt Size	Thickness
31920	11/32	1 3/8	5/16	3/16
31921	13/32	1 3/8	3/8	3/16
31932	17/32	1 3/8	1/2	1/4
31933	17/32	2	1/2	1/4
31934	21/32	2	5/8	1/4
31935	13/16	2	3/4	1/4
31922	15/16	2	7/8	1/4
31936	13/16	2 1/2	3/4	1/4
31923	15/16	2 1/2	7/8	1/4
31937	1 1/16	2 1/2	1	1/4
31924	13/16	3	3/4	5/16
31925	15/16	3	7/8	5/16
31926	1 1/16	3	1	5/16
31927	1 1/16	3	1	3/8
31928	1 5/16	3	1 1/4	3/8
31929	1 9/16	3	1 1/2	3/8

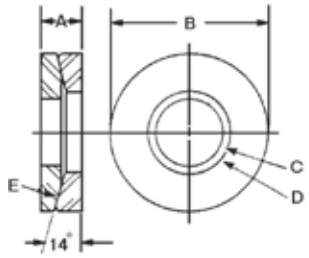
Washers
Self Aligning Washers (Two-Piece)

Upper



Lower

These washers are ideally suited for joining machine sections which are out of parallel. They adjust themselves for a positive, firm base. With radius "E" and the angular 14° combination, line contact is formed around the two mating washer surfaces, allowing the two washers the ability to seek misalignment in the companion clamping members. The heat treated I.D. of the bottom concave piece is larger than the I.D. of the top convex section for free action. It is precision ground and the sharp edges are removed.



Part Number	A	B	C	D	E	Bolt Size	Wt. (lbs)
41101	3/16	1/2	13/64	15/64	3/4	3/16	.01
41102	3/16	5/8	17/64	19/64	1	1/4	.01
41103	7/32	3/4	11/32	23/64	1	5/16	.01
41104	7/32	7/8	13/32	15/32	1 1/2	3/8	.03
41105	9/32	1 1/8	17/32	19/32	2	1/2	.08
41106	3/8	1 3/8	21/32	23/32	2 1/4	5/8	.13
41107	13/32	1 5/8	25/32	27/32	2 1/2	3/4	.20
41108	17/32	1 3/4	29/32	31/32	2 1/2	7/8	.33
41109	9/16	2	1 1/32	1 3/32	3 1/2	1	.41
41110	5/8	2 1/4	1 5/32	1 7/32	3 1/2	1 1/8	.77
41111	5/8	2 1/4	1 9/32	1 11/32	4	1 1/4	.62
41112	11/16	2 3/4	1 17/32	1 19/32	4 1/2	1 1/2	.85

Part Number	
Upper	Lower
41501	**41301**
41502	**41302**
41503	**41303**
41504	**41304**
41505	**41305**
41506	**41306**
41507	**41307**
41508	**41308**
41509	**41309**
41510	**41310**
41511	**41311**
41512	**41312**

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened

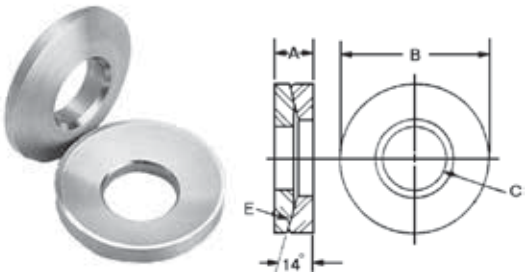
Metric Two-Piece Assemblies

Part Number	A	B	C	D	E	Bolt Size	Wt. (kg)
41102	5	16	6.5	7.5	25	M6	.01
41103	5.5	19	8.5	9	25	M8	.01
41104	5.5	22	10.5	12	38	M10	.01
41105	7	28	13.5	15	51	M12	.03
41106	9.5	35	17	18	57	M16	.06
41157	10.5	41	21	21.5	63.5	M20	.09

Single Units

Part Number	
Upper	Lower
41502	**41302**
41503	**41303**
41504	**41304**
41505	**41305**
41506	**41306**
41557	**41357**

Self Aligning Washers (Two-Piece)
Stainless Steel



- Material: 303 Stainless

Part Number	A	B	C	E	Bolt Size	Wt. (lbs)
41202	3/16	5/8	9/32	3/4	1/4	.01
41203	1/4	3/4	11/32	1	5/16	.01
41204	1/4	7/8	13/32	1 1/4	3/8	.03
41205	5/16	1 1/8	17/32	1 1/2	1/2	.08
41206	5/16	1 3/8	21/32	1 3/4	5/8	.13
41207	3/8	1 5/8	25/32	2 1/4	3/4	.20

USAE™ Heavy Duty Flat Washers



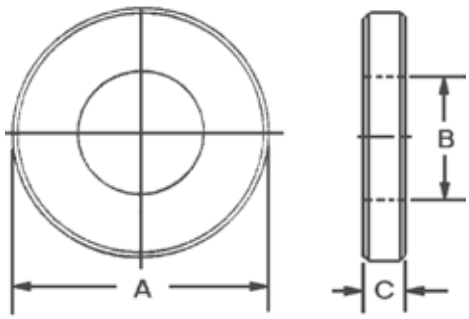
USS + SAE = USAE

What is a USAE™ Washer?

- It is a simple but effective idea that is long overdue.
- The Outside Diameter conforms to USS standards. This provides a washer that is up to 36% larger than standard hardened washers.

More Contact Area = More Holding Power

- The Inside Diameter conforms to SAE standards. The small ID provides a more precise fit on bolts, studs, etc.
- USAE Washers are also up to 37% thicker than standard hardened washers for greater strength.
- Washers are made from mild steel. They are case hardened to 60 HRc and have a black oxide finish.
- Bolt size is stamped on each washer for easy identification.



USAE™ Heavy Duty Flat Washers

Part No.	Bolt Size	A (OD)	B (ID)	C (Thickness)
FW00001	1/4	3/4	9/32	9/64
FW00002	5/16	7/8	11/32	9/64
FW00003	3/8	1	13/32	9/64
FW00004	1/2	1-3/8	17/32	5/32
FW00005	5/8	1-3/4	21/32	5/32
FW00006	3/4	2	13/16	1/4
FW00007	1	2-1/2	1-1/16	1/4

*Tolerances for all dimensions are +/- .010"

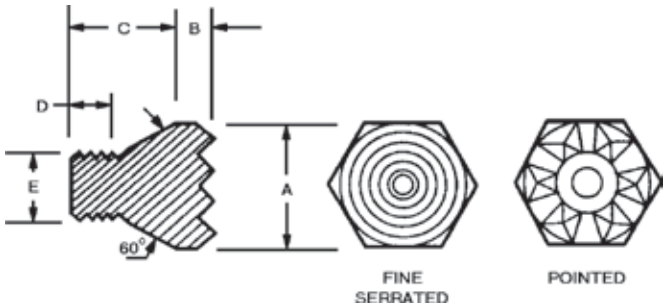
Replaceable Grippers
Tapered – Hardened Steel


Pointed


Fine Serrated

Jergens introduces a new concept in replaceable grippers. It is now easier to modify soft top jaws, strap clamps, or fixtures to hold irregularly shaped material. The grippers can be installed from one side, using a combination center drill, a tap, and a box wrench. There is no need to drill through holes from difficult to reach locations. Simply drill, tap, and install.

- Material: 8620
- Finish: Black Oxide
- Heat Treat: Case Hardened
- Available in FixturePro™ Design Software



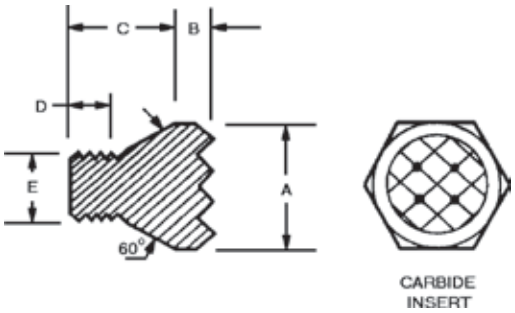
Hardened Steel Grippers

Part Number		Hex				Thread	Center	Drill To
Serrated	Pointed	A	B	C	D	E	Drill	Diameter
23801	**23811**	5/16	.093	.32	.19	8-32	No. 4	.310
23802	**23812**	1/2	.125	.46	.25	1/4-28	No. 6	.498
23803	**23813**	3/4	.187	.70	.38	3/8-16	No. 8	.745

Tapered – Carbide Tipped



- Material: Body 8620
  Insert, Carbide
- Finish: Zinc Plate
- Available in FixturePro™ Design Software



Carbide Tipped Grippers

Part Number	Hex A	B	C	D	Thread E	Center Drill	Drill To Diameter
23822	1/2	.125	.46	.25	1/4-28	No. 6	.498
23823	3/4	.187	.70	.38	3/8-16	No. 8	.745

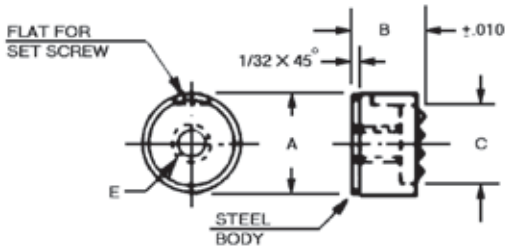
Replaceable Grippers



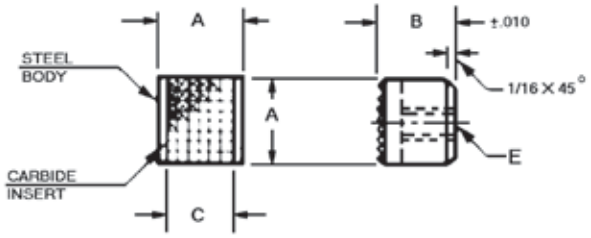
The Jergens Replaceable Grippers are available in Hardened High Speed Tool Steel or with Carbide Inserts. The points of the grippers embed themselves into the work piece giving greater holding power with less actual pressure. Jergens Grippers may be held in place using either a set screw on the flat of the gripper or the threaded hole in the back of the gripper.

Use Jergens Grippers to make hardened serrated jaws from Jergens soft top jaws or add the grippers to Jergens strap clamps for extra holding power. Use Jergens replaceable grippers anywhere that rough surfaces are being held in position for machining.

ROUND GRIPPERS



SQUARE GRIPPERS



- Material: Body, Low Carbon Steel
  Insert, Carbide
- Finish: Zinc Plate
- Serrations: .09" x 90°
- Available in FixturePro™ Design Software

Carbide Tipped Grippers

Part Number	Style	A	B	C	E	Wt. (lbs) 10 Pcs.
23708	Round	3/8	3/8	5/16	10-32 x 7/32	.15
23707	Round	1/2	3/8	3/8	10-32 x 7/32	.20
23702	Round	1/2	1/2	3/8	10-32 x 11/32	.22
23703	Round	1/2	21/32	3/8	10-32 x 7/16	.30
23704	Round	5/8	3/8	1/2	1/4-28 x 7/32	.36
23705	Round	3/4	3/8	5/8	1/4-28 x 7/32	.44
23706	Square	1/2	3/8	13/32	10-32 x 1/4	.30

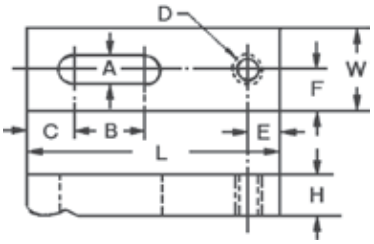
- Material: High Speed Tool Steel
- Finish: Black Oxide
- Heat Treat: Rc 60-62
- Serrations: .09" x 90°
- Available in FixturePro™ Design Software

Hardened Tool Steel Grippers

Part Number	Style	A	B	C	E	Wt. (lbs) 10 Pcs.
23710	Round	3/8	3/8	3/8	10-32 x 3/8	.15
23711	Round	1/2	3/8	1/2	10-32 x 3/8	.20
23712	Round	1/2	1/2	1/2	10-32 x 1/2	.22
23713	Round	1/2	21/32	1/2	10-32 x .651	.30
23714	Round	5/8	3/8	5/8	1/4-28 x 3/8	.36
23715	Round	3/4	3/8	3/4	1/4-28 x 3/8	.44
23716	Square	1/2	3/8	1/2	10-32 x 3/8	.30

Miniature Straps – Radius





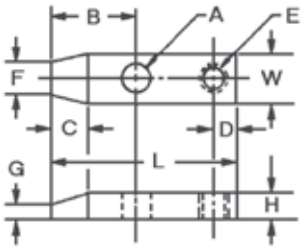
A light-duty strap with a specially designed radius end provides maximum pressure for extreme close-to-the-edge clamping. Features a tapped hole in the rear for knurled head thumb screw and a long slot for lateral adjustment.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69

Part Number	Bolt Size	A	B	C	Thread Size D	E	F	W	H	L	Wt. (lbs) 10 Pcs.
29704	#10 or M5	7/32	7/16	5/16	10-24	3/16	1/4	1/2	1/4	1 1/2	.44
29705	#10 or M5	7/32	9/16	5/16	10-24	3/16	1/4	1/2	1/4	1 3/4	.44
29706	#10 or M5	7/32	11/16	5/16	10-24	3/16	1/4	1/2	1/4	2	.44

Miniature Straps – Flat





A “chisel nose”, flat strap for light-duty holding where clamping is restricted. Features a tapped hole in back for heel rest and a drilled hole for stud clearance.

- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69

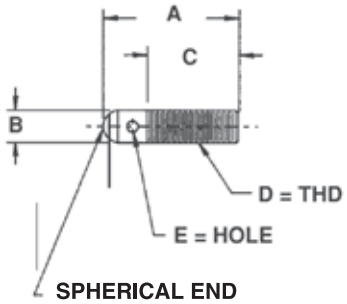
Part Number	A	B	C	D	Thread Size E	F	G	W	H	L	Wt. (lbs) 10 Pcs.
29701	7/32	5/8	3/8	3/16	10-24	1/4	1/8	1/2	1/4	1 1/2	.47
29702	9/32	7/8	3/8	3/16	10-24	1/4	1/8	1/2	1/4	2	.62
29703	9/32	1 1/8	3/8	3/16	10-24	1/4	1/8	1/2	5/16	2 1/2	.94

Adjustable Clamp Rests

Stainless Steel



- Material: 303 Stainless

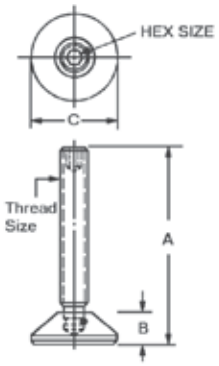


SPHERICAL END

Part Number	A	B	C	D	E
12231	3/4	.190	1/2	10-32	1/16
12232	1 1/4	.190	1	10-32	1/16
12233	1	1/4	11/16	1/4-20	5/64
12234	1 1/2	1/4	1 3/16	1/4-20	5/64
12235	1 3/8	5/16	1 1/8	5/16-18	3/32
12236	1 7/8	5/16	1 5/8	5/16-18	3/32
12237	1 5/8	3/8	1 3/8	3/8-16	1/8
12238	2 1/8	3/8	1 7/8	3/8-16	1/8

Adjustable Clamp Heels

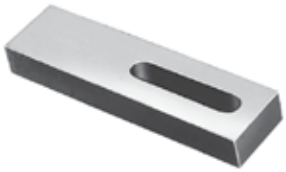


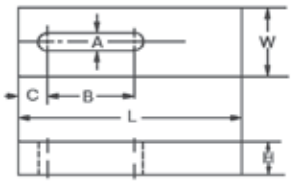


- Material: Stud, Stressproof®
  Pad, Low Carbon Steel
- Finish: Black Oxide
- Thread: 2B-UNC (Inch); 6h (Metric)

Part Number	Thread Size	A	B	C	Hex Key Size	Wt. (lbs)
47213	3/8-16	2	5/8	1 1/4	3/16	.20
47214	3/8-16	3	5/8	1 1/4	3/16	.30
47215	3/8-16	4	5/8	1 1/4	3/16	.40
47201	1/2-13	3	5/8	1 1/2	1/4	.40
47202	1/2-13	4	5/8	1 1/2	1/4	.50
47203	1/2-13	5	5/8	1 1/2	1/4	.60
47204	5/8-11	4	3/4	1 3/4	5/16	.70
47205	5/8-11	5	3/4	1 3/4	5/16	.80
47206	5/8-11	6	3/4	1 3/4	5/16	.90
47207	3/4-10	5	7/8	2	3/8	1.20
47208	3/4-10	6	7/8	2	3/8	1.35
47209	3/4-10	7	7/8	2	3/8	1.50
47210	1-8	4	1	2 1/2	9/16	1.90
47211	1-8	6	1	2 1/2	9/16	2.30

Plain Straps



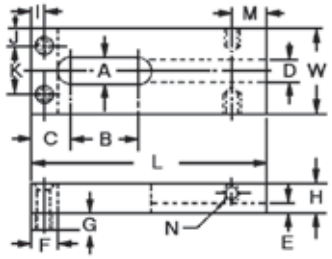


- Material: Low Carbon Steel, 2024 Aluminum

Part Number		Bolt				Width				Wt.
Steel	Aluminum	Size	A	B	C	Steel	Aluminum	H	L	(lbs)
33111	**33001**	1/4 or M6	9/32	5/8	3/8	5/8	3/4	3/8	2	.09
33113	—	5/16 or M8	11/32	3/4	9/16	7/8	—	1/2	2 1/2	.18
33114	**33004**	5/16 or M8	11/32	1 1/4	9/16	7/8	1	1/2	3 1/2	.25
33115	—	3/8 or M10	13/32	1 1/8	11/16	1 1/4	—	5/8	3 1/2	.61
33116	**33006**	3/8 or M10	13/32	1 5/8	11/16	1 1/4	1 1/2	5/8	4 1/2	.90
33117	—	1/2 or M12	17/32	1 1/4	7/8	1 1/2	—	3/4	4 1/2	1.12
33118	**33008**	1/2 or M12	17/32	2	7/8	1 1/2	2	3/4	6	1.60
33119	—	5/8 or M16	21/32	1 1/2	1 1/16	1 3/4	—	7/8	5	1.75
33120	—	5/8 or M16	21/32	2 1/2	1 1/16	1 3/4	—	7/8	7	2.60
33121	—	3/4 or M19	25/32	1 1/2	1 1/8	1 3/4	—	1	5	2.00
33122	—	3/4 or M19	25/32	2 1/2	1 1/8	1 3/4	—	1	7	2.90

Padded Straps





Jergens Feature:

The elongated slot allows for greater clamping force on the part. A steel pad is standard. Plastic or brass pads may be ordered separately for both inch and metric straps. See page 243.

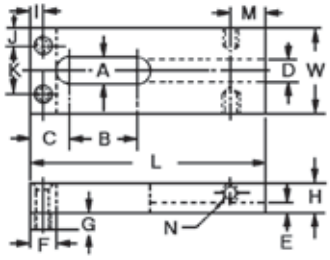
- Material: Low Carbon Steel
- Finish: Low Carbon Steel
- Heat Treat: Case Hardened
  Rockwell 30N Scale 59-69

Part Number	Bolt Size	A	B	C	D	E	F	G	I	J	K	M	N	W	H	L	Wt. (lbs)
37101	1/4 or M6	9/32	5/8	3/8	1/4	1/8	1/4	1/8	9/64	9/64	11/32	—	—	5/8	3/8	2	.09
37103	3/8 or M10	13/32	1 1/8	11/16	3/8	3/16	1/2	1/4	1/4	5/16	5/8	1/2	5/16-18	1 1/4	5/8	3 1/2	.65
37105	3/8 or M10	13/32	1 5/8	11/16	3/8	3/16	1/2	1/4	1/4	5/16	5/8	1/2	5/16-18	1 1/4	5/8	4 1/2	.83
37107*	1/2 or M12	17/32	1 1/4	7/8	3/8	1/4	5/8	3/8	5/16	3/8	3/4	1/2	5/16-18	1 1/2	3/4	4 1/2	1.24
37110*	1/2 or M12	17/32	2	7/8	3/8	1/4	5/8	3/8	5/16	3/8	3/4	1/2	5/16-18	1 1/2	3/4	6	1.63
37111*	5/8 or M16	21/32	1 1/2	1 1/16	3/8	1/4	3/4	1/2	3/8	1/2	3/4	3/4	5/16-18	1 3/4	7/8	5	1.88
37113*	5/8 or M16	21/32	2 1/2	1 1/16	3/8	1/4	3/4	1/2	3/8	1/2	3/4	3/4	5/16-18	1 3/4	7/8	7	2.63
37114*	3/4 or M20	25/32	1 1/2	1 1/8	3/8	1/4	3/4	1/2	3/8	1/2	3/4	3/4	5/16-18	1 3/4	1	5	2.12
37116*	3/4 or M20	25/32	2 1/2	1 1/8	3/8	1/4	3/4	1/2	3/8	1/2	3/4	3/4	5/16-18	1 3/4	1	7	2.88

*Carbide Gripper Kits are available, contact Technical Sales Department for details. Gripper Part #23704.

Padded Straps
Metric



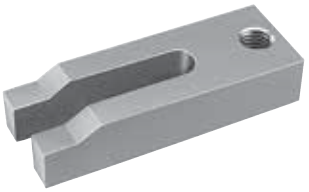


- Material: Low Carbon Steel
- Finish: Low Carbon Steel
- Heat Treat: Case Hardened
  Rockwell 30N Scale 59-69

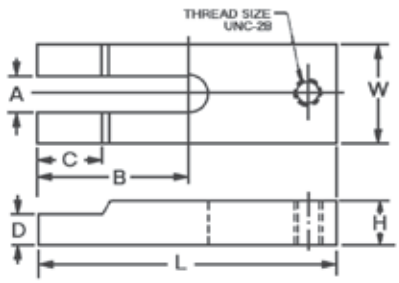
Metric

Part Number	Bolt Size	A	B	C	D	E	F	G	M	N	W	H	I	J	K	L	Wt (kg)
37151	M6	7	16	10	6	3	6	3	—	—	16	9	4	4	9	50	.04
37153	M8	10	28	17	10	5	13	6	13	M8	32	16	6	8	16	89	.29
37157	M10	13	32	22	10	6	16	10	13	M8	38	19	8	10	19	114	.38
37161	M16	17	38	27	10	6	19	13	19	M8	44	22	10	13	19	127	1.19
37164	M20	20	38	29	10	6	19	13	19	M8	44	25	10	13	19	127	1.31

Long Slot U-Straps

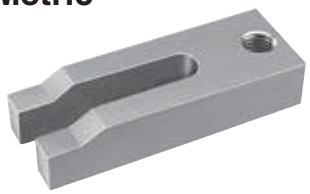


- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: UNC-2B (Inch); 6h (Metric)
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Designed to be used with Adjustable Clamp Heels, found on page 278, and Clamp Assembly Heels on page 238

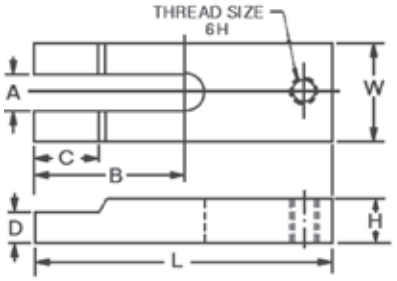


Part Number	Bolt Size	A	B	C	D	Thread Size	W	H	L	Wt. (lbs)
47021	1/2 or M12	17/32	2 1/2	—	—	1/2-13	1 1/2	3/4	4	1.18
47022	1/2 or M12	17/32	3 1/2	—	—	1/2-13	1 1/2	3/4	6	1.92
47023	5/8 or M16	21/32	2 7/16	5/8	3/4	5/8-11	1 3/4	7/8	4	1.52
47024	5/8 or M16	21/32	3 15/16	5/8	3/4	5/8-11	1 3/4	7/8	7	2.73
47025	3/4 or M20	25/32	3 1/2	5/8	3/4	3/4-10	2	1	6	2.96
47026	3/4 or M20	25/32	5	5/8	3/4	3/4-10	2	1 1/4	8	3.99
47027	1 or M24	1 1/16	5 1/2	5/8	3/4	1-8	2 1/2	1 1/2	10	8.12

Long Slot U-Straps
Metric



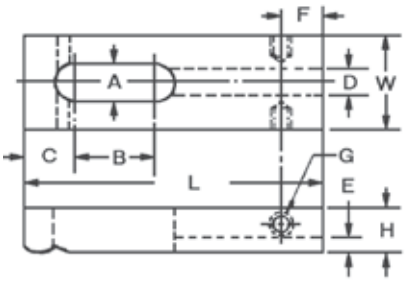
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: UNC-2B (Inch); 6h (Metric)
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Designed to be used with Adjustable Clamp Heels, found on page 278, and Clamp Assembly Heels on page 238



Part Number	Bolt Size	A	B	C	D	Thread Size	W	H	L	Wt (kg)
47071	M12	13	64	—	—	M12	38	19	100	.54
47072	M12	13	89	—	—	M12	38	19	150	.87
47073	M16	17	62	16	19	M16	44	22	100	.70
47074	M16	17	100	16	19	M16	44	22	175	1.24
47075	M20	20	89	16	19	M20	50	25	150	1.34
47076	M20	20	127	16	19	M20	50	32	200	1.81
47077	M24	27	140	16	19	M24	64	38	250	3.68

Radius Straps





Jergens Feature:

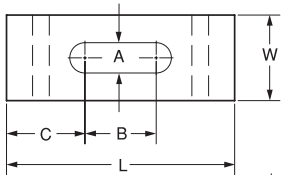
The elongated slot allows for greater clamping force on the part.

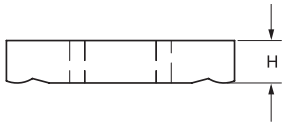
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69

Part Number	Bolt Size	A	B	C	D	E	F	G	W	H	L	Wt. (lbs)
36703	1/4 or M6	9/32	5/8	3/8	1/4	1/8	—	—	5/8	3/8	2	0.09
36708	1/4 or M6	9/32	1	3/8	1/4	1/8	—	—	5/8	3/8	2-1/2	0.11
36717	5/16	11/32	3/4	9/16	1/4	1/4	—	—	7/8	1/2	2-1/2	0.20
36718	5/16	11/32	1-1/4	9/16	1/4	1/4	—	—	7/8	1/2	3-1/2	0.25
36704	3/8 or M10	13/32	1-1/8	11/16	3/8	3/16	1/2	5/16-18	1-1/4	5/8	3-1/2	0.61
36719	3/8 or M10	13/32	1-5/8	11/16	3/8	3/16	1/2	5/16-18	1-1/4	5/8	4-1/2	0.71
36705	1/2 or M12	17/32	1-1/4	7/8	3/8	1/4	1/2	5/16-18	1-1/2	3/4	4-1/2	1.12
36714	1/2 or M12	17/32	2	7/8	3/8	1/4	1/2	5/16-18	1-1/2	3/4	6	1.56
36706	5/8 or M16	21/32	1-1/2	1-1/16	3/8	1/4	3/4	5/16-18	1-3/4	7/8	5	1.75
36715	5/8 or M16	21/32	2-1/2	1-1/16	3/8	1/4	3/4	5/16-18	1-3/4	7/8	7	2.44
36707	3/4	25/32	1-1/2	1-1/8	3/8	1/4	3/4	5/16-18	1-3/4	1	5	2.00
36716	3/4	25/32	2-1/2	1-1/8	3/8	1/4	3/4	5/16-18	1-3/4	1	7	2.70

Double End Radius Strap



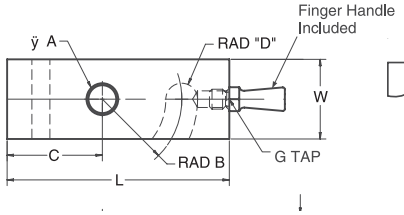


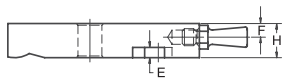


Part Number	Bolt Size	A	B	C	H	W	L	Wt (lbs)
36728	1/2 or M12	17/32	1-1/4	1-3/8	3/4	1-1/2	4	0.80
36729	1/2 or M12	17/32	1-1/2	1-3/4	3/4	1-1/2	5	1.25
36730	5/8 or M16	21/32	1-1/2	2-1/4	7/8	1-3/4	6	2.20

Swing Style Radius Nose Straps



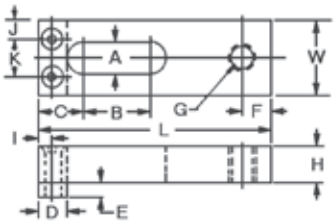




Part Number	Bolt Size	A	B	C	D	E	F	G	W	H	L	Wt (lbs)
36723	1/4	5/16	11/16	1	1/8	1/8	n/a	n/a	5/8	3/8	2	0.09
36724	3/8	7/16	1-1/4	1-1/2	1/4	3/16	1/4	5/16-18	1-1/4	5/8	3-1/2	0.61
36725	1/2	9/16	1-7/8	1-3/16	1/4	1/4	1/4	5/16-18	1-1/2	3/4	4-1/2	1.12
36726	5/8	11/16	2-3/16	2-1/16	1/4	1/4	1/4	5/16-18	1-3/4	7/8	5	1.75
36727	3/4	13/16	2-3/16	2-1/16	1/4	1/4	1/4	5/16-18	1-3/4	1	5	2.00

Tapped Straps





Jergens Feature:

The elongated slot allows for greater clamping force on the part. A steel pad is standard. Plastic or brass pads may be ordered separately, see page 243.

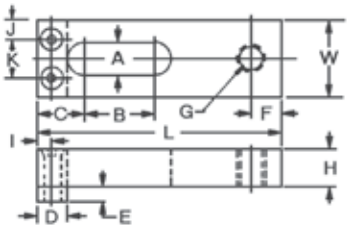
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 2B-UNC
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Tapped for use with adjustable clamp heel found on page 278

Part Number	Bolt Size	A	B	C	D	E	F	Thread Size G	I	J	K	W	H	L	Wt. (lbs)
36911	1/4 or M6	9/32	5/8	3/8	1/4	1/8	7/32	1/4-20	9/64	9/64	11/32	5/8	3/8	2	.10
36913	5/16 or M8	11/32	3/4	9/16	3/8	3/16	1/4	5/16-18	3/16	3/16	1/2	7/8	1/2	2 1/2	.20
36914	5/16 or M8	11/32	1 1/4	9/16	3/8	3/16	1/4	5/16-18	3/16	3/16	1/2	7/8	1/2	3 1/2	.27
36915	3/8 or M10	13/32	1 1/8	11/16	1/2	1/4	3/8	3/8-16	1/4	5/16	5/8	1 1/4	5/8	3 1/2	.69
36916	3/8 or M10	13/32	1 5/8	11/16	1/2	1/4	3/8	3/8-16	1/4	5/16	5/8	1 1/4	5/8	4 1/2	.88
36917*	1/2 or M12	17/32	1 1/4	7/8	5/8	3/8	7/16	1/2-13	1/4	3/8	3/4	1 1/2	3/4	4 1/2	.70
36918*	1/2 or M12	17/32	2	7/8	5/8	3/8	7/16	1/2-13	1/4	3/8	3/4	1 1/2	3/4	6	.90

* Carbide Gripper Kits are available, contact Technical Sales Department for details. Gripper Part #23704.

Tapped Straps
Metric





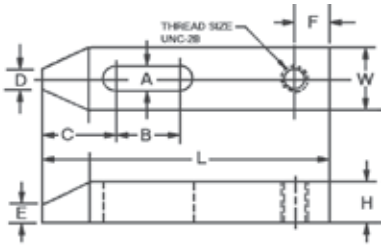
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 6h
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Tapped for use with adjustable clamp heel found on page 278

Part Number	Bolt Size	A	B	C	D	E	F	Thread Size 6h G	I	J	K	W	H	L	Wt. (Kg)
36961	M6	7	16	9	6	3	5	M6	4	4	9	16	9	50	.05
36963	M8	9	19	14	9	5	6	M8	5	5	12	22	13	63	.11
36965	M10	10	28	17	13	6	9	M10	6	8	16	32	16	88	.37
36967	M12	13	31	22	16	9	11	M12	6	9	19	38	19	113	.47

* Carbide Gripper Kits are available, contact Technical Sales Department for details. Gripper Part #23704.

Taper Nose Straps



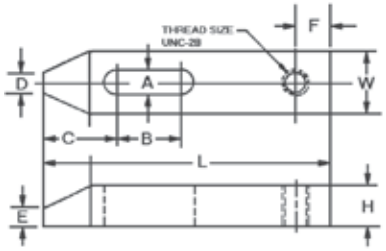


- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: UNC-2B
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Designed to be used with Adjustable Clamp Heels, found on page 278

Part Number	A	B	C	D	E	F	Thread Size	W	H	L	Wt. (lbs)
47119	13/32	1/2	13/16	3/8	3/16	7/16	3/8-16	1	1/2	3	.55
47120	13/32	1	15/16	3/8	3/16	7/16	3/8-16	1 1/4	5/8	4	.75
47123	13/32	1 1/2	15/16	3/8	3/16	7/16	3/8-16	1 1/4	5/8	5	.90
47124	17/32	1/2	1 1/16	1/2	1/4	7/16	1/2-13	1 1/4	5/8	3 1/2	.80
47125	17/32	1 1/4	1 3/16	1/2	3/8	7/16	1/2-13	1 1/4	3/4	4 1/2	1.10
47126	17/32	2	1 5/16	1/2	3/8	7/16	1/2-13	1 1/4	7/8	6	1.60
47127	21/32	1/2	1 3/16	5/8	1/4	1/2	5/8-11	1 1/4	5/8	4	1.80
47128	21/32	1 1/4	1 3/16	5/8	3/8	1/2	5/8-11	1 1/2	3/4	5	2.20
47129	21/32	2	1 5/16	5/8	3/8	1/2	5/8-11	1 1/2	7/8	7	3.10
47130	25/32	3/4	1 5/16	5/8	3/8	9/16	3/4-10	1 1/2	3/4	5	2.85
47131	25/32	1 1/2	1 1/2	5/8	3/8	9/16	3/4-10	1 1/2	1	6	3.40
47132	25/32	2 1/4	1 5/8	5/8	3/8	9/16	3/4-10	1 3/4	1 1/8	8	4.70
47134	1 1/16	2	2 5/8	7/8	5/8	11/16	1-8	2	1 1/2	10	9.55

Metric Taper Nose Straps





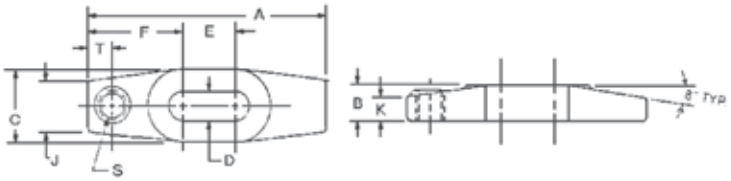
- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 6h
- Heat Treat: Case Hardened Rockwell 30N Scale 59-69
- Designed to be used with Adjustable Clamp Heels, found on page 278

Part Number	A	B	C	D	E	F	Thread Size	W	H	L	Wt. (Kg)
47169	11	13	21	10	5	11	M10 x 1.5	25	13	75	.30
47175	13	33	30	13	10	11	M12 x 1.75	32	19	114	.60
47179	17	50	33	16	10	13	M16 x 2.0	38	22	175	1.70
47182	21	57	41	16	10	14	M20 x 2.5	44	29	200	2.53
47184	26	50	67	22	16	17	M24 x 3.0	50	38	250	5.15

Forged Strap Clamps

Heel Clamp





• Material: C-1030 or C-1035

Standard & Tapped Heel Clamps

Part Number		Bolt												Wt.
Standard	Tapped	Size	A	B	C	D	E	F	J	K	S*	T	(lbs)
37201	**37202**	5/8 or M16	4	3/4	1 5/8	11/16	11/16	1 21/32	1 3/16	1/2	1/2-13	1/2	1.00
37203	**37204**	5/8 or M16	6	7/8	1 3/4	11/16	1 3/8	2 5/16	1 1/4	9/16	5/8-11	5/8	1.75
37205	**37206**	3/4 or M20	8	1 1/8	2 1/8	13/16	2	3	1 1/2	3/4	3/4-10	3/4	3.75
37207	**37208**	7/8 or M20	10	1 3/8	2 1/2	15/16	2 3/4	3 5/8	1 3/4	15/16	7/8-9	7/8	7.00

*Applicable to Tapped Clamp Only

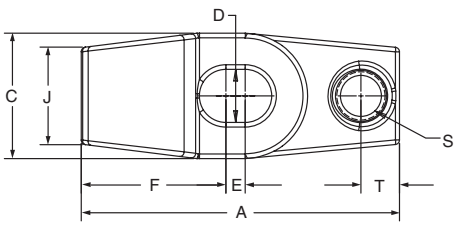
Metric Standard & Tapped Heel Clamps

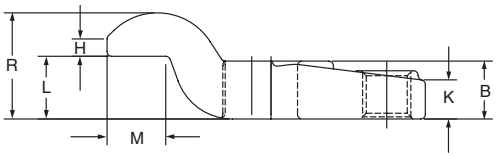
Part Number		Bolt											Wt.
Standard	Tapped	Size	A	B	C	D	E	F	J	K	S*	T	(Kg)
37201	**37252**	M16	100	19	41	17	17	42	30	13	M12 x 1.75	13	.53
37203	**37254**	M16	150	22	44	17	35	59	32	14	M16 x 2.0	16	.94
37205	**37256**	M20	200	29	54	21	50	75	38	19	M20 x 2.5	19	2.0
37207	**37258**	M20	250	35	63	24	70	92	44	24	M24 x 3.0	22	3.8

*Applicable to Tapped Clamp Only

Gooseneck Clamp







• Material: C-1030 or C-1035

Standard & Tapped Gooseneck Clamps

Part Number		Bolt														Wt.
Standard	Tapped	Size	A	B	C	D	E	F	H	J	K	L	M	R	S*	T	(lbs)
37211	**37212**	5/8	4	3/4	1 5/8	11/16	1/4	1 7/8	3/8	1 3/16	1/2	13/16	3/4	1 7/16	5/8-11	1/2	1.00
37213	**37214**	5/8	6	7/8	1 3/4	11/16	1	2 1/2	7/16	1 1/4	9/16	15/16	1 1/8	1 9/16	5/8-11	5/8	2.00
37215	**37216**	3/4	8	1 1/8	2 1/8	13/16	1 5/8	3 3/16	9/16	1 1/2	3/4	1 1/8	1 1/4	2 1/16	5/8-11	1	4.25

*Applicable to Tapped Clamp Only

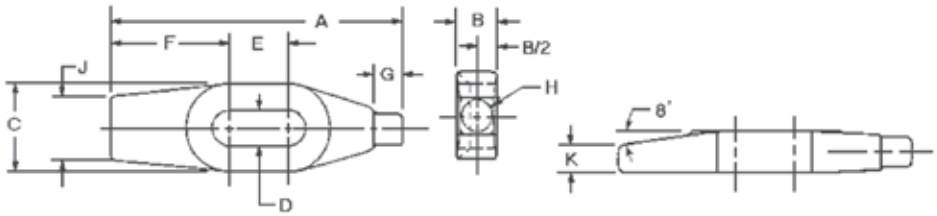
Part Number		Bolt														Wt.
Standard	Tapped	Size	A	B	C	D	E	F	H	J	K	L	M	R	S*	T	(Kg)
37211	**37262**	M16	100	19	41	17	6	48	10	30	13	20	19	37	M16 x 2.013		.53
37213	**37264**	M16	150	22	44	17	25	63	11	32	14	24	28	40	M16 x 2.016		1.4
37215	**37266**	M20	200	29	54	21	41	81	14	38	19	28	32	52	M16 x 2.025		2.3

*Applicable to Tapped Clamp Only

Forged Strap Clamps

Finger Clamp





• Material: C-1030 or C-1035

Part Number	Bolt Size	A	B	C	D	E	F	G	H	J	K	Wt. (lbs)
37221	5/8 or M16	4	3/4	1 5/8	11/16	11/16	1 21/32	1/2	1/2	1 3/16	7/16	.75
37223	5/8 or M16	6	7/8	1 3/4	11/16	1 1/4	2 3/8	5/8	5/8	1 1/4	1/2	1.50
37225	3/4 or M20	8	1 1/8	2 1/8	13/16	1 3/4	3 1/8	3/4	3/4	1 1/2	5/8	3.00

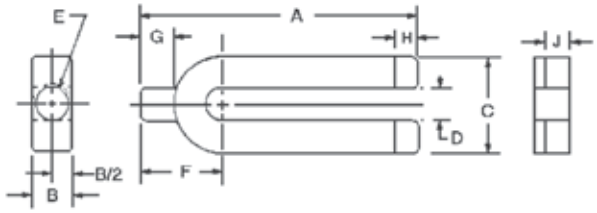
Metric

Part Number	Bolt Size	A	B	C	D	E	F	G	H	J	K	Wt. (Kg)
37221	M16	100	19	41	17	17	42	13	13	30	11	.40
37223	M16	150	22	44	17	32	59	16	16	32	13	.81
37225	M20	200	29	54	21	44	79	19	19	38	16	1.6

Forged Strap Clamps

"U" Clamp





• Material: C-1030 or C-1035

Part Number	Bolt Size	A	B	C	D	E	F	G	H	J	Wt. (lbs)
37231	5/8 or M16	4	3/4	1 3/4	11/16	9/16	1 7/16	9/16	1/2	1/2	1.00
37232	5/8 or M16	6	7/8	2	11/16	11/16	1 11/16	11/16	5/8	9/16	2.00
37233	3/4 or M20	8	1 1/8	2 3/8	13/16	13/16	2	13/16	3/4	11/16	4.00
37234	7/8 or M24	10	1 1/4	2 3/4	15/16	15/16	2 5/16	15/16	7/8	3/4	6.50
37235	1 or M24	12	1 3/8	3 1/4	1 1/16	1 1/16	2 11/16	1 1/16	1	13/16	9.00

Part Number	Bolt Size	A	B	C	D	E	F	G	H	J	Wt. (Kg)
37231	M16	100	19	44	17	14	37	14	13	13	.53
37232	M16	150	22	50	17	17	43	17	16	14	1.1
37233	M20	200	29	59	21	21	50	21	19	17	2.2
37234	M24	250	32	70	24	24	59	24	22	19	3.5
37235	M24	300	35	83	27	27	68	27	25	21	4.9

Forged Adjustable Clamps





Forged Adjustable Clamp holding one side of a hydraulic vise on a milling machine table.

Forged Adjustable Clamps automatically compensate for clamping height changes within their clamping ranges (see chart for ranges). The swivel bushing is permanently mounted in the clamp which alleviates lost or missing parts. The standard brass heel plate protects the machine table.

- Material: 1137 Forged Steel, Heat Treated
- Finish: Black Oxide
- One Piece Construction
- Versatile Clamping Height
- Made in U.S.A.

Features high quality forging providing superior clamping strength.

Part Number	Bolt Size	Clamping Range	W	T	L	X	Maximum Torque (ft-lbs)	Max Holding* Force (lbs)	Wt. (lbs)
19101	1/2	0-2	1 3/4	1 1/2	4 1/4	2 1/2	90	6800	1.1
19102	5/8	0-2 3/8	2	1 5/8	5	3	180	10600	1.7
19103	3/4	0-2 3/4	2 1/2	1 3/4	6 1/4	3 3/4	300	16000	3.0
19104	7/8	0-3 1/2	3	2 3/8	7	4 1/4	500	21800	5.3
19104	1	0-3 1/2	3	2 3/8	7	4 1/4	760	28600	5.3

Metric

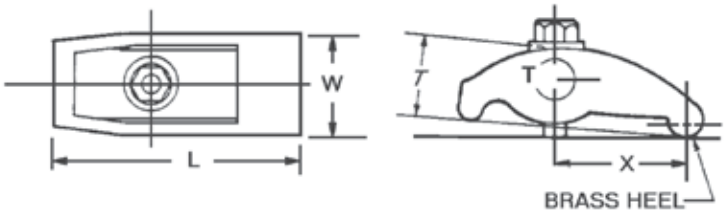
Part Number	Bolt Size	Clamping Range	W	T	L	X	Maximum Torque (N.m)	Max Holding* Force (Kgf)	Wt. (Kg)
19101	M12	0-50	44	38	108	63	100	2800	0.60
19102	M16	0-60	50	41	125	75	260	5250	0.92
19103	M20	0-70	63	44	159	95	500	8250	1.60
19104	M24	0-89	75	60	175	108	870	11850	2.90

***Note**:* **Holding forces are based on using Jergens heat treated alloy steel T-slot bolts, Studs, T-nuts and Flange nuts in order at the recommended torque.**



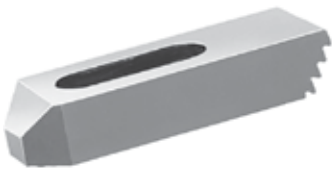
Accessories Available

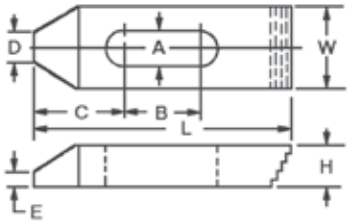
T-Slot Bolts	Flange Nuts	T-Slot Nuts	Studs	Washers
Page 262	Page 264	Page 269	Page 259	Page 270



Steel Heel Straps

Coarse Pitch





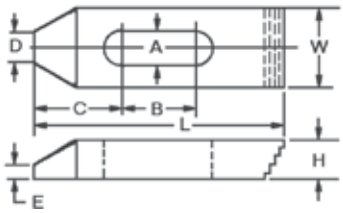
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N 50-54

The step teeth of the Coarse Pitch Steel Heel Straps match the Jergens Aluminum Step Blocks. These straps facilitate easier height adjustments on set-ups.

Part Number	Bolt Size	A	B	C	D	E	H	L	W	Wt. (lbs)
46814	1/2 or M12	17/32	1/2	1 1/16	1/2	1/4	5/8	2 1/2	1 1/4	.46
46815	1/2 or M12	17/32	1 1/4	1 3/16	1/2	1/4	3/4	4	1 1/4	.65
46816	1/2 or M12	17/32	2	1 5/16	1/2	1/4	7/8	6	1 1/4	.95
46817	5/8 or M16	21/32	1/2	1 3/16	5/8	1/4	5/8	3	1 1/4	.66
46818	5/8 or M16	21/32	1 1/4	1 3/16	5/8	3/8	3/4	5	1 1/2	.93
46819	5/8 or M16	21/32	2	1 5/16	5/8	3/8	7/8	7	1 1/2	1.36
46820	3/4 or M20	25/32	3/4	1 5/16	5/8	3/8	3/4	4	1 1/2	1.39
46821	3/4 or M20	25/32	1 1/2	1 1/2	5/8	3/8	1	6	1 1/2	1.94
46822	3/4 or M20	25/32	2 1/4	1 5/8	5/8	3/8	1 1/8	8	1 3/4	2.48

Fine Pitch



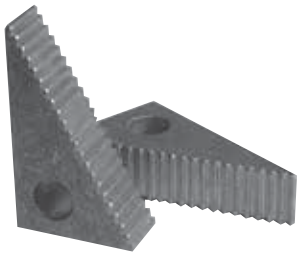


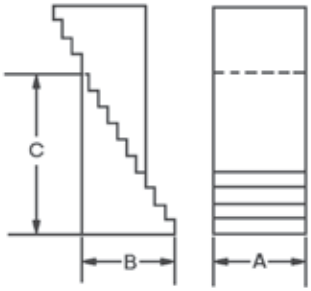
- Material: Low Carbon Steel
- Finish: Black Oxide
- Heat Treat: Case Hardened Rockwell 30N 50-54

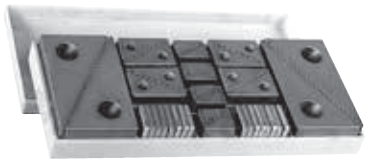
The step teeth of the Fine Pitch Steel Heel Straps match the Jergens Steel Step Blocks. These straps facilitate easier height adjustment on set-ups.

Part Number	Bolt Size	A	B	C	D	E	H	L	W	Wt. (lbs)
46834	1/2 or M12	9/16	1/2	1 1/16	1/2	1/4	1/2	2 1/2	1 1/8	.46
46835	1/2 or M12	9/16	1 1/4	1 3/16	1/2	1/4	3/4	4	1 1/4	.65
46836	1/2 or M12	9/16	2	1 5/16	1/2	1/4	7/8	6	1 1/4	.95
46837	5/8 or M16	11/16	1/2	1 3/16	5/8	1/4	5/8	2 1/2	1 1/4	.66
46838	5/8 or M16	11/16	1 1/4	1 3/16	5/8	3/8	3/4	4	1 1/2	.93
46839	5/8 or M16	11/16	2	1 5/16	5/8	3/8	7/8	6	1 1/2	1.36
46840	3/4 or M20	13/16	3/4	1 5/16	5/8	3/8	3/4	4	1 1/2	1.39
46841	3/4 or M20	13/16	1 1/2	1 1/2	5/8	3/8	1	6	1 5/8	1.94
46842	3/4 or M20	13/16	2 1/4	1 5/8	5/8	3/8	1 1/8	8	1 3/4	2.48

Adjustable Step Blocks
Aluminum — Coarse Pitch







1" & 2" Wide Adjustable Step Block Kits

Step blocks are made of aluminum to prevent damage to machine table surfaces.

Tooth design has no sharp edges which helps to prevent burrs and chip build-up in the steps. Blocks are completely interchangeable with each other, and with the Jergens Coarse Pitch Step Straps.

Standard (1" Width) Kit
21701

Included in Kit:

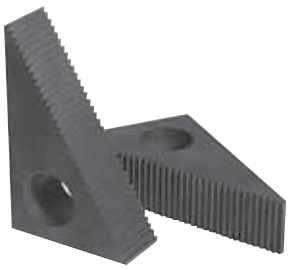
Qty Per Kit	Part Number (Blocks Only)	A	B	C	Step Elevation	Wt. (lbs)
8	**21705**	1	5/8	1 1/16	11/64	.03
8	**21702**	1	1	1 3/4	11/64	.09
4	**21703**	1	2 3/16	3 3/4	11/64	.39
16	**21706**	Protective Pad			11/64	.02

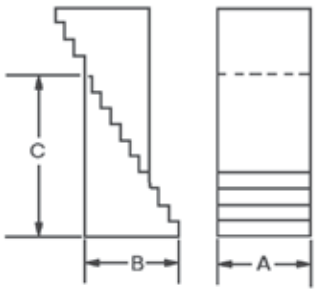
Heavy Duty (2" Width) Kit
21711

Included in Kit:

Qty Per Kit	Part Number (Blocks Only)	A	B	C	Step Elevation	Wt. (lbs)
8	**21712**	2	5/8	1 1/16	11/64	.06
8	**21713**	2	1	1 3/4	11/64	.18
4	**21714**	2	2 3/16	3 3/4	11/64	.78
16	**21715**	Protective Pad			11/64	.04

Steel — Fine Pitch







Adjustable Step Block Kit

Blocks are completely interchangeable with each other, and with the Jergens Fine Pitch Step Straps.

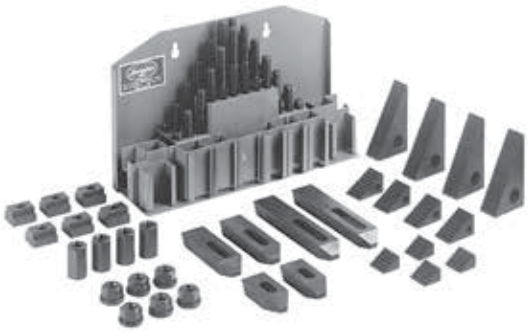
Adjustable Step Block Kit
21821

Included in Kit:

Qty Per Kit	Part Number (Blocks Only)	A	B	C	Step Elevation	Wt. (oz)
8	**21831**	1	5/8	1 1/8	3/32	2
8	**21832**	1	1 1/16	1 3/4	3/32	4
4	**21833**	1	2 3/8	3 7/8	3/32	14
16	**21706**	Protective Aluminum Pad				

Step Blocks sold individually.

60-Piece Set-Up Kits
Aluminum Step Blocks



Kit with Metal Holder

Each 60-Piece Set-Up Kit is supplied with either a non-marring wooden base or a heavy duty steel holder. Tooth design has no sharp edges, which helps to prevent burrs and chips from building up on the steps. The aluminum blocks will not mar precision machine tables.

Each Set-Up-Kit Includes:
- Six Table Saver T-Nuts
- Six Flange Nuts
- Six Step Heel Straps
- Four Coupling Nuts
- Twenty-four Studs: Four each of 3", 4", 5", 6" 7", 8" lengths
- Twelve Course Pitch Aluminum Step Blocks
- One Metal Holder

Part Number Metal Holder	Stud T-Slot Width	Thread Size	Strap Lengths	Wt (lbs)
45105	9/16	1/2-13	2 1/2, 4, 6	20
45106	5/8	1/2-13	2 1/2, 4, 6	20
45104	11/16	1/2-13	2 1/2, 4, 6	20
45108	11/16	5/8-11	3, 5, 7	30
45109	3/4	5/8-11	3, 5, 7	30
45107	13/16	5/8-11	3, 5, 7	30

Metal kit holders are also sold seperately.
Same holder used for both kits.

1/2" Metal Holder	5/8" Metal Holder
45116	**45117**

60-Piece Set-Up Kits
Steel Step Blocks

Each 60-Piece Set-Up Kit is supplied with heavy duty steel holder. The fine pitch steel blocks are compatible with other standard step blocks and straps.

NOTE: The fine pitch blocks are not compatible with the Jergens course pitch aluminum blocks.

Each Set-Up Kit Includes:
- Six Table Saver T-Nuts
- Six Flange Nuts
- Six Step Heel Straps
- Four Coupling Nuts
- Twenty-four Studs: Four each 3", 4", 5", 6", 7", 8" lengths
- Twelve Fine Pitch Steel Step Blocks
- One Metal Holder

Part Number Metal Holder	Stud T-Slot Width	Thread Size	Strap Lengths	Wt. (lbs)
45205	9/16	1/2-13	2 1/2, 4, 6	20
45206	5/8	1/2-13	2 1/2, 4, 6	20
45204	11/16	1/2-13	2 1/2, 4, 6	20
45208	11/16	5/8-11	2 1/2, 4, 6	30
45209	3/4	5/8-11	2 1/2, 4, 6	30
45207	13/16	5/8-11	2 1/2, 4, 6	30

40-Piece Clamping Kit



Contains the same quality components as the larger kits but without the step blocks and step heel straps. This Clamping Kit includes taper nose straps, T-nuts, coupling nuts, flange nuts, clamping heels and studs.

Each Clamping Kit Includes:

- Four Table Saver T-Nuts
- Twenty Studs:
  Four Each 4", 5", 6", 7", 8" lengths
- Four Adjustable Clamp Heels
- Four Flange Nuts
- Four Coupling Nuts
- Four Taper Nose Straps
- One Wooden Holder (†)

Part Number	T-Slot Width	Stud Thread Size	Strap Clamp	Adjustable Clamp Heel	Wt. (lbs)
45022†	7/16*	3/8-16	5/8 x 1 1/4 x 5	3/8-16 x 3	12
45023†	1/2	3/8-16	5/8 x 1 1/4 x 5	3/8-16 x 3	12
45021	9/16	3/8-16	5/8 x 1 1/4 x 5	3/8-16 x 3	12
45025	9/16*	1/2-13	7/8 x 1 1/4 x 6	1/2-13 x 4	20
45026	5/8	1/2-13	7/8 x 1 1/4 x 6	1/2-13 x 4	20
45024	11/16	1/2-13	7/8 x 1 1/4 x 6	1/2-13 x 4	20
45028†	11/16*	5/8-11	7/8 x 1 1/2 x 7	5/8-11 x 5	30
45029†	3/4	5/8-11	7/8 x 1 1/2 x 7	5/8-11 x 5	30
45027†	13/16	5/8-11	7/8 x 1 1/2 x 7	5/8-11 x 5	30
45031	13/16*	3/4-10	1 x 1 1/2 x 6	3/4-10 x 6	40
45032	7/8	3/4-10	1 x 1 1/2 x 6	3/4-10 x 6	40
45030	1 1/16	3/4-10	1 x 1 1/2 x 6	3/4-10 x 6	40

*T-Nuts not hardened due to thin wall.
† Includes Wood Holder.

Die Set-Up Kits



These Die Set-Up Kits can be used with any of the Jergens heavy duty straps; however, the kits are best suited **for use with forged strap clamps** found on pages 284 thru 286.

Each Kit includes:

- Four Flange Nuts
- Four Heavy Duty Washers
- Twelve Steel Step Blocks
- Twenty Studs
- One Wooden Holder

Thread Size	Part Number	Stud Lengths
1/2-13	**44921**	3, 4, 5, 6, 8
5/8-11	**44922**	3, 4, 5, 6, 8
3/4-10	**44923**	4, 5, 6, 8, 10

Toe Clamps

Small

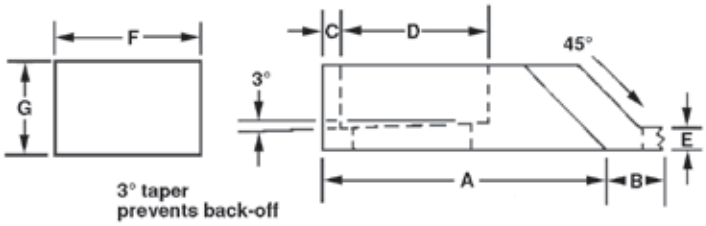


Jergens Feature:

3° Taper Prevents Back-off

Toe Clamps are powerful, low profile clamps that grip on the side of the workpiece leaving the top surface open. This minimizes interference with cutting tools or measuring instruments. Ideal for use on mills, planers, jig borers, drill presses, and faceplates.

- Steel or brass toe and special washer are included with each clamp
- Slotted for 5/16 or M8 Cap Screws
- Case hardened for maximun wear
- Black Oxide finish



Part Number	Toe Material	Toe Style	A	B	C	D	E	F	G	Wt. (lbs)	Toe Only
46921	STEEL	STANDARD	1 1/2	1/2	1/16	3/4	1/8	1	5/8	.24	**46952**
46971	STEEL	HIGH GRIP	1 1/2	1/2	1/16	3/4	5/8	1	5/8	.26	**46948**
46922	STEEL	STANDARD	2	1/2	1/16	1 1/4	1/8	1	5/8	.30	**46952**
46972	STEEL	HIGH GRIP	2	1/2	1/16	1 1/4	5/8	1	5/8	.32	**46948**
46923	STEEL	STANDARD	2 1/2	1/2	1/16	1 3/4	1/8	1	5/8	.35	**46952**
46973	STEEL	HIGH GRIP	2 1/2	1/2	1/16	1 3/4	5/8	1	5/8	.37	**46948**

* Replacement Parts available, contact customer service.

Small Toe Clamp Kits



Each Clamp Kit Includes:

- Six Toe Clamps:Two of each length (1 1/2", 2", 2 1/2")
- Six Low Grip Steel Toes
- Six Toe Clamp Nuts
- Six Protective Washers
- One T-Wrench
- One Wooden Holder

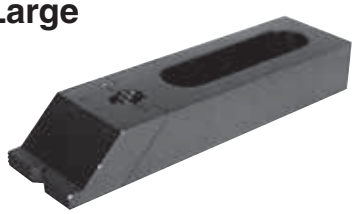
Part Number	Table Slot	Toe Clamps	Toe Clamp Nuts	Washers	lbs Per Kit
44901	3/8	**46921, 46922, 46923**	**46931**	**46942**	3
44902	7/16	**46921, 46922, 46923**	**46932**	**46942**	3
44903	1/2	**46921, 46922, 46923**	**46933**	**46942**	3
44904	9/16	**46921, 46922, 46923**	**46934**	**46942**	3
44905	5/8	**46921, 46922, 46923**	**46935**	**46942**	3

Slotted for 5/16" or M8 Socket Head Cap Screws

* Replacement Parts available, contact customer service.

Toe Clamps

Large

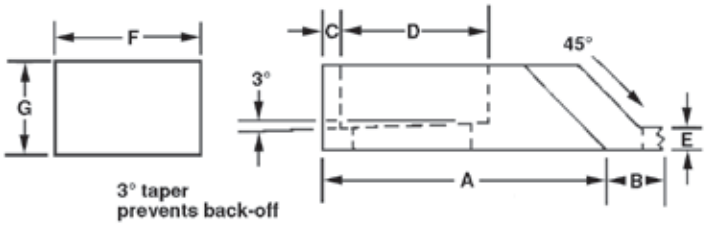


Jergens Feature:

3° Taper Prevents Back-off

Toe Clamps are powerful, low profile clamps that grip on the side of the workpiece leaving the top surface open. This minimizes interference with cutting tools or measuring instruments. Ideal for use on mills, planers, jig borers, drill presses, and faceplates.

- Steel or brass toe and special washer are included with each clamp.
- Slotted for 1/2" or M12 Cap Screws
- Low Carbon Steel hardened for maximum wear
- Black Oxide finish



Part Number	Toe Material	Toe Style	A	B	C	D	E	F	G	Wt. (lbs)	Toe Only
46926	STEEL	STANDARD	3 1/4	13/16	1/8	2	1/4	1 1/2	7/8	1.0	**46953**
46976	STEEL	HIGH GRIP	3 1/4	13/16	1/8	2	7/8	1 1/2	7/8	1.3	**46949**
46927	STEEL	STANDARD	4 11/16	13/16	1/2	2 3/4	1/4	1 1/2	7/8	1.4	**46953**
46977	STEEL	HIGH GRIP	4 11/16	13/16	1/2	2 3/4	7/8	1 1/2	7/8	1.7	**46949**
46928	STEEL	STANDARD	6 5/8	13/16	1	3 3/4	1/4	1 1/2	7/8	2.0	**46953**
46978	STEEL	HIGH GRIP	6 5/8	13/16	1	3 3/4	7/8	1 1/2	7/8	2.3	**46949**

* 5/8 or M16 Cap Screw Slot and replacement parts available, contact customer service.

Large Toe Clamp Kits



Each Clamp Kit Contains:

- Six Toe Clamps: Two of each length (3 1/4", 4 11/16", 6 5/8")
- Four Low Grip Steel Toes
- Six Toe Clamp Nuts
- Six Protective Washers
- One T-Wrench
- One Wooden Holder

Part Number	Table Slot	Toe Clamps	Toe Clamp Nuts	Washers	lbs Per Kit
44906	9/16	**46926, 46927, 46928**	**46936**	**46943**	11
44907	5/8	**46926, 46927, 46928**	**46937**	**46943**	12
44909	11/16	**46926, 46927, 46928**	**46938**	**46943**	12
44910	13/16	**46926, 46927, 46928**	**46939**	**46943**	13
44911	7/8	**46926, 46927, 46928**	**46940**	**46943**	14
44912	1	**46926, 46927, 46928**	**46941**	**46943**	15

Slotted for 1/2" or M12 Socket Head Cap Screws

* 5/8 or M16 Cap Screw Slotted Kits and replacement parts available, contact customer service.

Jergens OK-Vise®

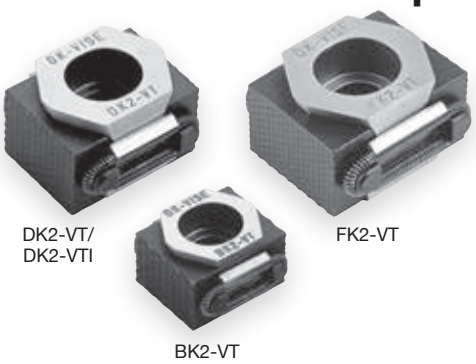
Serrated and Smooth Jaws 294
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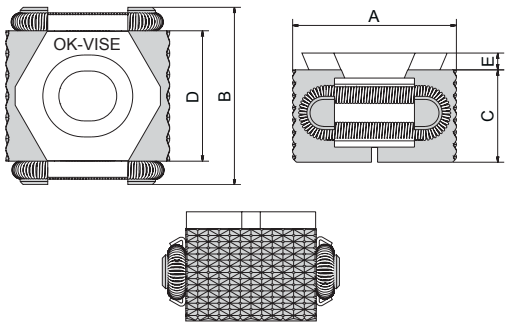
Jergens®
MANUFACTURING EFFICIENCY

Serrated Jaw Clamp



General-purpose clamps for your shop. Serration creates high friction, which ensures reliable clamping in any circumstances.

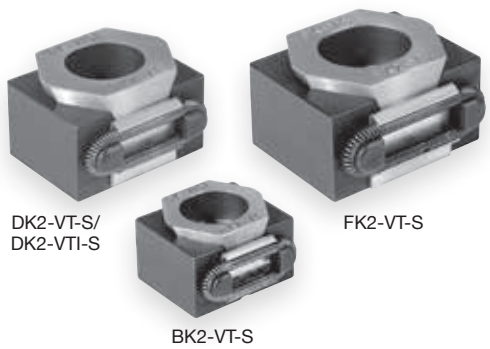




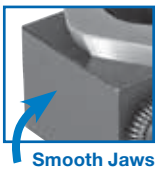
Part Number	A			B	C	D	E	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC
	Min	Optimum	Max									
BK2-VT	27	29	31	29	15	21	2.5	M8x20	25 (5620)	44 (32.4)	55 (0.12)	48-52
DK2-VT	42	45	49	41	22	30	4	M12x30	65 (14,612)	145 (107)	180 (0.4)	48-52
DK2-VTI*	1.65	1.77	1.92	1.61	0.86	1.18	0.15	1/2-13 X 1 1/4"	65 (14,612)	145 (107)	0.4	48-52
FK2-VT	57	61	65	56	29	42	5	M16x40	110 (24,729)	360 (265)	465 (1.03)	48-52

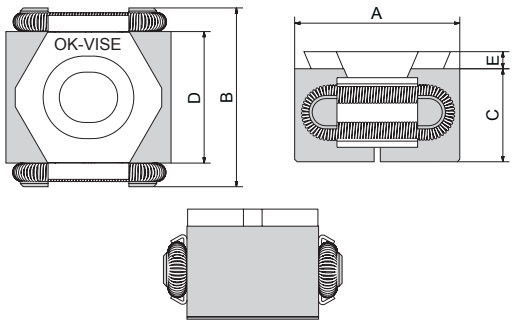
*DK2-VTI measures given in inches and pounds.

Smooth Jaw Clamp



When no marks on the workpieces are allowed, smooth jaws are used.

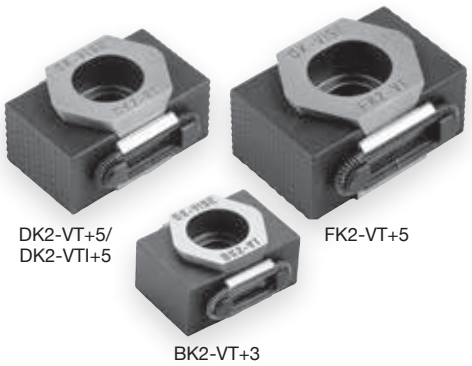




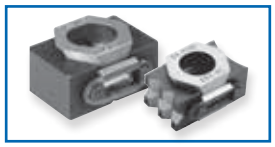
Part Number	A			B	C	D	E	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC
	Min	Optimum	Max									
BK2-VT-S	27	29	31	29	15	21	2.5	M8x20	25 (5620)	44 (32.4)	55 (0.12)	48-52
DK2-VT-S	42	45	49	41	22	30	4	M12x30	65 (14,612)	145 (107)	180 (0.4)	48-52
DK2-VTI-S*	1.65	1.77	1.92	1.61	0.86	1.18	0.15	1/2-13 X 1 1/4"	65 (14,612)	145 (107)	0.4	48-52
FK2-VT-S	57	60	64	56	29	42	5	M16x40	110 (24,729)	360 (265)	465 (1.03)	48-52

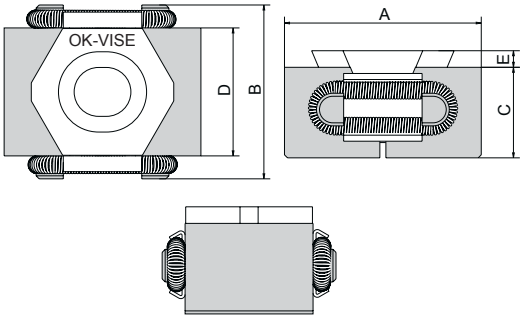
*DK2-VTI-S measures given in inches and pounds.

Machinable Jaw Clamp



Single-wedge clamps are also available with extended jaws and can be machined to suit the geometry of the workpiece. The smallest model can be machined up to 3 mm and the larger ones up to 5 mm.

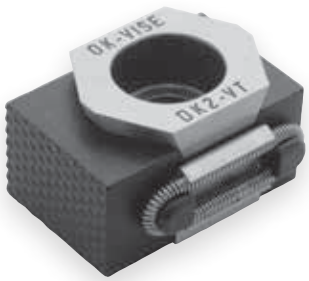


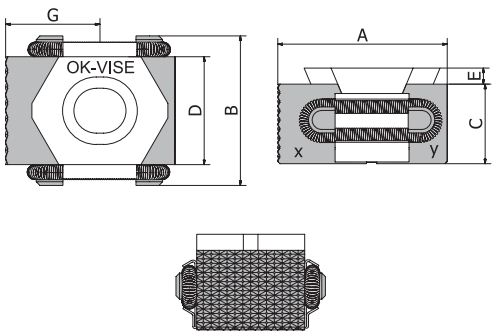


Part Number	A			B	C	D	E	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC
	Min	Optimum	Max									
BK2-VT+3	33	35	37	29	15	21	2.5	M8x20	25 (5620)	43 (31.7)	70 (0.16)	30-34
DK2-VT+5	52	55	59	41	22	30	4	M12x30	55 (12,364)	145 (107)	235 (0.52)	30-34
DK2-VTI+5*	2.04	2.16	2.32	1.61	0.86	1.18	0.15	1/2-13 X 1 1/4"	55 (12,364)	145 (107)	0.52	30-34
FK2-VT+5	67	70	75	56	29	42	5	M16x40	100 (22,480)	360 (265)	550 (1.21)	30-34

*DK2-VTI+5 measures given in inches and pounds.

Machinable & Smooth Jaw Clamp





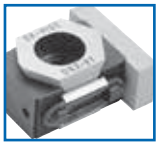
Part Number	A			G			B	C	D	E	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC X	Hardness of Jaws HRC Y
	Min	Optimum	Max	Min	Optimum	Max										
BK2-VT+3S	30	32	34	16.5	17.5	18.5	29	15	21	2.5	M8x20	22 (4,975)	43 (31.7)	65 (0.14)	30-34	48-52
DK2-VT+5S	47	50	54	26	27.5	29.5	54	22	30	4	M12x30	55 (12,364)	145 (107)	210 (0.46)	30-34	48-52
DK2-VTI+5S*	1.85	1.97	2.12	1.00	1.08	1.16	1.61	0.86	1.18	0.15	1/2-13 X 1 1/4"	55 (12,364)	145 (107)	0.52	30-34	48-52
FK2-VT+5S	62	65	70	33.5	35	37.5	56	29	42	5	M16x40	100 (22,480)	360 (265)	500 (1.21)	30-34	48-52

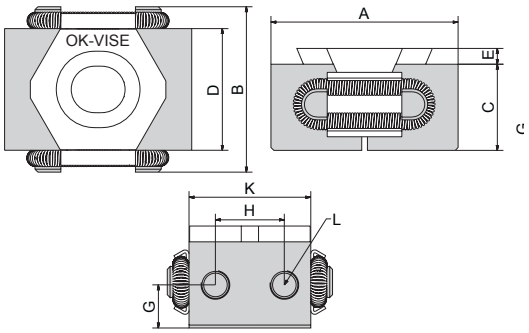
*DK2-VTI+5S measures given in inches and pounds.

Mounting Jaw Clamp



Additional piece models have machined female threadings (M5) for socket head screws on the side of the jaw, making it quick and easy to use various additional pieces which can also be machined into different shapes.

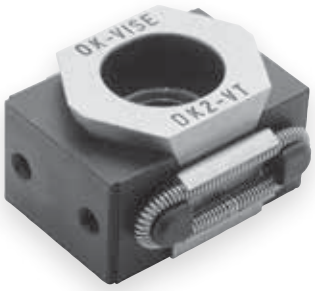


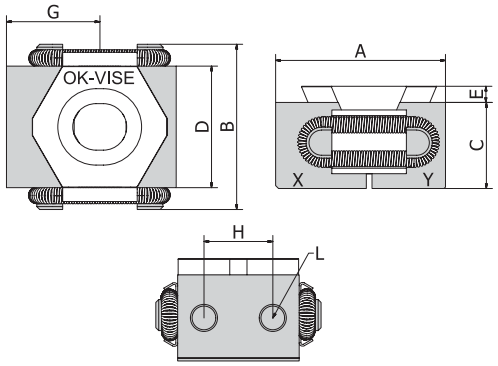


Part Number	A			B	C	D	E	G	H	K	L	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC
	Min	Optimum	Max													
BK2-VT-T	33	35	37	29	15	21	2.5	7.5	12	21	4xM5	M8x20	22 (4,975)	43 (31.7)	60 (0.13)	30-34
DK2-VT-T	46	49	53	41	22	30	4	11	18	28	4xM5	M12x30	55 (12,364)	145 (107)	200 (0.44)	30-34
DK2-VTI-T*	1.81	1.92	2.08	1.61	0.86	1.18	0.15	0.43	0.7	1.1	4xM5	1/2-13 X 1 1/4"	55 (12,364)	145 (107)	7.05	30-34
FK2-VT-T	61	65	70	56	29	42	5	14.5	26	40	4xM5	M16x40	100 (22,480)	360 (265)	480 (1.06)	30-34

*DK2-VTI-T measures given in inches and pounds.

Mounting & Smooth Jaw Clamp





Part Number	A			G			B	C	D	E	H	K	L	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC X	Hardness of Jaws HRC Y
	Min	Optimum	Max	Min	Optimum	Max													
BK2-VT-TS	30	32	34	16.5	17.5	18.5	29	15	21	2.5	12	21	4xM5	M8x20	22 (4,975)	43 (31.7)	62 (0.14)	30-34	48-52
DK2-VT-TS	47	50	54	23	24.5	26.5	41	22	30	4	18	28	4xM5	M12x30	55 (12,364)	145 (107)	192 (0.42)	30-34	48-52
DK2-VTI-TS*	1.85	1.97	2.12	0.90	0.96	1.05	1.61	0.86	1.18	0.15	0.7	1.1	4xM5	1/2-13 X 1 1/4"	55 (12,364)	145 (107)	6.8	30-34	48-52
FK2-VT-TS	62	65	70	30.5	32.5	35	56	29	42	5	26	40	4xM5	M16x40	100 (22,480)	360 (265)	475 (1.05)	30-34	48-52

*DK2-VT-TS measures given in inches and pounds.

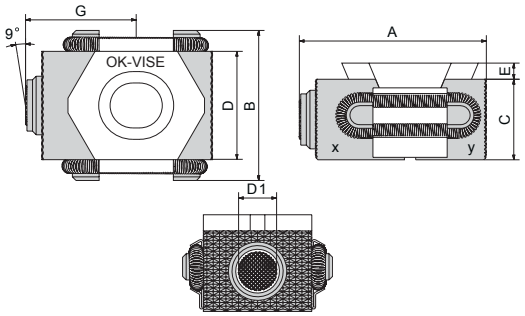
Self-Adjustable Jaw Clamp



DK2-VT-B/
DK2-VTI-B

BK2-VT-B

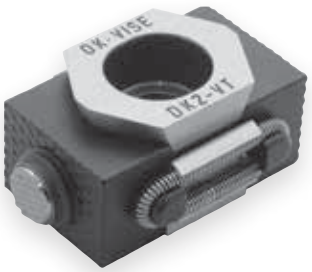
These clamps have a self-adjustable ball gripper screw inserted into a clamp jaw. The ball bearing at the end is made of steel and equipped with torsion protection, allowing the ball to self-adjust up to 9 degrees. This makes clamping irregular-shaped parts and castings more flexible

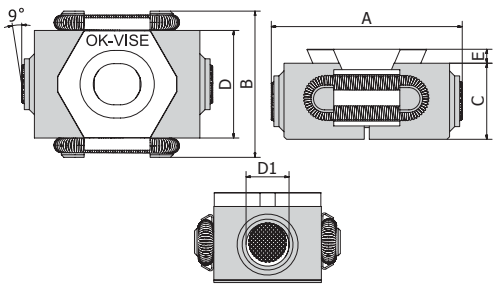


Part Number	A			G			B	C	D	E	Dia. of Serration (D1)	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC X	Hardness of Jaws HRC Y
	Min	Optimum	Max	Min	Optimum	Max											
BK2-VT-B	33	35	37	19.5	20.5	21.5	29	15	21	2.5	7.2	M8x20	22 (4,975)	43 (31.7)	64 (0.14)	30-34	48-52
DK2-VT-B	52	55	59	31	32.5	34.5	41	22	30	4	10.7	M12x30	55 (12,364)	145 (107)	212 (0.41)	30-34	48-52
DK2-VTI-B*	2.04	2.16	2.32	1.22	1.27	1.35	1.61	0.86	1.18	0.15	0.42	1/2-13 X 1 1/4"	55 (12,364)	145 (107)	0.46	30-34	48-52

*DK2-VTI-B measures given in inches and pounds.

Two Self-Adjustable Jaw Clamp

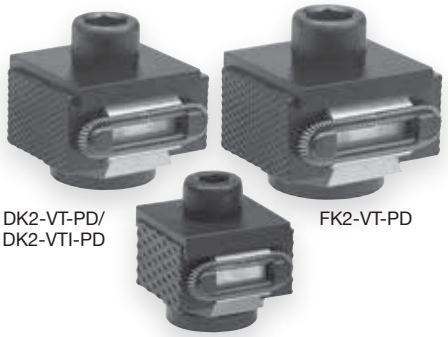




Part Number	A			B	C	D	E	Dia. of Serration (D1)	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC X	Hardness of Jaws HRC Y
	Min	Optimum	Max											
BK2-VT-E	39	41	43	29	15	21	2.5	7.2	M8x20	22 (4,975)	43 (31.7)	72 (0.16)	30-34	48-52
DK2-VT-E	62	65	69	41	44	30	4	10.7	M12x30	55 (12,364)	145 (107)	242 (0.54)	30-34	48-52
DK2-VTI-E*	2.44	2.56	2.72	1.61	0.86	1.18	0.15	0.42	1/2-13 X 1 1/4"	55 (12,364)	145 (107)	0.53	30-34	48-52

*DK2-VT+E measures given in inches and pounds.

Single-Wedge Pull-Down, Serrated Clamp



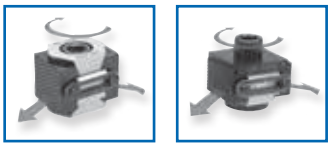
DK2-VT-PD/
DK2-VTI-PD

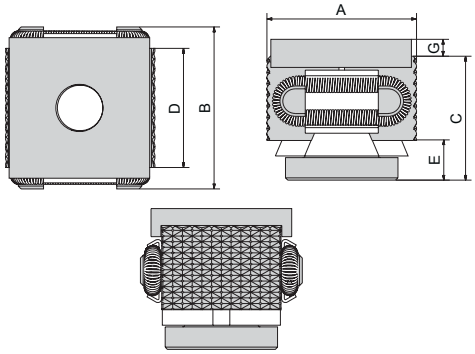
FK2-VT-PD

BK2-VT-PD

Bolt not included

In addition to holding the workpiece in place, pull-down clamps also generate pull-down action, pressing workpieces down onto the fixture plate.



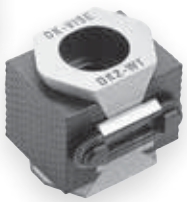


Part Number	A			B	C	D	E	G	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC
	Min	Optimum	Max										
BK2-VT-PD	27	29	31	29	22	21	7	3	M8x20	25 (5620)	44 (32.4)	68 (0.15)	48-52
DK2-VT-PD	42	45	49	41	32	30	10	4	M12x30	65 (14,612)	145 (107)	270 (0.60)	48-52
DK2-VTI-PD*	1.65	1.77	1.93	1.61	1.26	1.18	0.39	0.16	1/2	65 (14,612)	145 (107)	0.60	48-52
FK2-VT-PD	57	61	65	56	40.5	42	11.5	5	M16x40	110 (24,729)	360 (265)	620 (1.37)	48-52

Double-Wedge Pull-Down, Serrated Clamp

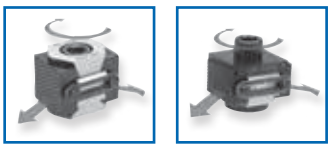


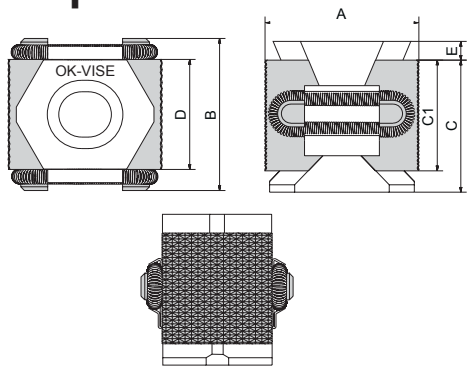
FK2-WT



DK2-WT/
DK2-WTI

In addition to holding the workpiece in place, pull-down clamps also generate pull-down action, pressing workpieces down onto the fixture plate.

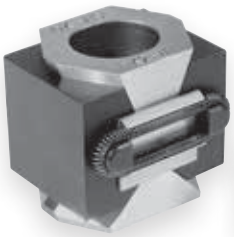




Part Number	A			B	C	C1	D	E	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC
	Min	Optimum	Max										
DK2-WT	42	46	49	41	36	30	30	5	M12x40	90 (20,232)	145 (107)	275 (0.61)	48-52
DK2-WTI*	1.65	1.81	1.92	1.61	1.41	1.18	1.18	0.19	1/2-13 X 1 3/4"	90 (20,232)	145 (107)	0.61	48-52
FK2-WT	58	61	66	56	50	–	42	5	M16x60	150 (33,721)	360 (265)	730 (1.61)	48-52

*DK2-WTI measures given in inches and pounds.

Double-Wedge Pull-Down, Smooth Clamp



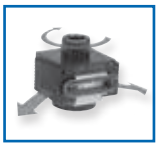
FK2-WT-S

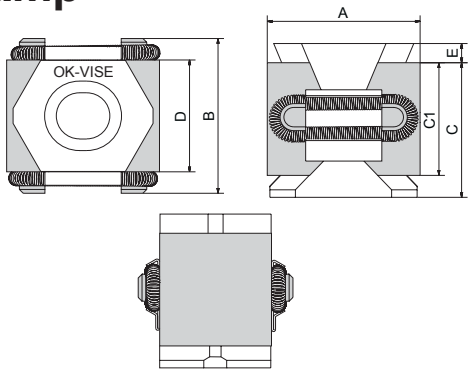


DK2-WT-S/
DK2-WTI-S

In addition to holding the workpiece in place, pull-down clamps also generate pull-down action, pressing workpieces down onto the fixture plate.



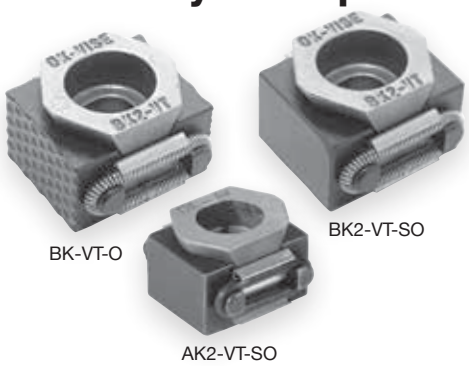




Part Number	A			B	C	C1	D	E	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (lbs) approx.	Hardness of Jaws HRC
	Min	Optimum	Max										
DK2-WT-S	41	45	48	41	36	30	30	5	M12x40	90 (20,232)	145 (107)	275 (0.61)	48-52
DK2-WTI-S*	1.61	1.77	1.88	1.61	1.41	1.18	1.18	0.19	1/2-13 X 1 3/4"	90 (20,232)	145 (107)	0.61	48-52
FK2-WT-S	58	61	66	56	50	–	42	5	M16x60	150 (33,721)	360 (265)	730 (1.61)	48-52

*DK2-WTI-S measures given in inches and pounds.

Economy Clamp



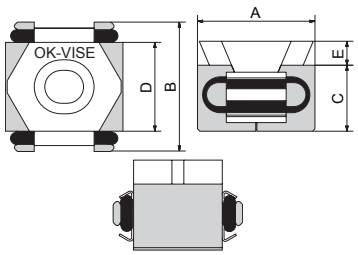
The cost efficient choice!

These models meet the demands of workholding when ultra precision and high clamping force are not necessary. They are made of the same raw material as our other models, and the bottom of the jaws are ground for precise positioning on the fixture base. AK2-VT-SO always comes with Viton o-rings.

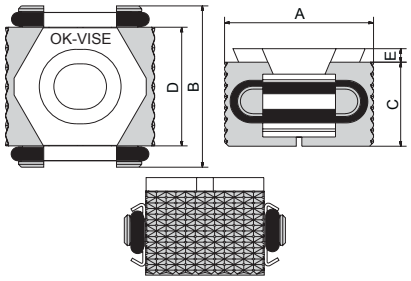
Only the bottom of the jaw is ground. Only our two smallest series clamps are available in the economy model (AK2-VT-SO).

Part Number	A			B	C	D	E	Socket Head Screw DIN 912	Clamping Force of Jaws kN (lbs)	Tightening Torque Nm (ft/lbs)	Weight in g (*lbs) approx.	Hardness of Jaws HRC
	Min	Optimum	Max									
AK2-VT-SO	20	23	25	22	11	15	4.2	M5x25	10 (2,248)	10 (7.4)	22 (0.05)	48-52
BK-VT-O	27	29	31	29	15	21	2.5	M8x20	15 (3,372)	25 (18.4)	55 (0.12)	48-52
BK2-VT-SO	27	29	31	29	15	21	2.5	M8x20	15 (3,372)	25 (18.4)	55 (0.12)	48-52

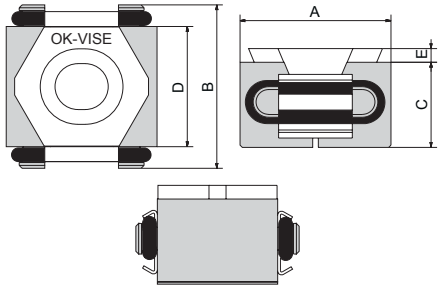
AK2-VT-SO



BK-VT-O



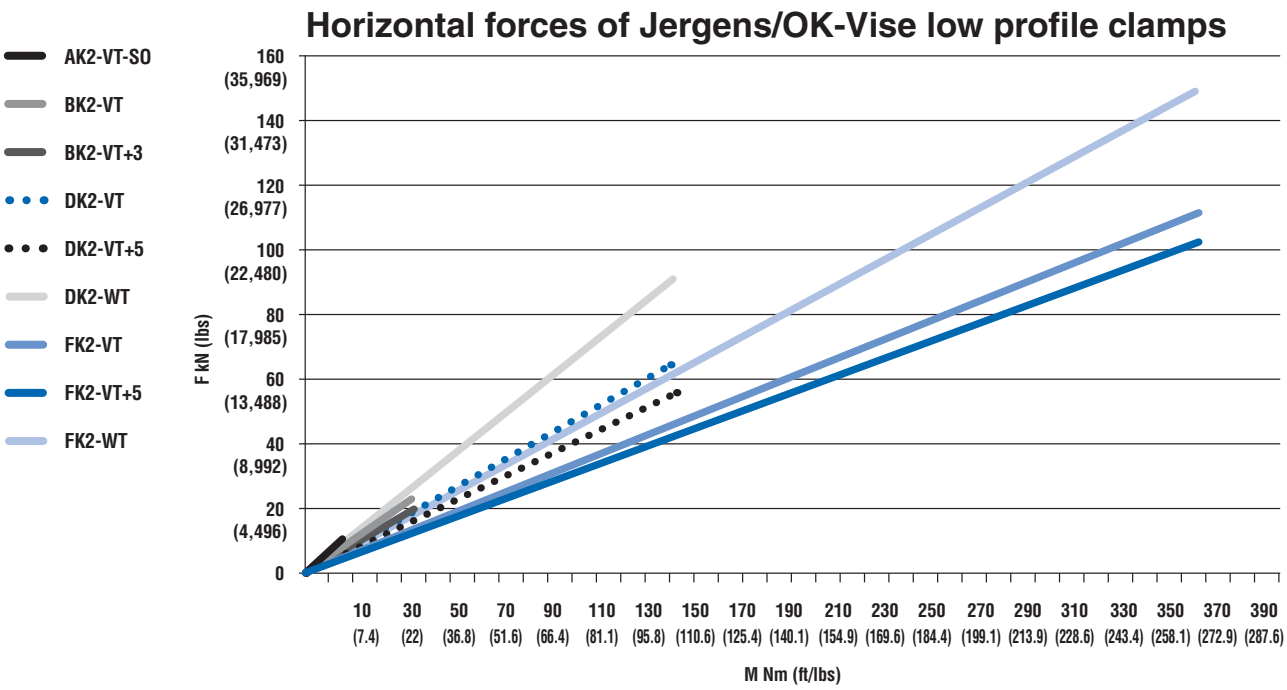
BK2-VT-SO



Low-Profile Clamps

Size	A	B	D	D (In)	F
Serrated basic version	–	BK2-VT	DK2-VT	DK2-VTI	FK2-VT
Smooth basic version	–	BK2-VT-S	DK2-VT-S	DK2-VTI-S	FK2-VT-S
Machinable jaws	–	BK2-VT+3	DK2-VT+5	DK2-VTI+5	FK2-VT+5
Machinable & smooth combo	–	BK2-VT+3S	DK2-VT+5S	DK2-VTI+5S	FK2-VT+5S
Mounting jaw model	–	BK2-VT-T	DK2-VT-T	DK2-VTI-T	FK2-VT-T
Mounting jaw model & smooth combo	–	BK2-VT-TS	DK2-VT-TS	DK2-VTI-TS	FK2-VT-TS
Self-adjustable model	–	BK2-VT-B	DK2-VT-B	DK2-VTI-B	–
Two self-adjustable jaws	–	BK2-VT-E	DK2-VT-E	DK2-VTI-E	–
Single-wedge pull-down, serrated	–	BK2-VT-PD	DK2-VT-PD	DK2-VTI-PD	FK2-VT-PD
Double-wedge pull-down, serrated	–	–	DK2-WT	DK2-WTI	FK2-WT
Double-wedge pull-down, smooth	–	–	DK2-WT-S	DK2-WTI-S	FK2-WT-S
Stainless steel model	–	BK2-VT-SS	–	–	21
Economy-series, serrated	–	BK2-VT-O	–	15	21
Economy-series, smooth	AK2-VT-SO	BK2-VT-SO	29	15	21
Metric bolt	M5	M8	M12	–	M16
Imperial bolt	3/16"	5/16"	–	1/2"	5/8"
Force up to kN (lbs)	10 (2,248)	25 (5,620)	90 (20,232)	90 (20,232)	150 (33,721)

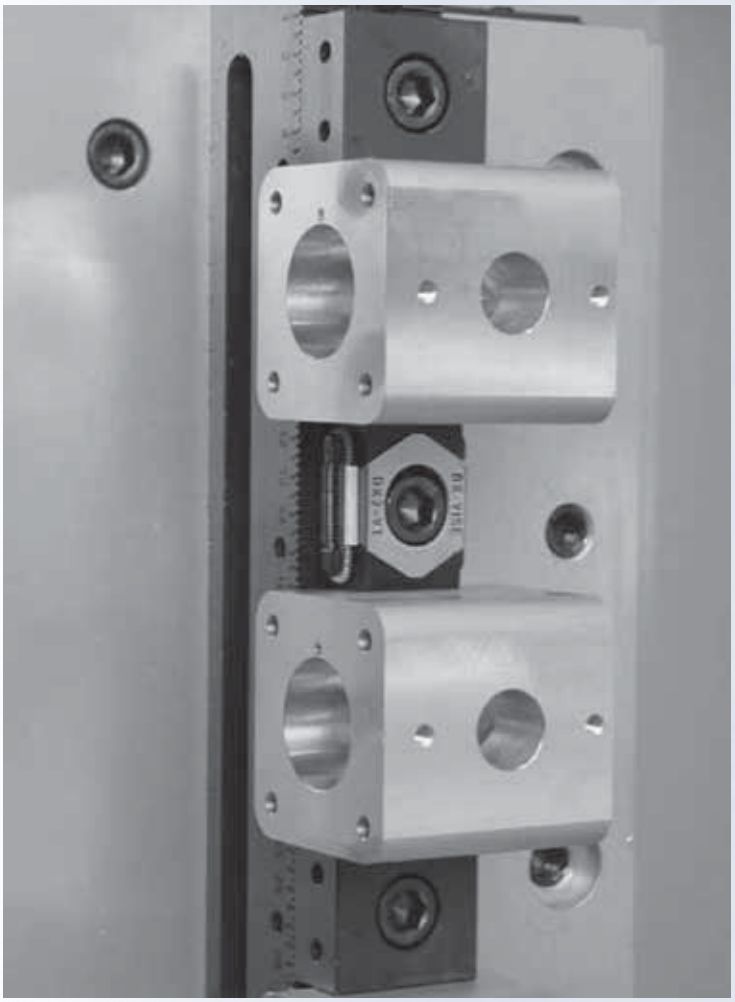
Clampforces



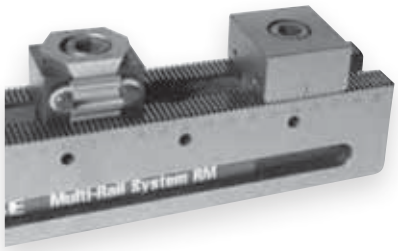
Jergens
WORKHOLDING SOLUTIONS GROUP

MULTI-RAIL RM SYSTEM

Jergens® / OK-VISE®
WORKHOLDING CLAMPS AND ACCESSORIES



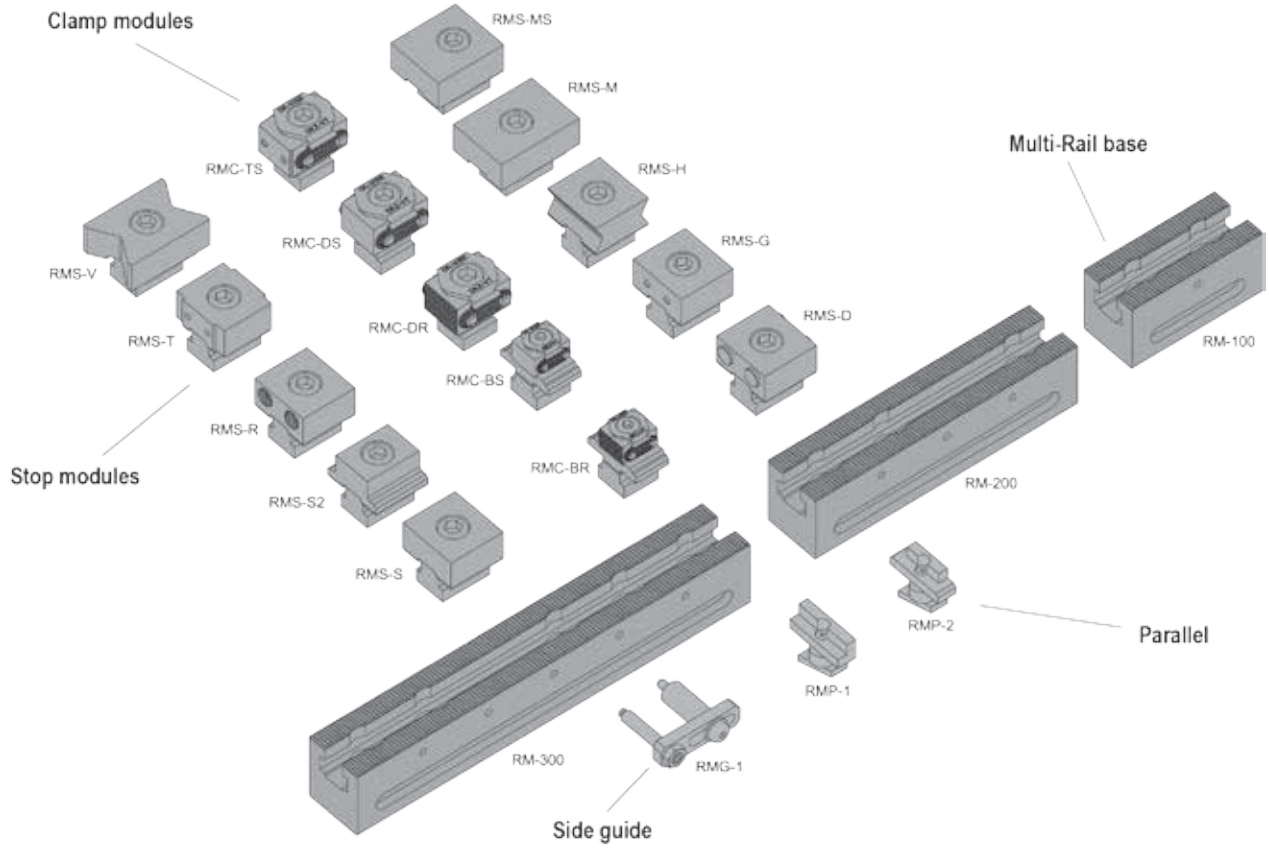
Multi-Rail RM System

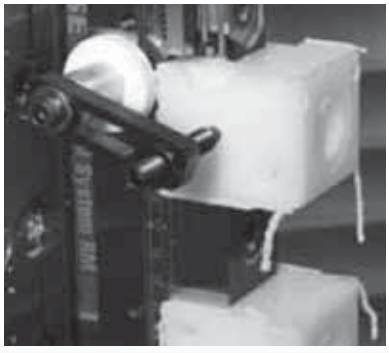


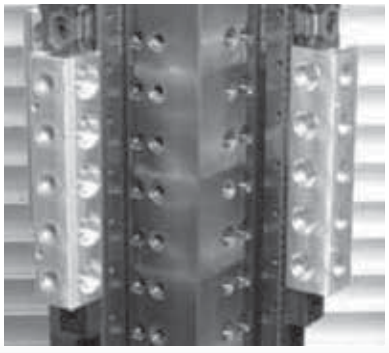
Multi-Rail is the new generic-purpose workholding system of Jergens/OK-VISE. Compared to a traditional machine vise, the Multi-Rail system offers the following benefits:

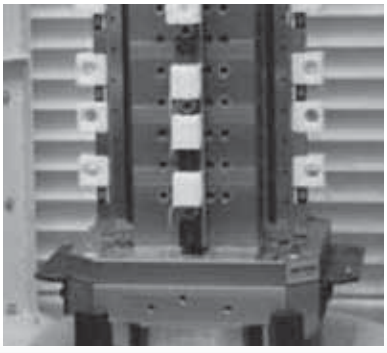
- Using the components of the system, even the most challenging workpiece types can be machined
- All sides of a workpiece can be machined with two setups
- Multiple workpieces can be clamped on the same area
- Workpiece will be safely fixtured
- It is also possible to clamp very large work pieces

Multi-Rail RM System Components

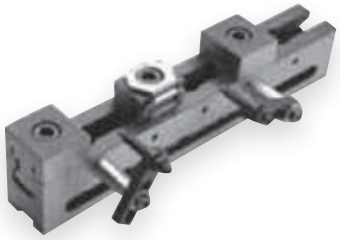






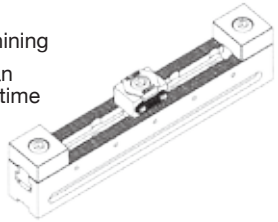


RM Application #1 (SRM-GB1)



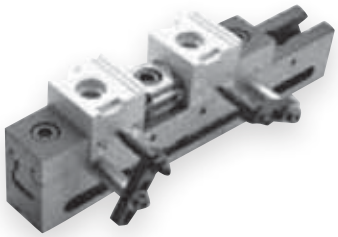
To make selection of the components easier, the Jergens/OK-Vise team has selected some basic sets to enable an easy start with the Multi-Rail system. In the pictures below you can see some solutions done with each set.

- For three-directional machining
- One or two workpieces can be machined at the same time

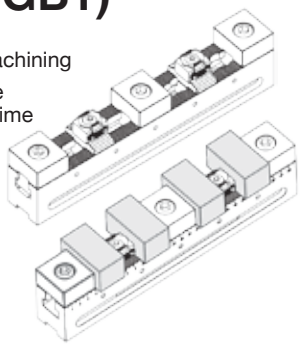


Code	Name	Pcs
RM-300	Multi-Rail Base	1
RMS-S	Stop Module Smooth	2
RMC-DS	Clamp Module D Smooth	1

RM Application #2 (SRM-133GB1)

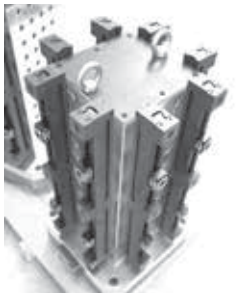


- For three-directional machining
- Four workpieces can be machined at the same time

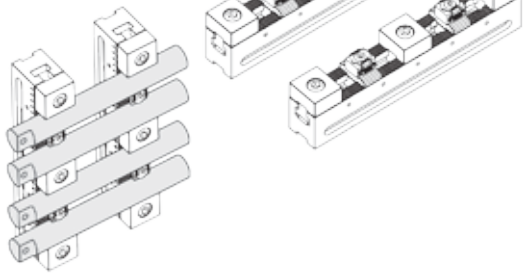


Code	Name	Pcs
RM-300	Multi-Rail Base	1
RMS-S	Stop Module Smooth	3
RMC-BS	Clamp Module B Smooth	2

RM Application #3 (SRM-236GB1)

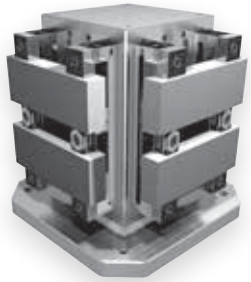


- Two SRM-133GB1 sets
- Also suitable for holding long workpieces

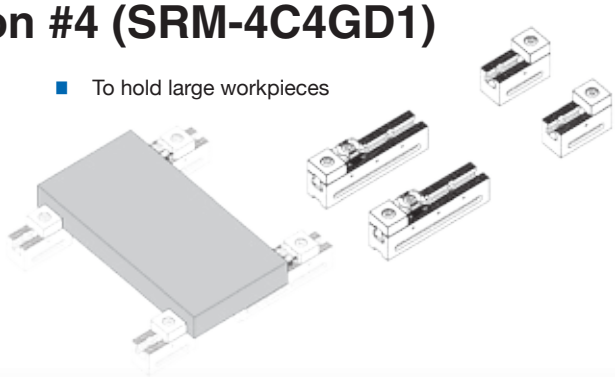


Code	Name	Pcs
RM-300	Multi-Rail Base	2
RMS-S	Stop Module Smooth	6
RMC-BS	Clamp Module B Smooth	4

RM Application #4 (SRM-4C4GD1)



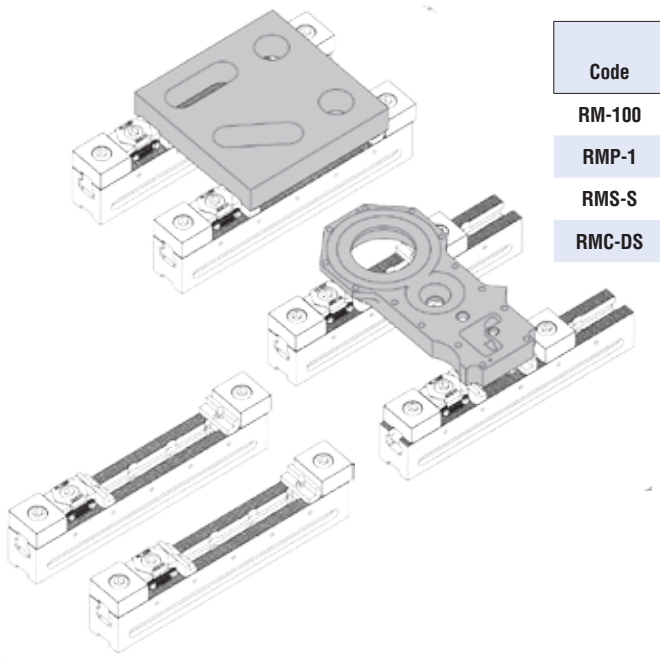
- To hold large workpieces



Code	Name	Pcs
RM-100	Multi-Rail Base	2
RM-200	Multi-Rail Base	2
RMC-DS	Clamp Module D Smooth	2
RMS-S	Stop Module Smooth	4

RM Application #5 (SRM-Z101)

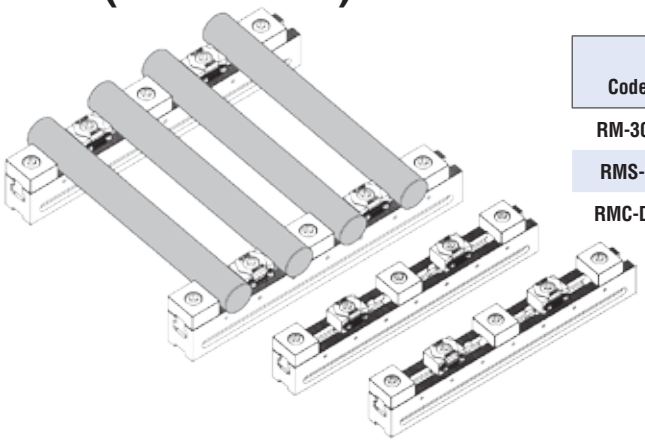




Code	Name	Pcs
RM-100	Multi-Rail Base	2
RMP-1	Parallel Block	4
RMS-S	Stop Module Smooth	4
RMC-DS	Clamp Module D Smooth	2

RM Application #6 (SRM-Z102)

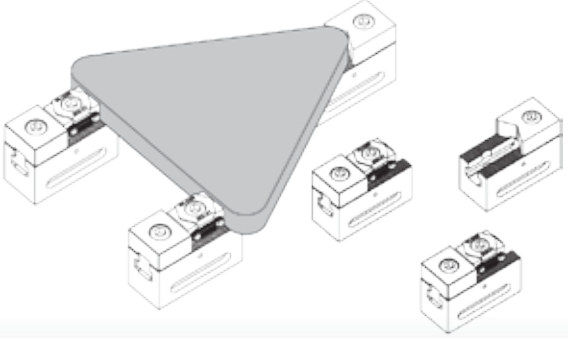




Code	Name	Pcs
RM-300	Multi-Rail Base	2
RMS-S	Stop Module Smooth	6
RMC-DS	Clamp Module D Smooth	4

RM Application #7 (SRM-Z103)

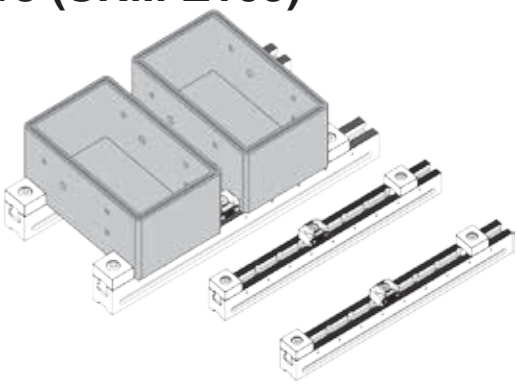




Code	Name	Pcs
RM-100	Multi-Rail Base	3
RMS-VS	Stop Module Combo V/S	1
RMS-S	Stop Module Smooth	2
RMS-DS	Clamp Module D Smooth	2

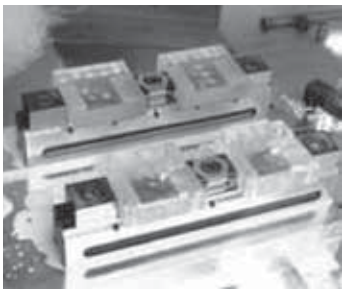
RM Application #8 (SRM-Z105)

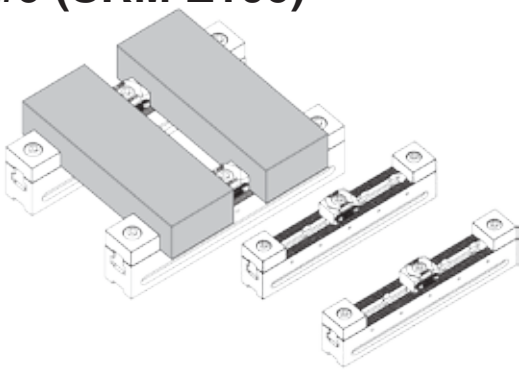




Code	Name	Pcs
RM-S	Stop Module Smooth	4
RMC-DS	Clamp Module Smooth	2
RM-500	Multi-Rail Base	2

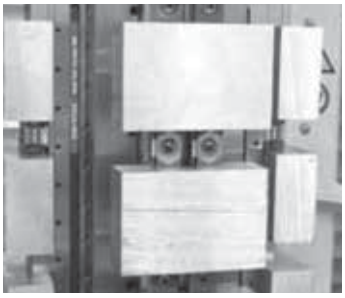
RM Application #9 (SRM-Z106)

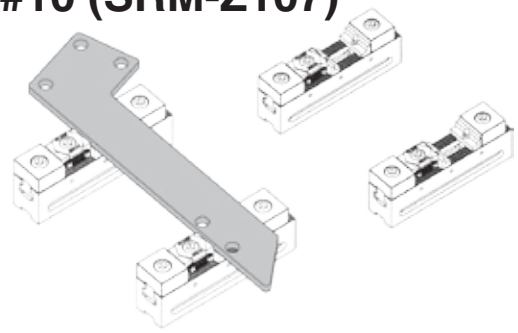




Code	Name	Pcs
RM-300	Multi-Rail Base	2
RMS-S	Stop Module Smooth	4
RMC-DS	Clamp Module Smooth	2

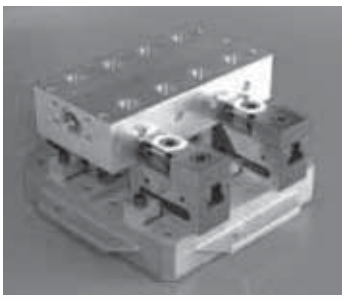
RM Application #10 (SRM-Z107)

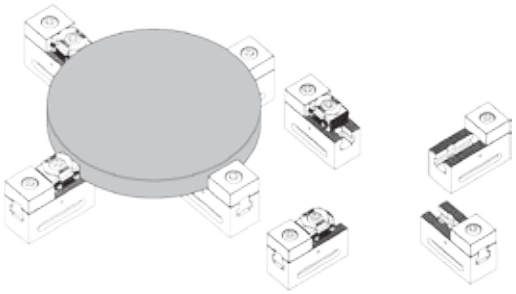




Code	Name	Pcs
RM-200	Multi-Rail Base	2
RMS-S	Stop Module Smooth	4
RMC-DS	Clamp Module Smooth	2
RMP-1	Parallel Block	4

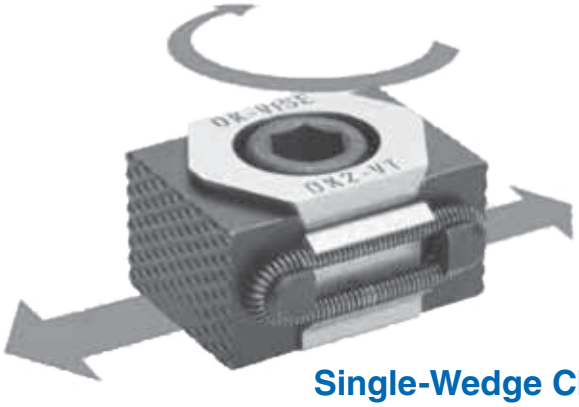
RM Application #11 (SRM-Z108)





Code	Name	Pcs
RM-100	Multi-Rail Base	4
RMS-S	Stop Module Smooth	4
RMC-DS	Clamp Module Smooth	2

Basic Modules

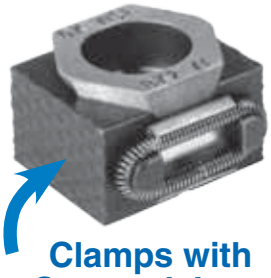


Single-Wedge Clamp

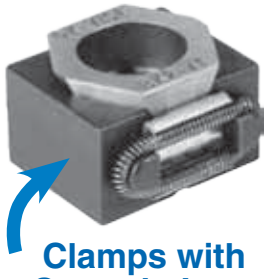
Jergens/OK-Vise low-profile clamps are the core components of our Multi-Rail system. Our low-profile clamps are available with various jaw types. In the Multi-Rail RM system, clamps of sizes D and B can be used.

Multi-Rail RM sets are built using few basic modules:

- Clamp modules
- Stop modules
- Side guides
- Paralles and riser blocks



Clamps with Serrated Jaws



Clamps with Smooth Jaws



Pull-Down Models

- Double Wedge
- Single Wedge



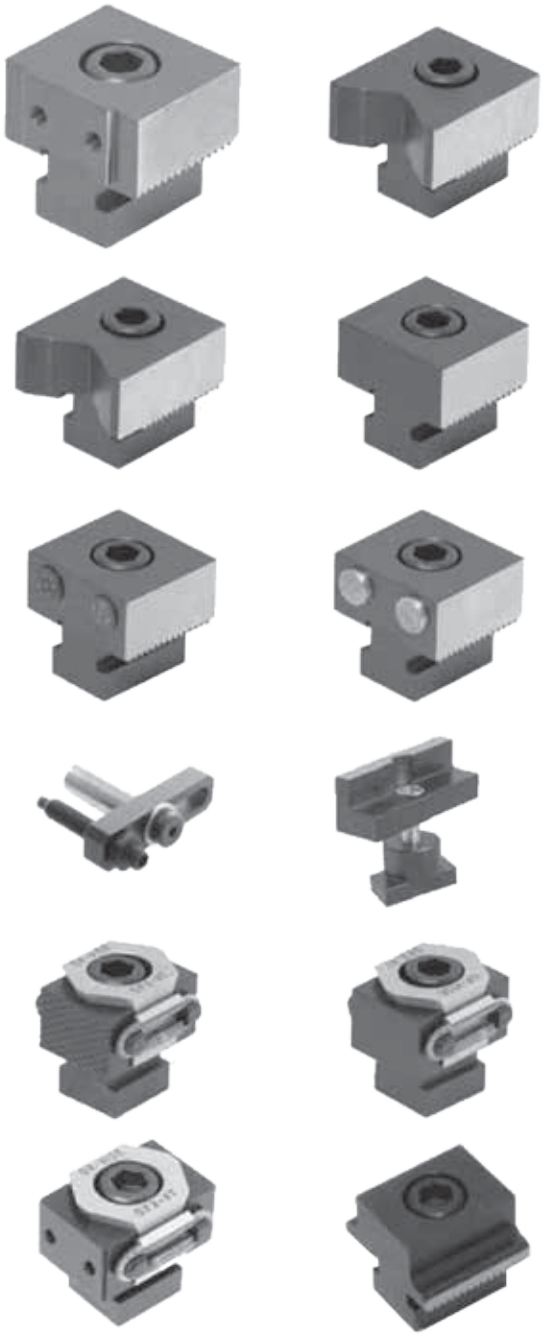
Clamps with Machinable Jaws



Additional Piece Models



Clamps with Self-Adjustable Jaws



Jergens WORKHOLDING SOLUTIONS GROUP

MULTI-RAIL RH SYSTEM

Jergens® / OK-VISE®
WORKHOLDING CLAMPS AND ACCESSORIES

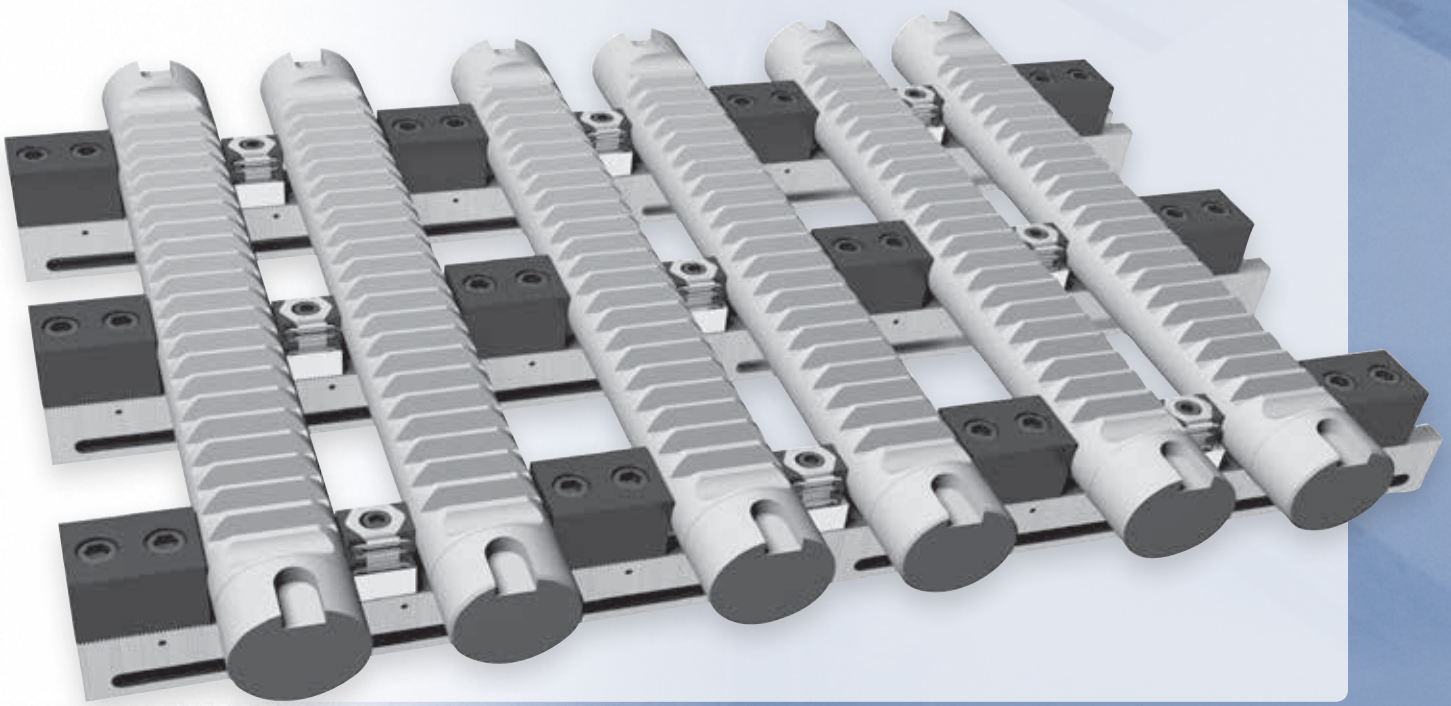
Multi-Rail RH System

Multi-Rail RH is the new generic-purpose fixturing system from Jergens/OK-VISE. Multi-Rail RH is optimal when the clamping force is over 4 tons and also when the work pieces are rather big.

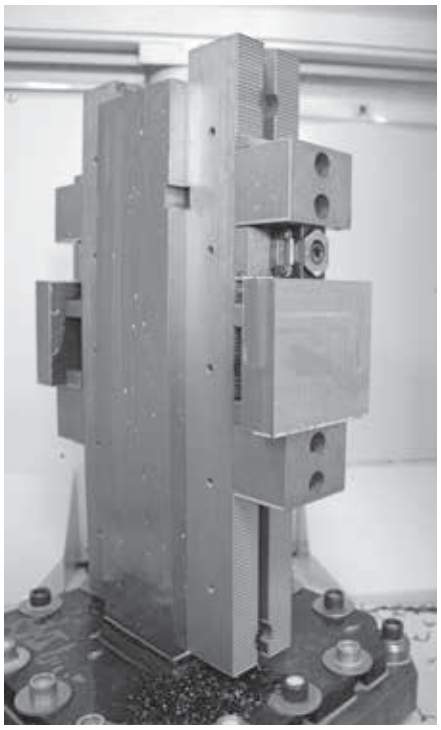
Fixture Sets

To make selection of the components easier, the Jergens/OK-VISE team has created some basic sets to enable an easy start with the Multi-Rail system. Compared to a traditional machine vise, the Multi-Rail RH system offers the following benefits:

- Using the components of the system, even the most challenging workpiece types can be machined.
- All sides of a workpiece can be machined with two setups.
- Multiple workpieces can be clamped on the same area.
- The workpiece is safely fixtured under all circumstances.
- It is also possible to clamp very large work pieces.



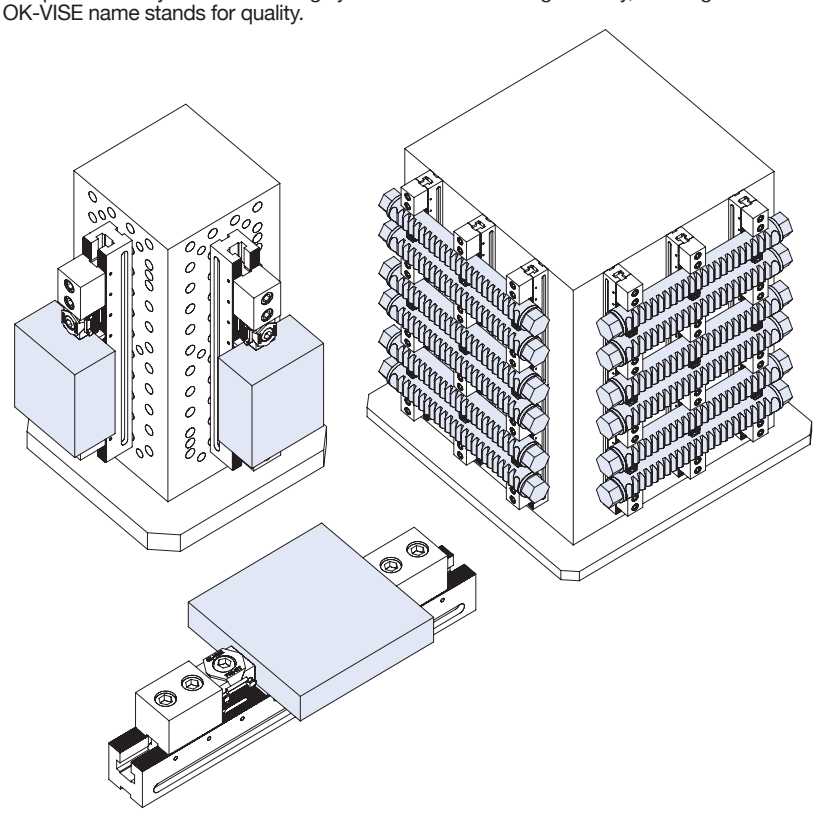
Multi-Rail RH System

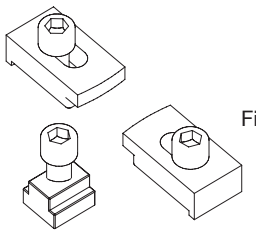


In a modular system all the functions of a fixture are divided into individual modules. This means that when workpiece material, form or size changes, the modules of the fixture can be changed independently of each other. Using a well-chosen collection of basic modules – a set – a huge variety of workpieces can be clamped simply using the same modules.

Jergens/OK-VISE low-profile clamps are the core component of our Multi-Rail system. Our low-profile clamps are available with various jaw types. In the Multi-Rail RH system, clamps of sizes D and F can be used.

The original Jergens/OK-VISE low-profile clamps are known worldwide as a core component of any modern fixturing system. In the machining industry, the Jergens/ OK-VISE name stands for quality.





We also offer installation sets for the most typical platforms like T-slot tables Jergens Fixture Pro System and other Grid Systems.

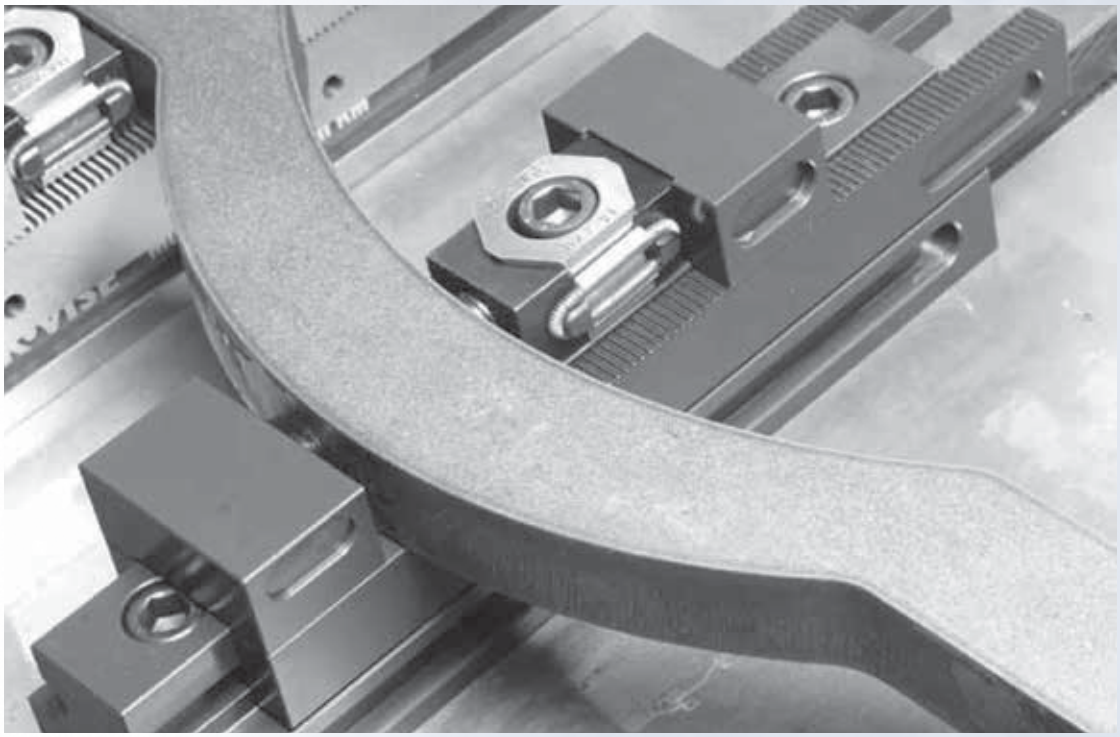
Jergens WORKHOLDING SOLUTIONS GROUP

COMBO-RAIL

Jergens® / OK-VISE®
WORKHOLDING CLAMPS AND ACCESSORIES

Combo-Rail

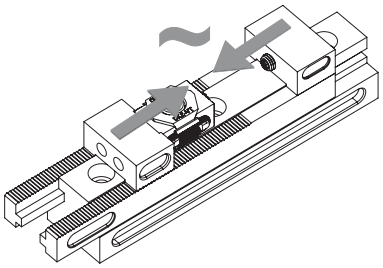
Jergens/OK-VISE Combo-Rail is a unique patent-pending design from us.There are several operating modes available: Floating Mode, Centralizing Mode and Machine Vice Mode.



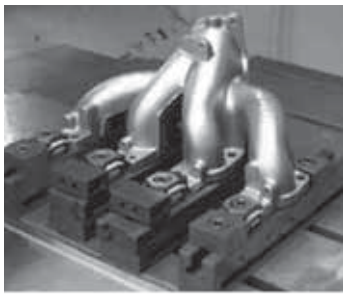
Floating Mode



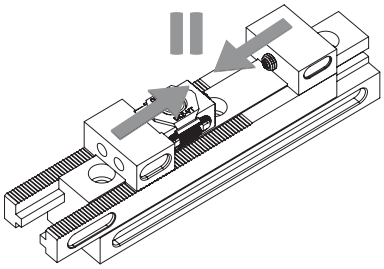
This is the most fascinating operating mode of the Combo-Rail. Here the fixture adjusts to the place of the workpiece.This is often needed while clamping inaccurate workpieces like castings, forgings or flame cut work pieces.Therefore floating mode installation normally needs positioning with some other means, like two Multi-Rail units, positioning pins, positioning by a robot etc.



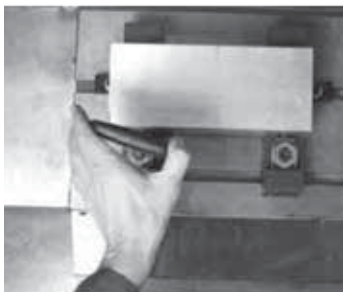
Centralizing Mode



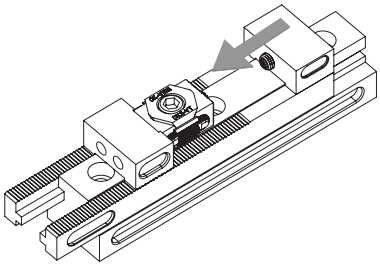
The jaws move synchronously. The center line of a casting or similar workpiece remains in the same place even if the outer dimensions of the workpiece changes. Centralizingmode



Machine Vice Mode

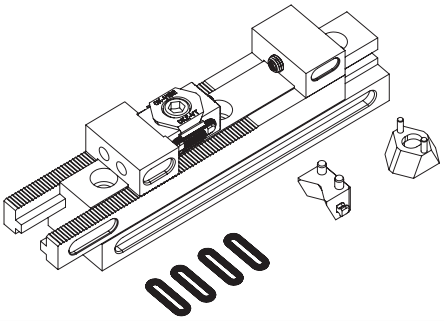


In this mode the other jaw is fixed to the base Compared to traditional Vises, in this method the ergonomics are radically improved in vertical machining centres



Universal Mode

CRH-K250 is a Combo-Rail unit that can be set in all three modes as mentioned before, operating modes by changing the jaw or wedge components (all included). All workpieces from 0 to 120 mm size can be clamped. The base height is 50 mm and total lenght is 250 mm.

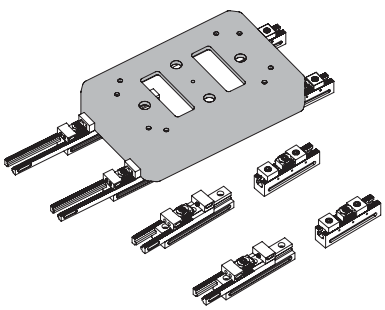


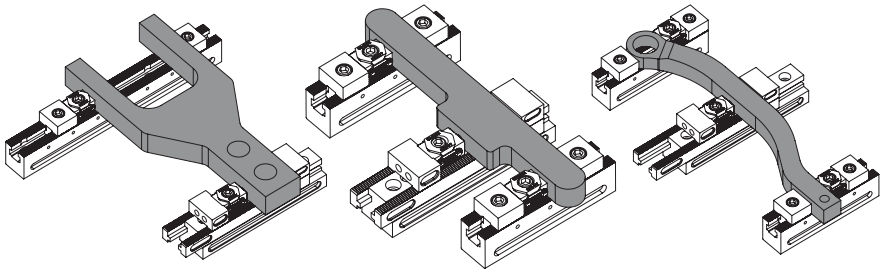
Jergens WORKHOLDING SOLUTIONS GROUP

Combo-Rail Applications

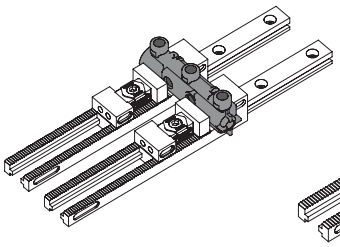
Please notice that the Combo-Rail units can be combined with most of OK-VISE Fixturing Concept components.
Especially combining Combo-Rail units with Jergens/OK-VISE Multi-Rail has been proven to be a versatile combination.

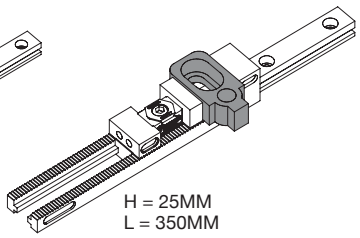
Floating Mode



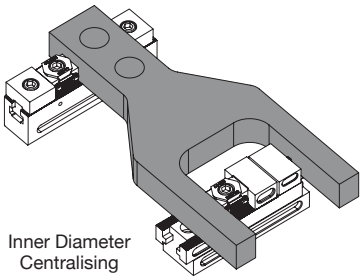


Centralizing Mode





H = 25MM
L = 350MM

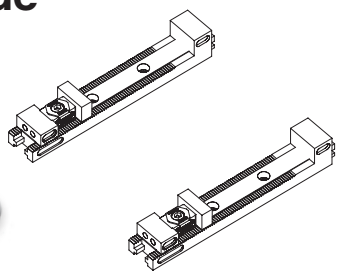


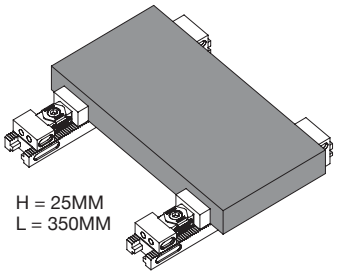
Inner Diameter
Centralising

Machine Vise Mode



There are several adapter sets
available for various platforms.



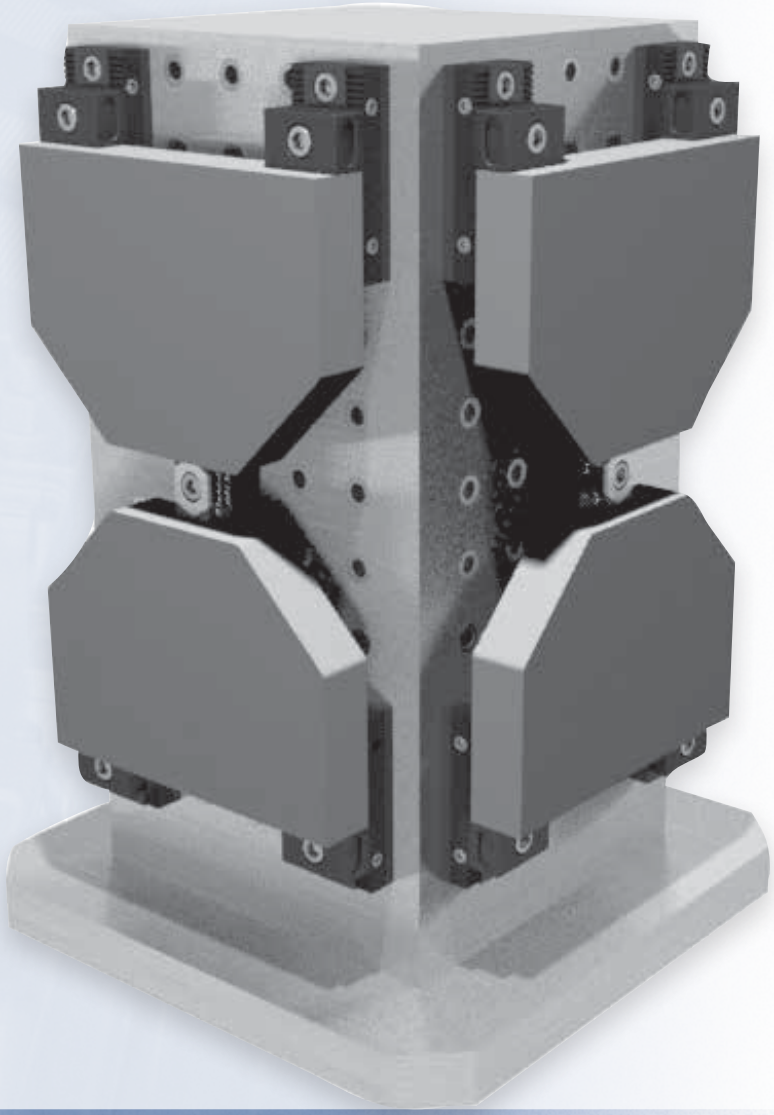


H = 25MM
L = 350MM

GRID FIXTURING SYSTEM

Jergens® / OK-VISE®

WORKHOLDING CLAMPS AND ACCESSORIES

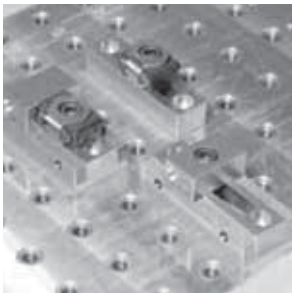


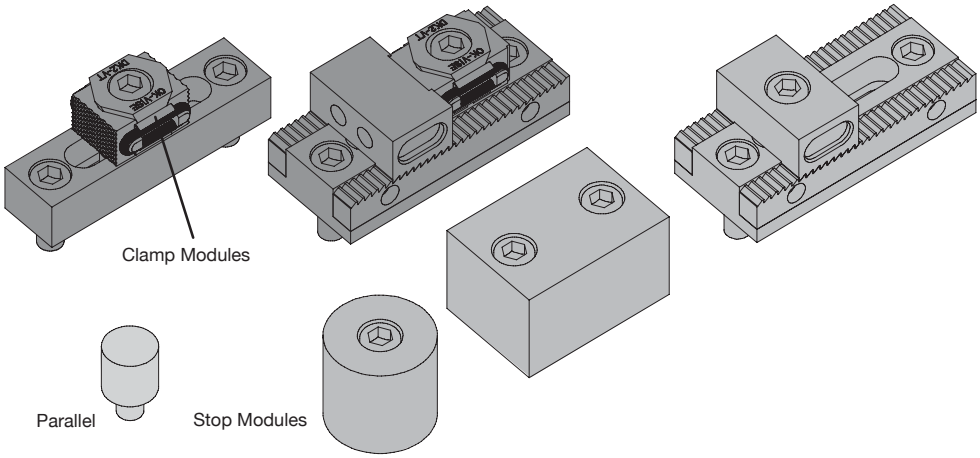
Jergens WORKHOLDING SOLUTIONS GROUP

Grid Fixturing System

Grid Fixturing System is the new generic-purpose fixturing system from Jergens/OK-VISE. It can be adapted to the grid platforms of leading workholding suppliers. With the Grid Fixturing System very complex forms of workpieces can be also clamped.On a grid platform you can also combine Jergens/OK-VISE modules with the components of other suppliers.

Grid Fixturing System Components





Clamp Module	
GCD-DR1	Serrated Jaws, D-Series
GCD-DS1	Smooth Jaws, D-Series
GCD-BR1	Serrated Jaws, B-Series
GCD-BS1	Smooth Jaws, B-Series
GCS-DS1	Adjustable, Smooth D-Series Jaw
GCS-DR1	Adjustable, Serrated D-Series Jaw

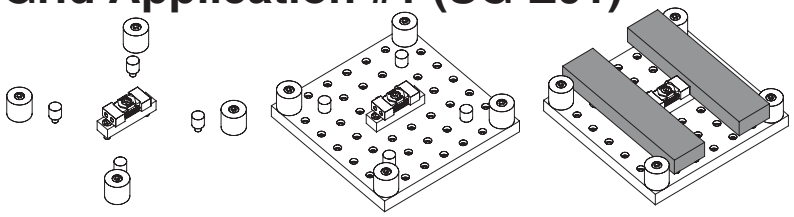
Stop Module	
GS-SF1	Round Smooth
GS-SF2	Rectangular, Fixed, Smooth
GS-SA1	Adjustable, Smooth
GR-RF1	Round, Serrated
GR-RF2	Rectangular, Fixed, Serrated
GR-RA1	Adjustable, Serrated

Parallel	
GP-1	Round

Grid Fixturing System – Applications

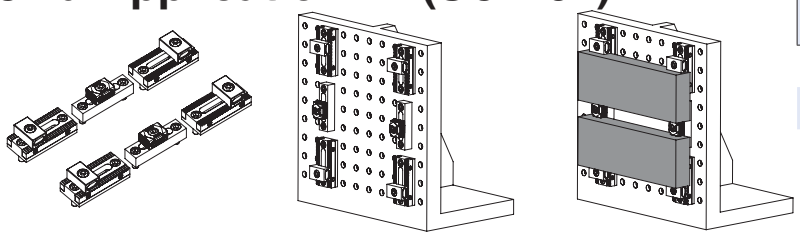
To make selection of the components easier, the Jergens/OK-VISE team has selected some basic sets to enable an easy start with the Grid system. In the pictures below you can see the solutions done with each set. We recommend platforms of leading suppliers. Grid plate is normally not included in the set.

Grid Application #1 (SG-Z01)



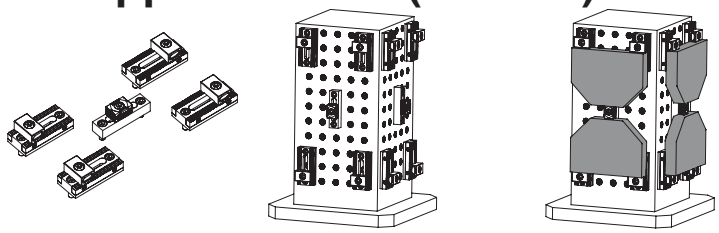
Part Number	Description	Qty
GCD-DT1	Mounting Jaw, D Series Clamp Module	1
GP-1	Parellel, Round	4
GS-SF1	Round Smooth Stop Module	4
JDA-3	Machinable Jaw	2

Grid Application #2 (SG-Z02)



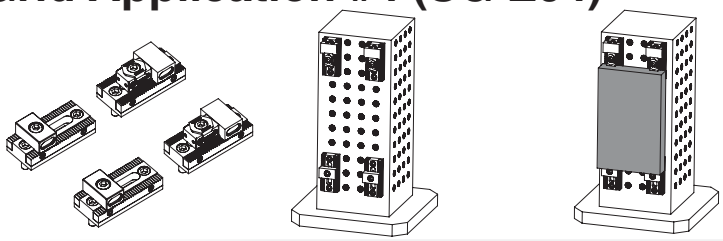
Part Number	Description	Qty
GCD-DS1	Smooth Jaw, D Series Clamp Module	2
GS-SA1	Adjustable Smooth Stop Module	4

Grid Application #3 (SG-Z03)



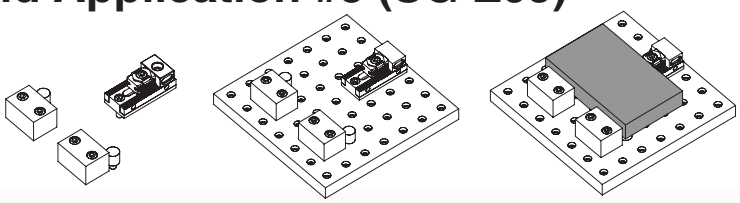
Part Number	Description	Qty
GCD-DS1	Smooth Jaw, D Series Clamp Module	1
GS-SA1	Adjustable Smooth Stop Module	4

Grid Application #4 (SG-Z04)



Part Number	Description	Qty
GCS-DS1	Adjustable Smooth, D Series Clamp Module	2
GS-SA1	Adjustable Smooth Stop Module	2

Grid Application #5 (SG-Z05)



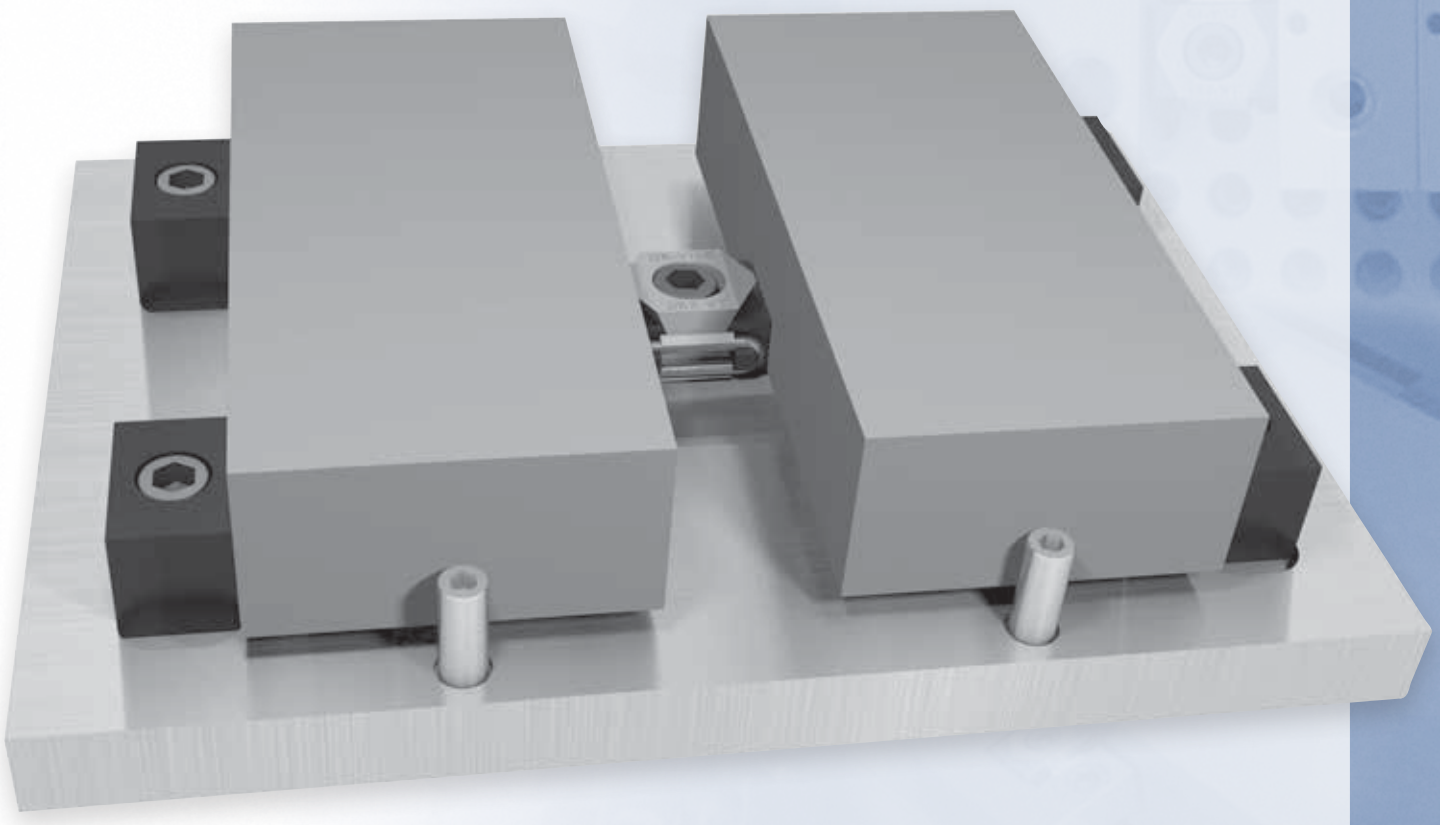
Part Number	Description	Qty
GCS-DS1	Adjustable Smooth, D Series Clamp Module	1
GP-1	Parallel, Round	2
GS-SF2	Rectangular Fixed Smooth Stop Module	2

Jergens
WORKHOLDING SOLUTIONS GROUP

BLANK FIXTURING SYSTEM

Jergens® / OK-VISE®

WORKHOLDING CLAMPS AND ACCESSORIES



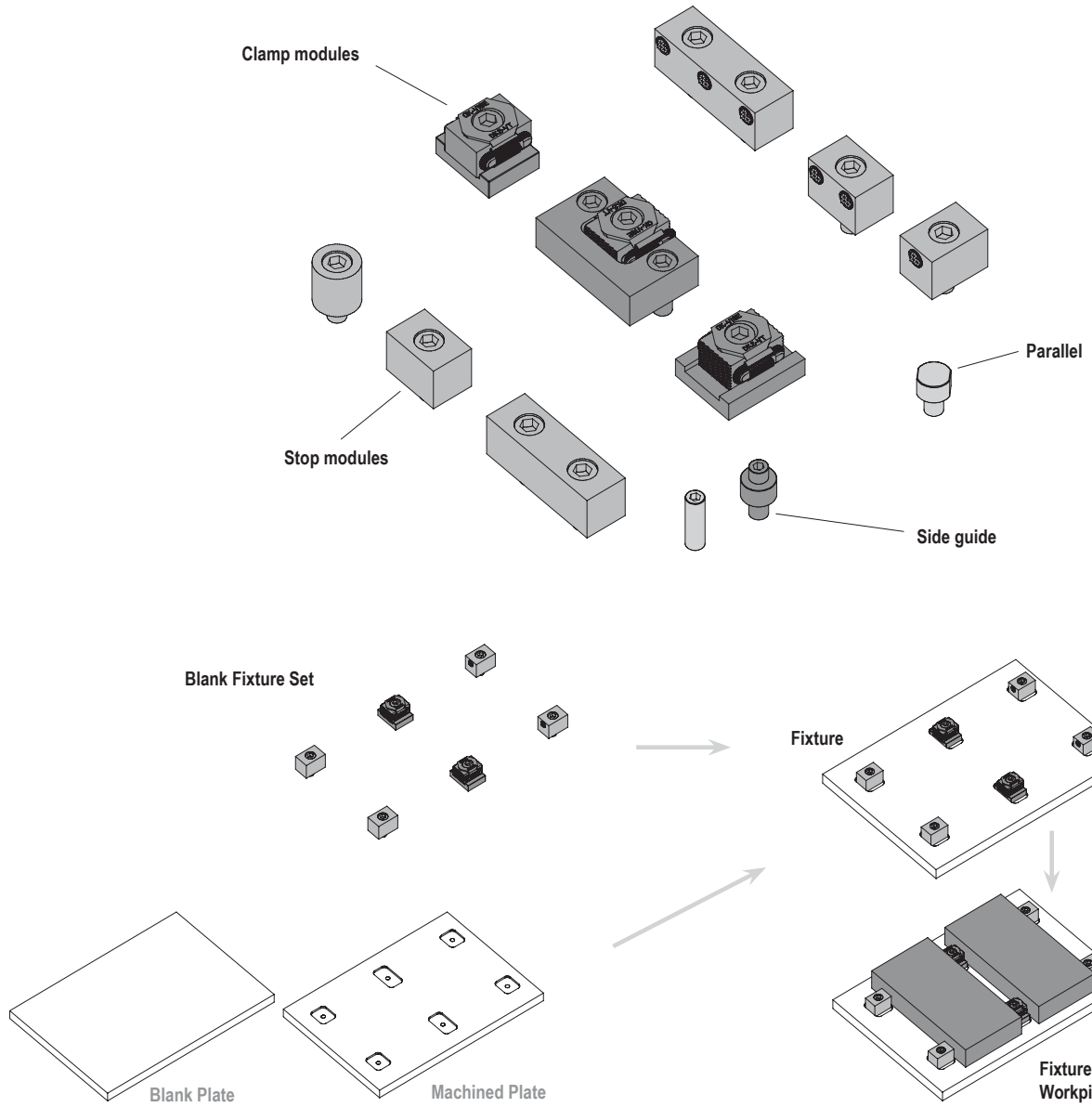
Blank Fixturing System

The Jergens/OK-VISE Blank Fixturing System is designed for cases when dedicated (product-specific) fixtures are needed. This is typical in high-volume production. Blank plates are used as a platform on which to build the fixture. Aluminium and steel blanks are recommended.

In addition to OK-VISE low-profile clamps and bolts, a variety of components are now available. Various clamp modules, stopper modules, side guides and parallels (or riser blocks) are the basic modules of the system. High-friction jaws in stopper modules and clamps ensure reliable clamping when high machining forces are used.

When sensitive contact with the workpiece is a must, then smooth, diamond-surface or contour-machined jaws are optimal. Now designing dedicated fixtures is easier than ever.

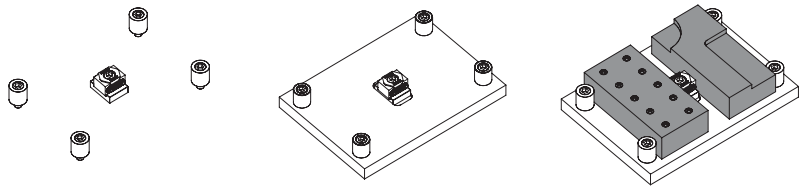
Blank Fixturing System Components



Blank Fixturing System – Applications

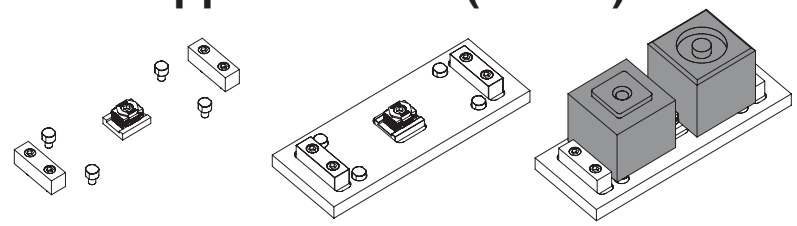
To make selection of the components easier, the Jergens/OK-VISE team has selected some basic sets to enable an easy start with the Blank system. In the pictures below you can see the solutions done with each set.

Blank Application #1 (SK-Z1)



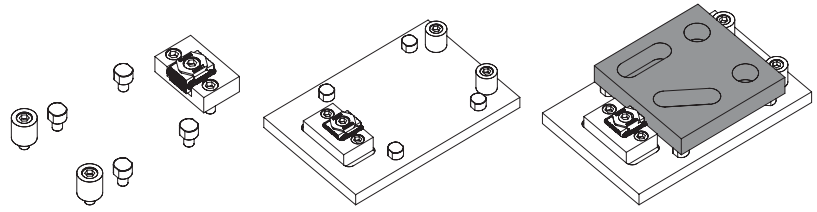
Part Number	Description	Qty
KCD-DS2	Smooth Jaw, D Series Clamp Module	1
KS-SO1	Round Smooth Stop Module	4

Blank Application #2 (SK-Z2)



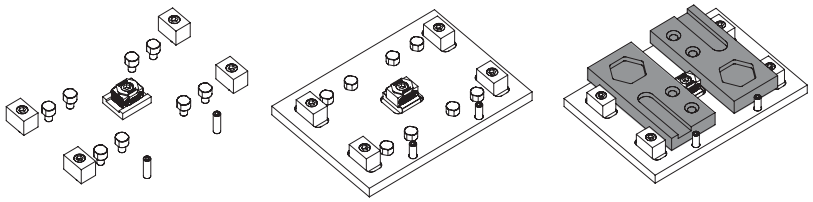
Part Number	Description	Qty
KCD-DS1	Smooth Jaw, D Series Clamp Module	1
KP-1	Parellel, Round	4
KS-S2	Rectangular Fixed Smooth Stop Module	2

Blank Application #3 (SK-Z3)



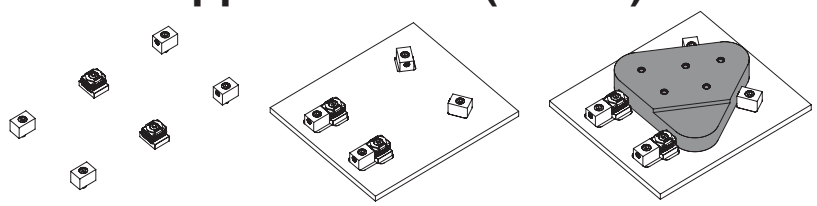
Part Number	Description	Qty
KCS-DS1	Smooth Jaw, D Series Clamp Module	1
KP-1	Parellel, Round	4
KS-SO1	Round Smooth Stop Module	2

Blank Application #4 (SK-Z4)



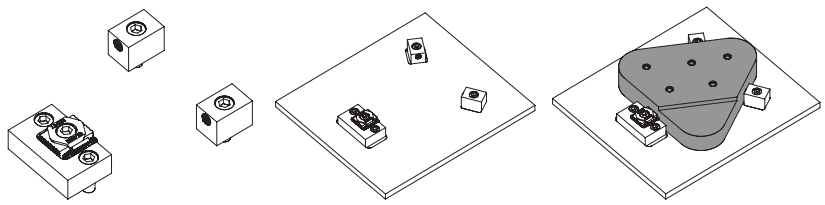
Part Number	Description	Qty
KCD-DS1	Smooth Jaw, D Series Clamp Module	1
KP-1	Parellel, Round	8
KS-S2	Rectangular Fixed Smooth Stop Module	4
KG-1	Round Side Guide	2

Blank Application #5 (SK-Z5)



Part Number	Description	Qty
KCD-DS2	Smooth Jaw, D Series Clamp Module	2
KS-S1	Rectangular Fixed Smooth Stop Module	2
KS-R1	Single Gripper Stop Module	2

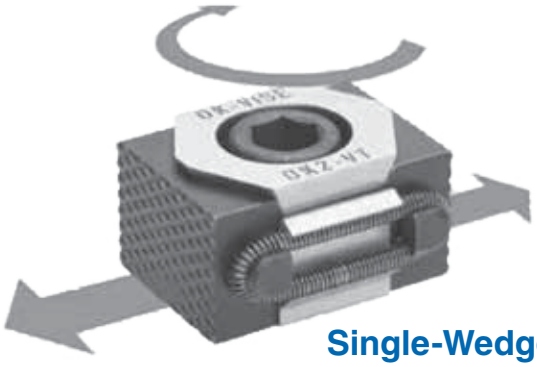
Blank Application #6 (SG-Z6)



Part Number	Description	Qty
KCS-DS1	Smooth Jaw, D Series Clamp Module	1
KS-R1	Single Gripper Stop Module	2

Jergens WORKHOLDING SOLUTIONS GROUP

Blank Fixturing System – Low-Profile Clamps



Single-Wedge Clamp

Jergens/OK-Vise low-profile clamps are the core components of our Blank system. Our low-profile clamps are available with various jaw types.

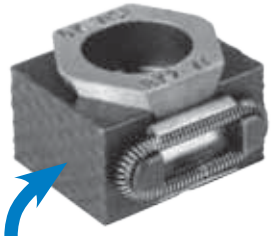


Pull-Down Models

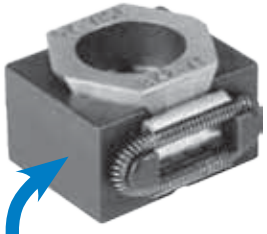
- Double Wedge
- Single Wedge



Clamps with Machinable Jaws



Clamps with Serrated Jaws



Clamps with Smooth Jaws



Additional Piece Models



Clamps with Self-Adjustable Jaws

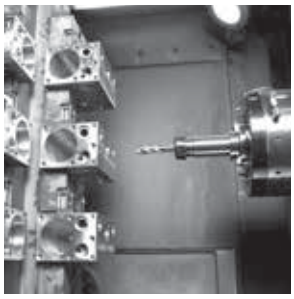
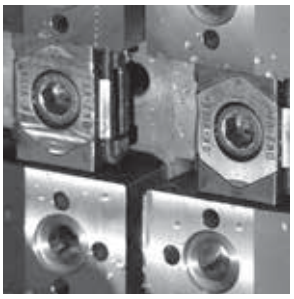
Clamp Module	
KCD-DR1	Dual Directional Long, Serrated, D
KCD-DS1	Dual Directional Long, Smooth, D
KCD-DS2	Dual Directional, Smooth, D
KCD-DR2	Dual Directional, Serrated, D
KCS-DR1	Single Directional, Serrated, D
KCS-DS1	Single Directional, Smooth, D

Stop Module	
KS-S1	Smooth
KS-S2	Smooth
KS-SO1	Round, Smooth
KS-R1	Serrated
KS-R2	Serrated
KS-R3	Serrated
KS-S2	Smooth
KS-D1	Diamond
KS-D2	Diamond
KS-D3	Diamond

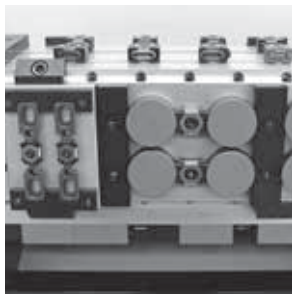
Parallels	
KP-1	Wide Pin

Side Guides	
KG-1	Pin
KG-2	Pin with Integrated Parallel

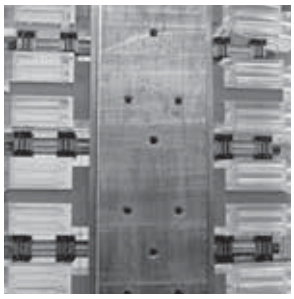
HMC Applications

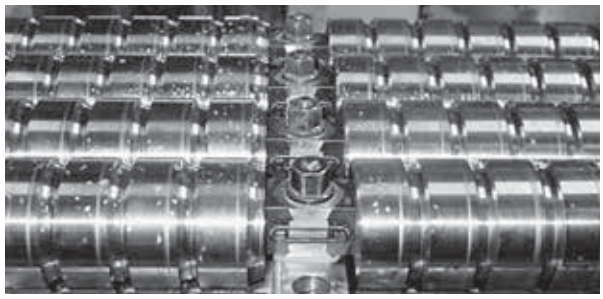
RPS Applications



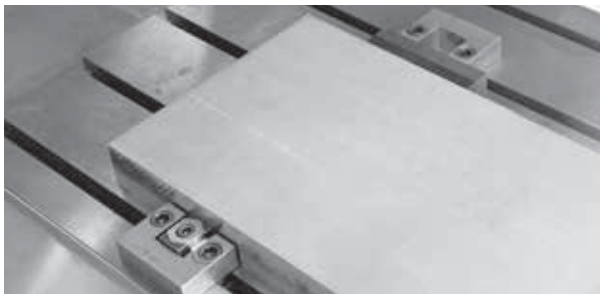

Hydraulic Applications



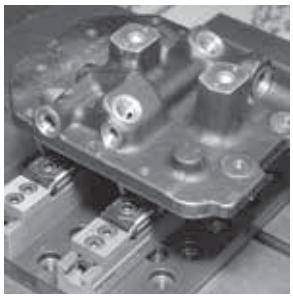
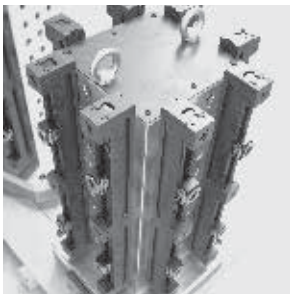

VMC Applications



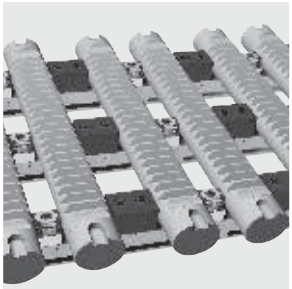
T-Slot Applications



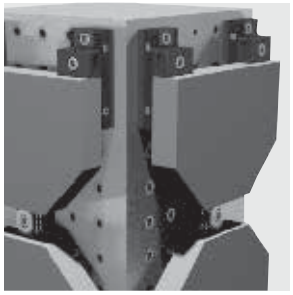
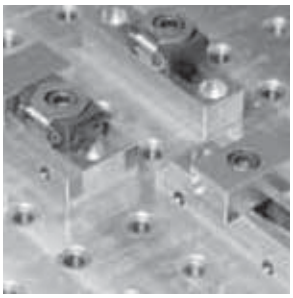
Multi-Rail RM Applications

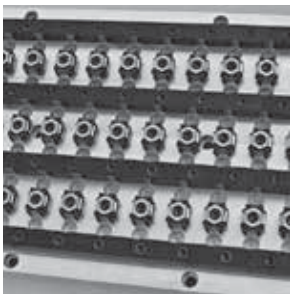
Multi-Rail RH Applications

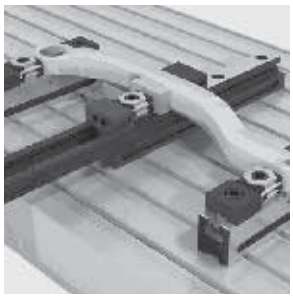
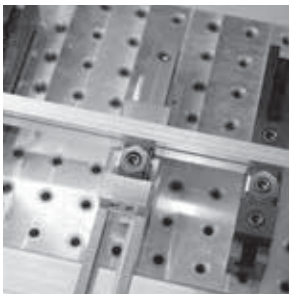
Grid Applications

Blank Plate Applications

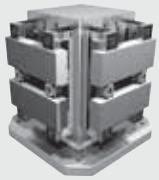
Combo-Rail Applications

Fixturing and Components

GENERIC FIXTURING COMPONENTS

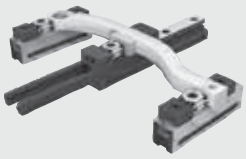
Multi-Rail RM System



Multi-Rail RH System



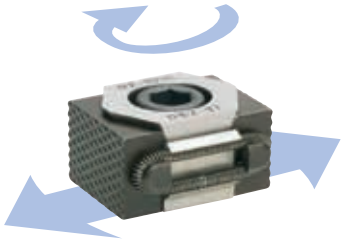
Combo-Rail



Grid Fixturing System

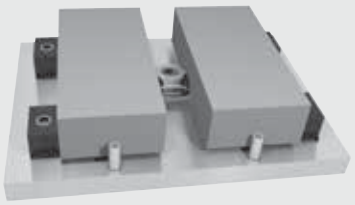


LOW-PROFILE CLAMPS

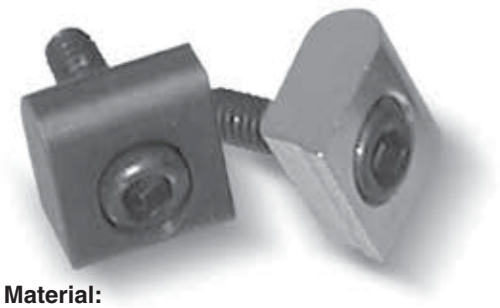


COMPONENTS FOR DEDICATED FIXTURING

Blank Fixturing System



Lo-Profile Micro™ Clamps

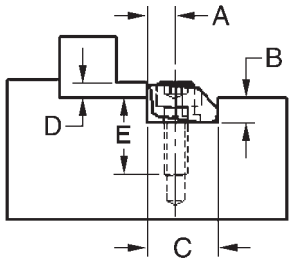


Problem: You require a clamping device which can grip low on a work piece, has exceptional horizontal *and* vertical holding force, and can be mounted below the fixture plate surface.

Solution: Jergens new Lo-Profile Micro clamps are the answer!

Material:

- Available in tool steel or brass
- Extraordinary horizontal and vertical force
- Extremely low profile – as low as .075
- Very small foot print
- High resistance to pull-out
- Choose among three sizes with inch or metric screws
- Knife and blunt edge styles



Lo-Profile Micro™ Clamps

Part Number	Description	A	B	C	D*	E	Clamp Width	Screw Size	Torque (ft/lbs)	Max. Holding Force (lbs)	Total Throw	Clamps Per Package
13201	Tool Steel, Knife Edge	.150	.140	.375	.075	.260	.375	4-40	1.30	650	.0075	8
13202	Tool Steel, Blunt Edge	.150	.140	.375	.075	.260	.375	4-40	1.30	650	.0075	8
13203	Brass, Blunt Edge	.150	.140	.375	.075	.220	.375	4-40	.41	200	.0075	8
13211	Tool Steel, Knife Edge	.200	.187	.500	.100	.390	.500	8-32	3.70	1500	.0160	8
13212	Tool Steel, Blunt Edge	.200	.187	.500	.100	.390	.500	8-32	3.70	1500	.0160	8
13213	Brass, Blunt Edge	.200	.187	.500	.100	.340	.500	8-32	2.00	400	.0160	8
13221	Tool Steel, Knife Edge	.300	.280	.750	.150	.570	.750	1/4-20	14.50	3600	.0240	6
13222	Tool Steel, Blunt Edge	.300	.280	.750	.150	.570	.750	1/4-20	14.50	3600	.0240	6
13223	Brass, Blunt Edge	.300	.280	.750	.150	.440	.750	1/4-20	4.10	950	.0240	6
13224	Tool Steel, Knife Edge	.400	.450	1.000	.250	.710	1.000	3/8-16 x 1"	30.00	6,000	0.050	4
13225	Tool Steel, Blunt Edge	.400	.450	1.000	.250	.710	1.000	3/8-16 x 1"	30.00	6,000	0.050	4
13226	Tool Steel, Knife Edge	.600	.640	1.500	.375	.710	1.500	1/2-13 x 1 1/4"	108.30	12,000	0.075	2
13227	Tool Steel, Blunt Edge	.600	.640	1.500	.375	.710	1.500	1/2-13 x 1 1/4"	108.30	12,000	0.075	2

* Combination horizontal and vertical force.

Metric Lo-Profile Micro™ Clamps

Part Number	Description	A	B	C	D*	E	Clamp Width	Screw Size	Max. Holding Force (N)	Torque (Nm)	Total Throw	Clamps Per Package
13251	Tool Steel, Knife Edge	3.81	3.55	9.52	1.90		9.52	M2.5	2800	1.8	.190	8
13252	Tool Steel, Blunt Edge	3.81	3.55	9.52	1.90		9.52	M2.5	2800	1.8	.190	8
13253	Brass, Blunt Edge	3.81	3.55	9.52	1.90		9.52	M2.5	875	.56	.190	8
13261	Tool Steel, Knife Edge	5.08	4.75	12.70	2.54		12.70	M4	6600	5.6	.406	8
13262	Tool Steel, Blunt Edge	5.08	4.75	12.70	2.54		12.70	M4	6600	5.6	.406	8
13263	Brass, Blunt Edge	5.08	4.75	12.70	2.54		12.70	M4	1750	2.8	.406	8
13271	Tool Steel, Knife Edge	7.62	7.11	19.05	3.81		19.05	M6	16000	22.5	.610	6
13272	Tool Steel, Blunt Edge	7.62	7.11	19.05	3.81		19.05	M6	16000	22.5	.610	6
13273	Brass, Blunt Edge	7.62	7.11	19.05	3.81		19.05	M6	4200	5.6	.610	6
13274	Tool Steel, Knife Edge	10.16	11.43	25.40	6.350	18.03	25.40	M10 x 25mm	26,000	40.6	1.270	4
13275	Tool Steel, Blunt Edge	10.16	11.43	25.40	6.350	18.03	25.40	M10 x 25mm	26,000	40.6	1.270	4
13276	Tool Steel, Knife Edge	15.24	16.26	38.10	9.520	19.56	38.10	M12 x 30mm	50,000	145.0	1.900	2
13277	Tool Steel, Blunt Edge	15.24	16.26	38.10	9.520	19.56	38.10	M12 x 30mm	50,000	145.0	1.900	2

* Combination horizontal and vertical force.

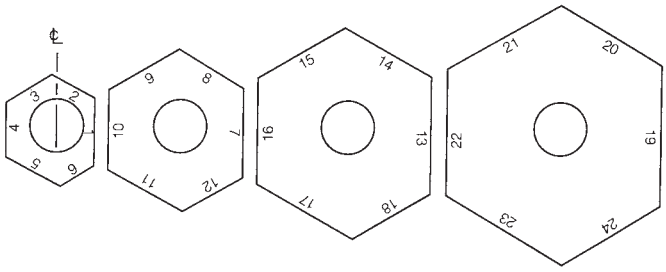
Adjustable Micro™ Clamps



Measured from the centerline, each face of these low profile clamps increases 1mm (.0394) from the smallest to the largest face.

Adjustable Micro Clamps decrease design and set-up times for modular fixtures, work cubes, and standard fixtures. Without changing hole locations, clamping range from 12mm to 35mm can be achieved.

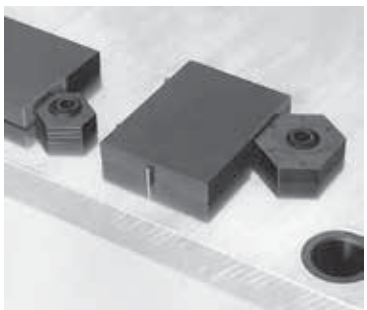
The clamps are available with either smooth or serrated faces which make them ideal for clamping machined parts, castings, and rough cut stock. The clamps work with a cam action, always following the contour of the workpiece for maximum surface contact.

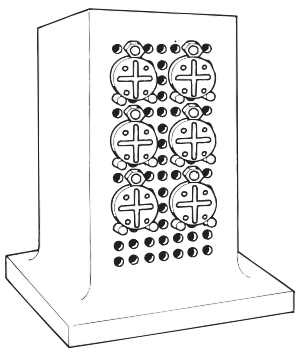


- Cam action
- Low profile
- Available in four sizes
- Heat treated and plated
- Serrated or smooth edges
- Adjustable clamps and stops
- Includes Cam Screw*

Face #	Distance From Center Line	Face #	Distance From Center Line	Face #	Distance From Center Line	Face #	Distance From Center Line
1	12mm (.4724)	7	18mm (.7086)	13	24mm (.9449)	19	30mm (1.1811)
2	13mm (.5118)	8	19mm (.7480)	14	25mm (.9842)	20	31mm (1.2205)
3	14mm (.5512)	9	20mm (.7874)	15	26mm (1.0236)	21	32mm (1.2598)
4	15mm (.5906)	10	21mm (.8268)	16	27mm (1.0630)	22	33mm (1.2992)
5	16mm (.6299)	11	22mm (.8661)	17	28mm (1.1024)	23	34mm (1.3386)
6	17mm (.6693)	12	23mm (.9055)	18	29mm (1.1417)	24	35mm (1.3780)

Locking Screw is 1/2-13 for inch sizes and 12M for metric sizes; total distance of movement is .100".





Inch Part Number	Metric Part Number	Description
68601	68651	1-6 smooth
68602	68652	7-12 smooth
68603	68653	13-18 smooth
68604	68654	19-24 smooth
68611	68661	1-6 serrated
68612	68662	7-12 serrated
68613	68663	13-18 serrated
68614	68664	19-24 serrated

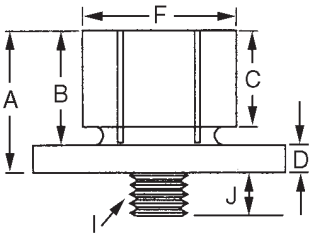
All clamps include a cam screw.
Clamps are 10mm (.394) thick.

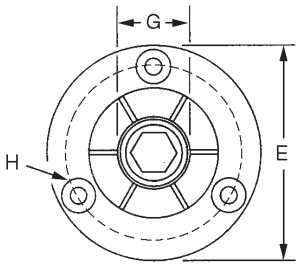
Part Number	Thread	Max. Torque Holding Force
68202	Cam Screw 1/2-13	65 Ft/lbs. – 4000 lbs.
68199	Cam Screw M12	88N.M. – 17,800 N.

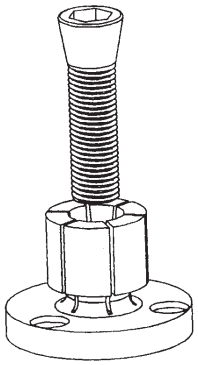
Jergens WORKHOLDING SOLUTIONS GROUP

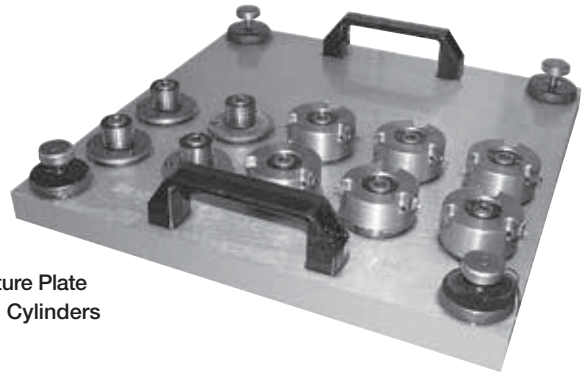
ID Expansion Clamp











The ID expansion clamp is the ideal way to hold parts on an inside diameter for multiple machining on a vertical or horizontal machining center.

The larger diameter of the clamp is held to a close tolerance for precision locating in a machined pocket on work cubes and fixture plates.

The customer machines the mild steel clamp to match the bore of the part ensuring proper fit. Often times the clamps can be remachined for different size jobs.

- Body Material: Mild Steel
- Low Profile
- Ideal for Secondary Operations on Lathe Parts
- Easily Machined to Size on Lathe or Mill
- Excellent for Palletized Setups
- Allows More Parts Per Workcube or Fixture Plate
- Tighten with Hex Key or Hydraulic Pull Cylinders (Drill clearance hole for longer bolt into hydraulic cylinder)
- Instructions included with each clamp

Part Number	A	B	C	D	+.000 -.002 E	F	G*	H*	I	J	Torque (ft/lbs)	Holding Force (lbs)	Replacement Screw
68401	.42	.30	.24	.12	.787	.29	.16	2-56 on .540 BHC	2-56	.16	.05	250	68900
68402	.86	.63	.59	.23	1.170	.49	.28	6-32 on .825 BHC	8-32	.30	3.6	950	68901
68403	.98	.75	.59	.23	1.240	.56	.48	6-32 on .910 BHC	1/4-20	.50	13.3	1900	68902
68404	.98	.75	.59	.23	1.476	.79	.53	6-32 on 1.140 BHC	5/16-18	.56	27.6	2500	68903
68405	1.13	.88	.69	.25	1.968	1.06	.71	8-32 on 1.550 BHC	3/8-16	.71	49.3	4500	68904
68406	1.25	1.0	.81	.25	2.205	1.39	.90	8-32 on 1.790 BHC	1/2-13	.71	120.0	5900	68905
68407	1.56	1.25	1.06	.31	2.736	1.65	1.15	10-32 on 2.200 BHC	5/8-11	.79	224.0	10000	68906
68408	1.56	1.25	1.06	.31	2.972	2.03	1.15	10-32 on 2.515 BHC	5/8-11	.79	224.0	10000	68906
68409	1.79	1.48	1.27	.31	4.232	3.06	1.15	1/4-20 on 3.646 BHC	5/8-11	.79	224.0	10000	68907
68410	1.79	1.48	1.27	.31	5.232	4.06	1.15	1/4-20 on 4.648 BHC	5/8-11	.79	224.0	10000	68907
68411	1.79	1.48	1.27	.31	5.232	6.89	1.15	1/4-20 on 4.648 BHC	5/8-11	.79	224.0	10000	68907
68412	1.79	1.48	1.27	.31	6.000	9.85	1.15	1/4-20 on 5.250 BHC	5/8-11	.79	125.0	6000	68907

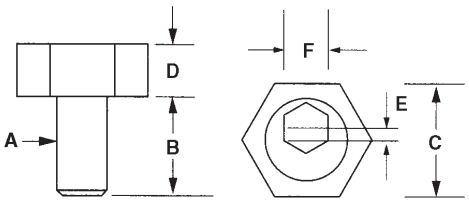
Metric

Part Number	A	B	C	D	+0.00 -0.05 E	F	G*	H*	I	J	Torque (Nm)	Holding Force (N.)	Replacement Screw
68829	10.7	7.6	6.1	3.0	20.0	7.4	4.1	M2 on 13.7 BHC	M2	4.1	.70	1,113	68909
68830	21.8	16.0	15.0	5.9	29.72	12.4	8.0	M3 on 20.95 BHC	M4	7.2	5.00	4,228	68910
68831	24.9	19.0	15.0	5.9	31.5	14.2	12.2	M3 on 23.1 BHC	M6	11.2	17.00	8,455	68911
68832	24.9	19.0	15.0	5.9	37.5	20.0	13.5	M3 on 29.0 BHC	M8	13.2	34.00	11,125	68912
68833	28.6	22.2	17.5	6.4	50.0	27.0	18.0	M4 on 39.4 BHC	M10	16.3	60.00	20,025	68913
68834	31.8	25.4	20.6	6.4	56.0	35.3	23.0	M4 on 45.5 BHC	M12	20.3	150.00	26,255	68914
68835	39.6	31.8	27.0	7.9	69.5	42.0	29.3	M5 on 55.9 BHC	M16	21.4	280.00	44,500	68915
68836	39.6	31.8	27.0	7.9	75.5	51.5	29.3	M5 on 63.9 BHC	M16	21.4	280.00	44,500	68915
68837	45.5	37.6	32.3	7.9	107.5	77.7	29.3	M6 on 92.6 BHC	M16	19.3	280.00	44,500	68916
68838	45.5	37.6	32.3	7.9	132.90	103.0	29.3	M6 on 188.06 BHC	M16	19.3	280.00	44,500	68916
68839	45.5	37.6	32.3	7.9	132.90	175.0	29.3	M6 on 188.06 BHC	M16	19.3	280.00	44,500	68916
68850	45.5	37.6	32.3	7.9	152.40	250.2	29.3	M6 on 133.35 BHC	M16	19.3	170.00	26,000	68916

* (3) Mounting Screws Included
* Minimum diameter the "F" dimension can be machined too.

Micro™ Clamps







Jergens Micro™ Clamps feature both high hold down forces and low profiles, which makes them ideal for building fixtures on Ball Lock® fixturing plates. Two simple components make them work: a hardened steel socket cap screw with an offset head and a hexagonal washer. A half turn tightens or loosens the workpiece.

- Low profile makes computer programming easier
- Cam action provides fast, strong clamping
- Small size allows more parts per load
- Requires only a tapped hole in your fixture
- Available in stainless steel
- Note clockwise rotation recomended workpiece stop should be on the right of the Clamp.

Part Number Steel	Part Number Stainless	A	B	C	D	Total Distance of Measurement E	Key Size F	G*	Maximum Holding Force	Replacement Screw
68501	-	8-32	.350	.312	.110	.030	5/64	.150	205	68521
68502	-	10-32	340	.500	.160	.040	3/32	.250	350	68533
68503	**68153**	1/4-20	.470	.625	.190	.040	1/8	.308	800	68523
68505	-	5/16-24	.460	.812	.190	.040	3/16	.400	750	68525
68506	**68515**	5/16-18	.460	.812	.190	.040	3/16	.400	750	68526
68507	-	3/8-16	.710	.812	.250	.050	3/16	.400	2,000	68527
68509	-	1/2-13	.900	1.000	.375	.100	5/16	.500	4,000	68529
68511	-	5/8-11	1.125	1.187	.500	.100	3/8	.590	6,000	68531

* This measurement is the correct location to drill and tap the hole from the edge of the work piece.

Metric

Part Number Steel	Part Number Stainless	A	B	C	D	Total Distance of Measurement E	Key Size F	G*	Maximum Holding Force (N)
68571	–	M4x0.7	9.6	7.93	2.8	.76	3	3.8	910
68572	**68551**	M6x1.0	11.2	15.86	4.75	1.01	4	7.8	3,558
68573	**68553**	M8x1.25	15.0	20.61	4.75	1.01	5	10.15	3,355
68574	–	M10x1.5	19.0	20.61	6.35	1.52	7	10.15	8,895
68575	–	M12x1.75	22.8	25.38	9.52	2.03	8	12.7	17,790
68576	–	M16x2.0	28.5	30.13	12.69	2.54	12	15.0	26,680

* This measurement is the correct location to drill and tap the hole from the edge of the work piece.

Replacement Screws available, contact customer service for more information.

Knife Edge Clamps





Knife edge clamps can be used for clamping rough cut stock, castings, or any material that requires a hardened clamping element. Hardened steel, brass-plated.

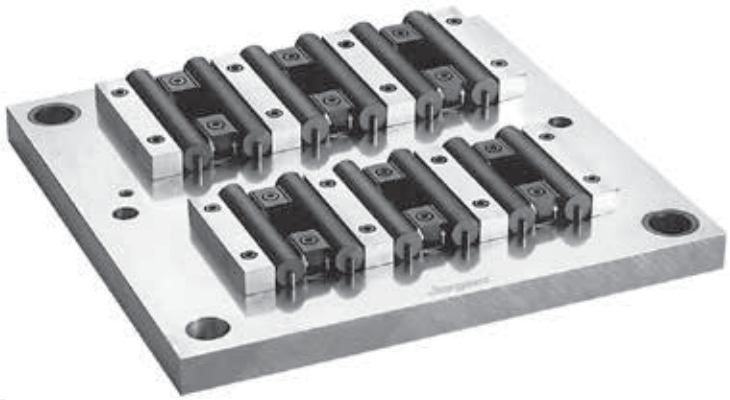
Replacement Screws available, contact customer service for more information.

Part Number	A	B	C	D	E	F	G*	Torque (ft. lbs)	Max. Holding Force (lbs)
68547	3/8-16	3/16	0.812	0.250	0.050	0.710	0.400	16.6	2,000
68548	1/2-13	5/16	1.000	0.375	0.100	0.900	0.500	52.0	4,000
68549	5/8-11	3/8	1.187	0.500	0.100	1.125	0.590	80.0	6,000
Metric								**(Nm)**	**(N)**
68840	M10	7M	1.52	20.60	6.35	19.0	10.15	28	8,895
68841	M12	8M	2.03	25.40	9.52	22.8	12.70	88	17,790
68842	M16	12M	2.54	30.15	12.70	28.5	15.00	135	26,680

* This measurement is the correct location to drill and tap the hole from the edge of the work piece.

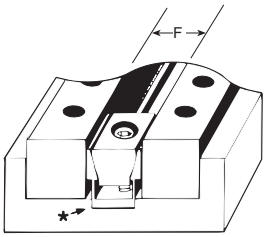
Expanding Micro™ Clamps

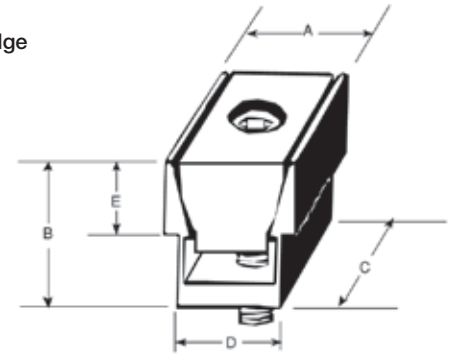


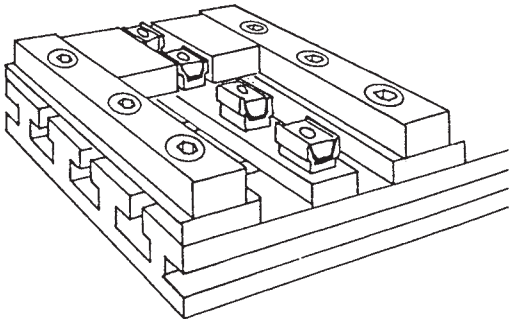


Jergens Expanding Micro Clamps allow you to fixture more parts on your fixture plates. The unique expanding design can hold two parts at once when used with a positive stop.

- Minimizes tool changes
- Holds two parts with equilateral clamping action
- Ideal for clamping flat or round work pieces
- Reduces wasted space
- Aluminum Housing, Steel Wedge







*A shallow slot, a little wider than D dimension, will insure clamp remains in line with workpiece.

Part Number	A	B	C	D*	E	F†	Thread Size	Maximum Spread	Maximum Holding Force (lbs)	Key Size
68706	.240	.250	.320	.210	.100	.250	2-56	.265	200	5/64
68707	.360	.380	.470	.310	.185	.375	4-40	.395	310	3/32
68701	.485	.500	.625	.410	.220	.500	8-32	.540	500	9/64
68702	.735	.750	.940	.632	.375	.750	1/4-20	.800	1500	3/16
68703	.980	1.00	1.250	.820	.500	1.000	5/16-18	1.060	2000	1/4
68704	1.470	1.50	1.875	1.215	.750	1.500	1/2-13	1.590	3500	3/8
68705	1.960	2.00	2.500	1.625	1.000	2.000	5/8-11	2.100	6000	1/2

Metric

Part Number	A	B	C	D*	E	F†	Thread Size	Maximum Spread	Maximum Holding Force (N)	Key Size
68716	6.1	6.9	8.1	5.3	3.6	6.4	M2	6.7	880	1.5
68717	9.1	9.7	11.9	7.9	4.7	9.5	M2.5	10	1,350	2
68711	12.3	14.5	15.9	10.4	5.6	12.7	M4	13.2	2,224	3
68712	18.6	19.0	23.8	16.1	9.5	19.0	M6	20.3	6,670	5
68713	24.8	25.9	31.7	20.8	12.7	25.4	M8	26.9	8,895	6
68714	37.3	38.6	47.6	30.8	19.0	38.1	M12	39.9	15,565	10
68715	49.7	51.5	63.5	41.2	25.4	50.8	M16	53.0	26,690	14

†F is the distance needed between workpieces for clamp clearance. Drill and tap mounting hole on the center of F dimension.

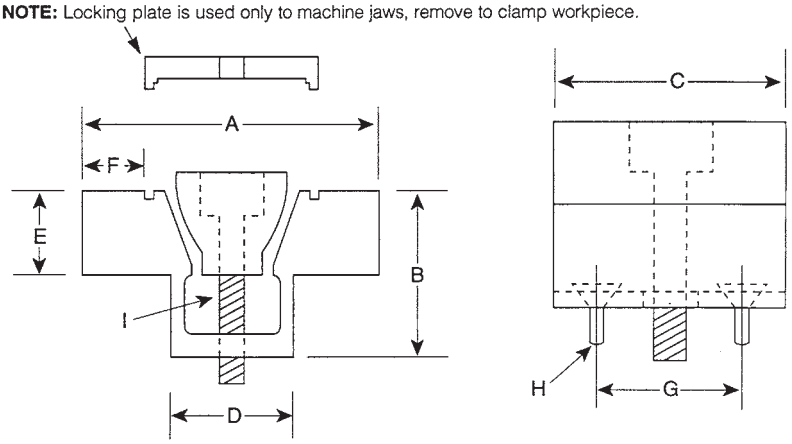
Machinable Expanding Micro™ Clamps



The compact Machinable Expanding Micro™ Clamp is available with extra material on the clamping jaw so it can be machined to conform to the shape of your workpiece – enabling you to fixture unusual applications easily. The specially designed steel wedge spreads the clamping force uniformly on both sides of the aluminum channel. Clamps may be ordered with a unique locking plate to make the clamp rigid while machining the jaw to your specifications, without vibration.

- Material: Channel 7075-76 Alumnium
- Mounting Screws Included
- Compact Design
- Allows more parts to be mounted on Fixture

NOTE: Locking plate is used only to machine jaws, remove to clamp workpiece.



Part No. With Locking Plate	Part No. Without Locking Plate	A*	B	C	D	E	F†	G	Mounting Screw **H	I
68770	68771	1.125	0.50	0.62	0.420	0.18	0.18	0.400	2-56	8-32
68772	68773	1.500	0.75	0.94	0.632	0.37	0.26	0.624	6-32	1/4-20
68774	68775	2.000	1.00	1.25	0.820	0.50	0.39	0.812	6-32	5/16-18
68776	68777	3.000	1.50	1.87	1.215	0.75	0.62	1.200	10-32	1/2-13
68778	68779	4.000	2.00	2.50	1.625	1.00	0.80	1.625	1/4-20	5/8-11

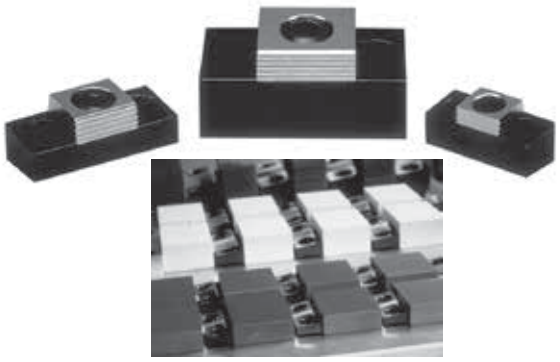
* The distance needed between workpieces for clamp clearance, drill and tap mounting holes on the center of "A" dimension.
† The amount of machinable stock on jaws.
** Mounting Screws Included

Metric

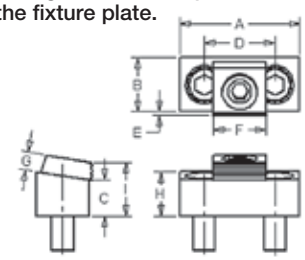
Part No. With Locking Plate	Part No. Without Locking Plate	A*	B	C	D	E	F†	G	Mounting Screw **H	I
68870	68871	28.6	12.7	15.7	10.67	6.3	4.6	10.16	M2	M4
68872	68873	38.1	19.1	23.9	16.05	9.4	6.6	15.87	M4	M6
68874	68875	50.8	25.4	31.8	20.83	12.7	9.9	20.62	M4	M8
68876	68877	76.2	38.1	47.5	30.86	19.1	15.7	30.48	M5	M12
68878	68879	101.6	50.8	63.5	41.28	25.4	20.3	41.28	M6	M16

* The distance needed between workpieces for clamp clearance, drill and tap mounting holes on the center of "A" dimension.
† The amount of machinable stock on jaws.
** Mounting Screws Included

Micro™ Toe Clamps



This cam action fixture clamp provides positive down force while using very little space on the fixture. Workpieces can be clamped in series by using the back surface of a clamp to locate the next workpiece. The hardened steel clamping element has both a smooth surface for machined workpieces and a serrated clamping surface for rougher work. The height of the clamp can be adjusted by milling the slot deeper in the fixture plate.



Part Number	A	B	C	D	E†	F	G	H	I	Cam Screw	Distance of Movement	Mounting Screws	Torque (ft/lbs)	Holding Force(lbs)
68731	1.70	.75	.50	1.00	.090	.75	.25	.62	.845	68527	.050	5/16-18 x 3/4 LH	20.8	2000
68732	2.12	1.00	.45	1.32	.110	1.00	.38	.62	.960	68529	.100	3/8-16 x 3/4 LH	65.0	4000
68733	2.95	1.50	.99	2.00	.130	1.50	.50	1.25	1.70	68531	.100	1/2-13 x 1 1/4 SHCS	100.0	6000

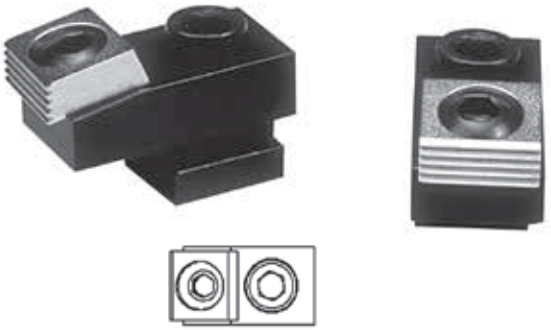
† "E" is the distance needed between the front of the clamp base and the workpiece.

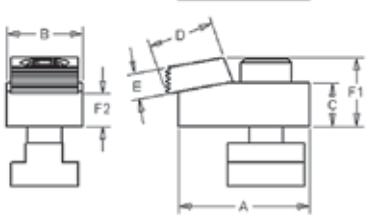
Metric

Part Number	A	B	C	D	E†	F	G	H	Cam Screw	Distance of Movement	Mounting Screws Included	Torque (N-m)	Holding Force(N)
68781	43.2	19.0	12.7	25.4	2.3	19.0	6.4	15.75	M10	1.6	M8	28.0	8900
68782	54.0	25.4	11.4	33.5	2.8	25.4	9.7	15.75	M12	2.0	M10	88.0	17800
68783	75.0	38.1	25.2	50.8	3.3	38.1	12.7	2.5	M16		M12		

† "E" is the distance needed between the front of the clamp base and the workpiece.

Micro™ T-Slot Toe Clamps





This clamp is like the Micro Toe Clamp, only it is designed to be used in the T-slots of machine tables. It provides positive down force while maintaining a low profile. The hardened steel clamping element has both a smooth surface for machined work pieces and a serrated clamping surface for rougher work.

Inch

Part Number	T-Slot Size	A	B	C	D	E	F¹	F²	Max. Torque/ Holding Force (Ft Lbs/Lbs)
68750	No T-nut or Mtg. Screw	1.94	1.12	0.62	1.00	0.38	1.00	0.875	65/4,000
68741	9/16	1.94	1.12	0.62	1.00	0.38	1.00	0.875	65/4,000
68742	5/8	1.94	1.12	0.62	1.00	0.38	1.00	0.875	65/4,000
68743	11/16	1.94	1.12	0.62	1.00	0.38	1.00	0.875	65/4,000
68744	3/4	1.94	1.12	0.62	1.00	0.38	1.00	0.875	65/4,000

Metric

Part Number	T-Slot Size	A	B	C	D	E	F¹	F²	Max Torque/ Holding Force (N.m./N.)
68791	14	50	28.5	15.7	25.4	9.6	25.4	22.2	88.00/17800
68792	16	50	28.5	15.7	25.4	9.6	25.4	22.2	88.00/17800
68793	18	50	28.5	15.7	25.4	9.6	25.4	22.2	88.00/17800
68794	No T-nut or Mtg. Screw	50	28.5	15.7	25.4	9.6	25.4	22.2	88.00/17800

F¹ - The distance from the top of the back of the washer to the bottom of the clamp body.
F² - The distance from the top of the front of the washer to the bottom of the clamp body.

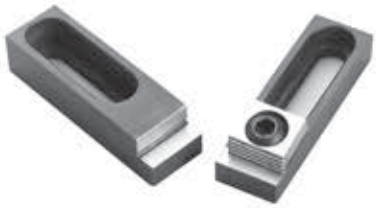
Part Number	T-Slot Size
68750	No T-nut or Mtg. Screw
68741	9/16
68742	5/8
68743	11/16
68744	3/4

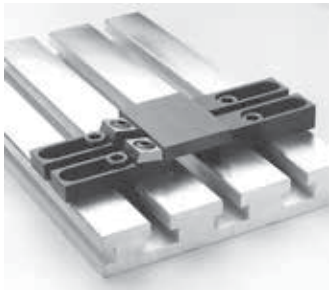
Metric

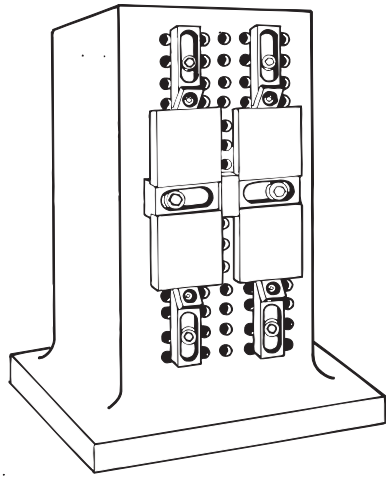
Part Number	T-Slot Size
68791	14
68792	16
68793	18
68794	No T-nut or Mtg. Screw

Torque mounting bolt to 110 Ft/Lbs (150 N.m.)

Micro™ Edge Clamps

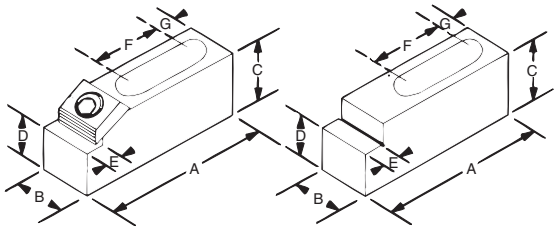




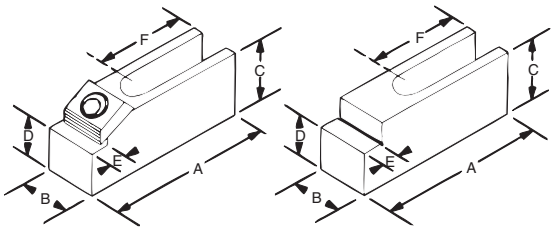


The Micro Edge Clamp offers increased versatility through its unique elevated clamping abilities.

- Workpiece is elevated for through milling and drilling
- Cam action provides positive holddown force
- Provides flexible set-ups for hard to hold parts
- Works in plates, both with tapped hole layouts or T-slot configurations
- Can be mounted vertically or horizontally
- Built-in stops locate workpiece for repeat positioning
- Larger sizes are ideal for mold shop applications
- Tapered mounting slot prevents movement when clamping pressure is applied
- Hardened steel clamping element, low carbon steel body



Closed slot style



Open slot style

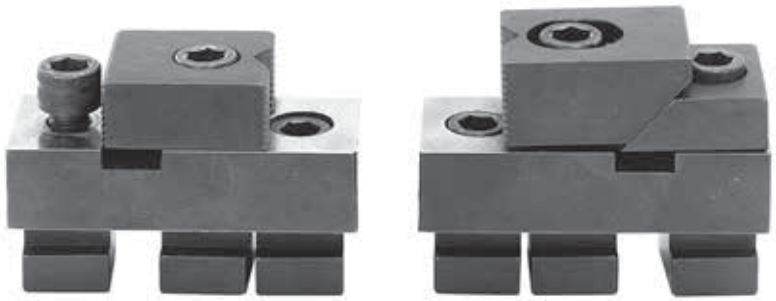
Inch

Part Number	Item	A	B	C	+.0000 -.0005 D	E	F	G	Cam Screw Part Number	Mounting Screw	Slot
68721	Clamp	2.50	.75	.62	.4600	.31	.83	.53	68527	5/16	Closed
68722	Stop	2.50	.75	.75	.4600	.31	1.11	.53	N/A	5/16	Closed
68723	Clamp	3.75	1.12	.62	.4800	.37	1.68	.50	68529	1/2	Closed
68724	Stop	3.75	1.12	.87	.4800	.37	1.68	.50	N/A	1/2	Closed
68725	Clamp	4.21	1.50	1.62	1.3780	.37	1.82	N/A	68535	5/8	Open
68726	Stop	4.21	1.50	2.00	1.3780	.37	1.82	N/A	N/A	5/8	Open

Metric

Part Number	Item	A	B	C	+.0000 -.0130 D	E	F	G	Cam Screw Part Number	Mounting Screw	Slot
68821	Clamp	63.5	19.1	15.8	11.68	8.0	21.1	13.5	68532	M8	Closed
68822	Stop	63.5	19.1	19.1	11.68	8.0	28.2	13.5	NA	M8	Closed
68823	Clamp	95.3	28.5	15.8	12.19	9.4	42.7	12.7	68534	M12	Closed
68824	Stop	95.3	28.5	22.1	12.19	9.4	42.7	12.7	NA	M12	Closed
68825	Clamp	107.0	38.1	41.2	35.00	9.4	46.2	NA	68535	M16	Open
68826	Stop	107.0	38.1	50.8	35.00	9.4	46.2	NA	NA	M16	Open

Modular Mini Vise



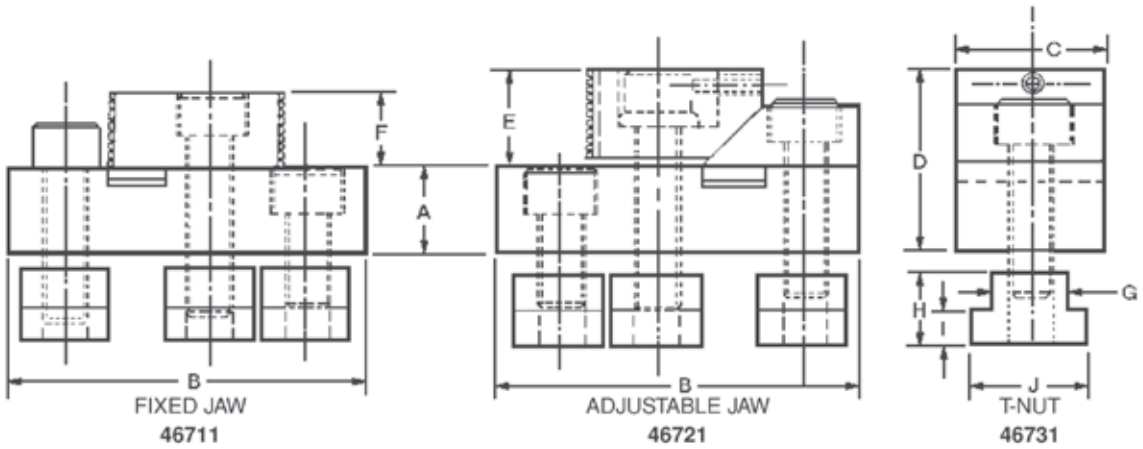
- Material: C-1018
- Finish: Black Oxide
  Case Hardened 58-62 Rc

Description	Part Number
Fixed Jaw Clamp	46711
Adj. Jaw Clamp	46721
T-Slot Nut	46731

The Jergens Modular Mini Vise provides accurate location and positive holding. The bases are hardened and ground to the same height as Jergens Rest Pads for accurate location. The jaws are serrated and hardened to provide positive holding. These versatile clamps may be used as shown, or the jaws may be reversed to allow the workpiece to rest on the machine table or fixture base. The clamps can be made part of a dedicated fixture by removing the T-nuts and fastening the 3/8-16" cap screws directly to the fixture.

To use the Jergens Modular Mini Vise: position the fixed jaw clamp and tighten all three cap screws to secure the clamp. Position the adjustable clamp and tighten the outside capscrews. Insert the workpiece and tighten the center cap screw. The adjustable jaw will force the workpiece down against the base and over against the fixed jaw clamp.

The 46711 clamp has a fixed jaw for locating.
The 46721 clamp has an adjustable jaw for clamping.
Each clamp is supplied with three 3/8-16" cap screws and three 46731 T-nuts.



+.0000 -.0005 A	B	C	Maximum Height D	E	F	Table Slot G	H	I	J
.7205	3	1 1/4	1-9/16	3/4	5/8	5/8	5/8	11/32	1

Mini Edge Clamps & Stops



Cam Action Clamps

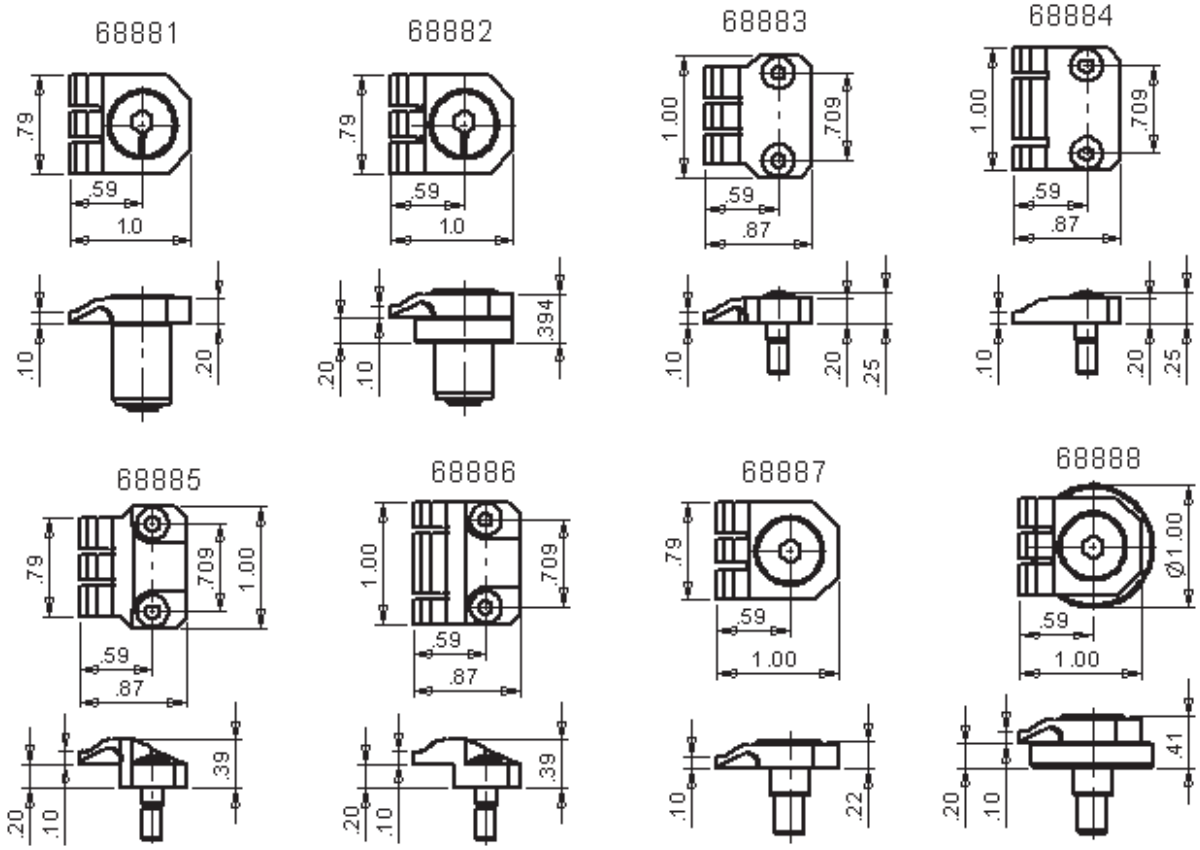
• Cam Action Clamps - The clamp actuates by a com screw with .047" (1.2mm) of stroke.

Part Number	Material	Clamp Type	Clamping Height	Max. Torque	Holding Force
68881	Spring Steel	Low Profile Clamp	.1000" (2.5mm)	6.6 ft. lbs. (8.95 Nm)	880lbs. (3900 N)
68882	Spring Steel	Raised Clamp	.300" (2.5mm)	6.6 ft. lbs. (8.95 Nm)	880lbs. (3900 N)

Stops / Locators

• Stop / Locators - Single Stops are used for pieces over 1.75" (44.5mm) long. Double Stops are used for smaller pieces.

Part Number	Material	Stop Type	Jaw Height
68883	Spring Steel	Single Stop	.100" (2.5mm)
68884	Spring Steel	Double Stop	.100" (2.5mm)
68885	Spring Steel	Raised Single Stop	.300" (7.5mm)
68886	Spring Steel	Raised Double Stop	.300" (7.5mm)
68887	Spring Steel	Swivel Stop	.100" (2.5mm)
68888	Spring Steel	Raised Swivel Stop	.100" (2.5mm)



Kwik-Lok® Pins

Selection and Ordering 336

T-Handle Pins
- Aluminum Handle 338–339
- Stainless Handle 346–347

L-Handle Pins
- Aluminum Handle 340–341
- Stainless Handle 346–347

Button Handle Pins
- Aluminum Handle 342–343
- Stainless Handle 342–343
- Recessed Stainless 337

Ring Handle Pins
- Stainless Steel 344–345

Kwik-Lok® Lifting Pins
- Stainless Steel 362–363

Double Acting Pin
- T, L & Ring 348–349

Detent Pins 350–351

Marine Pins 353-355

Lanyards 356–357

Standard Duty Detent Pins 358–359

Special Pin Quotation 364

Specifications and Materials 360–361

Jergens®
MANUFACTURING EFFICIENCY

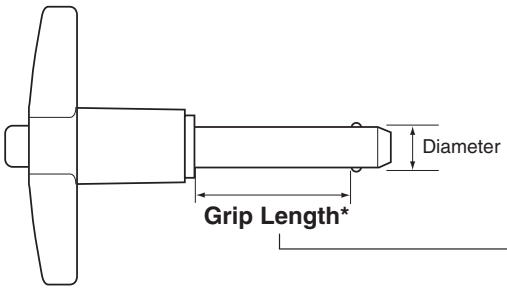
Kwik-Lok® Pins – Selection and Ordering

1. Choose Handle Shape and Style:

	Material
T, L, or Button	Aluminum
Heavy Duty T, L, or Button	Stainless Steel
Ring Handle, Lifting Ring, or Recessed Button	Stainless Steel
Double Acting (Push/Pull) T or L	Stainless Steel

2. Select Pin Body Material

- 17-4-PH heat treated Stainless Steel for highest strength, corrosion and scratch resistance
- Alloy Steel heat treated and cadmium plating to military specifications



*Grip Length is measured to edge of locking ball
Standard Grip Lengths: 1/2"–6", 10–100 mm
Special Grip Lengths available on request

3. Specify Pin Diameter and Grip Length

Standard Kwik-Lok® Pin Diameters				Double Shear Resistance (Minimum)			
				Stainless Steel (17-4 PH)		Alloy Steel (Cadmium Plated)	
Nominal		Min/Max (Inches)	Min/Max (mm)	lbs	kN	lbs	kN
3/16"		0.1870 / 0.1885	4.75 / 4.79	5150	23	4600	20
—	5 mm	0.1937 / 0.1953	4.92 / 4.96	5395	24	4721	21
—	6 mm	0.2331 / 0.2346	5.92 / 5.96	7868	35	6969	31
1/4"		0.2470 / 0.2485	6.27 / 6.31	9200	41	8200	36
5/16"		0.3095 / 0.3110	7.86 / 7.90	14400	64	12800	57
—	8 mm	0.3118 / 0.3134	7.92 / 7.96	14695	65	13062	58
3/8"		0.3720 / 0.3735	9.45 / 9.49	20700	92	18400	82
—	10 mm	0.3906 / 0.3921	9.92 / 9.96	22480	100	19782	88
7/16"		0.4345 / 0.4360	11.04 / 11.07	28500	127	25000	111
—	12 mm	0.4693 / 0.4709	11.92 / 11.96	32371	144	28774	128
1/2"		0.4970 / 0.4985	12.62 / 12.66	36900	164	32800	146
9/16"		0.5595 / 0.5610	14.21 / 14.25	46700	208	41600	185
5/8"		0.6220 / 0.6235	15.80 / 15.84	57800	257	51400	229
—	16 mm	0.6268 / 0.6283	15.92 / 15.96	57774	257	51479	229
3/4"		0.7470 / 0.7485	18.97 / 19.01	83200	370	74600	332
—	20 mm	0.7843 / 0.7858	19.92 / 19.96	90594	403	57998	258
7/8"		0.8720 / 0.8735	22.15 / 22.19	112500	500	100000	445
—	25 mm	0.9811 / 0.9827	24.92 / 24.96	141849	631	126113	561
1"		0.9970 / 0.9985	25.32 / 25.36	147200	655	131000	583

See Page 360 for recommended mounting hole diameters and minimum locking ball tensile strength for estimating pullout resistance.

4. Locate Standard Part Numbers from Charts by Diameter and Grip Length.

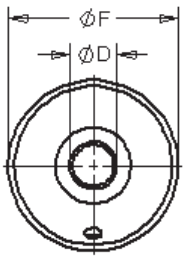
5. Select Lanyards and Tabs on pages 356–357:

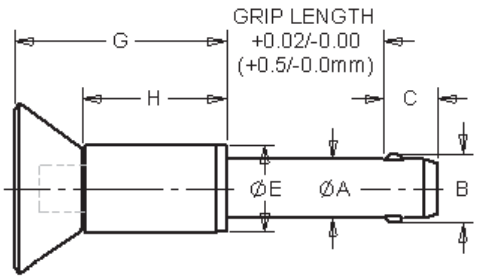
Specify Length of Cable (Stainless Steel) with Green Nylon Jacket (other colors available)
Choose Tab Style, Material and Mounting Hole Dimension
Specify if Lanyard is to be crimped to Pin without Split Ring

Recessed Button Handle Kwik-Lok® Pin



- The Recessed Button Handle Kwik-Lok® Pin design helps prevent accidental actuation of the pin.
- Handle is stainless steel and the button is stainless steel.
- Body is made from high Strength Stainless Steel, 17-4 PH heat treated.
- Includes hole for easy attachment of optional lanyard or ring.





Recessed Button Handle Specifications – Inch

DIA	A MIN	A MAX	B +/-.005	C +0.00 / -0.04	D MIN	D MAX	E MIN	E MAX	F +/-.020	G +/-.020	H +/-.020
3/16	0.1870	0.1885	0.220	0.260	0.250	0.310	0.310	0.530	0.800	0.990	0.710
1/4	0.2470	0.2485	0.289	0.290	0.250	0.310	0.310	0.530	0.800	0.990	0.710
5/16	0.3095	0.3110	0.375	0.330	0.250	0.310	0.410	0.590	0.800	1.050	0.780
3/8	0.3720	0.3735	0.440	0.365	0.300	0.390	0.450	0.650	1.090	1.375	0.930
7/16	0.4345	0.4360	0.509	0.380	0.300	0.390	0.450	0.650	1.090	1.375	0.930
1/2	0.4970	0.4985	0.594	0.460	0.435	0.565	0.600	0.800	1.040	1.320	0.930

Recessed Button Handle Specifications – Metric

DIA	A MIN	A MAX	B +/-.13	C +0.00 / -1.00	D MIN	D MAX	E MIN	E MAX	F +/-.020	G +/-.020	H +/-.020
5MM	4.92	4.96	5.54	6.0	6.4	7.9	7.9	13.5	20.3	25.1	18.0
6MM	5.92	5.96	6.99	7.0	6.4	7.9	7.9	13.5	20.3	25.1	18.0
8MM	7.92	7.96	9.42	8.0	6.4	7.9	7.9	13.5	20.3	26.7	19.8
10MM	9.92	9.96	11.86	9.0	7.6	9.9	11.4	16.5	27.7	34.9	23.6
12MM	11.92	11.96	14.45	10.0	7.6	9.9	11.4	16.5	27.7	34.9	23.6

		Grip Length (In)											
	Pin Dia	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3*	4*	5*	6
PART NUMBERS	3/16	803000	803001	803002	803003	803004	803005	803006	803008	803009	803011	803013	803015
	1/4	803016	803017	803018	803019	803020	803021	803022	803024	803025	803027	803029	803031
	5/16	803032	803033	803034	803035	803036	803037	803038	803040	803041	803043	803045	803047
	3/8	803048	803049	803050	803051	803052	803053	803054	803056	803057	803059	803061	803063
	7/16	803064	803065	803066	803067	803068	803069	803070	803072	803073	803075	803077	803079
	1/2	803080	803081	803082	803083	803084	803085	803086	803088	803089	803091	803093	803095

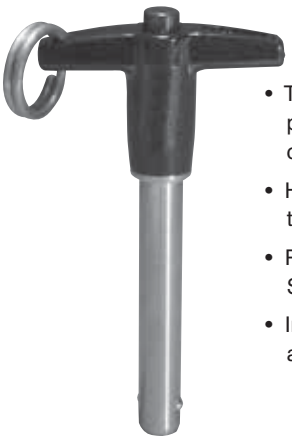
Contact customer service for other sizes.

		Grip Length (Metric)											
	Pin Dia	10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	5	853000	853001	853002	853003	853004	853005	853006	853007	853008	853009	853010	853011
	6	853012	853013	853014	853015	853016	853017	853018	853019	853020	853021	853022	853023
	8	853024	853025	853026	853027	853028	853029	853030	853031	853032	853033	853034	853035
	10	853036	853037	853038	853039	853040	853041	853042	853043	853044	853045	853046	853047
	12	853048	853049	853050	853051	853052	853053	853054	853055	853056	853057	853058	853059

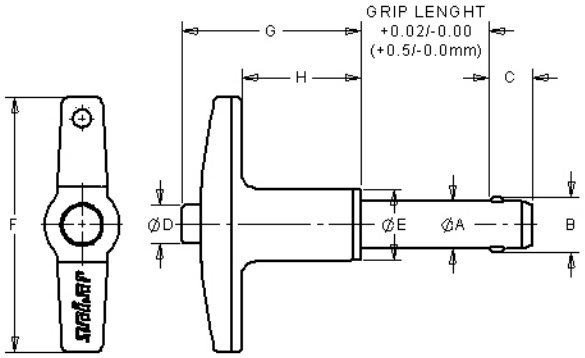
Contact customer service for other sizes.

T-Handle Kwik-Lok® Pin MS17985, NAS1333-NAS1343

A2=Aluminum T Handle



- The T-Handle Kwik-Lok® Pin provides a firm, even grip for smooth comfortable operation.
- Handle is black cast aluminum and the button is blue anodized aluminum.
- Pin body: Heat Treated 17-4 PH Stainless Steel.
- Includes hole and split ring for easy attachment of optional lanyard.



T-Handle Specifications – Inch

DIA	A MIN	A MAX	B +/-.005	C +0.00 / -0.04	D MIN	D MAX	E MIN	E MAX	F MIN	F MAX	G MAX	H MIN
3/16	0.1870	0.1885	0.220	0.260	0.250	0.310	0.380	0.500	1.750	1.815	1.270	0.800
1/4	0.2470	0.2485	0.289	0.290	0.250	0.310	0.380	0.500	1.750	1.815	1.270	0.800
5/16	0.3095	0.3110	0.375	0.330	0.250	0.310	0.380	0.500	1.750	1.815	1.270	0.800
3/8	0.3720	0.3735	0.440	0.365	0.300	0.390	0.510	0.625	1.935	2.065	1.450	0.850
7/16	0.4345	0.4360	0.509	0.380	0.300	0.390	0.510	0.625	1.935	2.065	1.470	0.850
1/2	0.4970	0.4985	0.594	0.460	0.435	0.565	0.630	0.800	2.220	2.345	1.600	0.885
9/16	0.5595	0.5610	0.666	0.510	0.435	0.565	0.630	0.800	2.220	2.345	1.600	0.885
5/8	0.6220	0.6235	0.750	0.580	0.450	0.580	0.810	0.940	2.250	3.100	1.700	0.980
3/4	0.7470	0.7485	0.887	0.670	0.570	0.700	0.810	1.000	2.500	3.100	1.720	1.030
7/8	0.8720	0.8735	1.046	0.760	0.700	0.840	1.120	1.300	2.750	3.520	2.170	1.310
1	0.9970	0.9985	1.209	0.890	0.750	0.950	1.180	1.320	2.750	3.520	2.170	1.310

T-Handle Specifications – Metric

DIA	A MIN	A MAX	B +/-.13	C +0.00 / -1.00	D MIN	D MAX	E MIN	E MAX	F MIN	F MAX	G MAX	H MIN
5MM	4.92	4.96	5.54	6.0	6.4	7.9	9.7	12.7	44.5	46.1	32.3	20.3
6MM	5.92	5.96	6.99	7.0	6.4	7.9	9.7	12.7	44.5	46.1	32.3	20.3
8MM	7.92	7.96	9.42	8.0	6.4	7.9	9.7	12.7	44.5	46.1	32.3	20.3
10MM	9.92	9.96	11.86	9.0	7.6	9.9	13.0	15.9	49.1	52.5	36.8	21.6
12MM	11.92	11.96	14.45	10.0	7.6	9.9	13.0	15.9	49.1	52.5	36.8	21.6
16MM	15.92	15.96	19.00	14.0	11.4	14.7	20.6	23.9	57.2	78.7	43.2	24.9
20MM	19.92	19.96	24.08	17.0	14.5	17.8	20.6	25.4	63.5	78.7	43.7	26.2
25MM	24.92	24.96	30.94	22.0	19.1	24.1	30.0	33.5	69.9	89.4	55.1	33.3

Dimensions in millimeters

T-Handle – Inch

Aluminum Handle, Body – High Strength Stainless Steel, 17-4 PH Heat Treated

	Pin Dia	Grip Length (In)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
PART NUMBERS	3/16	801000	801001	801002	801003	801004	801005	801006	801008	801009	801011	801013	801015
	1/4	801016	801017	801018	801019	801020	801021	801022	801024	801025	801027	801029	801031
	5/16	801032	801033	801034	801035	801036	801037	801038	801040	801041	801043	801045	801047
	3/8	801048	801049	801050	801051	801052	801053	801054	801056	801057	801059	801061	801063
	7/16	801064	801065	801066	801067	801068	801069	801070	801072	801073	801075	801077	801079
	1/2	801080	801081	801082	801083	801084	801085	801086	801088	801089	801091	801093	801095
	9/16	801096	801097	801098	801099	801100	801101	801102	801104	801105	801107	801109	801111
	5/8	801112	801113	801114	801115	801116	801117	801118	801120	801121	801123	801125	801127
	3/4	801128	801129	801130	801131	801132	801133	801134	801136	801137	801139	801141	801143
	7/8	801144	801145	801146	801147	801148	801149	801150	801152	801153	801155	801157	801159
	1	801160	801161	801162	801163	801164	801165	801166	801168	801169	801171	801173	801175

T-Handle – Metric

Aluminum Handle, Body – High Strength Stainless Steel, 17-4 PH Heat Treated

	Pin Dia	Grip Length (Metric)											
		10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	5	851000	851001	851002	851003	851004	851005	851006	851007	851008	851009	851010	851011
	6	851012	851013	851014	851015	851016	851017	851018	851019	851020	851021	851022	851023
	8	851024	851025	851026	851027	851028	851029	851030	851031	851032	851033	851034	851035
	10	851036	851037	851038	851039	851040	851041	851042	851043	851044	851045	851046	851047
	12	851048	851049	851050	851051	851052	851053	851054	851055	851056	851057	851058	851059
	16	851060	851061	851062	851063	851064	851065	851066	851067	851068	851069	851070	851071
	20	851072	851073	851074	851075	851076	851077	851078	851079	851080	851081	851082	851083
	25	851084	851085	851086	851087	851088	851089	851090	851091	851092	851093	851094	851095

Contact customer service for other sizes.

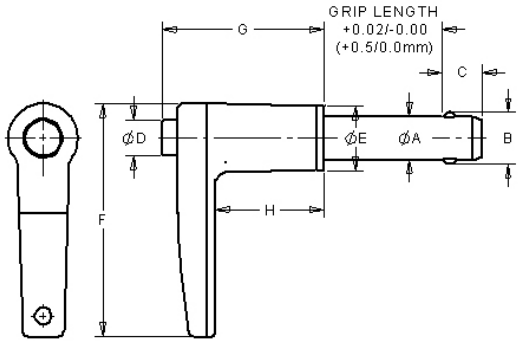
Kwik-lok®
SPECIALTY PINS & FASTENERS

L-Handle Kwik-Lok® Pin MS17986, NAS1333-NAS1343

A5=Aluminum L Handle



- The L-Handle Kwik-Lok® Pin provides a firm grip for applications where a T-Handle will not fit.
- Handle is black cast aluminum and the button is blue anodized aluminum.
- Pin body available in: Heat Treated 17-4 PH Stainless Steel.
- Includes hole and split ring for easy attachment of optional lanyard.



L-Handle Specifications – Inch

DIA	A MIN	A MAX	B +/-.005	C +0.00 / -0.04	D MIN	D MAX	E MIN	E MAX	F MIN	F MAX	G MAX	H MIN
3/16	0.1870	0.1885	0.220	0.260	0.250	0.310	0.380	0.500	1.720	1.800	1.270	0.760
1/4	0.2470	0.2485	0.289	0.290	0.250	0.310	0.380	0.500	1.720	1.800	1.270	0.760
5/16	0.3095	0.3110	0.375	0.330	0.250	0.310	0.380	0.500	1.720	1.800	1.270	0.760
3/8	0.3720	0.3735	0.440	0.365	0.300	0.390	0.510	0.625	1.945	2.030	1.450	0.850
7/16	0.4345	0.4360	0.509	0.380	0.300	0.390	0.510	0.625	1.945	2.030	1.450	0.850
1/2	0.4970	0.4985	0.594	0.460	0.435	0.565	0.630	0.800	2.230	2.360	1.600	0.850
9/16	0.5595	0.5610	0.666	0.510	0.435	0.565	0.630	0.800	2.230	2.360	1.600	0.850
5/8	0.6220	0.6235	0.750	0.580	0.450	0.580	0.810	0.975	2.385	3.070	1.700	0.905
3/4	0.7470	0.7485	0.887	0.670	0.570	0.700	0.810	1.000	2.465	3.070	1.720	0.980
7/8	0.8720	0.8735	1.046	0.760	0.700	0.840	1.120	1.320	2.750	3.700	2.170	1.200
1	0.9970	0.9985	1.209	0.890	0.750	0.950	1.180	1.320	2.750	3.700	2.170	1.200

L-Handle Specifications – Metric

DIA	A MIN	A MAX	B +/-.13	C +0.00 / -1.00	D MIN	D MAX	E MIN	E MAX	F MIN	F MAX	G MAX	H MIN
5MM	4.92	4.96	5.54	6.0	6.4	7.9	7.9	12.7	43.7	45.7	32.3	19.3
6MM	5.92	5.96	6.99	7.0	6.4	7.9	7.9	12.7	43.7	45.7	32.3	19.3
8MM	7.92	7.96	9.42	8.0	6.4	7.9	7.9	12.7	43.7	45.7	32.3	19.3
10MM	9.92	9.96	11.86	9.0	7.6	9.9	13.0	15.9	49.4	51.6	36.8	21.6
12MM	11.92	11.96	14.45	10.0	7.6	9.9	13.0	15.9	49.4	51.6	36.8	21.6
16MM	15.92	15.96	19.00	14.0	11.4	14.7	20.6	24.8	60.6	78.0	43.2	23.0
20MM	19.92	19.96	24.08	17.0	14.5	17.8	20.6	25.4	62.6	78.0	43.7	24.9
25MM	24.92	24.96	30.94	22.0	19.1	24.1	30.0	33.5	69.9	94.0	55.1	30.5

Dimensions in millimeters

L-Handle – Inch

Aluminum Handle, Body – High Strength Stainless Steel, 17-4 PH Heat Treated

	Pin Dia	Grip Length (In)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
PART NUMBERS	3/16	801400	801401	801402	801403	801404	801405	801406	801408	801409	801411	801413	801415
	1/4	801416	801417	801418	801419	801420	801421	801422	801424	801425	801427	801429	801431
	5/16	801432	801433	801434	801435	801436	801437	801438	801440	801441	801443	801445	801447
	3/8	801448	801449	801450	801451	801452	801453	801454	801456	801457	801459	801461	801463
	7/16	801464	801465	801466	801467	801468	801469	801470	801472	801473	801475	801477	801479
	1/2	801480	801481	801482	801483	801484	801485	801486	801488	801489	801491	801493	801495
	9/16	801496	801497	801498	801499	801500	801501	801502	801504	801505	801507	801509	801511
	5/8	801512	801513	801514	801515	801516	801517	801518	801520	801521	801523	801525	801527
	3/4	801528	801529	801530	801531	801532	801533	801534	801536	801537	801539	801541	801543
	7/8	801544	801545	801546	801547	801548	801549	801550	801552	801553	801555	801557	801559
	1	801560	801561	801562	801563	801564	801565	801566	801568	801569	801571	801573	801575

L-Handle – Metric

Aluminum Handle, Body – High Strength Stainless Steel, 17-4 PH Heat Treated

	Pin Dia	Grip Length (Metric)											
		10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	5	851400	851401	851402	851403	851404	851405	851406	851407	851408	851409	851410	851411
	6	851412	851413	851414	851415	851416	851417	851418	851419	851420	851421	851422	851423
	8	851424	851425	851426	851427	851428	851429	851430	851431	851432	851433	851434	851435
	10	851436	851437	851438	851439	851440	851441	851442	851443	851444	851445	851446	851447
	12	851448	851449	851450	851451	851452	851453	851454	851455	851456	851457	851458	851459
	16	851460	851461	851462	851463	851464	851465	851466	851467	851468	851469	851470	851471
	20	851472	851473	851474	851475	851476	851477	851478	851479	851480	851481	851482	851483
	25	851484	851485	851486	851487	851488	851489	851490	851491	851492	851493	851494	851495

Contact customer service for other sizes.

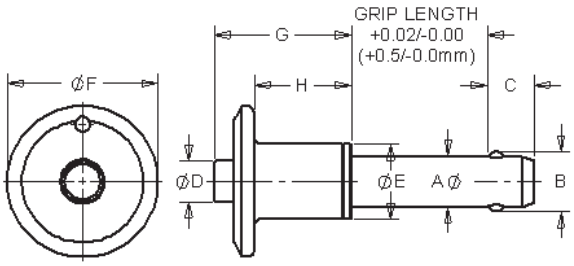
Kwik-lok®
SPECIALTY PINS & FASTENERS

Button Handle Kwik-Lok® Pin MS17984, NAS 1333-1343



A3=Aluminum Button Handle

- The Button Handle Kwik-Lok® Pin is ideal for applications that have limited space around the handle.
- Light weight black anodized aluminum handle with blue anodized aluminum button.
- Pin body available in:Heat Treated 17-4 PH Stainless Steel.
- Includes hole and split ring for easy attachment of optional lanyard.





C3=Stainless Button Handle

- Heavy Duty solid handle in 303 series stainless steel provides additional impact resistance
- Includes hole and split ring for easy attachment of optional lanyard.
- All stainless steel construction provides additional corrosion resistance
- Body is made from high Strength Stainless Steel, 17-4 PH heat treated
- Meets or exceeds NASM 23460 specifications
- May be ordered with 4 locking balls for additional locking element tensile strength

Button Handle Specifications – Inch

DIA	A MIN	A MAX	B +/-.005	C +0.00 / -0.04	D MIN	D MAX	E MIN	E MAX	F MIN	F MAX	G MAX	H MIN
3/16	0.1870	0.1885	0.220	0.260	0.250	0.310	0.310	0.440	0.720	0.800	0.830	0.480
1/4	0.2470	0.2485	0.289	0.290	0.250	0.310	0.310	0.440	0.720	0.800	0.890	0.480
5/16	0.3095	0.3110	0.375	0.330	0.250	0.310	0.410	0.490	0.810	1.135	0.930	0.480
3/8	0.3720	0.3735	0.440	0.365	0.300	0.390	0.450	0.570	0.875	1.135	1.040	0.620
7/16	0.4345	0.4360	0.509	0.380	0.300	0.390	0.550	0.625	0.940	1.400	1.160	0.620
1/2	0.4970	0.4985	0.594	0.460	0.435	0.565	0.600	0.725	1.300	1.400	1.190	0.720
9/16	0.5595	0.5610	0.666	0.510	0.435	0.565	0.680	0.760	1.400	1.650	1.410	0.950
5/8	0.6220	0.6235	0.750	0.580	0.450	0.580	0.750	0.865	1.530	1.700	1.500	0.950
3/4	0.7470	0.7485	0.887	0.670	0.570	0.700	0.865	1.000	1.790	1.900	1.680	1.140
7/8	0.8720	0.8735	1.046	0.760	0.700	0.840	0.865	1.000	2.120	2.250	1.985	1.270
1	0.9970	0.9985	1.209	0.890	0.750	0.950	1.175	1.250	2.120	2.250	2.140	1.490

Button Handle Specifications – Metric

DIA	A MIN	A MAX	B +/-.13	C +0.00 / -1.00	D MIN	D MAX	E MIN	E MAX	F MIN	F MAX	G MAX	H MIN
5MM	4.92	4.96	5.54	6.0	6.4	7.9	7.9	11.2	18.3	20.3	21.1	12.2
6MM	5.92	5.96	6.99	7.0	6.4	7.9	7.9	11.2	18.3	20.3	22.6	12.2
8MM	7.92	7.96	9.42	8.0	6.4	7.9	10.4	12.4	20.6	28.8	23.6	12.2
10MM	9.92	9.96	11.86	9.0	7.6	9.9	11.4	14.5	22.2	28.8	26.4	15.7
12MM	11.92	11.96	14.45	10.0	7.6	9.9	14.0	15.9	23.9	35.6	29.5	15.7
16MM	15.92	15.96	19.00	14.0	11.4	14.7	19.1	22.0	38.9	43.2	38.1	24.1
20MM	19.92	19.96	24.08	17.0	14.5	17.8	22.0	25.4	45.5	48.3	42.7	29.0
25MM	24.92	24.96	30.94	22.0	19.1	24.1	29.8	31.8	53.8	57.2	54.4	37.8

Dimensions in millimeters

Button Handle – Inch

Aluminum Button, Heat Treated Stainless Steel 17-4 PH Body

	Pin Dia	Grip Length (In)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
PART NUMBERS	3/16	800600	800601	800602	800603	800604	800605	800606	800608	800609	800611	800613	800615
	1/4	800616	800617	800618	800619	800620	800621	800622	800624	800625	800627	800629	800631
	5/16	800632	800633	800634	800635	800636	800637	800638	800640	800641	800643	800645	800647
	3/8	800648	800649	800650	800651	800652	800653	800654	800656	800657	800659	800661	800663
	7/16	800664	800665	800666	800667	800668	800669	800670	800672	800673	800675	800677	800679
	1/2	800680	800681	800682	800683	800684	800685	800686	800688	800689	800691	800693	800695
	9/16	800696	800697	800698	800699	800700	800701	800702	800704	800705	800707	800709	800711
	5/8	800712	800713	800714	800715	800716	800717	800718	800720	800721	800723	800725	800727
	3/4	800728	800729	800730	800731	800732	800733	800734	800736	800737	800739	800741	800743
	7/8	800744	800745	800746	800747	800748	800749	800750	800752	800753	800755	800757	800759
	1	800760	800761	800762	800763	800764	800765	800766	800768	800769	800771	800773	800775

Stainless Steel Button, Heat Treated Stainless Steel 17-4 PH Body

	Pin Dia	Grip Length (In)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
PART NUMBERS	3/16	806400	806401	806402	806403	806404	806405	806406	806408	806409	806411	806413	806415
	1/4	806416	806417	806418	806419	806420	806421	806422	806424	806425	806427	806429	806431
	5/16	806432	806433	806434	806435	806436	806437	806438	806440	806441	806443	806445	806447
	3/8	806448	806449	806450	806451	806452	806453	806454	806456	806457	806459	806461	806463
	7/16	806464	806465	806466	806467	806468	806469	806470	806472	806473	806475	806477	806479
	1/2	806480	806481	806482	806483	806484	806485	806486	806488	806489	806491	806493	806495
	9/16	806496	806497	806498	806499	806500	806501	806502	806504	806505	806507	806509	806511
	5/8	806512	806513	806514	806515	806516	806517	806518	806520	806521	806523	806525	806527
	3/4	806528	806529	806530	806531	806532	806533	806534	806536	806537	806539	806541	806543
	7/8	806544	806545	806546	806547	806548	806549	806550	806552	806553	806555	806557	806559
	1	806560	806561	806562	806563	806564	806565	806566	806568	806569	806571	806573	806575

Button Handle – Metric

Aluminum Button, Heat Treated Stainless Steel 17-4 PH Body

	Pin Dia	Grip Length (Metric)											
		10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	5	850600	850601	850602	850603	850604	850605	850606	850607	850608	850609	850610	850611
	6	850612	850613	850614	850615	850616	850617	850618	850619	850620	850621	850622	850623
	8	850624	850625	850626	850627	850628	850629	850630	850631	850632	850633	850634	850635
	10	850636	850637	850638	850639	850640	850641	850642	850643	850644	850645	850646	850647
	12	850648	850649	850650	850651	850652	850653	850654	850655	850656	850657	850658	850659
	16	850660	850661	850662	850663	850664	850665	850666	850667	850668	850669	850670	850671
	20	850672	850673	850674	850675	850676	850677	850678	850679	850680	850681	850682	850683
	25	850684	850685	850686	850687	850688	850689	850690	850691	850692	850693	850694	850695

Stainless Steel Button, Heat Treated Stainless Steel 17-4 PH Body

	Pin Dia	Grip Length (Metric)											
		10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	5	855400	855401	855402	855403	855404	855405	855406	855407	855408	855409	855410	855411
	6	855412	855413	855414	855415	855416	855417	855418	855419	855420	855421	855422	855423
	8	855424	855425	855426	855427	855428	855429	855430	855431	855432	855433	855434	855435
	10	855436	855437	855438	855439	855440	855441	855442	855443	855444	855445	855446	855447
	12	855448	855449	855450	855451	855452	855453	855454	855455	855456	855457	855458	855459
	16	855460	855461	855462	855463	855464	855465	855466	855467	855468	855469	855470	855471
	20	855472	855473	855474	855475	855476	855477	855478	855479	855480	855481	855482	855483
	25	855484	855485	855486	855487	855488	855489	855490	855491	855492	855493	855494	855495

Contact customer service for other sizes.

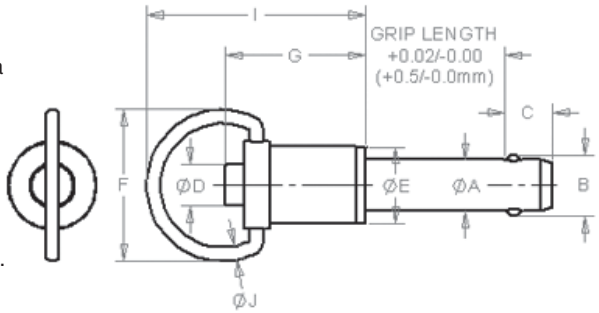
Jergens SPECIALTY FASTENERS GROUP

Ring-Handle Kwik-Lok® Pin MS17987, NAS1333-NAS1343

C6=Stainless Ring Handle



- The Ring-Handle Kwik-Lok® Pin is designed for applications which require small clearance area around the pin.
- Stainless steel handle for tough environment with blue anodized aluminum button (steel shanks), or stainless button (stainless steel shanks).
- Pin body: Heat Treated 17-4 PH Stainless Steel.
- Ring allows for easy attachment of optional lanyard.



Ring-Handle Specifications – Inch

DIA	A MIN	A MAX	B +/-.005	C +0.00 / -0.04	D MIN	D MAX	E MIN	E MAX	F MIN	G MIN	G MAX	I MAX	J MIN
3/16	0.1870	0.1885	0.220	0.260	0.250	0.310	0.310	0.530	1.060	0.730	1.490	1.450	0.080
1/4	0.2470	0.2485	0.289	0.290	0.250	0.310	0.310	0.530	1.060	0.780	1.490	1.500	0.080
5/16	0.3095	0.3110	0.375	0.330	0.250	0.310	0.410	0.590	1.060	0.830	1.490	1.650	0.080
3/8	0.3720	0.3735	0.440	0.365	0.300	0.390	0.450	0.650	1.060	0.940	1.490	1.650	0.080
7/16	0.4345	0.4360	0.509	0.380	0.300	0.390	0.550	0.710	1.090	0.980	1.580	1.850	0.080
1/2	0.4970	0.4985	0.594	0.460	0.435	0.565	0.600	0.800	1.160	1.140	1.580	1.850	0.080
9/16	0.5595	0.5610	0.666	0.510	0.435	0.565	0.680	0.840	1.160	1.140	1.580	2.030	0.080
5/8	0.6220	0.6235	0.750	0.580	0.450	0.580	0.750	0.905	1.240	1.400	1.840	2.250	0.120
3/4	0.7470	0.7485	0.887	0.670	0.570	0.700	0.865	1.045	1.640	1.625	1.990	2.650	0.120
7/8	0.8720	0.8735	1.046	0.760	0.700	0.840	0.980	1.235	1.640	1.875	2.190	3.000	0.120
1	0.9970	0.9985	1.209	0.890	0.750	0.950	1.175	1.330	1.640	2.000	2.450	3.100	0.120

Ring-Handle Specifications – Metric

DIA	A MIN	A MAX	B +/-.13	C +0.00 / -1.00	D MIN	D MAX	E MIN	E MAX	F MIN	G MIN	G MAX	I MAX	J MIN
5MM	4.92	4.96	5.54	6.0	6.4	7.9	7.9	13.5	26.9	18.5	37.8	36.8	2.0
6MM	5.92	5.96	6.99	7.0	6.4	7.9	7.9	13.5	26.9	18.5	37.8	36.8	2.0
8MM	7.92	7.96	9.42	8.0	6.4	7.9	7.9	13.5	26.9	18.5	37.8	36.8	2.0
10MM	9.92	9.96	11.86	9.0	7.6	9.9	11.4	16.5	26.9	23.9	37.8	36.8	2.0
12MM	11.92	11.96	14.45	10.0	7.6	9.9	14.0	18.0	27.7	24.9	40.1	47.0	2.0
16MM	15.92	15.96	19.00	14.0	11.4	14.7	19.1	23.0	31.5	35.6	46.7	57.2	3.0
20MM	19.92	19.96	24.08	17.0	14.5	17.8	22.0	26.5	41.7	41.3	50.5	67.3	3.0
25MM	24.92	24.96	30.94	22.0	19.1	24.1	29.8	33.8	41.7	50.8	62.2	78.7	3.0

Dimensions in millimeters

Ring-Handle – Inch

Stainless Steel – High Strength Stainless Steel, 17-4 PH Heat Treated

		Grip Length (In)											
	Pin Dia	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
PART NUMBERS	3/16	800200	800201	800202	800203	800204	800205	800206	800208	800209	800211	800213	800215
	1/4	800216	800217	800218	800219	800220	800221	800222	800224	800225	800227	800229	800231
	5/16	800232	800233	800234	800235	800236	800237	800238	800240	800241	800243	800245	800247
	3/8	800248	800249	800250	800251	800252	800253	800254	800256	800257	800259	800261	800263
	7/16	800264	800265	800266	800267	800268	800269	800270	800272	800273	800275	800277	800279
	1/2	800280	800281	800282	800283	800284	800285	800286	800288	800289	800291	800293	800295
	9/16	800296	800297	800298	800299	800300	800301	800302	800304	800305	800307	800309	800311
	5/8	800312	800313	800314	800315	800316	800317	800318	800320	800321	800323	800325	800327
	3/4	800328	800329	800330	800331	800332	800333	800334	800336	800337	800339	800341	800343
	7/8	800344	800345	800346	800347	800348	800349	800350	800352	800353	800355	800357	800059
	1	800360	800361	800362	800363	800364	800365	800366	800368	800369	800371	800373	800375

Ring-Handle – Metric

Stainless Steel – High Strength Stainless Steel, 17-4 PH Heat Treated

		Grip Length (Metric)											
	Pin Dia	10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	5	850200	850201	850202	850203	850204	850205	850206	850207	850208	850209	850210	850211
	6	850212	850213	850214	850215	850216	850217	850218	850219	850220	850221	850222	850223
	8	850224	850225	850226	850227	850228	850229	850230	850231	850232	850233	850234	850235
	10	850236	850237	850238	850239	850240	850241	850242	850243	850244	850245	850246	850247
	12	850248	850249	850250	850251	850252	850253	850254	850255	850256	850257	850258	850259
	16	850260	850261	850262	850263	850264	850265	850266	850267	850268	850269	850270	850271
	20	850272	850273	850274	850275	850276	850277	850278	850279	850280	850281	850282	850283
	25	850284	850285	850286	850287	850288	850289	850290	850291	850292	850293	850294	850295

Contact customer service for other sizes.

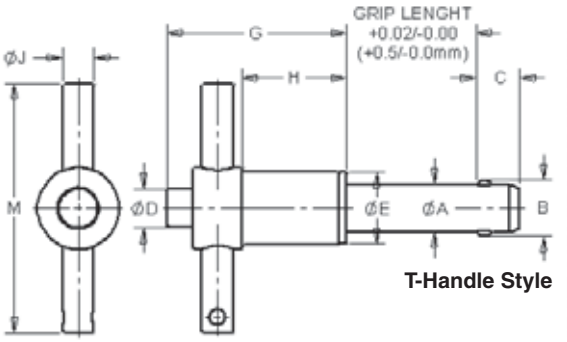
Kwik-lok®
SPECIALTY PINS & FASTENERS

Jergens SPECIALTY FASTENERS GROUP

Heavy Duty T&L Handle Pins
17985, 17986, NAS1333-NAS1343
C2=Stainless T Handle
C5=Stainless L Handle

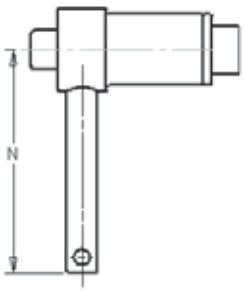


- Also known as Ground Handling Pins
- Heavy Duty welded handle provides additional impact resistance
- Includes split ring for easy attachment of optional lanyard.
- All stainless steel handle and button provide additional corrosion resistance
- Body is made from high Strength Stainless Steel, 17-4 PH heat treated.
- Meets or exceeds NASM 23460 specifications
- May be ordered with 4 locking balls for additional locking element tensile strength



T-Handle Style

L-Handle Style



Heavy Duty T&L Handle Specifications – Inch

Nom Pin Dia	Pin Dia A Min	Pin Dia A Max	±0.005 B	+0.00/ -0.04 C	D	E	G	H	J	M	N
3/16 (#10)	.1870	.1885	.220	.260	1/4	7/16	1 1/4	13/16	3/16	1 15/16	1 3/4
1/4	.2470	.2485	.289	.290	1/4	7/16	1 1/4	13/16	3/16	1 15/16	1 3/4
5/16	.3095	.3110	.375	.330	1/4	7/16	1 1/4	13/16	3/16	1 15/16	1 3/4
3/8	.3720	.3735	.440	.365	5/16	9/16	1 11/32	13/16	1/4	1 15/16	1 3/4
7/16	.4345	.4360	.509	.380	5/16	9/16	1 11/32	13/16	1/4	2 1/8	1 3/4
1/2	.4970	.4985	.594	.460	7/16	11/16	1 7/16	13/16	1/4	2 3/8	1 31/32
9/16	.5595	.5610	.666	.510	7/16	11/16	1 7/16	13/16	1/4	2 3/8	1 31/32
5/8	.6220	.6235	.750	.580	1/2	15/16	1 11/16	31/32	5/16	2 7/8	2 15/32
3/4	.7470	.7485	.887	.670	37/64	15/16	1 23/32	31/32	5/16	2 7/8	2 15/32
7/8	.8720	.8735	1.046	.760	3/4	1 3/16	2 5/32	1 1/4	3/8	3 1/4	2 13/16
1	.9970	.9985	1.219	.890	3/4	1 3/16	2 5/32	1 1/4	3/8	3 1/4	2 13/16

Heavy Duty T&L Handle Specifications – Metric

Nom Pin Dia	Pin Dia A Min	Pin Dia A Max	± 0.13 B	+0.0/- 1.0 C	D	E	G	H	J	M	N
5	4.92	4.96	5.54	6	6.5	10.8	31.7	20.4	4.76	49.5	44.5
6	5.92	5.96	6.99	7	6.5	10.8	31.7	20.4	4.76	49.5	44.5
8	7.92	7.96	9.40	8	6.5	10.8	31.7	20.4	4.76	49.5	44.5
10	9.92	9.96	11.86	9	7.7	14.2	34.1	21.0	6.35	49.5	44.5
12	11.92	11.96	14.45	10	7.7	14.2	34.2	21.0	6.35	54.1	50.0
16	15.92	15.96	19.00	14	12.4	23.9	42.6	24.6	7.94	73.2	62.7
20	19.92	19.96	24.08	17	12.4	23.9	42.6	24.9	7.94	73.2	62.7
25	24.92	24.96	30.94	22	19.2	30.0	53.4	30.2	9.53	82.3	71.0

Dimensions in millimeters

Heavy Duty T-Handle – Inch

PART NUMBERS	Pin Dia	Grip Length (inches)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
	3/16	802600	802601	802602	802603	802604	802605	802606	802608	802609	802611	802613	802615
	1/4	802616	802617	802618	802619	802620	802621	802622	802624	802625	802627	802629	802631
	5/16	802632	802633	802634	802635	802636	802637	802638	802640	802641	802643	802645	802647
	3/8	802648	802649	802650	802651	802652	802653	802654	802656	802657	802659	802661	802663
	7/16	802664	802665	802666	802667	802668	802669	802670	802672	802673	802675	802677	802679
	1/2	802680	802681	802682	802683	802684	802685	802686	802688	802689	802691	802693	802695
	9/16	802696	802697	802698	802699	802700	802701	802702	802704	802705	802707	802709	802711
	5/8	802712	802713	802714	802715	802716	802717	802718	802720	802721	802723	802725	802727
	3/4	802728	802729	802730	802731	802732	802733	802734	802736	802737	802739	802741	802743
	7/8	802744	802745	802746	802747	802748	802749	802750	802752	802753	802755	802757	802759
	1	802760	802761	802762	802763	802764	802765	802766	802768	802769	802771	802773	802775

Heavy Duty L-Handle – Inch

PART NUMBERS													
	3/16	805600	805601	805602	805603	805604	805605	805606	805608	805609	805611	805613	805615
	1/4	805616	805617	805618	805619	805620	805621	805622	805624	805625	805627	805629	805631
	5/16	805632	805633	805634	805635	805636	805637	805638	805640	805641	805643	805645	805647
	3/8	805648	805649	805650	805651	805652	805653	805654	805656	805657	805659	805661	805663
	7/16	805664	805665	805666	805667	805668	805669	805670	805672	805673	805675	805677	805679
	1/2	805680	805681	805682	805683	805684	805685	805686	805688	805689	805691	805693	805695
	9/16	805696	805697	805698	805699	805700	805701	805702	805704	805705	805707	805709	805711
	5/8	805712	805713	805714	805715	805716	805717	805718	805720	805721	805723	805725	805727
	3/4	805728	805729	805730	805731	805732	805733	805734	805736	805737	805739	805741	805743
	7/8	805744	805745	805746	805747	805748	805749	805750	805752	805753	805755	805757	805759
	1	805760	805761	805762	805763	805764	805765	805766	805768	805769	805771	805773	805775

Heavy Duty T-Handle – Metric

PART NUMBERS	Pin Dia	Grip Length (mm)											
		10	15	20	25	30	40	50	60	70	80	90	100
	5	852600	852601	852602	852603	852604	852605	852606	852607	852608	852609	852610	852611
	6	852612	852613	852614	852615	852616	852617	852618	852619	852620	852621	852622	852623
	8	852624	852625	852626	852627	852628	852629	852630	852631	852632	852633	852634	852635
	10	852636	852637	852638	852639	852640	852641	852642	852643	852644	852645	852646	852647
	12	852648	852649	852650	852651	852652	852653	852654	852655	852656	852657	852658	852659
	16	852660	852661	852662	852663	852664	852665	852666	852667	852668	852669	852670	852671
	20	852672	852673	852674	852675	852676	852677	852678	852679	852680	852681	852682	852683
	25	852684	852685	852686	852687	852688	852689	852690	852691	852692	852693	852694	852695

Heavy Duty L-Handle – Metric

NUMBERS													
	5	854200	854201	854202	854203	854204	854205	854206	854207	854208	854209	854210	854211
	6	854212	854213	854214	854215	854216	854217	854218	854219	854220	854221	854222	854223
	8	854224	854225	854226	854227	854228	854229	854230	854231	854232	854233	854234	854235
	10	854236	854237	854238	854239	854240	854241	854242	854243	854244	854245	854246	854247
	12	854248	854249	854250	854251	854252	854253	854254	854255	854256	854257	854258	854259
	16	854260	854261	854262	854263	854264	854265	854266	854267	854268	854269	854270	854271
	20	854272	854273	854274	854275	854276	854277	854278	854279	854280	854281	854282	854283
	25	854284	854285	854286	854287	854288	854289	854290	854291	854292	854293	854294	854295

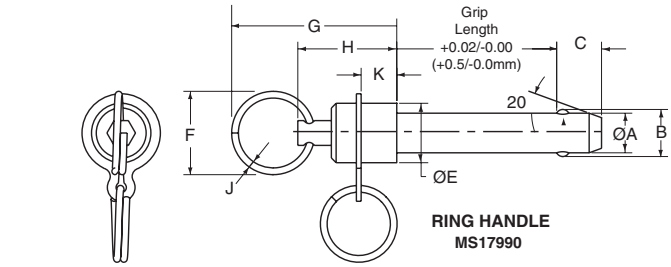
Contact customer service for special sizes & materials.

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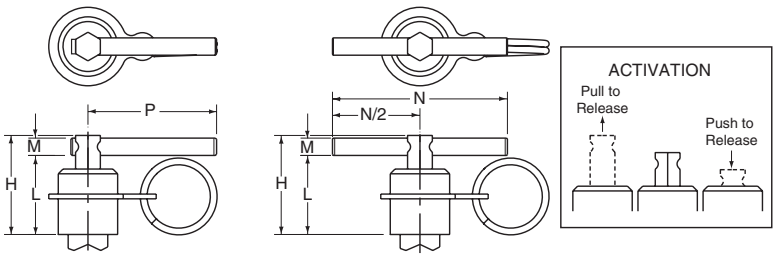
Double Acting T, L, Ring Handles
MS17988, MS17989, MS17990
NAS1353-NAS1366



Push/Pull Activation



RING HANDLE
MS17990



L-HANDLE
MS17989

T-HANDLE
MS17988

- Double Acting Pins are activated by push or pull motion
- All stainless steel construction provides additional corrosion resistance
- Body is made from high Strength Stainless Steel, 17-4 PH heat treated.
- Ideal for quick insertion and removal
- Four ball options available upon request
- Includes split ring for easy attachment of optional lanyard.
- Meets or exceeds NASM 23460 specifications
- Drive Out feature available upon request

Double Acting Specifications – Inch

Nom Pin Dia	Pin Dia A Min	Pin Dia A Max	B ±0.005	C Max	E Min	E Max	F Min	F Max	Max G	H	J	K Min	K Max	Min L	Dia M	N	P
3/16 (#10)	.1870	.1885	.220	.410	.360	.450	1.000	1.125	1.945	1.030	.080	.415	.480	.780	.109	1.500	1.300
1/4	.2470	.2485	.289	.410	.360	.450	1.000	1.125	1.945	1.030	.080	.415	.480	.780	.109	1.500	1.300
5/16	.3095	.3110	.375	.440	.390	.505	1.000	1.125	1.945	1.030	.080	.415	.480	.780	.109	1.500	1.300
3/8	.3720	.3735	.440	.510	.510	.630	1.000	1.125	2.025	1.090	.080	.445	.540	.830	.156	2.000	1.500
7/16	.4345	.4360	.509	.510	.510	.630	1.000	1.125	2.025	1.090	.080	.445	.540	.830	.156	2.000	1.500
1/2	.4970	.4985	.594	.590	.640	.755	1.000	1.125	2.200	1.270	.080	.445	.540	.880	.218	2.250	1.655
9/16	.5595	.5610	.666	.660	.640	.755	1.000	1.125	2.200	1.270	.080	.445	.540	.880	.218	2.250	1.655
5/8	.6220	.6235	.750	.750	.805	.870	1.312	1.500	2.690	1.465	.120	.510	.575	1.000	.250	2.500	1.810
3/4	.7470	.7485	.887	.790	.890	.960	1.312	1.500	2.690	1.465	.120	.530	.595	1.000	.250	2.500	1.810
7/8	.8720	.8735	1.046	.950	1.070	1.150	1.312	1.500	2.860	1.640	.120	.665	.730	1.180	.250	2.875	2.250
1	.9970	.9985	1.219	1.110	1.200	1.280	1.312	1.500	3.010	1.830	.120	.800	.865	1.320	.250	2.875	2.250

Double Acting Specifications – Metric

Nom Pin Dia	Pin Dia A Min	Pin Dia A Max	B ±0.13	C Max	E Min	E Max	F Min	F Max	Max G	H	J	K Min	K Max	Min L	Dia M	N	P
5	4.92	4.96	5.54	10.41	9.14	11.43	25.40	28.58	49.40	26.16	2.03	10.54	12.19	19.81	2.78	38.10	33.02
6	5.92	5.96	6.99	10.41	9.14	11.43	25.40	28.58	49.40	26.16	2.03	10.54	12.19	19.81	2.78	38.10	33.02
8	7.92	7.96	9.42	11.68	9.91	12.83	25.40	28.58	49.40	26.16	2.03	10.54	12.19	19.81	2.78	38.10	33.02
10	9.92	9.96	11.86	13.21	12.95	16.00	25.40	28.58	51.44	27.69	2.03	11.30	13.72	21.08	3.97	49.21	38.10
12	11.92	11.96	14.45	13.72	12.95	16.00	25.40	28.58	51.44	27.69	2.03	11.30	13.72	21.08	3.97	49.21	38.10
16	15.92	15.96	19.00	19.18	20.45	22.10	33.32	38.10	68.33	37.21	3.04	12.95	14.61	25.40	6.35	61.91	45.97
20	19.92	19.96	24.08	20.57	22.61	24.38	33.32	38.10	68.33	37.21	3.04	13.46	15.11	25.40	6.35	61.91	45.97
25	24.92	24.96	30.94	28.83	30.48	32.51	33.32	38.10	76.45	46.48	3.04	20.32	21.97	33.53	6.35	71.45	57.15

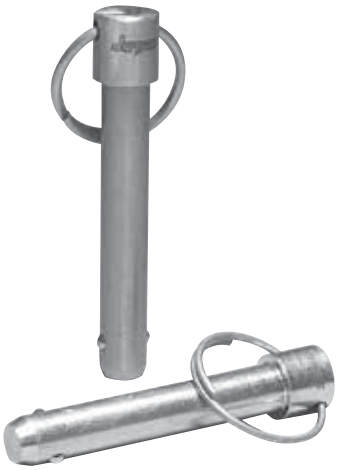
Dimensions in millimeters

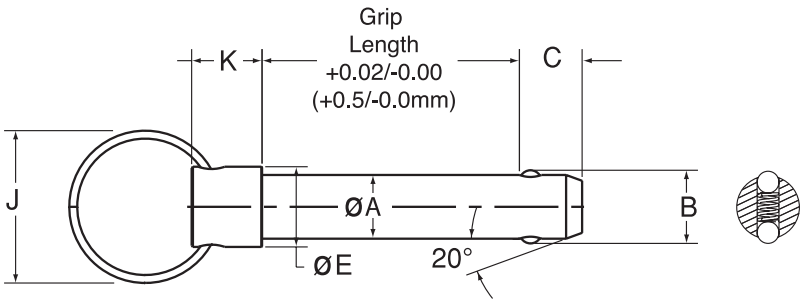
PART NUMBERS	Pin Dia	Grip Length (inches)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
	Double Acting Ring Handle – Inch – MS17990												
	3/16	806200	806201	806202	806203	806204	806205	806206	806208	806209	806211	806213	806215
	1/4	806216	806217	806218	806219	806220	806221	806222	806224	806225	806227	806229	806231
	5/16	806232	806233	806234	806235	806236	806237	806238	806240	806241	806243	806245	806247
	3/8	806248	806249	806250	806251	806252	806253	806254	806256	806257	806259	806261	806263
	7/16	806264	806265	806266	806267	806268	806269	806270	806272	806273	806275	806277	806279
	1/2	806280	806281	806282	806283	806284	806285	806286	806288	806289	806291	806293	806295
	9/16	806296	806297	806298	806299	806300	806301	806302	806304	806305	806307	806309	806311
	5/8	806312	806313	806314	806315	806316	806317	806318	806320	806321	806323	806325	806327
	3/4	806328	806329	806330	806331	806332	806333	806334	806336	806337	806339	806341	806343
	7/8	806344	806345	806346	806347	806348	806349	806350	806352	806353	806355	806357	806359
	1	806360	806361	806362	806363	806364	806365	806366	806368	806369	806371	806373	806375
	Double Acting T-Handle – Inch – MS17988												
	3/16	803400	803401	803402	803403	803404	803405	803406	803408	803409	803411	803413	803415
	1/4	803416	803417	803418	803419	803420	803421	803422	803424	803425	803427	803429	803431
	5/16	803432	803433	803434	803435	803436	803437	803438	803440	803441	803443	803445	803447
	3/8	803448	803449	803450	803451	803452	803453	803454	803456	803457	803459	803461	803463
	7/16	803464	803465	803466	803467	803468	803469	803470	803472	803473	803475	803477	803479
	1/2	803480	803481	803482	803483	803484	803485	803486	803488	803489	803491	803493	803495
	9/16	803496	803497	803498	803499	803500	803501	803502	803504	803505	803507	803509	803511
	5/8	803512	803513	803514	803515	803516	803517	803518	803520	803521	803523	803525	803527
	3/4	803528	803529	803530	803531	803532	803533	803534	803536	803537	803539	803541	803543
	7/8	803544	803545	803546	803547	803548	803549	803550	803552	803553	803555	803557	803559
	1	803560	803561	803562	803563	803564	803565	803566	803568	803569	803571	803573	803575
	Double Acting L-Handle – Inch – MS17989												
	3/16	806000	806001	806002	806003	806004	806005	806006	806008	806009	806011	806013	806015
	1/4	806016	806017	806018	806019	806020	806021	806022	806024	806025	806027	806029	806031
	5/16	806032	806033	806034	806035	806036	806037	806038	806040	806041	806043	806045	806047
	3/8	806048	806049	806050	806051	806052	806053	806054	806056	806057	806059	806061	806063
	7/16	806064	806065	806066	806067	806068	806069	806070	806072	806073	806075	806077	806079
	1/2	806080	806081	806082	806083	806084	806085	806086	806088	806089	806091	806093	806095
	9/16	806096	806097	806098	806099	806100	806101	806102	806104	806105	806107	806109	806111
	5/8	806112	806113	806114	806115	806116	806117	806118	806120	806121	806123	806125	806127
	3/4	806128	806129	806130	806131	806132	806133	806134	806136	806137	806139	806141	806143
	7/8	806144	806145	806146	806147	806148	806149	806150	806152	806153	806155	806157	806159
	1	806160	806161	806162	806163	806164	806165	806166	806168	806169	806171	806173	806175

PART NUMBERS	Pin Dia	Grip Length (mm)											
		10	15	20	25	30	40	50	60	70	80	90	100
	Double Acting Ring Handle – Metric												
	5	855000	855001	855002	855003	855004	855005	855006	855007	855008	855009	855010	855011
	6	855012	855013	855014	855015	855016	855017	855018	855019	855020	855021	855022	855023
	8	855024	855025	855026	855027	855028	855029	855030	855031	855032	855033	855034	855035
	10	855036	855037	855038	855039	855040	855041	855042	855043	855044	855045	855046	855047
	12	855048	855049	855050	855051	855052	855053	855054	855055	855056	855057	855058	855059
	16	855060	855061	855062	855063	855064	855065	855066	855067	855068	855069	855070	855071
	20	855072	855073	855074	855075	855076	855077	855078	855079	855080	855081	855082	855083
	25	855084	855085	855086	855087	855088	855089	855090	855091	855092	855093	855094	855095
	Double Acting T-Handle – Metric												
	5	853400	853401	853402	853403	853404	853405	853406	853407	853408	853409	853410	853411
	6	853412	853413	853414	853415	853416	853417	853418	853419	853420	853421	853422	853423
	8	853424	853425	853426	853427	853428	853429	853430	853431	853432	853433	853434	853435
	10	853436	853437	853438	853439	853440	853441	853442	853443	853444	853445	853446	853447
	12	853448	853449	853450	853451	853452	853453	853454	853455	853456	853457	853458	853459
	16	853460	853461	853462	853463	853464	853465	853466	853467	853468	853469	853470	853471
	20	853472	853473	853474	853475	853476	853477	853478	853479	853480	853481	853482	853483
	25	853484	853485	853486	853487	853488	853489	853490	853491	853492	853493	853494	853495
	Double Acting L-Handle – Metric												
	5	854600	854601	854602	854603	854604	854605	854606	854607	854608	854609	854610	854611
	6	854612	854613	854614	854615	854616	854617	854618	854619	854620	854621	854622	854623
	8	854624	854625	854626	854627	854628	854629	854630	854631	854632	854633	854634	854635
	10	854636	854637	854638	854639	854640	854641	854642	854643	854644	854645	854646	854647
	12	854648	854649	854650	854651	854652	854653	854654	854655	854656	854657	854658	854659
	16	854660	854661	854662	854663	854664	854665	854666	854667	854668	854669	854670	854671
	20	854672	854673	854674	854675	854676	854677	854678	854679	854680	854681	854682	854683
	25	854684	854685	854686	854687	854688	854689	854690	854691	854692	854693	854694	854695

Contact customer service for special sizes & materials.

Heavy Duty Detent Pins





The Heavy Duty Detent Kwik-Lok® Pin is a high quality shoulder style alignment pin for applications that don't require the positive locking ball feature.

- Heavy duty spring and 2 spring loaded stainless steel locking balls provide high pull out force
- Available in 17-4 PH heat treated stainless steel
- Includes split ring for easy attachment of optional lanyard

Heavy Duty Detent Specifications – Inch

Nom. Pin Dia	Dia. +0.000/ -0.003 A	Min. B	+0.00/ -0.06 C	Dia. +/–0.015 E	Dia. J	K	Double Shear Strength – (lbs) Stainless 17-4 PH	Pull Out Force (lbs)	Recommended Hole Diameter Max	Recommended Hole Diameter Min
3/16 (#10)	.1885	.200	.250	.375	1.187	.50	5,262	2 to 7	0.1940	0.1900
1/4	.2480	.280	.344	.375	1.187	.50	9,537	2 to 7	0.2540	0.2500
5/16	.3105	.360	.359	.438	1.187	.50	15,075	2 to 7	0.3165	0.3125
3/8	.3730	.430	.390	.500	1.187	.50	22,050	6 to 14	0.3790	0.3750
7/16	.4355	.495	.469	.625	1.187	.55	30,438	6 to 14	0.4425	0.4375
1/2	.4980	.570	.516	.625	1.187	.55	39,263	10 to 22	0.5050	0.5000
9/16	.5605	.645	.593	.625	1.687	.55	49,731	15 to 30	0.5675	0.5625
5/8	.6230	.720	.672	.750	1.687	.55	61,736	15 to 30	0.6300	0.6250
3/4	.7480	.860	.750	.875	1.687	.55	88,442	15 to 30	0.7570	0.7500
7/8	.8730	1.030	.859	1.000	2.187	.55	121,500	20 to 35	0.8820	0.8750
1	.9980	1.160	.984	1.125	2.187	.55	158,998	20 to 40	1.0100	1.0000

Heavy Duty Detent Specifications – Metric

Nom. Pin Dia	Dia. +0.000/ -0.080 A	Min. B	+0.0/ -1.5 C	Dia. +/– 0.4 E	Dia. J	K	Double Shear Strength – (kN) Stainless 17-4 PH	Pull Out Force	Recommended Hole Diameter Max	Recommended Hole Diameter Min
5	4.95	5.23	6.35	9.53	30.15	12.7	25	9 to 31	5.1	5
6	5.95	6.88	8.74	9.53	30.15	12.7	36	9 to 31	6.1	6
8	7.95	9.35	9.12	11.13	30.15	12.7	69	9 to 31	8.1	8
10	9.95	11.58	9.91	12.70	30.15	12.7	107	26 to 62	10.1	10
12	11.95	13.84	13.11	15.88	30.15	14.2	154	44 to 97	12.1	12
16	15.95	18.54	17.07	19.05	42.85	14.2	275	66 to 133	16.1	16
20	19.95	22.91	19.05	22.23	42.85	14.2	433	89 to 155	20.15	20
25	24.95	29.18	24.99	28.58	55.55	14.2	682	89 to 178	25.15	25

Dimensions in millimeters

Heavy Duty Detent Pins – Inch

Stainless Steel – Stainless Steel, 17-4 PH

	Pin Dia	Grip Length (In)											
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5	6
PART NUMBERS	3/16	804200	804201	804202	804203	804204	804205	804206	804208	804209	804211	804213	804215
	1/4	804216	804217	804218	804219	804220	804221	804222	804224	804225	804227	804229	804231
	5/16	804232	804233	804234	804235	804236	804237	804238	804240	804241	804243	804245	804247
	3/8	804248	804249	804250	804251	804252	804253	804254	804256	804257	804259	804261	804263
	7/16	804264	804265	804266	804267	804268	804269	804270	804272	804273	804275	804277	804279
	1/2	804280	804281	804282	804283	804284	804285	804286	804288	804289	804291	804293	804295
	9/16	804296	804297	804298	804299	804300	804301	804302	804304	804305	804307	804309	804311
	5/8	804312	804313	804314	804315	804316	804317	804318	804320	804321	804323	804325	804327
	3/4	804328	804329	804330	804331	804332	804333	804334	804336	804337	804339	804341	804343
	7/8	804344	804345	804346	804347	804348	804349	804350	804352	804353	804355	804357	804359
	1	804360	804361	804362	804363	804364	804365	804366	804368	804369	804371	804373	804375

Heavy Duty Detent Pins – Metric

Stainless Steel – Stainless Steel, 17-4 PH

	Pin Dia	Grip Length (Metric)											
		10	15	20	25	30	40	50	60	70	80	90	100
PART NUMBERS	5	854000	854001	854002	854003	854004	854005	854006	854007	854008	854009	854010	854011
	6	854012	854013	854014	854015	854016	854017	854018	854019	854020	854021	854022	854023
	8	854024	854025	854026	854027	854028	854029	854030	854031	854032	854033	854034	854035
	10	854036	854037	854038	854039	854040	854041	854042	854043	854044	854045	854046	854047
	12	854048	854049	854050	854051	854052	854053	854054	854055	854056	854057	854058	854059
	16	854060	854061	854062	854063	854064	854065	854066	854067	854068	854069	854070	854071
	20	854072	854073	854074	854075	854076	854077	854078	854079	854080	854081	854082	854083
	25	854084	854085	854086	854087	854088	854089	854090	854091	854092	854093	854094	854095

Contact customer service for special sizes, materials or mil-spec (MIL-P-45952/1).

Jergens

KWIK-LOK®

MARINE PINS



Jergens Kwik-Lok® Release Pins for Marine Applications

The most corrosive resistant pin for the most harsh, marine environments. Available in Ring Handle, Recessed Button Handle and Heavy Duty Detent styles. Pin styles that are ideal for applications that require a tight clearance, safe actuation and high pull out force.

- The Ring-Handle Marine Pin is designed for applications which require a small clearance area around the pin.
- The Recessed Button Handle Marine Pin design helps prevent accidental actuation of the pin.
- The Heavy Duty Detent Pin provides a high pull out force with its heavy duty spring and locking balls.
- The Marine Pin's Stainless Steel handles withstand tough environmental conditions.

Component Part	Material
Handle	300 Series Stainless Steel
Button	300 Series Stainless Steel
Body	Recessed & Ring Handle - 17-4 PH Stainless Steel
	Heavy Duty Detent - 300 Series Stainless Steel
Spindle	17-4 PH Stainless Steel
Spring	300 Series Stainless Steel
Balls	300 Series Stainless Steel

Pin Dia (in)	Double Shear Resistance Minimum (lbs)	
	Recessed & Ring Handle	Heavy Duty Detent
3/16	5,150	2,530
1/4	9,200	4,500
5/16	14,400	7,100
3/8	20,700	10,300
1/2	36,900	18,400
5/8	57,800	28,900
3/4	83,200	41,800

Lanyards available upon request.

All Jergens Kwik-lok® pins are manufactured in the USA and are MS, NAS, DFARS, QLSM and RoHS compliant. ISO 9001:2008

WORKHOLDING SOLUTIONS | SPECIALTY FASTENERS | LIFTING SOLUTIONS

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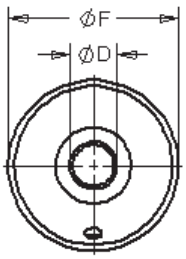
Jergens® MANUFACTURING EFFICIENCY

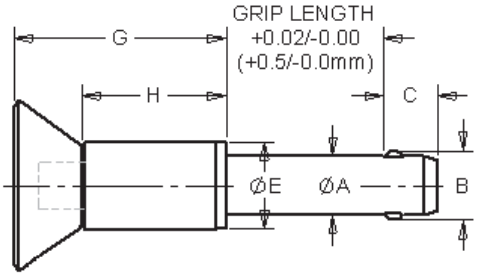
Jergens, Inc. | 15700 S. Waterloo Road | Cleveland, Ohio 44110-3898 USA

Kwik-Lok® Marine Pins
Recessed Button Handle



- The Recessed Button Handle Kwik-Lok® Pin design helps prevent accidental actuation of the pin.
- Handle is stainless steel and the button is stainless steel.
- Body is made from high Strength Stainless Steel, 17-4 PH heat treated.
- Includes hole for easy attachment of optional lanyard or ring.
- 300 Series Stainless Steel Balls





Recessed Button Handle Marine Pin Specifications – Inch

DIA	A MIN	A MAX	B +/-.005	C +0.00 / -0.04	D MIN	D MAX	E MIN	E MAX	F +/-.020	G +/-.020	H +/-.020
3/16	0.1870	0.1885	0.220	0.260	0.250	0.310	0.310	0.530	0.800	0.990	0.710
1/4	0.2470	0.2485	0.289	0.290	0.250	0.310	0.310	0.530	0.800	0.990	0.710
5/16	0.3095	0.3110	0.375	0.330	0.250	0.310	0.410	0.590	0.800	1.050	0.780
3/8	0.3720	0.3735	0.440	0.365	0.300	0.390	0.450	0.650	1.090	1.375	0.930
1/2	0.4970	0.4985	0.594	0.460	0.435	0.565	0.600	0.800	1.040	1.320	0.930

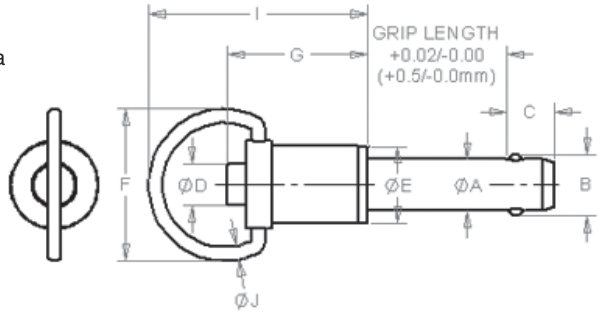
		Grip Length (In)										
	Pin Dia	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5
PART NUMBERS	**3/16**	883000	883001	883002	883003	883004	883005	883006	883008	883009	–	–
	1/4	883016	883017	883018	883019	883020	883021	883022	883024	883025	883027	–
	5/16	883032	883033	883034	883035	883036	883037	883038	883040	883041	883043	–
	3/8	883048	883049	883050	883051	883052	883053	883054	883056	883057	883059	883061
	1/2	883080	883081	883082	883083	883084	883085	883086	883088	883089	883091	883093

Contact customer service for other sizes.

Kwik-Lok® Marine Pins
Ring-Handle



- The Ring-Handle Kwik-Lok® Pin is designed for applications which require small clearance area around the pin.
- Stainless steel handle for tough environment with stainless button (stainless steel shanks).
- Pin body: Heat Treated 17-4 PH Stainless Steel.
- Ring allows for easy attachment of optional lanyard.
- 300 Series Stainless Steel Balls



Ring-Handle Marine Pin Specifications – Inch

DIA	A MIN	A MAX	B +/-.005	C +0.00 / -0.04	D MIN	D MAX	E MIN	E MAX	F MIN	G MIN	G MAX	I MAX	J MIN
3/16	0.1870	0.1885	0.220	0.260	0.250	0.310	0.310	0.530	1.060	0.730	1.490	1.450	0.080
1/4	0.2470	0.2485	0.289	0.290	0.250	0.310	0.310	0.530	1.060	0.780	1.490	1.500	0.080
5/16	0.3095	0.3110	0.375	0.330	0.250	0.310	0.410	0.590	1.060	0.830	1.490	1.650	0.080
3/8	0.3720	0.3735	0.440	0.365	0.300	0.390	0.450	0.650	1.060	0.940	1.490	1.650	0.080
1/2	0.4970	0.4985	0.594	0.460	0.435	0.565	0.600	0.800	1.160	1.140	1.580	1.850	0.080
5/8	0.6220	0.6235	0.750	0.580	0.450	0.580	0.750	0.905	1.240	1.400	1.840	2.250	0.120
3/4	0.7470	0.7485	0.887	0.670	0.570	0.700	0.865	1.045	1.640	1.625	1.990	2.650	0.120

	Pin Dia	Grip Length (In)										
		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5
PART NUMBERS	**3/16**	880200	880201	880202	880203	880204	880205	880206	880208	880209	–	–
	1/4	880216	880217	880218	880219	880220	880221	880222	880224	880225	880227	–
	5/16	880232	880233	880234	880235	880236	880237	880238	880240	880241	880243	–
	3/8	880248	880249	880250	880251	880252	880253	880254	880256	880257	880259	880261
	1/2	880280	880281	880282	880283	880284	880285	880286	880288	880289	880291	880293
	5/8	880312	880313	880314	880315	880316	880317	880318	880320	880321	880323	880325
	3/4	880328	880329	880330	880331	880332	880333	880334	880336	880337	880339	880341

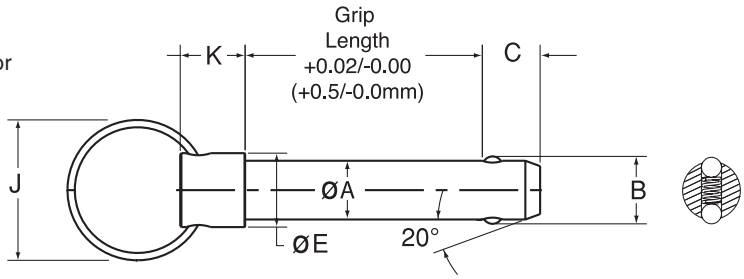
Contact customer service for other sizes.

Kwik-Lok® Marine Pins
Heavy Duty Detent



The Heavy Duty Detent Kwik-Lok® Pin is a high quality shoulder style alignment pin for applications that don't require the positive locking ball feature.

- Heavy duty spring and 2 spring loaded stainless steel locking balls provide high pull out force
- Available in 300 Series Stainless steel.
- Includes split ring for easy attachment of optional lanyard



Heavy Duty Detent Specifications – Inch

DIA	A +0.00 / -0.003	B MIN	C +0.00 / -0.06	E DIA +/-0.15 / -0.04	J DIA	K	Double Shear Strength - (lbs) Stainless 17-4 PH	Pull Out Force (lbs)	Recommended Hole Dia MAX	Recommended Hole Dia MIN
3/16 (#10)	0.1885	0.200	0.250	0.375	1.187	0.50	5,262	2 to 7	0.1940	0.1900
1/4	0.2480	0.280	0.344	0.375	1.187	0.50	9,537	2 to 7	0.2540	0.2500
5/16	0.3105	0.360	0.359	0.438	1.187	0.50	15,075	2 to 7	0.3165	0.3125
3/8	0.3730	0.430	0.390	0.500	1.187	0.50	22,050	6 to 14	0.3790	0.3750
1/2	0.4980	0.570	0.516	0.625	1.187	0.55	39,263	10 to 22	0.5050	0.5000
5/8	0.6230	0.720	0.672	0.750	1.687	0.55	61,736	15 to 30	0.6300	0.6250
3/4	0.7480	0.860	0.750	0.875	1.687	0.55	88,442	15 to 30	0.7570	0.7500

	Pin Dia	Grip Length (In) 0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	4	5
PART NUMBERS	**3/16**	883800	883801	883802	883803	883804	883805	883806	883808	883809	–	–
	1/4	883816	883817	883818	883819	883820	883821	883822	883824	883825	883827	–
	5/16	883832	883833	883834	883835	883836	883837	883838	883840	883841	883843	–
	3/8	883848	883849	883850	883851	883852	883853	883854	883856	883857	883859	883861
	1/2	883880	883881	883882	883883	883884	883885	883886	883888	883889	883891	883893
	5/8	883912	883913	883914	883915	883916	883917	883918	883920	883921	883923	883925
	3/4	883928	883929	883930	883931	883932	883933	883934	883936	883937	883939	883941

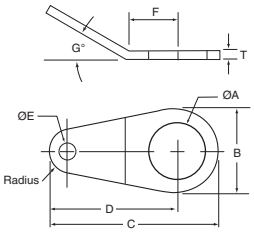
Contact customer service for other sizes.

Lanyard Specifications & Styles

Lanyard Specifications:

- 302/304 Stainless Steel cable, 1/16" (1.59 mm), with green nylon jacket, 1/8" (3.18 mm), meets Mil-DTL-83420
- Other cable diameters, other jacket colors (blue, black, clear) and special configuration styles by special order.

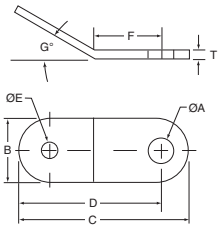
Stainless Steel Round Tab



Hold Down Side of Tab

9 standard Tab Hole Diameters (ØA)
0.131-0.515" (3.3-13.1mm)

Aluminum Oval Tab



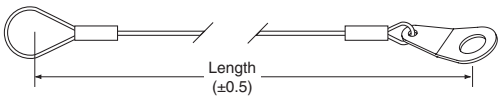
Hold Down Side of Tab

3 standard Tab Hole Diameters (ØA)
0.131", 0.196", 0.257"
(3.3mm, 4.9mm, 6.5mm)

Consult Table 1, Page 357 for Options.

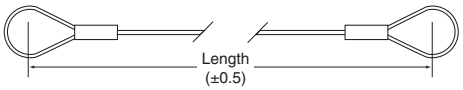
Standard (W/Tab)

(Fig. 1)



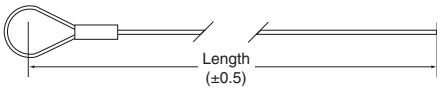
Standard (2 Loops)

(Fig. 2)



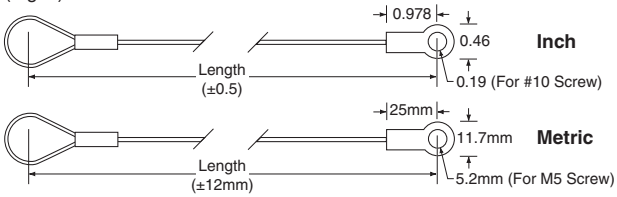
Standard (1 Loop)

(Fig. 3)



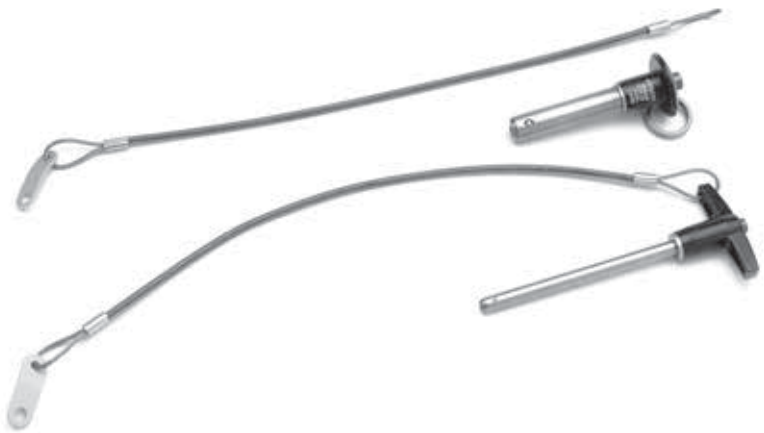
Loop/Eyelet, Stainless Steel

(Fig. 4)



Tab Dimensions – Inch

Tab Style	±0.005 ØA	±0.01 B	±0.02 C	±0.02 D	±0.005 ØE	±0.016 Radius	±0.01 F	± 5 deg. G	±0.01 T	Material
Round Tab	See Table 1	0.688	1.316	1.004	0.125	0.160	0.406	12	0.048	300 Series Stain. Steel
Oval Tab	See Table 1	0.375	1.130	0.945	0.125	—	0.500	12	0.060	Aluminum



Ordering Lanyards Attached to Pins

Lanyard with a Tab (Fig. 1)

Length		Round Tab	Oval Tab
inch	mm	Stainless Steel	Aluminum
4	102	(Pin#) A*	(Pin#) M*
6	152	B*	N*
8	203	C*	P*
10	254	D*	Q*
12	305	H*	R*
16	406	J*	S*
20	508	K*	T*
24	610	L*	U*

Substitute the asterisk (*) with the proper hole size letter from Table 1.

Table 1 Tab Hole Size

Tab Mounting Hole Diameter		
Inch	mm	Size Letter
0.131	3.3	P
0.196	4.9	Q
0.257	6.5	R
0.283†	7.1†	S
0.320†	8.1†	T
0.379†	9.6†	U
0.406†	10.3†	V
0.468†	11.8†	W
0.515†	13.1†	Y

(†) These sizes only available in stainless steel round tabs

Lanyard without a Tab

Length		2 Loops (Fig. 2)	1 Loops (Pin) (Fig. 3)
inch	mm		
4	102	(Pin#)EA	(Pin#)FA
6	152	EB	FB
8	203	EC	FC
10	254	ED	FD
12	305	EE	FE
16	406	EF	FF
20	508	EG	FG
24	610	EH	FH

Lanyard Loop/Eyelet (Fig. 4)

For Screw Size	
#10	M5
(Pin#)GA	(Pin#)HA
GB	HB
GC	HC
GD	HD
GE	HE
GF	HF
GG	HG
GH	HH

Part Numbering:

Lanyards with Tab, attached to Pins

To order Kwik-Lok® pins with attached lanyard and tab (fig. 1), photo on page 356. Specify the six digit pin number followed by two letters from the tables above to define the lanyard length, type of lanyard and tab mounting hole diameter. The first letter designates the length of the lanyard and the type of Tab. The second letter (from table 1) designates the size of the hole in the tab for the mounting screw.

Example A: For an Aluminum T-Handle with stainless steel pin body 1/2" x 1.0", with an attached 8" Lanyard and Round Stainless Steel Tab with a mounting hole diameter of 0.257" (6.5 mm), the part number is 801082CR.

Lanyards with 2 loops, 1 loop, or loop/eyelet

To order Kwik-Lok® pins with lanyard and 2 loops (fig. 2), 1 loop (fig. 3) or loop/eyelet (fig. 4), specify the six digit pin number followed by a two letter combination from above to define lanyard length, number of loops or loop/eyelet with mounting screw size.

Example B: For all Stainless Steel L Handle Pin, 1"x 6", with attached 24" (610 mm) lanyard and 2 Loops, the part number is 805775EH.

Example C: For all Stainless Steel Button Handle Pin, 6 x 40 mm, with attached 10" (254 mm) lanyard and Loop/Eyelet for M5 screws, the part number is 855417HD.

Note: Split rings are not included when attaching lanyards, unless customer specified. In that case add an R as a third letter to the extension.

Ordering Lanyards When Supplied Separately Without Pins

Lanyards with Tabs (Fig. 1)

Length		Round Tab	Oval Tab
inch	mm	Stainless Steel	Aluminum
4	102	**890054***	**890104***
6	152	**890056***	**890106***
8	203	**890058***	**890108***
10	254	**890060***	**890110***
12	305	**890062***	**890112***
16	406	**890066***	**890116***
20	508	**890070***	**890120***
24	610	**890074***	**890124***

Substitute the asterisk (*) with the proper hole size letter from Table 1.

Table 1 Tab Hole Size

Tab Mounting Hole Diameter		
Inch	mm	Size Letter
0.131	3.3	P
0.196	4.9	Q
0.257	6.5	R
0.283†	7.1†	S
0.320†	8.1†	T
0.379†	9.6†	U
0.406†	10.3†	V
0.468†	11.8†	W
0.515†	13.1†	Y

(†) These sizes only available in stainless steel round tabs

Lanyards without Tabs

Length		2 Loops (Fig. 2)	1 Loops (Pin) (Fig. 3)
inch	mm		
4	102	**890204**	**890254**
6	152	**890206**	**890256**
8	203	**890208**	**890258**
10	254	**890210**	**890260**
12	305	**890212**	**890262**
16	406	**890216**	**890266**
20	508	**890220**	**890270**
24	610	**890224**	**890274**

Lanyard Loop/Eyelet (Fig. 4)

For Screw Size	
#10	M5
890304	**890404**
890306	**890406**
890308	**890408**
890310	**890410**
890312	**890412**
890316	**890416**
890320	**890420**
890324	**890424**

Part Numbering: Lanyards to be Supplied Separately

For lanyards with tabs, ordered separately without pins (photo page 356), specify the six digit pin number followed by the hole size letter from Table 1.

Example D: For a 24" (610 mm) lanyard with stainless steel round tab with a mounting hole diameter of 0.406" (10.3 mm), the part number is 890074V.

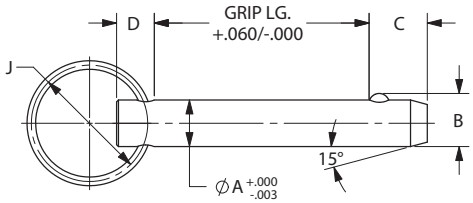
Jergens SPECIALTY FASTENERS GROUP



Standard Duty Detent Pins

Ideal for basic holding and removal applications that don't require a positive locking ball feature.

- **Body (Shank) is CRES 303 Stainless with CRES 316 stainless spring & ball**
- **Pins are activated by push or pull motion**
- **Includes split ring for attachment of optional general purpose lanyard**
- **Optional materials, sizes, and styles available**



Standard Duty Detent Specifications - Inch

Nom. Pin Dia.	+0.000/-0.003 A	B	C	D	J	Double Shear Strength (lbs)	Pull Out Force (lbs)	Recommended Hole Diameter	
								Max.	Min.
3/16	.1875	.204	.200	.187	1.00	2,530	4 - 6	.1930	.1890
1/4	.2500	.286	.312	.220	1.00	4,500	5 - 7	.2555	.2515
5/16	.3125	.358	.375	.250	1.00	7,100	5 - 7	.3180	.3140
3/8	.3750	.426	.500	.250	1.00	10,300	7 - 10	.3805	.3765
1/2	.5000	.486	.625	.250	1.25	18,400	10 - 14	.5065	.5015
5/8	.6250	.710	.750	.375	1.25	28,900	23 - 26	.6315	.6265
3/4	.7500	.856	.937	.375	1.50	41,800	24 - 27	.7585	.7515
1	1.000	1.140	1.250	.500	1.50	74,600	30 - 33	1.0115	1.0015

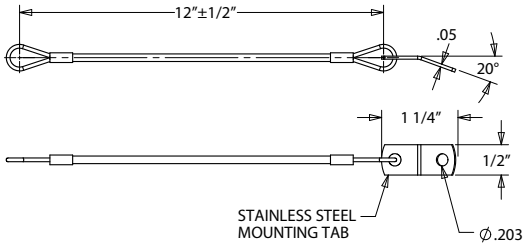
Standard Duty Detent Pins - Inch

Pin Dia.	Grip length (inches)										
	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	6
3/16	804000	804001	804002	804003	804004	804005					
1/4	804011	804012	804013	804014	804015	804016					
5/16	804022	804023	804024	804025	804026	804027	804028	804029	804030		
3/8		804034	804035	804036	804037	804038	804039	804040	804041	804042	
1/2		804045	804046	804047	804048	804049	804050	804051	804052	804053	
5/8		804056	804057	804058	804059	804060	804061	804062	804063	804064	
3/4		804067	804068	804069	804070	804071	804072	804073	804074	804075	804076
1				804080	804081	804082	804083	804084	804085	804086	804087

Standard Duty Detent Pins

General Purpose Lanyard Specifications & Styles
(Available on Standard Duty Detent Pins only)





- **300 Series Stainless Steel cable, 1/16" (1.59 mm), with clear nylon jacket, 1/8" (3.18 mm)**
- **Other cable diameters, other jacket colors (blue, black, clear) and special configuration styles by special order.**

Ordering Lanyards Attached to Pins (Attached to Split Ring)
Standard cone loop with rectangular tab

Part Numbering: Specify the six digit standard detent pin number followed by the 3 digit suffix (i.e. 804614 - L12 - 1/4" x 2" pin with 12" lanyard attached to ring).

Ordering Lanyards Attached (Specify)

Length	Pin with Lanyard Part Number
6"	XXXXXX - L06
12"	XXXXXX - L12

Note: .203" mounting hole



Ordering Lanyards When Supplied Separately Without Pins

Part Numbering: Specify the six digit number below for the 6" or 12" lanyard.

Ordering Lanyards Separately

Length	Lanyard Part Number
6"	890340
12"	890341

Note: .203" mounting hole

Kwik-Lok® Pin Specifications

Kwik-Lok® Pin Specifications – Inch

Pin Dia (in)	Double Shear Resistance Minimum (lbs)*		Locking Element Tensile Strength Min (lbs)†	Recommended Hole Diameter (in)	
	Stainless Steel 17-4 PH Heat Treated	Alloy Steel Heat Treated Cadmium Plated		Max	Min
3/16 (#10)	5,150	4,600	200	0.1940	0.1900
1/4	9,200	8,200	230	0.2540	0.2500
5/16	14,400	12,800	510	0.3165	0.3125
3/8	20,700	18,400	575	0.3790	0.3750
7/16	28,500	25,000	710	0.4425	0.4375
1/2	36,900	32,800	1,160	0.5050	0.5000
9/16	46,700	41,600	1,420	0.5675	0.5625
5/8	57,800	51,400	2,070	0.6300	0.6250
3/4	83,200	74,600	2,950	0.7570	0.7500
7/8	112,500	100,000	3,900	0.8820	0.8750
1	147,200	131,000	5,480	1.0100	1.0000

Kwik-Lok® Pin Specifications – Metric

Pin Dia (mm)	Double Shear Resistance Minimum (kN)*		Locking Element Tensile Strength Min (N)†	Recommended Hole Diameter(mm)	
	Stainless Steel 17-4 PH Heat Treated	Alloy Steel Heat Treated Cadmium Plated		Max	Min
5	24	21	890	5.1	5
6	35	31	890	6.1	6
8	65	58	2,250	8.1	8
10	100	88	2,280	10.1	10
12	144	128	3,150	12.1	12
16	257	229	9,200	16.1	16
20	403	358	13,100	20.15	20
25	631	561	23,400	25.15	25

* Double shear values are the minimum requirements according to NAS functionality tests.

† Locking element tensile strength values are the minimum requirements of NAS functionality tests. Pins may be special ordered with 4 locking balls for additional locking element tensile strength.

Military Specifications(MS) & National Aerospace Standards(NASM)

Jergens is a Department of Defense approved supplier of Quick Release Pins, under CAGE code 94882.
Certificate of Conformance is available upon request at time of order.
DFARS compliant material can be quoted upon request.

NAS Number 1333-1346 and 1353-1366 are available.

MS Numbers 17984-90 now refer to NASM 17984-90.

MS 17984 C 4 15

- 15 → Grip Length in tenths of an inch
  Example: 15 = 1.5”
- 4 → Pin Diameter in sixteenth of an inch
  Example: 4 = ¼”
- C → Pin Material (Body Only)
  Example: C = Stainless Steel
  S = Carbon Steel
- 17984 → Handle Style or Type
  17984 = Button Handle – Single Acting
  17985 = T-Handle – Single Acting
  17986 = L-Handle – Single Acting
  17987 = Ring Handle – Single Acting
  17988 = T-Handle – Double Acting
  17989 = L-Handle – Double Acting
  17990 = Ring Handle – Double Acting
- MS → Military Standard

Special Military and Aerospace size and configurations are available. Please contact customer service 1-800-JERGENS (537-4367).

Material Specifications

Kwik-Lok® Pin

Component Part	Material
Bodies (Shank)	CRES 17-4 PH Stainless Steel
Balls	CRES 440C Stainless Steel*
Buttons	CRES 17-4 PH Stainless Steel
	Aluminum Alloy 2024
Springs	CRES 302 Stainless Steel
Handles	
T & L Handles	Aluminum (380) Casting
Button Handles	Aluminum Alloy 2024
Ring Handles	CRES 303 Stainless Steel
Heavy Duty T & L	CRES 303 Stainless Steel
Heavy Duty Button Handle	CRES 303 Stainless Steel
Recessed Button Handle	CRES 300 Series Stainless Steel
Collar	CRES 303 or 304 Stainless Steel

Kwik-Lok® Lifting Pin

Component Part	Material
Bodies (Shank)	CRES 17-4 PH Stainless Steel
Balls	CRES 440C Stainless Steel*
Buttons	CRES 303 Stainless Steel
Lift Ring	Forged 17-4 PH Stainless Steel
Springs	CRES 302 Stainless Steel

Detent Pins

Component Part	Material
Bodies (Shank)	CRES 17-4 PH Stainless Steel
	CRES 303 Stainless Steel-Optional
Balls	CRES 440C Stainless Steel*
Springs	CRES 302 Stainless Steel
Head	CRES 303 Stainless Steel

* Actual locking element tensile strength is reduced by lower strength alloys. Ordering special pins with 4 balls will increase locking element tensile strength above NAS functionality test requirements.

Heat Treatment:

- 17-4 PH Stainless Steel: Condition H-900, Rockwell C40 Min per MIL-H-6875

Surface Treatment:

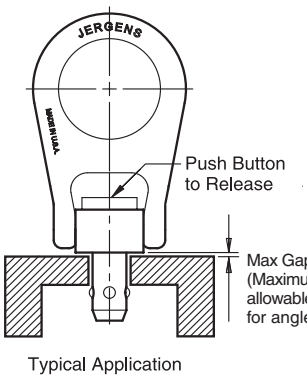
- CRES Parts: Passivate per AMS-QQ-P-35
- Aluminum Alloy Parts: Anodize per MIL-A-8625 Type I or II per MIL-C-5541 Class 1A
- Aluminum Handles: Color Black

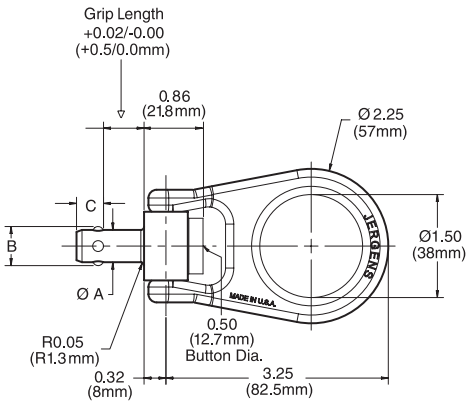
Jergens Kwik-Lok® Pins are designed and manufactured to meet or exceed these standards.

Jergens SPECIALTY FASTENERS GROUP

Kwik-Lok® Lifting Pins







- All stainless steel construction and components
- 17-4 PH stainless steel forged, heat treated lifting ring with large opening
- Lifting ring with Load Spreader Bar
- 5 to 1 strength factor
- 360° Swivel
- 180° Pivot
- Also chosen for lashing applications

CE CERTIFIED

Lifting Pin Specifications – Inches

Nom Pin Dia	Max. Load Rating (lbs)*	ØA		±0.005 B	+0.00/ -0.04 C	Max. Gap (X) (in)	Required Hole Diameter (in)	
		Min	Max				Max	Min
1/4	400	.2470	.2485	.286	.290	0.06	0.2540	0.2500
5/16	700	.3095	.3110	.375	.330	0.06	0.3165	0.3125
3/8	1,000	.3720	.3735	.440	.365	0.06	0.3790	0.3750
1/2	1,250	.4970	.4985	.594	.460	0.06	0.5050	0.5000
5/8	1,400	.6220	.6235	.750	.580	0.06	0.6300	0.6250

Lifting Pin Specifications – Metric

Nom Pin Dia	Max. Load Rating (kN)*	ØA		±0.13 B	+0.0/ -1.0 C	Max. Gap (X) (mm)	Required Hole Diameter (mm)	
		Min	Max				Max	Min
10	4.4	9.92	9.96	12.00	9	1.5	10.1	10.0
12	5.5	11.92	11.96	14.27	10	1.5	12.1	12.0
16	6.2	15.92	15.96	19.00	14	1.5	16.1	16.0

*Dimensions in millimeters

Kwik-Lok® Lifting Pin – Inches

Dia.	Grip Length							
	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00
1/4	**807216**	**807217**	**807218**	**807219**	**807220**	**807222**	**807224**	**807225**
5/16	**807232**	**807233**	**807234**	**807235**	**807236**	**807238**	**807240**	**807241**
3/8	**807248**	**807249**	**807250**	**807251**	**807252**	**807254**	**807256**	**807257**
1/2	**807280**	**807281**	**807282**	**807283**	**807284**	**807286**	**807288**	**807289**
5/8	**807312**	**807313**	**807314**	**807315**	**807316**	**807318**	**807320**	**807321**

Kwik-Lok® Lifting Pin – Metric

Dia.	Grip Length							
	15	20	25	30	35	40	50	75
10	**857237**	**857238**	**857239**	**857240**	**857299**	**857241**	**857242**	**857307**
12	**857249**	**857250**	**857251**	**857252**	**857300**	**857253**	**857254**	**857308**
16	**857261**	**857262**	**857263**	**857264**	**857301**	**857265**	**857266**	**857309**

Important: Please review all operating instructions that are included in the packaging or online before use.

Note: If the required hole size cannot be achieved; Jergens recommends the use of our threaded receptacle (see page 363); Please Contact Customer Service with any questions.

*Lifting load ratings are based on tests with hardened tool steel plates or shoulder bushings. Load ratings may be reduced if oversized holes or parent material under 80,000 psi tensile are used.

*Kwik-Lok® Lifting Pins are not suited for continuous rotation under load.

Threaded Receptacles

High Strength Stainless Steel, 17-4 PH heat treated

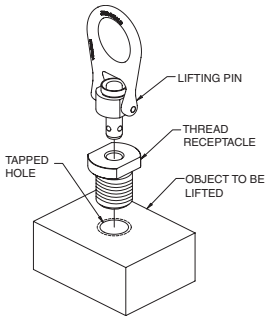


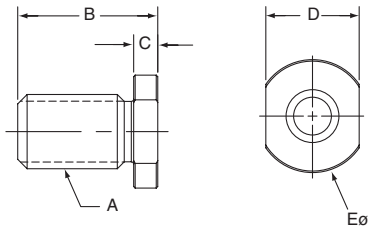
KLP Threaded Receptacles – Inch

For Kwik-Lok® Lifting Pin		Use Receptacle	Thread Size	Overall Length	Head Height	Head Flats	Diameter	Install Torque
Size	Part Number	Part Number	A	B	C	D	E	(ft-lbs)
1/4×0.5	807216	**845100**	1/2-13	0.930	0.16	.62	.75	7
5/16×0.5	807232	**845101**	3/4-10	1.100	0.28	.87	1.12	18
3/8×0.5	807248	**845102**	3/4-10	1.100	0.28	.87	1.12	25
1/2×0.5	807280	**845103**	1 1/8-7	1.625	0.37	1.25	1.62	47
5/8×0.5	807312	**845104**	1 1/8-7	1.625	0.37	1.25	1.62	53

KLP Threaded Receptacles – Metric

For Kwik-Lok® Lifting Pin		Use Receptacle	Thread Size	Overall Length	Head Height	Head Flats	Diameter	Install Torque
Size	Part Number	Part Number	A	B	C	D	E	(kg•m)
10×15	857237	**855100**	M20x2.5	29	7	26	34.8	3.6
12×15	857249	**855101**	M22x2.5	37	9	30	34.8	5.0
16×15	857261	**855102**	M27x3	41	10	32	41.2	6.9







Kwik-Lok® Lifting Pin Kits – Inch

Kit Part Number	Kwik-Lok® Lifting Pin Size	Receptacle Thread Size	Kwik-Lok® Lifting Pin Part Number	Threaded Receptacle Part Number
847216	1/4 x 0.5	1/2-13	807216	845100
847232	5/16 x 0.5	3/4-10	807232	845101
847248	3/8 x 0.5	3/4-10	807248	845102
847280	1/2 x 0.5	1 1/8-7	807280	845103
847312	5/8 x 0.5	1 1/8-7	807312	845104

*Each kit contains one Kwik-Lok® lifting pin and one corresponding Threaded Receptacle.

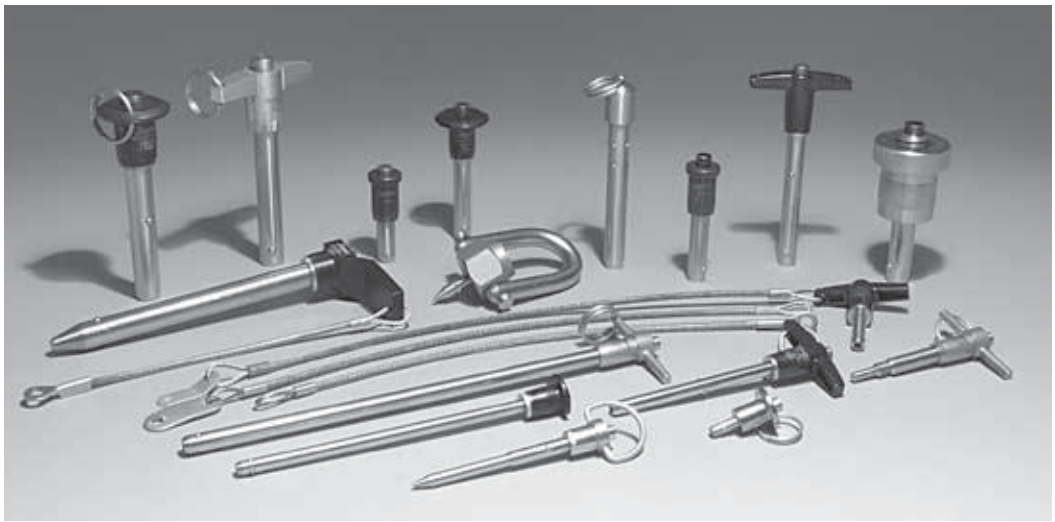
Kwik-Lok® Lifting Pin Kits – Metric

Kit Part Number	Kwik-Lok® Lifting Pin Size	Receptacle Thread Size	Kwik-Lok® Lifting Pin Part Number	Threaded Receptacle Part Number
877237	M10 x 15	M20 x 2.5	857237	855100
877249	M12 x 15	M22 x 2.5	857249	855101
877261	M16 x 15	M27 x 3	857261	855102

*Each kit contains one Kwik-Lok® lifting pin and one corresponding Threaded Receptacle.

Jergens SPECIALTY FASTENERS GROUP

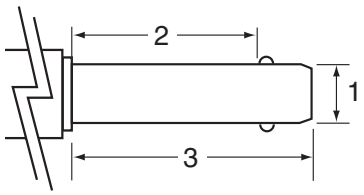
Kwik-Lok® Pin Special Application Information



Special Kwik-Lok® Pins

If you don't see the exact Kwik-Lok® Pin to meet your application requirements, photocopy the form below, indicate your requirements, and send to Jergens.

Quotation Request Worksheet (online at www.jergensinc.com/tools/pins_rfq.aspx)



1. Pin Diameter _____

2. Grip Length _____

3. Overall Length _____

***For special Shank/Lanyard configurations – Please provide drawing or sketch.**

Application (describe): _____

Handle Style: ☐ T ☐ L ☐ Ring ☐ Button ☐ Recessed Button ☐ Kwik-Lok® Lifting Pins ☐ Special _____

Body Material: ☐ 17-4 PH heat treated Stainless Steel ☐ Other (describe) _____

Number of Locking Elements: ☐ 2 balls(standard) ☐ 4 balls Attach Split Ring? _____ (yes/no)

*Lanyard Length: _____ (inch or mm) SS cable with nylon color _____ (Green,Black,Clear or other)

Attach Lanyard directly to Pin without split ring? _____ (yes/no) Attach to Split Ring? _____ (yes/no)

Tabs: ☐ Round (Stainless Steel) ☐ Oval(Aluminum) Mounting Hole Size _____ (inch or mm)

Loop/Eyelet (Stainless Steel) with Mounting Hole: ☐ 0.19" for #10 screw ☐ 5.2mm for M5 screw

Quantity Required: _____ (pieces) Request date: _____ Annual Requirements _____ (pieces)

NAME: _____ POSITION/TITLE: _____

COMPANY: _____ ADDRESS: _____

CITY: _____ STATE: _____ COUNTRY: _____ POSTAL CODE: _____

TELEPHONE: _____ FAX: _____ E-MAIL: _____

Spring Loaded Devices

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Jergens®
MANUFACTURING EFFICIENCY

Jergens Spring & Ball Plungers Last Longer ...And Here's Why!

Spring Plungers

Spring Plunger tips are manufactured using case hardened steel. This means they have a protective shell, about .10" deep.

Jergens Spring and Ball Plungers have accurate end forces, are easy to install, and are competitively priced. They are manufactured in the U.S.A. in a ISO 9001:2008 certified quality system.

And if these aren't enough reasons to specify Jergens Spring and Ball Plungers, here are a few more:

Better Point of Contact

The Jergens plungers are turned and the tips generated in one smooth continuing process. This results in a constant radius tip, perfectly tangent to the point where the tip joins the shaft. Conventional two step, turn and grind operations, can leave ridges on the shaft at the tip junction and can also produce out-of-round tips. These, in turn, can gouge or score finely finished parts or can cause detent cams to hang up or stick.

Extra Length Springs for Longer Life

The longer the spring, the longer its life. Jergens goes to extra lengths to minimize the thickness of the base flanges on all of its plungers. That allows us to use longer springs with less chance for fatigue and breakage.

Improved Plunger to Body Alignment

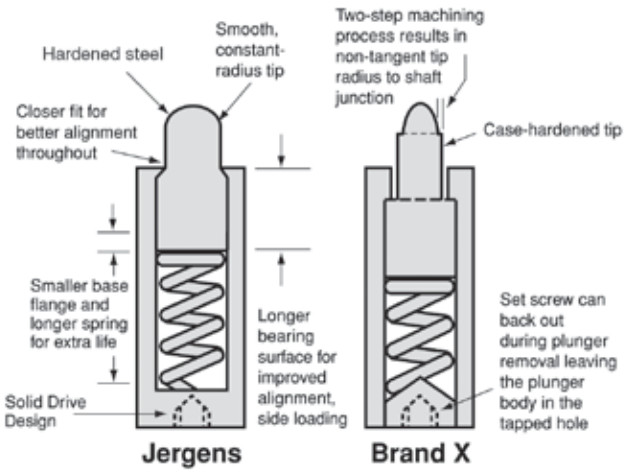
The long base flange allows for a larger bearing surface. This means improved plunger-to-body alignment, truer travel, and much improved side load characteristics.

Tighter Fit Resists Contamination

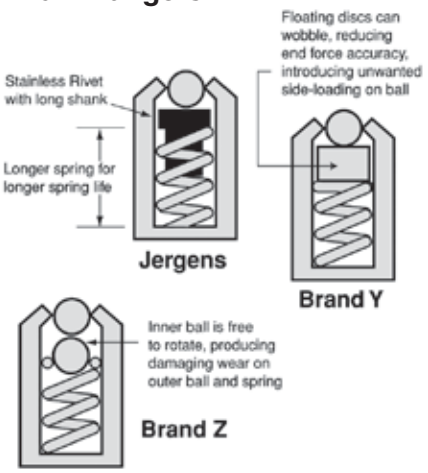
Closer machining tolerances, minimum plunger-to-body clearance, and smoother plunger finish make Jergens plungers fit more snugly in the plunger bore. This improves plunger alignment and provides extra resistance to contaminant entry. The results: dirt and grit cannot get to the bearing surfaces to shorten the life of the plunger.

Better Plunger Adjustment

The Solid Drive Design assures that during removal or adjustment of the plunger, the whole plunger is moving, not just the set screw. This means no lost parts or springs falling out of the plunger.



Ball Plungers



Positive Control of Spring Pressure

Accurate spring alignment is maintained by using a stainless rivet with a long shank on larger sizes of Jergens Ball Plungers. This precisely positions the spring for more accurate ball travel and provides positive control of spring pressure. Conventional floating discs are easily misaligned, while the rotation of the inner ball on dual-ball plungers results in less wearability on both the spring and the ball.

Longer Spring Life

By minimizing the lining pin head thickness, Jergens is able to use the longest possible springs. This, of course, means less fatigue and longer spring life.

Uniform Ball Projection

The distance by which the ball projects from the body of the plunger must be uniform from plunger to plunger. This uniformity is maintained by precisely controlling the crimping pressure applied to the neck of the plunger. Accurate machine controls plus rigid inspection procedures keep variances in ball projection to within ±.005".

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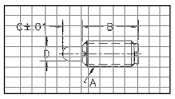
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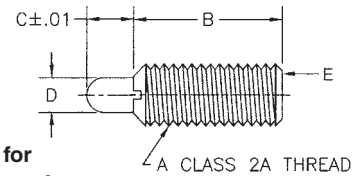
Spring Stops 382

Spring Plungers
Inch



SOLID DRIVE

- Single unit construction
- No set screw to separate from plunger body
- Better reliability
- Steel tips are case hardened steel
- Close tolerance between tip and body



Hex drive in rear for spring plunger insertion.

- Material: Body – Low Carbon Steel, Black Oxide or 303-Stainless Steel
  Tip – Steel or Stainless Steel
- Thread: 2A-UNC
- 3D Solid Models are available in multiple formats from www.jergensinc.com
- Conforms to TCMA dimensional standards

Plunger tips are color coded to indicate light or heavy force:
Silver = Steel Tip, Light Force
Black = Steel Tip, Heavy Force

Unlike conventional spring plungers, the body of a Jergens Solid Drive Plunger is machined in one piece. The spring is assembled from the top so that there is no need for a set screw. Solid Drive Plungers do not have a set screw which can loosen or separate from the plunger body. The advantage is no lost springs, no need for "easy-out" tools. When adjusting Solid Drive, you can be sure the plunger body is turning and not a set screw.

Specials available, see page 376 for Plunger Quote Request worksheet.

Inch – Steel & Stainless Steel Tip With Locking Element

SS Part Number	Steel Part Number	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D	Hex Size E
27336	**27321**	6-32	0.5	1.5	17/32	1/16	0.046	3/64
26936	**26921**	6-32	1.5	4.5	17/32	1/16	0.046	3/64
27337	**27322**	8-32	0.7	2.3	5/8	3/32	0.070	5/64
26937	**26922**	8-32	2.7	7.3	5/8	3/32	0.070	5/64
27338	**27323**	10-32	1.3	2.7	3/4	1/8	0.093	3/32
26938	**26923**	10-32	2.9	11.1	3/4	1/8	0.093	3/32
27339	**27324**	1/4-20	1.0	4.0	1	3/16	0.119	1/8
26939	**26924**	1/4-20	3.0	13.0	1	3/16	0.119	1/8
27340	**27325**	1/4-28	1.0	4.0	1	3/16	0.119	1/8
26940	**26925**	1/4-28	3.0	13.0	1	3/16	0.119	1/8
27341	**27326**	5/16-18	1.5	4.5	1	3/16	0.135	5/32
26941	**26926**	5/16-18	3.0	15.0	1	3/16	0.135	5/32
27342	**27327**	3/8-16	2.8	7.2	1 1/8	3/16	0.186	3/16
26942	**26927**	3/8-16	5.5	14.5	1 1/8	3/16	0.186	3/16
27343	**27328**	1/2-13	2.7	9.3	1 1/4	1/4	0.248	1/4
26943	**26928**	1/2-13	6.6	17.4	1 1/4	1/4	0.248	1/4
27344	**27329**	5/8-11	3.5	10.5	1 1/2	5/16	0.310	5/16
26944	**26929**	5/8-11	10.5	25.5	1 1/2	5/16	0.310	5/16
27345	**27330**	3/4-10	5.5	14.5	1 3/4	5/16	0.374	3/8
26945	**26930**	3/4-10	6.7	37.3	1 3/4	5/16	0.374	3/8
—	**27311***	1-8	10.0	25.0	2 13/32	1/2	0.499	3/8
—	**26911***	1-8	16.0	68.0	2 13/32	1/2	0.499	3/8

Without Locking Element

SS Part Number	Steel Part Number
27031	**27221**
27011	**26821**
27032	**27222**
27012	**26822**
27033	**27223**
27013	**26823**
27034	**27224**
27014	**26824**
27035	**27225**
27015	**26825**
27036	**27226**
27016	**26826**
27037	**27227**
27017	**26827**
27038	**27228**
27018	**26828**
27039	**27229**
27019	**26829**
27040	**27230**
27020	**26830**
—	**27211***
—	**26811***

* Not available in DRIVE construction.

NOTE: For easy insertion of Spring Plungers with locking elements, the tapped hole should be countersunk at least .030-.045" (0.76-1.14mm) larger than the major diameter of the plunger.

Spring Plungers
Inch

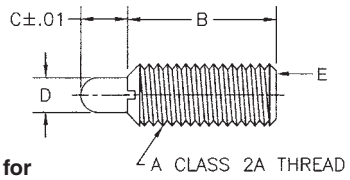


SOLID DRIVE

- Single unit construction
- No set screw to separate from plunger body
- No need for "easy-out" tools
- Better reliability
- Steel tips are case hardened steel
- Close tolerance between tip and body

- Material: Body – Low Carbon Steel, Black Oxide or 303-Stainless Steel
  Tip – Delrin
- Thread: 2A-UNC
- 3D Solid Models are available in multiple formats from www.jergensinc.com
- Conforms to TCMA dimensional standards

Plunger tips are color coded to indicate light or heavy force:
White = Delrin Tip, Light Force
Blue = Delrin Tip, Heavy Force



Hex drive in rear for spring plunger insertion.

Unlike conventional spring plungers, the body of a Jergens Solid Drive Plunger is machined in one piece. The spring is assembled from the top so that there is no need for a set screw. Solid Drive Plungers do not have a set screw which can loosen or separate from the plunger body. The advantage is no lost springs, no need for "easy-out" tools. When adjusting Solid Drive, you can be sure the plunger body is turning and not a set screw.

Specials available, see page 376 for Plunger Quote Request worksheet.

Inch – Delrin Tip With Locking Element

SS Part Number	Steel Part Number	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D	Hex Size E
30936	**30921**	6-32	0.5	1.5	17/32	1/16	0.046	3/64
30536	**30521**	6-32	1.5	4.5	17/32	1/16	0.046	3/64
30937	**30922**	8-32	0.7	2.3	5/8	3/32	0.070	5/64
30537	**30522**	8-32	2.7	7.3	5/8	3/32	0.070	5/64
30938	**30923**	10-32	1.3	2.7	3/4	1/8	0.093	3/32
30538	**30523**	10-32	2.9	11.1	3/4	1/8	0.093	3/32
30939	**30924**	1/4-20	1.0	4.0	1	3/16	0.119	1/8
30539	**30524**	1/4-20	3.0	13.0	1	3/16	0.119	1/8
30940	**30925**	1/4-28	1.0	4.0	1	3/16	0.119	1/8
30540	**30525**	1/4-28	3.0	13.0	1	3/16	0.119	1/8
30941	**30926**	5/16-18	1.5	4.5	1	3/16	0.135	5/32
30541	**30526**	5/16-18	3.0	15.0	1	3/16	0.135	5/32
30942	**30927**	3/8-16	2.8	7.2	1 1/8	3/16	0.186	3/16
30542	**30527**	3/8-16	5.5	14.5	1 1/8	3/16	0.186	3/16
30943	**30928**	1/2-13	2.7	9.3	1 1/4	1/4	0.248	1/4
30543	**30528**	1/2-13	6.6	17.4	1 1/4	1/4	0.248	1/4
30944	**30929**	5/8-11	3.5	10.5	1 1/2	5/16	0.310	5/16
30544	**30529**	5/8-11	10.5	25.5	1 1/2	5/16	0.310	5/16
30945	—	3/4-10	5.5	14.5	1 /34	5/16	0.374	3/8
30545	—	3/4-10	6.7	37.3	1 3/4	5/16	0.374	3/8

Without Locking Element

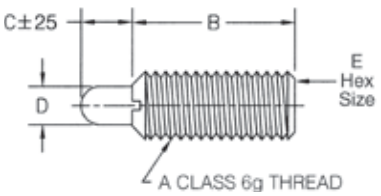
SS Part Number	Steel Part Number
30510	**30821**
30500	**30421**
30511	**30822**
30501	**30422**
30512	**30823**
30502	**30423**
30513	**30824**
30503	**30424**
30514	**30825**
30504	**30425**
30515	**30826**
30505	**30426**
30516	**30827**
30506	**30427**
30517	**30828**
30507	**30428**
30518	**30829**
30508	**30429**
30519	—
30509	—

NOTE: For easy insertion of Spring Plungers with locking elements, the tapped hole should be countersunk at least .030-.045" (0.76-1.14mm) larger than the major diameter of the plunger.

Spring Plungers
Metric







The hex drive in the rear of the spring plunger is for plunger insertion.

Specials available, see page 376 for Plunger Quote Request worksheet.

- Material: Body – Low Carbon Steel, Black Oxide or 303-Stainless Steel
  Tip – Steel or Stainless Steel
- Thread: 2A-UNC
- 3D Solid Models are available in multiple formats from www.jergensinc.com
- Conforms to TCMA dimensional standards

Unlike conventional spring plungers, the body of a Jergens Solid Drive Plunger is machined in one piece. The spring is assembled from the top so that there is no need for a set screw. Solid Drive Plungers do not have a set screw which can loosen or separate from the plunger body. The advantage is no lost springs, no need for "easy-out" tools. When adjusting Solid Drive, you can be sure the plunger body is turning and not a set screw.

Metric – Steel & Stainless Steel Tip With Locking Element

SS Part Number	Steel Part Number	Thread Size A	Initial Force (kg)	Final Force (kg)	B	C	D	Hex Size E
30890	**27250**	M4 x 0.7	0.32	1.04	16	2.5	1.78	2.0
30490	**26850**	M4 x 0.7	1.22	3.29	16	2.5	1.78	2.0
30891	**27251**	M5 x 0.8	0.59	1.22	19	3.0	2.36	2.5
30491	**26851**	M5 x 0.8	1.31	5.00	19	3.0	2.36	2.5
30892	**27252**	M6 x 1.0	0.45	1.80	25	5.0	3.02	3.0
30492	**26852**	M6 x 1.0	1.35	5.85	25	5.0	3.02	3.0
30893	**27253**	M8 x1.25	0.68	2.03	25	5.0	3.43	4.0
30493	**26853**	M8 x1.25	1.35	6.75	25	5.0	3.43	4.0
30894	**27254**	M10 x 1.5	1.26	3.26	29	5.0	4.72	5.0
30494	**26854**	M10 x 1.5	2.48	6.53	29	5.0	4.72	5.0
30895	**27255**	M12 x 1.75	1.22	4.21	32	6.0	6.30	6.0
30495	**26855**	M12 x 1.75	2.97	7.83	32	6.0	6.30	6.0
30897	**27257**	M16 x 2.0	1.58	4.76	38	8.0	7.87	8.0
30497	**26857**	M16 x 2.0	4.73	11.48	38	8.0	7.87	8.0
30898	**27258**	M20 x 2.5	2.50	6.58	44	8.0	9.50	10.0
30498	**26858**	M20 x 2.5	3.05	16.95	44	8.0	9.50	10.0

Without Locking Element

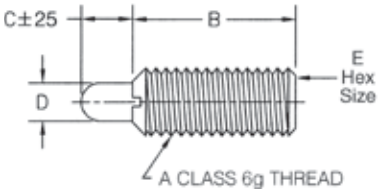
SS Part Number	Steel Part Number
30880	**27270**
30480	**26870**
30881	**27271**
30481	**26871**
30882	**27272**
30482	**26872**
30883	**27273**
30483	**26873**
30884	**27274**
30484	**26874**
30885	**27275**
30485	**26875**
30887	**27277**
30487	**26877**
30888	**27278**
30488	**26878**

NOTE: For easy insertion of Spring Plungers with locking elements, the tapped hole should be countersunk at least .030-.045" (0.76-1.14mm) larger than the major diameter of the plunger.

Spring Plungers
Metric – Delrin Tip







The hex drive in the rear of the spring plunger is for plunger insertion.

Specials available, see page 376 for Plunger Quote Request worksheet.

- Material: Body – Low Carbon Steel, Black Oxide
  Tip – Delrin
- Thread: 2A-UNC
- 3D Solid Models are available in multiple formats from www.jergensinc.com
- Conforms to TCMA dimensional standards

Unlike conventional spring plungers, the body of a Jergens Solid Drive Plunger is machined in one piece. The spring is assembled from the top so that there is no need for a set screw. Solid Drive Plungers do not have a set screw which can loosen or separate from the plunger body. The advantage is no lost springs, no need for "easy-out" tools. When adjusting Solid Drive, you can be sure the plunger body is turning and not a set screw.

Metric – Delrin Tip With Locking Element

Steel Part Number	Thread Size A	Initial Force (kg)	Final Force (kg)	B	C	D	Hex Size E
30850	M4 x 0.7	0.32	1.04	16	2.5	1.78	2.0
30450	M4 x 0.7	1.22	3.29	16	2.5	1.78	2.0
30851	M5 x 0.8	0.59	1.22	19	3.0	2.36	2.5
30451	M5 x 0.8	1.31	5.00	19	3.0	2.36	2.5
30852	M6 x 1.0	0.45	1.80	25	5.0	3.02	3.0
30452	M6 x 1.0	1.35	5.85	25	5.0	3.02	3.0
30853	M8 x1.25	0.68	2.03	25	5.0	3.43	4.0
30453	M8 x1.25	1.35	6.75	25	5.0	3.43	4.0
30854	M10 x 1.5	1.26	3.26	29	5.0	4.72	5.0
30454	M10 x 1.5	2.48	6.53	29	5.0	4.72	5.0
30855	M12 x 1.75	1.22	4.21	32	6.0	6.30	6.0
30455	M12 x 1.75	2.97	7.83	32	6.0	6.30	6.0
30857	M16 x 2.0	1.58	4.76	38	8.0	7.87	8.0
30457	M16 x 2.0	4.73	11.48	38	8.0	7.87	8.0
30858	M20 x 2.5	2.50	6.58	44	8.0	9.50	10.0
30458	M20 x 2.5	3.05	16.95	44	8.0	9.50	10.0

Without Locking Element

Steel Part Number
30870
30470
30871
30471
30872
30472
30873
30473
30874
30474
30875
30475
30877
30477
30878
30478

NOTE: For easy insertion of Spring Plungers with locking elements, the tapped hole should be countersunk at least .030-.045" (0.76-1.14mm) larger than the major diameter of the plunger.

Shortie Spring Plungers
Inch



- Material: Body – Low Carbon Steel, Black Oxide
  Tip – Delrin or Steel
- Thread: 2A-UNC
- 3D Solid Models are available in multiple formats from www.jergensinc.com
- Conforms to TCMA dimensional standards
- Thread: 2A-UNC
- Available in metric sizes. See page 373.

Jergens Feature:

Jergens Shortie Spring Plungers are made to the same quality standards as the Solid Drive *Made with full standard spring plunger stroke in a short body. A screwdriver slot is substituted for the hex drive due to the smaller size.

Inch – Shortie Spring Plunger With Locking Element

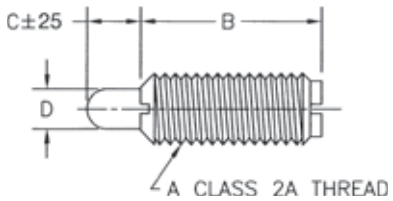
Steel Tip	Delrin Tip	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D
27101	**30701**	6-32	0.5	1.5	3/8	1/16	0.046
26701	**30301**	6-32	0.5	3.5	3/8	1/16	0.046
27102	**30702**	8-32	0.5	2.0	1/2	3/32	0.070
26702	**30302**	8-32	0.5	4.0	1/2	3/32	0.070
27103*	**30703***	10-32	0.3	3.0	9/16	1/8	0.093
26703*	**30303***	10-32	0.5	5.0	9/16	1/8	0.093
27104	**30704**	1/4-20	0.3	3.5	5/8	3/16	0.119
26704	**30304**	1/4-20	0.5	6.0	5/8	3/16	0.119
27105	**30705**	5/16-18	0.5	4.5	5/8	3/16	0.135
26705	**30305**	5/16-18	0.5	10.0	5/8	3/16	0.135
27106	**30706**	3/8-16	1.5	7.5	11/16	3/16	0.186
26706	**30306**	3/8-16	1.0	12.0	11/16	3/16	0.186
27107	**30707**	1/2-13	1.7	8.5	13/16	1/4	0.248
26707	**30307**	1/2-13	2.5	15.0	13/16	1/4	0.248
27108	**30708**	5/8-11	2.0	10.5	1 1/8	5/16	0.310
26708	**30308**	5/8-11	3.5	26.0	1 1/8	5/16	0.310

*Thread: UNF

Without Locking Element

Steel Tip	Delrin Tip
27001	**30601**
26601	**30201**
27002	**30602**
26602	**30202**
27003*	**30603***
26603*	**30203***
27004	**30604**
26604	**30204**
27005	**30605**
26605	**30205**
27006	**30606**
26606	**30206**
27007	**30607**
26607	**30207**
27008	**30608**
26608	**30208**

Shortie Spring Plungers Stainless Steel (Short Travel)



The slot in the rear of the Shortie Spring Plunger is for insertion.

- Material:
  Body, 303 Stainless
  Spring, 303 Stainless
  Nose, Stainless or Delrin
- Thread: 2A-UNC

Inch – Stainless Steel With Locking Element

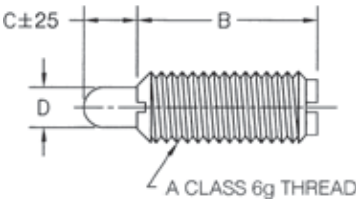
Part Number		Thread Size A	Force, lbs.		B	C	D
Stainless Tip	Delrin Tip		Initial	Final			
27601	**27621**	8-32	.5	1.5	7/16	.052	.070
27602	**27622**	8-32	1.5	4.75	7/16	.052	.070
27603*	**27623***	8-36	.5	1.5	7/16	.052	.070
27604*	**27624***	8-36	1.5	4.75	7/16	.052	.070
27605	**27625**	10-32	.75	2.5	15/32	.065	.093
27606	**27626**	10-32	1.75	6.25	15/32	.065	.093
27607	**27627**	1/4-20	1.0	3.5	17/32	.078	.119
27608	**27628**	1/4-20	3.0	10.5	17/32	.078	.119
27609	**27629**	5/16-18	1.0	4.0	9/16	.084	.135
27610	**27630**	5/16-18	3.75	15.5	9/16	.084	.135
27611	**27631**	3/8-16	1.5	5.0	5/8	.110	.186
27612	**27632**	3/8-16	4.5	18.5	5/8	.110	.186
27613	**27633**	1/2-13	1.75	5.5	3/4	.151	.248
27614	**27634**	1/2-13	5.0	28.0	3/4	.151	.248

*Thread: UNF

Specials available, see page 376 for Plunger Quote Request worksheet.

Shortie Spring Plungers
Metric





Specials available, see page 376 for Plunger Quote Request worksheet.

- Material: Body – Low Carbon Steel, Black Oxide
  Tip – Delrin or Steel
- Thread: Class 6g
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Plunger Tips are color coded to indicate light or heavy force.

White = Light Force
Blue = Heavy Force

Jergens Feature:

Jergens Shortie Spring Plungers are made to the same quality standards as the Solid Drive *Made with full standard spring plunger stroke in a short body. A screwdriver slot is substituted for the hex drive due to the smaller size.

*Carbon Steel body only

Metric – Shortie Spring Plungers With Locking Elements

Steel Tip	Delrin Tip	Thread Size A	Initial Force (kg)	Final Force (kg)	B	C	D
27170	**30770**	M4 x 0.7	0.23	0.91	13.0	2.5	1.78
26770	**30370**	M4 x 0.7	0.23	1.81	13.0	2.5	1.78
27171	**30771**	M5 x 0.8	0.14	1.36	14.5	3.0	2.36
26771	**30371**	M5 x 0.8	0.23	2.27	14.5	3.0	2.36
27172	**30772**	M6 x 1.0	0.14	1.59	16.0	4.7	3.02
26772	**30372**	M6 x 1.0	0.23	2.72	16.0	4.0	3.02
27173	**30773**	M8 x 1.25	0.23	2.04	16.0	5.0	3.43
26773	**30373**	M8 x 1.25	0.23	4.54	16.0	5.0	3.43
27174	**30774**	M10 x 1.5	0.68	3.4	17.5	4.7	4.72
26774	**30374**	M10 x 1.5	0.46	5.44	17.5	5.0	4.72
27175	**30775**	M12 x 1.75	0.77	3.86	20.5	6.5	6.30
26775	**30375**	M12 x 1.75	1.13	6.80	20.5	6.5	6.30
27177	**30777**	M16 x 2.0	0.91	4.76	28.5	8.0	7.87
26777	**30377**	M16 x 2.0	1.59	11.79	28.5	8.0	7.87

Plunger Wrenches



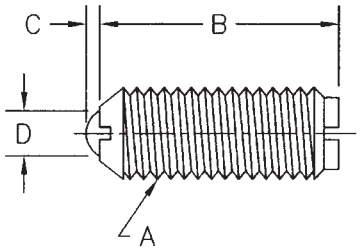
IMPORTANT: It is not recommended that a screwdriver be used to insert ball or spring plungers from the ball or plunger end. The tip of the screwdriver will force the ball or tip of the plunger below the surface of the end of the plunger. This may compress the spring to a solid, causing possible damage to the spring plunger. It is recommended that a Jergens Plunger Wrench be used or that a slot be ground in the end of a screwdriver to clear the height of the ball or tip for each size ball or plunger used.

Part Number	Thread Size of Plungers	
	Inch	Metric
27501	6-32	—
27502	8-32	M4
27503	10-32	M5
27504	1/4-20	M6
27505	5/16-18	M8
27506	3/8-16	M10
27507	1/2-13	M12
27508	5/8-11	M16
27509	3/4-10	M20
27510	1-8	M25

Ball Plungers

Inch





- Body Material: Low Carbon Steel, or 303 Stainless Steel
- Ball Material: Stainless, 440
- Spring Material: Stainless, 17-7 PH
- Finish: Black Oxide on Body
- Thread: 2A
- Dimensionally comforms to TCMA standards
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Inch – Coarse Thread (UNC) With Locking Element

SS Part Number	Steel Part Number	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D
11102	**10927**	5-40	0.25	0.75	1/4	0.020	0.062
11201	**10701**	10-24	0.50	1.50	33/64	0.025	0.093
11211	**10711**	10-24	1.50	3.00	33/64	0.025	0.093
11202	**10702**	10-24	2.00	5.00	33/64	0.025	0.093
11108	**10904**	1/4-20	2.00	4.00	17/32	0.035	0.125
11109	**10905**	1/4-20	3.00	7.00	17/32	0.035	0.125
11110	**10906**	1/4-20	4.00	12.00	17/32	0.035	0.125
11111	**10907**	5/16-18	2.00	4.50	37/64	0.040	0.156
11112	**10908**	5/16-18	4.00	9.00	37/64	0.040	0.156
11113	**10909**	5/16-18	6.00	17.00	37/64	0.040	0.156
11114	**10910**	3/8-16	2.50	5.00	5/8	0.048	0.187
11115	**10911**	3/8-16	5.00	10.00	5/8	0.048	0.187
11116	**10912**	3/8-16	6.00	21.00	5/8	0.048	0.187
11117	**10913**	1/2-13	3.00	6.00	3/4	0.072	0.281
11118	**10914**	1/2-13	6.00	12.00	3/4	0.072	0.281
11119	**10915**	1/2-13	6.00	30.00	3/4	0.072	0.281
11120	**10916**	5/8-11	4.50	9.00	1	0.096	0.375
11121	**10917**	5/8-11	9.00	18.00	1	0.096	0.375
11122	**10918**	5/8-11	7.00	50.00	1	0.096	0.375

Without Locking Element

SS Part Number	Steel Part Number
11002	**10827**
11221	**10721**
11231	**10731**
11222	**10722**
11008	**10804**
11009	**10805**
11010	**10806**
11011	**10807**
11012	**10808**
11013	**10809**
11014	**10810**
11015	**10811**
11016	**10812**
11017	**10813**
11018	**10814**
11019	**10815**
11020	**10816**
11021	**10817**
11022	**10818**

NOTE: For easy insertion of Ball Plungers with locking elements, the tapped hole should be countersunk at least .030-.045 (0.76-1.14mm) larger than the major diameter of the plunger.

Inch – Fine Thread (UNF) With Locking Element

SS Part Number	Steel Part Number	Thread Size A	Initial Force (lbs)	Final Force (lbs)	B	C	D
11101	**10926**	4-48	0.12	0.50	3/16	0.020	0.062
11103	**10928**	6-40	0.50	1.00	5/16	0.023	0.078
11104	**10929**	8-36	0.50	1.25	11/32	0.025	0.093
11105	**10901**	10-32	0.50	1.50	33/64	0.025	0.093
11106	**10902**	10-32	1.50	3.00	33/64	0.025	0.093
11107	**10903**	10-32	2.00	5.00	33/64	0.025	0.093
11203	**10703**	1/4-28	2.0	4.0	17/32	0.035	0.125
11212	**10712**	1/4-28	3.0	7.0	17/32	0.035	0.125
11204	**10704**	1/4-28	4.0	12.0	17/32	0.035	0.125
11205	**10705**	5/16-24	2.0	4.5	37/64	0.040	0.156
11213	**10713**	5/16-24	4.0	9.0	37/64	0.040	0.156
11206	**10706**	5/16-24	6.0	17.0	37/64	0.040	0.156
11207	**10707**	3/8-24	2.5	5.0	5/8	0.048	0.187
11214	**10714**	3/8-24	5.0	10.0	5/8	0.048	0.187
11208	**10708**	3/8-24	6.0	21.0	5/8	0.048	0.187
11209	**10709**	1/2-20	3.0	6.0	3/4	0.072	0.281
11215	**10715**	1/2-20	6.0	12.0	3/4	0.072	0.281
11210	**10710**	1/2-20	6.0	30.0	3/4	0.072	0.281

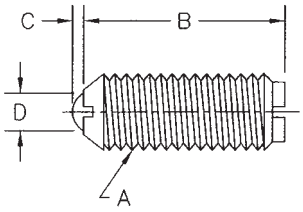
Without Locking Element

SS Part Number	Steel Part Number
11001	**10826**
11003	**10828**
11004	**10829**
11005	**10801**
11006	**10802**
11007	**10803**
11223	**10723**
11232	**10732**
11224	**10724**
11225	**10725**
11233	**10733**
11226	**10726**
11227	**10727**
11234	**10734**
11228	**10728**
11229	**10729**
11235	**10735**
11230	**10730**

Ball Plungers

Metric





- Body Materials: Low Carbon Steel, Black Oxide or 303 Stainless Steel
- Ball: Stainless, 440
- Spring: Stainless, 17-7 PH
- Thread: Class 6g
- 3D Solid Models are available in multiple formats from www.jergensinc.com

NOTE: For easy insertion of Ball Plungers with locking elements, the tapped hole should be countersunk at least .030-.045 (0.76-1.14mm) larger than the major diameter of the plunger.

Metric – Steel & SS Tip With Locking Element

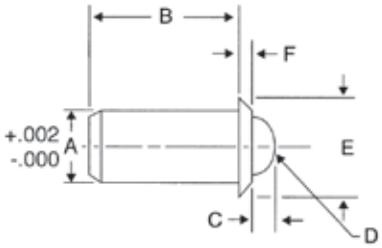
SS Part Number	Steel Part Number	Thread Size A	Initial Force (kg)	Final Force (kg)	B	C	D
11051	**10971**	M4 x 0.7	0.23	0.56	9.00	0.60	2.38
11052	**10972**	M5 x 0.8	0.23	0.68	13.00	0.60	2.38
11053	**10973**	M5 x 0.8	0.68	1.35	13.00	0.60	2.38
11054	**10974**	M5 x 0.8	0.90	2.25	13.00	0.60	2.38
11055	**10975**	M6 x 1.0	0.90	1.80	13.50	0.90	3.18
11056	**10976**	M6 x 1.0	1.35	3.15	13.50	0.90	3.18
11057	**10977**	M6 x 1.0	1.80	5.40	13.50	0.90	3.18
11058	**10978**	M8 x1.25	0.90	2.03	15.00	1.00	3.97
11059	**10979**	M8 x1.25	1.80	4.05	15.00	1.00	3.97
11060	**10980**	M8 x1.25	2.70	7.65	15.00	1.00	3.97
11061	**10981**	M10 x 1.5	1.13	2.25	16.00	1.20	4.76
11062	**10982**	M10 x 1.5	2.25	4.50	16.00	1.20	4.76
11063	**10983**	M10 x 1.5	2.70	9.45	16.00	1.20	4.76
11064	**10984**	M12 x 1.75	1.35	2.70	19.00	2.00	7.14
11065	**10985**	M12 x 1.75	2.70	5.40	19.00	2.00	7.14
11066	**10986**	M12 x 1.75	2.70	13.50	19.00	2.00	7.14
11067	**10987**	M16 x 2.0	2.00	4.00	25.40	2.40	9.50
11068	**10988**	M16 x 2.0	4.00	8.10	25.40	2.40	9.50
11069	**10989**	M16 x 2.0	3.10	22.70	25.40	2.40	9.50

Without Locking Element

SS Part Number	Steel Part Number
10951	**10871**
10952	**10872**
10953	**10873**
10954	**10874**
10955	**10875**
10956	**10876**
10957	**10877**
10958	**10878**
10959	**10879**
10960	**10880**
10961	**10881**
10962	**10882**
10963	**10883**
10964	**10884**
10965	**10885**
10966	**10886**
10967	**10887**
10968	**10888**
10969	**10889**

Press Fit Plungers





- Body Material: Low Carbon Steel
- Ball Material: Stainless, 400
- Spring Material: 17-7 PH
- Finish: Black Oxide on Body

Heavy Force

Part Number	Stainless Steel Part Number	Force (lbs)		A	B	C	Ball Dia. D	E	F
		Initial	Final						
10832	**11032**	2	5	.188	.405	.058	.156	.250	.035
10834	**11034**	3	7	.250	.481	.070	.187	.312	.044
10836	**11036**	5	14	.375	.785	.110	.312	.500	.078
10838	**11038**	8	18	.500	1.130	.161	.437	.688	.088

Light Force

Part Number	Stainless Steel Part Number	Force (lbs)		A	B	C	Ball Dia. D	E	F
		Initial	Final						
10831	**11031**	1	2.5	.188	.405	.058	.156	.250	.035
10833	**11033**	1.5	3.5	.250	.481	.070	.187	.312	.044
10835	**11035**	2.5	7	.375	.785	.110	.312	.500	.078
10837	**11037**	4	9	.500	1.130	.161	.437	.688	.088

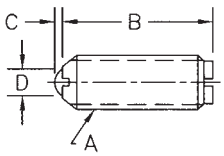
Jergens SPECIALTY FASTENERS GROUP

Special Spring and Ball Plungers

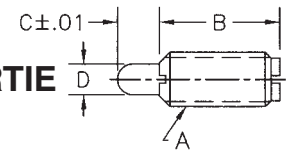
If you don't see the exact spring or ball plunger to meet your application requirements, photocopy the form below, indicate your requirements, and mail to your Jergens Distributor or e-mail Jergens Specialty Fasteners at fasteners@jergensinc.com.

PLUNGER QUOTATION REQUEST WORKSHEET

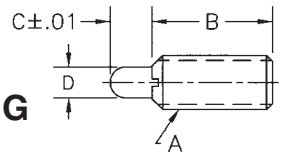
BALL



SHORTIE



SPRING



A dim. (See note below) _____ **C** dim. _____
B dim. _____ **D** dim. _____

Application (describe): _____

Type of Plunger: ☐ Solid Drive ☐ Spring ☐ "Shortie" ☐ Ball ☐ Other (see sketch)

Thread or O.D. _____ (Class 2A Threads unless Otherwise Specified)

Length of Plunger Travel: _____

Initial Force Required: _____ Final Force Required: _____

Plastic Locking Patch: ☐ Required ☐ Not Required Tip/Ball Material: _____

Tip/Ball Finish: _____ Body Material: _____

Body Finish: _____ Spring Material: _____

Temperature Range: _____

Type of Environment (describe—corrosives, chemicals, contaminants, etc.): _____

_____

Other Specifications: _____

_____

Quantity Needed: _____ Delivery By: _____

NAME: _____ TITLE: _____

COMPANY: _____ ADDRESS: _____

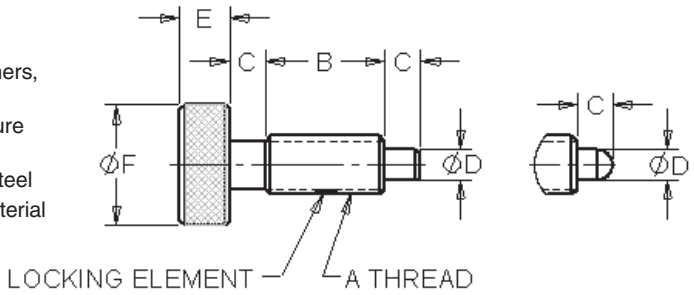
CITY: _____ STATE: _____ ZIP: _____

TELEPHONE: _____ FAX: _____

Retractable Plungers
Hand Retractable Locking Style



- Improved design allows plunger pin to be locked in fully retracted position
- Used in machining applications as positioners, loading pins or indexing devices
- Plunger pin has slight taper on end to assure easy alignment
- Zinc Plated Carbon Steel, 303 Stainless Steel
- Phenolic Nose Prevents Marring of Soft Material
- Supplied with locking element



Inch – Hand Retractable Locking Style Plungers

Steel Part Number	Steel Delrin Nose Part Number	Stainless Steel Part Number	Stainless Steel Delrin Nose Part Number	A	End Force (lbs)		B	C	+.001 -.002 D	E	F	Net Wt. (lbs) 10 Pcs.
					Start	Full						
27426	**27531**	**27826**	**27539**	1/4-20	0.5	2.5	1/2	1/8	.124	1/4	1/2	.3
27421	**27532**	**27821**	**27540**	1/4-20	1.0	5.0	1/2	1/8	.124	1/4	1/2	.3
27427	**27533**	**27827**	**27541**	5/16-18	0.75	3.0	5/8	3/16	.155	9/32	5/8	.5
27422	**27534**	**27822**	**27542**	5/16-18	1.5	6.0	5/8	3/16	.155	9/32	5/8	.5
27428	**27535**	**27828**	**27543**	3/8-16	0.75	4.0	3/4	7/32	.186	5/16	3/4	.7
27423	**27536**	**27823**	**27544**	3/8-16	1.5	8.0	3/4	7/32	.186	5/16	3/4	.7
27429	**27537**	**27829**	**27545**	1/2-13	1.25	5.0	7/8	1/4	.249	3/8	1"	1.3
27424	**27538**	**27824**	**27546**	1/2-13	2.5	10.0	7/8	1/4	.249	3/8	1"	1.3

Metric – Hand Retractable Locking Style Plungers

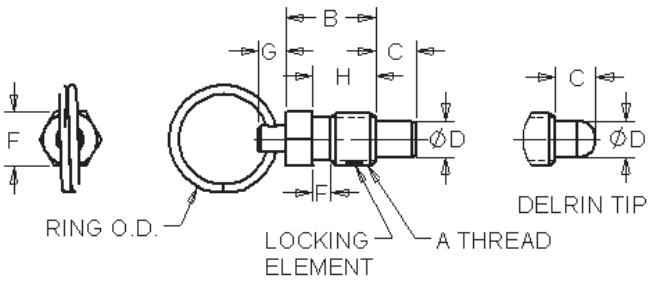
Steel Part Number	Class 6g ISO A	End Force (kg)		B	C	+.025 -.050 D	E	F	Net Wt. (kg) 10 Pcs.
		Start	Full						
27555	M6x1.0	0.225	1.135	12.50	3.17	3	6.3	12.7	.16
27551	M6x1.0	0.4	2.27	12.50	3.17	3	6.3	12.7	.16
27556	M8x1.25	0.34	1.36	16.00	4.75	4	7.0	15.8	.27
27552	M8x1.25	0.68	2.72	16.00	4.75	4	7.0	15.8	.27
27557	M10x1.5	0.34	1.815	19.00	5.50	5	7.9	19.0	.38
27553	M10x1.5	0.68	3.63	19.00	5.50	5	7.9	19.0	.38
27558	M12x1.75	0.565	2.27	22.00	6.35	6	9.4	25.4	.7
27554	M12x1.75	1.13	4.54	22.00	6.35	6	9.4	25.4	.7

Retractable Plungers

Pull Ring Style



- For use in application with limited space
- Slight taper on end of plunger for easy alignment

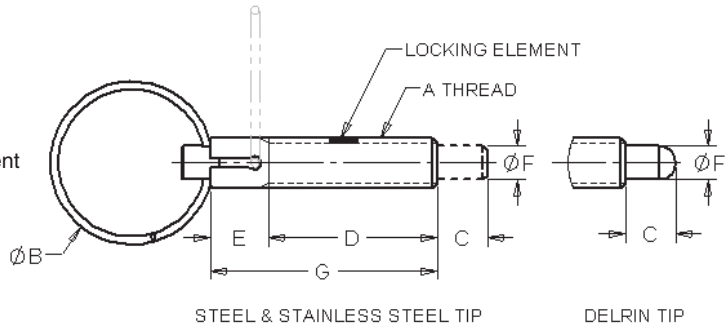


Pull Ring – Short Locking Plungers

Steel Part Number	Steel Delrin Nose Part Number	Stainless Steel Part Number	Stainless Steel Delrin Nose Part Number	A	Force, (lbs)		B	C	+.001 -.002 D	E	F	G	H	O.D	Net Wt. (lbs) 10 Pcs.
					Initial	Final									
27441	**27560**	**27800**	**27564**	1/4-20	0.50	2.0	7/16	3/16	.156	1/4	1/32	5/32	9/32	3/4	.1
27442	**27561**	**27801**	**27565**	3/8-16	0.75	3.0	5/8	9/32	.250	3/8	1/8	3/16	7/16	3/4	.2
27443	**27562**	**27802**	**27566**	1/2-13	1.00	4.0	13/16	3/8	.312	1/2	5/32	1/4	9/16	1	.43
27444	**27563**	**27803**	**27567**	5/8-11	1.25	5.0	1	7/16	.375	5/8	5/32	5/16	11/16	1	.8



- For use in application with limited space
- Slight taper on end of plunger for easy alignment
- Turn ring to lock and extend plunger



Pull Ring – Standard Length – Locking Plungers

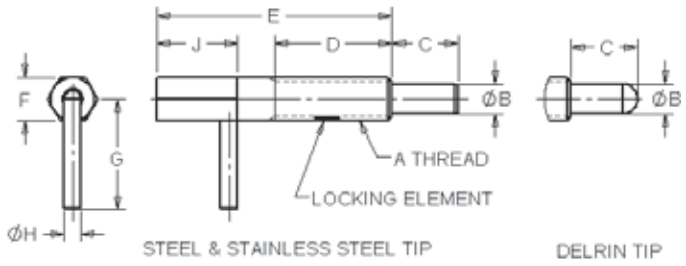
Steel Part Number	Steel Delrin Nose Part Number	Stainless Steel Part Number	Stainless Steel Delrin Nose Part Number	A	Force, (lbs)		B	C	+.001 -.002 D	E	F	G	Net Wt. (lbs) 10 Pcs.
					Initial	Final							
27446	**27568**	**27812**	**27571**	1/4-20	1.0	2.5	5/8	1/4	13/16	5/16	.156	1-1/8	.15
27447	**27569**	**27813**	**27572**	3/8-16	2.0	4.0	1	3/8	1-1/4	7/16	.233	1-11/16	.43
27448	**27570**	**27814**	**27573**	1/2-13	2.5	5.0	1-1/4	1/2	1-7/16	9/16	.312	2	.9

Retractable Plungers

L Handle Hand Retractable Locking Style



- Hand retractable for easy removal or insertion
- Turn handle to unlock and extend plunger
- Slight taper on end of plunger for easy alignment
- Locking element standard on all sizes



Locking Plungers – Long Reach – Standard Length

Steel Part Number	Steel Delrin Nose Part Number	Stainless Steel Part Number	Stainless Steel Delrin Nose Part Number	A	Force (lbs)		+.001 -.002 B	C	D	E	F	G	H	J	Net Wt. (lbs) 10 Pcs.
					Initial	Final									
27436	**27575**	**27836**	**27579**	1/4-20	.50	2.5	.156	3/8	5/8	1-1/4	1/4	5/8	3/32	1/2	.15
27437	**27576**	**27837**	**27580**	3/8-16	.75	3.75	.250	9/16	1-1/16	2	3/8	15/16	9/64	11/16	.53
27438	**27577**	**27838**	**27581**	1/2-13	1.0	5.0	.312	3/4	1-1/8	2-1/8	1/2	1-1/4	3/16	3/4	1.03
27439	**27578**	**27839**	**27582**	5/8-11	1.0	5.0	.375	1	1-3/4	3	5/8	1-5/16	3/16	1-1/16	2.23

Locking Plungers – Long Reach – Short Length

Steel Part Number	Steel Delrin Nose Part Number	Stainless Steel Part Number	Stainless Steel Delrin Nose Part Number	A	Force (lbs)		+.001 -.002 B	C	D	E	F	G	H	J	Net Wt. (lbs) 10 Pcs.
					Initial	Final									
27416	**27583**	**27867**	**27587**	1/4-20	.125	.50	.156	3/16	7/16	3/4	1/4	9/16	3/32	1/4	.1
27417	**27584**	**27868**	**27588**	3/8-16	.25	1.25	.250	5/16	5/8	1-1/8	3/8	3/4	9/64	3/8	.3
27418	**27585**	**27869**	**27589**	1/2-13	.50	2.0	.312	13/32	7/8	1-1/2	1/2	1	3/16	1/2	.7
27419	**27586**	**27870**	**27590**	5/8-11	.75	2.5	.375	1/2	1-1/8	1-7/8	5/8	1-3/16	3/16	5/8	1.35

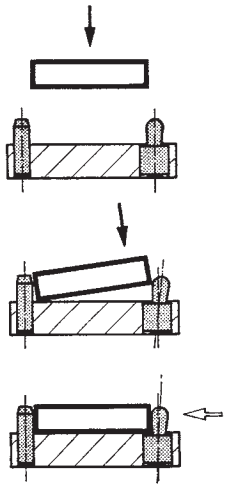
Spring Locating Pins



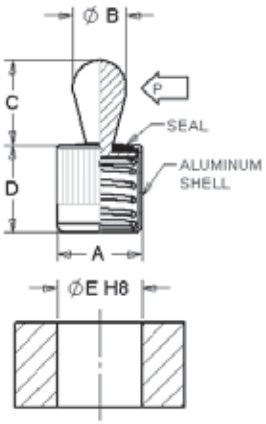


The Jergens Spring Locating Pins are designed for fixturing small parts in tight or compact space. Ideal for positioning and chucking flat parts and round parts and for profile clamping.

- Material: Body, aluminum
  Pin, steel, plastic, or stainless steel
- Finish: Steel Pin, case hardened, zinc coated
  Plastic Pin, delrin
  Spring, steel
- Economical
- Easy to handle and mount
- Ideal for positioning flat or round pieces
- Maintains constant pressure on parts
- Minimizes fixturing space

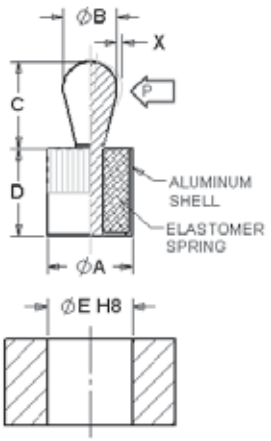


Spring Locating Pins with Seal



Part Number		Diameter				+.001 -.000	Force		Installation
Steel Pin	Plastic Pin	A	B	C	D	E H8	P (lbs)	X	Tool
36201	**36221**	.250	.118	.158	.276	.250	2.2	.035	**36295**
36202	**36222**	.250	.118	.158	.276	.250	4.5	.035	**36295**
36203	—	.250	.118	.158	.276	.250	9.0	.035	**36295**
36204	**36223**	.438	.197	.236	.472	.438	4.5	.063	**36296**
36205	**36224**	.438	.197	.236	.472	.438	11.2	.063	**36296**
36206	—	.438	.197	.236	.472	.438	21.5	.063	**36296**
36207	**36225**	.438	.236	.394	.472	.438	9.0	.071	**36297**
36208	**36226**	.438	.236	.394	.472	.438	17.0	.071	**36297**
36209	—	.438	.236	.394	.472	.438	34.0	.071	**36297**
36210	**36227**	.500	.315	.512	.551	.500	11.2	.102	**36298**
36211	**36228**	.500	.315	.512	.551	.500	22.5	.102	**36298**
36212	—	.500	.315	.512	.551	.500	45.0	.102	**36298**
36213	**36229**	.625	.394	.625	.709	.625	22.5	.126	**36299**
36214	**36230**	.625	.394	.625	.709	.625	45.0	.126	**36299**
36215	—	.625	.394	.625	.709	.625	67.5	.126	**36299**

Spring Locating Pins with *Elastomer base



Part Number							+.001 -.000	Force		Installation
Steel Pin	Plastic Pin	Stainless Steel Pin	Diameter A	B	C	D	E H8	P (lbs)	X	Tool
36231	**36251**	**36271**	.250	.118	.146	.295	.250	2.2	.039	**36295**
36232	**36252**	**36272**	.250	.118	.146	.295	.250	4.4	.039	**36295**
36233	**36253**	**36273**	.438	.197	.287	.371	.438	6.7	.063	**36296**
36234	**36254**	**36274**	.438	.197	.287	.371	.438	13.5	.063	**36296**
36235	**36255**	**36275**	.438	.197	.287	.371	.438	20.0	.063	**36296**
36236	**36256**	**36276**	.438	.236	.406	.371	.438	4.4	.075	**36297**
36237	**36257**	**36277**	.438	.236	.406	.371	.438	6.7	.075	**36297**
36238	**36258**	**36278**	.438	.236	.406	.371	.438	13.5	.075	**36297**
36239	—	**36279**	.438	.236	.406	.371	.438	20.0	.075	**36297**
36240	**36259**	**36280**	.500	.315	.520	.512	.500	11.1	.106	**36298**
36241	**36260**	**36281**	.500	.315	.520	.512	.500	22.2	.106	**36298**
36242	**36261**	**36282**	.625	.394	.654	.625	.625	17.5	.134	**36299**
36243	**36262**	**36283**	.625	.394	.654	.625	.625	35.0	.134	**36299**

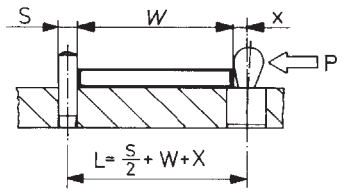
*Uses elastomer plastic spring

Spring Locating Pins
Installation Data

To determine mounting hole locations, use the following formula:

$$L = \frac{S}{2} + W + X$$

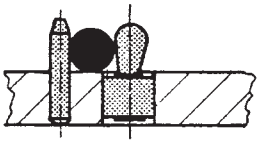
L = Location
S = Diameter of Locating Pin
W = Width of Workpiece
X = See Chart



Application Ideas



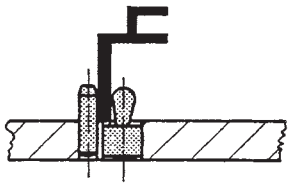
Position and hold flat parts.



Position and hold round parts.



Position and hold from the inside to the outside.



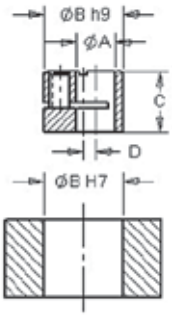
Position and hold various profiles of parts.

Eccentric Liners



Part Number	A	B	C	D
36291	.250	.500	.390	.079
36292	.438	.687	.469	.079
36293	.500	.750	.547	.079
36294	.625	1.000	.705	.118

Eccentric Liners allow for adjustment of spring pin tension due to part material variations, different tolerance requirements, or force adjustment.

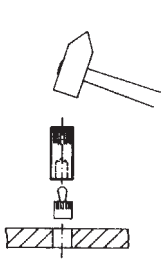


Installation Tools



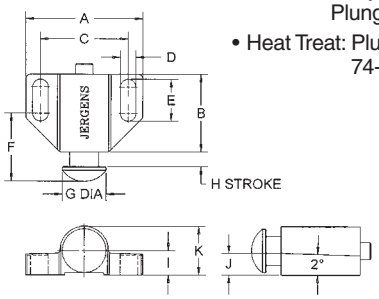
Locating Spring Pin Installation Tools are designed to make installation easier.

Refer to the charts on page 380 to determine which tool to use.



Spring Stops
Button Type





- Material: Body, Zinc Aluminum Alloy ZA-12
  Plunger, Low Carbon Steel
- Heat Treat: Plunger Case Hardened
  74-77 R30N

Jergens Features:

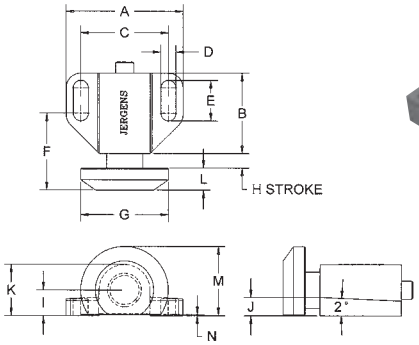
Set screw allows for adjustable plunger travel.

Angled mounting slot provides a more secure hold.

End Force (Half-Depressed)
36101, 36104, 36107 – 10 lbs./6.8 kg
36102, 36105, 36111 – 14 lbs./13.6 kg
36103, 36106, 36109 – 32 lbs./18.14 kg

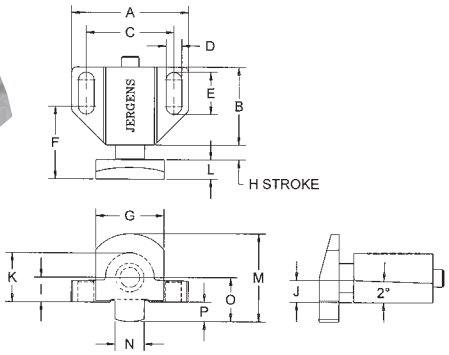
Flat Button Type





Tang Type





Jergens Spring Stops Dimension Tables

	Part. No.	A	B	C	D	E	F	G	Stroke H	I	J	K	L	M	N	O	P	Wt. (lbs) 10 Pcs.
Button	**36101**	15/16	11/16	21/32	0.14	0.35	21/32	3/8	1/8	7/32	7/32	13/32	—	—	—	—	—	0.2
	36102	1 1/2	1	1 1/8	0.2	0.54	29/32	9/16	3/16	5/16	9/32	5/8	—	—	—	—	—	0.9
	36103	2	1 3/8	1 1/2	0.257	0.69	1 5/16	13/16	1/4	7/16	5/16	7/8	—	—	—	—	—	1.85
Tang	**36104**	15/16	11/16	21/32	0.14	0.35	21/32	5/8	1/8	7/32	7/32	13/32	3/16	7/8	1/4	7/16	15/64	0.2
	36105	1 1/2	1	1 1/8	0.2	0.54	29/32	7/8	3/16	5/16	9/32	5/8	1/4	1 1/8	3/8	9/16	17/64	0.9
	36106	2	1 3/8	1 1/2	0.257	0.69	1 5/16	1 1/4	1/4	7/16	5/16	7/8	3/8	1 1/2	1/2	3/4	21/64	1.85
Flat	**36107**	15/16	11/16	21/32	0.14	0.35	21/32	3/4	1/8	7/32	7/32	13/32	3/16	7/8	1/64	—	—	0.2
	36111	1 1/2	1	1 1/8	0.2	0.54	29/32	1 1/8	3/16	5/16	9/32	5/8	1/4	1 1/8	1/64	—	—	0.9
	36109	2	1 3/8	1 1/2	0.257	0.69	1 5/16	1 1/2	1/4	7/16	5/16	7/8	3/8	1 1/2	1/64	—	—	1.85

Metric Dimensions (mm)

	Part. No.	A	B	C	D	E	F	G	Stroke H	I	J	K	L	M	N	O	P	Wt. (kg) 10 Pcs.
Button	**36101**	23.8	17.5	16.7	3.6	8.9	15.1	9.5	3.2	5.6	5.6	10.3	—	—	—	—	—	0.09
	36102	38.1	25.4	28.6	5.1	13.7	21.4	14.3	4.8	7.9	7.1	15.9	—	—	—	—	—	0.41
	36103	50.8	34.9	38.1	6.5	17.5	31	20.6	6.4	11.1	7.9	22.2	—	—	—	—	—	0.84
Tang	**36104**	23.8	17.5	16.7	3.6	8.9	15.1	15.9	3.2	5.6	5.6	10.3	4.8	22.2	6.4	11.1	6	0.09
	36105	38.1	25.4	28.6	5.1	13.7	21.4	22.2	4.8	7.9	7.1	15.9	6.4	28.6	9.5	14.3	6.7	0.41
	36106	50.8	34.9	38.1	6.5	17.5	31	31.8	6.4	11.1	7.9	22.2	9.5	38.1	12.7	19.1	8.3	0.84
Flat	**36107**	23.8	17.5	16.7	3.6	8.9	15.1	19.1	3.2	5.6	5.6	10.3	4.8	22.2	0.4	—	—	0.09
	36111	38.1	25.4	28.6	5.1	13.7	21.4	22.2	4.8	7.9	7.1	15.9	6.4	28.6	0.4	—	—	0.41
	36109	50.8	34.9	38.1	6.5	17.5	31	38.1	6.4	11.1	7.9	22.2	9.5	38.1	0.4	—	—	0.84

Threaded Inserts

Bolster Plate Bushings 387
Installation and Removal Instructions 384
Internal Locking Thread Repair Insert 390–391
Keylocking, Extra Heavy Duty Industrial Style 388
Keylocking, Heavy Duty Industrial Style 386
Keylocking, Metric/Inch 387
Keylocking, Solid Industrial Style 389
Keylocking, Thinwall Industrial Style 385
Miniature Metric Mil Spec Inserts 392–393
Thread Repair Kits 394–397

Jergens®
MANUFACTURING EFFICIENCY

Installation Information



1. Drill to allow full tap depth shown in chart. Note: Tap drill is oversized; see chart below. Countersink as shown in chart.



2. Tap to depth shown in chart.



3. Install insert .010" to .030" below surface.



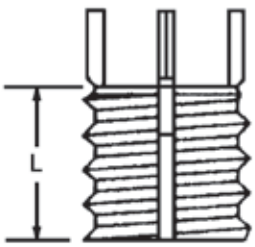
4. Drive keys down with proper installation tool.

Removal Information

Jergens Keylocking Inserts can be removed without damage to the parent material.

1. Drill the insert to the size and depth shown under removal data in the chart below.
2. Bend the keys down and break them off.
3. Remove the insert using an E-Z out or similar tool.





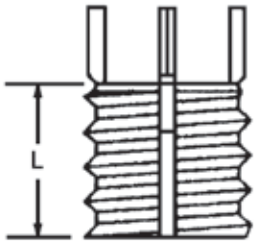
Installation Information

Preparation of External Threads Prior to Installation (For Keylocking Inserts Only)

Insert		Installation Data			Removal Data	
External Thread Class 2A	Length L	Tap Drill Size	C'sink Dia. +.010 -.000	Minimum Tap Depth	Drill Size	Drill Depth
5/16-18	.31	I	.323	.37	7/32	1/8
3/8-16	.31/.37	Q	.385	.37/.43	9/32	1/8
7/16-14	.31/.37/.43	X	.447	.37/.43/.50	11/32	3/16
1/2-13	.37/.43/.50	29/64	.510	.44/.50/.56	13/32	3/16
9/16-12	.43/.50/.56	33/64	.572	.50/.56/.62	15/32	3/16
5/8-11	.50/.62	37/64	.635	.56/.68	17/32	3/16
3/4-16	.62/.81	45/64	.760	.68/.94	21/32	3/16
7/8-14	.68/.81/.87	53/64	.885	.75/.94/1.0	25/32	3/16
1-12	.87	15/16	1.020	1.0	27/32	5/16
1 1/8-12	1.12	1 1/16	1.145	1.31	31/32	5/16
1 1/4-12	1.12/1.25	1 3/16	1.270	1.31/1.44	1 3/32	5/16
1 3/8-12	1.25/1.37	1 5/16	1.395	1.44/1.56	1 7/32	5/16
1 1/2-12	1.37/1.62	1 7/16	1.520	1.56/1.84	1 11/32	5/16
1 5/8-12	1.81	1 9/16	1.640	2.06	1 15/32	5/16
1 7/8-12	2.00	1 13/16	1.890	2.28	1 23/32	5/16

Keylocking Inserts
Thinwall Industrial Style





- Material: Carbon Steel Inserts - C1215 or equivalent
  Stainless Steel Insert - 303 Keys - 302
- Finish: Carbon Steel Inserts - Parkerized
  Stainless Steel Inserts - Passivated
- Tolerances: Inch ±.010 Metric ±.25mm
- Keys: Inserts with internal thread size of 5/16-18 or larger are furnished with four locking keys.
- RoHS compliant

Inch Inserts - Thinwall

Internal Thread Class 2B	Part Number		External Thread	Length L	Installation Tool Part Number
	Carbon Steel	Stainless Steel			
10-24	**25921**	**26321**	5/16-18	.31	**24721**
10-32	**26121**	**26521**	5/16-18	.31	**24721**
1/4-20	**25922**	**26322**	3/8-16	.37	**24722**
1/4-28	**26122**	**26522**	3/8-16	.37	**24722**
5/16-18	**25923**	**26323**	7/16-14	.43	**24723**
5/16-24	**26123**	**26523**	7/16-14	.43	**24723**
3/8-16	**25924**	**26324**	1/2-13	.50	**24724**
3/8-24	**26124**	**26524**	1/2-13	.50	**24724**
7/16-14	**25925**	**26325**	9/16-12	.56	**24725**
7/16-20	**26125**	**26525**	9/16-12	.56	**24725**
1/2-13	**25926**	**26326**	5/8-11	.62	**24726**
1/2-20	**26126**	**26526**	5/8-11	.62	**24726**

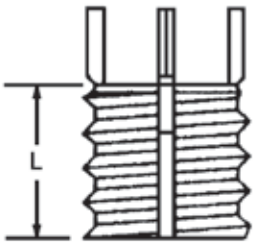
See chart on page 384 for installation information.

Metric Inserts - Thinwall

Part Number		Insert		Installation						Removal	
								Thread Tap		Drill	
Carbon Steel	Stainless Steel	Internal Thread Class 6H	External Thread Class 6g	Length L	Installation Tool Part No.	Tap Drill Size	C'sink Dia. +.25 -.00	Size Class 6h	Min. Depth	Size	Depth
25951	**26351**	M 5x0.8	M 8x1.25	8.0	**24751**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
25952	**26352**	M 6x1.0	M 10x1.25	10.0	**24752**	8.8	10.25	M 10x1.25	11.5	7.50	4.75
25953	**26353**	M 8x1.25	M 12x1.25	12.0	**24753**	10.8	12.25	M 12x1.25	13.5	9.50	4.75
26153	**26553**	M 8x1.0	M 12x1.25	12.0	**24753**	10.8	12.25	M 12x1.25	13.5	9.50	4.75
25955	**26355**	M 10x1.5	M 14x1.5	14.0	**24755**	12.8	14.25	M 14x1.5	15.5	11.50	4.75
26155	**26555**	M 10x1.25	M 14x1.5	14.0	**24755**	12.8	14.25	M 14x1.5	15.5	11.50	4.75
25956	**26356**	M 12x1.75	M 16x1.5	16.0	**24756**	14.75	16.25	M 16x1.5	17.5	13.50	4.75
26156	**26556**	M 12x1.25	M 16x1.5	16.0	**24756**	14.75	16.25	M 16x1.5	17.5	13.50	4.75

Jergens SPECIALTY FASTENERS GROUP

Keylocking Inserts
Heavy Duty Industrial Style



- Material: Carbon Steel Inserts - C1215 or equivalent
  Stainless Steel Insert - 303
  Keys - 302
- Finish: Carbon Steel Inserts - Parkerized
  Stainless Steel Inserts - Passivated
- Tolerances: Inch ±.010
  Metric ±.25mm
- Keys: Inserts with internal thread size of 5/16-18 or larger are furnished with four locking keys.
- RoHS compliant

Inch Inserts - Heavy Duty

Internal Thread Class 2B	Part Number		External Thread	Length L	Installation Tool Part Number
	Carbon Steel	Stainless Steel			
8-32	**25900**	**26300**	5/16-18	.31	**24700**
10-24	**25901**	**26301**	3/8-16	.31	**24701**
10-32	**26101**	**26501**	3/8-16	.31	**24701**
1/4-20	**25902**	**26302**	7/16-14	.37	**24702**
1/4-28	**26102**	**26502**	7/16-14	.37	**24702**
5/16-18	**25903**	**26303**	1/2-13	.43	**24703**
5/16-24	**26103**	**26503**	1/2-13	.43	**24703**
3/8-16	**25904**	**26304**	9/16-12	.50	**24704**
3/8-24	**26104**	**26504**	9/16-12	.50	**24704**
7/16-14	**25905**	**26305**	5/8-11	.62	**24705**
7/16-20	**26105**	**26505**	5/8-11	.62	**24705**
1/2-13	**25906**	**26306**	3/4-16	.62	**24706**
1/2-20	**26106**	**26506**	3/4-16	.62	**24706**
9/16-12	**25907**	**26307**	3/4-16	.81	**24707**
9/16-18	**26107**	**26507**	3/4-16	.81	**24707**
5/8-11	**25908**	**26308**	7/8-14	.87	**24708**
5/8-18	**26108**	**26508**	7/8-14	.87	**24708**
3/4-10	**25909**	**26309**	1 1/8-12	1.12	**24709**
3/4-16	**26109**	**26509**	1 1/8-12	1.12	**24709**
7/8-9	**25910**	**26310**	1 1/4-12	1.25	**24710**
7/8-14	**26110**	**26510**	1 1/4-12	1.25	**24710**
1-8	**25911**	**26311**	1 3/8-12	1.37	**24711**
1-12	**26111**	**26511**	1 3/8-12	1.37	**24711**
1-14	**26112**	—	1 3/8-12	1.37	**24711**
1 1/8-7	**25913**	—	1 1/2-12	1.62	**24713**
1 1/8-12	**26113**	—	1 1/2-12	1.62	**24713**
1 1/4-7	**25914**	—	1 5/8-12	1.81	**24714**
1 1/4-12	**26114**	—	1 5/8-12	1.81	**24714**
1 1/2-6	**25916**	—	1 7/8-12	2.00	**24716**
1 1/2-12	**26116**	—	1 7/8-12	2.00	**24716**

See chart on page 384 for installation information.

Metric Inserts - Heavy Duty

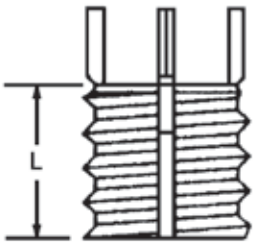
Part Number Carbon Steel	Part Number Stainless Steel	Insert			Installation					Removal	
		Internal Thread Class 6H	External Thread Class 6g	Length L	Installation Tool Part No.	Tap Drill Size	C'sink Diameter +.25 -.00	Thread Tap		Drill	
								Size Class 6h	Min. Depth	Size	Depth
25963	**26363**	M 4x0.7	M 8x1.25	8.0	**24763**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
25964	**26364**	M 5x0.8	M 10x1.25	10.0	**24764**	8.8	10.25	M 10x1.25	12.5	7.50	4.75
25965	**26365**	M 6x1.0	M 12x1.25	12.0	**24765**	10.8	12.25	M 12x1.25	14.5	9.50	4.75
25966	**26366**	M 8x1.25	M 14x1.5	14.0	**24766**	12.8	14.25	M 14x1.5	16.5	11.50	4.75
26166	**26566**	M 8x1.0	M 14x1.5	14.0	**24766**	12.8	14.25	M 14x1.5	16.5	11.50	4.75
25967	**26367**	M 10x1.5	M 16x1.5	16.0	**24767**	14.75	16.25	M 16x1.5	18.5	13.50	4.75
26167	**26567**	M 10x1.25	M 16x1.5	16.0	**24767**	14.75	16.25	M 16x1.5	18.5	13.50	4.75
25969	**26369**	M 12x1.75	M 18x1.5	18.0	**24769**	16.75	18.25	M 18x1.5	20.5	15.50	4.75
26169	**26569**	M 12x1.25	M 18x1.5	18.0	**24769**	16.75	18.25	M 18x1.5	20.5	15.50	4.75
25970	**26370**	M 14x2.0	M 20x1.5	20.0	**24770**	18.75	20.25	M 20x1.5	22.5	17.50	4.75
26170	**26570**	M 14x1.5	M 20x1.5	20.0	**24770**	18.75	20.25	M 20x1.5	22.5	17.50	4.75
25971	**26371**	M 16x2.0	M 22x1.5	22.0	**24771**	20.5	22.25	M 22x1.5	24.5	17.75	6.35
26171	**26571**	M 16x1.5	M 22x1.5	22.0	**24771**	20.5	22.25	M 22x1.5	24.5	17.75	6.35
26172	**26572**	M 18x1.5	M 24x1.5	24.0	**24772**	22.5	24.25	M 24x1.5	26.5	19.75	6.35
25973	**26373**	M 20x2.5	M 30x2.0	30.0	**24773**	28.0	30.25	M 30x2.0	34.5	25.75	6.35
26173	**26573**	M 20x1.5	M 30x2.0	30.0	**24773**	28.0	30.25	M 30x2.0	34.5	25.75	6.35
26174	**26574**	M 22x1.5	M 32x2.0	32.0	**24774**	30.0	32.25	M 32x2.0	36.5	27.75	6.35
25975	**26375**	M 24x3.0	M 33x2.0	33.0	**24775**	31.0	33.25	M 33x2.0	37.5	28.75	6.35
26175	**26575**	M 24x2.0	M 33x2.0	33.0	**24775**	31.0	33.25	M 33x2.0	37.5	28.75	6.35

NOTE: Install insert .25mm to .76mm below surface and drive locking keys down. See C'sink Diameter column above.

Keylocking Inserts
Metric/Inch Inserts



Create Metric Holes...
With Inch Taps!
This unique product allows you to create a metric thread utilizing inch drills and taps. The insert O.D. is inch sized, the I.D. is metric.



Metric Internal/Inch External - Heavy Duty Industrial Style

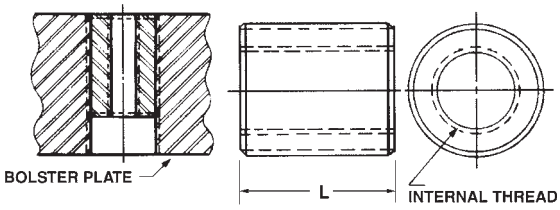
Part Number Carbon Steel	Insert			Installation					Removal	
	Internal Thread Class 6H	External Thread Class 2A	Length L	Installation Tool Part Number	Tap Drill Size	C'sink Diameter +.010 -.000	Thread Tap Size Class 2b	Thread Tap Min. Depth	Drill Size	Drill Depth
26243	M 6x1.0	3/8 - 16	.31	**24843**	Q	.38	3/8 - 16	.37	9/32	1/8
26244	M 8x1.25	1/2 - 13	.43	**24844**	29/64	.51	1/2 - 13	.50	13/32	3/16
26245	M 10x1.5	5/8 - 11	.50	**24845**	37/64	.63	5/8 - 11	.56	17/32	3/16
26247	M 12x1.75	3/4 - 16	.62	**24847**	45/64	.76	3/4 - 16	.68	21/32	3/16
26248	M 14x2.0	7/8 - 14	.81	**24848**	53/64	.88	7/8 - 14	.94	25/32	5/16
26249	M 16x2.0	1" - 12	.87	**24849**	15/16	1.02	1" - 12	1.00	27/32	5/16

All dimensions are in inches except for internal thread, which is metric.

Bolster Plate Bushings



- Material: Stressproof
- Finish: Black Oxide
- Internal Thread: 2B-UNC
- External Thread: 2A-UNF



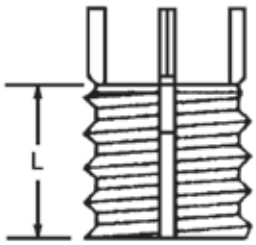
Repairs are made quickly, easily, and right on the machine. Re-tap bolster plate hole, insert the threaded bushing to match, use a locking type sealant to lock the bushing in place. The Bolster Plate Bushings can also be used as threaded bushings in cast iron machine bases where greater thread strength is necessary. Eliminates the problems of "pulled-out" cast iron threads, reduces the need for bulky threaded cast iron sections.

Part Number	Internal Thread	External Thread	L	Wt. (lbs) 10 Pcs.
11701	3/8-16	3/4-16	1 1/2	1.25
11702	1/2-13	1 -14	1 1/2	2.20
11703	5/8-11	1 -14	1 1/2	1.85
11704	3/4-10	1 1/4-12	1 1/2	3.00
11705	1 -8	1 1/2-12	2	5.15

Jergens SPECIALTY FASTENERS GROUP

Keylocking Inserts
Extra Heavy Duty
Industrial Style





The increased wall thickness and greater external thread area of these extra heavy duty threaded inserts offer greater pull-out strength, stability, and longer life. These inserts should be used in materials with lower ultimate shear strength to obtain maximum pull-out strength and holding power.

- Greater Thread Area
- Increased Shear Engagement
- Offers Holding Power Comparable to Standard Heavy Duty Inserts in High Shear Strength Material
- Material: Carbon Steel Inserts - C1215 or equivalent
  Stainless Steel Insert - 303
  Keys - 302
- Finish: Carbon Steel Inserts - Parkerized
  Stainless Steel Inserts - Passivated
- Tolerances: ±.010
- Keys: Inserts with internal thread size of 5/16-18 or larger are furnished with four locking keys.
- RoHS compliant

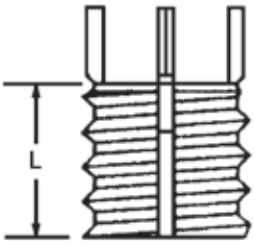
Internal Thread Class 2B	Part Number		External Thread Class 2A	Length L	Installation Tool Part Number
	Carbon Steel	Stainless Steel			
6-32	**25931**	**26331**	5/16-18	.31	**24731**
8-32	**25932**	**26332**	3/8-16	.31	**24732**
10-24	**25933**	**26333**	7/16-14	.31	**24733**
10-32	**26133**	**26533**	7/16-14	.31	**24733**
1/4-20	**25934**	**26334**	1/2-13	.37	**24734**
1/4-28	**26134**	**26534**	1/2-13	.37	**24734**
5/16-18	**25935**	**26335**	9/16-12	.43	**24735**
5/16-24	**26135**	**26535**	9/16-12	.43	**24735**
3/8-16	**25936**	**26336**	5/8-11	.50	**24736**
3/8-24	**26136**	**26536**	5/8-11	.50	**24736**
7/16-14	**25937**	**26337**	3/4-16	.62	**24737**
7/16-20	**26137**	**26537**	3/4-16	.62	**24737**
1/2-13	**25938**	**26338**	7/8-14	.68	**24738**
1/2-20	**26138**	**26538**	7/8-14	.68	**24738**
9/16-12	**25939**	**26339**	7/8-14	.81	**24739**
9/16-18	**26139**	**26539**	7/8-14	.81	**24739**
5/8-11	**25940**	**26340**	1-12	.87	**24740**
5/8-18	**26140**	**26540**	1-12	.87	**24740**
3/4-10	**25941**	**26341**	1 1/4-12	1.12	**24741**
3/4-16	**26141**	**26541**	1 1/4-12	1.12	**24741**
7/8-9	**25942**	**26342**	1 3/8-12	1.25	**24742**
7/8-14	**26142**	**26542**	1 3/8-12	1.25	**24742**
1-8	**25943**	**26343**	1 1/2-12	1.37	**24743**
1-12	**26143**	**26543**	1 1/2-12	1.37	**24743**

See chart on page 384 for installation information.

Keylocking Inserts
Solid Industrial Style



- Material: Carbon Steel Inserts - C1215 or equivalent
  Stainless Steel Insert - 303
  Keys - 302
- Finish: Carbon Steel Inserts - Parkerized
  Stainless Steel Inserts - Passivated
- Tolerances: Inch ±.010
  Metric ±.25mm
- Keys: Inserts with internal thread size of M7 or larger are furnished with four locking keys.
- RoHS compliant



- Salvage expensive castings
- Relocate holes that have been drilled or tapped in the wrong location
- Fill holes that are too large
- No need to alter original bolt size

External Thread Class 2A	Part Number		Length L	Installation Tool Part Number
	Carbon Steel	Stainless Steel		
5/16-18	**26001**	**26401**	.31	**24801**
3/8-16	**26002**	**26402**	.31	**24802**
7/16-14	**26003**	**26403**	.37	**24803**
1/2-13	**26004**	**26404**	.43	**24804**
9/16-12	**26005**	**26405**	.50	**24805**
5/8-11	**26006**	**26406**	.62	**24806**
3/4-16	**26007**	**26407**	.68	**24807**
7/8-14	**26008**	**26408**	.87	**24808**
1-12	**26009**	**26409**	.87	**24809**
1 1/8-12	**26010**	**26410**	1.12	**24810**
1 1/4-12	**26011**	**26411**	1.25	**24811**
1 3/8-12	**26012**	**26412**	1.37	**24812**

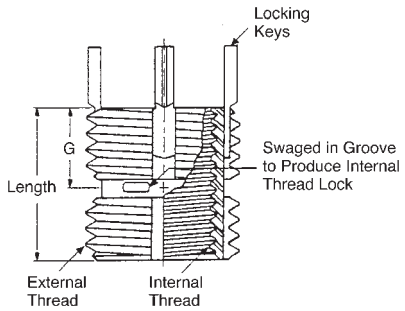
See chart on page 384 for installation information.

Metric Inserts - Solid

Part Number Carbon Steel	Insert		Installation					Removal	
	External Thread Class 6g	Length L	Installation Tool Part No.	Tap Drill Size	C'sink Dia. +.25 -.00	Thread Tap		Drill	
						Size Class 6h	Min. Depth	Size	Depth
26021	M 8x1.25	8.0	**24821**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
26022	M 10x1.25	10.0	**24822**	8.8	10.25	M 10x1.25	12.5	7.50	4.75
26023	M 12x1.25	12.0	**24823**	10.8	12.25	M 12x1.25	14.5	9.50	4.75
26024	M 14x1.5	14.0	**24824**	12.8	14.25	M 14x1.5	16.5	11.50	4.75
26025	M 16x1.5	16.0	**24825**	14.75	16.25	M 16x1.5	18.5	13.50	4.75
26026	M 18x1.5	18.0	**24826**	16.75	18.25	M 18x1.5	20.5	15.50	4.75
26027	M 20x1.5	20.0	**24827**	18.75	20.25	M 20x1.5	22.5	17.50	4.75
26028	M 22x1.5	22.0	**24828**	20.5	22.25	M 22x1.5	24.5	17.75	6.35
26029	M 24x1.5	24.0	**24829**	22.5	24.25	M 24x1.5	26.5	19.75	6.35
26030	M 30x2.0	30.0	**24830**	28.0	30.25	M 30x2.0	34.5	25.75	6.35
26031	M 32x2.0	32.0	**24831**	30.0	32.25	M 32x2.0	36.5	27.75	6.35
26032	M 33x2.0	33.0	**24832**	31.0	33.25	M 33x2.0	37.5	28.75	6.35

Internal Locking Thread Repair Inserts

Material: Inserts - 303 stainless steel or equivalent
Keys - 302 stainless steel or equivalent
Finish: Passivated
Tolerances: ± .010 inch unless specified otherwise.
Dimensions: All dimensions below are in inches.
Keys: Inserts with an internal thread size of 5/16 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.
RoHS compliant



Thinwall - Locking

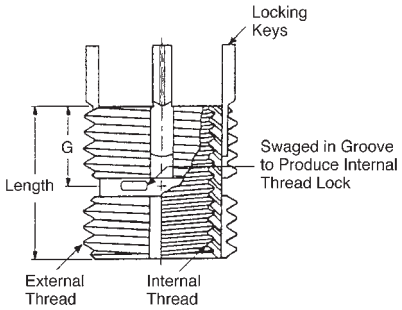
Insert					Installation					Removal	
								Thread Tap		Drill	
Part Number	Internal Thread Class 2B	External Thread (Mod.) Class 2A	Length	G (Ref.)	Installation Tool Part No.	Tap Drill Size	C'sink Dia +.010 -.000	Size Class 2B	Min. Depth	Size	Depth
24521	10 - 24	5/16 - 18	.31	.15	**24721**	"I"	.32	5/16 - 18	.37	7/32	1/8
24621	10 - 32										
24522	1/4 - 20	3/8 - 16	.37	.18	**24722**	"Q"	.38	3/8 - 16	.43	9/32	3/16
24622	1/4 - 28										
24523	5/16 - 18	7/16 - 14	.43	.21	**24723**	"X"	.44	7/16 - 14	.50	11/32	3/16
24623	5/16 - 24										
24524	3/8 - 16	1/2 - 13	.50	.25	**24724**	29/64	.51	1/2 - 13	.56	13/32	3/16
24624	3/8 - 24										
24525	7/16 - 14	9/16 - 12	.56	.28	**24725**	33/64	.57	9/16 - 12	.62	15/32	3/16
24625	7/16 - 20										
24526	1/2 - 13	5/8 - 11	.62	.31	**24726**	37/64	.63	5/8 - 11	.68	17/32	3/16
24626	1/2 - 20										

Heavy Duty - Locking

Insert					Installation					Removal	
								Thread Tap		Drill	
Part Number	Internal Thread Class 2B	External Thread (Mod.) Class 2A	Length	G (Ref.)	Installation Tool Part No.	Tap Drill Size	C'sink Dia +.010 -.000	Size Class 2B	Min. Depth	Size	Depth
24500	8 - 32	5/16 - 18	.31	.15	**24700**	"I"	.32	5/16 - 18	.37	7/32	1/8
24501	10 - 24	3/8 - 16	.31	.15	**24701**	"Q"	.38	3/8 - 16	.37	9/32	1/8
24601	10 - 32										
24502	1/4 - 20	7/16 - 14	.37	.18	**24702**	"X"	.44	7/16 - 14	.43	11/32	3/16
24602	1/4 - 28										
24503	5/16 - 18	1/2 - 13	.43	.21	**24703**	29/64	.51	1/2 - 13	.50	13/32	3/16
24603	5/16 - 24										
24504	3/8 - 16	9/16 - 12	.50	.25	**24704**	33/64	.57	9/16 - 12	.56	15/32	3/16
24604	3/8 - 24										
24505	7/16 - 14	5/8 - 11	.62	.31	**24705**	37/64	.63	5/8 - 11	.68	17/32	3/16
24605	7/16 - 20										
24506	1/2 - 13	3/4 - 16	.62	.31	**24706**	45/64	.76	3/4 - 16	.68	21/32	3/16
24606	1/2 - 20										
24507	9/16 - 12	3/4 - 16	.81	.40	**24707**	45/64	.76	3/4 - 16	.94	21/32	3/16
24607	9/16 - 18										
24508	5/8 - 11	7/8 - 14	.87	.43	**24708**	53/64	.88	7/8 -14	1.00	25/32	5/16
24608	5/8 - 18										
24509	3/4 - 10	1-1/8 - 12	1.12	.56	**24709**	1-1/16	1.14	1-1/8 - 12	1.31	31/32	5/16
24609	3/4 - 16										
24510	7/8 - 9	1-1/4 - 12	1.25	.62	**24710**	1-3/16	1.27	1-1/4 - 12	1.44	1-3/32	5/16
24610	7/8 - 14										
24511	1" - 8	1-3/8 - 12	1.37	.68	**24711**	1-5/16	1.39	1-3/8 - 12	1.56	1-7/32	5/16
24611	1" - 12										

Metric Internal Locking Thread Repair Inserts

Material: Inserts - 303 stainless steel or equivalent
Keys - 302 stainless steel or equivalent
Finish: Passivated
Tolerances: ±.25 mm unless specified otherwise.
Dimensions: All dimensions below are in millimeters
Keys: Inserts with an internal thread size of M7 and larger are furnished with 4 locking keys. Smaller sizes have 2 locking keys.
RoHS compliant



Thinwall - Metric - Locking

Insert					Installation					Removal	
								Thread Tap		Drill	
Part Number	Internal Thread Class 6H	External Thread Class 6g	Length	G (Ref.)	Installation Tool Part No.	Tap Drill Size	C'sink Dia. +.25 -.00	Size Class 6h	Min. Depth	Size	Depth
24551	M 5x0.8	M 8x1.25	8.0	4.0	**24751**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
24552	M 6x1.0	M 10x1.25	10.0	5.0	**24752**	8.8	10.25	M 10x1.25	11.5	7.50	4.75
24553	M 8x1.25	M 12x1.25	12.0	6.0	**24753**	10.8	12.25	M 12x1.25	13.5	9.50	4.75
24653	M 8x1.0										
24555	M 10x1.5	M 14x1.5	14.0	7.0	**24755**	12.8	14.25	M 14x1.5	15.5	11.50	4.75
24655	M 10x1.25										
24556	M 12x1.75	M 16x1.5	16.0	8.0	**24756**	14.75	16.25	M 16x1.5	17.5	13.50	4.75
24656	M 12x1.25										

Heavy Duty - Metric - Locking

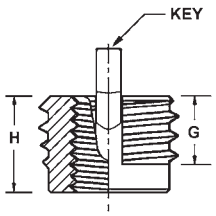
Insert					Installation					Removal	
								Thread Tap		Drill	
Part Number	Internal Thread Class 6H	External Thread Class 6g	Length	G (Ref.)	Installation Tool Part No.	Tap Drill Size	C'sink Dia. +.25 -.00	Size Class 6h	Min. Depth	Size	Depth
24563	M 4X0.7	M 8x1.25	8.0	4.0	**24763**	6.9	8.25	M 8x1.25	9.5	5.50	4.00
24564	M 5x0.8	M 10x1.25	10.0	5.0	**24764**	8.8	10.25	M 10x1.25	12.5	7.50	4.75
24565	M 6x1.0	M 12x1.25	12.0	6.0	**24765**	10.8	12.25	M 12x1.25	14.5	9.50	4.75
24566	M 8x1.25	M 14x1.5	14.0	7.0	**24766**	12.8	14.25	M 14x1.5	16.5	11.50	4.75
24666	M 8x1.0										
24567	M 10x1.5	M 16x1.5	16.0	8.0	**24767**	14.75	16.25	M 16x1.5	18.5	13.50	4.75
24667	M 10x1.25										
24569	M 12x1.75	M 18x1.5	18.0	9.0	**24769**	16.75	18.25	M 18x1.5	20.5	15.50	4.75
24669	M 12x1.25										
24570	M 14x2.0	M 20x1.5	20.0	10.0	**24770**	18.75	20.25	M 20x1.5	22.5	17.50	4.75
24670	M 14x1.5										
24571	M 16x2.0	M 22x1.5	22.0	11.0	**24771**	20.5	22.25	M 22x1.5	24.5	17.75	6.35
24671	M 16x1.5										
24672	M 18x1.5	M 24X1.5	24.0	12.0	**24772**	22.5	24.25	M 24x1.5	26.5	19.75	6.35
24573	M 20x2.5	M 30x2.0	30.0	15.0	**24773**	28.0	30.25	M 30x2.0	34.5	25.75	6.35
24673	M 20x1.5										
24674	M 22x1.5	M 32x2.0	32.0	16.0	**24774**	30.0	32.25	M 32x2.0	36.5	27.75	6.35
24575	M 24x3.0	M 33x2.0	33.0	16.5	**24775**	31.0	33.25	M 33x2.0	37.5	28.75	6.35
24675	M 24x2.0										

Jergens SPECIALTY FASTENERS GROUP

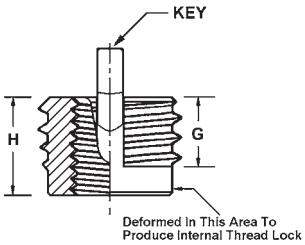
Miniature - Metric
303 CRES Keylocking Threaded Inserts

Material: Inserts - 303 CRES
Keys - 302 CRES
Finish: Passivated
Tolerances: ±.25 mm unless specified otherwise
Internal Threads: Per Fed Std H28/21, MJ Form
Dimensions: All dimensions below are in millimeters
Keys: Miniature Inserts are furnished with 2 locking keys
Material Identification Mark: None
Lubrication: Dry Film Lube on Self-Locking Inserts only
RoHS compliant

Non-Locking



Self-Locking

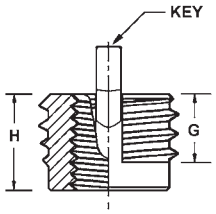


Part Number*			Insert			Installation					Removal	
									Thread Tap		Drill	
Non-Locking	Self-Locking	Internal Thread Class 4H6H	External Thread Class 4h	Thread Length G	Length H	Install Tool Part No*	Tap Drill Size +.080/ -.025	C'Sink Dia. +.25/-.00	Size Class 6H	Min. Depth	Size	Depth
26382	**27382**	M 2x0.4	M 4x0.7	2.20	3.00	**22682**	3.4	4.1	M 4x0.7	4.0	2.8	2.00
26383	**27383**	M 2.5x0.45	M 4.5x0.75	2.70	3.81	**22683**	3.9	4.6	M 4.5x0.75	5.0	3.0	2.00
26384	**27384**	M 3x0.5	M 5x0.8	3.10	4.25	**22684**	4.4	5.1	M 5x0.8	5.5	3.5	2.25
26386	**27386**	M 4x0.7	M 6x0.75	4.11	5.25	**22686**	5.5	6.1	M 6x0.75	6.5	4.6	2.50

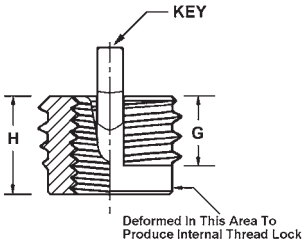
Miniature - Inch
303 CRES Keylocking Threaded Inserts

Material: Inserts - 303 CRES
Keys - 302 CRES
Finish: Passivated
Tolerances: ±.010 inch unless specified otherwise
Internal Threads: Per SAE AS8879
Dimensions: All dimensions below are in inches
Keys: Miniature Inserts are furnished with 2 locking keys
Material Identification Mark: None
Lubrication: Dry Film Lube on Self-Locking Inserts only
RoHS compliant

Non-Locking



Self-Locking



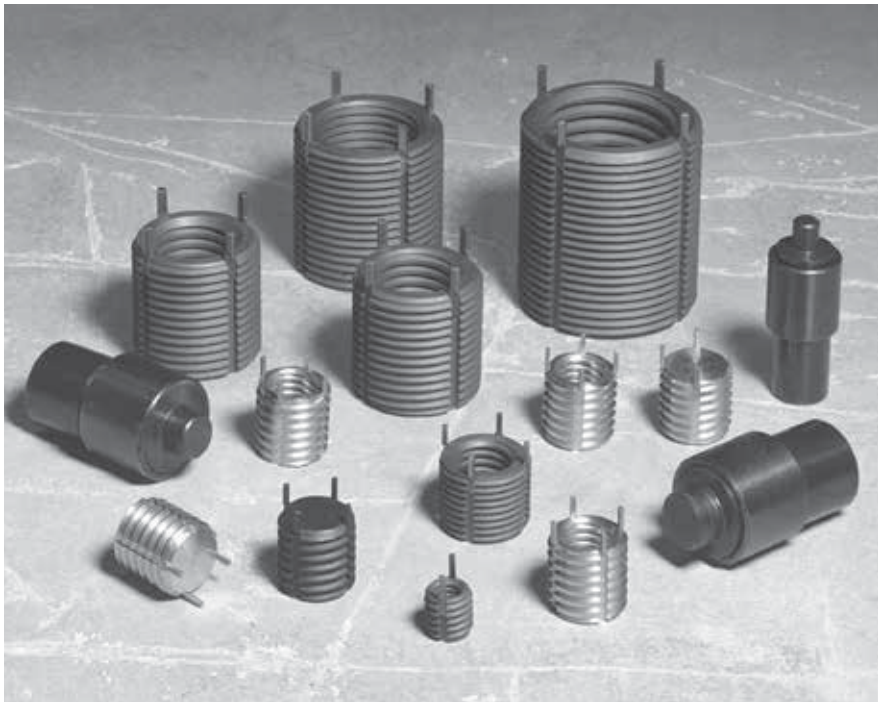
Part Number*			Insert			Installation					Removal	
									Thread Tap		Drill	
Non-Locking	Self-Locking	Internal Thread Class 3B	External Thread Class 2A	G Thread Length	H Length	Install Tool Part No*	Tap Drill Size +.003/ -.001	C'Sink Dia. +.010/-.000	Size Class 2B	Min. Depth	Size	Depth
26283	**27283**	2 - 56	8 - 32	.090	.120	**22552**	.134	.166	8 - 32	.140	#33	1/16
26284	**27284**	4 - 40	10 - 32	.125	.170	**22554**	.161	.194	10 - 32	.160	#29	3/32
26285	**27285**	6 - 32	12 - 28	.125	.170	**22556**	.187	.220	12 - 28	.160	#21	3/32
26286	**27286**	8 - 32	1/4 - 28†	.175	.220	**22558**	.228	.255	1/4 - 28	.210	#8	1/8

† Modified Minor Diameter

High Strength Materials Available: These miniature inserts are also manufactured in high strength stainless steel (A-286 with heat treatment) and in alloy steel (4140 with heat treatment).

MS/NAS Style Insert

Jergens now offers Mil-Spec Keylocking Threaded Inserts



NEW

Thread Inserts

- Inch and metric sizes available
- Standard Material: 303 CRES
  C1215
- Special Material: A286 CRES
  4140 Alloy Steel

Insert Style
Miniature & Lightweight MS 51830/NAS 1394
Heavy Duty MS 51831/NAS 1395
Extra Heavy Duty MS 51832

Please contact Jergens for cross reference and ordering information.
1-800-Jergens (537-4367)

Master Thread Repair Kits
Small Assortments



The Jergens Master Thread Repair Kits include several different kinds of inserts, installation tools and installation and removal instructions.

The Kits are available with inch or metric, carbon steel inserts or with stainless steel inserts.

Coarse Series, Heavy Duty Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
10 - 24	3/8 - 16	.31	5
1/4 - 20	7/16 - 14	.37	10
5/16 - 18	1/2 - 13	.43	10
3/8 - 16	9/16 - 12	.50	10
1/2 - 13	3/4 - 16	.62	10
5/8 - 11	7/8 - 14	.87	10
3/4 - 10	1-1/8 - 12	1.12	5
		Total Inserts Per Kit 60 pcs.	

Carbon Steel Kit	Stainless Steel Kit
25949	**26349**

Fine Series, Heavy Duty Kits

Internal Thread Class 2B	External Thread Class 2A	Length	Quantity of Inserts Per Kit
10 - 32	3/8 - 16	.31	5
1/4 - 28	7/16 - 14	.37	10
5/16 - 24	1/2 - 13	.43	10
3/8 - 24	9/16 - 12	.50	10
1/2 - 20	3/4 - 16	.62	10
5/8 - 18	7/8 - 14	.87	10
3/4 - 16	1-1/8 - 12	1.12	5
		Total Inserts Per Kit 60 pcs.	

Carbon Steel Kit	Stainless Steel Kit
26149	**26549**

Metric, Thinwall Kits

Internal Thread Class 2B	External Thread Class 2A	Length (mm)	Quantity of Inserts Per Kit
M 5x0.8	M 8x1.25	8.0	8
M 6x1.0	M 10x1.25	10.0	8
M 8x1.25	M 12x1.25	12.0	6
M 8x1.0	M 12x1.25	12.0	6
M 10x1.5	M 14x1.5	14.0	4
M 10x1.25	M 14x1.5	14.0	4
M 12x1.75	M 16x1.5	16.0	3
M 12x1.25	M 16x1.5	16.0	3
		Total Inserts Per Kit 42 pcs.	

Metric Carbon Steel Kit	Stainless Steel Kit
25999	**25998**

Master Thread Repair Kits
Large Assortments

Coarse Series, Heavy Duty Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
1/4 - 20	7/16 - 14	.37	20
5/16 - 18	1/2 - 13	.43	15
3/8 - 16	9/16 - 12	.50	10
7/16 - 14	5/8 - 11	.62	10
1/2 - 13	3/4 - 16	.62	6
9/16 - 12	3/4 - 16	.81	5
5/8 - 11	7/8 - 14	.87	3
3/4 - 10	1-1/8 - 12	1.12	3
7/8 - 9	1-1/4 - 12	1.25	3
1" - 8	1-3/8 - 12	1.37	2

Total Inserts Per Kit 77 pcs.

Carbon Steel Kit	Stainless Steel Kit
25945	26345

Fine Series, Heavy Duty Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
1/4 - 28	7/16 - 14	.37	10
5/16 - 24	1/2 - 13	.43	10
3/8 - 24	9/16 - 12	.50	10
7/16 - 20	5/8 - 11	.62	10
1/2 - 20	3/4 - 16	.62	6
9/16 - 18	3/4 - 16	.81	5
5/8 - 18	7/8 - 14	.87	3
3/4 - 16	1-1/8 - 12	1.12	3
7/8 - 14	1-1/4 - 12	1.25	3
1" - 12	1-3/8 - 12	1.37	2

Total Inserts Per Kit 77 pcs.

Carbon Steel Kit	Stainless Steel Kit
26145	26545

Metric, Thinwall Kits

Internal Thread Class 6H	External Thread Class 6g	Length (mm)	Quantity of Inserts Per Kit
M 6x1.0	M 10x1.25	10.0	20
M 8x1.25	M 12x1.25	12.0	15
M 8x1.0	M 12x1.25	12.0	15
M 10x1.5	M 14x1.5	14.0	10
M 10x1.25	M 14x1.5	14.0	10
M 12x1.75	M 16x1.5	16.0	6
M 12x1.25	M 16x1.5	16.0	6

Total Inserts Per Kit 82 pcs.

Metric Carbon Steel Kit	Stainless Steel Kit
25997	25996

Coarse Series, Thinwall Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
10 - 24	5/16 - 18	.31	20
1/4 - 20	3/8 - 16	.37	20
5/16 - 18	7/16 - 14	.43	15
3/8 - 16	1/2 - 13	.50	10
7/16 - 14	9/16 - 12	.56	10
1/2 - 13	5/8 - 11	.62	6

Total Inserts Per Kit 81 pcs.

Carbon Steel Kit	Stainless Steel Kit
25948	26348

Fine Series, Thinwall Kits

Internal Thread Class 2B	External Thread (Mod) Class 2A	Length	Quantity of Inserts Per Kit
10 - 32	5/16 - 18	.31	20
1/4 - 28	3/8 - 16	.37	20
5/16 - 24	7/16 - 14	.43	15
3/8 - 24	1/2 - 13	.50	10
7/16 - 20	9/16 - 12	.56	10
1/2 - 20	5/8 - 11	.62	6

Total Inserts Per Kit 81 pcs.

Carbon Steel Kit	Stainless Steel Kit
25947	26548

Inch Thread Repair Insert Kits



The Jergens Keylocking Inserts provide strong and durable threads in most types of material. They are easily installed using standard drills and taps.

The Jergens Thread Repair Insert Kits include inserts, an installation tool, and installation and removal instructions.

The Kits are available with either inch, metric, or metric internal/inch external carbon steel inserts.

Each Kit is comprised of one size of insert in various quantities. For Thread Repair Kits that include several different sizes, see pages 394 – 395.

Inch Thread Kits - Heavy Duty

Carbon Steel Part Number	Stainless Steel Part Number	Internal Thread	External Thread	Inserts Per Kit	Insert Part Number	Stainless Steel Insert Part Number	Tool Part Number
75900	76300	8-32	5/16-18	9	25900	26300	24700
75901	76301	10-24	3/8-16	9	25901	26301	24701
76101	76501	10-32	3/8-16	9	26101	26501	24701
75902	76302	1/4-20	7/16-14	8	25902	26302	24702
76102	76502	1/4-28	7/16-14	8	26102	26502	24702
75903	76303	5/16-18	1/2-13	7	25903	26303	24703
76103	76503	5/16-24	1/2-13	7	26103	26503	24703
75904	76304	3/8-16	9/16-12	6	25904	26304	24704
76104	76504	3/8-24	9/16-12	6	26104	26504	24704
75905	76305	7/16-14	5/8-11	6	25905	26305	24705
76105	76505	7/16-20	5/8-11	6	26105	26505	24705
75906	76306	1/2-13	3/4-16	4	25906	26306	24706
76106	76506	1/2-20	3/4-16	4	26106	26506	24706
75907	76307	9/16-12	3/4-16	3	25907	26307	24707
76107	76507	9/16-18	3/4-16	3	26107	26507	24707
75908	76308	5/8-11	7/8-14	3	25908	26308	24708
76108	76508	5/8-18	7/8-14	3	26108	26508	24708
75909	76309	3/4-10	1 1/8-12	3	25909	26309	24709
76109	76509	3/4-16	1 1/8-12	3	26109	26509	24709
75910	76310	7/8-9	1 1/4-12	3	25910	26310	24710
76110	76510	7/8 -14	1 1/4-12	3	26110	26510	24710
75911	76311	1 - 8	1 3/8-12	2	25911	26311	24711
76111	76511	1 -12	1 3/8-12	2	26111	26511	24711
75913	—	1 1/8-7	1 1/2-12	2	25913	—	24713
76113	—	1 1/8-12	1 1/2-12	2	26113	—	24713
75914	—	1 1/4-7	1 5/8-12	2	25914	—	24714
76114	—	1 1/4-12	1 5/8-12	2	26114	—	24714
75916	—	1 1/2-6	1 7/8-12	2	25916	—	24716
76116	—	1 1/2-12	1 7/8-12	2	26116	—	24716

Inch Thread Kits - Thin Wall

Carbon Steel Part Number	Stainless Steel Part Number	Internal Thread	External Thread	Inserts Per Kit	Carbon Steel Insert Part Number	Stainless Steel Insert Part Number	Installation Tool Part Number
75921	76421	10-24	5/16-18	9	25921	26321	24721
76121	76521	10-32	5/16-18	9	26121	26521	24721
75922	76422	1/4-20	3/8-16	8	25922	26322	24722
76122	76522	1/4-28	3/8-16	8	26122	26522	24722
75923	76423	5/16-18	7/16-14	7	25923	26323	24723
76123	76523	5/16-24	7/16-14	7	26123	26523	24723
75924	76424	3/8-16	1/2-13	6	25924	26325	24724
76124	76524	3/8-24	1/2-13	6	26124	26524	24724
75925	76425	7/16-14	9/16-12	6	25925	26325	24725
76125	76525	7/16-20	9/16-12	6	26125	26525	24725
75926	76426	1/2-13	5/8-11	4	25926	26326	24726
76126	76526	1/2-20	5/8-11	4	26126	26526	24726

Metric Thread Repair Insert Kits



The Jergens Keylocking Inserts provide strong and durable threads in most types of material. They are easily installed using standard drills and taps.

The Jergens Thread Repair Insert Kits include inserts, an installation tool, and installation and removal instructions.

The Kits are available with either inch, metric, or metric internal/inch external carbon steel inserts.

Each Kit is comprised of one size of insert in various quantities. For Thread Repair Kits that include several different sizes, see pages 394 – 395.

Metric Thread Kits - Heavy Duty

Carbon Steel Part Number	Stainless Steel Part Number	Internal Thread	External Thread	Inserts Per Kit	Insert Part Number	Stainless Steel Insert Part Number	Tool Part Number
75963	76463	M4x0.7	M8x1.25	9	25963	26363	24763
75964	76464	M5x0.8	M10x1.25	8	25964	26364	24764
75965	76465	M6x1.0	M12x1.25	8	25965	26365	24765
75966	76466	M8x1.25	M14x1.5	6	25966	26366	24766
76166	76566	M8x1.0	M14x1.5	6	26166	26566	24766
75967	76467	M10x1.5	M16x1.5	4	25967	26367	24767
76167	76567	M10x1.25	M16x1.5	4	26167	26567	24767
75969	76469	M12x1.75	M18x1.5	3	25969	26369	24769
76169	76569	M12x1.25	M18x1.5	3	26169	26569	24769
75970	76470	M14x2.0	M20x1.5	4	25970	26370	24770
76170	76570	M14x1.5	M20x1.5	4	26170	26570	24770
75971	76471	M16x2.0	M22x1.5	3	25971	26371	24771
76171	76571	M16x1.5	M22x1.5	3	26171	26571	24771
76172	76572	M18x1.5	M24x1.5	2	26172	26572	24772
75973	76473	M20x2.5	M30x2.0	3	25973	26373	24773
76173	76573	M20x1.5	M30x2.0	3	26173	26573	24773
76174	76574	M22x1.5	M32x2.0	3	26174	26574	24774
75975	76475	M24x3.0	M33x2.0	3	25975	26375	24775
76175	76575	M24x2.0	M33x2.0	2	26175	26575	24775

Metric Thread - Thin Wall

Carbon Steel Part Number	Stainless Steel Part Number	Internal Thread	External Thread	Inserts Per Kit	Insert Part Number	Stainless Steel Insert Part Number	Tool Part Number
75951	76451	M5x0.8	M8x1.25	8	25951	26351	24751
75952	76452	M6x1.0	M10x1.25	8	25952	26352	24752
75953	76453	M8x1.25	M12x1.25	6	25953	26353	24753
76153	76553	M8x1.0	M12x1.25	6	26153	26553	24753
75955	76455	M10x1.5	M14x1.5	4	25955	26355	24755
76155	76555	M10x1.25	M14x1.5	4	26155	26555	24755
75956	76456	M12x1.75	M16x1.5	3	25956	26356	24756
76156	76556	M12x1.25	M16x1.5	3	26156	26556	24756

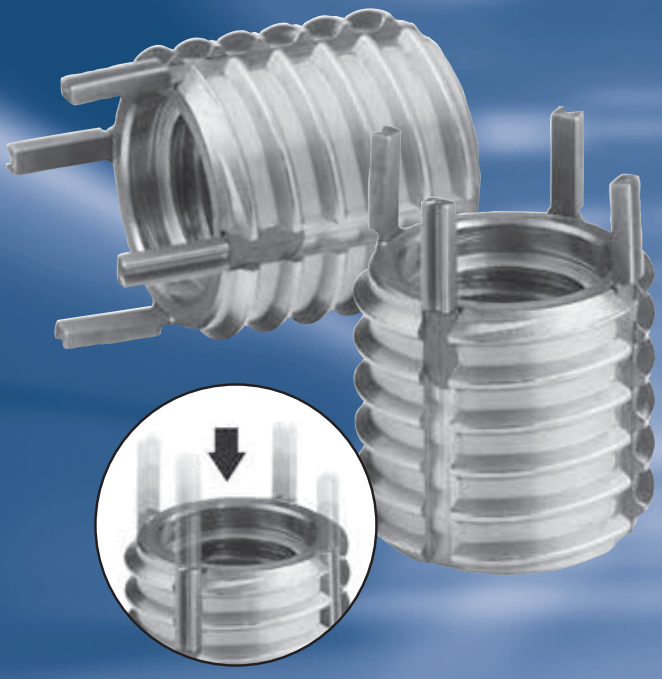
Carbon Steel Kits - Metric Internal/Inch External Threads - Heavy Duty

Part Number	Internal Thread	External Thread	Inserts Per Kit	Insert Part Number	Tool Part Number
76243	M 6x1.0	3/8 - 16	8	26243	24843
76244	M 8x1.25	1/2 - 13	8	26244	24844
76245	M 10x1.5	5/8 - 11	6	26245	24845
76247	M 12x1.75	3/4 - 16	4	26247	24847
76248	M 14x2.0	7/8 - 14	3	26248	24848
76249	M 16x2.0	1" - 12	3	26249	24849

THE Jergens DIFFERENCE

Keylocking Inserts

OURS



Jergens keylocking inserts are easy to install with standard drills and taps.

THEIRS



Competitive thread repair devices require special drills, taps, and installation tools.

JERGENS KEYLOCKING INSERTS	VS.	THREAD REPAIR FROM OTHER MANUFACTURERS
Easy installation requires no special tools: uses standard drills and standard taps.		Installation requires special drills, taps, and installation tools.
"Keys" mechanically lock the insert into the base material.		Springs or locking patches do not mechanically lock the insert.
Rated among the highest in pullout strength of any thread repair device on the market.		Less pullout strength versus Jergens inserts.
Wide variety of styles, including thinwall, heavy duty, extra heavy duty, and solid inserts in both stainless steel and carbon steel materials.		Limited offerings may force you to settle on a device that doesn't meet all of your needs.

15700 Waterloo Road • Cleveland, OH 44110 • 800-537-4367 • www.jergensinc.com

Jergens®
MANUFACTURING EFFICIENCY

Miscellaneous Fasteners

Alloy Steel Pull Dowel Pins 400–403
Clevis Pins 406
Leveling Mounts 407
Rod Ends 404
Washers, Heavy Duty Flat 408
Yokes 405

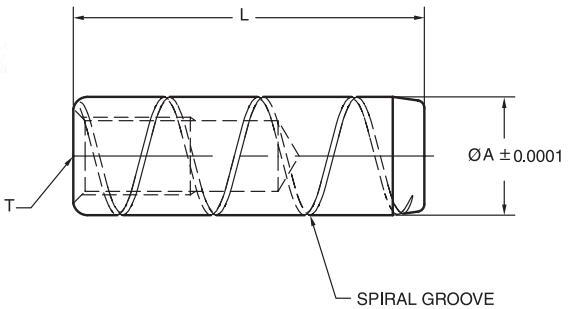
Jergens®
MANUFACTURING EFFICIENCY

Alloy Steel Pull Dowel Pins

Jergens Offers 3 Styles of Precision Ground Pull Dowels

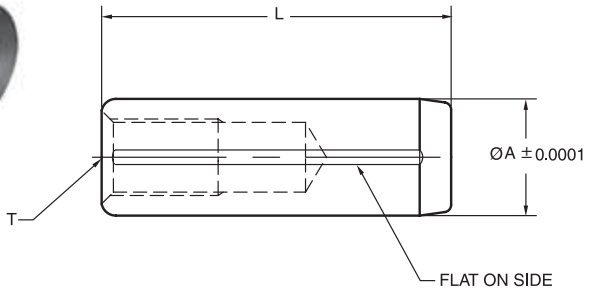


Spiral Groove
(Grooves Help to Relieve Trapped Air)



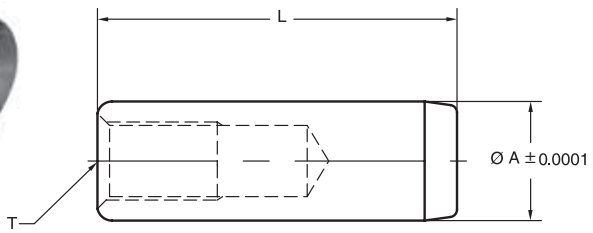


Flat Vent
(Ground Flat Helps to Relieve Trapped Air)





Standard Round
(Non-Vented)



Features, Applications & Benefits

- Internally threaded hole allows removal of pull dowels with a standard screw.
- Standard Round Pull Dowels are typically used in applications featuring a through hole.
- Spiral Groove Pull Dowels feature a groove cut to allow trapped air to be released.
- Flat Vent Pull Dowels feature a ground flat on one side to release trapped air.
- Spiral Groove and Flat Vent Pull Dowels are typically used in blind hole applications.
- All of Jergens Precision Ground Pull Dowels are constructed of heat treated alloy steel.

Precision Ground Pull Dowels

Spiral Groove	Flat Vent	Standard Round	Nominal	Actual	Length	Internal Thread
31800	31400	31600	1/4	.2502	1/2	8 - 32
31801	31401	31601	1/4	.2502	3/4	8 - 32
31802	31402	31602	1/4	.2502	1	8 - 32
31803	31403	31603	1/4	.2502	1-1/4	8 - 32
31804	31404	31604	1/4	.2502	1-1/2	8 - 32
31805	31405	31605	1/4	.2502	1-3/4	8 - 32
31806	31406	31606	1/4	.2502	2	8 - 32
31807	31407	31654	1/4	.2502	2-1/4	8 - 32
31808	31408	31607	1/4	.2502	2-1/2	8 - 32
31809	31409	31608	5/16	.3127	3/4	10 - 32
31810	31410	31609	5/16	.3127	1	10 - 32
31811	31411	31610	5/16	.3127	1-1/4	10 - 32
31812	31412	31611	5/16	.3127	1-1/2	10 - 32
31813	31413	31612	5/16	.3127	2	10 - 32
31814	31414	31613	5/16	.3127	2-1/4	10 - 32
31815	31415	31614	5/16	.3127	2-1/2	10 - 32
31816	31416	31615	3/8	.3752	3/4	10 - 32
31817	31417	31616	3/8	.3752	1	10 - 32
31818	31418	31617	3/8	.3752	1-1/4	10 - 32
31819	31419	31618	3/8	.3752	1-1/2	10 - 32
31820	31420	31619	3/8	.3752	1-3/4	10 - 32
31821	31421	31620	3/8	.3752	2	10 - 32
31822	31422	31621	3/8	.3752	2-1/4	10 - 32
31823	31423	31622	3/8	.3752	2-1/2	10 - 32
31824	31424	31623	3/8	.3752	3	10 - 32
31825	31425	31624	7/16	.4377	1	1/4 - 20
31826	31426	31625	7/16	.4377	1-1/2	1/4 - 20
31827	31427	31626	7/16	.4377	2	1/4 - 20
31828	31428	31627	1/2	.5002	3/4	1/4 - 20
31829	31429	31628	1/2	.5002	1	1/4 - 20
31830	31430	31629	1/2	.5002	1-1/4	1/4 - 20
31831	31431	31630	1/2	.5002	1-1/2	1/4 - 20
31832	31432	31631	1/2	.5002	1-3/4	1/4 - 20
31833	31433	31632	1/2	.5002	2	1/4 - 20
31834	31434	31633	1/2	.5002	2-1/4	1/4 - 20
31835	31435	31634	1/2	.5002	2-1/2	1/4 - 20
31836	31436	31635	1/2	.5002	3	1/4 - 20
31837	31437	31636	1/2	.5002	3-1/2	1/4 - 20
31838	31438	31637	1/2	.5002	4	1/4 - 20
31839	31439	31638	5/8	.6252	1-1/4	1/4 - 20
31840	31440	31639	5/8	.6252	1-1/2	1/4 - 20
31841	31441	31640	5/8	.6252	2	1/4 - 20
31842	31442	31641	5/8	.6252	2-1/4	1/4 - 20
31843	31443	31642	5/8	.6252	2-1/2	1/4 - 20
31844	31444	31643	5/8	.6252	3	1/4 - 20
31845	31445	31644	5/8	.6252	4	1/4 - 20
31846	31446	31645	3/4	.7502	1-1/2	5/16 - 18
31847	31456	31655	3/4	.7502	1-3/4	5/16 - 18
31848	31447	31646	3/4	.7502	2	5/16 - 18
31849	31448	31647	3/4	.7502	2-1/2	5/16 - 18
31850	31449	31648	3/4	.7502	3	5/16 - 18
31851	31450	31649	3/4	.7502	4	5/16 - 18
31856*	31451	31656	1	1.0002	1-3/4	5/16 - 18
31852*	31452	31650	1	1.0002	2	5/16 - 18
31853*	31453	31651	1	1.0002	2-1/2	5/16 - 18
31854*	31454	31652	1	1.0002	3	5/16 - 18
31855*	31455	31653	1	1.0002	4	5/16 - 18

*3/8-16 Internal Thread

Technical Data

Material:
Alloy Steel

Length Tolerance:
± .010"

Core Hardness:
47 - 58 Rockwell C

Diameter Tolerance:
± .0001"

Surface Hardness:
60 - 64 Rockwell C

Recommended Hole Size:
.0005" under Nom. Dia.

Surface Finish:
8 Micro-Inch

Specification:
ASME B18.8.2

Spiral Groove



Flat Vent



Standard Round



Precision Ground Pull Dowels
Stainless Steel

Spiral Groove	Standard Round	Nominal	Actual	Length	Internal Thread
31800-SS	31600-SS	1/4	.2502	1/2	8 - 32
31801-SS	31601-SS	1/4	.2502	3/4	8 - 32
31802-SS	31602-SS	1/4	.2502	1	8 - 32
31803-SS	31603-SS	1/4	.2502	1-1/4	8 - 32
31804-SS	31604-SS	1/4	.2502	1-1/2	8 - 32
31805-SS	31605-SS	1/4	.2502	1-3/4	8 - 32
31806-SS	31606-SS	1/4	.2502	2	8 - 32
31807-SS	31654-SS	1/4	.2502	2-1/4	8 - 32
31808-SS	31607-SS	1/4	.2502	2-1/2	8 - 32
31809-SS	31608-SS	5/16	.3127	3/4	10 - 32
31810-SS	31609-SS	5/16	.3127	1	10 - 32
31811-SS	31610-SS	5/16	.3127	1-1/4	10 - 32
31812-SS	31611-SS	5/16	.3127	1-1/2	10 - 32
31813-SS	31612-SS	5/16	.3127	2	10 - 32
31814-SS	31613-SS	5/16	.3127	2-1/4	10 - 32
31815-SS	31614-SS	5/16	.3127	2-1/2	10 - 32
31816-SS	31615-SS	3/8	.3752	3/4	10 - 32
31817-SS	31616-SS	3/8	.3752	1	10 - 32
31818-SS	31617-SS	3/8	.3752	1-1/4	10 - 32
31819-SS	31618-SS	3/8	.3752	1-1/2	10 - 32
31820-SS	31619-SS	3/8	.3752	1-3/4	10 - 32
31821-SS	31620-SS	3/8	.3752	2	10 - 32
31822-SS	31621-SS	3/8	.3752	2-1/4	10 - 32
31823-SS	31622-SS	3/8	.3752	2-1/2	10 - 32
31824-SS	31623-SS	3/8	.3752	3	10 - 32
31825-SS	31624-SS	7/16	.4377	1	1/4 - 20
31826-SS	31625-SS	7/16	.4377	1-1/2	1/4 - 20
31827-SS	31626-SS	7/16	.4377	2	1/4 - 20
31828-SS	31627-SS	1/2	.5002	3/4	1/4 - 20
31829-SS	31628-SS	1/2	.5002	1	1/4 - 20
31830-SS	31629-SS	1/2	.5002	1-1/4	1/4 - 20
31831-SS	31630-SS	1/2	.5002	1-1/2	1/4 - 20
31832-SS	31631-SS	1/2	.5002	1-3/4	1/4 - 20
31833-SS	31632-SS	1/2	.5002	2	1/4 - 20
31834-SS	31633-SS	1/2	.5002	2-1/4	1/4 - 20
31835-SS	31634-SS	1/2	.5002	2-1/2	1/4 - 20
31836-SS	31635-SS	1/2	.5002	3	1/4 - 20
31837-SS	31636-SS	1/2	.5002	3-1/2	1/4 - 20
31838-SS	31637-SS	1/2	.5002	4	1/4 - 20
31839-SS	31638-SS	5/8	.6252	1-1/4	1/4 - 20
31840-SS	31639-SS	5/8	.6252	1-1/2	1/4 - 20
31841-SS	31640-SS	5/8	.6252	2	1/4 - 20
31842-SS	31641-SS	5/8	.6252	2-1/4	1/4 - 20
31843-SS	31642-SS	5/8	.6252	2-1/2	1/4 - 20
31844-SS	31643-SS	5/8	.6252	3	1/4 - 20
31845-SS	31644-SS	5/8	.6252	4	1/4 - 20
31846-SS	31645-SS	3/4	.7502	1-1/2	5/16 - 18
31847-SS	31655-SS	3/4	.7502	1-3/4	5/16 - 18
31848-SS	31646-SS	3/4	.7502	2	5/16 - 18
31849-SS	31647-SS	3/4	.7502	2-1/2	5/16 - 18
31850-SS	31648-SS	3/4	.7502	3	5/16 - 18
31851-SS	31649-SS	3/4	.7502	4	5/16 - 18
31856-SS*	31656-SS	1	1.0002	1-3/4	5/16 - 18
31852-SS*	31650-SS	1	1.0002	2	5/16 - 18
31853-SS*	31651-SS	1	1.0002	2-1/2	5/16 - 18
31854-SS*	31652-SS	1	1.0002	3	5/16 - 18
31855-SS*	31653-SS	1	1.0002	4	5/16 - 18

*3/8-16 Internal Thread

Technical Data

Material:
300 Series SS (18-8)

Length Tolerance:
± .010"

Diameter Tolerance:
± .0001"

Recommended Hole Size:
.0005" under Nom. Dia.

Surface Finish:
8 Micro-Inch

Specification:
ASME B18.8.2

(Parts are not heat treated/hardened)

Spiral Groove



Standard Round

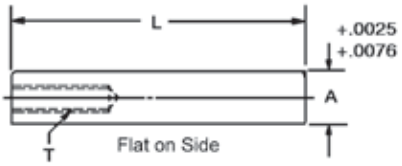


Pull Dowels
Metric



- Material: Low Carbon Steel
- Heat Treat: Case Hardened
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Flat ground on the side for air release in blind holes.



Part Number	A	L	T
31751	8	20	M5 x 1.0
31753	8	30	M5 x 1.0
31755	8	40	M5 x 1.0
31759	10	20	M6 x 1.0
31761	10	30	M6 x 1.0
31763	10	40	M6 x 1.0
31765	10	50	M6 x 1.0
31767	10	70	M6 x 1.0
31769	12	20	M6 x 1.0
31771	12	30	M6 x 1.0
31773	12	40	M6 x 1.0

Part Number	A	L	T
31775	12	50	M6 x 1.0
31776	12	60	M6 x 1.0
31777	12	70	M6 x 1.0
31780	16	40	M8 x 1.25
31782	16	50	M8 x 1.25
31783	16	60	M8 x 1.25
31784	16	70	M8 x 1.25
31787	20	50	M10 x 1.6
31788	20	60	M10 x 1.6
31789	20	70	M10 x 1.6

Button head screw not included.

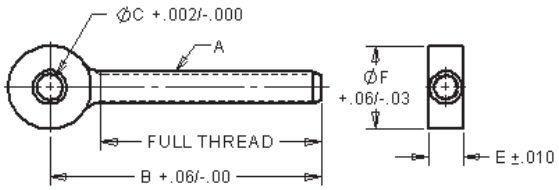
Rod Ends
Threaded



- Material: Alloy Steel
- Finish: Black Oxide
- Heat Treat: 32-36 Rc
- Thread: Class 2A-UNC

* 150,000 PSI Tensile

Rod Ends are forged and finished for applications not requiring flat contact with the head. All holes are reamed. Rod Ends can be used with spherical flange assemblies, flange nuts and clamp assemblies.



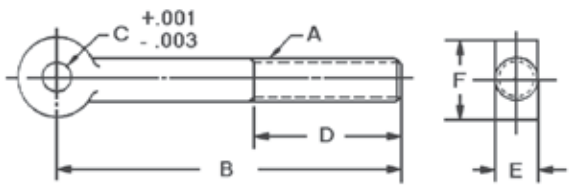
Part Number	Thread A	B	C	E	F	Wt. (lbs)
35301*	1/4-20	2	3/16	1/4	39/64	.04
35302	1/4-20	2	1/4	1/4	–	.03
35318*	5/16-18	3	1/4	5/16	43/64	.08
35319*	5/16-18	3	5/16	5/16	–	.08
35303*	3/8-16	3	5/16	3/8	13/16	.11
35320	3/8-16	4	5/16	3/8	–	.11
35304	3/8-16	2 3/16	3/8	3/8	–	.08
35305*	3/8-16	3	3/8	3/8	–	.11
35306*	3/8-16	5	3/8	3/8	–	.12
35307*	1/2-13	3 3/4	3/8	1/2	1 1/32	.25
35308	1/2-13	2 11/16	1/2	1/2	–	.19
35309	1/2-13	3 3/4	1/2	1/2	–	.24
35310	1/2-13	5	1/2	1/2	–	.31
35311	5/8-11	3 11/16	5/8	5/8	1 5/16	.40
35312*	5/8-11	4 1/2	5/8	5/8	–	.46
35314*	5/8-11	6	5/8	5/8	–	.60
35315*	3/4-10	4 1/2	3/4	3/4	1 9/16	.73
35321*	3/4-10	6	3/4	3/4	–	1.00
35317	1-8	8	1	1	2 3/32	2.25

***Not to be used for lifting.**

Rod Ends
Stainless Steel



- Material: 303 Stainless
- Thread Class 2A-UNC



Part Number	Ref. A	B	Ref. C	D	E	F
35721	1/4-20	2 1/8	3/16	7/8	1/4	1/2
35722	1/4-20	2 1/8	1/4	7/8	1/4	1/2
35723	5/16-18	3 1/2	1/4	1 1/2	5/16	5/8
35724	5/16-18	3 1/2	5/16	1 1/2	5/16	5/8
35725	3/8-16	3 1/2	3/8	1 1/2	3/8	3/4
35726	3/8-16	5	3/8	2 1/2	3/8	3/4
35727	1/2-13	3 3/4	1/2	1 1/2	1/2	1
35728	1/2-13	5	1/2	2	1/2	1
35729	5/8-11	4 1/2	5/8	2	5/8	1 1/4
35730	5/8-11	6	5/8	3	5/8	1 1/4
35731	3/4-10	4 1/2	3/4	2	3/4	1 1/2
35732	3/4-10	6	3/4	2 1/2	3/4	1 1/2

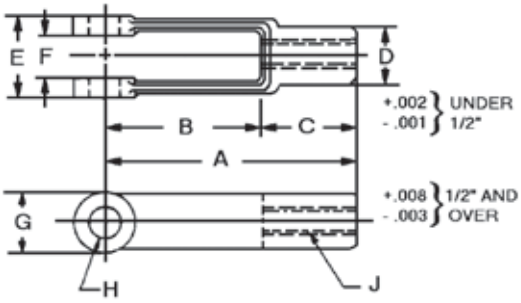
Not to be used for lifting.

Yokes
Tapped



- Material: C-1021 Forging
- Finish: Black Oxide
- Thread: 2B

Jergens offers these yokes for attaching to threaded linkage at stem end. The forged holes are reamed and faced-off parallel inside and outside the yoke ends.



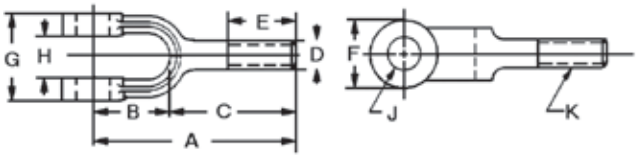
Part Number Coarse Pitch	UNC J	Part Number Fine Pitch	UNF J	A	B	C	D	E	F	G	H	Wt. (lbs) 10 Pcs.
		45501	10-32	1 9/16	1	9/16	5/16	7/16	3/16	3/8	3/16	.21
45302	1/4-20	**45502**	1/4-28	2	1 1/4	3/4	7/16	5/8	9/32	1/2	1/4	.62
45303	5/16-18	**45503**	5/16-24	2 1/4	1 7/16	13/16	1/2	3/4	11/32	19/32	5/16	.94
45304	3/8-16	**45504**	3/8-24	2 1/2	1 5/8	7/8	5/8	7/8	7/16	11/16	3/8	1.45
45305	7/16-14	**45505**	7/16-20	2 7/8	1 7/8	1	23/32	1	1/2	13/16	7/16	2.35
45306	1/2-13	**45506**	1/2-20	3	1 7/8	1 1/8	13/16	1 1/8	9/16	15/16	1/2	3.10
45307	1/2-13	**45507**	1/2-20	4 3/16	3 1/16	1 1/8	13/16	1 1/8	9/16	15/16	1/2	4.35
45308	5/8-11	**45508**	5/8-18	4 15/16	3 11/16	1 1/4	1 1/16	1 3/8	11/16	1 3/16	5/8	8.10
45309	3/4-10	**45509**	3/4-16	4	2 3/4	1 1/4	1 1/8	1 1/2	11/16	1 3/8	5/8	7.50
45310	3/4-10	—	—	6 1/16	4 9/16	1 1/2	1 1/4	1 5/8	13/16	1 7/16	3/4	15.00
45312	1-8	—	—	8	6	2	1 5/8	2 1/8	1 1/16	1 15/16	1	32.50

Yokes
Threaded



- Material: C-1021 Forging
- Finish: Black Oxide
- Thread: 2A-UNC

This style yoke is similar to the above except the stem is threaded for attaching to tapped linkage.

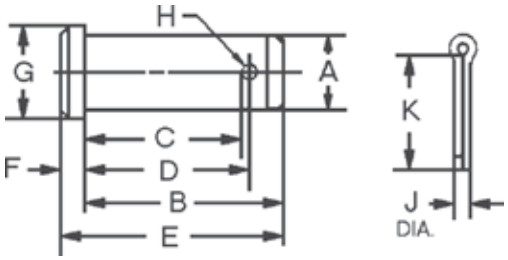


Part Number	K	A	B	C	D	E	F	G	H	J	Wt. (lbs) 10 Pcs.
45902	1/4-20	1 3/4	5/8	1 1/8	1/4	3/4	1/2	5/8	9/32	1/4	.47
45903	5/16-18	2	3/4	1 1/4	5/16	3/4	19/32	3/4	11/32	5/16	.85
45904	3/8-16	2 1/8	27/32	1 9/32	3/8	3/4	11/16	7/8	7/16	3/8	1.10
45906	1/2-13	2 1/2	1 1/8	1 3/8	1/2	3/4	15/16	1 1/8	9/16	1/2	2.35
45907	5/8-11	2 7/8	1 7/16	1 7/16	5/8	3/4	1 3/16	1 3/8	11/16	5/8	4.20
45908	3/4-10	3 5/8	1 11/16	1 15/16	3/4	1 1/4	1 7/16	1 5/8	13/16	3/4	7.35
45910	1-8	4 1/2	2 1/2	2	1	1 1/8	1 15/16	2 1/8	1 1/16	1	17.50

Clevis Pins



- Material: Low Carbon Steel
- All Clevis Pins supplied with cotter pins.



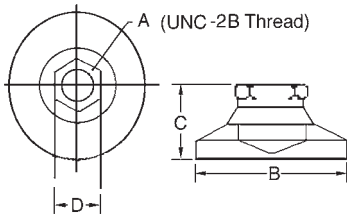
Part Number	A	B	C	D	E	F	G	H	J	K	Wt. (lbs) 10 Pcs.
32701	3/16	37/64	29/64	31/64	41/64	1/16	5/16	5/64	1/16	1/2	.08
32702	1/4	49/64	41/64	43/64	55/64	3/32	3/8	5/64	1/16	1/2	.15
32703	5/16	15/16	49/64	13/16	1 1/32	3/32	7/16	7/64	3/32	1/2	.30
32704	3/8	1 1/16	57/64	15/16	1 3/16	1/8	1/2	7/64	3/32	5/8	.45
32705	7/16	1 3/16	1 1/64	1 1/16	1 11/32	5/32	9/16	7/64	3/32	5/8	.60
32706	1/2	1 23/64	1 9/64	1 13/64	1 33/64	5/32	5/8	9/64	1/8	1	1.00
32707	5/8	1 39/64	1 25/64	1 29/64	1 13/16	13/64	13/16	9/64	1/8	1	1.18
32708	5/8	1 3/4	1 33/64	1 19/32	1 63/64	13/64	13/16	9/64	1/8	1	1.82
32709	3/4	1 29/32	1 41/64	1 23/32	2 5/32	1/4	15/16	11/64	5/32	1 1/2	3.00
32711	1	2 13/32	2 9/64	2 7/32	2 3/4	11/32	1 3/16	11/64	5/32	1 1/2	7.00

Leveling Mounts

- Material: 1214 Steel
- Zinc plated, yellow finish
- Non-Skid Material: Neoprene
- Case hardened, file hard
- Swivels 10° in all directions
- Available with non-skid on base
- Available in stainless steel, or with a delrin pad, and in larger sizes upon request.

Tapped



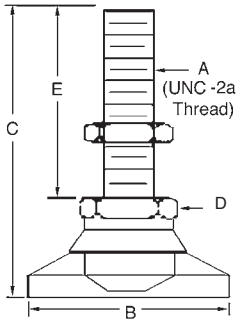


Part Number		A	B	C*	Across Flats D	Maximum Load (lbs)	
Standard	Non-skid					Standard	Non-skid
32601	**32651**	10-32	3/4	17/32	3/8	700	550
32602	**32652**	1/4-20	1	45/64	1/2	1000	825
32606	**32656**	3/8-16	1 1/4	7/8	5/8	3750	2820
32608	**32658**	1/2-13	1 7/8	1 1/8	3/4	5000	3750
32610	**32660**	5/8-11	2 1/2	1 1/4	7/8	6000	5000
32612	**32662**	3/4-10	3	1 1/2	1 1/16	7400	6000
32616	**32666**	1-8	4	1 7/8	1 3/8	21000	16500

*Add 1/8" to C Dimension for non-skid style.

Threaded





Part Number		A	B	C*	Across Flats D	E	Maximum Load (lbs)	
Standard	Non-skid						Standard	Non-skid
32621	**32671**	10-32	3/4	1 17/32	3/8	1	700	550
32623	**32673**	1/4-20	1	1 61/64	1/2	1 1/4	1000	825
32626	**32676**	3/8-16	1 1/4	2 7/8	5/8	2	3750	2850
32629	**32679**	1/2-13	1 7/8	3 1/8	3/4	2	5000	3750
32632	**32682**	5/8-11	2 1/2	3 1/4	7/8	2	6000	4350
32635	**32685**	3/4-10	3	3 1/2	1 1/16	2	7400	5500
32640	**32690**	1-8	4	5 3/8	1 3/8	3 1/2	20000	16500

*Add 1/8" to C Dimension for non-skid style.

USAE™ Heavy Duty Flat Washers



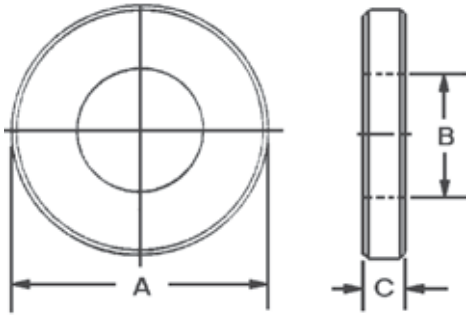
USS + SAE = USAE

What is a USAE™ Washer?

- It is a simple but effective idea that is long overdue.
- The Outside Diameter conforms to USS standards. This provides a washer that is up to 36% larger than standard hardened washers.

More Contact Area = More Holding Power

- The Inside Diameter conforms to SAE standards. The small ID provides a more precise fit on bolts, studs, etc.
- USAE Washers are also up to 37% thicker than standard hardened washers for greater strength.
- Washers are made from mild steel. They are case hardened to 60 HRc and have a black oxide finish.
- Bolt size is stamped on each washer for easy identification.



USAE™ Heavy Duty Flat Washers

Part No.	Bolt Size	A (OD)	B (ID)	C (Thickness)
FW00001	1/4	3/4	9/32	9/64
FW00002	5/16	7/8	11/32	9/64
FW00003	3/8	1	13/32	9/64
FW00004	1/2	1-3/8	17/32	5/32
FW00005	5/8	1-3/4	21/32	5/32
FW00006	3/4	2	13/16	1/4
FW00007	1	2-1/2	1-1/16	1/4

*Tolerances for all dimensions are +/- .010"

Handwheels

Aluminum Angular Solid Handwheel.....411
Aluminum Angular Spoked Handwheel..... 410
Aluminum Finger Wheel 418
Nylon Angular Three-Spoked Handwheel 417
Plastic Angular Solid Handwheel.....417
Plastic Three-Spoked Handwheel..... 413
Plastic Three-Spoked Handwheel
With Revolving Handle 414
Plastic Two-Spoked Handwheel 412
Plastic Two-Spoked Handwheel
With Revolving Handles..... 412
Plastic Two-Spoked Handwheel
With Revolving Fold-Away Handle 413
Plastic Solid Handwheel..... 416
Plastic Solid Handwheel With Finger Grips and
Revolving Fold-Away Handle.....417
Plastic Solid Handwheel
With Revolving, Fold-Away Handle 415
Plastic Solid Handwheel
With Revolving Handle 414
Plastic Solid Handwheel With Revolving,
Spring Loaded, Fold-Away Handle 415

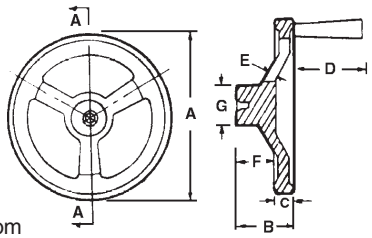
Jergens®
MANUFACTURING EFFICIENCY

Jergens SPECIALTY FASTENERS GROUP

Aluminum Angular Spoked Handwheel



- Diameters from 4" to 23" and 100mm to 575mm
- Lightweight, 319 Aluminum Alloy
- Rims machined to run concentric with center drill
- Available with or without handle
- Special bores and keyways quoted upon request
- 3D Solid Models are available in multiple formats from www.jergensinc.com



Handwheels With Handle

Part Number	A	B	C	D	E	F	G	Number Of Spokes
22308	4	1 1/2	5/8	1 5/8	1/4	1	1 3/16	2
22301	6	2	3/4	2 9/16	5/16	1 7/16	1 1/2	3
22302	8	2 1/2	7/8	2 15/16	3/8	1 7/8	2	3
22303	10	3	7/8	3 5/16	7/16	2 1/8	2 3/8	3
22304	12	3 3/8	7/8	3 5/16	7/16	2 3/16	2 1/2	3
22305	14	3 13/16	1	3 5/16	7/16	2 17/32	2 3/4	5
22306	18	4 7/8	1 1/4	3 5/16	7/16	3 1/16	4 1/8	5
22307	23	7 1/8	1 1/4	3 5/16	7/16	4 3/8	4 1/2	6

Part Number	
Handwheel Only	Handle Only
22108*	**21902**
22101*	**21904**
22102*	**21905**
22103*	**21906**
22104*	**21906**
22105*	**21906**
22106*	**21906**
22107*	**21906**

*Not tapped for handle

Metric Handwheels With Handle

Part Number	A	B	C	D	E	F	G	Number Of Spokes
22358	100	38	16	41	6	25	30	2
22351	150	50	19	64	8	36	38	3
22352	200	63	22	73	9	47	50	3
22353	250	75	22	83	11	53	59	3
22354	300	84	22	83	11	55	63	3
22355	350	95	25	83	11	63	69	5
22356	450	122	31	83	11	77	103	5
22357	575	178	31	83	11	110	113	6

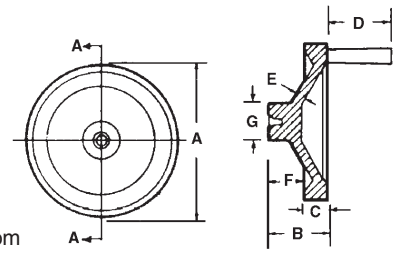
Part Number	
Handwheel Only	Handle Only
22108*	**21952**
22101*	**21954**
22102*	**21955**
22103*	**21956**
22104*	**21956**
22105*	**21956**
22106*	**21956**
22107*	**21956**

*Not tapped for handle

Aluminum Angular Solid Handwheel



- Diameters from 3" to 12" and 75mm to 300mm
- Lightweight, 319 Aluminum Alloy
- Rims machined to run concentric with center drill
- Available with or without handle
- Special bores and keyways quoted upon request
- 3D Solid Models are available in multiple formats from www.jergensinc.com



Handwheels With Handle

Part Number	A	B	C	D	E	F	G
22702	3	1 11/16	5/8	1 5/8	1/4	1 7/32	1 1/4
22703	4	1 7/8	5/8	1 5/8	3/16	1 7/16	1 1/2
22704	5	2	11/16	2 1/16	3/16	1 1/4	1 1/2
22705†	6	2	3/4	2 9/16	3/16	1 3/8	1 1/2
22706†	8	2 1/2	7/8	2 15/16	3/16	1 3/4	2
22707†	10	3 1/4	1	3 5/16	3/16	2 7/32	2 5/16
22708†	12	3 1/2	1	3 5/16	1/4	2 1/4	2 1/2

†Finger grips formed behind solid wheel rim

Part Number	
Handwheel Only	Handle Only
22502*	**21902**
22503*	**21902**
22504*	**21903**
22505*†	**21904**
22506*†	**21905**
22507*†	**21906**
22508*†	**21906**

*Not tapped for handle

Metric Handwheels With Handle

Part Number	A	Ref. B	C	D	E	F	G
22752	75	42	16	41	6	30	31
22753	100	47	16	41	5	36	38
22754	125	50	17	52	5	31	38
22755	150	50	19	64	5	34	38
22756	200	63	22	73	5	44	50
22757	250	81	25	83	5	55	58
22758	300	88	25	83	6	56	63

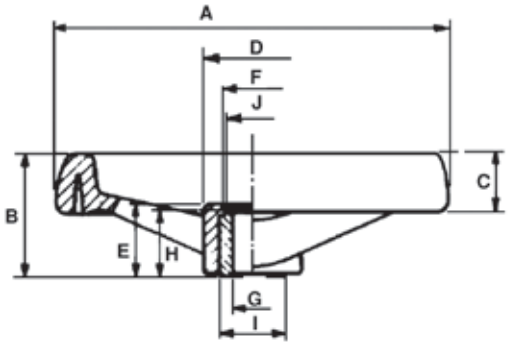
*Not tapped for handle

Part Number	
Handwheel Only	Handle Only
22502*	**21952**
22503*	**21952**
22504*	**21953**
22505*	**21954**
22506*	**21955**
22507*	**21956**
22508*	**21956**

Plastic Two-Spoked Handwheel
ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



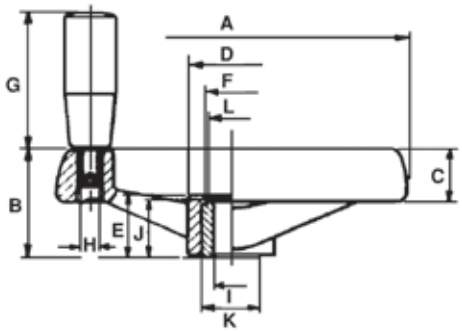
Handwheels Only

Part Number	A	B	C	D	E	F	Fractional G	H	I	J
22601	3.15	1.38	0.71	0.91	0.75	0.67	5/16	0.67	0.71	0.62
22602	3.90	1.46	0.79	0.98	0.75	0.67	3/8	0.67	0.71	0.63
22603	4.92	1.73	0.87	1.22	0.98	0.83	3/8	0.87	0.87	0.79
22604	6.30	2.01	0.98	1.57	1.14	0.98	1/2	1.06	1.02	0.94
22605	7.87	2.40	1.10	1.97	1.42	1.22	5/8	1.34	1.18	1.10
22606	9.84	2.76	1.26	2.32	1.57	1.34	5/8	1.50	1.32	1.30
22607	11.81	3.07	1.42	2.60	1.81	1.65	3/4	1.69	1.57	1.46
22608	14.76	3.23	1.50	2.72	1.81	1.65	3/4	1.69	1.57	1.46

Plastic Two-Spoked Handwheel With Revolving Handles
ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



Handwheels With Revolving Handle

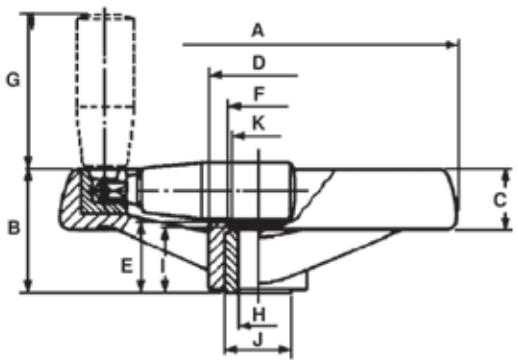
Part Number	A	B	C	D	E	F	G	H	I	J	K	L
22611	3.15	1.38	0.71	0.91	0.75	0.67	1.57	M6	0.312	0.67	0.71	0.63
22612	3.90	1.46	0.79	0.98	0.75	0.67	2.20	M6	0.375	0.67	0.71	0.63
22613	4.92	1.73	0.87	1.22	0.98	0.83	2.56	M8	0.375	0.87	0.87	0.79
22614	6.30	2.01	0.98	1.57	1.14	0.98	2.56	M8	0.500	1.06	1.02	0.94
22615	7.87	2.40	1.10	1.97	1.42	1.22	3.15	M8	0.625	1.34	1.18	1.10
22616	9.84	2.76	1.26	2.32	1.57	1.34	3.54	M10	0.625	1.50	1.38	1.30
22617	11.81	3.07	1.42	2.60	1.81	1.65	3.54	M10	0.750	1.69	1.57	1.46
22618	14.76	3.23	1.50	2.72	1.81	1.65	3.54	M10	0.750	1.69	1.57	1.46

Plastic Two-Spoked Handwheel With Revolving Fold-Away Handle

ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



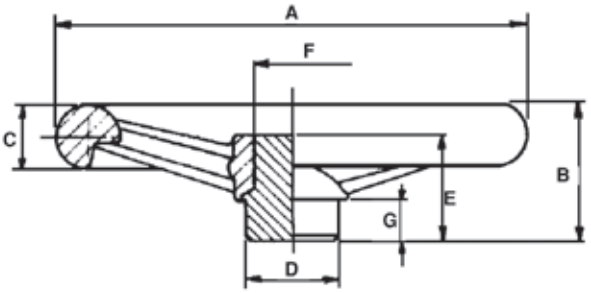
Part Number	A	B	C	D	E	F	G	H	I	J	K
22621	3.15	1.38	.71	.91	.75	.67	1.96	.312	.67	.71	.62
22622	3.90	1.46	.79	.98	.75	.67	2.20	.375	.67	.71	.63
22623	4.92	1.73	.87	1.22	.98	.83	2.56	.375	.87	.87	.79
22624	6.30	2.01	.98	1.57	1.14	.98	2.56	.500	1.06	1.02	.94
22625	7.87	2.40	1.10	1.97	1.42	1.22	3.15	.625	1.34	1.18	1.10
22626	9.84	2.76	1.26	2.32	1.57	1.34	3.54	.625	1.50	1.38	1.30

Plastic Three-Spoked Handwheel

ELESA Original Design



- Material: High Strength Reinforced Duroplast
- Finish: Black Bright
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



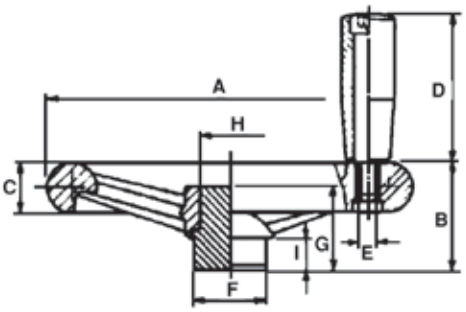
Part Number	A	B	C	D	E	F	G
22631	3.86	1.57	.55	.94	1.42	.79	.47
22632	4.88	1.77	.71	.94	1.42	.79	.47
22633	6.18	1.97	.87	1.26	1.50	.94	.59
22634	7.09	2.20	.94	1.57	1.69	1.22	.59
22635	7.80	2.20	.94	1.57	1.69	1.22	.59
22636	9.72	2.60	1.18	1.93	1.73	1.50	.59
22637	11.34	3.07	1.26	2.28	2.20	1.85	.71
22638	14.76	4.25	1.57	2.28	3.03	2.28	1.02

Plastic Three-Spoked Handwheel With Revolving Handle

ELESA Original Design



- Material: High Strength Reinforced Duroplast
- Finish: Black Bright
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



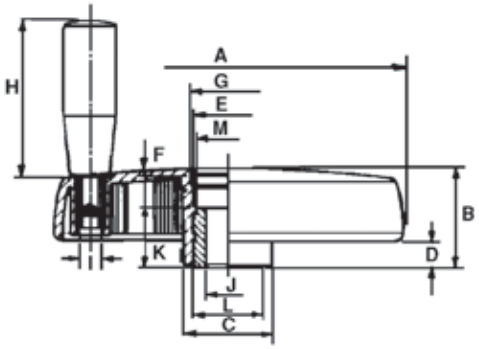
Part Number	A	B	C	D	E	F	G	H	I
22641	3.86	1.57	.55	1.57	M6	.94	1.42	.79	.47
22642	4.88	1.77	.71	1.97	M8	.94	1.42	.79	.47
22643	6.18	1.97	.87	2.56	M8	1.26	1.50	.94	.59
22644	7.09	2.20	.94	3.15	M10	1.57	1.69	1.22	.59
22645	7.80	2.20	.94	3.15	M10	1.57	1.69	1.22	.59
22646	9.72	2.60	1.18	3.54	M10	1.93	1.73	1.50	.59
22647	11.34	3.07	1.26	3.94	M12	2.28	2.20	1.85	.71
22648	14.76	4.25	1.57	3.94	M14	2.28	3.03	2.28	1.02

Plastic Solid Handwheel With Revolving Handle

ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M
22801	3.27	1.14	.98	.35	.75	.31	.82	1.57	M6	.312	.67	.71	.63
22802	4.02	1.34	1.18	.39	.98	.35	1.06	1.97	M6	.375	.87	.87	.79
22803	4.92	1.54	1.38	.43	1.10	.31	1.22	2.20	M6	.375	1.06	1.02	.94
22804	5.91	1.73	1.50	.47	1.18	.39	1.34	2.56	M8	.500	1.18	1.02	.94
22805	6.93	1.93	1.73	.51	1.38	.63	1.54	3.15	M10	.500	1.10	1.38	1.30
22806	7.87	2.09	1.97	.55	1.57	.51	1.73	3.54	M10	.625	1.42	1.57	1.50
22807	9.84	2.36	2.24	.66	1.88	.75	1.97	3.54	M10	.625	1.42	1.57	1.50

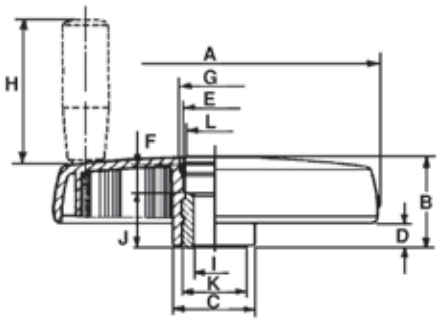
Plastic Solid Handwheel With Revolving, Fold-Away Handle

ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

This type of handwheel with fold-away handle has been designed for applications where limited space or safety reasons demand that the handle be folded back flat after manual use.



Part Number	A	B	C	D	E	F	G	H	I	J	K	L
22811	3.27	1.50	0.98	0.73	0.53	0.14	0.65	1.77	0.312	0.67	0.71	0.63
22812	4.02	1.34	1.18	0.39	0.98	0.35	1.06	1.97	0.375	0.87	0.87	0.79
22813	4.92	1.54	1.38	0.43	1.10	0.31	1.22	2.20	0.375	1.06	1.02	0.94
22814	5.91	1.73	1.50	0.47	1.18	0.39	1.34	2.56	0.50	1.18	1.02	0.94
22815	6.93	1.93	1.73	0.51	1.38	0.63	1.54	3.15	0.50	1.10	1.38	1.30
22816	7.87	2.09	1.97	0.55	1.57	0.51	1.73	3.54	0.625	1.42	1.57	1.50
22817	9.84	2.36	2.24	0.66	1.88	0.74	1.97	3.54	0.625	1.42	1.57	1.50

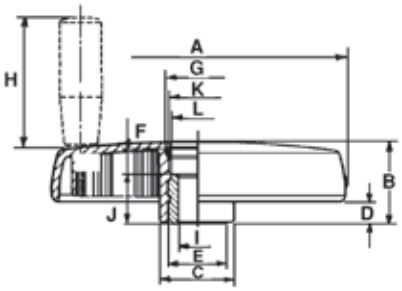
Plastic Solid Handwheel With Revolving, Spring Loaded, Fold-Away Handle

ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

This handwheel has a special spring loaded handle which automatically folds down into the cavity of the handwheel when the operator releases it. The handle disengages only when the axial pressure exerted by the operator ceases.

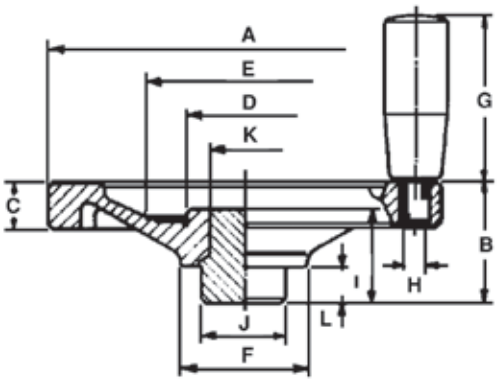


Part Number	A	B	C	D	E	F	G	H	I	J	K	L
22825	6.93	1.93	1.73	.51	1.38	.63	1.54	3.15	.500	1.10	1.38	1.30
22826	7.87	2.09	1.97	.55	1.57	.51	1.75	3.54	.625	1.42	1.57	1.50
22827	9.84	2.36	2.24	.66	1.88	.74	1.96	3.54	.625	1.42	1.57	1.50

Plastic Solid Handwheel
ELESA Original Design



- Material: High Strength Reinforced Duroplast
- Finish: Black Bright
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



Part Number	A	B	C	D	E	F	G	H	I	J	K	L
22831	3.15	1.22	0.55	1.10	1.69	1.18	—	—	1.10	0.79	0.63	0.39
22841*	3.15	1.22	0.55	1.10	1.69	1.18	1.57	M6	1.10	0.79	0.63	0.39
22832	3.94	1.57	0.59	1.38	2.13	1.54	—	—	1.42	0.94	0.79	0.47
22842*	3.94	1.57	0.59	1.38	2.13	1.54	1.97	M6	1.42	0.94	0.79	0.47
22833	4.92	1.73	0.59	1.73	2.76	1.81	—	—	1.5	1.26	0.94	0.59
22843*	4.92	1.73	0.59	1.73	2.76	1.81	2.56	M8	1.5	1.26	0.94	0.59
22834	5.91	1.89	0.71	1.73	2.76	1.89	—	—	1.5	1.26	0.94	0.59
22844*	5.91	1.89	0.71	1.73	2.76	1.89	2.56	M8	1.5	1.26	0.94	0.59
22835	6.89	2.09	0.75	2.17	3.54	2.2	—	—	1.69	1.57	1.22	0.59
22845*	6.89	2.09	0.75	2.17	3.54	2.2	3.15	M10	1.69	1.57	1.22	0.59
22836	7.87	2.24	0.83	2.17	3.54	2.36	—	—	1.69	1.57	1.22	0.59
22846*	7.87	2.24	0.83	2.17	3.54	2.36	3.54	M10	1.69	1.57	1.22	0.59
22837	8.86	2.56	0.98	2.6	4.33	2.76	—	—	1.73	1.93	1.5	0.59
22847*	8.86	2.56	0.98	2.6	4.33	2.76	3.54	M10	1.73	1.93	1.5	0.59
22838	11.85	2.95	0.98	3.7	5.83	3.23	—	—	2.2	2.28	2.28	0.71
22848*	11.85	2.95	0.98	3.7	5.83	3.23	3.54	M10	2.2	2.28	2.28	0.71

* With Revolving Handle

Jergens offers 3D models

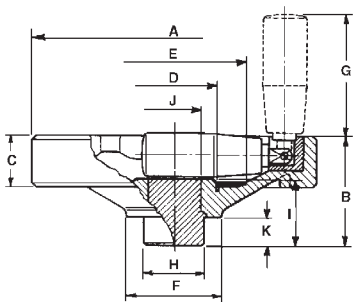
for all handles, knobs and handwheels at www.jergensinc.com

Plastic Solid Handwheel With Finger Grips and Revolving Fold-Away Handle

ELESA Original Design



- Material: High Strength Reinforced Duroplast
- Finish: Black Bright
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

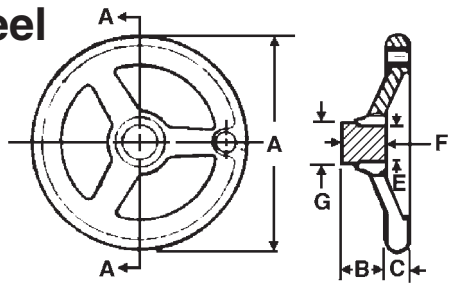


Part Number	A	B	C	D	E	F	G	H	I	J	K
22852	3.94	2.04	1.02	1.37	2.12	1.53	2.20	.94	1.29	.78	.47
22853	4.92	2.36	1.18	1.73	2.76	1.81	2.56	1.26	1.50	.94	.59
22854	5.91	2.48	1.26	1.73	2.76	1.89	2.56	1.26	1.50	.94	.59
22855	7.01	2.56	1.26	2.17	3.54	2.20	3.54	1.57	1.69	1.22	.59
22856	7.91	2.76	1.34	2.17	3.54	2.36	3.54	1.57	1.69	1.22	.59
22857	9.80	3.03	1.42	2.60	4.33	2.76	3.54	1.93	1.73	1.50	.59

Nylon Angular Three-Spoked Handwheel



- Material: Wheel, 6-6 Nylon
  Hub, Cast Iron
- Finish: Wheel, Black
  Hub, Black Oxide
- Threaded Brass Inserts have serrated O.D. for rigid union with Handwheel.
- All Wheels have three spokes
- 3D Solid Models are available in multiple formats from www.jergensinc.com

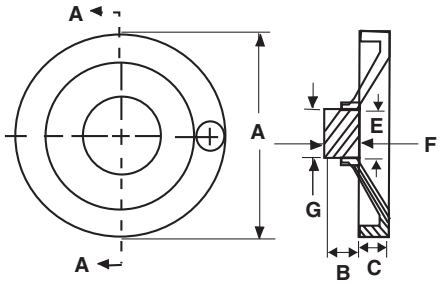


Part Number	A	B	C	E	F	G	Thread Size
34051	4	1 3/32	9/16	15/16	15/16	1 1/16	M8 x 1.25
34054	6	1 13/32	23/32	1 3/16	1 3/8	1 3/8	M10 x 1.50
34055	8	1 13/32	7/8	1 3/8	1 29/32	1 17/32	M10 x 1.50

Plastic Angular Solid Handwheel



- Material: Wheel, Acetal Co-Polymer
  Hub, Cast Iron
- Finish: Wheel, Black
  Hub, Black Oxide
- Threaded Brass Inserts have serrated O.D. for rigid union with Handwheel.
- Aluminum Center Plate can be imprinted with your company name, instructions, etc.
- 3D Solid Models are available in multiple formats from www.jergensinc.com

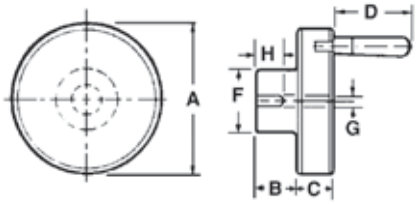


Part Number	A	B	C	E	F	G	Thread Size
34061	5	1 1/8	5/8	1	1 1/8	1 1/8	M8 x 1.25
34062	6	1 11/32	23/32	1 3/16	1 11/32	1 11/32	M10 x 1.50
34063	8	1 29/32	25/32	1 3/8	1 29/32	1 17/32	M10 x 1.50

Aluminum Finger Wheel



- Material: 2024 Aluminum
- Finish: Black Anodize
- Knurled O.D. for better gripping
- Revolving handle and reamed hole are included
- 3D Solid Models are available in multiple formats from www.jergensinc.com



Finger Wheel With Handle

Part Number	A	B	C	D	F	G	H	Part Number	
								Wheel Only	Handle Only
22721	2	9/16	9/16	1 1/8	13/16	3/8	7/8	**22521**	**21911**

Metric Finger Wheel With Handle

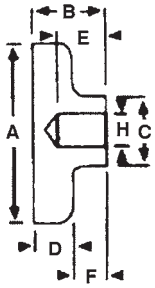
Part Number	A	B	C	D	F	G	H	Part Number	
								Wheel Only	Handle Only
22771	50	14	14	28	20	10	22	**22571***	**21951**

*Not tapped for handle

Aluminum Finger Wheel

- Material: 2024 Aluminum
- Finish: Clear anodized polished to a high luster
- Outer rim is knurled

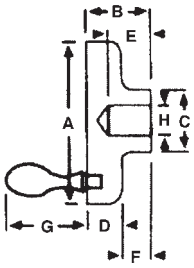




Finger Wheels

Part Number	A	B	C	D	E	F	H
21280	1	13/16	1/2	3/8	—	7/16	Blank
21281	2	1 1/8	13/16	9/16	—	9/16	Blank
21282	3	1 1/4	1 1/4	11/16	—	9/16	Blank
21285	1	13/16	1/2	3/8	5/8	7/16	1/4
21286	2	1 1/8	13/16	9/16	7/8	9/16	3/8
21287	3	1 1/4	1 1/4	11/16	7/8	9/16	5/8





Finger Wheels With Handle

Part Number	A	B	C	D	E	F	G	H
21291	2	1 1/8	13/16	9/16	—	9/16	1 9/32	Blank
21292	3	1 1/4	1 1/4	9/16	—	9/16	1 15/16	Blank
21296	2	1 1/8	13/16	9/16	7/8	9/16	1 9/32	3/8
21297	3	1 1/4	1 1/4	9/16	7/8	9/16	1 15/16	5/8

Note: Also available in Stainless Steel

Handles, Levers & Cranks

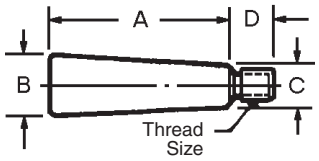
Adjustable Handle 435
Adjustable Handle With Stud 435
Aluminum Balanced Crank Handle 428
Aluminum Revolving and Solid Handle 420
Aluminum Tubular Handle 442
Aluminum & Malleable Clamping Levers 431
Aluminum & Malleable Offset Handle 430
Aluminum & Malleable Speed Handle 427
Back Mounted Bridge Handle 440
Balanced Crank Handle 428
Control Lever 439
Double Handle Locking Lever 431
Ergonomic Style Steel Handles 421
Fold-Away Handle 425
Forged Crank Handle 429
Front Mounted Bridge Handle 440
Handle With Steel Shank 422
Machine Guard Handles 439
Metal Adjustable Handles 432–434
Plastic Adjustable Handle With Stainless Steel Stud 437
Plastic Button Head Tapped Adjustable Handle 436, 438
Plastic Button Head Adjustable Handle With Stud 436, 438
Plastic Button Head Adjustable Tapped Handle With Stainless Steel Insert 437
Plastic Crank With Revolving Fold-Away Handle 426
Plastic Crank With Revolving Handle 426
Plastic Folding Handle 420
Plastic Fixed Handle 420
Plastic Handle 441
Plastic Heavy Duty Tapered Handle 424
Plastic Light Duty Tapered Handle 424
Plastic Pull/Lift Handle 442
Plastic Revolving Fold-Away Handle 425
Plastic Revolving Heavy Duty Handle With Steel Shank 422
Plastic Revolving Handle With Steel Through Shank 422
Plastic Revolving Handle With Steel Shank 423
Revolving Handle 423
Single Handle Locking Lever 430
Steel Clamp Lever 429
Steel Solid and Revolving Balanced Crank Handle 428

Jergens®
MANUFACTURING EFFICIENCY

Jergens SPECIALTY FASTENERS GROUP

Aluminum Revolving and Solid Handle





- Material: Handle, 2024 Aluminum
  Stem, Low Carbon Steel
- Finish: Revolving Handle, Clear or Black Anodize
  Stem for Revolving Handle, Zinc Plate
  Solid Handle, Plain
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Aluminum Revolving Handles

Part Number		A	B	C	D	Thread Size	Wt. (lbs)
Clear	Black						
21901	**21911**	1 1/8	7/16	3/8	3/8	10-24	.02
21902	**21912**	1 9/16	5/8	1/2	7/16	1/4-20	.03
21903	**21913**	2	7/8	9/16	1/2	5/16-18	.08
21904	**21914**	2 1/2	1	3/4	1/2	3/8-16	.19
21905	**21915**	2 7/8	1 1/8	15/16	1/2	1/2-13	.23
21906	**21916**	3 1/4	1 1/4	15/16	1/2	1/2-13	.39

Solid Handles

Part Number	Wt. (lbs)
—	—
10301	.03
10302	.10
10303	.15
—	—
10304	.31

Metric

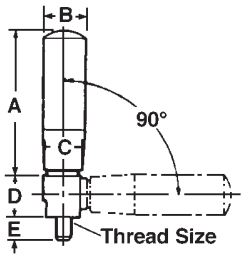
Clear	Black	A	B	C	D	Thread Size
Part Number*						
21951	**21961**	28	11	9	9	M5
21952	**21962**	39	16	13	11	M6
21953	**21963**	50	22	14	13	M8
21954	**21964**	63	25	19	13	M10
21955	**21965**	72	28	23	13	M12
21956	**21966**	82	31	23	13	M12

*Dimensions in millimeters

- Material: Handles: 2024 Aluminum
  Stem: Low Carbon Steel
- Finish: Clear or Black Anodize
  Stem: Zinc Plate
- Thread: Class 6g

Plastic Folding Handle



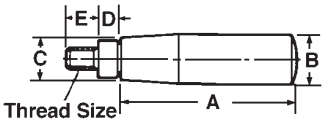


- Material: Handle, 6-6 Nylon Stem, Steel
- Finish: Handle, Black Stem, Chrome Plated
- Folds out of the way
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	D	E	Thread Size
34070	2 1/4	25/32	25/32	7/8	1/2	M8 x 1.25
34071	3	25/32	25/32	7/8	9/16	M10 x 1.50

Plastic Fixed Handle

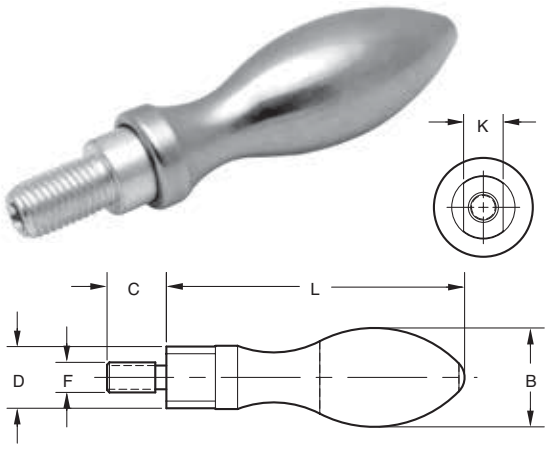




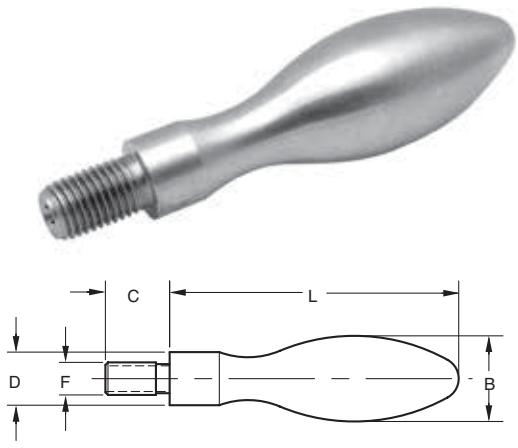
- Material: Handle, 6-6 Nylon Stem, Steel
- Finish: Handle, Black Stem, Chrome Plated
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	D	E	Thread Size
34075	2 9/32	5/8	9/16	5/16	1/2	M8 x 1.25
34076	2 15/32	7/8	11/16	23/32	9/16	M10 x 1.50

Ergonomic Style Steel Handles

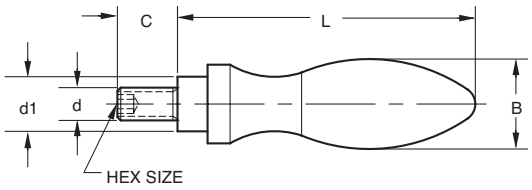


Revolving Handle

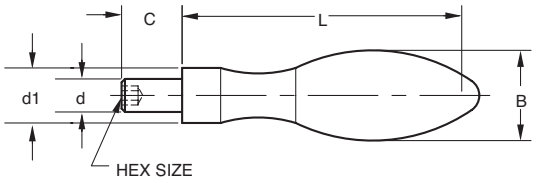


Fixed Handle

Part Number	Style	F (Thread)	B	C	D	L	K
22000	Revolving	10 - 24	1/2	3/8	0.32	1-7/8	1/4
22001	Revolving	1/4 - 20	5/8	1/2	0.40	2-1/4	5/16
22002	Revolving	5/16 - 18	13/16	9/16	0.51	2-13/16	3/8
22003	Revolving	3/8 - 16	1	11/16	0.63	3-3/8	7/16
22011	Fixed	10 - 24	1/2	3/8	0.32	1-11/16	—
22012	Fixed	1/4 - 20	5/8	1/2	0.40	2	—
22013	Fixed	5/16 - 18	13/16	9/16	0.51	2-5/8	—
22014	Fixed	3/8 - 16	1	11/16	0.63	3-3/16	—



Metric Revolving Style



Metric Fixed Style

Metric

Part Number*	Style	d (Thread)	L	B	C	d 1
22050	Revolving	M6	54.5	16	11	10
22051	Revolving	M8	67	20	13	13
22052	Revolving	M10	83	25	14	16
22053	Revolving	M12	105.5	32	21	20
22054	Revolving	M16	117	36	26	22
22055	Fixed	M6	54	16	11	10
22056	Fixed	M8	64	20	13	13
22057	Fixed	M10	80	25	14	16
22058	Fixed	M12	100	32	21	20
22059	Fixed	M16	112	36	26	22

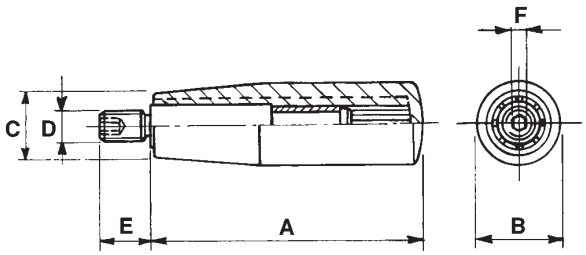
*Dimensions in millimeters

Jergens SPECIALTY FASTENERS GROUP

Plastic Revolving Heavy Duty Handle With Steel Shank
ELESA Original Design



- Material: Black Duroplast
- Finish: Black Bright
- Shank: Zinc Plated Steel or Stainless Steel 303
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



With Steel Shank

Part Number	A	B	C	D*	E	F
33621	1.57	.71	.59	M6	.51	.12
33622	1.97	.83	.67	M6	.51	.12
33624	2.56	.91	.75	M8	.59	.16
33625	3.15	1.02	.83	M10	.67	.20
33626	3.54	1.10	.87	M10	.67	.20

*Dimension in millimeters

With Stainless Steel Shank

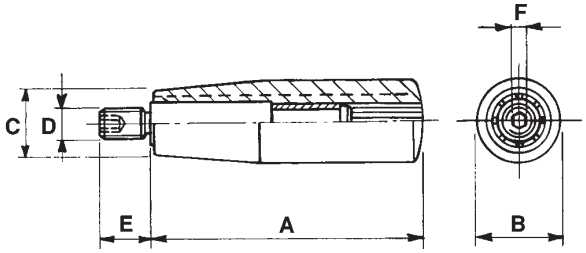
Part Number	A	B	C	D*	E	F
34102	1.97	.83	.67	M6	.51	.12
34103	2.56	.91	.75	M8	.59	.16
34104	3.15	1.02	.83	M10	.67	.20
34105	3.54	1.10	.87	M10	.67	.20

*Dimension in millimeters

Plastic Revolving Handle With Steel Through Shank
ELESA Original Design



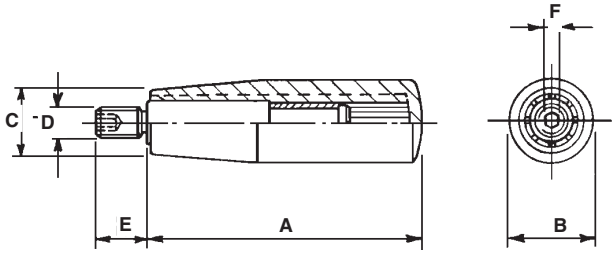
- Material: Black Duroplast
- Finish: Black Bright
- Shank: Matte Chrome Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



Part Number	A	B	C	D	E	F
33601	1.57	.71	.59	1/4-20	.51	5/32
33602	1.97	.83	.67	5/16-18	.59	3/16
33604	2.56	.91	.75	5/16-18	.67	1/4
33605	3.15	1.02	.83	3/8-16	.71	1/4
33606	3.54	1.10	.87	3/8-16	.71	5/16

Plastic Revolving Handle With Steel Shank
ELESA Original Design



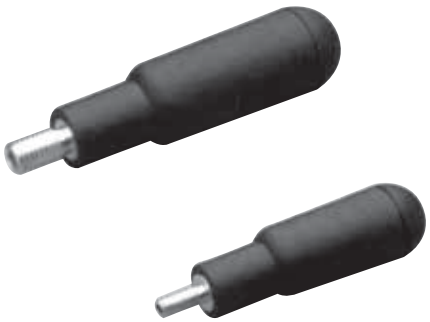


- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Shank: Zinc Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D*	E	F
33611	1.57	.71	.59	M6	.51	.12
33612	1.97	.83	.67	M6	.51	.12
33613	2.20	.87	.71	M6	.51	.12
33614	2.56	.91	.75	M8	.59	.16
33615	3.15	1.02	.83	M8	.59	.16
33616	3.54	1.10	.87	M10	.67	.20

*Dimension in millimeters

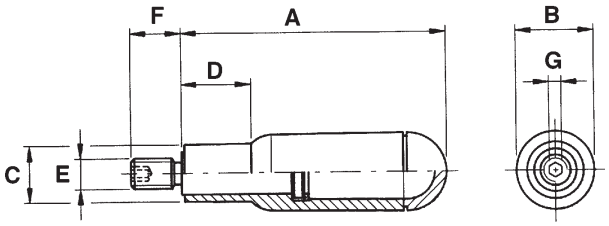
Revolving Handle
ELESA Orginal Design



- Material: High Impact Strength Technopolymer
- Finish: Gray/Black Matte
- Stud: Zinc Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E*	F	G
34471	2.56	.81	.59	.73	M6	.51	.12
34472	2.87	.87	.63	.75	M8	.59	.16
34473	3.39	.96	.69	.94	M8	.59	.16
34474	3.39	.96	.69	.94	M10	.67	.20
34475	3.74	1.04	.71	.98	M10	.67	.20

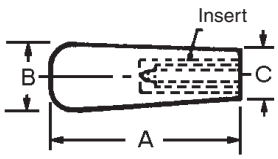
*Dimension in millimeters



Jergens SPECIALTY FASTENERS GROUP

Plastic Heavy Duty Tapered Handle





- Use as grasp handles on portable tools or as machine shift levers
- Inserts: Brass
- 3D Solid Models are available in multiple formats from www.jergensinc.com

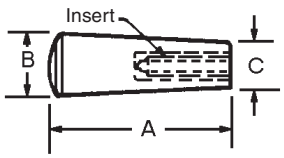
With Tapped Holes

Part Number	A	B	C	Insert Thread and Depth
32105	4 1/2	1 3/8	1	3/8-16 x 5/8
32106	4 1/2	1 3/8	1	3/8-24 x 5/8
32101	4 1/2	1 3/8	1	3/8-16 x 2
32107	4 1/2	1 3/8	1	1/2-13 x 5/8
32108	4 1/2	1 3/8	1	1/2-20 x 5/8
32103	4 1/2	1 3/8	1	1/2-13 x 1 1/4
32104	4 1/2	1 3/8	1	5/8-18 x 3/4

Plastic Light Duty Tapered Handle



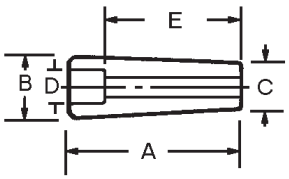
- Use as grasp handles on small tools, utensils, and gauges
- Inserts: Brass
- Through hole style for use with a socket head cap screw
- 3D Solid Models are available in multiple formats from www.jergensinc.com



With Tapped Holes

Part Number	A	B	C	Insert Thread and Depth
32111	2 5/8	1	5/8	1/4-20 x 7/16
32112	2 5/8	1	5/8	5/16-18 x 7/16
32117	2 5/8	1	5/8	3/8-16 x 1/2
32118	3 7/8	1 1/8	3/4	1/4-20 x 1/2
32119	3 7/8	1 1/8	3/4	5/16-18 x 7/16
32109	3 7/8	1 1/8	3/4	3/8-16 x 5/8
32102	3 7/8	1 1/8	3/4	3/8-16 x 2
32110*	3 7/8	1 1/8	3/4	.500/.510 x 2

* Cored Hole



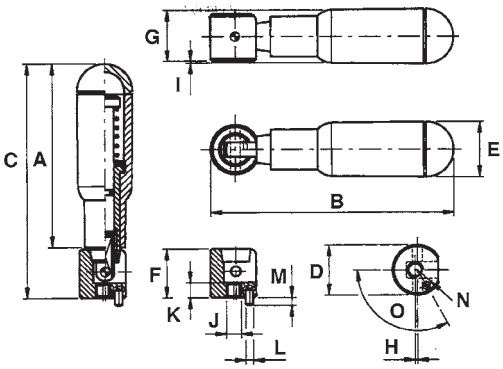
With Through Hole

Part Number	A	B	C	D	E	Through Hole Size
32113	2 9/16	1	5/8	1/2	5/8	.251/.256
32114	3 11/16	1 1/8	3/4	3/4	2 5/8	.380/.385

Fold-Away Handle
ELESA Orginal Design



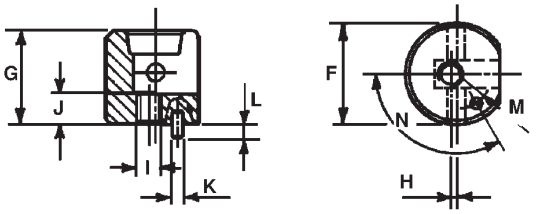
- Material: High Impact Strength Technopolymer
- Finish: Gray/Black Matte
- Base: Sintered and Oxidized
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

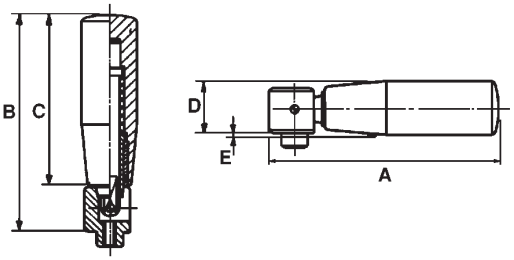


Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
34481	2.56	3.27	3.17	.63	.81	.59	.75	.04	.06	M4	.20	.12	.12	.22	90°
34482	2.87	3.58	3.48	.63	.87	.59	.77	.04	.10	M4	.20	.12	.12	.22	90°
34483	2.87	3.82	3.66	.79	.87	.77	.85	.02	.02	M6	.24	.12	.12	.22	120°
34484	3.39	4.33	4.17	.79	.96	.77	.91	.02	.06	M6	.24	.12	.12	.28	120°
34485	3.74	4.69	4.53	.79	1.04	.77	.94	.02	.10	M6	.24	.12	.12	.28	120°

Plastic Revolving Fold-Away Handle
ELESA Original Design







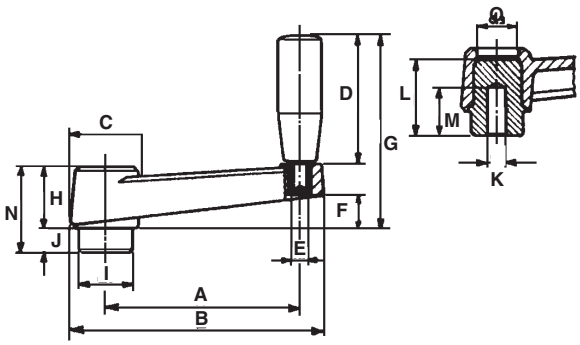
- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Stud: Black Oxide Steel Double Guide
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N
33631	2.91	2.80	2.20	.75	.10	.63	.59	.04	M4	.20	.12	.12	.22	90°
33632	3.27	3.15	2.56	.79	.12	.63	.59	.04	M4	.20	.12	.12	.22	90°
33633	3.50	3.35	2.56	.87	.04	.79	.77	.02	M6	.24	.12	.12	.28	120°
33634	4.09	3.94	3.15	.94	.10	.79	.77	.02	M6	.24	.12	.12	.28	120°
33635	4.49	4.33	3.54	.94	.12	.79	.77	.02	M6	.24	.12	.12	.28	120°
33636	4.65	4.45	3.54	1.06	.04	1.02	.91	.06	M6	.28	.12	.12	.37	90°

Jergens SPECIALTY FASTENERS GROUP

Plastic Crank With Revolving Handle
ELESA Original Design





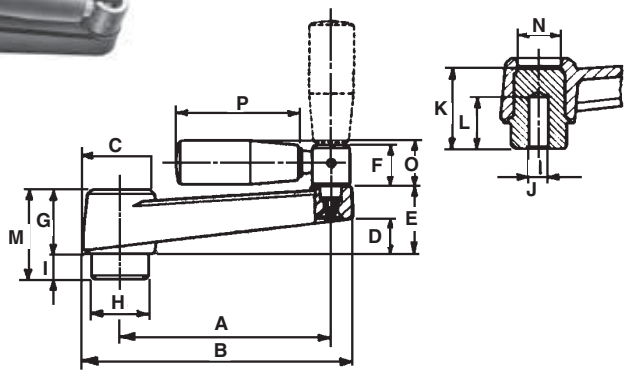
- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Matte
- Ribbed Structure for heavy duty applications
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Available in Ergostyle®. See Ergostyle Section.
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	D	E*	F	G	H	I	J	K	L	M	N	O
33651	2.52	3.39	1.06	1.57	M6	.39	2.48	.91	.71	.39	.236	1.14	.71	1.30	.63
33652	3.15	4.13	1.18	1.97	M6	.51	2.99	1.02	.87	.39	.236	1.26	1.02	1.42	.67
33653	3.94	5.04	1.34	2.56	M8	.59	3.78	1.18	.94	.39	.315	1.46	1.10	1.57	.83
33654	5.11	6.37	1.57	3.15	M8	.79	4.52	1.37	1.10	.55	.394	1.73	1.18	1.93	.98
33655	6.30	7.80	1.77	3.54	M10	.91	5.12	1.57	1.34	.59	.394	1.93	1.18	2.17	1.06
33656	8.35	8.92	1.97	3.54	M10	1.02	5.35	1.77	1.57	.59	.472	2.09	1.18	2.36	1.22

*Dimension in millimeters

Plastic Crank With Revolving Fold-Away Handle
ELESA Original Design



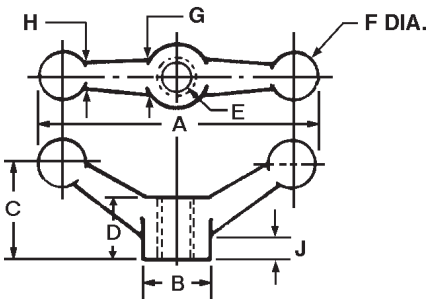


- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Matte
- Ribbed Structure for heavy duty applications
- Hub: Black Oxide Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
33662	3.15	4.13	1.18	.51	1.06	.59	1.02	.87	.39	.236	1.26	1.02	1.42	.67	.74	2.20
33663	3.94	5.04	1.34	.59	1.22	.79	1.18	.94	.39	.315	1.46	1.10	1.57	.83	.86	2.56
33664	5.11	6.37	1.57	.78	1.37	.79	1.37	1.10	.55	.394	1.73	1.18	1.93	.98	.86	2.56
33665	6.30	7.80	1.77	.91	1.57	.79	1.57	1.34	.59	.394	1.93	1.18	2.17	1.06	.94	3.15
33666	8.35	8.92	1.97	1.02	1.81	.91	1.77	1.57	.59	.472	2.09	1.18	2.36	1.22	1.06	3.54

Aluminum & Malleable Speed Handle





- Material: 319 Aluminum
  Malleable ASTM A47, GR32510
- Finish: Mill
- Thread: 2B-UNC or class 6h
- Can be used with rod ends for clamping tank covers, locking lids or any fast spin locking application
- With or without tapped or blank hole
- Three head widths
- 3D Solid Models are available in multiple formats from www.jergensinc.com
- "D" dimension is based on machined castings. It may be slightly greater on blanks.

Part Number							Dia			
Aluminum	Malleable	A	B	C	D	E	F	G	H	J
39901	**40301**	4 1/2	1 1/8	1 1/2	1	Blank	11/16	3/4	7/16	1/2
39902	**40302**	4 1/2	1 1/8	1 1/2	1	3/8-16	11/16	3/4	7/16	1/2
39903	**40303**	4 1/2	1 1/8	1 1/2	1	1/2-13	11/16	3/4	7/16	1/2
39904	**40304**	6	1 1/2	2 1/8	1 1/2	Blank	.94	7/8	5/8	3/4
39905	**40305**	6	1 1/2	2 1/8	1 1/2	1/2-13	.94	7/8	5/8	3/4
39906	**40306**	6	1 1/2	2 1/8	1 1/2	5/8-11	.94	7/8	5/8	3/4
39907	**40307**	8 3/4	2	3	2	Blank	1 3/16	1.02	7/8	.94
—	**40308**	8 3/4	2	3	2	3/4-10	1 3/16	1.02	7/8	.94

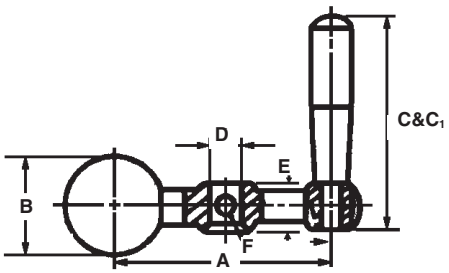
Part Number							Dia			
Aluminum	Malleable	A	B	C	D	E*	F	G	H	J
39901	**40301**	113	28	38	25	Blank	17	19	11	13
39952	**40352**	113	28	38	25	M10	17	19	11	13
39953	**40353**	113	28	38	25	M12	17	19	11	13
39904	**40304**	150	38	53	38	Blank	24	22	16	19
39955	**40355**	150	38	53	38	M12	24	22	16	19
39956	**40356**	150	38	53	38	M16	24	22	16	19
39907	**40307**	219	50	75	50	Blank	30	26	22	24
—	**40358**	222	50	75	50	M20	30	26	22	24

*Dimension in millimeters

Jergens
SPECIALTY FASTENERS GROUP

Steel Solid and Revolving Balanced Crank Handle





SOLID HANDLE DOES NOT REVOLVE

- Material: Steel
- Finish: Bright Chrome
- 3D Solid Models are available in multiple formats from www.jergensinc.com
- Revolving Handle is a replacement set for Bridgeport Style Mills

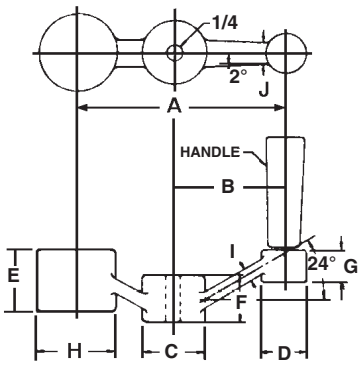
Part Number						Reamed		Center Hole*
Solid	Revolving	A	B	C	C_1†	D	E	F
11401	—	2	13/16	2	—	5/16	7/16	1/8
11402	**11412**	2 1/2	1	2 1/2	2 3/4	5/16	9/16	1/8
11403	**11413**	3 1/8	1 1/4	3 1/4	3 1/2	3/8	11/16	5/32
11404	**11414**	4	1 1/4	3 1/4	3 1/2	3/8	11/16	5/32
11405	**11415**	5	1 1/2	4	4 3/16	1/2	7/8	3/16
11406	—	6 1/8	1 1/2	4	—	1/2	7/8	3/16

* Center Hole is cross drilled on one side.

† Dimension for Revolving Style

Aluminum Balanced Crank Handle





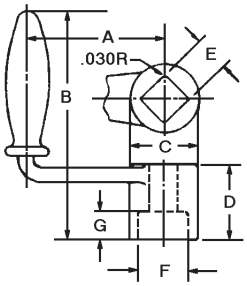
Jergens Aluminum Balanced Crank Handles are good replacements for heavier steel handles. The light-weight characteristics make table positioning easier as no fall-off occurs after position has been established. Light-weight Aluminum Balanced Crank Handles are ideal for applications such as optical jig boring equipment and inspection instruments.

- Material: 319 Aluminum Alloy
- Finish: Grey Enamel
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	D	E	F	G	H	I	J	Handle	Wt. (lbs)
11301	2 5/16	1 1/4	3/4	1/2	11/16	1/2	7/16	7/8	3/16	5/16	21902	.14
11302	3 1/16	1 11/16	1	5/8	7/8	5/8	1/2	1 1/4	1/4	3/8	21903	.30
11303	3 15/16	2 1/8	1 1/8	3/4	1 3/16	3/4	5/8	1 3/8	5/16	7/16	21904	.54
11304	4 11/16	2 9/16	1 3/8	7/8	1 5/16	1	3/4	1 5/8	5/16	1/2	21905	.75
11305	5 11/16	3 1/16	1 3/8	7/8	1 1/2	1	1	1 3/4	3/8	9/16	21905	.90

Forged Crank Handle





- Material: C-1021 Forging
- Finish: Mill
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Blank Crank Handles

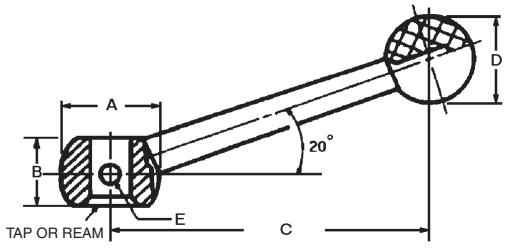
Part Number	A	B	C	D	Wt. (lbs)
20501	2 1/2	3 3/4	1	1/4	.60
20503	3	4 1/4	1 1/4	1 1/2	.97
20504	3 1/2	4 3/16	1 1/16	1 5/16	.90
20505	4	4 1/2	1 1/4	1 3/8	1.14
20506	5	4 15/16	1 1/4	1 13/16	1.62
20507	6	5 1/16	1 1/4	1 15/16	1.62
20508	7	5 7/16	1 3/8	2 1/16	1.95
20509	8	6 1/16	1 9/16	2 7/16	3.00
20510	9 1/8	6 1/4	1 1/2	2 1/2	3.25
20511	10	7	1 3/4	3	4.37

Finished Crank Handles

Part Number	E	F	G	Wt. (lbs)
20301	1/2 Sq.	3/4	3/16	.50
20303	9/16 Sq.	3/4	1/4	.82
20304	1/2 Sq.	11/16	1/4	.74
20305	9/16 Sq.	3/4	5/16	.97
20306	5/8 Sq.	7/8	3/8	1.37
20307	11/16 Sq.	15/16	3/8	1.25
20308	3/4 Sq.	1 1/16	1/2	1.67
20309	7/8 Sq.	1 1/4	1/2	2.44
20310	7/8 Sq.	1 1/4	1/2	2.60
20311	1 Sq.	1 3/8	9/16	3.62

Steel Clamp Lever





- Material: Lever, Low Carbon Steel
  Ball, Plastic
- Finish: Lever, Satin Chrome Plate
  Ball, Black

Part Number	Hub Style	A	B	C	D	E
16601	1/4 Ream	5/8	7/16	2 1/4	3/4	1/8
16602	5/16-18 Tap	5/8	7/16	2 1/4	3/4	—
16603	5/16 Ream	25/32	9/16	2 3/4	13/16	1/8
16604	3/8-16 Tap	25/32	9/16	2 3/4	13/16	—
16605	3/8 Ream	1	3/4	3 1/2	15/16	5/32
16606	1/2-13 Tap	1	3/4	3 1/2	15/16	—
16607	1/2 Ream	1 1/4	7/8	4 3/8	1 1/4	3/16
16608	5/8-11 Tap	1 1/4	7/8	4 3/8	1 1/4	—
16609	5/8 Ream	1 9/16	1 1/8	5 1/2	1 1/2	1/4
16610	3/4-10 Tap	1 9/16	1 1/8	5 1/2	1 1/2	—

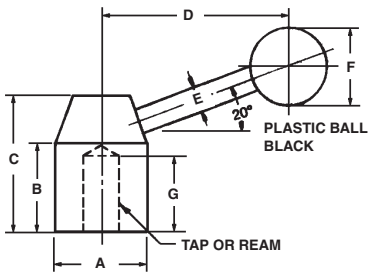
Jergens SPECIALTY FASTENERS GROUP

Single Handle Locking Lever



A fast and efficient means of clamping and locking on jigs, fixtures, machine tools and special applications where high clamping force is necessary.

- Material: Low Carbon Steel
- Finish: Zinc Plate
- Thread: Class 2B-UNC
- Handles: Copper Brazed into the hubs
- Ream: + .001
  - .000
- 3D Solid Models are available in multiple formats from www.jergensinc.com



Part Number	A	B	C	D	E	F	G	Hub Style
28901	1	1	1 1/2	2	1/4	1	—	Blank
28902	1	1	1 1/2	2	1/4	1	11/16	3/8-16 Tap
28903	1	1	1 1/2	2	1/4	1	13/16	3/8 Ream
28904	1 1/4	1 1/8	1 11/16	3	3/8	1	—	Blank
28905	1 1/4	1 1/8	1 11/16	3	3/8	1	3/4	1/2-13 Tap
28906	1 1/4	1 1/8	1 11/16	3	3/8	1	7/8	1/2 Ream
28907	1 1/2	1 1/4	2	4	1/2	1 3/8	—	Blank
28908	1 1/2	1 1/4	2	4	1/2	1 3/8	15/16	5/8-11 Tap
28909	1 1/2	1 1/4	2	4	1/2	1 3/8	1 1/16	5/8 Ream

Metric

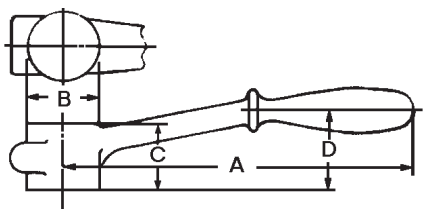
Part Number*	A	B	C	D	E	F	G	Hub Style
28901	25	25	38	50	6	25	-	Blank
28952	25	25	38	50	6	25	17	M8 Tap
28953	25	25	38	50	6	25	20	8mm Ream
28904	31	28	42	75	9	25	-	Blank
28955	31	28	42	75	9	25	19	M12 Tap
28956	31	28	42	75	9	25	22	12mm Ream
28907	38	31	50	100	13	34	-	Blank
28958	38	31	50	100	13	34	23	M16 Tap
28959	38	31	50	100	13	34	27	16mm Ream

*Dimensions in millimeters

Aluminum & Malleable Offset Handle



- Material: 319 Aluminum Alloy
  Malleable ASTM A47, GR32510
- Finish: Mill
- 3D Solid Models are available in multiple formats from www.jergensinc.com



Aluminum

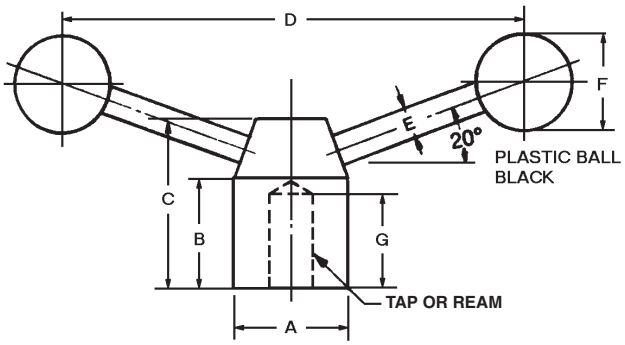
Part Number	A	B	C	D	Wt. (lbs)
29901	4 1/2	1	3/4	1	.15
29902	6	1 1/2	1 1/4	1 3/4	.44
29903	11	1 5/8	1 3/8	1 15/16	.78

Malleable

Part Number	Wt. (lbs)
30101	.45
30102	1.24
30103	2.25

Double Handle Locking Lever





- Material: Low Carbon Steel
- Finish: Zinc Plate
- Thread: Class 2B-UNC or Class 6h
- Handles: Copper brazed into the hubs
- Ream: + .001
  - .000
- Metric Ream:
  + .025
  - .000
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Locking levers with double handles are used where it is advantageous to clamp and lock quickly with high clamping force.

Part Number	A	B	C	D	E	F	G	Hub Style
28910	1	1	1 1/2	4	1/4	1	—	Blank
28911	1	1	1 1/2	4	1/4	1	11/16	3/8-16 Tap
28912	1 1/4	1 1/8	1 11/16	6	3/8	1	—	Blank
28913	1 1/4	1 1/8	1 11/16	6	3/8	1	3/4	1/2-13 Tap
28914	1 1/2	1 1/4	2	8	1/2	1 3/8	—	Blank
28915	1 1/2	1 1/4	2	8	1/2	1 3/8	15/16	5/8-11 Tap
28916	1 1/2	1 1/4	2	8	1/2	1 3/8	1 1/16	5/8 Ream

Metric

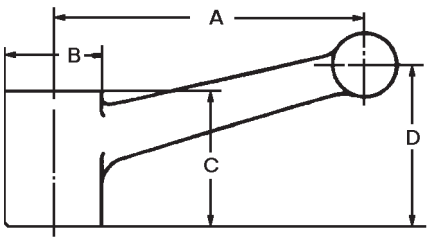
Part Number*	A	B	C	D	E	F	G	Hub Style
28910	25	25	38	100	6	25	—	Blank
28961	25	25	38	100	6	25	17	M8 Tap
28912	31	28	42	150	9	25	—	Blank
28963	31	28	42	150	9	25	19	M12 Tap
28914	38	31	50	200	13	34	—	Blank
28965	38	31	50	200	13	34	23	M16 Tap
28966	38	31	50	200	13	34	27	16mm Ream

*Dimensions in millimeters

Aluminum & Malleable Clamping Levers



- Material: 319 Aluminum Alloy
  Malleable ASTM A47, GR32510
- Finish: Mill
- 3D Solid Models are available in multiple formats from www.jergensinc.com



Aluminum

Part Number	A	B	C	D	Wt. (lbs)
16501	2	1	1	1 1/8	.10
16502	4	1 1/2	2	2 1/8	.53
16503	5 9/64	2	2 3/8	2 53/64	1.00

Malleable

Number	Wt. (lbs)
16701	.30
16702	1.50
16703	2.80

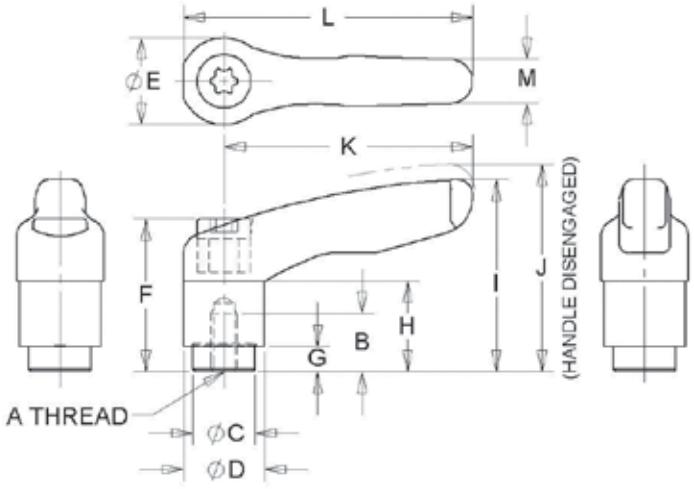
Metal Adjustable Handles



For adjustable clamping or tightening controls for limited operating angles. Adjustment of handle position occurs by pulling up on the handle, which disengages the teeth from the locking mechanism, and turning to the desired position. Releasing the handle allows for tightening or loosening.

Tapped Holes:
- Material: Handle, Die Cast Zinc
- Finish: Handle, Plastic Coated Steel Parts, Black Oxide
- Color: Black Satin Finish

Stainless Steel Tapped Holes:
- Material: Handle, Die Cast Zinc Steel Parts, 303 Stainless Steel
- Finish: Handle, Plastic Coated Steel Parts, Bright
- Color: Black Satin Finish



With Tapped Holes

Tapped Part Number	Stainless Tapped Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M
40501	-	8-32	0.35	0.39	0.51	0.57	0.94	0.16	0.59	1.16	1.31	1.57	1.85	0.29
-	**40602**	10-24	0.35	0.39	0.51	0.57	0.94	0.15	0.59	1.16	1.31	1.57	1.85	0.29
40502	-	10-24	0.35	0.39	0.51	0.57	0.94	0.16	0.59	1.16	1.31	1.57	1.85	0.29
-	**40603**	1/4-20	0.35	0.39	0.51	0.57	0.94	0.15	0.59	1.16	1.31	1.57	1.85	0.29
40503	-	1/4-20	0.35	0.39	0.51	0.57	0.94	0.16	0.59	1.16	1.31	1.57	1.85	0.29
40504	**40604**	1/4-20	0.47	0.53	0.70	0.76	1.14	0.25	0.68	1.61	1.77	2.55	2.95	0.37
40505	**40605**	5/16-18	0.47	0.53	0.70	0.76	1.14	0.25	0.68	1.61	1.77	2.55	2.95	0.37
-	**40606**	5/16-18	0.55	0.62	0.84	0.90	1.47	0.39	0.94	2.08	2.24	3.14	3.60	0.45
40506	-	5/16-18	0.55	0.70	0.84	0.90	1.47	0.39	0.94	2.08	2.24	3.14	3.60	0.43
-	**40607**	3/8-16	0.55	0.62	0.84	0.90	1.47	0.39	0.94	2.08	2.24	3.14	3.60	0.45
40507	-	3/8-16	0.55	0.70	0.84	0.90	1.47	0.39	0.94	2.08	2.24	3.74	3.60	0.43
-	**40608**	3/8-16	0.66	0.74	1.00	1.08	1.67	0.39	1.06	2.40	2.55	3.74	4.28	0.53
40508	-	3/8-16	0.66	0.70	1.00	1.08	1.67	0.39	1.06	2.40	2.55	3.74	4.25	0.51
-	**40609**	1/2-13	0.66	0.74	1.00	1.08	1.67	0.39	1.06	2.40	2.55	3.74	4.28	0.53
40509	-	1/2-13	0.66	0.70	1.00	1.08	1.67	0.39	1.06	2.40	2.55	3.74	4.25	0.51
40510	**40610**	1/2-13	0.90	0.90	1.18	1.27	2.00	0.47	1.29	2.85	3.05	4.32	4.97	0.61
40511	**40611**	5/8-11	0.90	0.90	1.18	1.27	2.00	0.47	1.29	2.85	3.05	4.32	4.97	0.61

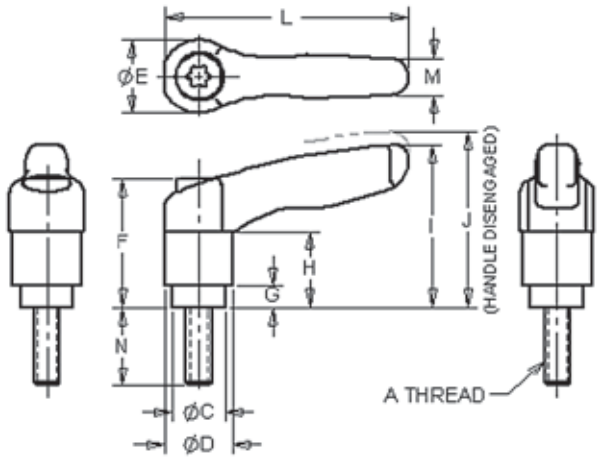
Jergens offers 3D models

for all handles, knobs and handwheels at www.jergensinc.com

Metal Adjustable Handles



For adjustable clamping or tightening controls for limited operating angles. Adjustment of handle position occurs by pulling up on the handle, which disengages the teeth from the locking mechanism, and turning to the desired position. Releasing the handle allows for tightening or loosening.



- Material: Handle, Die Cast Zinc
- Finish: Handle, Plastic Coated Steel Parts, Black Oxide
- Color: Black Satin Finish

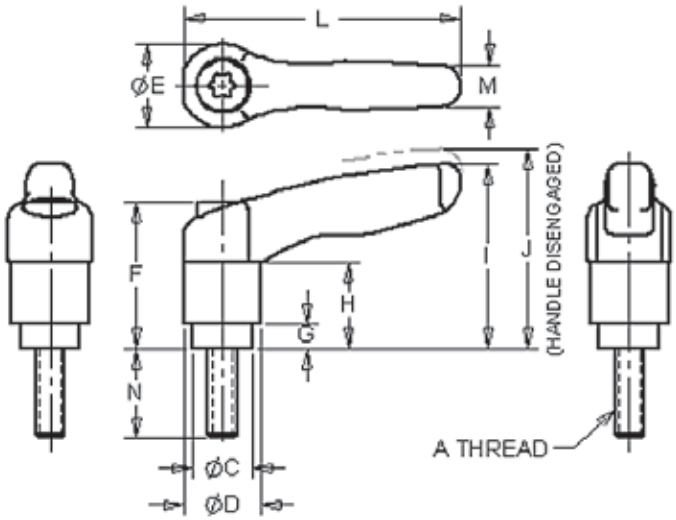
Part Number	Thread Size A	Thread Length N	C	D	E	F	G	H	I	J	L	M
40521	10-24	.59	.39	.51	.57	.94	.16	.59	1.16	1.31	1.85	.29
40522	10-24	.98	.39	.51	.57	.94	.16	.59	1.16	1.31	1.85	.29
40523	1/4-20	.78	.39	.51	.57	.94	.16	.59	1.16	1.31	1.85	.29
40524	1/4-20	.98	.39	.51	.57	.94	.16	.59	1.16	1.31	1.85	.29
40525	1/4-20	1.57	.39	.51	.57	.94	.16	.59	1.16	1.31	1.85	.29
40526	1/4-20	.78	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.95	.37
40527	1/4-20	.98	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.95	.37
40528	1/4-20	1.57	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.95	.37
40529	5/16-18	.78	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.95	.37
40530	5/16-18	.98	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.95	.37
40531	5/16-18	1.57	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.95	.37
40532	3/8-16	.98	.70	.84	.90	1.47	.39	.94	2.08	2.24	3.60	.43
40533	3/8-16	1.57	.70	.84	.90	1.47	.39	.94	2.08	2.24	3.60	.43
40534	3/8-16	1.96	.70	.84	.90	1.47	.39	.94	2.08	2.24	3.60	.43
40535	3/8-16	.98	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	4.25	.51
40536	3/8-16	1.57	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	4.25	.51
40537	3/8-16	1.96	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	4.25	.51
40538	1/2-13	.98	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	4.25	.51
40539	1/2-13	1.57	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	4.25	.51
40540	1/2-13	1.96	.70	1.00	1.08	1.67	.39	1.06	2.40	2.55	4.25	.51
40541	1/2-13	.98	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.97	.61
40542	1/2-13	1.57	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.97	.61
40543	1/2-13	1.96	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.97	.61
40544	5/8-11	1.37	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.97	.61
40545	5/8-11	1.77	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.97	.61
40546	5/8-11	2.16	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.97	.61
34360	M5	25	10	13	14	24.5	4	14.5	30	33	37	7
34361	M5	35	10	13	14	24.5	4	14.5	30	33	37	7

Jergens SPECIALTY FASTENERS GROUP

Metal Adjustable Handles



For adjustable clamping or tightening controls for limited operating angles. Adjustment of handle position occurs by pulling up on the handle, which disengages the teeth from the locking mechanism, and turning to the desired position. Releasing the handle allows for tightening or loosening.



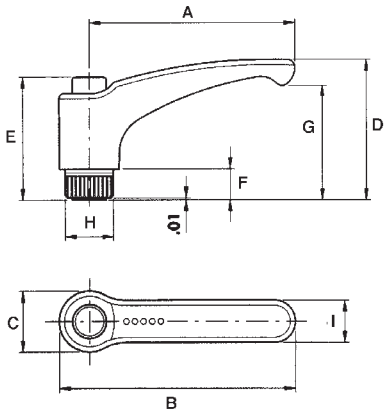
- Handle: Zinc Die Cast, Powder Coated, Satin Black
- Bolts & Internal Parts: Steel Black Oxide Finish; 303 Stainless Steel

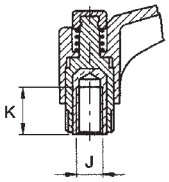
With Stainless Steel Stud

Part Number	Thread Size A	Thread Length N	C	D	E	F	G	H	I	J	K	L	M
40621	10-24	.59	.39	.51	.57	.94	.15	.59	1.16	1.31	1.57	1.85	.29
40623	1/4-20	.78	.39	.51	.57	.94	.15	.59	1.16	1.31	1.57	1.85	.29
40625	1/4-20	1.57	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40630	5/16-18	.78	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40631	5/16-18	1.57	.53	.70	.76	1.14	.25	.68	1.61	1.77	2.55	2.95	.37
40632	3/8-16	.98	.62	.84	.90	1.47	.39	.94	2.08	2.24	3.14	3.60	.45
40634	3/8-16	1.96	.62	.84	.90	1.47	.39	.94	2.08	2.24	3.14	3.60	.45
40641	1/2-13	.98	.74	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.28	.53
40643	1/2-13	1.96	.74	1.00	1.08	1.67	.39	1.06	2.40	2.55	3.74	4.28	.53
40644	5/8-11	1.57	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61
40646	5/8-11	2.36	.90	1.18	1.27	2.00	.47	1.29	2.85	3.05	4.32	4.97	.61

Adjustable Handle
ELESA Orginal Design







- Material: Glass Fibre Reinforced Technopolymer
- Finish: Body - Gray/Black Matte
  Push Button - Orange
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional button colors available upon request (Black, Grey, Yellow, Blue & Red)

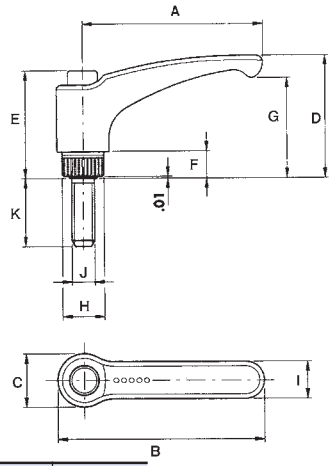
With Brass Insert

Brass Insert	Stainless Insert	A	B	C	D	E	F	G	H	I	J	K
34401	—	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	10-24	.39
34402	**34412**	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	1/4-20	.39
34403	—	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	1/4-20	.47
34404	**34414**	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	5/16-18	.51
34406	—	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	3/8-16	.67
34407	**34416**	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	1/2-13	.67
34408	—	3.74	4.29	1.04	2.54	2.15	.51	2.09	.85	.71	3/8-16	.79
34409	—	3.74	4.29	1.04	2.54	2.15	.51	2.09	.85	.71	1/2-13	.79

Adjustable Handle With Stud
ELESA Orginal Design



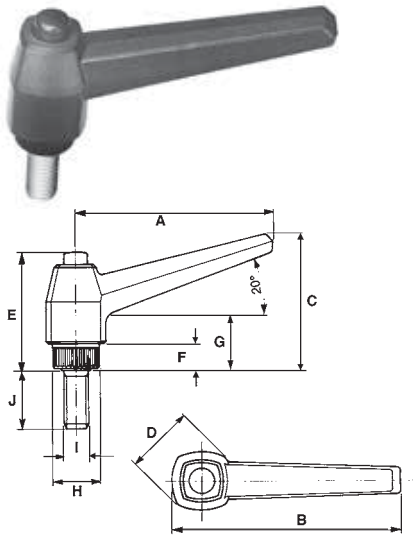
- Material: Glass Fibre Reinforced Technopolymer
- Finish: Body - Gray/Black Matte
  Push Button - Orange
- Stud: Zinc Plated Steel With Chamfered End.
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional button colors available upon request (Black, Grey, Yellow, Blue & Red)



Part Number	A	B	C	D	E	F	G	H	I	J	K
34421	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	10-24	.75
34422	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	1/4-20	.75
34423	1.73	2.05	.61	1.28	1.16	.24	.98	.47	.43	1/4-20	1
34424	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	5/16-18	.75
34425	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	5/16-18	1
34426	2.48	2.89	.75	1.69	1.48	.31	1.36	.59	.53	5/16-18	1.2
34427	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	3/8-16	1
34428	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	3/8-16	1.2
34429	3.07	3.56	.91	2.13	1.85	.47	1.73	.75	.63	3/8-16	1.5

Plastic Button Head Adjustable Handle With Stud

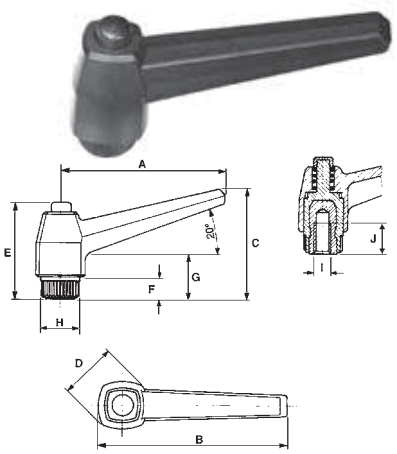
ELESA Original Design



Part Number	A	B	C	D	E	F	G	H	I	J
34311	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	10-24	0.750
34312	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	0.500
34313	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	0.750
34314	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	1.00
34315	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	1.50
34321	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	1/4-20	0.750
34322	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	1/4-20	1.00
34323	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	1/4-20	1.50
34324	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	0.500
34325	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	0.750
34326	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	1.00
34327	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	1.25
34328	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	1.50
34329	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	2.00
34331	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	0.750
34332	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	1.00
34333	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	1.25
34334	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	1.50
34335	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	3/8-16	2.00
34337	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	1/2-13	1.25
34338	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	1/2-13	1.50
34339	3.15	3.63	2.13	1.10	1.85	0.39	0.86	0.75	1/2-13	2.00
34341	3.94	4.50	2.55	1.30	2.12	0.47	0.98	0.98	1/2-13	1.25
34342	3.94	4.50	2.55	1.30	2.12	0.47	0.98	0.98	1/2-13	1.50
34343	3.94	4.50	2.55	1.30	2.12	0.47	0.98	0.98	1/2-13	2.00

- Material: Glass-Fibre Reinforced Technopolymer Lever Body
- Finish: Black Matte
- Available with a Zinc Plated Steel Stud with a chamfered flat end or with a Brass Insert with a tapped blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Available In Ergostyle®. See Ergostyle Section.
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Plastic Button Head Tapped Adjustable Handle

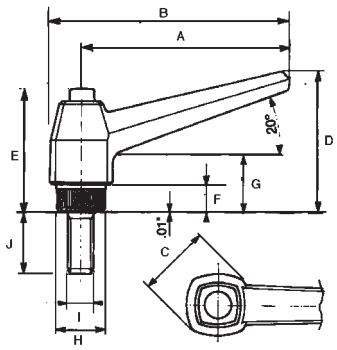


Part Number	A	B	C	D	E	F	G	H	I	J
34301	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	10-24	0.39
34302	1.65	1.96	1.25	0.70	1.14	0.23	0.55	0.47	1/4-20	0.39
34303	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	1/4-20	0.47
34304	2.48	2.87	1.69	0.90	1.45	0.31	0.66	0.60	5/16-18	0.51
34305	3.15	3.62	2.12	1.10	1.85	0.39	0.86	0.74	5/16-18	0.71
34306	3.15	3.62	2.12	1.10	1.85	0.39	0.86	0.74	3/8-16	0.67
34307	3.15	3.62	2.12	1.10	1.85	0.39	0.86	0.74	1/2-13	0.67
34308	3.94	4.48	2.55	1.30	2.12	0.47	0.98	0.98	3/8-16	0.79
34309	3.94	4.48	2.55	1.30	2.12	0.47	0.98	0.98	1/2-13	0.79

Plastic Adjustable Handle With Stainless Steel Stud

ELESA Original Design





- Material: Lever Body, Glass-Fibre Reinforced Technopolymer
- Finish: Lever Body, Black Matte
- Stainless Steel Stud with chamfered flat end
- Retaining Pin, Glass-Fibre Reinforced Technopolymer integrally molded with the Locking Element
- Push Button, Black Matte Technopolymer
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	H	I	J
34145	2.48	2.87	0.91	1.69	1.46	0.31	0.67	0.59	5/16-18	0.750
34146	2.48	2.87	0.91	1.69	1.46	0.31	0.67	0.59	5/16-18	1.000
34147	2.48	2.87	0.91	1.69	1.46	0.31	0.67	0.59	5/16-18	1.250

Metric

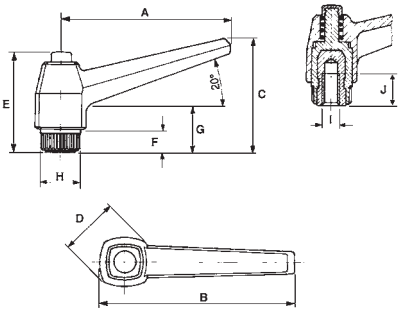
Part Number*	A	B	C	D	E	F	G	H	I	J
34156	42	50	32	18	29	6	14	12	M6	16
34157	63	73	43	23	37	8	17	15	M8	20
34158	80	92	51	28	47	10	22	19	M10	20
34159	80	92	54	28	47	10	22	19	M12	30

*Dimensions in millimeters

Plastic Button Head Adjustable Tapped Handle With Stainless Steel Insert

Metric
ELESA Original Design





- Material: Glass-Fibre Reinforced Technopolymer Lever Body
- Finish: Black Matte
- Locking Element: Black, Glass-Fibre Reinforced Technopolymer
- Insert: 303 Stainless Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

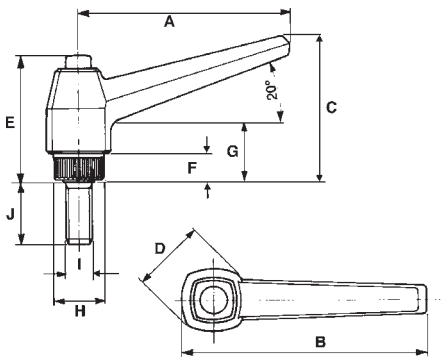
Part Number*	A	B	C	D	E	F	G	H	I	J
34151	42	50	32	18	29	6	14	12	M6	10
34152	63	73	43	23	37	8	17	15	M8	13
34153	80	92	54	28	47	10	22	19	M10	17

*Dimensions in millimeters

Plastic Button Head Adjustable Handle With Stud

Metric
ELESA Original Design





For adjustable clamping or tightening controls when the operating angle is limited. To adjust during the locking operation, lift the lever in order to disengage the teeth from the locking element and change lever position. The return spring automatically engages the teeth again.

- Material: Glass-Fibre Reinforced Technopolymer Lever Body
- Finish: Black Matte
- Locking Element: Black, Glass-Fibre Reinforced Technopolymer
- Stud: Zinc Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

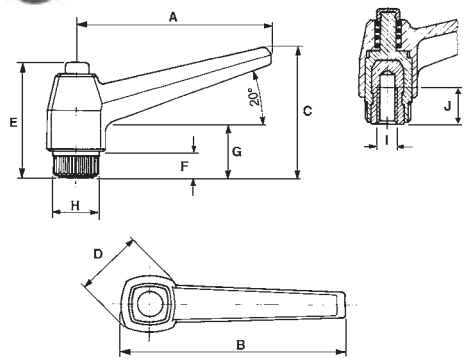
Part Number*	A	B	C	D	E	F	G	H	I	J
34362	42	50	32	18	29	6	14	12	M6	16
34363	42	50	32	18	29	6	14	12	M6	20
34364	42	50	32	18	29	6	14	12	M6	30
34365	42	50	32	18	29	6	14	12	M6	40
34374	63	73	43	23	37	8	17	15	M8	16
34375	63	73	43	23	37	8	17	15	M8	20
34377	63	73	43	23	37	8	17	15	M8	30
34378	63	73	43	23	37	8	17	15	M8	40
34379	63	73	43	23	37	8	17	15	M8	50
34381	80	92	54	28	47	10	22	19	M10	20
34383	80	92	54	28	47	10	22	19	M10	30
34385	80	92	54	28	47	10	22	19	M10	50
34387	80	92	54	28	47	10	22	19	M12	30
34388	80	92	54	28	47	10	22	19	M12	40
34391	100	114	65	33	54	12	25	25	M12	30
34393	100	114	65	33	54	12	25	25	M12	50

*Dimensions in millimeters

Plastic Button Head Tapped Adjustable Handle

Metric
ELESA Original Design





- Material: Glass-Fibre Reinforced Technopolymer Lever Body
- Finish: Black Matte
- Locking Element: Black, Glass-Fibre Reinforced Technopolymer
- Insert: Brass
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

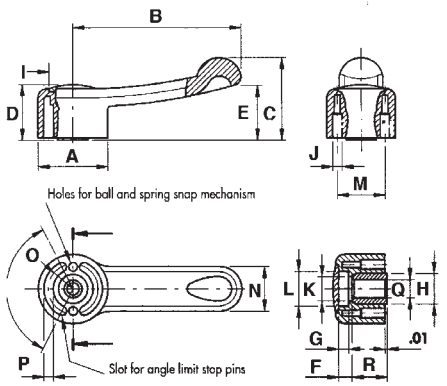
Part Number*	A	B	C	D	E	F	G	H	I	J
34352	42	50	32	18	29	6	14	12	M6	10
34354	63	73	43	23	37	8	17	15	M8	13
34355	80	92	54	28	47	10	22	19	M8	20
34356	80	92	54	28	47	10	22	19	M10	18
34357	80	92	54	28	47	10	22	19	M12	17
34359	100	114	65	33	54	12	25	25	M12	20

*Dimensions in millimeters

Control Lever
ELESA Orginal Design

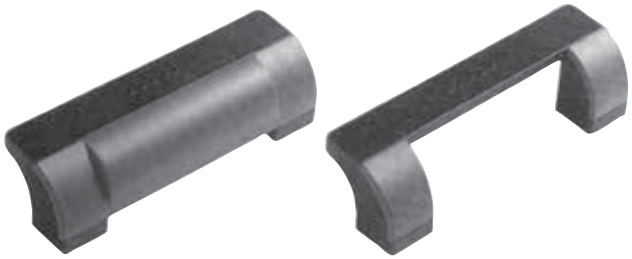


- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Removable Boss Caps
- Adaptable For Click Positioning Applications
- Slot Provided For Angle Limit Stop Pins
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Blue & Red)



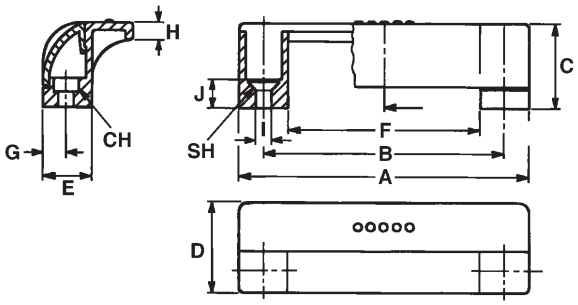
Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
34460	1.46	3.35	1.56	1.04	1.02	.30	.20	.71	1.02	.20	.53	.79	1.02	.91	.54	.17	.315	.69
34461	1.81	4.33	2.13	1.38	1.42	.39	.31	.87	1.24	.24	.67	1.00	1.26	1.14	.69	.26	.472	.87

Machine Guard Handles
ELESA Original Design



Closed Style

Open Style



- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Handle Shank, Matte Reinforced Polyamide Technopolymer
- Safety Cover Caps, Technopolymer Orange
- Cylindrical Socket Head (CH) or Countersunk Head (SH) Self-Tapping Screws (use 1/4-20 screws)
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Blue & Red)

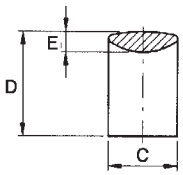
Part Number	Mounting Style	A	B	C	D	E	F	G	H	I	J
34240	CH	4.49	3.68	1.30	1.38	.75	2.91	.37	.28	.26	.43
34241	SH	4.49	3.68	1.30	1.38	.75	2.91	.37	.28	.26	.43
34242*	CH	4.49	3.68	1.30	1.38	.75	2.91	.37	.28	.26	.43
34243*	SH	4.49	3.68	1.30	1.38	.75	2.91	.37	.28	.26	.43

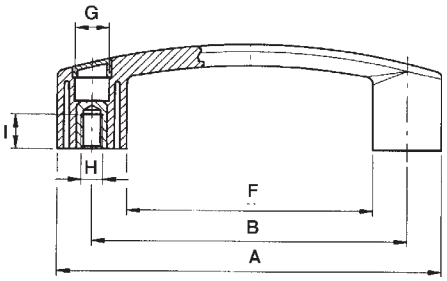
* Open Style

Jergens SPECIALTY FASTENERS GROUP

Back Mounted Bridge Handle
ELESA Orginal Design





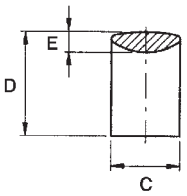


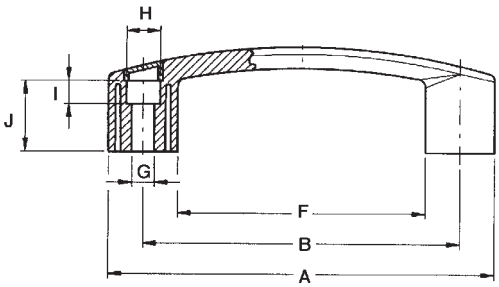
- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Inserts: Tapped with Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Orange, Blue & Red)

Part Number	A	B	C	D	E	F	G	H	I
33875	4.57	3.68	0.87	1.38	0.29	2.83	0.51	1/4-20	0.47
34469	5.67	4.61	1.02	1.54	0.33	3.62	0.53	5/16-18	0.51
33876	7.01	5.91	1.10	1.77	0.37	4.80	0.53	5/16-18	0.51

Front Mounted Bridge Handle
ELESA Orginal Design







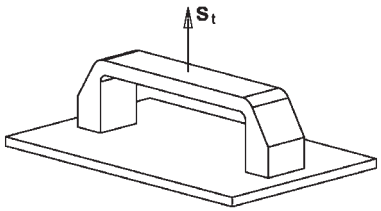
- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Mounted by Two Through Holes in Front
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Orange, Blue & Red)

Part Number	A	B	C	D	E	F	G	H	I	J
34467	4.57	3.68	0.87	1.38	0.29	2.83	0.25	0.41	0.25	0.92
34468	5.67	4.61	1.02	1.54	0.31	3.62	0.33	0.53	0.33	1.04
34479	7.01	5.91	1.10	1.77	0.37	4.8	0.33	0.53	0.55	1.26

Plastic Handle
ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

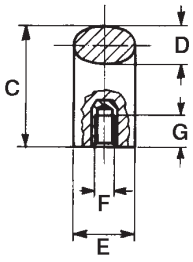


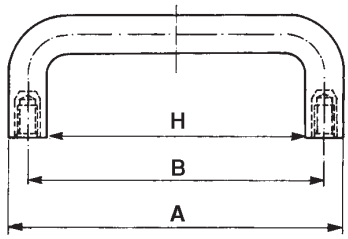
Part Number	A	B	C	D	E	F	G	St lbs
33791	3.94	3.39	1.73	0.55	0.91	1/4-20	0.47	538
33792	5.28	4.61	1.93	0.59	0.98	5/16-18	0.51	594
33793	7.72	7.05	2.24	0.63	1.06	5/16-18	0.51	450

Metric

Part Number*	A	B	C	D	E	F	G	H	St N
33706	100	86	44	14	23	M6	12	73	2400
33705	134	117	49	15	25	M8	13	103	2650
33707	196	179	57	16	27	M8	13	105	2000

*Dimensions in millimeters





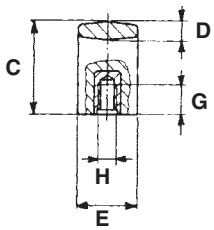
Plastic Handle
Metric
ELESA Original Design

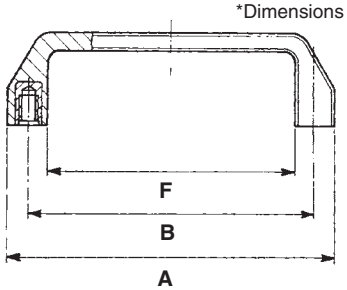


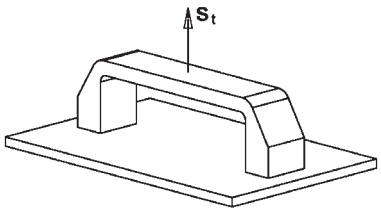
- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number*	A	B	C	D	E	F	G	H	St N
33708	134	117	38	7.5	25	102	12	M6	2000
33709	134	117	38	7.5	25	102	12	M8	2000

*Dimensions in millimeters



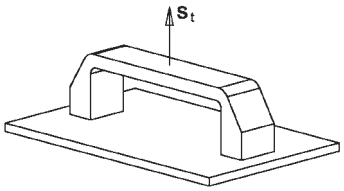


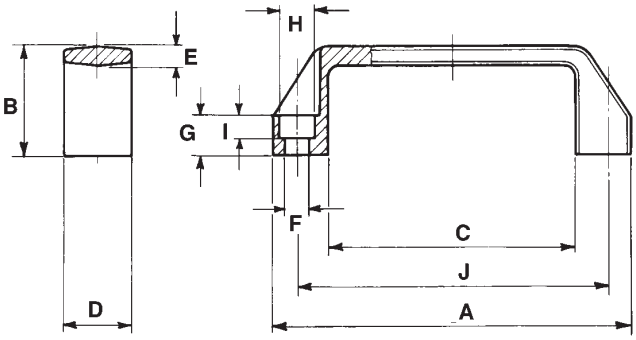


Jergens SPECIALTY FASTENERS GROUP

Plastic Pull/Lift Handle
ELESA Original Design







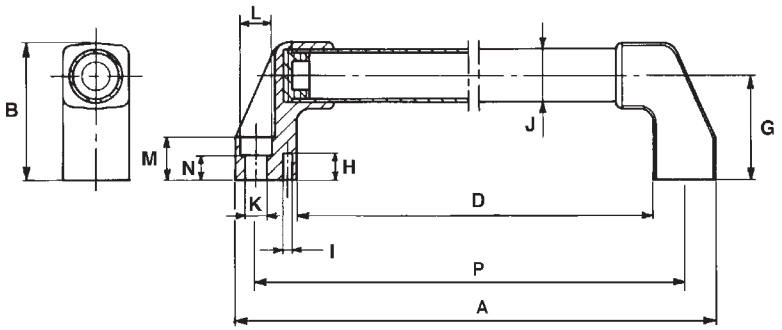
- Material: Glass-Fibre Reinforced Polyamide Technopolymer
- Finish: Black Matte
- Maximum Working Temp. 210°F
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

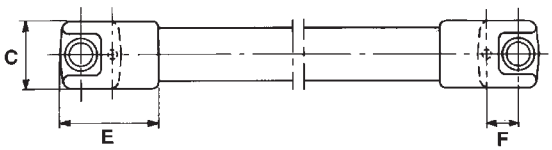
Part Number	A	B	C	D	E	F	G	H	I	J	St*
33701	4.21	1.42	2.91	0.83	0.24	0.26	0.51	0.41	0.28	3.68	560
33702	5.28	1.61	3.74	1.02	0.28	0.34	0.59	0.53	0.33	4.61	560
33703	5.90	1.77	4.25	1.06	0.28	0.34	0.63	0.53	0.33	5.20	560
33704	7.76	1.97	6.02	1.10	0.31	0.34	0.67	0.53	0.33	7.05	605
33710	10.31	2.13	7.95	1.22	0.35	0.41	0.79	0.65	0.41	9.25	784

* Denotes Stength Table

Aluminum Tubular Handle
Elesa Original Design







- Material: Tube, Aluminum Handle Shanks, Reinforced Polyamide Technopolymer
- Finish: Tube, Polyurethane coat on an epoxy base Color, Metalflake Graphite
- Handle Shank connection is axially knurled to the tube to prevent tube rotation
- Reference pins for safer positioning of the shanks
- Resistant to wear, scratches, and chemical agents

Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
33725	12.76	3.07	1.50	10.00	2.24	.71	2.36	.59	.16	1.18	.41	.63	.98	.59	12
33727	16.69	3.07	1.50	13.94	2.24	.71	2.36	.59	.16	1.18	.41	.63	.98	.59	16
33728	20.63	3.07	1.50	17.87	2.24	.71	2.36	.59	.16	1.18	.41	.63	.98	.59	20
33730	28.50	3.07	1.50	25.75	2.24	.71	2.36	.59	.16	1.18	.41	.63	.98	.59	28

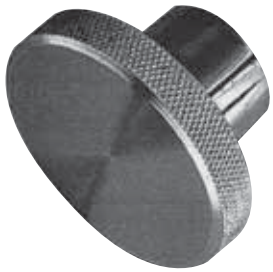
Knobs

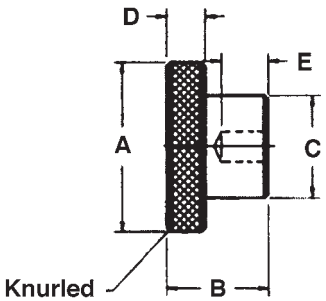
Aluminum Hand Knob 447–448
Aluminum Hand Knob With Stud 447
Aluminum Palmgrip Knob 449
Brass Ball 451
Cast Iron Hand Knob 446
Knurled Knob 464
Knurled Knob With Stud 464
Knurled Steel Knob 449
Plain Steel Ball 451
Plastic Ball 452
Plastic Fluted Grip Knob 463
Plastic Fluted Grip Knob With Stud 463
Plastic Fluted Knob 457
Plastic Four Prong Knob 455
Plastic Four Prong Knob With Extended Prong 455
Plastic Knurled Torque Knob 456
Plastic Knurled Torque Knob With Stud 456
Plastic Knurled Knob 458
Plastic Knurled Knob With Stud 458
Plastic Knurled Grip Knob 465
Plastic Latch Type Lobe Knob 465
Plastic Lift Knob 467
Plastic Lobe Knob 459–461
Plastic Lobe Knob With Stud 462
Plastic Lobe Knob With Stainless Steel Stud 462
Plastic Oval Tapered Knob 468
Plastic Push/Pull Knob 470
Plastic Tapered Knob 467
Plastic T-Handle 466
Plastic Three-Spoked Knob 470
Plastic Wing Knob 453
Plastic Wing Knob With Stud 453
Polished Steel Ball 451
Quick Lock Hand Knob 445
Soft Touch Ball 452
Soft Touch Oval Tapered Knob 468
Soft Touch Tapered Knob 469
Speed Bar Knob 450
Steel Knurled Control Knob 444
Steel Knurled Control Knob With Stud 445
Thermoplastic Fluted Knob 457
Wing Nut 454
Wing Nut With Stud 454

Jergens®
MANUFACTURING EFFICIENCY

Jergens SPECIALTY FASTENERS GROUP

Steel Knurled Control Knob





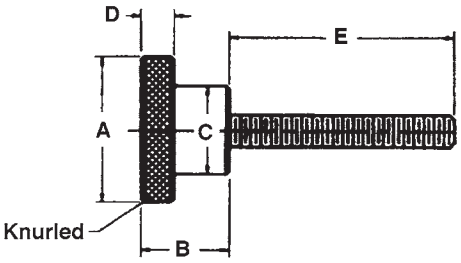
- Material: 1214 Steel
- Finish: Black Oxide
- Knurled Head

Part Number	A	B	C	D	E	Hole Diameter
21200	3/4	5/8	1/2	1/4	3/8	3/16 Ream
21201	3/4	5/8	1/2	1/4	3/8	10-24 Tap
21202	3/4	5/8	1/2	1/4	3/8	10-24 Thru Hole
21203	3/4	5/8	1/2	1/4	3/8	1/4 Ream
21204	3/4	5/8	1/2	1/4	3/8	1/4-20 Tap
21205	3/4	5/8	1/2	1/4	3/8	1/4-20 Thru Hole
21206	1	3/4	5/8	1/4	1/2	1/4 Ream
21207	1	3/4	5/8	1/4	1/2	1/4-20 Tap
21208	1	3/4	5/8	1/4	1/2	1/4-20 Thru Hole
21209	1	3/4	5/8	1/4	1/2	5/16 Ream
21210	1	3/4	5/8	1/4	1/2	5/16-18 Tap
21211	1	3/4	5/8	1/4	1/2	5/16-18 Thru Hole
21212	1 1/2	1	3/4	5/16	5/8	5/16 Ream
21213	1 1/2	1	3/4	5/16	5/8	5/16-18 Tap
21214	1 1/2	1	3/4	5/16	5/8	5/16-18 Thru Hole
21215	1 1/2	1	3/4	5/16	5/8	3/8 Ream
21216	1 1/2	1	3/4	5/16	5/8	3/8-16 Tap
21217	1 1/2	1	3/4	5/16	5/8	3/8-16 Thru Hole
21218	2	1 1/8	1	3/8	5/8	3/8 Ream
21219	2	1 1/8	1	3/8	5/8	3/8-16 Tap
21220	2	1 1/8	1	3/8	5/8	3/8-16 Thru Hole
21221	2	1 1/8	1	3/8	5/8	1/2 Ream
21222	2	1 1/8	1	3/8	5/8	1/2-13 Tap
21223	2	1 1/8	1	3/8	5/8	1/2-13 Thru Hole
21224	2 1/2	1 1/2	1 1/2	9/16	3/4	1/2 Ream
21225	2 1/2	1 1/2	1 1/2	9/16	3/4	1/2-13 Tap
21226	2 1/2	1 1/2	1 1/2	9/16	3/4	1/2-13 Thru Hole
21227	2 1/2	1 1/2	1 1/2	9/16	3/4	5/8 Ream
21228	2 1/2	1 1/2	1 1/2	9/16	3/4	5/8-11 Tap
21229	2 1/2	1 1/2	1 1/2	9/16	3/4	5/8-11 Thru Hole
21230	3	1 3/4	1 3/4	5/8	1	5/8 Ream
21231	3	1 3/4	1 3/4	5/8	1	5/8-11 Tap
21232	3	1 3/4	1 3/4	5/8	1	5/8-11 Thru Hole
21233	3	1 3/4	1 3/4	5/8	1	3/4 Ream
21234	3	1 3/4	1 3/4	5/8	1	3/4-10 Tap
21235	3	1 3/4	1 3/4	5/8	1	3/4-10 Thru Hole

Note: Also available in Metric and Stainless Steel

Steel Knurled Control Knob With Stud

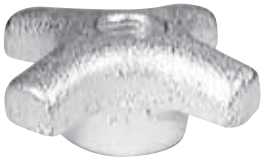


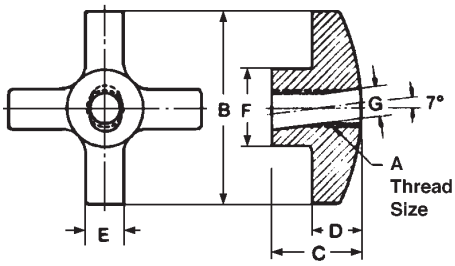


- Material: 1214 Steel
- Finish: Black Oxide
- Knurled Head

Part Number	A	B	C	D	E	Stud Thread
21240	3/4	5/8	1/2	1/4	1/2	10-24
21241	3/4	5/8	1/2	1/4	1	10-24
21242	3/4	5/8	1/2	1/4	3/4	1/4-20
21243	3/4	5/8	1/2	1/4	1 1/4	1/4-20
21244	1	3/4	5/8	1/4	1 3/4	1/4-20
21245	1	3/4	5/8	1/4	1 3/4	5/16-18
21246	1	3/4	5/8	1/4	3	5/16-18
21247	1 1/2	1	3/4	5/16	1 3/4	5/16-18
21248	1 1/2	1	3/4	5/16	3	5/16-18
21249	1 1/2	1	3/4	5/16	1 3/4	3/8-16
21250	1 1/2	1	3/4	5/16	3	3/8-16
21251	2	1 1/8	1	3/8	1 3/4	3/8-16
21252	2	1 1/8	1	3/8	3	3/8-16
21253	2	1 1/8	1	3/8	1 3/4	1/2-13
21254	2 1/2	1 1/2	1 1/2	9/16	1 3/4	1/2-13
21255	2 1/2	1 1/2	1 1/2	9/16	3	1/2-13
21256	2 1/2	1 1/2	1 1/2	9/16	1 3/4	5/8-11

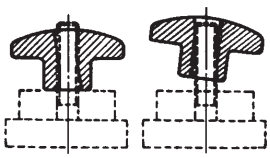
Quick Lock Hand Knob





Used to save time where a knob must be completely removed from the stud. After approximately one-quarter turn of the hand knob, it can be tilted on an angle and removed from the stud. Recommended for light duty applications.

- Material: 40 Grey Iron
- Finish: Zinc Plate
- Thread: Class 2B-UNC
- 3D Solid Models are available in multiple formats from www.jergensinc.com



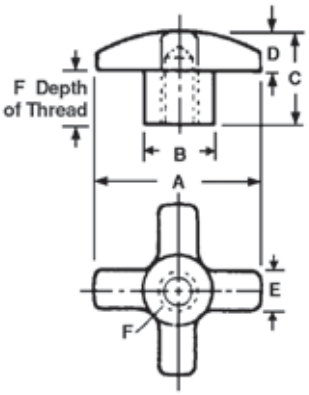
Part Number	Thread Size A	B	C	D	E	F	G	Wt. (lbs)
33901	1/4-20	1 1/8	11/16	5/16	5/16	9/16	17/64	.06
33902	3/8-16	2 3/16	1	1/2	1/2	7/8	25/64	.27
33903	1/2-13	3	1 1/4	5/8	5/8	1 7/16	33/64	.72
33904	5/8-11	3	1 1/4	5/8	5/8	1 7/16	41/64	.69

Jergens SPECIALTY FASTENERS GROUP

Cast Iron Hand Knob



- Material: #30 Grey Iron
- Finish: Zinc Plate
- Thread: 2B-UNC
- Ream: +.002 -.000
- Hub: Available Blank, Reamed or Tapped
- 3D Solid Models are available in multiple formats from www.jergensinc.com



Part Number	A	B	C	D	E	Hub Style	Depth of Thread F	Wt. (lbs) 10 Pcs.
16305*	1 1/8	5/8	3/4	5/16	5/16	Blank	—	.78
16331*	1 1/8	5/8	11/16	5/16	5/16	1/4 Ream	1/2	.63
16330	1 1/8	5/8	11/16	5/16	5/16	5/16 Ream	1/2	.63
16306*	1 1/8	5/8	11/16	5/16	5/16	1/4-20 Tap	1/2	.63
16307	1 1/8	5/8	11/16	5/16	5/16	5/16-18 Tap	1/2	.63
16308*	1 1/2	11/16	15/16	7/16	3/8	Blank	—	1.56
16309*	1 1/2	11/16	7/8	7/16	3/8	5/16 Ream	9/16	1.30
16310	1 1/2	11/16	7/8	7/16	3/8	3/8 Ream	9/16	1.30
16311*	1 1/2	11/16	7/8	7/16	3/8	5/16-18 Tap	9/16	1.30
16312	1 1/2	11/16	7/8	7/16	3/8	3/8-16 Tap	9/16	1.30
16313*	2	3/4	1 3/16	1/2	1/2	Blank	—	3.00
16314*	2	3/4	1 1/8	1/2	1/2	3/8 Ream	11/16	2.75
16315	2	3/4	1 1/8	1/2	1/2	1/2 Ream	11/16	2.70
16316*	2	3/4	1 1/8	1/2	1/2	3/8-16 Tap	11/16	2.75
16317	2	3/4	1 1/8	1/2	1/2	1/2-13 Tap	11/16	2.70
16318*	2 1/2	1 1/8	1 9/16	5/8	5/8	Blank	—	7.00
16319*	2 1/2	1 1/8	1 1/2	5/8	5/8	1/2 Ream	1	6.00
16320*	2 1/2	1 1/8	1 1/2	5/8	5/8	5/8 Ream	1	5.80
16321*	2 1/2	1 1/8	1 1/2	5/8	5/8	1/2-13 Tap	1	6.00
16322*	2 1/2	1 1/8	1 1/2	5/8	5/8	5/8-11 Tap	1	5.80
16323*	3	1 1/4	1 13/16	9/16	5/8	Blank	—	11.25
16324*	3	1 1/4	1 3/4	9/16	5/8	5/8 Ream	1 1/8	10.00
16325*	3	1 1/4	1 3/4	9/16	5/8	3/4 Ream	1 1/8	8.20
16326	3	1 1/4	1 3/4	9/16	5/8	1/2-13 Tap	1 1/8	10.70
16327*	3	1 1/4	1 3/4	9/16	5/8	5/8-11 Tap	1 1/8	10.25
16328*	3	1 1/4	1 3/4	9/16	5/8	3/4-10 Tap	1 1/8	8.50

*TCMA Standard

Cast Iron Hand Knob
Metric

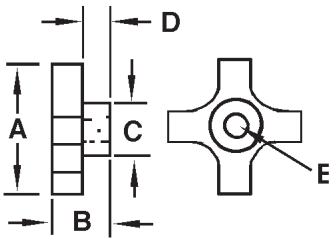
- Material: #30 Grey Iron
- Finish: Zinc Plate
- Thread: Class 6h
- Ream: -.000 +.05
- Blank Knobs are Zinc Plated
- 3D Solid Models are available in multiple formats from www.jergensinc.com

*Part Number	A	B	C	D	E	Hub Style	Depth of Thread F
16305	28	16	19	8	8	Blank	—
16354	28	16	17	8	8	6mm Ream	12
16355	28	16	17	8	8	M6 x 1.0 Tap	12
16308	38	17	23	11	9	Blank	—
16359	38	17	22	11	9	8mm Ream	14
16361	38	17	22	11	9	M8 x 1.25 Tap	14
16313	50	19	30	13	13	Blank	—
16364	50	19	28	13	13	10mm Ream	17
16366	50	19	28	13	13	M10 x 1.5 Tap	17
16318	63	29	39	16	16	Blank	—
16369	63	29	38	16	16	12mm Ream	25
16370	63	29	38	16	16	16mm Ream	25
16371	63	29	38	16	16	M12 x 1.75 Tap	25
16372	63	29	38	16	16	M16 x 2.0 Tap	25
16323	75	32	45	14	16	Blank	—
16374	75	32	44	14	16	16mm Ream	28
16375	75	32	44	14	16	20mm Ream	28
16377	75	32	44	14	16	M16 x 2.0 Tap	28
16378	75	32	44	14	16	M20 x 2.5 Tap	28

*Dimensions in millimeters

Aluminum Hand Knob





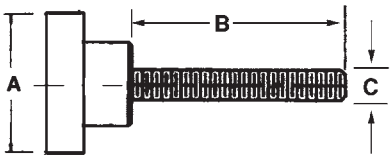
- Material: Aluminum
- Also available in black, red, blue, clear and gold anodized

Part Number	A	B	C	D	E
21000	1	7/8	1/2	1/2	Blank
21001	1	7/8	1/2	1/2	1/4-20 Tap
21002	1	7/8	1/2	1/2	1/4-20 Thru Hole
21003	1	7/8	1/2	1/2	1/4 Ream
21004	1 1/2	7/8	5/8	3/8	Blank
21005	1 1/2	7/8	5/8	3/8	5/16-18 Tap
21006	1 1/2	7/8	5/8	3/8	5/16-18 Thru Hole
21007	1 1/2	7/8	5/8	3/8	5/16 Ream
21008	2	1	13/16	1/2	Blank
21009	2	1	13/16	1/2	3/8-16 Tap
21010	2	1	13/16	1/2	3/8-16 Thru Hole
21011	2	1	13/16	1/2	3/8 Ream
21012	2 1/2	1 1/8	1	9/16	Blank
21013	2 1/2	1 1/8	1	9/16	1/2-13 Tap
21014	2 1/2	1 1/8	1	9/16	1/2-13 Thru Hole
21015	2 1/2	1 1/8	1	9/16	1/2 Ream

Note: Also available in metric sizes.

Aluminum Hand Knob With Stud





- Material: Aluminum
- Also available in black, red, blue, clear and gold anodized

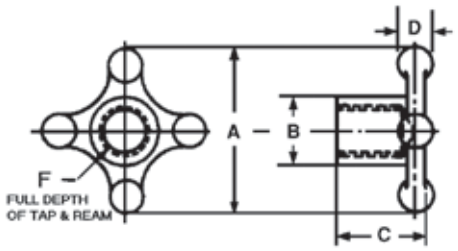
Part Number	A	B	C
21020	1 1/2	1 3/4	1/4-20
21021	1 1/2	3	1/4-20
21022	2	1 3/4	5/16-18
21023	2	3	5/16-18
21024	2 1/2	1 3/4	3/8-16
21025	2 1/2	3	3/8-16
21026	2 1/2	1 3/4	1/2-13
21027	2 1/2	3	1/2-13

Note: Also available in metric sizes.

Jergens SPECIALTY FASTENERS GROUP

Aluminum Hand Knob



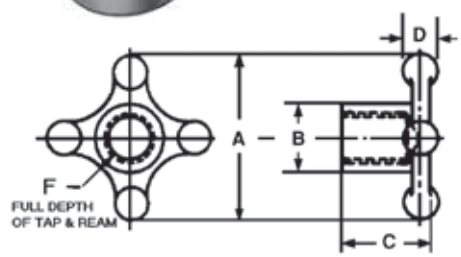


- Material: 319 Aluminum Alloy
- Thread: 2B-UNC
- Ream: +.002 -.000
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	D	Hub Style	F	Wt. (lbs) 10 Pcs.
21101	1 1/4	9/16	3/4	5/16	Blank	—	.21
21102	1 1/4	9/16	3/4	5/16	1/4 Ream	1/2	.16
21104	1 1/4	9/16	3/4	5/16	1/4-20 Tap	1/2	.16
21105	1 1/4	9/16	3/4	5/16	5/16-18 Tap	1/2	.16
21106	1 1/2	11/16	7/8	3/8	Blank	—	.47
21108	1 1/2	11/16	7/8	3/8	3/8 Ream	5/8	.31
21109	1 1/2	11/16	7/8	3/8	5/16-18 Tap	5/8	.31
21110	1 1/2	11/16	7/8	3/8	3/8-16 Tap	5/8	.31
21111	2 1/8	7/8	1 1/4	1/2	Blank	—	1.10
21112	2 1/8	7/8	1 1/4	1/2	3/8 Ream	7/8	1.00
21113	2 1/8	7/8	1 1/4	1/2	1/2 Ream	7/8	1.00
21114	2 1/8	7/8	1 1/4	1/2	3/8-16 Tap	7/8	1.00
21115	2 1/8	7/8	1 1/4	1/2	1/2-13 Tap	7/8	1.00
21116	3	1 3/8	1 3/4	11/16	Blank	—	3.80
21118	3	1 3/8	1 3/4	11/16	5/8 Ream	1 1/4	3.30
21119	3	1 3/8	1 3/4	11/16	3/4 Ream	1 1/4	3.10
21120	3	1 3/8	1 3/4	11/16	1/2-13 Tap	1 1/4	3.40
21121	3	1 3/8	1 3/4	11/16	5/8-11 Tap	1 1/4	3.30
21122	3	1 3/8	1 3/4	11/16	3/4-10 Tap	1 1/4	3.10

Aluminum Hand Knob
Metric





- Material: 319 Aluminum Alloy
- Thread: Class 6h
- Ream: +.05 -.000

*Part Number	A	B	C	D	Hub Style	F
21101	31	14	19	8	Blank	–
21152	31	14	19	8	6mm Ream	13
21154	31	14	19	8	M6 Tap	13
21155	31	14	19	8	M8 Tap	13
21106	38	17	22	9	Blank	–
21158	38	17	22	9	10mm Ream	16
21159	38	17	22	9	M8 Tap	16
21160	38	17	22	9	M10 Tap	16
21111	53	22	32	12	Blank	–
21162	53	22	32	12	10mm Ream	22
21163	53	22	32	12	12mm Ream	22
21164	53	22	32	12	M10 Tap	22
21165	53	22	32	12	M12 Tap	22
21116	75	34	44	17	Blank	–
21168	75	34	44	17	16mm Ream	32
21169	75	34	44	17	20mm Ream	32
21170	75	34	44	17	M12 Tap	32
21171	75	34	44	17	M16 Tap	32
21172	75	34	44	17	M20 Tap	32

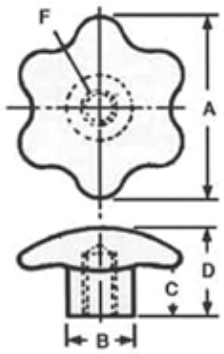
*Dimensions in millimeters

Aluminum Palmgrip Knob



Full Depth of Tap and Ream

- Material: 319 Aluminum Alloy
- Finish: Tumble
- Thread: 2B-UNC or Class 6h
- Ream: +.002 -.000
- Metric Ream: +.05 -.000
- 3D Solid Models are available in multiple formats from www.jergensinc.com



Inch

Part Number	A	B	C	D	F	Hub Style
20901	1 1/2	27/32	7/8	3/8	—	Blank
20902	1 1/2	27/32	7/8	1 5/16	3/4	1/4 Ream
20903	1 1/2	27/32	7/8	1 5/16	3/4	1/4-20 Tap
20904	2	1	7/8	1 19/32	—	Blank
20905	2	1	7/8	1 1/2	3/4	3/8 Ream
20906	2	1	7/8	1 1/2	3/4	3/8-16 Tap
20907	2 3/4	1 3/16	1 1/8	1 31/32	—	Blank
20908	2 3/4	1 3/16	1 1/8	1 7/8	1 1/4	1/2 Ream
20909	2 3/4	1 3/16	1 1/8	1 7/8	1 1/4	1/2-13 Tap
20910	3 1/2	1 1/4	1	1 13/16	—	Blank
20911	3 1/2	1 1/4	1	1 3/4	1 1/4	1/2 Ream
20912	3 1/2	1 1/4	1	1 3/4	1 1/4	1/2-13 Tap

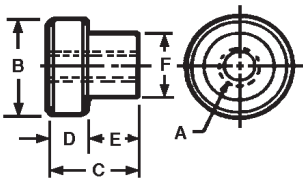
Metric

*Part Number	A	B	C	D	F	Hub Style
20901	38	19	22	34	—	Blank
20952	38	19	22	33	19	6mm Ream
20953	38	19	22	33	19	M6 Tap
20904	50	25	22	40	—	Blank
20955	50	25	22	38	19	10mm Ream
20956	50	25	22	38	19	M10 Tap
20907	69	30	29	49	—	Blank
20958	69	30	29	47	31	12mm Ream
20959	69	30	29	47	31	M12 Tap
20910	88	31	25	45	—	Blank
20961	88	31	25	44	31	12mm Ream
20962	88	31	25	44	31	M12 Tap

*Dimensions in millimeters

Knurled Steel Knob





- Material: Low Carbon Steel
- Finish: Black Oxide
- Thread: 2B-UNC or Class 6h
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Inch

Part Number	A	B	C	D	E	F
27901	10-24	3/4	5/8	1/4	3/8	7/16
27902	1/4-20	1	3/4	1/4	1/2	5/8
27903	3/8-16	1 1/4	1 1/8	1/2	5/8	3/4
27904	1/2-13	1 1/2	1 1/4	1/2	3/4	1
27905	5/8-11	2	1 3/4	5/8	1 1/8	1 1/4
27906	3/4-10	2 1/2	2 1/4	5/8	1 5/8	1 1/2

Metric

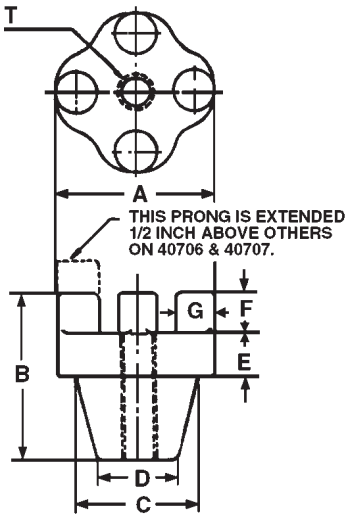
*Part Number	A	B	C	D	E	F
27951	M5 x 0.8	19	16	6	9	11
27952	M6 x 1.0	25	19	6	13	16
27953	M10 x 1.5	31	28	13	16	19
27954	M12 x 1.75	38	31	13	19	25
27955	M16 x 2.0	50	44	16	28	31
27956	M20 x 2.5	63	57	16	41	38

*Dimensions in millimeters

Jergens SPECIALTY FASTENERS GROUP

Speed Bar Knob





Speed Bar Knobs offer the ultimate in strength to hold down covers and clamp heavy work pieces. Insert bar between four vertical prongs for maximum leverage and holding force. One extra long prong is available on part numbers **40706** and **40707** for use with a crank handle.

- Material: Malleable ASTM 32510
- Finish: Mill
- Thread: 2B-UNC or Metric Class 6h
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Inch

Part Number	A	B	C	D	E	F	G	T	Wt. (lbs)
40701	2	2 1/8	1 1/4	1 1/8	1/2	3/4	1/2	Blank	0.80
40711	2	2 1/8	1 1/4	1 1/8	1/2	3/4	1/2	3/8-16	0.76
40702	2	2 1/8	1 1/4	1 1/8	1/2	3/4	1/2	1/2-13	0.72
40712	2	2 1/8	1 1/4	1 1/8	1/2	3/4	1/2	5/8-11	0.68
40703	2 1/2	2 3/8	1 3/4	1 1/2	9/16	7/8	5/8	Blank	1.56
40713	2 1/2	2 3/8	1 3/4	1 1/2	9/16	7/8	5/8	1/2-13	1.48
40704	2 1/2	2 3/8	1 3/4	1 1/2	9/16	7/8	5/8	5/8-11	1.44
40705	2 1/2	2 3/8	1 3/8	1 1/2	9/16	7/8	5/8	3/4-10	1.44
40706	3 1/2	2 3/8	2 3/8	2 1/8	1/2	7/8	5/8	Blank	2.50
40715	3 1/2	2 3/8	2 3/8	2 1/8	1/2	7/8	5/8	7/8-09	2.38
40707	3 1/2	2 3/8	2 3/8	2 1/8	1/2	7/8	5/8	1-8	2.25

Metric

Part Number**	A	B	C	D	E	F	G	T
40701	50	53	31	28	12	19	12	Blank
40752	50	53	31	28	12	19	12	M12
40703	63	59	44	38	14	22	16	Blank
40754	63	59	44	38	14	22	16	M16
40755	63	59	44	38	14	22	16	M20
40706*	88	59	59	53	12	22	16	Blank
40757*	88	59	59	53	12	22	16	M24

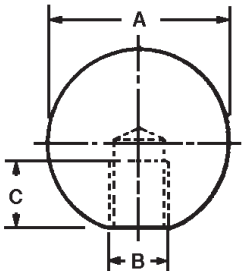
*Note: One extra long prong is available on part numbers 40706 and 40757 for use with a crank handle.

**Dimensions in millimeters

Plain Steel Ball



- Material: Carbon Steel
- Finish: Black Oxide
- Available Tapped or Blank
- 3D Solid Models are available in multiple formats from www.jergensinc.com

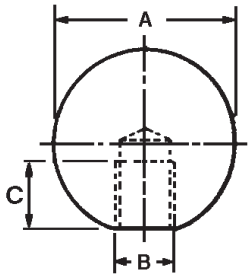


Part Number	A	B	C
36511	1 1/2	Blank	—
36512	1 1/2	3/8-16	5/8
36513	2	Blank	—
36514	2	1/2-13	3/4
36515	2	5/8-11	7/8

Polished Steel Ball



- Material: Steel
- Finish: Polished

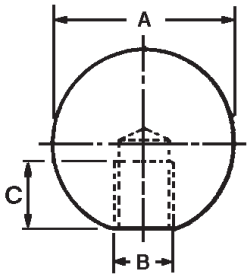


Part Number	A	B	C
36520	3/4	10-32	3/8
36521	1	10-32	3/8
36522	1	1/4-20	1/2
36523	1	5/16-18	1/2
36524	1	3/8-16	1/2
36525	1 3/8	1/4-20	5/8
36526	1 3/8	5/16-18	5/8
36527	1 3/8	3/8-16	5/8
36528	1 3/8	1/2-13	5/8
36529	1 7/8	3/8-16	3/4
36530	1 7/8	1/2-13	3/4
36531	1 7/8	5/8-11	3/4

Brass Ball



- Material: Brass
- Finish: Polished
- Water Resistant

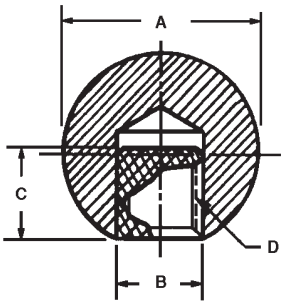


Part Number	A	B	C
36540	3/4	10-32	3/8
36541	1	10-32	3/8
36542	1	1/4-20	1/2
36543	1	5/16-18	1/2
36544	1	3/8-16	1/2
36545	1 3/8	1/4-20	5/8
36546	1 3/8	5/16-18	5/8
36547	1 3/8	3/8-16	5/8
36548	1 3/8	1/2-13	5/8
36549	1 7/8	3/8-16	3/4
36550	1 7/8	1/2-13	3/4
36551	1 7/8	5/8-11	3/4

Jergens SPECIALTY FASTENERS GROUP

Plastic Ball



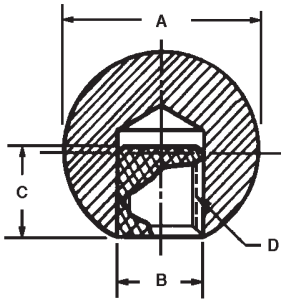


- Material: Plastic, Black
- Insert: Brass
- Finish: Tumble, Sand, & Buff
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Black Part Number	A	B	C	Brass Insert D
31301	3/4	1/4	5/16	10-32
31316	3/4	1/4	5/16	1/4-20
31317	1	1/2	1/2	10-32
31302	1	1/2	7/16	1/4-20
31308	1	1/2	7/16	5/16-18
31303	1	1/2	1/2	3/8-16
31318	1 3/8	5/8	5/8	1/4-20
31309	1 3/8	5/8	7/16	5/16-18
31304	1 3/8	5/8	1/2	3/8-16
31310	1 3/8	5/8	1/2	3/8-24
31305	1 3/8	5/8	5/8	1/2-13
31311	1 3/8	5/8	5/8	1/2-20
31319	1 5/8	11/16	5/8	5/16-18
31314	1 5/8	11/16	1/2	3/8-16
31315	1 5/8	11/16	5/8	1/2-13
31320	1 7/8	3/4	7/16	5/16-18
31312	1 7/8	3/4	1/2	3/8-16
31306	1 7/8	3/4	5/8	1/2-13
31313	1 7/8	3/4	5/8	1/2-20
31307	1 7/8	3/4	3/4	5/8-18

Soft Touch Ball





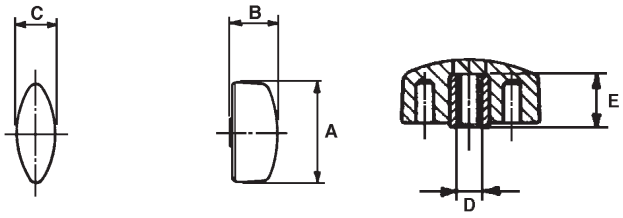
- Material: Soft Touch Plastic
- Finish: Black Matte
- Insert: Brass
- Also available in red, blue, yellow, and green (250 piece minimum)

Part Number	A	B	C	Insert D
31330	1 1/2	1 15/64	5/8	1/4-20 x 5/8
31331	1 1/2	1 15/64	5/8	5/16-18 x 5/8
31332	1 1/2	1 15/64	5/8	3/8-16 x 5/8
31333	1 1/2	1 15/64	5/8	1/2-13 x 5/8

This Ball Knob has a soft touch material which enables the operator to get a better grip on the knob for many different types of operations.

Plastic Wing Knob
ELESA Original Design
Metric





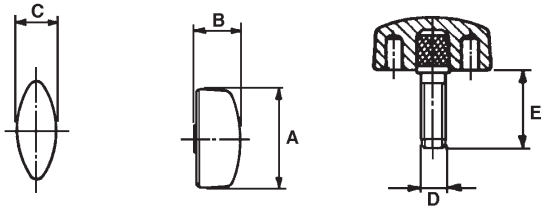
- Material: Glass-Fibre Reinforced Black Technopolymer
- Finish: Black Matte
- Insert: Brass with tapped blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number*	A	B	C	D	E
33776	26	13	11	M5	5
33777	32	15	13	M6	8
33778	40	17	15.5	M8	8

*Dimensions in millimeters

Plastic Wing Knob With Stud
ELESA Original Design





- Material: Glass-Fibre Reinforced Black Technopolymer
- Finish: Black Matte
- Zinc-Plated Steel Stud with chamfered flat end
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Inch

Part Number	A	B	C	D	E
33765	1.02	.51	.43	10-32	.500
33766	1.02	.51	.43	10-32	.750
33767	1.26	.59	.51	1/4-20	.500
33768	1.26	.59	.51	1/4-20	.750
33769	1.26	.59	.51	1/4-20	1.000
33770	1.57	.67	.61	5/16-18	.750
33771	1.57	.67	.61	5/16-18	1.000

Metric

Part Number*	A	B	C	D	E
33781	26	13	11	M5	16
33782	32	15	13	M6	16
33783	32	15	13	M8	16
33784	40	17	15.5	M8	25
33785	40	17	15.5	M10	30

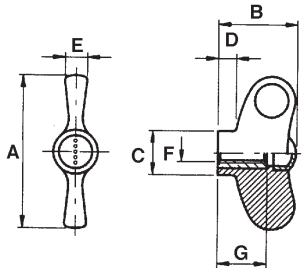
*Dimensions in millimeters

Jergens SPECIALTY FASTENERS GROUP

Wing Nut
ELESA Orginal Design



- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Insert: Brass With Tapped Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Blue & Red)

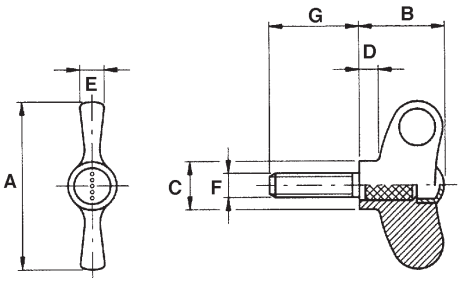


Part Number	A	B	C	D	E	F	G
34450	2.17	1.1	0.63	0.26	0.31	1/4-20	0.71
34451	2.17	1.1	0.63	0.26	0.31	5/16-18	0.71
34452	2.76	1.42	0.79	0.31	0.39	5/16-18	0.79
34453	2.76	1.42	0.79	0.31	0.39	3/8-16	0.79

Wing Nut With Stud
ELESA Orginal Design



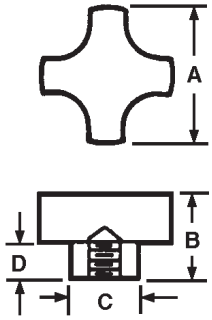
- Material: Glass Fibre Reinforced Technopolymer
- Finish: Gray/Black Matte
- Stud: Zinc Plated Threaded Steel With Chamfered End
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Optional cap colors available upon request (Black, Grey, Yellow, Blue & Red)



Part Number	A	B	C	D	E	F	G
34455	2.17	1.10	.63	.26	.31	5/16-18	1.00
34456	2.17	1.10	.63	.26	.31	5/16-18	1.50
34457	2.76	1.42	.79	.31	.39	3/8-16	1.00
34458	2.76	1.42	.79	.31	.39	3/8-16	1.50

Plastic Four Prong Knob





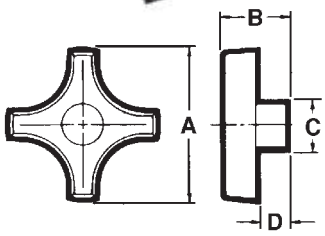
- Material: Plastic
- Finish: Tumble
- Insert: Brass
- Excellent gripping action for turning and tightening uses: adjusting devices, tripods, lawn mower height adjustments, valve controls, etc.
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	Insert Thread and Depth	A	B	C	D
32201	1/4-20 x 7/16	1 1/4	7/8	5/8	3/8
32270	5/16-18 x 7/16	1 1/4	7/8	5/8	3/8
32202*	1/4-20 x 1/2	1 1/4	7/8	5/8	3/8
32271	1/4-20 x 7/16	1 3/4	1	13/16	1/2
32203	5/16-18 x 7/16	1 3/4	1	13/16	1/2
32204*	5/16-18 x 5/8	1 3/4	1	13/16	1/2
32272*	1/4-20 x 5/8	1 3/4	1	13/16	1/2
32205	3/8-16 x 1/2	1 3/4	1	13/16	1/2
32206*	3/8-16 x 5/8	1 3/4	1	13/16	1/2
32207	3/8-16 x 1/2	2 1/4	1 1/8	1	9/16
32273	5/16-18 x 1/2	2 1/4	1 1/8	1	9/16
32208*	3/8-16 x 5/8	2 1/4	1 1/8	1	9/16
32274*	5/16-18 x 5/8	2 1/4	1 1/8	1	9/16
32209	1/2-13 x 5/8	2 1/4	1 1/8	1	9/16
32210*	1/2-13 x 5/8	2 1/4	1 1/8	1	9/16

*Indicates knobs with through clearance hole.

Plastic Four Prong Knob With Extended Prong





- Material: Polypropylene
- Finish: Tumble
- Insert: Brass

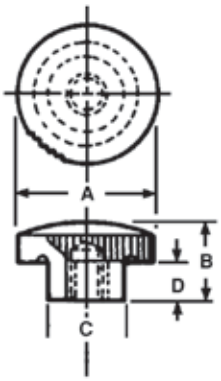
Part Number	A	B	C	D	Insert
32260	3	1 1/4	7/8	5/8	1/4-20
32261*	3	1 1/4	7/8	5/8	1/4-20
32262	3	1 1/4	7/8	5/8	5/16-18
32263*	3	1 1/4	7/8	5/8	5/16-18
32264	3	1 1/4	7/8	5/8	3/8-16
32265*	3	1 1/4	7/8	5/8	3/8-16

* Through Hole Style

Jergens SPECIALTY FASTENERS GROUP

Plastic Knurled Torque Knob





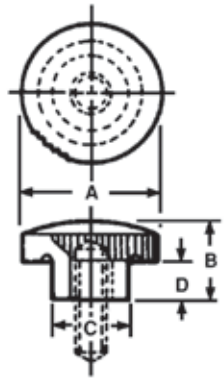
- Material: Plastic
- Finish: Tumble
- Knurled edge for non-slip grip
- Insert Threads: Brass
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	Insert Thread and Depth	A	B	C	D
32324	8-32 x 5/16	3/4	9/16	5/8	—
32325	10-32 x 5/16	3/4	9/16	5/8	—
32328	1/4-20 x 3/8	3/4	9/16	5/8	—
32301	10-32 x 5/16	1	21/32	5/8	5/16
32303	1/4-20 x 3/8	1	21/32	5/8	5/16
32305	1/4-20 x 7/16	1 3/8	25/32	3/4	3/8
32308	5/16-18 x 7/16	1 3/8	25/32	3/4	3/8
32310	3/8-16 x 3/8	1 3/8	25/32	3/4	3/8
32311	5/16-18 x 7/16	1 7/8	1	1	1/2
32312	3/8-16 x 1/2	1 7/8	1	1	1/2
32315	Bushing*	1 7/8	1	1	1/2

*.377 I.D. x 1/2" O.D. x 1/2" long plain hole brass bushing, drilled and tapped for one #10-32 set screw.

Plastic Knurled Torque Knob With Stud





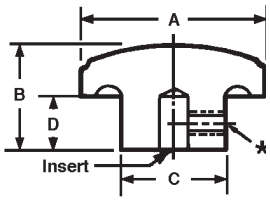
- Material: Plastic
- Finish: Tumble
- Knurled edge for non-slip grip
- Stud Threads: Zinc Plated Steel
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	Stud Thread and Length	A	B	C	D
32326	10-32 x 1/2	3/4	9/16	5/8	—
32327	10-32 x 1	3/4	9/16	5/8	—
32329	1/4-20 x 1/2	3/4	9/16	5/8	—
32330	1/4-20 x 1	3/4	9/16	5/8	—
32302	10-32 x 1	1	21/32	5/8	5/16
32304	1/4-20 x 1	1	21/32	5/8	5/16
32334	5/16-18 x 1	1	21/32	5/8	5/16
32306	1/4-20 x 1	1 3/8	25/32	3/4	3/8
32307	1/4-20 x 2	1 3/8	25/32	3/4	3/8
32331	5/16-18 x 1	1 3/8	25/32	3/4	3/8
32309	5/16-18 x 2	1 3/8	25/32	3/4	3/8
32332	3/8-16 x 1	1 3/8	25/32	3/4	3/8
32333	5/16-18 x 1	1 7/8	1	1	1/2
32313	3/8-16 x 1	1 7/8	1	1	1/2

Plastic Fluted Knob



- Material: Plastic
- Finish: Tumble
- Insert Threads: Brass
- Bushing: Brass
- Stud Threads: Zinc Plated Steel
- For heavy torque applications, clamping devices, adjusting rods
- 3D Solid Models are available in multiple formats from www.jergensinc.com

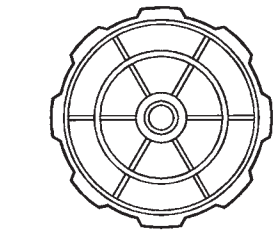


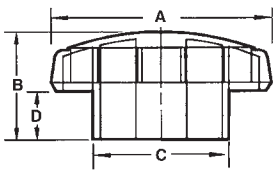
Part Number	Insert Thread and Depth	Stud Thread and Length	A	B	C	D
32320	1/4-20 x 7/16	—	1 3/8	27/32	27/32	25/64
32340	—	1/4-20 x 1	1 3/8	27/32	27/32	25/64
32321	5/16-18 x 7/16	—	1 3/8	27/32	27/32	25/64
32341	—	5/16-18 x 1	1 3/8	27/32	27/32	25/64
32342	—	3/8-16 x 1	1 3/8	27/32	27/32	25/64
32343	—	1/4-20 x 1	1 3/4	1 1/16	1 1/16	1/2
32322	5/16-18 x 7/16	—	1 3/4	1 1/16	1 1/16	1/2
32344	—	5/16-18 x 1	1 3/4	1 1/16	1 1/16	1/2
32323	3/8-16 x 1/2	—	1 3/4	1 1/16	1 1/16	1/2
32345	—	3/8-16 x 1	1 3/4	1 1/16	1 1/16	1/2
32346	1/4-20 x 7/16	—	1 3/4	1 1/16	1 1/16	1/2
32316	3/8-16 x 1/2	—	2 3/8	1 5/16	1 1/4	5/8
32347	5/16-18 x 7/16	—	2 3/8	1 5/16	1 1/4	5/8
32317	—	3/8-16 x 1	2 3/8	1 5/16	1 1/4	5/8
32318	—	3/8-16 x 2	2 3/8	1 5/16	1 1/4	5/8
32348	—	5/16-18 x 1	2 3/8	1 5/16	1 1/4	5/8
32319	Bushing*	—	2 3/8	1 5/16	1 1/4	5/8

*.377 I.D. x 1/2" O.D. x 1/2" deep plain brass bushing, drilled and tapped for one #10-32 set screw.

Thermoplastic Fluted Knob







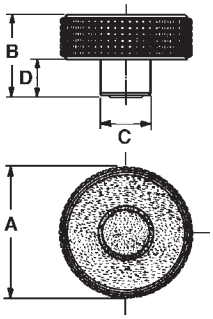
- Material: Thermoplastic
- Finish: Black Matte
- Insert: Brass
- Textured surface resists scratches, nicks, and fingerprints
- Also available in red, blue, yellow, and green
- A standard 1" stud is available, other lengths available upon request.

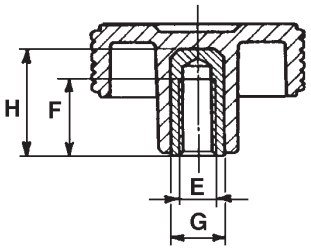
Part Number	A	B	C	D	Insert
32350	3 1/4	1 3/8	2	3/4	1/4-20 x 5/8
32351	3 1/4	1 3/8	2	3/4	5/16-18 x 3/4
32352	3 1/4	1 3/8	2	3/4	3/8-16 x 7/8

Jergens SPECIALTY FASTENERS GROUP

Plastic Knurled Knob
ELESA Original Design





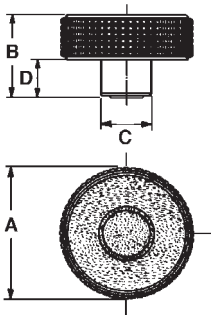


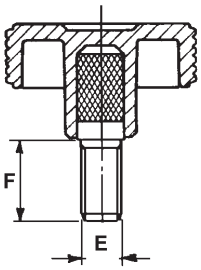
- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Brass Insert with tapped or plain blind hole
- Knobs with plain blind hole complete with set screw
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	Set Screw	F	G	H
33801	1.22	.87	.59	.35	1/4-20	—	.47	—	—
33802	1.57	.94	.67	.43	1/4	10-32	.55	.47	.67
33803	1.57	.94	.67	.43	1/4-20	—	.47	—	—
33804	1.57	.94	.67	.43	5/16-18	—	.51	—	—
33805	1.97	1.18	.79	.53	3/8	10-32	.79	.63	.98
33806	1.97	1.18	.79	.53	5/16-18	—	.70	—	—
33807	1.97	1.18	.79	.53	3/8-16	—	.67	—	—
33808	2.36	1.38	.91	.59	3/8	1/4-20	.79	.63	1.18
33809	2.36	1.38	.91	.59	3/8-16	—	.79	—	—
33810	2.36	1.38	.91	.59	1/2-13	—	.79	—	—

Plastic Knurled Knob With Stud
ELESA Original Design





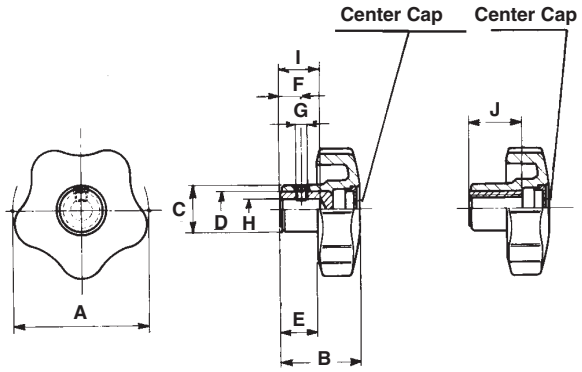


- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Stud: Zinc Plated Steel with chamfered flat end
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F
33811	1.22	.87	.59	.35	1/4-20	.500
33812	1.22	.87	.59	.35	1/4-20	.750
33813	1.57	.94	.67	.43	1/4-20	.750
33814	1.57	.94	.67	.43	1/4-20	1.00
33815	1.57	.94	.67	.43	5/16-18	.750
33816	1.57	.94	.67	.43	5/16-18	1.00
33817	1.97	1.18	.79	.53	3/8-16	1.00
33818	1.97	1.18	.79	.53	3/8-16	1.25
33819	2.36	1.38	.91	.59	3/8-16	1.00
33820	2.36	1.38	.91	.59	3/8-16	1.25

Plastic Lobe Knob
ELESA Original Design



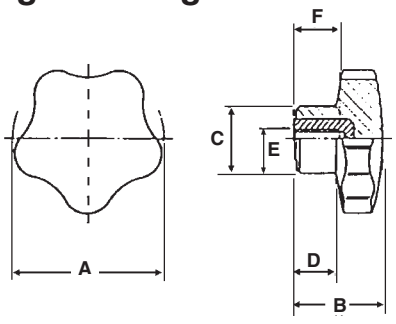


- Material: High Impact Strength Technopolymer
- Finish: Black
- Insert: Brass with tapped or plain blind hole
- Knobs with plain blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	Set Screw G	Mounting Holes (H) Plain	Mounting Holes (H) Tapped	I	J
33840	0.98	0.75	0.51	0.28	0.31	—	—	—	10-32	—	0.39
33841	1.26	0.91	0.59	—	0.39	—	—	—	1/4-20	—	0.47
33842	1.26	0.91	0.59	0.47	0.39	0.2	10-32	1/4	—	—	0.47
33843	1.57	1.06	0.67	—	0.47	—	—	—	1/4-20	—	0.71
33844	1.57	1.06	0.67	—	0.47	—	—	—	5/16-18	—	0.71
33845	1.57	1.06	0.67	0.47	0.47	0.24	10-32	1/4	—	0.55	—
33846	1.57	1.06	0.67	0.55	0.47	0.24	10-32	5/16	—	0.59	—
33847	1.97	1.26	0.75	—	0.55	—	—	—	5/16-18	—	0.79
33848	1.97	1.26	0.75	—	0.55	—	—	—	3/8-16	—	0.79
33849	1.97	1.26	0.75	0.55	0.55	0.28	10-32	5/16	—	0.63	—
33850	1.97	1.26	0.75	0.63	0.55	0.28	10-32	3/8	—	0.63	—
33851	2.48	1.46	0.87	—	0.63	—	—	—	3/8-16	—	1.02
33852	2.48	1.46	0.87	—	0.63	—	—	—	1/2-13	—	1.02
33853*	2.48	1.46	0.87	0.67	0.63	0.31	1/4-20	3/8	—	0.79	—
33854*	2.48	1.46	0.87	0.75	0.63	0.31	1/4-20	1/2	—	0.79	—
33855	2.91	1.71	1.02	0.75	0.87	0.31	1/4-20	1/2	—	0.79	—
33856	2.91	1.71	1.02	—	0.87	—	—	—	1/2-13	—	1.02

*Steel Insert

Plastic Lobe Knob
Metric
Elesa Original Design



- Material: Duroplast
- Finish: Black Matte
- Insert: Stainless Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number*	A	B	C	D	E	F
34121	32	23	19	11	M6	12
34122	40	27	21	12	M8	13
34123	50	33	25	14	M10	17
34124	60	37	27	17	M12	20

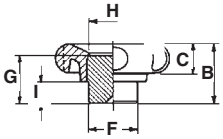
*Dimensions in millimeters

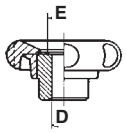
Jergens SPECIALTY FASTENERS GROUP

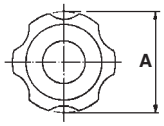
Plastic Lobe Knob

ELESA Original Design









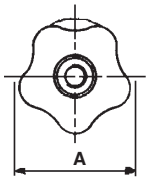
- Material: Black Duroplast
- Finish: Black Bright
- Metal Hub
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

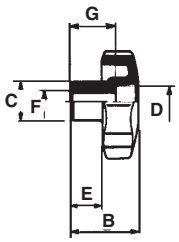
Part Number	A	B	C	D	E	F	G	H	I
33751	2.01	1.14	.51	Blank	—	.79	.83	.71	.39
33752	2.01	1.14	.51	5/16	—	.79	.83	.71	.39
33753	2.01	1.14	.51	5/16-18	—	.79	.83	.71	.39
33755	2.72	1.30	.71	3/8	.71	1.18	.98	1.10	.47
33756	2.72	1.30	.71	3/8-16	.71	1.18	.98	1.10	.47
33758	3.23	1.57	.75	1/2	.71	1.38	1.18	1.34	.59
33759	3.23	1.57	.75	1/2-13	.71	1.38	1.18	1.34	.59
33760	3.90	1.73	.79	Blank	—	1.42	1.34	1.34	.55
33761	3.90	1.73	.79	1/2	.84	1.42	1.34	1.34	.55
33762	3.90	1.73	.79	5/8-11	.84	1.42	1.34	1.34	.55
33763	5.07	1.85	.87	Blank	—	1.57	1.34	1.42	.51
33764	5.07	1.85	.87	1/2	—	1.57	1.34	1.46	.51

Plastic Lobe Knob

ELESA Original Design







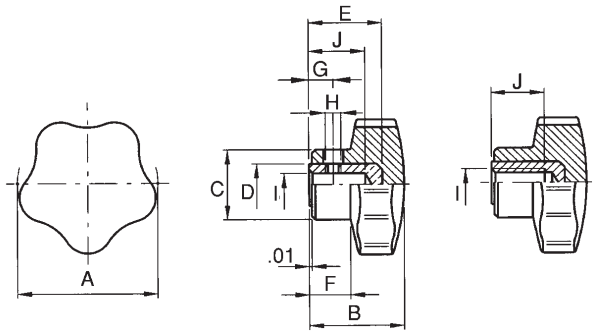
- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Insert: Brass with tapped through hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G
33831	1.26	0.91	0.59	0.39	0.39	1/4-20	0.47
33832	1.57	1.06	0.67	0.47	0.47	5/16-18	0.71
33833	1.97	1.26	0.75	0.59	0.55	3/8-16	0.79
33834	2.48	1.46	0.87	0.75	0.63	3/8-16	1.02
33835	2.48	1.46	0.87	0.75	0.63	1/2-13	1.02
33836	2.91	1.17	1.02	0.67	0.87	1/2-13	1.02

Plastic Lobe Knob
ELESA Original Design







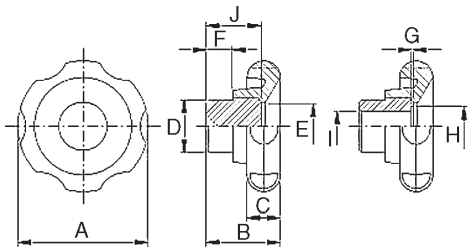
- Material: Phenolic based Duroplast
- Insert: Black oxide steel or Brass

Part Number	A	B	C	D	E	F	Set Screw G	Set Screw H	Mounting Hole (I) Plain	Mounting Hole (I) Tapped	J	Wt. lbs.
33884*	1.26	0.91	0.75	—	—	0.43	—	—	—	1/4-20	0.39	0.04
33885*	1.57	1.06	0.83	—	—	0.47	—	—	—	1/4-20	0.47	0.07
33886*	1.57	1.06	0.83	—	—	0.47	—	—	—	5/16-18	0.51	0.06
33887*	1.57	1.06	0.83	0.47	0.67	0.47	0.28	10-32	0.250	—	0.55	0.07
33888*	1.57	1.06	0.83	0.63	0.79	0.47	0.28	10-32	0.312	—	0.63	0.06
33889*	1.97	1.3	0.98	—	—	0.55	—	—	—	5/16-18	0.71	0.11
33890*	1.97	1.3	0.98	—	—	0.55	—	—	—	3/8-16	0.67	0.10
33891*	1.97	1.3	0.98	0.59	0.99	0.55	0.31	10-32	0.312	—	0.79	0.14
33892*	1.97	1.3	0.98	0.63	0.99	0.55	0.31	10-32	0.375	—	0.79	0.13
33893	2.36	1.46	1.06	—	—	0.67	—	—	—	3/8-16	0.67	0.16
33894	2.36	1.46	1.06	—	—	0.67	—	—	—	1/2-13	0.79	0.17
33895	2.36	1.46	1.06	0.67	1.02	0.67	0.35	1/4-20	0.375	—	0.79	0.21
33896	2.36	1.46	1.06	0.79	1.18	0.67	0.35	1/4-20	0.500	—	0.99	0.19
33897	2.75	1.73	1.18	—	—	0.79	—	—	—	1/2-13	0.79	0.26
33898	2.75	1.73	1.18	0.79	1.18	0.79	0.43	1/4-20	0.500	—	0.99	0.27
33899	3.34	2.16	1.37	—	—	1.18	—	—	—	5/8-11	0.86	0.38

***denotes brass insert.**

Plastic Lobe Knob
ELESA Original Design





- Materials: Glass reinforced polyamide based technopolymer
- Finish: Black glossy
- Black-oxide steel hub
- Lighter Design
- With plain or tapped hole

1. Not drilled
2. Plain through hole
3. Tapped through hole

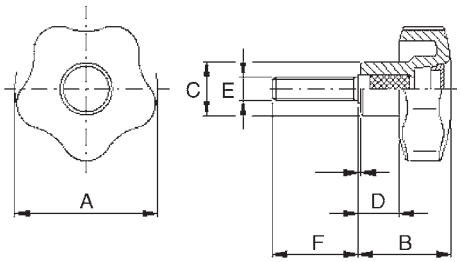
Part Number	A	B	C	D	E	F	G	H	Mounting Holes (I) Plain	Mounting Holes (I) Tapped	J	Wt. lbs.
34000[1]	1.97	1.14	0.51	0.79	0.71	0.39	—	—	—	—	0.83	0.16
34001[2]	1.97	1.14	0.51	0.79	0.71	0.39	—	—	0.312	—	0.83	0.14
34002[3]	1.97	1.14	0.51	0.79	0.71	0.39	—	—	—	5/16-18	0.83	0.15
34003[1]	2.40	1.18	0.53	0.98	0.94	0.43	—	—	—	—	0.91	0.28
34004[1]	2.76	1.30	0.71	1.18	1.14	0.47	—	—	—	—	0.98	0.42
34005[2]	2.76	1.30	0.71	1.18	1.14	0.47	0.03	0.71	0.375	—	0.98	0.37
34006[3]	2.76	1.30	0.71	1.18	1.14	0.47	0.03	0.71	—	3/8-16	0.98	0.39
34007[1]	3.15	1.57	0.75	1.38	1.34	0.59	—	—	—	—	1.18	0.66
34008[2]	3.15	1.57	0.75	1.38	1.34	0.59	0.03	0.71	0.500	—	1.18	0.61
34009[3]	3.15	1.57	0.75	1.38	1.34	0.59	0.03	0.71	—	1/2-13	1.18	0.62

Jergens SPECIALTY FASTENERS GROUP

Plastic Lobe Knob With Stud
ELESA Original Design



- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Stud: Zinc Plated Steel with Chamfered Flat End
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

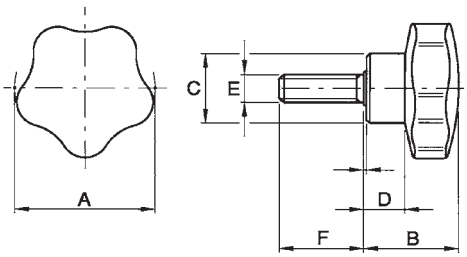


Part Number	A	B	C	D	E	F
33859	0.98	0.75	0.51	0.31	10-32	0.500
33860	0.98	0.75	0.51	0.31	10-32	0.750
33861	1.26	0.91	0.59	0.39	1/4-20	0.500
33862	1.26	0.91	0.59	0.39	1/4-20	0.750
33863	1.26	0.91	0.59	0.39	1/4-20	1.000
33864	1.57	1.06	0.67	0.47	1/4-20	0.500
33865	1.57	1.06	0.67	0.47	1/4-20	1.000
33866	1.57	1.06	0.67	0.47	5/16-18	0.750
33867	1.57	1.06	0.67	0.47	5/16-18	1.000
33868	1.97	1.26	0.75	0.55	5/16-18	1.000
33869	1.97	1.26	0.75	0.55	5/16-18	1.500
33870	1.97	1.26	0.75	0.55	3/8-16	1.000
33871	1.97	1.26	0.75	0.55	3/8-16	1.500
33872	2.48	1.46	0.87	0.63	3/8-16	1.250
33873	2.48	1.46	0.87	0.63	3/8-16	2.000
33874	2.48	1.46	0.87	0.63	1/2-13	1.500
33877	2.91	1.71	1.02	0.87	1/2-13	1.250
33878	2.91	1.71	1.02	0.87	1/2-13	2.000

Plastic Lobe Knob With Stainless Steel Stud
ELESA Original Design



- Material: Duroplast
- Finish: Black Matte
- Stud: Stainless Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents



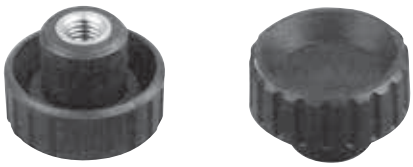
Part Number	A	B	C	D	E	F
34181	1.26	.91	.75	.43	1/4-20	.500
34182	1.26	.91	.75	.43	1/4-20	.750
34183	1.26	.91	.75	.43	1/4-20	1.00
34184	1.57	1.06	.83	.47	5/16-18	.750
34185	1.57	1.06	.83	.47	5/16-18	1.00
34186	1.57	1.06	.83	.47	5/16-18	1.25
34187	1.97	1.30	.98	.55	3/8-16	1.00
34188	1.97	1.30	.98	.55	3/8-16	1.25
34189	1.97	1.30	.98	.55	3/8-16	1.50
34190	1.97	1.30	.98	.55	3/8-16	2.00

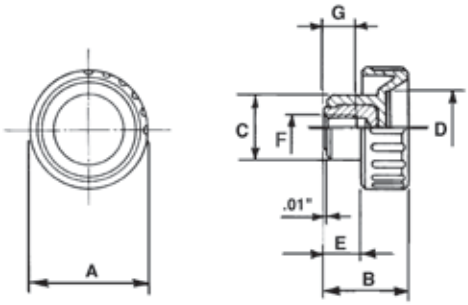
Metric

Part Number*	A	B	C	D	E	F
34131	32	23	19	11	M6	16
34132	40	27	21	12	M8	20
34133	40	27	21	12	M8	30
34134	50	33	25	14	M10	20
34135	50	33	25	14	M10	40
34136	60	37	27	17	M12	30

*Dimensions in millimeters

Plastic Fluted Grip Knob
ELESA Original Design





- Material: High Strength Technopolymer
- Finish: Black Matte
- Insert: Brass with tapped blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G
34200	.79	.63	.47	.43	.24	8-32	.24
34201	.79	.63	.47	.43	.24	10-32	.24
34202	.98	.75	.63	.59	.31	10-32	.39
34203	.98	.75	.63	.59	.31	1/4-20	.31
34204	1.26	.87	.67	.83	.35	1/4-20	.39
34205	1.26	.87	.67	.83	.35	5/16-18	.39

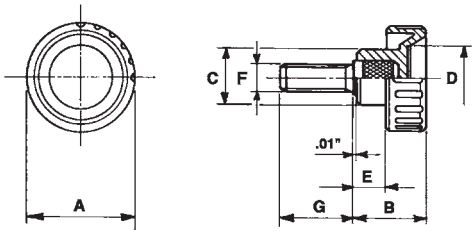
Metric

Part Number*	A	B	C	D	E	F	G
34260	16	13	11	9	5	M4	6
34261	20	16	12	11	6	M5	6
34262	25	19	16	15	8	M6	8
34263	32	22	17	21	9	M8	10

*Dimensions in millimeters

Plastic Fluted Grip Knob With Stud
ELESA Original Design





- Material: High Impact Strength Technopolymer
- Finish: Black Matte
- Zinc-Plated Steel Stud With Chamfered Flat End
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G
34210	0.63	0.51	0.43	0.35	0.2	8-32	0.375
34211	0.63	0.51	0.43	0.35	0.2	8-32	0.500
34212	0.79	0.63	0.47	0.43	0.24	8-32	0.500
34213	0.79	0.63	0.47	0.43	0.24	8-32	0.750
34214	0.79	0.63	0.47	0.43	0.24	10-32	0.500
34215	0.79	0.63	0.47	0.43	0.24	10-32	0.750
34216	0.98	0.75	0.63	0.59	0.31	1/4-20	0.500
34217	0.98	0.75	0.63	0.59	0.31	1/4-20	0.750
34218	0.98	0.75	0.63	0.59	0.31	1/4-20	1.000
34219	1.26	0.87	0.67	0.83	0.35	5/16-18	0.750
34220	1.26	0.87	0.67	0.83	0.35	5/16-18	1.000
34221	1.57	1.06	0.75	0.98	0.51	3/8-16	1.000
34222	1.97	1.12	0.87	1.22	0.53	3/8-16	1.000

Metric

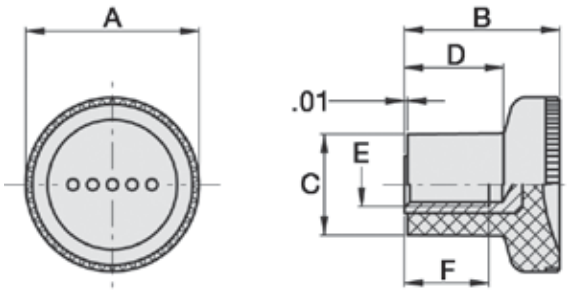
Part Number*	A	B	C	D	E	F	G
34250	16	13	11	9	5	M4	10
34251	16	13	11	9	5	M5	10
34252	20	16	12	11	6	M5	16
34253	20	16	12	11	6	M6	16
34254	25	19	16	15	8	M6	16
34255	25	19	16	15	8	M8	16
34256	32	22	17	21	9	M8	16
34257	32	22	17	21	9	M10	20

*Dimensions in millimeters

Jergens SPECIALTY FASTENERS GROUP

Knurled Knob
ELESA Orginal Design



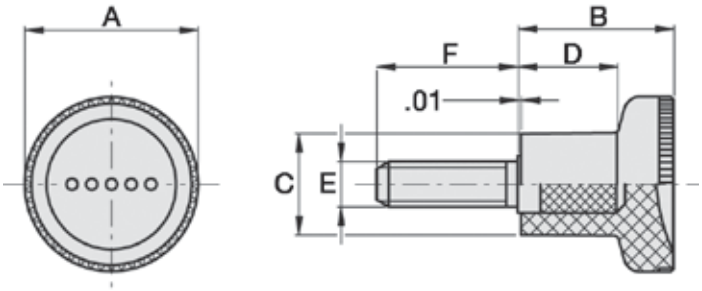


- Material: High Strength Technopolymer
- Finish: Gray/Black Matte
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Concave surface makes gripping easier.

Part Number	A	B	C	D	E	F
34490	0.83	0.71	0.49	0.41	10-32	0.39
34491	0.98	0.89	0.57	0.55	1/4-20	0.47
34492	1.22	1.06	0.73	0.67	5/16-18	0.63

Knurled Knob With Stud
ELESA Orginal Design



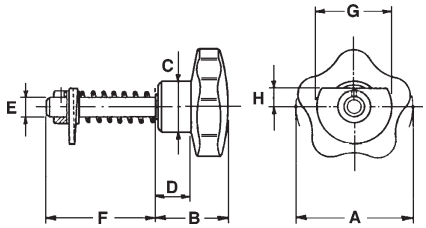


- Material: High Strength Technopolymer
- Finish: Gray/Black Matte
- Stud: Zinc Plated Threaded Steel With Chamfered End
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Concave surface makes gripping easier.

Part Number	A	B	C	D	E	F
34493	.83	.71	.49	.41	10-32	.750
34494	.98	.89	.57	.55	1/4-20	.750
34495	1.22	1.06	.73	.67	5/16-18	.750

Plastic Latch Type Lobe Knob
ELESA Original Design



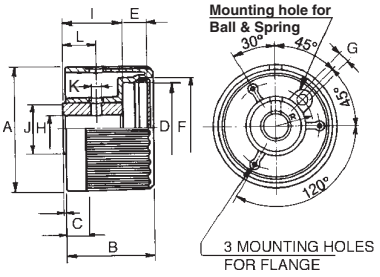


- Material: Black Duroplast
- Finish: Black Bright
- Stud: Zinc Plated Steel
- Resistant to Solvents, Oils, Greases, and other Chemical Agents
- Available in Stainless Steel with left or right swing style

Part Number	A	B	C	D	E	F	G	H	Swing Style
33881	1.97	1.30	.98	.55	.47	1.81	1.77	.47	Left
33882	2.36	1.46	1.06	.67	.47	1.81	1.77	.47	Right

Plastic Knurled Grip Knob
ELESA Original Design





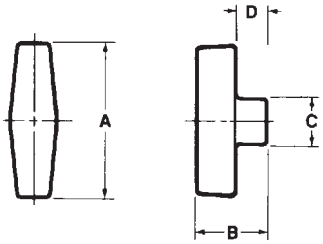
- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Bright
- Black Oxide Steel Insert
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	H	I	J	K	L
33741	1.89	1.38	.31	1.26	.39	1.34	.13	.375	.87	.87	.16	.55
33742	2.05	1.54	.35	1.46	.51	1.54	.17	.500	.87	.87	.16	.55
33743	2.28	1.61	.39	1.65	.43	1.73	.20	.500	1.06	1.02	.20	.63
33744	2.48	1.73	.43	1.89	.39	1.97	.24	.500	1.18	1.02	.20	.63

Jergens SPECIALTY FASTENERS GROUP

Plastic T-Handle

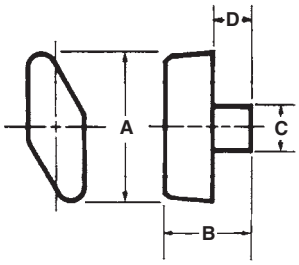




- Material: Polypropylene
- Finish: Tumble
- Insert: Metal
- Also Available With Stud
- Ideal For High Torque Applications
- Textured Grip

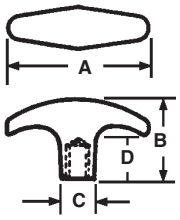
Part Number	A	B	C	D	Insert
32126	2 1/2	1 1/4	3/4	5/8	5/16-18 x 3/4





Part Number	A	B	C	D	Insert
32121	2	1 1/8	5/8	1/2	5/16-18 x 5/8



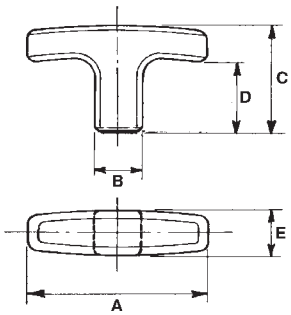


- Material: Plastic
- Finish: Tumble
- For heavy-duty clamping and push/pull applications; latch release with pull cables or rods; also for cabinet doors, access panel latches, etc.

Part Number	Insert Thread and Depth	A	B	C	D
32115	5/16-18 x 7/16	2 1/4	1 1/4	9/16	11/16
32116	1/4-20 x 7/16	2 1/4	1 1/4	9/16	11/16

Plastic T-Handle
ELESA Original Design





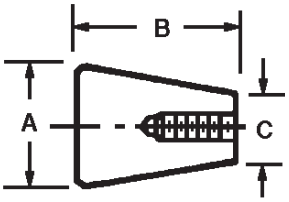
- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Matte
- Insert: Brass With Tapped Blind Hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

Part Number	A	B	C	D	E	F	G	Ft.* lbs.
33711	1.57	0.51	1.18	0.79	0.51	1/4-20	0.63	560
33712	2.17	0.55	1.3	0.87	0.55	1/4-20	0.71	739
33713	2.64	0.63	1.46	0.98	0.63	5/16-18	0.79	1,008
33714	3.15	0.79	1.61	1.02	0.79	3/8-16	0.79	1,568
33715	3.66	0.83	1.77	1.12	0.83	1/2-13	0.79	1,795

*Max. Tensile strength / Pull Force

Plastic Tapered Knob





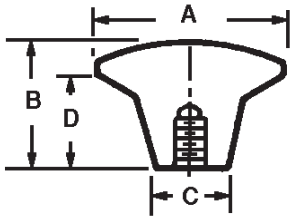
- Tapered shanks, enlarged heads provide good finger clearance and excellent grasp for pulling
- Popular Applications: push-pull rods, palm switch knobs, palm grasp knobs (for portable power tools), push buttons, drawer pulls, etc.

- Material: Plastic
- Finish: Tumble
- Insert: Brass
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	Insert Thread and Depth
32213	1	1 1/4	1/2	1/4-20 x 7/16
32214	1	1 1/4	1/2	5/16-18 x 7/16

Plastic Lift Knob

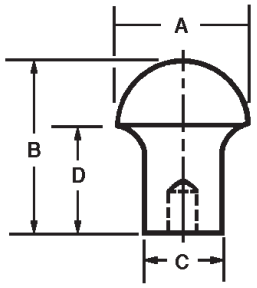




- Material: Plastic
- Finish: Tumble
- Insert: Brass
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	D	Insert Thread and Depth
32217	1 3/8	7/8	5/8	5/8	1/4-20 x 7/16





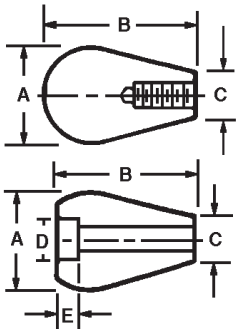
Part Number	A	B	C	D	Insert Thread and Depth
32215	1	1 3/16	9/16	11/16	10-32 x 5/16
32216	1	1 3/16	9/16	11/16	1/4-20 x 7/16

Jergens offers 3D models

for all handles, knobs and handwheels at www.jergensinc.com

Plastic Oval Tapered Knob





- Material: Polypropylene
- Finish: Tumble
- For shift levers, control levers, push/pull rods on machine tools, lawn and garden equipment, jigs and fixtures, and for finger tip levers or lid knobs.
- Available with either brass insert, tapped plastic thread, or untapped through hole.
- Sand and Buff Finish available upon request
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	D	E	Hole Diameter
32211*	1 3/16	1 7/8	9/16	—	—	5/16-18 x 3/4
32218**	1 3/16	1 7/8	9/16	—	—	1/4-20 x 7/16
32212	1 3/16	1 3/4	9/16	9/16	5/16	.380/.385 through hole (untapped)
32219	1 3/16	1 3/4	9/16	9/16	5/16	.313/.318 through hole (untapped)

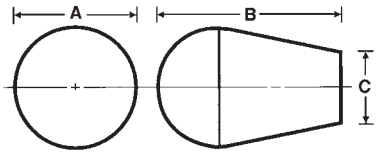
*Tapped plastic threads
**Brass insert

Soft Touch Oval Tapered Knob



- Material: Soft Touch Plastic
- Finish: “Soft Feel” Black Matte
- Insert: Brass
- Cushioned vinyl covering helps to dampen vibrations
- Also available in red, blue, yellow, and green (250 piece minimum)

This Oval Tapered Knob has the original soft touch material that helps in gripping. It is designed with an enlarged head and tapered shaft for maximum push, pull, and turning.



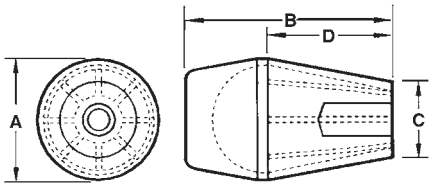
Part Number	A	B	C	Hole Diameter
32150	1 5/8	2 1/2	7/8	5/16-18 x 5/8
32151	1 5/8	2 1/2	7/8	5/16
32152	1 5/8	2 1/2	7/8	3/8-16 x 5/8
32153	1 5/8	2 1/2	7/8	3/8

Soft Touch Tapered Knob



- Material: Soft Touch Plastic
- Finish: Black Matte
- Insert: Brass
- Cushioned vinyl covering helps to dampen vibrations
- Also available in red, blue, yellow, and green (250 piece minimum)

This Oval Tapered Knob has the original soft touch material that helps in gripping. It is designed with an enlarged head and tapered shaft for maximum push, pull, and turning.

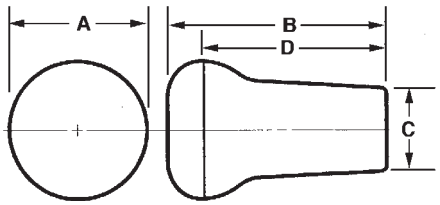


Part Number	A	B	C	D	Hole Diameter
32160	1 1/2	2 1/2	15/16	1 1/2	1/4-20 x 5/8
32161	1 1/2	2 1/2	15/16	1 1/2	5/16-18 x 3/4
32162	1 1/2	2 1/2	15/16	1 1/2	3/8-16 x 5/8

Soft Touch Tapered Knob



- Material: Soft Touch Plastic
- Finish: Black Matte
- Insert: Brass
- Cushioned vinyl covering helps to dampen vibrations
- Also available in red, blue, yellow, and green (250 piece minimum)
- A standard 1" stud is available, other lengths available upon request.



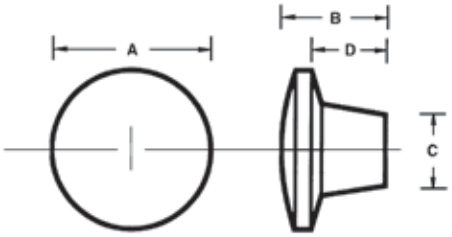
Part Number	A	B	C	D	Hole Diameter
32180	1 5/8	2 1/2	7/8	2 1/8	1/4-20 x 5/8
32181*	1 5/8	2 1/2	7/8	2 1/8	1/4 x 1
32182	1 5/8	2 1/2	7/8	2 1/8	5/16-18 x 5/8
32183*	1 5/8	2 1/2	7/8	2 1/8	5/16 x 1
32184*	1 5/8	2 1/2	7/8	2 1/8	3/8 x 1
32170	1 3/8	2 1/8	13/16	1 3/4	5/16-18 x 5/8
32171	1 3/8	2 1/8	13/16	1 3/4	3/8-16 x 5/8
32172*	1 3/8	2 1/8	13/16	1 3/4	3/8 x 1
32173	1 3/8	2 1/8	13/16	1 3/4	1/2-13 x 5/8
32174*	1 3/8	2 1/8	13/16	1 3/4	1/2 x 1

*Cored Hole

Jergens SPECIALTY FASTENERS GROUP

Plastic Push/Pull Knob



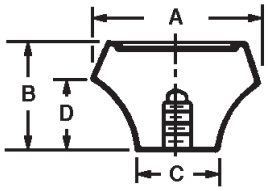


- Material: Thermoplastic
- Finish: Matte
- Insert: Brass
- Also available with stud

Part Number	A	B	C	D	Insert
32225	1 3/8	7/8	5/8	5/8	8-32
32226	1 3/8	7/8	5/8	5/8	10-32
32227	1 3/8	7/8	5/8	5/8	1/4-20
32228	1 3/8	7/8	5/8	5/8	5/16-18
32229	1 3/8	7/8	5/8	5/8	3/8-16

Plastic Push/Pull Knob



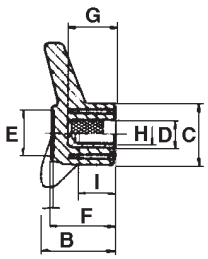


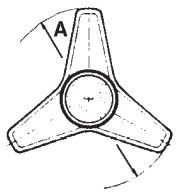
- Material: Plastic
- Finish: Tumbled
- Insert: Brass
- 3D Solid Models are available in multiple formats from www.jergensinc.com

Part Number	A	B	C	D	Insert Thread and Depth
32220	1	11/16	1/2	7/16	8-32 x 5/16
32221	1	11/16	1/2	7/16	10-32 x 5/16
32222	1	11/16	1/2	7/16	1/4-20 x 7/16
32223	1	15/16	9/16	11/16	10-32 x 7/16
32224	1	15/16	9/16	11/16	1/4-20 x 7/16

Plastic Three-Spoked Knob
ELESA Original Design







- Material: Glass-Fibre Reinforced Technopolymer
- Finish: Black Matte
- Brass Insert with tapped blind hole
- Insert: Brass or Steel with plain blind hole
- Resistant to Solvents, Oils, Greases, and other Chemical Agents

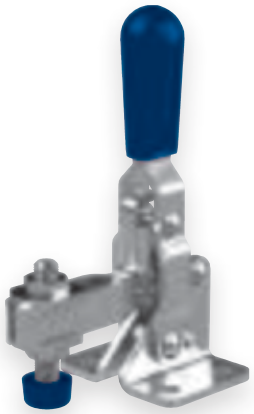
Part Number	A	B	C	D	E	F	G	H	I	Insert
33731	2.48	1.10	1.02	—	.70	.98	—	5/16-18	.62	Brass
33732	2.48	1.10	1.02	.59	.70	.98	.87	5/16	.62	Steel
33733	3.14	1.37	1.25	—	.82	1.18	—	3/8-16	.67	Brass
33734	3.14	1.37	1.25	.59	.82	1.18	.98	3/8	.79	Steel
33735	3.93	1.65	1.41	—	.98	1.41	—	1/2-13	.79	Brass
33736	3.93	1.65	1.41	.94	.98	1.41	1.29	1/2	.98	Steel

Toggle Clamps

True-Lok™ Clamps
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Jergens®
MANUFACTURING EFFICIENCY

Vertical Handle Toggle Clamps

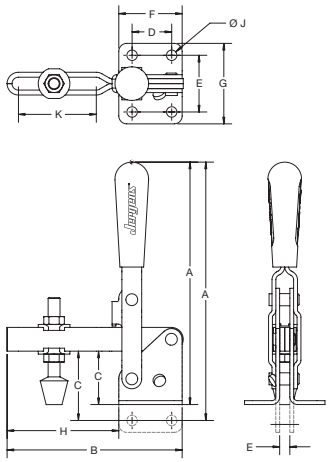


Specifications

- Bar Opens: 110°
- Handle Opens: 61°
- Spindle Supplied: 70062



Straight Base
70001



Model	Holding Capacity lb(N)	Weight lb(Kg)	Description	In(mm)									
				A	B	C	D	E	F	G	H	J	K
70000	100(440)	0.16(0.07)	Flanged Base, U-Bar	3.03(77)	2.05(52)	0.62(15.8)	0.62(15.7)	0.94(24)	1.00(25.4)	1.32(33.5)	1.05(26.6)	0.18(4.5)	0.73(18.5)
70001	100(440)	0.16(0.07)	Straight Base, U-Bar	3.29(83.5)	2.05(52)	0.88(22.4)	0.62(15.7)	0.15(3.8)	1.00(25.4)	-	1.05(26.6)	0.18(4.5)	0.73(18.5)

Vertical Handle Toggle Clamps



Specifications

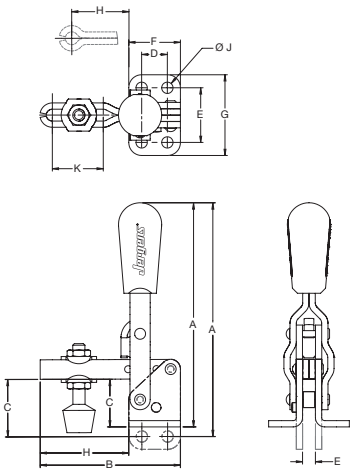
- Bar Opens: 96°
- Handle Opens: 62°
- Spindle Supplied: 70064



Straight Base
70004/70005

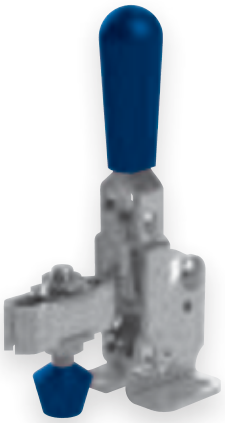


Solid Bar
70002



Model	Holding Capacity lb(N)	Weight lb(Kg)	Description	In(mm)									
				A	B	C	D	E	F	G	H	J	K
70002	200(890)	0.35(0.16)	Flanged Base, Solid Bar	4.36(110.7)	2.31(58.6)	0.93(23.7)	0.50(12.7)	1.06(27)	1.00(25.4)	1.57(39.9)	1.31(33.27)	0.22(5.6)	-
70003	200(890)	0.35(0.16)	Flanged Base, U-Bar	4.36(110.7)	2.73(69.2)	0.92(23.5)	0.50(12.7)	1.06(27)	1.00(25.4)	1.57(39.9)	1.72(43.7)	0.22(5.6)	0.99(25.1)
70004	200(890)	0.35(0.16)	Straight Base, U-Bar	4.55(115.5)	2.73(69.2)	1.11(28.2)	0.50(12.7)	0.25(6.4)	1.00(25.4)	-	1.72(43.7)	0.22(5.6)	0.99(25.1)
70005	200(890)	0.35(0.16)	Straight Base, Solid Bar	4.55(115.5)	2.31(58.6)	1.11(28.2)	0.50(12.7)	0.25(6.4)	1.00(25.4)	-	1.31(33.27)	0.22(5.6)	-

Vertical Handle Toggle Clamps



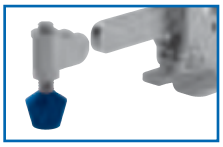
Specifications

- Bar Opens: 102°
- Handle Opens: 57°
- Supplied:* 70065

*Solid Bar versions supplied with bolt retainer.



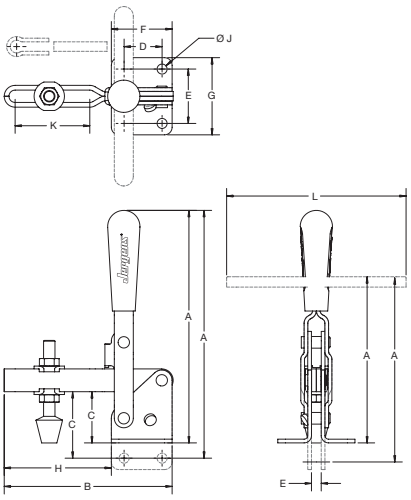
Straight Base
70008



Solid Bar
70010

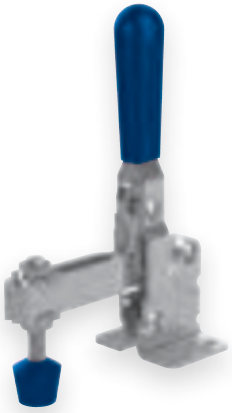


T-Handle
70009



Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70006	375	0.67	Flanged Base, Long U-Bar	5.64	5.4	1.26	0.75	1.25	1.38	1.75	3.84	0.28	3.00
70007	375	0.67	Flanged Base, U-Bar	5.64	4.4	1.25	0.75	1.25	1.38	1.75	2.84	0.28	2.00
70008	375	0.78	Straight Base, U-Bar	5.93	4.4	1.55	0.75	0.25	1.38	-	2.84	0.28	2.00
70009	375	0.82	Flanged Base, U-Bar, T-Handle	4.36	4.57	1.25	0.75	1.25	1.38	1.76	2.85	0.28	2.00
70010	500	0.75	Flanged Base, Solid Bar	5.64	3.78	1.25	0.75	1.25	1.38	1.75	2.22	0.28	-

Vertical Handle Toggle Clamps



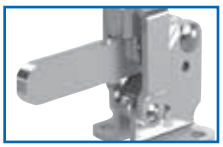
Specifications

- Bar Opens: 105°
- Handle Opens: 58°
- Spindle Supplied:* 3/8-16 x 3.50

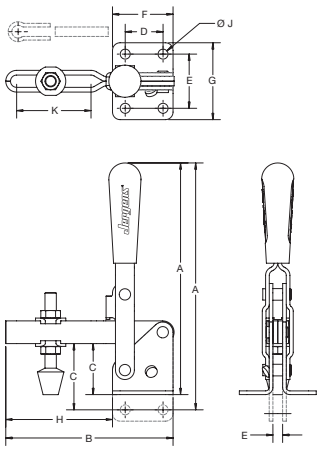
*Solid Bar versions supplied with bolt retainer.



Straight Base
70013



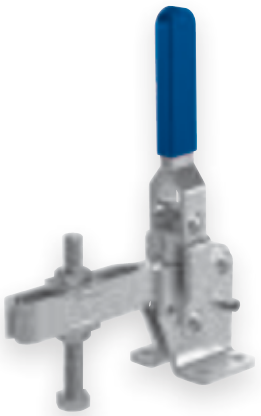
Solid Bar
70012/70013



Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70011	600	1.29	Flanged Base, U-Bar	7.72	5.57	1.67	1.25	1.78	1.94	2.54	3.55	0.33	2.34
70012	750	1.5	Flanged Base, Solid Bar	7.89	5.51	1.69	1.25	1.78	1.94	2.54	3.49	0.33	-
70013	750	1.5	Straight Base, Solid Bar	8.45	5.51	2.06	1.25	0.35	1.94	-	3.49	0.33	-

Jergens SPECIALTY FASTENERS GROUP

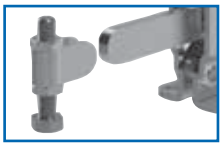
Vertical Handle Toggle Clamps



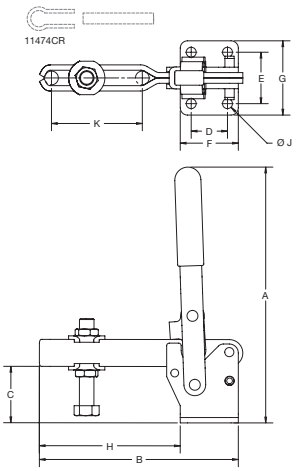
Specifications

- Bar Opens: 96°-135°
- Handle Opens: 67°-70°
- Spindle Supplied:* 70071

*For U-Bar versions only.



Solid Bar
70015



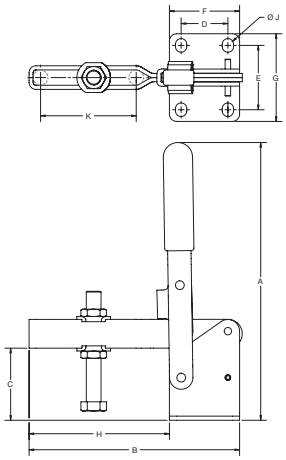
Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70014	1000	2.76	Flanged Base, U-Bar	8.87	6.94	2.00	1.25	1.78	2.00	2.54	4.94	0.34	3.14
70015	1000	2.76	Flanged Base, Solid Bar	8.87	6.87	2.00	1.25	1.78	2.00	2.54	4.87	0.34	-

Vertical Handle Toggle Clamps



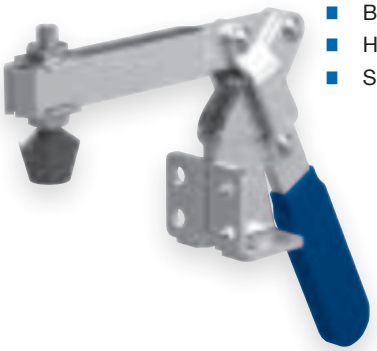
Specifications

- Bar Opens: 140°
- Handle Opens: 60°
- Spindle Supplied: 1/2-13 x 4.50



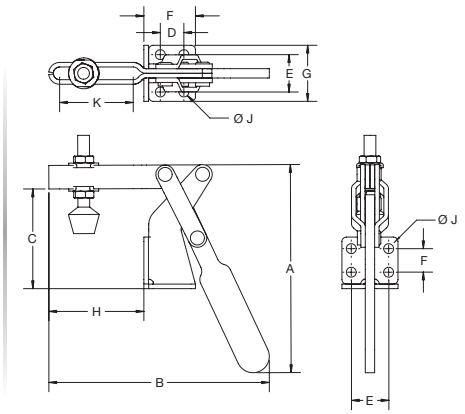
Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70016	1200	5.6	Flanged Base, U-Bar	12.01	9.04	3.19	2.00	2.76	3.00	3.76	6.04	0.48	4.11

Vertical Handle Toggle Clamps



Specifications

- Bar Opens: 180°
- Handle Opens: 60°
- Supplied: 5/16-18 x 2.50



Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70017	375	0.88	Flanged Base, U-Bar	6.38	6.4	2.15	0.63	1.00	1.38	1.50	2.55	0.27	1.99

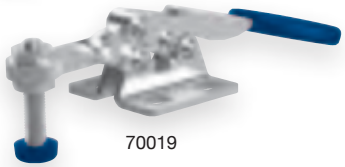
Horizontal Handle Toggle Clamps

Specifications

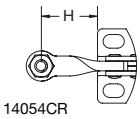
- Bar Opens: 90°
- Handle Opens: 50°
- Spindle Supplied: 70061



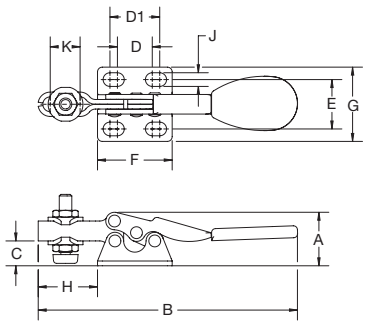
70018



70019



14054CR



Model	Holding Capacity lb	Weight lb	Description	Inches										
				A	B	C	D	D1	E	F	G	H	J	K
70018	60	0.06	Flanged Base, U-Bar	0.67	3.26	0.29	0.44	0.63	0.62	0.94	0.93	0.74	0.17	0.37
70019	60	0.06	Flanged Base, Straight Bar	0.67	3.40	0.35	0.44	0.63	0.62	0.94	0.93	0.71	0.17	-

Horizontal Handle Toggle Clamps

Specifications

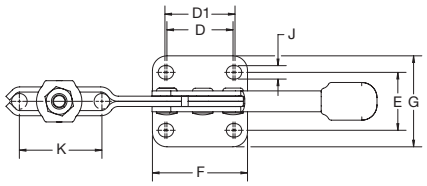
- Bar Opens: 84°
- Handle Opens: 70°
- Spindle Supplied: 70064

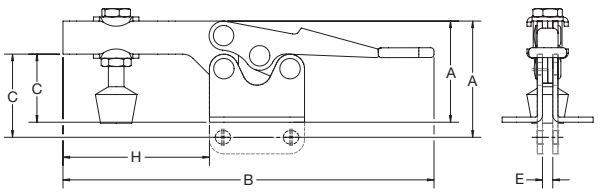


70020



70021





Model	Holding Capacity lb	Weight lb	Description	Inches										
				A	B	C	D	D1	E	F	G	H	J	K
70020	200	0.34	Flanged Base, U-Bar	1.53	5.61	1.01	1.00	1.06	0.88	1.44	1.38	2.22	0.20	1.23
70021	200	0.34	Straight Base, U-Bar	1.76	5.63	1.23	1.00	1.06	0.16	1.44	-	2.22	0.20	1.23

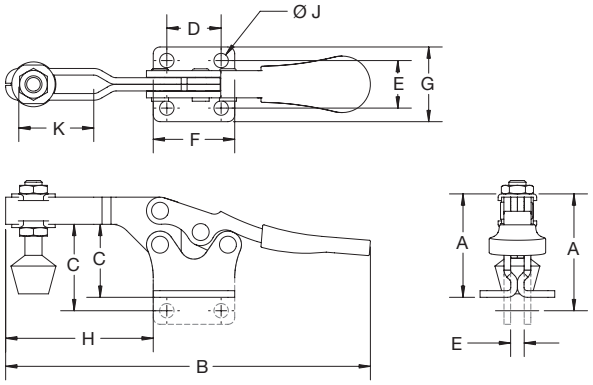
Horizontal Handle Toggle Clamps

Specifications

- Bar Opens: 92°
- Handle Opens: 70°
- Spindle Supplied: 70065


70022


70023



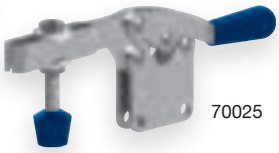
Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70022	500	0.55	Flanged Base, U-Bar	1.84	6.69	1.30	1.00	0.88	1.50	1.38	2.72	0.27	1.38
70023	500	0.55	Straight Base, U-Bar	2.09	6.69	1.55	1.00	0.24	1.50	-	2.72	0.27	1.38

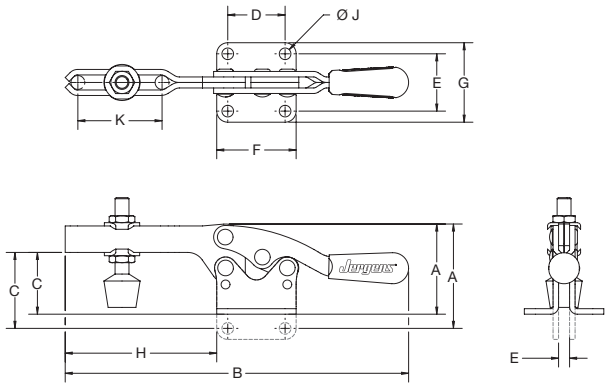
Horizontal Handle Toggle Clamps

Specifications

- Bar Opens: 92°
- Handle Opens: 50°
- Spindle Supplied: 70066


70024

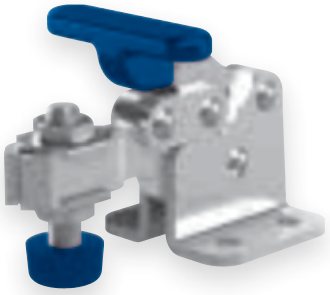

70025



Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70024	750	1.47	Flanged Base, U-Bar	2.55	9.73	1.70	1.63	1.62	2.25	2.25	4.30	0.33	2.37
70025	500	0.55	Straight Base, U-Bar	2.96	9.76	2.11	1.63	0.31	2.25	-	4.30	0.33	2.37

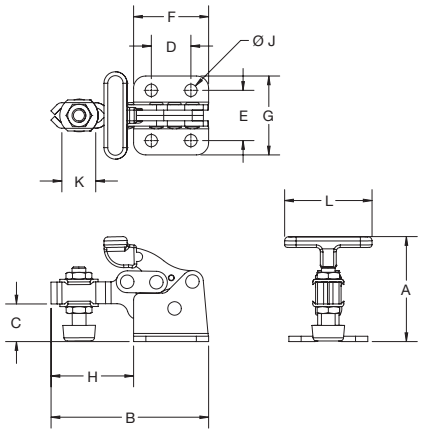
Jergens SPECIALTY FASTENERS GROUP

Horizontal Handle Toggle Clamps



Specifications

- Bar Opens: 90°
- Handle Opens: 50°
- Spindle Supplied:
  #10-42 x 1.38 (70026)
  5/16-18 x 2.50 (70027)
  3/8-16 x 3.50 (70028)

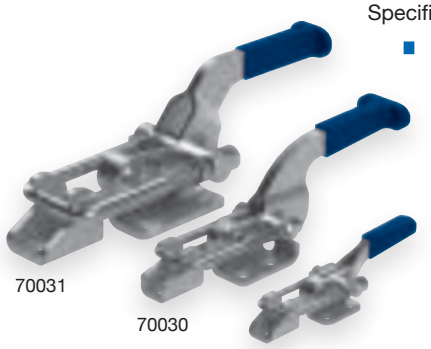


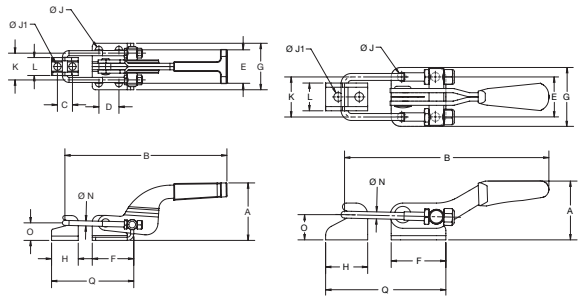
Model	Holding Capacity lb	Weight lb	Description	Inches										
				A	B	C	D	E	F	G	H	J	K	L
70026	150	0.16	Flanged Base, U-Bar	1.41	2.22	0.48	0.53	0.62	1.03	1.03	1.19	0.18	0.50	1.12
70027	350	0.54	Flanged Base, U-Bar	2.40	3.61	0.86	0.91	1.15	1.72	1.81	1.89	0.28	0.75	2.00
70028	750	0.59	Flanged Base, U-Bar	3.63	5.32	1.30	1.38	1.50	2.52	2.47	2.80	0.31	1.20	2.48

Latch Type Toggle Clamps

Specifications

- Drawing Movement (in):
  70029 1.81
  70030 1.75
  70031 2.50





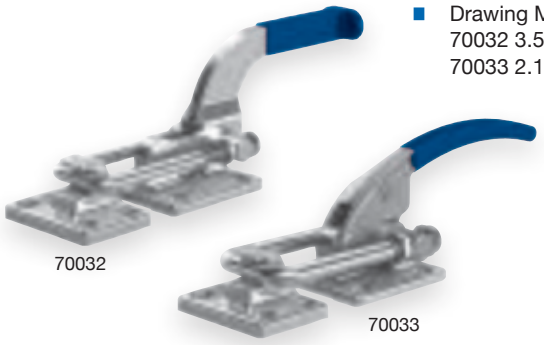
70030 - 70031 70029

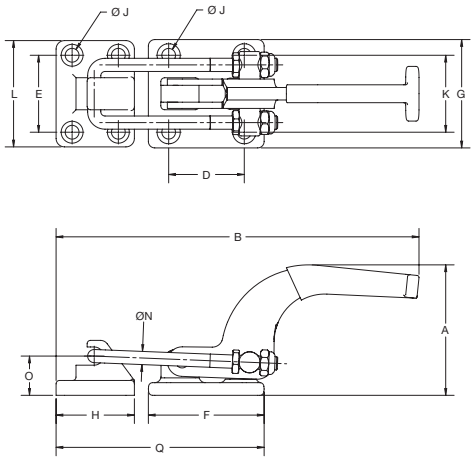
Model	Holding Capacity lb	Weight lb	Inches															
			A	B	C	D	E	F	G	H	J	J1	K	L	N	O	Q min	Q max
70029	360	0.16	1.10	3.83	0.39	0.63	0.75	1.02	1.10	0.79	0.17	0.17	0.75	0.52	0.13	0.47	1.81	2.25
70030	700	0.56	2.15	6.07	0.56	0.75	1.25	1.56	1.74	1.00	0.27	0.27	1.00	0.67	0.19	0.66	2.56	3.08
70031	2000	1.43	2.75	7.41	0.75	1.63	1.50	2.38	2.12	1.50	0.33	0.33	1.75	1.19	0.31	0.94	3.88	4.50

Latch Type Toggle Clamps

Specifications

- Drawing Movement (in):
  70032 3.50
  70033 2.19





Model	Holding Capacity lb	Weight lb	Inches															
			A	B	C	D	E	F	G	H	J	K	L	N	O	Q min	Q max	
70032	4,000	2.78	4.03	11.27	1.38	2.24	2.25	3.44	3.19	2.28	0.41	2.25	3.13	0.39	1.13	6.22	7.21	
70033	7,500	3.26	3.73	10.17	1.38	2.25	2.25	3.43	3.19	2.28	0.41	2.25	3.13	0.47	1.13	6.13	7.25	

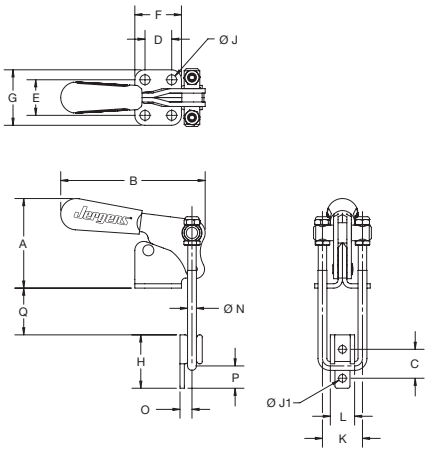
Jergens SPECIALTY FASTENERS GROUP

Latch Type Toggle Clamps



Specifications

- Drawing Movement (in):
  70034 1.53
  70035 2.00
  70036 2.50

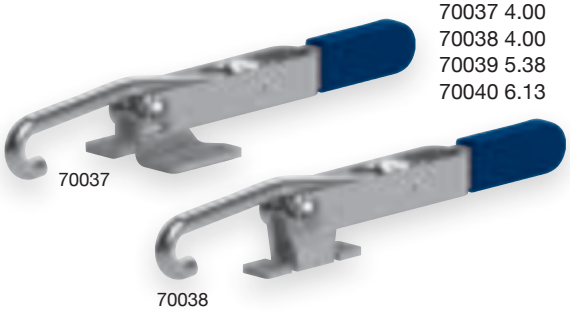


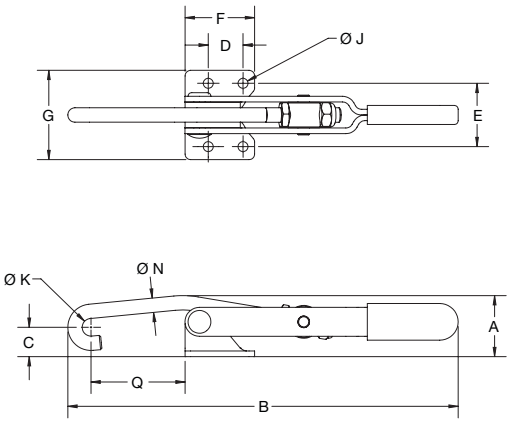
Model	Holding Capacity lb	Weight lb	Inches																
			A	B	C	D	E	F	G	H	J	J1	K	L	N	O	P	Q min	Q max
70034	360	0.25	2.06	3.48	0.56	0.50	0.88	1.00	1.38	1.00	0.20	0.17	0.81	0.52	0.14	0.19	0.44	0.51	0.92
70035	700	0.55	2.52	4.06	0.81	0.75	1.00	1.31	1.56	1.50	0.28	0.22	1.13	0.68	0.25	0.35	0.66	0.63	1.34
70036	2,000	1.54	3.31	5.13	1.06	1.25	1.44	1.94	2.13	2.13	0.34	0.34	1.75	1.21	0.31	0.50	0.79	2.11	2.14

Latch Type Toggle Clamps

Specifications

- Drawing Movement (in):
  70037 4.00
  70038 4.00
  70039 5.38
  70040 6.13



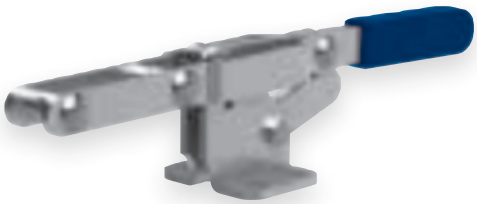


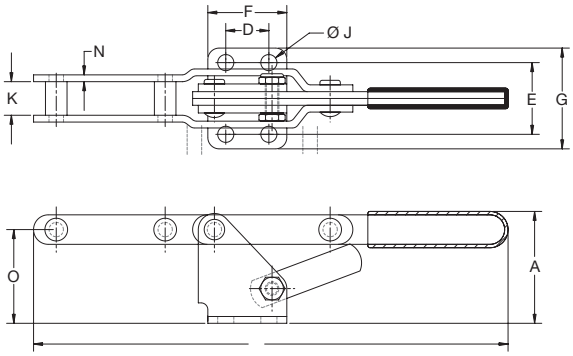
Model	Holding Capacity lb	Weight lb	Inches											
			A	B	C	D	E	F	G	J	K	N	Q min	Q max
70037	375	0.61	1.29	8.42	0.61	0.75	1.37	1.50	1.93	0.22	0.38	0.31	1.72	2.15
70038	375	0.61	1.40	8.42	0.70	1.50	-	2.00	0.56	0.27	0.38	0.31	1.22	1.67
70039	750	1.38	2.20	11.71	1.42	1.25	1.94	1.87	2.62	0.34	0.50	0.39	2.70	3.44
70040	1000	2.49	2.65	13.21	1.81	1.13	2.37	2.13	3.38	0.41	0.62	0.47	2.75	3.60

Latch Type Toggle Clamps

Specifications

- Drawing Movement (in): 70041 4.00





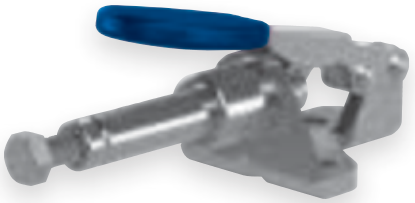
Model	Holding Capacity lb	Weight lb	Inches									
			A	B	D	E	F	G	J	K	N	O
70041	375	0.68	1.91	8.23	0.87	1.25	1.37	1.75	0.28	0.56	0.12	1.51

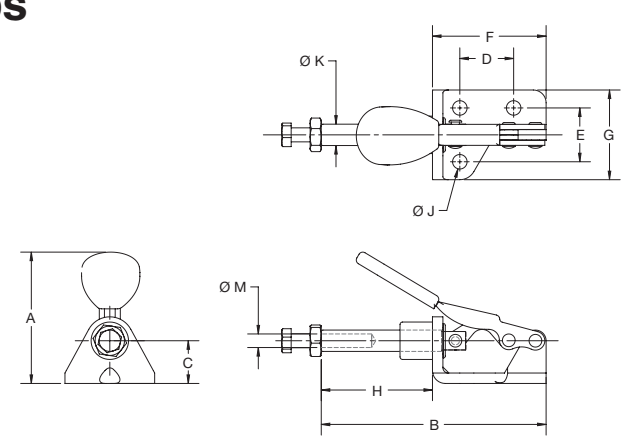
Jergens SPECIALTY FASTENERS GROUP

Push/Pull Action Toggle Clamps

Specifications

- Model: 70042
- Plunger Travel (in): 0.63
- Spindle Supplied: 70067





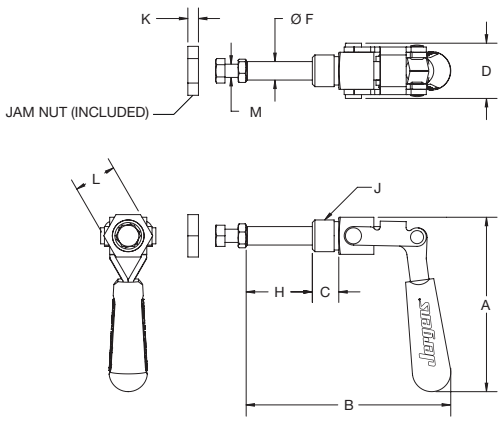
Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	J	K	M
70042	100	0.09	Flanged Base	1.54	2.63	0.50	0.63	0.63	1.33	1.05	0.17	0.25	#8-32

Push/Pull Action Toggle Clamps

Specifications

- Model: 70043
- Plunger Travel (in): 0.75
- Spindle Supplied: 70068
- Model: 70044
- Plunger Travel (in): 1.50
- Spindle Supplied: 70069
- Model: 70045
- Plunger Travel (in): 2.63
- Spindle Supplied: 70070





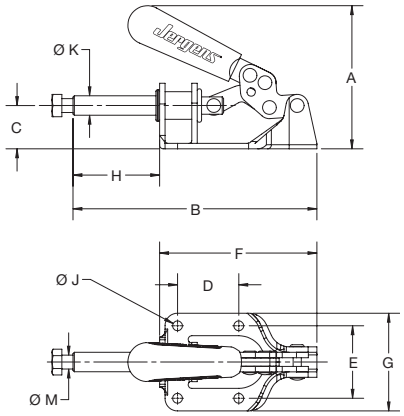
Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	F	H	J	K	L	M
70043	200	0.12	Through Hole Mount	3.07	2.65	0.50	1.03	0.39	0.81	0.625 - 18	0.25	0.88	1/4-20
70044	300	0.44	Through Hole Mount	4.10	4.97	0.62	1.30	0.44	1.56	0.75 - 16	0.25	1.00	5/16-18
70045	700	1.54	Through Hole Mount	5.45	6.12	0.88	1.82	0.62	2.73	1 - 14	0.25	1.61	3/8-16

Push/Pull Action Toggle Clamps

Specifications

- Model: 70046
- Plunger Travel (in): 1.25
- Spindle Supplied: 70069





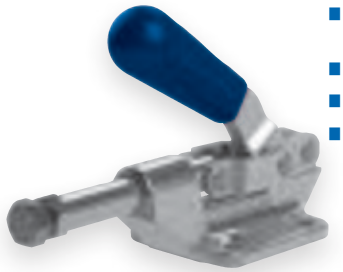
Model	Holding Capacity lb	Weight lb	Description	Inches A	B	C	D	E	F	G	J	K	M
70046	300	0.69	Flanged Base	3.29	5.47	0.97	1.38	1.63	3.53	2.19	0.22	0.44	5/16-18

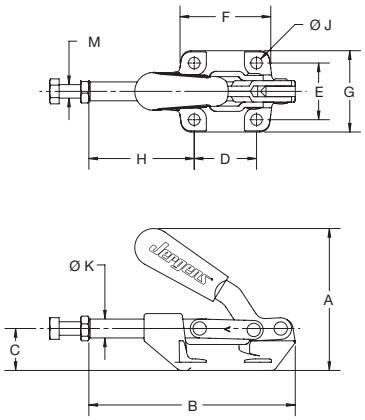
Push/Pull Action Toggle Clamps

Specifications

- Model: 70047
- Plunger Travel (in): 1.25
- Spindle Supplied: 70069

- Model: 70048
- Plunger Travel (in): 1.65
- Spindle Supplied: 70070





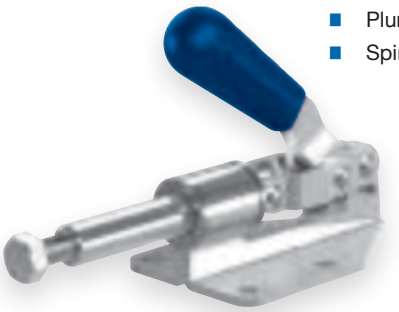
Model	Holding Capacity lb	Weight lb	Description	Inches A	B	C	D	E	F	G	H	J	K	M
70047	600	0.7	Flanged Base	3.28	4.77	0.97	1.44	1.31	2.10	1.88	2.44	0.27	0.44	5/16-18
70048	850	1.28	Flanged Base	3.82	6.25	1.25	1.63	1.63	2.32	2.25	3.53	0.33	0.62	3/8-16

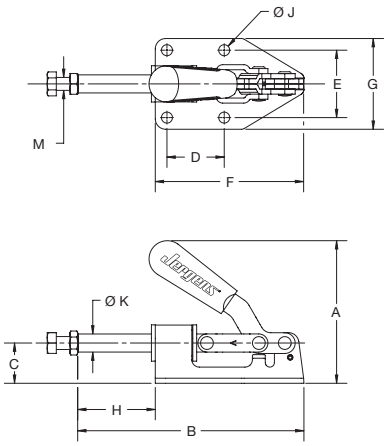
Jergens SPECIALTY FASTENERS GROUP

Push/Pull Action Toggle Clamps

Specifications

- Model: 70049
- Plunger Travel (in): 1.25
- Spindle Supplied: 70069



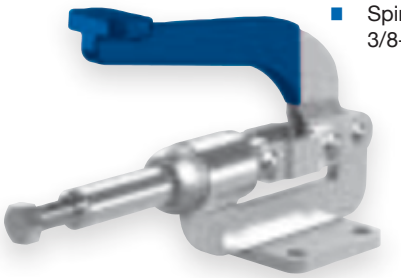


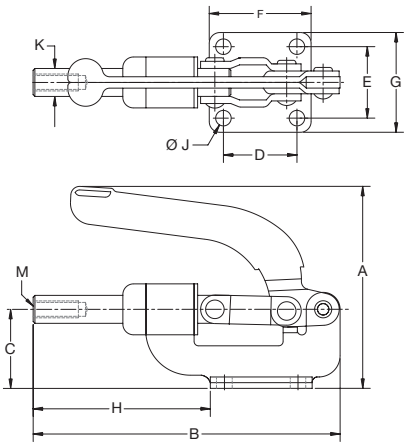
Model	Holding Capacity lb	Weight lb	Description	Inches										
				A	B	C	D	E	F	G	H	J	K	M
70049	300	0.88	Flanged Base	3.44	5.45	0.97	1.38	1.62	3.58	2.19	1.87	0.27	0.44	5/16-18

Push/Pull Action Toggle Clamps

Specifications

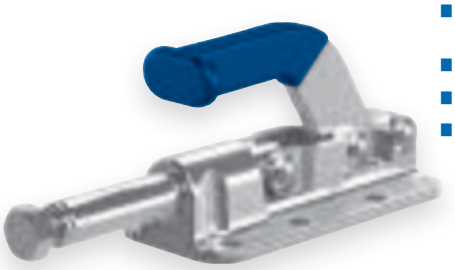
- Model: 70050
- Plunger Travel (in): 1.63
- Spindle Supplied: 3/8-16 x 1.25





Model	Holding Capacity lb	Weight lb	Description	Inches										
				A	B	C	D	E	F	G	H	J	K	M
70050	800	1.76	Flanged Base	4.49	6.72	1.70	1.63	1.63	2.25	2.25	3.84	0.34	0.62	3/8-16

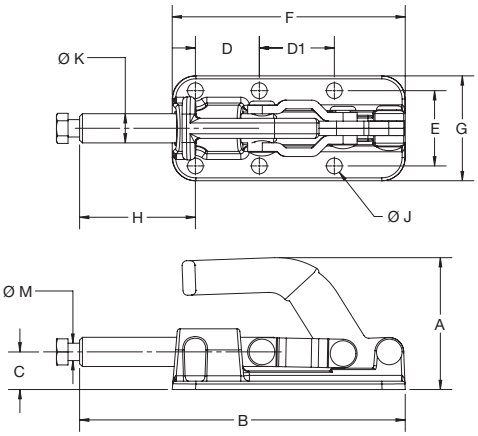
Push/Pull Action Toggle Clamps



Specifications

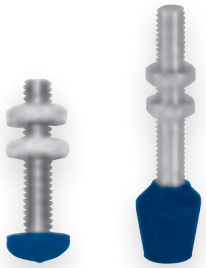
- Model: 70051
- Plunger Travel (in): 1.62
- Spindle Supplied: 70069

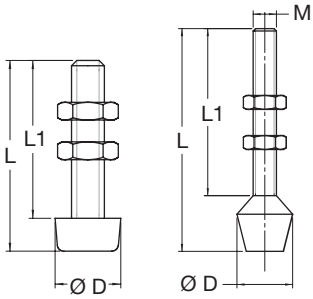
- Model: 70052
- Plunger Travel (in): 2.00
- Spindle Supplied: 70070



Model	Holding Capacity lb	Weight lb	Description	Inches											
				A	B	C	D	D1	E	F	G	H	J	K	M
70051	800	1.7	Flanged Base	3.27	6.10	0.69	1.38	1.63	1.63	4.31	2.19	2.47	0.28	0.50	5/16-18
70052	2500	2.06	Flanged Base	2.89	7.03	0.81	1.38	1.62	1.63	5.03	2.27	2.50	0.34	0.63	3/8-16

Flat Cushion Tip Bonded Cap Spindle (Includes Two Jam Nuts)

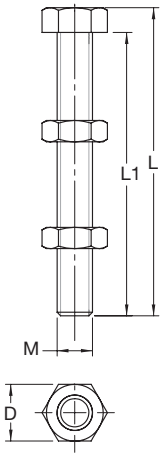




Model	In(mm) D	M	L	L1	Type
70058	0.63	1/4-20	2.13	1.58	B
70059	0.83	5/16-18	3.00	2.29	B
70060	0.88	3/8-16	3.50	2.50	B
70061	0.31(8)	M4X0.7	0.87(22)	0.78(20)	A
70062	0.39(10)	M5X0.8	1.14(29)	0.98(29)	A
70063	0.75(19)	M8X1.25	1.78(45.3)	1.28(32.6)	A
70064	0.63(16)	M6X1.0	1.73(44)	1.18(30)	B
70065	0.83(21)	M8X1.25	2.09(54)	1.38(35)	B
70066	1.02(26)	M10X1.5	3.11(79)	2.17(55)	B

Standard Adjustable Spindle (Includes Two Jam Nuts)



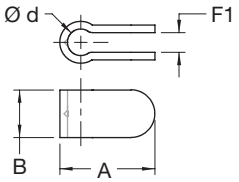


Model	In(mm) D	M	L	L1
70067*	0.25	#8-32	0.86	0.75
70068	0.44	1/4-20	0.80	0.63
70069	0.50	5/16-18	1.22	1.00
70070	0.56	3/8-16	1.50	1.25
70071	0.75	1/2-13	3.31	3.00
70072	0.75	1/2-13	4.81	4.50
70073*	4.77(7)	M4 x 0.7	0.86(21.8)	0.75(19)
70074	0.39(10)	M6 x 1.0	0.87(22)	0.78(20)
70075	0.51(13)	M8 x 1.25	1.14(29)	0.98(25)
70076	0.67(17)	M10 x 1.5	1.69(43)	1.38(35)

* Material: Nylon

Bolt Retainer





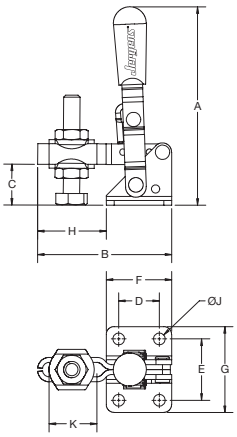
Model	Inches A	B	F1	d
70086	1.20	0.64	0.25	0.32
70087	37.3	0.74	0.33	0.41
70089	1.70	1.19	0.38	0.67

Stainless Steel Vertical Handle Toggle Clamps



Specifications

- Bar Opens: 100°
- Handle Opens: 55°
- Supplied: 70093



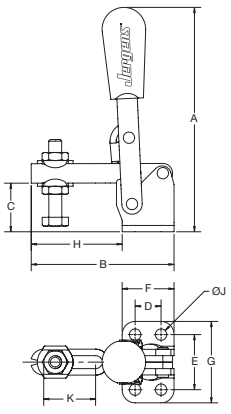
Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70000-SS	125	0.16	Flanged Base, U-Bar	3.03	2.05	0.62	0.62	0.94	1	1.31	1.05	0.18	0.73

Stainless Steel Vertical Handle Toggle Clamps



Specifications

- Bar Opens: 105°
- Handle Opens: 65°
- Spindle Supplied: 70094



Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70055-SS	250	0.35	Flanged Base, U-Bar	4.33	2.75	0.94	0.5	1.06	1	1.57	1.75	0.22	1

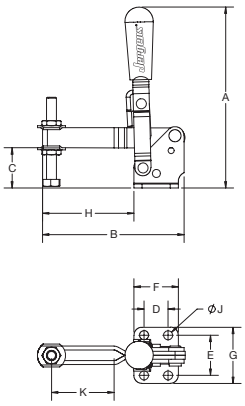
Jergens
SPECIALTY FASTENERS GROUP

Stainless Steel Vertical Handle Toggle Clamps



Specifications

- Bar Opens: 99°
- Handle Opens: 57°
- Supplied: 70095

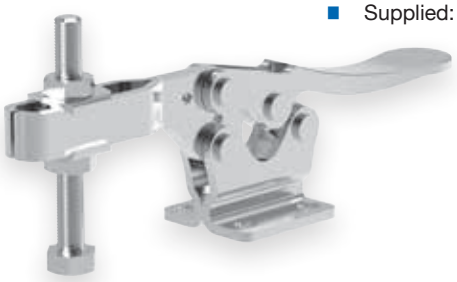


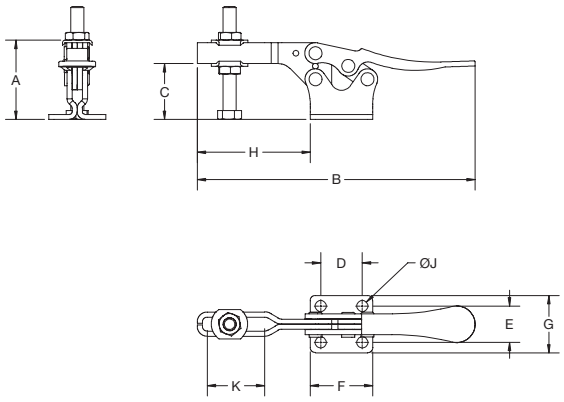
Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70007-SS	375	0.67	Flanged Base, U-Bar	5.64	4.41	1.26	0.75	1.25	1.38	1.75	2.85	0.28	1.95

Stainless Steel Horizontal Handle Toggle Clamps

Specifications

- Bar Opens: 92°
- Handle Opens: 70°
- Supplied: 70095



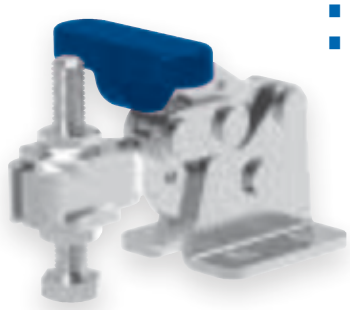


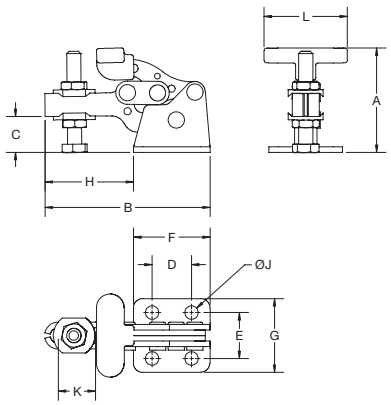
Model	Holding Capacity lb	Weight lb	Description	Inches									
				A	B	C	D	E	F	G	H	J	K
70022-SS	600	0.59	Flanged Base, U-Bar	1.84	6.68	1.34	1.00	0.88	1.50	1.38	2.72	0.27	1.38

Stainless Steel Horizontal Handle Toggle Clamps

Specifications

- Bar Opens: 90°
- Handle Opens: 170°
- Spindle Supplied: 70093

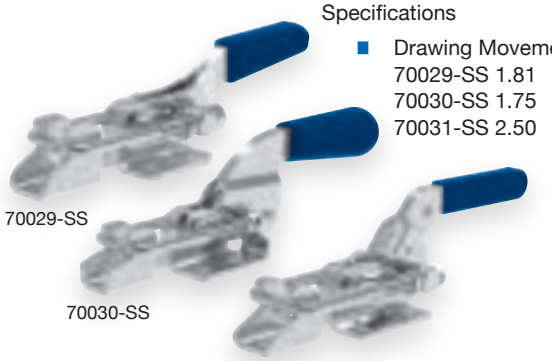




Model	Holding Capacity lb	Weight lb	Description	Inches										
				A	B	C	D	E	F	G	H	J	K	L
70026-SS	200	0.13	Flanged Base, U-Bar	1.43	2.22	0.48	0.53	0.62	1.03	0.99	1.19	0.18	0.50	1.12

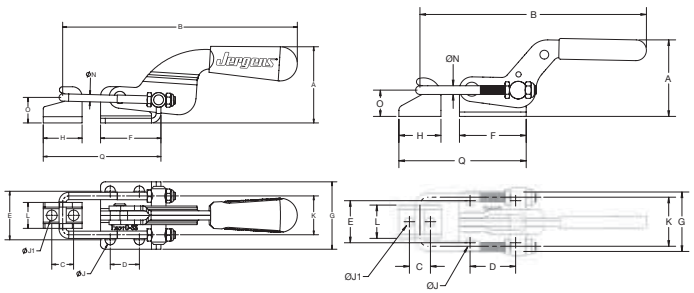
Jergens SPECIALTY FASTENERS GROUP

Stainless Steel Latch Type Toggle Clamps



Specifications

- Drawing Movement (in):
  70029-SS 1.81
  70030-SS 1.75
  70031-SS 2.50



70029-SS - 70030-SS

70031-SS

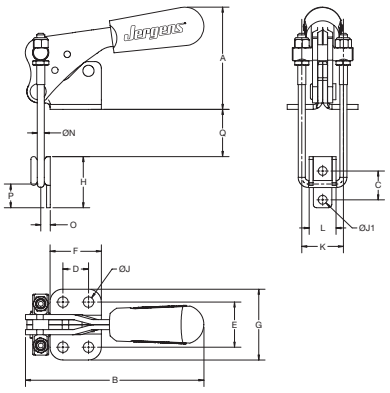
Model	Holding Capacity lb	Weight lb	Inches															
			A	B	C	D	E	F	G	H	J	J1	K	L	N	O	Q min	Q max
70029-SS	360	0.15	1.10	3.84	0.39	0.63	0.75	1.02	1.10	0.79	0.17	0.17	0.75	0.52	0.13	0.47	1.81	2.25
70030-SS	700	0.56	1.96	6.05	0.56	0.75	1.25	1.56	1.74	1.00	0.27	0.27	1.00	0.67	0.19	0.66	2.56	3.08
70031-SS	2000	1.43	2.73	8.08	0.75	1.63	1.50	2.38	2.12	1.50	0.33	0.33	1.75	1.19	0.31	0.94	3.88	4.50

Stainless Steel Latch Type Toggle Clamps



Specifications

- Drawing Movement (in):
  1.53



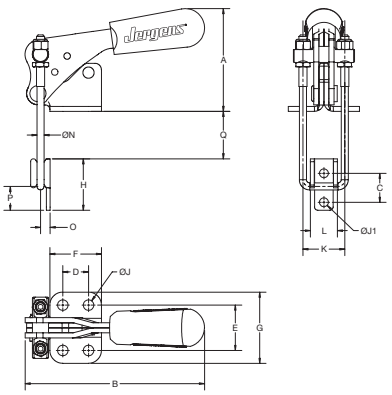
Model	Holding Capacity lb	Weight lb	Inches																
			A	B	C	D	E	F	G	H	J	J1	K	L	N	O	P	Q min	Q max
70034-SS	500	0.25	2.03	3.50	0.56	0.50	0.88	1.00	1.38	1.00	0.20	0.17	0.81	0.52	0.14	0.19	0.46	0.51	0.92

Stainless Steel Latch Type Toggle Clamps



Specifications

- Drawing Movement (in): 2.00



Model	Holding Capacity lb	Weight lb	Inches																
			A	B	C	D	E	F	G	H	J	J1	K	L	N	O	P	Q min	Q max
70035-SS	1000	0.55	2.37	4.13	0.81	0.75	1.00	1.31	1.56	1.50	0.28	0.22	1.13	0.68	0.25	0.33	0.66	0.63	1.34

Stainless Steel Latch Type Toggle Clamps

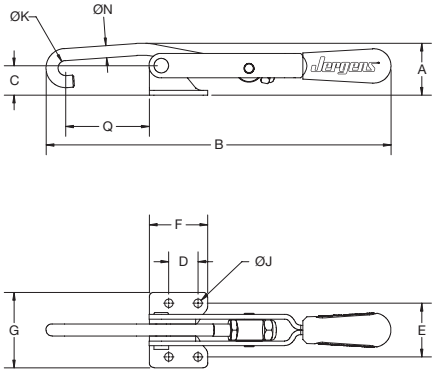
Specifications

- Drawing Movement (in): 4.00





Model 70037-SS allows for quick access to this vacuum handling hopper.



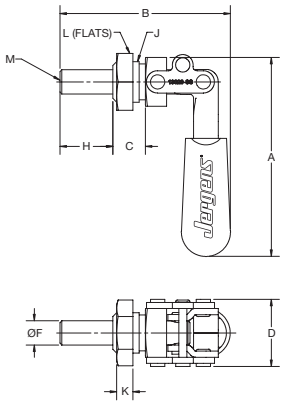
Model	Holding Capacity lb	Weight lb	Inches											
			A	B	C	D	E	F	G	J	K	N	Q min	Q max
70037-SS	450	0.61	1.33	8.84	0.69	0.75	1.37	1.50	1.93	0.22	0.38	0.31	1.72	2.15

Stainless Steel Push/Pull Action Toggle Clamps



Specifications

- Model: 70043-SS
- Plunger Travel (in): 0.75



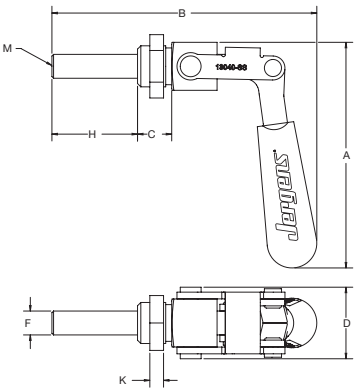
Model	Holding Capacity lb(N)	Weight lb(Kg)	Description	In(mm) A	B	C	D	F	H	J	K	L	M
70043-SS	200	0.25	Through Hole Mount	3.06	2.67	0.50	1.03	0.37	0.81	5/8-18	0.25	0.88	1/4-20

Stainless Steel Push/Pull Action Toggle Clamps



Specifications

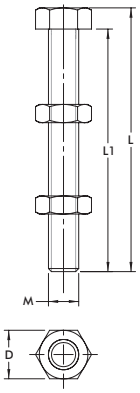
- Model: 70044-SS
- Plunger Travel (in): 1.50



Model	Holding Capacity lb(N)	Weight lb(Kg)	Description	In(mm) A	B	C	D	F	H	J	K	L	M
70044-SS	300	0.60	Through Hole Mount	4.13	4.79	0.62	1.30	0.44	1.56	3/4-16	0.25	1.00	5/16-18

Standard Adjustable Spindle (includes two jam nuts)

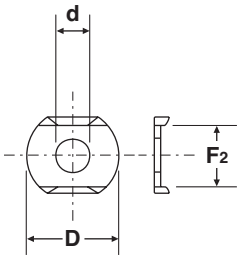




Model	In(mm)			
	D	M	L	L1
70093	0.31(8)	M5	1.32(33.5)	1.18(30)
70094	0.39(10)	M6	1.73(44)	1.57(40)
70095	0.51(13)	M8	2.77(70.3)	2.56(65)
70096	0.31	#10-32	1.37	1.25
70097	0.44	1/4-20	1.67	1.50
70098	0.50	5/16-18	2.72	2.5

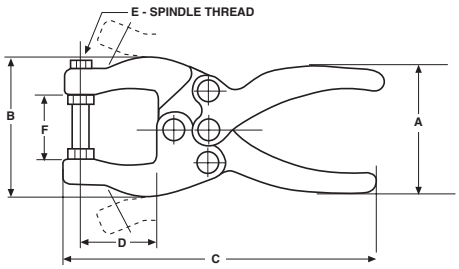
Flanged Washers (qty: 2)



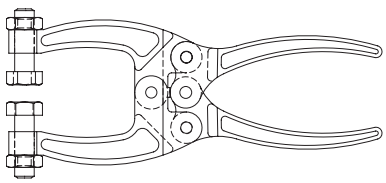


Model	Inches			
	For Spindle Diameter	D	d	F2
70101	M5 or #10	0.56	0.2	0.38
70102	M6 or 1/4	0.69	0.26	0.5
70103	M8 or 5/16	0.88	0.33	0.6

Squeeze Action — Forged Jaws



These forged steel, squeeze action, plier clamps can be used in a wide range of applications. Ideal for clamping, fixturing, holding, processing, or positioning. All models are supplied with spindle assemblies.



2 Spindle Version

Part Number	2 Spindle Part Number	A	B	C	D	E	F	Holding Capacity (lbs.)	Spindle Type	Trigger Release	Wt. (oz.)
70710	**71049**	1 15/16	2 1/16	4 1/2	1 1/8	1/4-20	1	200	Standard	No	5
70720	**71050**	1 7/8	2 13/16	6	1 3/4	5/16-18	1 1/4	350	Standard	No	8
70730	—	2 11/16	2 7/8	8 1/16	2 9/32	5/16-18	1/2	700	Standard	Yes	16
70740	**70745**	2 11/16	4 1/4	8 1/2	2 3/4	3/8-16	1 3/4	700	Standard	Yes	19
70750	—	2 11/16	4 3/4	8 1/2	2 3/4	3/8-16	3	700	Standard	Yes	22

Note: F dimension will be less if spindle and locknut are used.



70710
Supplied with 70927 Spindle Assembly

71049 Supplied with 2 Spindle Assemblies (Not Shown)



70720
Supplied with 70946 Spindle Assembly

71050 Supplied with 2 Spindle Assemblies (Not Shown)



70730
Supplied with 70945 Spindle Assembly



70740
Supplied with 70913 Spindle Assembly

70745 (not shown)
Supplied with (2) 70912 Spindle Assembly



70750
Supplied with 70913 and 70914 Spindle Assemblies

Adjustable Spindle Assemblies

Hex Head Adjustable Spindle Assemblies



Vinyl Coated Hex Head Adjustable Spindle Assemblies



Neoprene Cap-Flat Tipped Adjustable Spindle Assemblies



Swivel Foot Adjustable Spindle Assemblies



Part Number	Description	True-Lok Part Number
70962	8-32 x 27/32 Nylon Hex Head	
70916	8-32 x 3/4 Hex Head*	**70067**
70945	5/16-18 x 1 1/8 Hex Head	**70069**
70946	5/16-18 x 1 3/4 Hex Head	–
70912	3/8-16 x 1 1/4 Hex Head	**70070**
70913	3/8-16 x 3 Hex Head	–
70903	1/2-13 x 3 Hex Head	**70071**
70942	5/8-11 x 4 1/2 Hex Head	–
70963	8-32 x 1 1/4 Vinyl Coated Hex Head	–
70927	1/4-20 x 1 1/2 Vinyl Coated Hex Head	–
70926	1/4-20 x 1 3/4 Neoprene Cap Flat Tipped	–
70918	1/4-20 x 1 15/16 Neoprene Cap Flat Tipped	–
70947	5/16-18 x 2 1/4 Neoprene Cap Flat Tipped	–
70949	5/16-18 x 3 Neoprene Cap Flat Tipped	–
70915	3/8-16 x 3 1/4 Neoprene Cap Flat Tipped	–
70917	10-32 x 1 3/8 Neoprene Cap Flat Tipped	–
70948	5/16-18 x 2 3/4 Swivel Foot	–
70914	3/8-16 x 3 Swivel Foot	–

***Nuts not included**

Flanged Washers for U-Bar Clamps Only

Flanged Washers for U-Bar Clamps



Part Number	Description	True-Lok SS Part Number
70960	#8 For Vertical Handle Models	–
70925	1/4	**70102**
70944	5/16	**70103**
70911	3/8	–
70902	1/2	–
70941	5/8	–

Bolt Retainer

Bolt Retainers For Solid Bar Clamps



Part Number	Description	True-Lok Part Number
70943	5/16	**70086**
70910	3/8	**70087**
70901	1/2	–
70940	5/8	**70089**

Jergens SPECIALTY FASTENERS GROUP

HDV Series Heavy Duty Vertical Clamps



Features:

All **HDV** series clamps are designed to be adaptable and durable, and to withstand abuse in heavy duty applications.

The **HDV** series have a phosphated corrosion resistant finish.

Models HDV660WW, HDV1500WW, HDV2600WW and HDV5200WW comprise a basic toggle mechanism onto which can be welded at the desired angle the clamping arm and handle which can be specified as accessories. These models feature a swivel base which is welded at the desired angle to the mechanism, and then welded either directly to a fixture, or alternatively to a base which is offered as an accessory for bolt mounting.

Models HDV660SW, HDV1500SW, HDV2600SW and HDV5200SW share all the features of the above models, but with a straight base which can be directly bolt mounted or welded to a fixture, or alternatively to the accessory base for bolt mounting.

Models HDV660SW, HDV1500SS, HDV2600SS and HDV5200SS are similar to the type 'T' models, but with a handle with a PVC grip fitted vertically, and a longer stub clamping arm which can be modified and the spindle retainer supplied welded in the desired position.

Models HDV660SW, HDV1500FA, HDV2600FA and HDV5200FA feature a flanged base with holes for bolt mounting, a handle with PVC grip fitted vertically, and a fixed spindle or setscrew position which does not require welding.

Specifications:

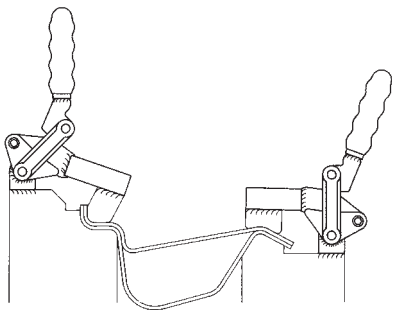
The main components are of steel, the forked lower handles being precision alloy steel castings, and all axles of hardened steel running in either hardened bushes or directly in the close-toleranced holes of hardened parts. The clamps are finished chemi-black.

Installation:

When welding the swivel base of the 'Stub Nose' models to the clamp mechanism ensure that the full length of the adjoining surfaces are welded. Ensure that welding spatter does not enter the slots which form the forward stop of the mechanism.

The handle pivot bolt may be adjusted if required to remove excess free play from the mechanism.

Frequent lubrication will extend the life of the clamp.



Hold Down Vertical



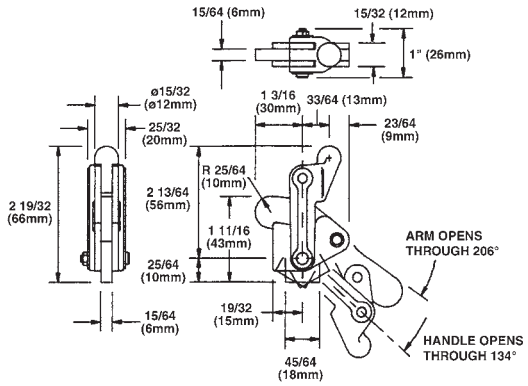
Part Number
72120

Model HDV660/WW

Arm: Stub nose for welded extension
Base: Swivel for welding in the desired position
Nominal Holding Force: 660 lbs.
Weight: 6 oz.

See "Features and Installation Information" on page 496 for Installation Instructions.

See page 499 for accessories and handles.





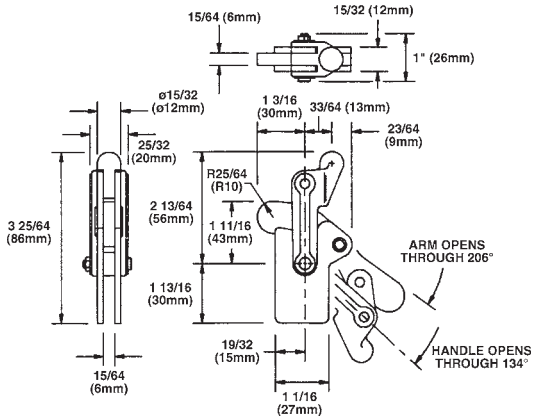
Part Number
72101

Model HDV660/SW

Arm: Stub nose for welded extension
Base: Straight
Nominal Holding Force: 660 lbs.
Weight: 6 oz.

See "Features and Installation Information" on page 496 for Installation Instructions.

See page 499 for accessories and handles.



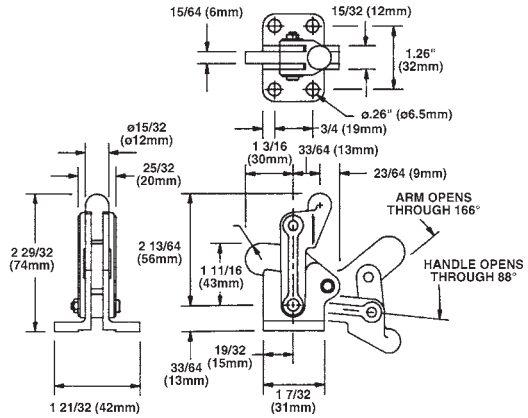


Part Number
72102

Model HDV660/FW

Arm: Stub nose for welded extension
Base: Flanged
Nominal Holding Force: 660 lbs.
Weight: 7 oz.

See page 499 for accessories and handles.



Jergens SPECIALTY FASTENERS GROUP

Hold Down Vertical

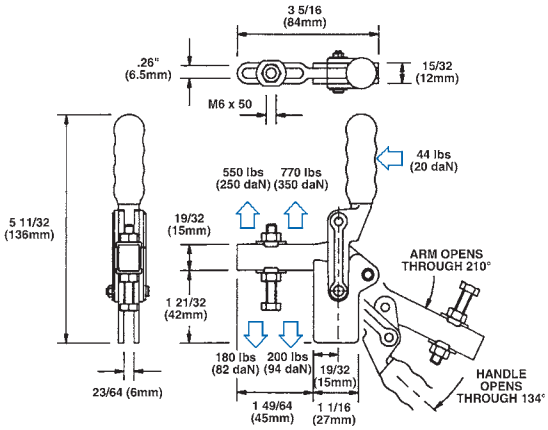


Part Number
72103

Model HDV660/SA

Arm: The spindle is adjustable along the arm
Base: Straight
Nominal Holding Force: 660 lbs.
Weight: 9 oz.
Supplied complete with: Set screw & nuts, Flanged washer

See page 499 for accessories and handles.



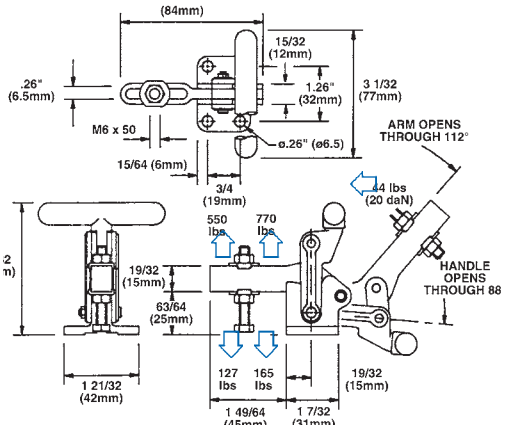


Part Number
72104

Model HDV660/FA

Arm: The spindle is adjustable along the arm
Base: Flanged
Nominal Holding Force: 660 lbs.
Weight: 9 oz.
Supplied complete with: Set screw & nuts, Flanged washer

See page 499 for accessories and handles.



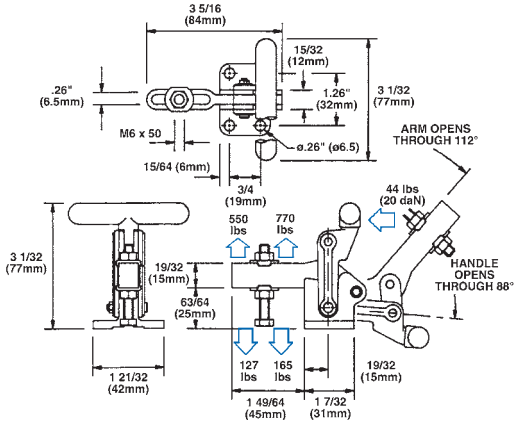


Part Number
72105

Model HDV660/FA2

Arm: The spindle is adjustable along the arm
Base: Flanged
Nominal Holding Force: 660 lbs.
Weight: 9 oz.
Supplied complete with: Set screw & nuts, Flanged washer

See page 499 for accessories and handles.



Hold Down Vertical



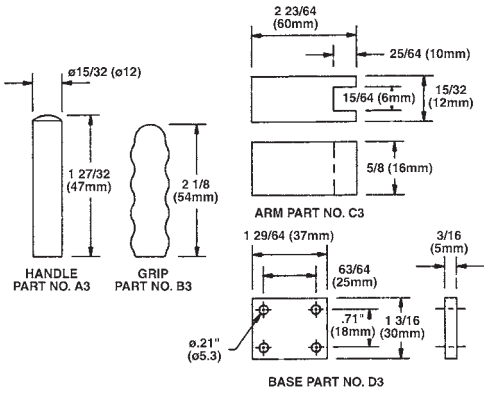
HDV660 Series Accessories

Part No. 72130
Handle: For welding at the desired angle to HDV660/WW & HDV660/SW
Weight: 2 oz.

Part No. 72131
Grip: To fit Part No. 72130 handle
Weight: 0.5 oz.

Part No. 72132
Arm: For extending the stub arms of HDV660/WW & HDV660/SW
Weight: 3 oz.

Part No. 72133
Base: For bolt mounting HDV660/WW & HDV660/SW
Weight: 2 oz.





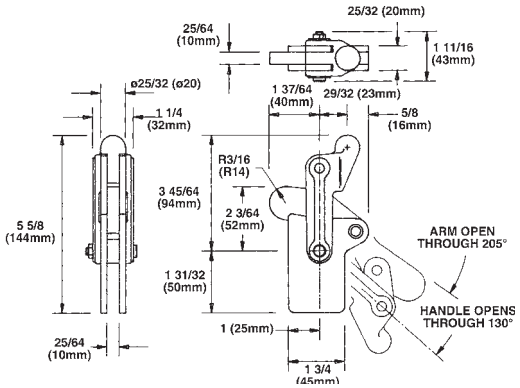
Part Number
72121

Model HDV1500/WW

Arm: Stub nose for welded extensions
Base: Swivel for welding in the desired position
Nominal Holding Force: 1,543 lbs.
Weight: 1lb 7 oz.

See "Features and Installation Information" on page 496 for Installation Instructions.

See page 500 for accessories and handles.





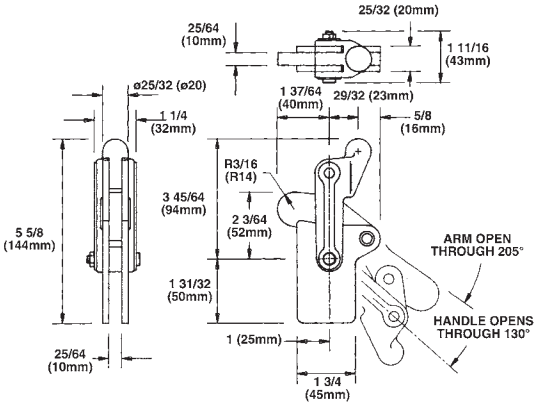
Part Number
72106

Model HDV1500/SW

Arm: Stub nose for welded extensions
Base: Straight
Nominal Holding Force: 1,543 lbs.
Weight: 1lb 9 oz.

See "Features and Installation Information" on page 496 for Installation Instructions.

See page 500 for accessories and handles.



Hold Down Vertical

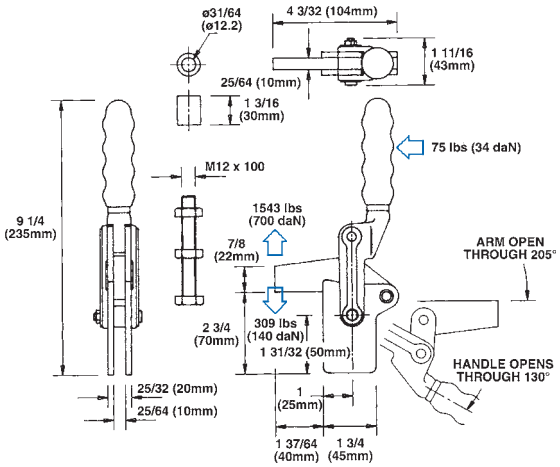


Part Number
72107

Model HDV1500/SS

Arm: Solid arm
Base: Straight
Nominal Holding Force: 1,543 lbs.
Weight: 2 lbs 5 oz.
Supplied complete with: Spindle retainer, Setscrew & nuts

See below for accessories and handles.



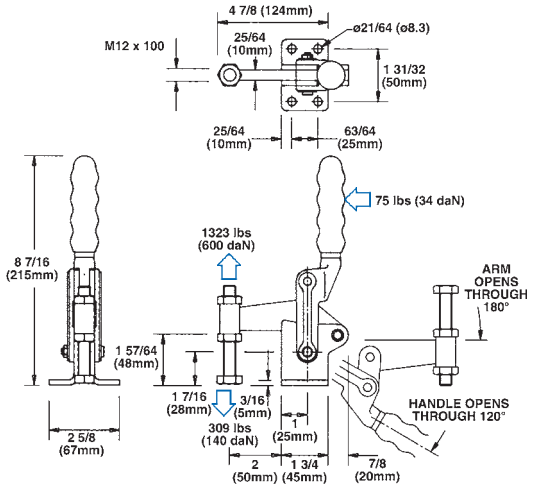


Part Number
72108

Model HDV1500/FA

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 1,543 lbs.
Weight: 2 lbs 9 oz.
Supplied complete with: Setscrew & nuts

See below for accessories and handles.





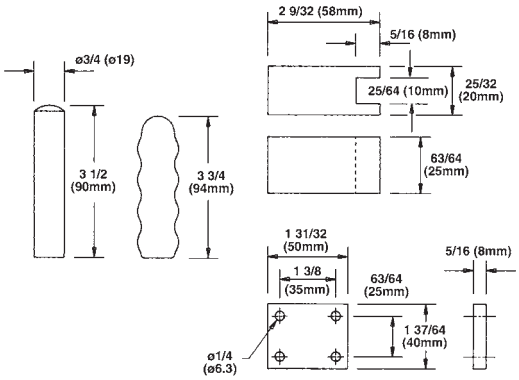
HDV1500 Series Accessories

Part No. 72140
Handle: For welding at the desired angle to HDV1500/WW & HDV1500/SW
Weight: 5.3 oz.

Part No. 72141
Grip: To fit Part No. 72140 handle
Weight: 0.3 oz.

Part No. 72142
Arm: For extending the stub arms of HDV1500/WW & HDV1500/SW
Weight: 5.5 oz.

Part No. 72143
Base: For bolt mounting VHDV1500/WW & HDV1500/SW
Weight: 3 oz.



Hold Down Vertical



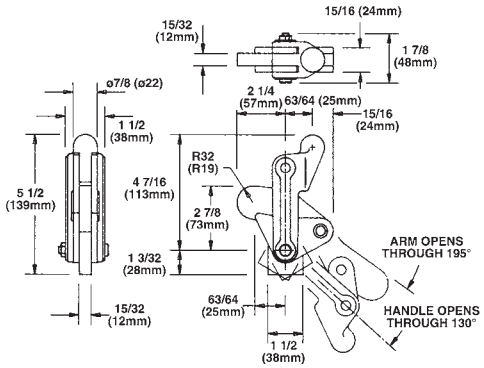
Part Number
72122

Model HDV2600/WW

Arm: Stub nose for welded extensions
Base: Swivel for welding in the desired position
Nominal Holding Force: 2,646 lbs.
Weight: 2 lbs 10 oz.

See "Features and Installation Information" on page 496 for Installation Instructions.

See page 502 for accessories and handles.





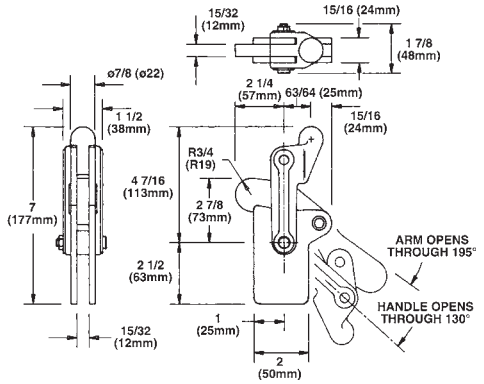
Part Number
72109

Model HDV2600/SW

Arm: Stub nose for welded extensions
Base: Straight
Nominal Holding Force: 2,646 lbs.
Weight: 3 lbs 2 oz.

See "Features and Installation Information" on page 496 for Installation Instructions.

See page 502 for accessories and handles.



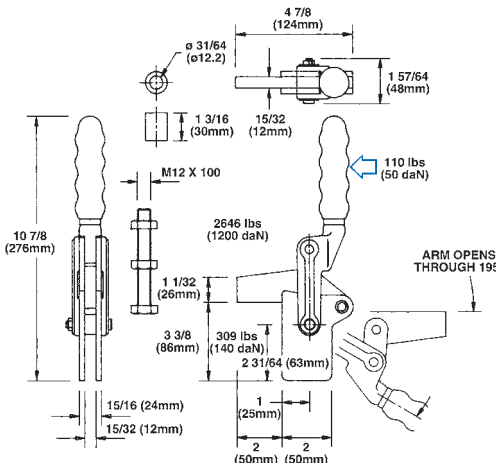


Part Number
72110

Model HDV2600/SS

Arm: Solid arm
Base: Straight
Nominal Holding Force: 2,646 lbs.
Weight: 4 lbs.
Supplied complete with: Spindle retainer, Setscrew & nuts

See page 502 for accessories and handles.



TOGGLE CLAMPS

Jergens SPECIALTY FASTENERS GROUP

Hold Down Vertical

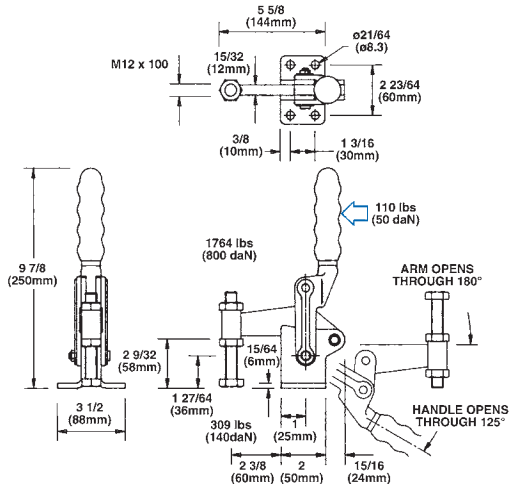


Part Number
72111

Model HDV2600/FA

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 2,646 lbs.
Weight: 4 lbs 4 oz.
Supplied complete with: Setscrew & nuts

See below for accessories and handles.





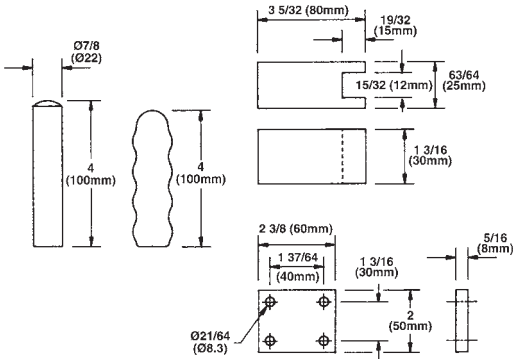
HDV2600 Series Accessories

Part No. 72150
Handle: For welding at the desired angle to HDV2600/WW & HDV2600/SW
Weight: 8 oz.

Part No. 72151
Grip: To fit Part No. 72150 handle
Weight: 0.3 oz.

Part No. 72152
Arm: For extending the stub arms of HDV2600/WW & HDV2600/SW
Weight: 11 oz.

Part No. 72153
Base: For bolt mounting HDV2600/WW & HDV2600/SW
Weight: 4 oz.



Hold Down Vertical



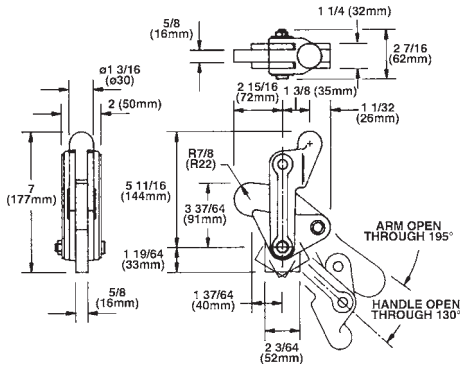
Part Number
72123

Model HDV5200/WW

Arm: Stub nose for welded extensions
Base: Swivel for welding in the desired position
Nominal Holding Force: 5,291 lbs.
Weight: 6 lbs 4 oz.

See "Features and Installation Information" on page 496 for Installation Instructions.

See page 504 for accessories and handles.





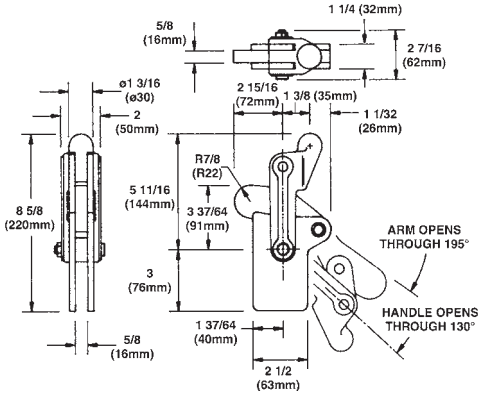
Part Number
72112

Model HDV5200/SW

Arm: Stub nose for welded extensions
Base: Straight
Nominal Holding Force: 5,291 lbs.
Weight: 7 lbs 1 oz.

See "Features and Installation Information" on page 496 for Installation Instructions.

See page 504 for accessories and handles.



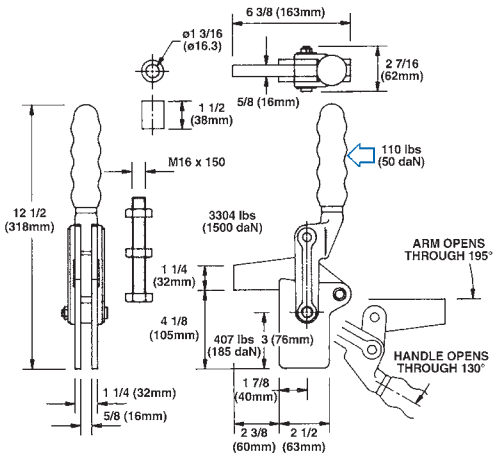


Part Number
72113

Model HDV5200/SS

Arm: Solid arm
Base: Straight
Nominal Holding Force: 5,286 lbs.
Weight: 8 lbs 3 oz.
Supplied complete with: Spindle retainer, Setscrew & nuts

See page 504 for accessories and handles.



Jergens
SPECIALTY FASTENERS GROUP

Hold Down Vertical

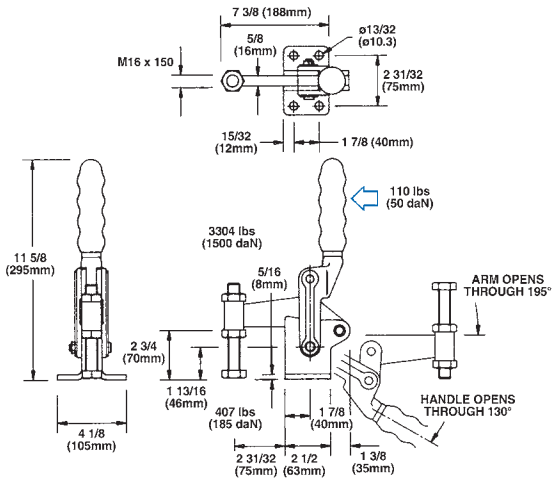


Part Number
72114

Model HDV5200/FA

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 5,286 lbs
Weight: 9 lbs.
Supplied complete with: Setscrew & nuts

See below for accessories and handles.



HDV5200 Series Accessories

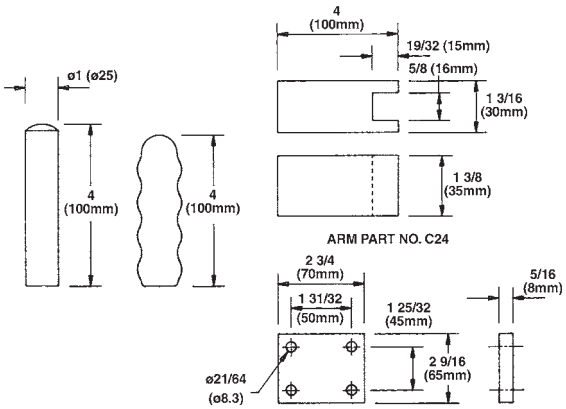
Part No. 72170
Handle: For welding at the desired angle
to HDV5200/WW & HDV5200/SW
Weight: 10.3 oz.

Part No. 72171
Grip: To fit Part No. 72170 handle
Weight: 4 oz.



Part No. 72172
Arm: For extending the stub
arms of HDV5200/WW & HDV5200/SW
Weight: 1 lb 8 oz.

Part No. 72173
Base: For bolt mounting
HDV5200/WW & HDV5200/SW
Weight: 7 oz.



Vertical Cam Clamps



Features:

Cam clamps are similar to vertical clamps but the clamping force is generated not by a toggle linkage, but by the action of a roller on a cam.

The cam action allows components of differing thickness to be clamped without readjustment of the clamping spindle.

Model JCV155/FF can clamp parts with thickness varying by up to 1/16", and models JCV550/FF and JCV770/FF thickness varying by up to 5/64".

A comfortable, cushioned PVC handle grip is fitted to all three models of cam clamp.

Specifications:

The main components are of zinc plated and passivated steel, the cam and its roller being case hardened to resist wear.

Rivets are of stainless steel, which burnishes and work-hardens with use, the rivets of models JCV550/FF and JCV770/FF rotating in hardened bushes. The setscrews are made of steel.

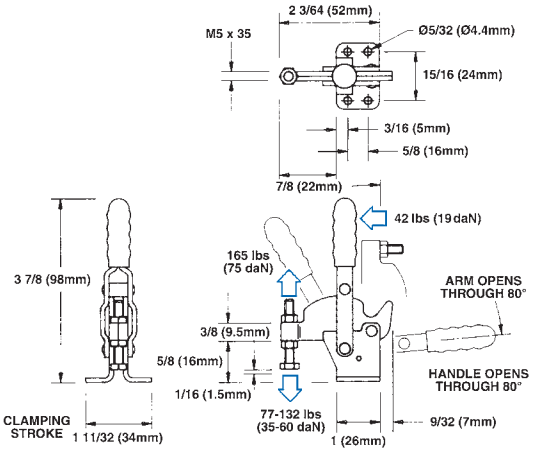
Vertical Cam Clamps



Part Number
72160

Model JCV/155/FF

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 165 lbs.
Weight: 1.3 oz.
Supplied complete with: Setscrew & nuts

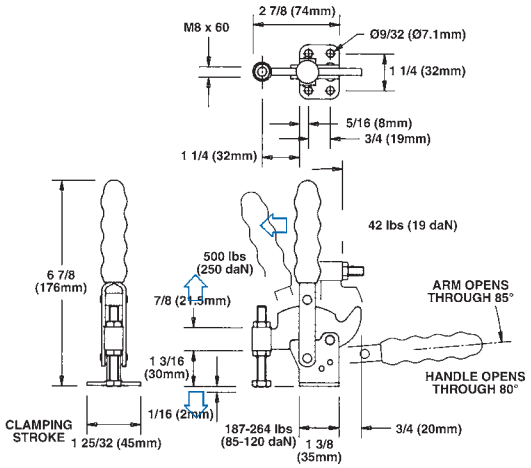




Part Number
72161

Model JCV550/FF

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 550 lbs.
Weight: 9 oz.
Supplied complete with: Setscrew & nuts

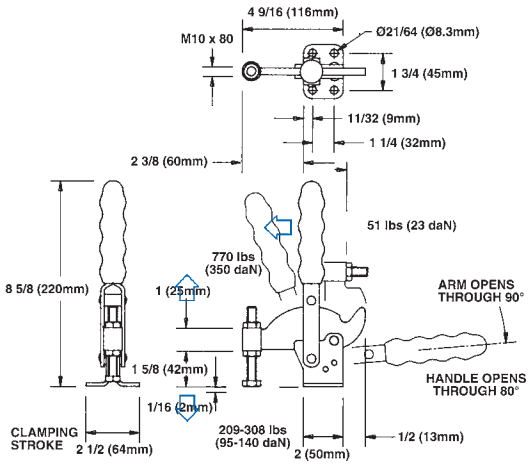




Part Number
72162

Model JCV770/FF

Arm: The spindle is in a fixed position
Base: Flanged
Nominal Holding Force: 770 lbs.
Weight: 1 lb 6 oz.
Supplied complete with: Setscrew & nuts



Heavy-Duty & Long-Handled Push-Pull Clamps

- **Low profile handle**
- **Heavy duty link**
- **Ribbed housing povides extra protection against side impact**
- **Locks in both foward and rear position**



Features:

These clamps are of exceptionally robust construction featuring cast and machined handles and bases. The clamps are designed with a low plunger height and with the mechanism guarded within the base to avoid finger traps.

Models HDP1300, HDP2600, HDP5500, and HDP11000 have handles of normal length for clamping. The long handled 'L' versions (HDP1300/L, HDP5500/L, and HDP11000/L) have their handles either to the front or rear of the clamp according to the application and produce high forces which make them suitable for clamping or for light work such as swaging, rivetting, press fitting components, etc. All models are fitted with a comfortable, cushioned PVC handle grip.

Specifications:

The bases of all models, and the handles of models HDP1300, HDP2600, HDP5500, and HDP11000 are machined cast iron.

The handles of the 'L' versions are of steel bar and mount in housings which are either machined steel castings or machined from steel bar.

The plungers are of steel, and their precision ground diameter runs in a close-toleranced hole in the base casting.

All axles are of hardened steel and run in either the cast iron of the handle, or in the close-toleranced holes of hardened parts.

All models are supplied with a steel setscrew.

Jergens SPECIALTY FASTENERS GROUP

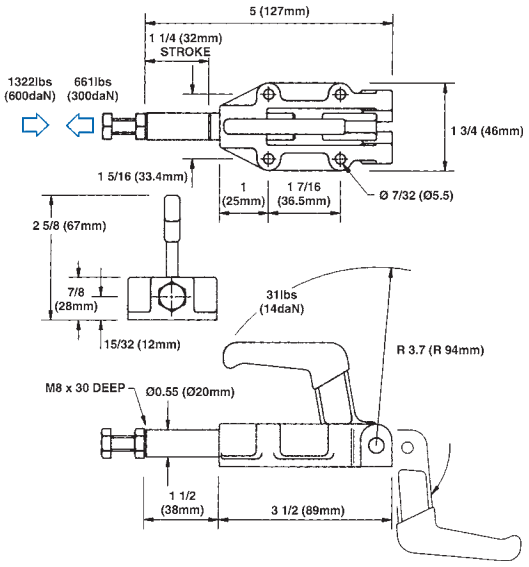
Heavy-Duty & Long-Handled Push-Pull Clamps



Part Number
72201

Model HDP1300

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 1,322 lbs.
Weight: 1 lb
Supplied complete with:
Setscrew & nut

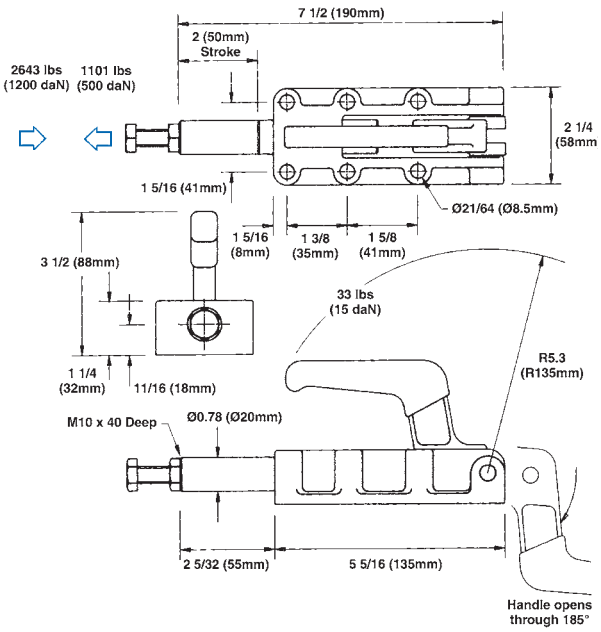




Part Number
72202

Model HDP2600

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 2,643 lbs.
Weight: 3 lbs
Supplied complete with:
Setscrew & nut



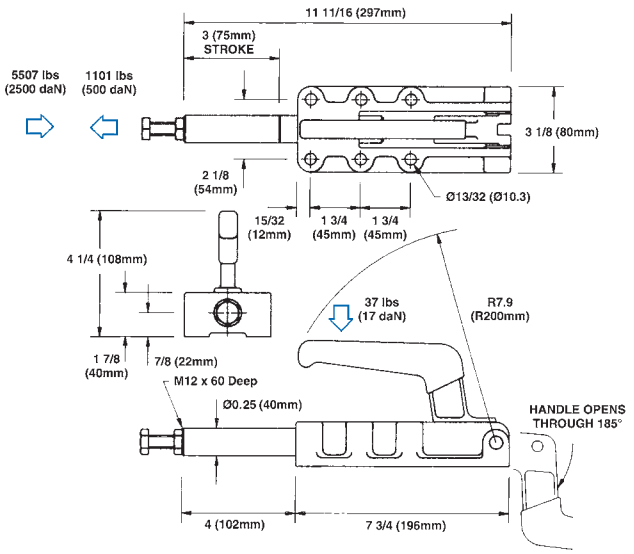
Heavy-Duty & Long-Handled Push-Pull Clamps



Part Number
72203

Model HDP5500

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 5,507 lbs
Weight: 8 lbs
Supplied complete with: Setscrew & nut

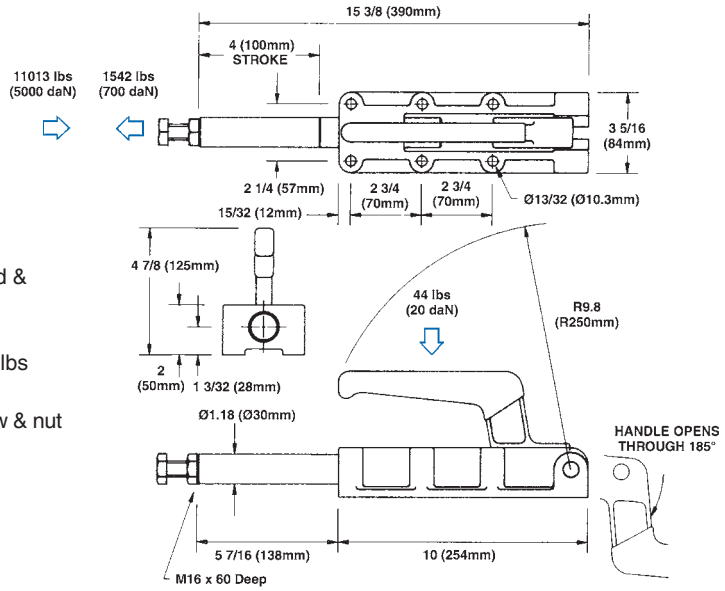




Part Number
72204

Model HDP11000

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 11,013 lbs
Weight: 13 lbs 6 oz.
Supplied complete with: Setscrew & nut



Jergens SPECIALTY FASTENERS GROUP

Heavy-Duty & Long-Handled Push-Pull Clamps

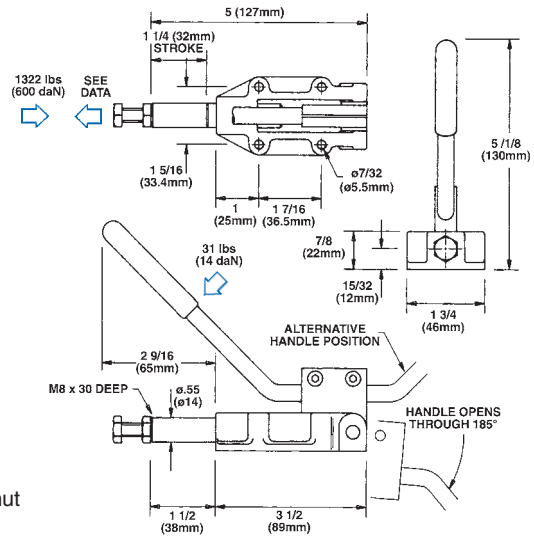


Part Number
72205

Model HDP1300/L

With 31 lbs handle force the output force is:	lbs
Fully retracted	1,035
0.197 extended	242
0.394 ,,	154
0.591 ,,	165
0.787 ,,	176
1.00 ,,	187
1.180 ,,	322
1.219 ,,	419
Fully extended	1,277

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 1,322 lbs
Weight: 1 lb 2 oz.
Supplied complete with: Setscrew & nut



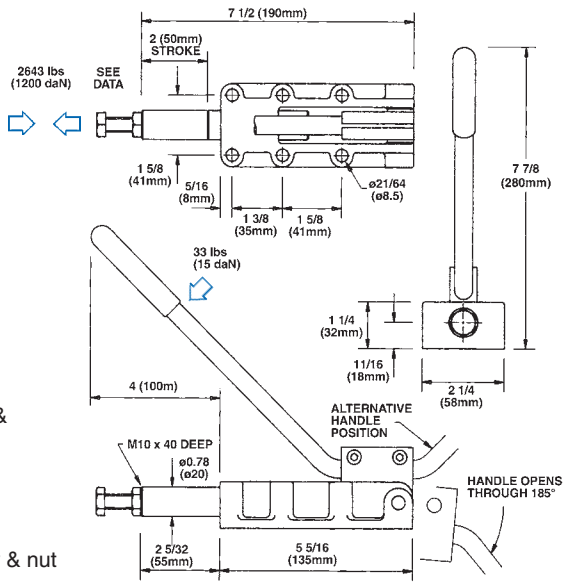


Part Number
72206

Model HDP2600/L

With 33 lbs handle force the output force is:	lbs
Fully retracted	1,553
0.197 extended	368
0.394 ,,	198
0.591 ,,	161
0.787 ,,	154
1.00 ,,	159
1.180 ,,	187
1.377 ,,	220
1.573 ,,	242
1.769 ,,	330
1.887 ,,	485
1.926 ,,	639
Fully extended	2,048

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 2,643 lbs
Weight: 3 lbs 6 oz.
Supplied complete with: Setscrew & nut



Heavy-Duty & Long-Handled Push-Pull Clamps

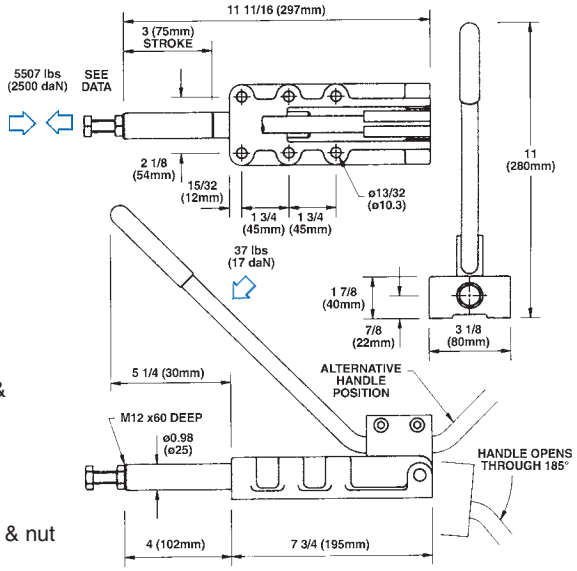


Part Number
72207

Model HDP5500/L

With 37 lbs handle force the output force is:	lbs
Fully retracted	2,203
0.394 extended	220
0.787 ,,	159
1.180 ,,	132
1.573 ,,	154
1.970 ,,	194
2.364 ,,	260
2.758 ,,	419
2.836 ,,	507
2.915 ,,	778
Fully extended	2,423

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 5,507 lbs.
Weight: 9 lbs 1 oz.
Supplied complete with: Setscrew & nut



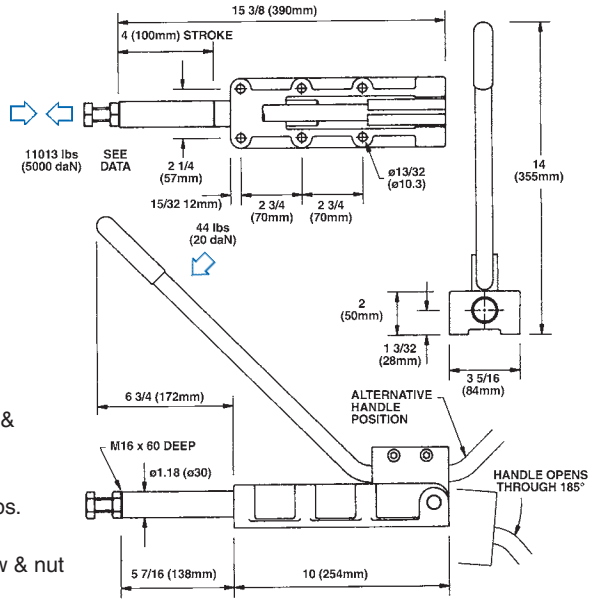


Part Number
72208

Model HDP11000/L

With 44 lbs handle force the output force is:	lbs
Fully retracted	2,423
0.394 extended	397
0.787 ,,	242
1.180 ,,	165
1.573 ,,	176
1.970 ,,	181
2.364 ,,	220
2.758 ,,	220
3.152 ,,	286
3.546 ,,	419
3.743 ,,	551
3.821 ,,	683
3.900 ,,	991
Fully extended	2,665

Plunger: Locks at both extended & retracted ends of the stroke
Base: Body mounting
Nominal Holding Force: 11,013 lbs.
Weight: 15 lbs 6 oz.
Supplied complete with: Setscrew & nut



Jergens SPECIALTY FASTENERS GROUP

Horizontal Latch Clamps



Features:

Latch clamps are available in two sizes. Bracket holes will not elongate over time. They have a small footprint for space constrained applications.

All latch clamps are fitted with PVC handle grips.

Specifications:

The HDL Series clamps have precision cast steel bases and latch brackets with cast iron handles. The finish is black oxide.

Installation:

It is important that the clamp and latch bracket are in alignment when viewed from both the top and the side to ensure that the clamp locks over center correctly.

The 'U' bolt should be adjusted to ensure an equal pull on either side.

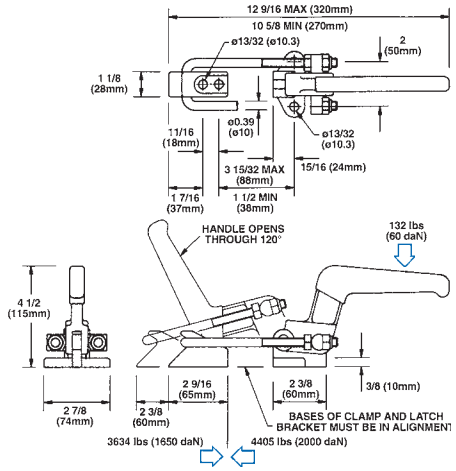
Horizontal Latch Clamps



Part Number
72301

Model HDL4400

Nominal Holding Force: 4,405 lbs
Weight: 3 lbs 1 oz.
Supplied complete with: Latch Bracket as shown

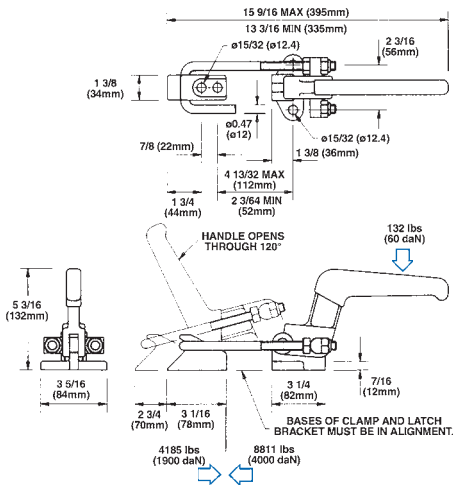




Part Number
72302

Model HDL8800

Nominal Holding Force: 8,811 lbs
Weight: 5 lbs 9 ozs.
Supplied complete with: Latch Bracket as shown



Magna Force Heavy Duty Cam Clamps



- Unique, patented range of cam clamps
- Rugged build quality, ideal for machine shops
- Clamping forces from 660 lbs to 11,000 lbs
- Significant cost benefits over strap clamps in repetitive machining
- A fraction of the cost of hydraulic workholding

Jergens SPECIALTY FASTENERS GROUP

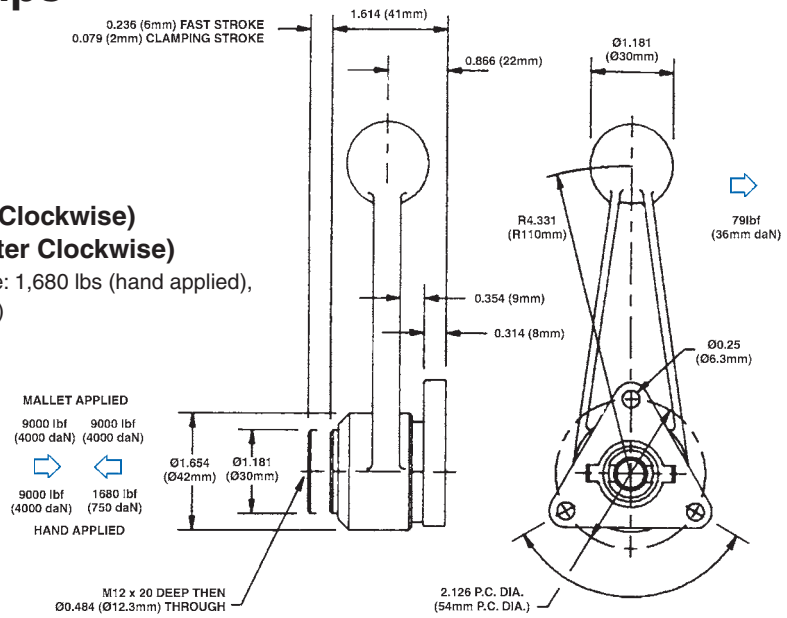
Heavy Duty Cam Clamps



Part Number
72401
72402

Model HDC8800R (Clockwise)
HDC8800RB (Counter Clockwise)

Operating clamping force: 1,680 lbs (hand applied), 9,000 lbs (mallet applied)
Weight: 1.21 lbs

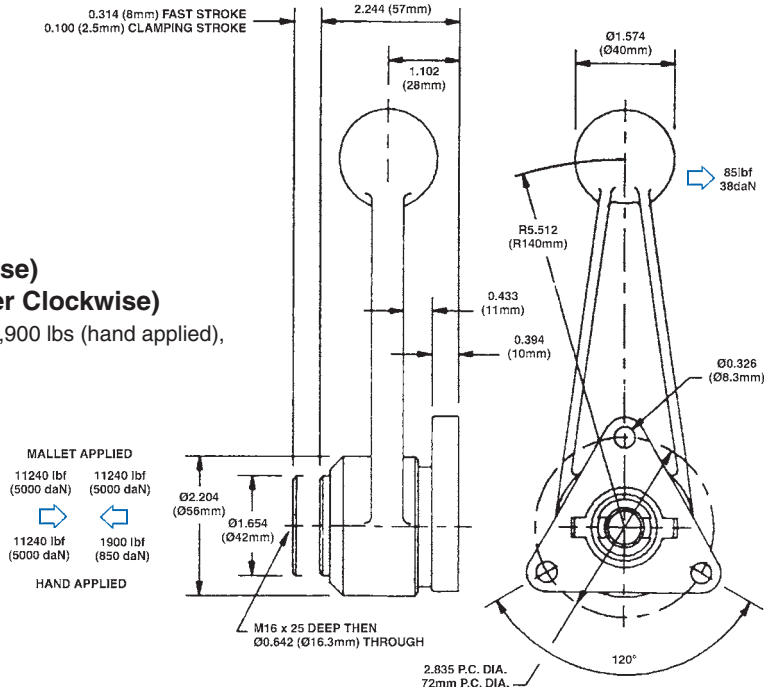




Part Number
72403
72404

Model
HDC11000R (Clockwise)
HDC11000RB (Counter Clockwise)

Operating clamping force: 1,900 lbs (hand applied), 11,240 lbs (mallet applied)
Weight: 2.9 lbs



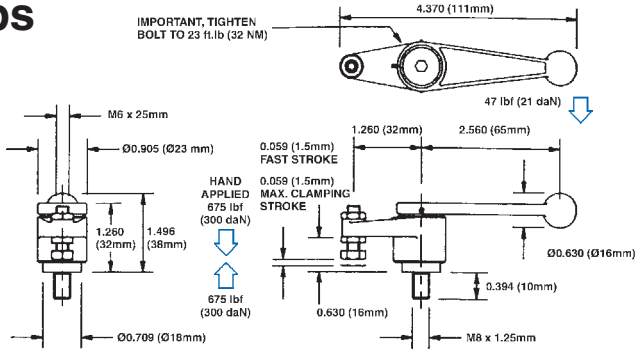
Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72401	81 lbs	1686 lbs	8992 lbs	0.236	0.079
72402	81 lbs	1686 lbs	8992 lbs	0.236	0.079
72403	85 lbs	1910 lbs	11240 lbs	0.315	0.100
72404	85 lbs	1910 lbs	11240 lbs	0.315	0.100

Heavy Duty Cam Swing Clamps



Part Number
72405
72406

Model
HDC675S (Clockwise)
HDC675SB (Counter Clockwise)
Operating clamping force: 675 lbs (hand applied)
Weight: 0.4 lbs
Supplied complete with: Set screw & nuts



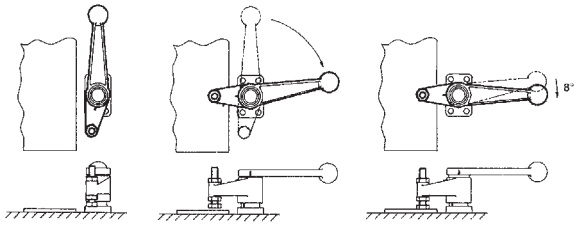
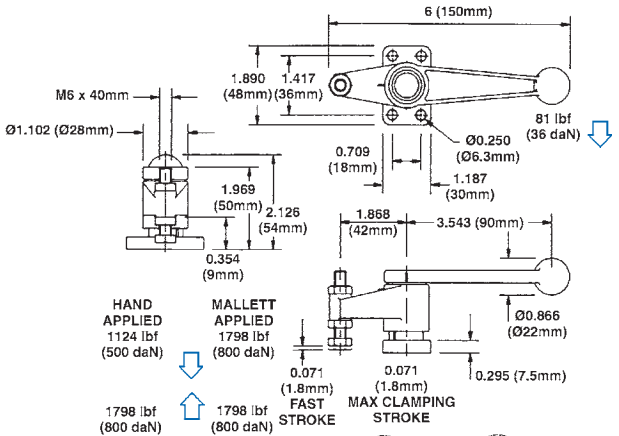


Fig. 1 Fig. 2 Fig. 3



Part Number
72407
72408

Model
HDC1800S (Clockwise)
HDC1800SB (Counter Clockwise)
Operating clamping force: 1,120 lbs (hand applied), 1,800 lbs (mallet applied)
Weight: 0.9 lbs
Supplied complete with: Set screw & nuts



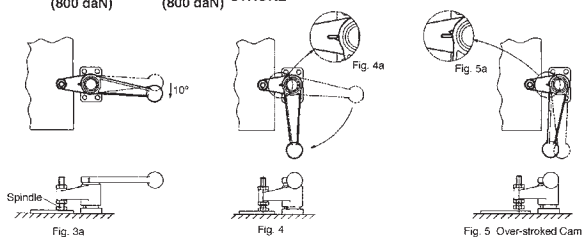


Fig. 3a Fig. 4 Fig. 5 Over-stroked Cam

Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72405	47 lbs	674 lbs	N/A	0.059	0.059
72406	47 lbs	674 lbs	N/A	0.059	0.059
72407	81 lbs	1124 lbs	1800 lbs	0.070	0.070
72408	81 lbs	1124 lbs	1800 lbs	0.070	0.070

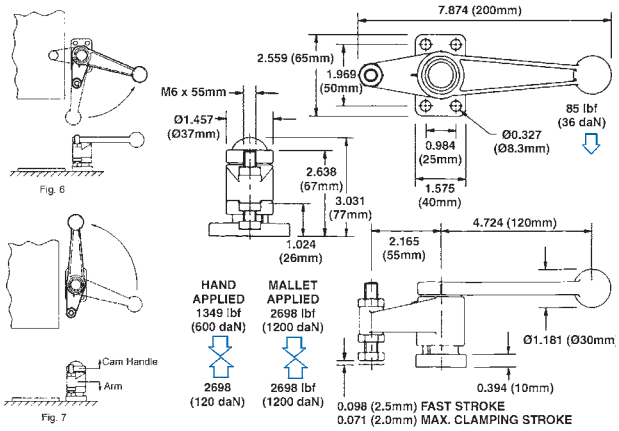
Jergens SPECIALTY FASTENERS GROUP

Heavy Duty Cam Swing Clamps



Part Number
72409
72410

Model
HDC2600S (Clockwise)
HDC2600SB (Counter Clockwise)
Operating clamping force:
1,350 lbs (hand applied),
2,700 lbs (mallet applied)
Weight: 2 lbs
Supplied complete with: Setscrew & nuts

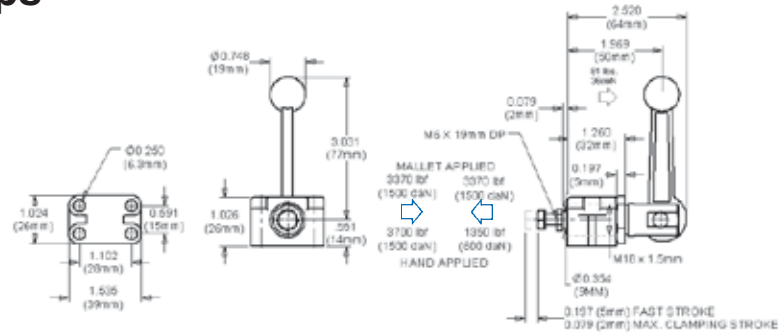


Heavy Duty Cam Push Clamps



Model HDC3300P
Operating clamping force:
3,370 lbs (mallet applied),
1,350 lbs (hand applied)
Weight: 0.6 lbs
Supplied complete with:
Set screw & nuts, Mounting base and locknuts

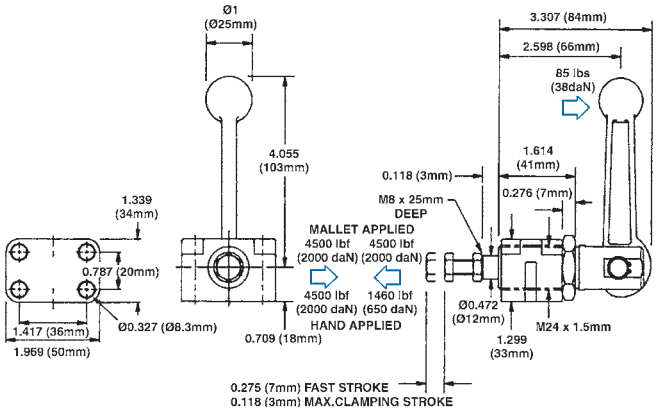
Part Number
72411





Model HDC4400P
Operating clamping force:
4500 lbs (mallet applied),
1,460 lbs (hand applied)
Weight: 1.3 lbs
Supplied complete with:
Set screw & nuts
CMB24 Mounting base & locknuts

Part Number
72412



Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72409	85 lbs	1350 lbs	2700 lbs	0.098	0.079
72410	85 lbs	1350 lbs	2700 lbs	0.098	0.079
72411	81 lbs	1350 lbs	3370 lbs	0.205	0.087
72412	85 lbs	1460 lbs	4500 lbs	0.276	0.118

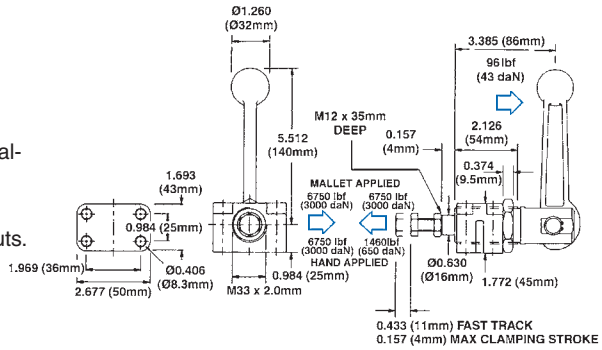
Heavy Duty Cam Push Clamps



Part Number
72413

Model HDC6750P

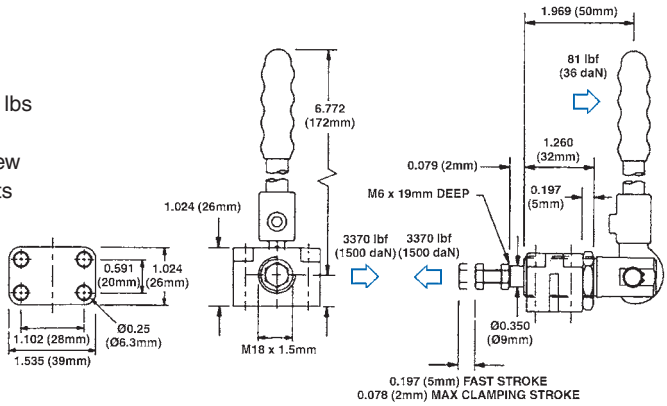
Operating clamping force: 6,750 lbs (mallet applied), 1,460 lbs (hand applied)
Weight: 3.4 lbs
Supplied complete with: Set screw & nuts.
Mounting base & locknuts



Part Number
72414

Model HDC3300PL

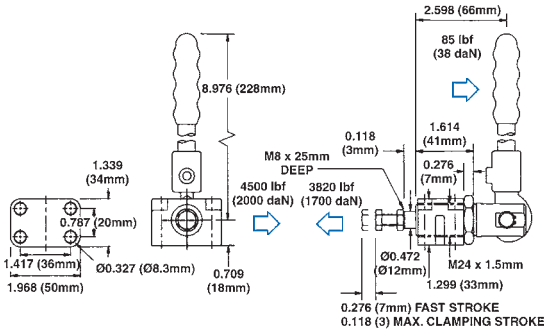
Operating clamping force: 3,370 lbs
Weight: 0.8 lbs
Supplied complete with: Set screw & nuts, Mounting base & locknuts



Part Number
72415

Model HDC4400PL

Operating clamping force: 3,820 lbs
Weight: 1.7 lbs
Supplied complete with: Set screw & nuts
Mounting base & locknuts,
Nominal holding force: 4,500 lbs



Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72413	97 lbs	1460 lbs	6750 lbs	0.433	0.157
72414	81 lbs	3370 lbs	N/A	0.205	0.087
72415	85 lbs	3820 lbs	N/A	0.276	0.118

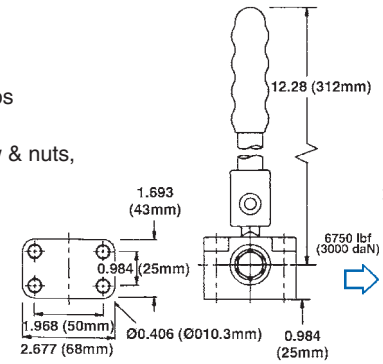
Jergens
SPECIALTY FASTENERS GROUP

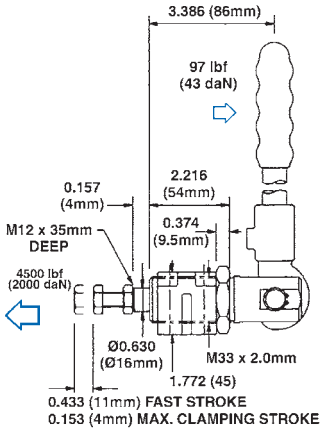
Heavy Duty Cam Push Clamps



Model HDC6750PL
Operating clamping force: 4,500 lbs
Weight: 4.4 lbs
Supplied complete with: Set screw & nuts, Mounting base & locknuts
Nominal holding force: 6,740 lbs

Part Number
72416





Part Number	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
72416	97 lbs	4,500 lbs	N/A	0.433	0.157

Conversion Chart Part Numbers

OLD JERGENS NO.	NEW JERGENS NO.	DESTACO	CARR LANE	GOOD HAND
70310	70000	201	CL-150-VTC	101-AI
70315	70001	201-B	CL-151-VTC	101-AI
70330	70002	202	CL-250-VTC	12050
70342	70003	202-U	CL-253-VTC	12050-U
–	70004	202-UB	–	–
70335	70005	202-B	CL-251-VTC	12055
70395	70006	207-UL	CL-453-VTC	12132
70380	70007	207-U	CL-450-VTC	12130
70385	70008	207-UB	CL-451-VTC	12135
70390	70009	207-TU	CL-452-VTC	12131
70350	70010	207-S	CL-350-VTC	12140
70440	70011	210-U	CL-650-VTC	12265
70420	70012	210-S	CL-550-VTC	12275
70425	70013	210-SB	CL-551VTC	12280
70470	70014	247-U	CL-850-VTC	10247
70460	70015	247-S	CL-750-VTC	10249
70490	70016	267-U	CL-1050-VTC	101-J
70285	70017	317-U	CL-475-HTC	20820
70230	70018	205--U	CL-250-HTC	201
70210	70019	205-S	CL-150-HTC	201-A
70240	70020	215-U	CL-350-HTC	201-B
70245	70021	215-UB	CL-351-HTC	201-BI
70250	70022	225-U	CL-450-HTC	225-D
71010	70023	217-UB	–	–
70270	70024	235-U	CL-550-HTC	20235
70275	70025	235-UB	CL-551-HTC	–
70280	70026	305-U	CL-200-VTC	13005
–	70027	307-U	–	–

Conversion Chart Part Numbers

OLD JERGENS NO.	NEW JERGENS NO.	DESTACO	CARR LANE	GOOD HAND
–	70028	309-U	–	–
70558	70029	323	CL-100-PA	40323
70560	70030	331	CL-200-PA	431
70562	70031	341	CL-300-PA	40341
72301	70032	375	–	–
72302	70033	385	–	–
71041	70034	324	CL-110-PA	40324
71042	70035	334	CL-210-PA	40334
70565	70036	344	CL-310-PA	40344
70570	70037	351	CL-250-PA	451
70580	70038	351-B	CL-251-PA	452
–	70039	371	–	–
71039	70040	381	CL-350-PA	43810
70550	70041	301	CL-150-PA	43101
70818	70042	601	CL-50-SPC	301-A
70118	70043	602	CL-150-TPC	36202
70120	70044	604	CL-250-TPC	36204
70140	70045	624	CL-350-TPC	36224
70820	70046	605	CL-150-SPC	302-F
70810/70815	70047	– /603	CL-100-PC	36003/304-C
70830	70048	608	CL-200-PC	304-E
–	70049	609	–	–
70840	70050	610	CL-250-SPC	36010
–	70051	607	–	–
70860	70052	630	CL-350-SPC	36330
71041	70034	324	CL-110-PA	40324
70480	70053	267	CL-950-VTC	–
70340	70121	202-T	CL-252-VTC	12070
70355	70122	207-SB	CL-351-VTC	12145
70365	70123	207-L	CL-353-VTC	12142
70445	70124	210-UB	CL-750-VTC	12270
70450	70125	210-TU	CL-652-VTC	–
70850	70126	–	CL-300-PC	304-H
71002	70127	205-USS	CL-250-HTC-S	201-SS
71008	70128	215-S	CL-300-HTC	201-BSS
71009	70129	215-SB	–	201-BSI
71015	70026-SS	305-USS	CL-200-VTC-S	13005-SS
71019	70131	202-TU	–	–
71021	70132	207-LB	–	12147
71025	70133	207-ULB	–	12137
71030	70134	247-SB	CL-751-VTC	10250
71031	70135	247-UB	CL-851-VTC	10248
71040	70029-SS	323-MSS	CL-100-PA-S	40323-SS
70260	70137	213-U	CL-260-HTC	20752-B
70215	70138	205-SB	CL-151-HTC	201-AI
70555	70139	311	CL-170-PA	–
71004	70141	213-USS	CL-260-HTC-S	–

Lifting Solutions

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Jergens®
MANUFACTURING EFFICIENCY

Jergens LIFTING SOLUTIONS GROUP

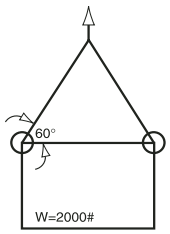
Engineer The Lift!!

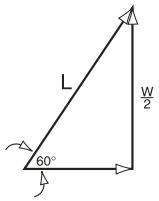
- **Jergens recommends the use of swiveling and pivoting hoist rings.**
- **Conventional eye bolts should be used for straight vertical lifts only.**
- **Are you using the proper hoist ring for the application?**
- **Is the hoist ring free to swivel and pivot? Any movement restrictions?**
- **Are lifting hole(s) in the proper location?**
- **Do you have the correct hole size for the hardware - safe lift capacity?**
- **Are the holes tapped deep enough to assure full thread engagement? (See figure #3 on Installation Information; page 523.)**
- **Recommended thread depth:**
  Steel – 1-1/2 times the bolt diameter (min.)
  Aluminum – 2 times the bolt diameter (min.)
- **RULE OF THUMB, IF IN DOUBT – DON'T!!!**

Applied Load Changes With Sling Angle

Jergens swivelling hoist rings are designed and rated to be pulled at any angle at the rated load. However, the applied load on a multipoint lift will increase if the sling angle is less than 90°. So be sure to consider the sling angle when selecting lifting equipment. See illustration below.

Sample Calculation:

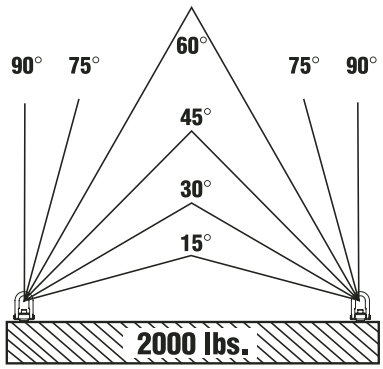




L = applied load on each leg of sling

N = # of Lift Points

$$L = \frac{W}{N \times SIN\ 60^\circ} = \frac{2000}{2 \times .866} = 1155\ \#$$



Sling Angle (Degrees)	Applied Load (Pounds)
90	1000
75	1040
60	1155
45	1410
30	2000
15	3860

DO'S

1. Observe working load limitations (be especially careful with eyebolts used for angle lifts – see sling angle chart).
2. Visually inspect hoist ring prior to use.
3. Fully tighten hoist ring to recommended torque. Full thread engagement is required (no space between swivel bushing and lift).
4. Assure proper thread depth - do not shim.
5. Make sure hoist rings have free travel - it must swivel and pivot without restrictions.
6. When installing in soft metal, such as aluminum, the minimum effective thread engagement should be two times the diameter of the thread (1-1/2 times bolt diameter – steel).

DON'TS

1. Never pull a Center Pull Style hoist ring bar from the side.
2. Never use an oversized hook in eyebolts or hoist rings (See figure #1 on Installation Information; page 523).
3. Never use excessive sling angle.
4. Never steam clean or degrease hoist rings (could cause rusting and binding).
5. Never apply shock loads.
6. Never allow the side of a hoist ring to make contact with the lift. (See figure #2 on Installation Information; page 523.)

Installation Information

Select the proper Hoist Ring for the job. Do not attempt to apply more than the rated load capacity. *The load capacity is marked on the Hoist Ring.*

Drill and tap the workpiece so that the hoist ring bolt is installed perpendicular to the surface of the workpiece. Countersink the tapped hole to prevent "swelling" of the top thread when the hoist ring bolt is torqued. The workpiece surface must be flat, providing complete contact for the hoist ring bushing.

Do not use spacers between the hoist ring bushing and the workpiece surface.

When installing in soft metal, such as aluminum, the minimum effective thread engagement should be two times the diameter of the thread. When installing in steel, thread engagement should be 1-1/2 times the thread diameter.

Always *tighten the bolt to the proper torque value*, which is stamped on the Hoist Ring.

Loosening of the *bolt* may develop during use. *Re-tightening to the required torque must be done whenever the bolt loosens.* The proper tightening torque is stamped on the Hoist Ring.

When lifting, apply force gradually. **DO NOT APPLY SHOCK LOADS.**

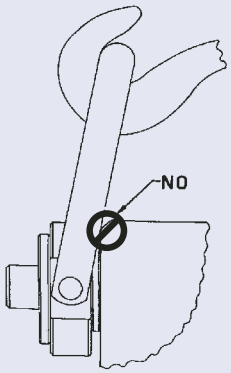
For through-hole applications, be sure that nut/washer are the same quality grade as the Hoist Ring.

Periodic visual inspection and pull testing is recommended as damage can occur from improper usage.



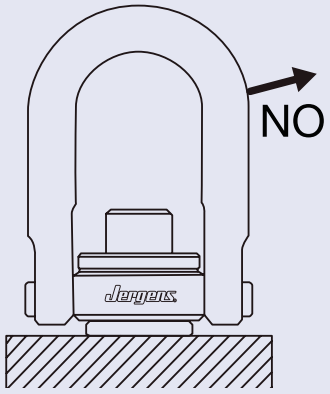
Never use a hook or other lifting device which will pry or tend to open the "U" shaped bar on Center-Pull Hoist Rings!

Fig. 1



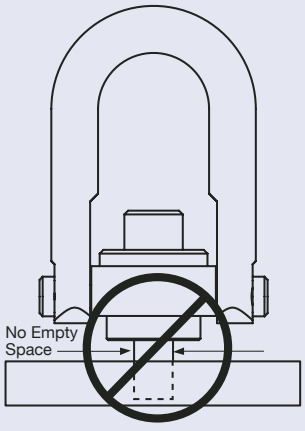
After installation, check the hoist ring to be sure it swivels and pivots freely in all directions. **The side of the ring must not contact *anything*!**

Fig. 2



Never pull U-Bar from a side!

Fig. 3



Always ensure full thread engagement when installing hoist rings!

Fig. 4



Depending upon the sling angle, **the applied load may be more than the weight being lifted.** Two point lifting of a 2000 pound weight, with a sling angle of 30°, will result in an applied load of 2000 pounds to ***each*** hoist ring!

Fig. 5

Shackle-Lok™ Shackle-Style Hoist Rings



Shackle-Lok™
SHACKLE-STYLE HOIST RINGS

Shackle-Lok™ combines the strength of a hoist ring with the versatility of a shackle. Its unique, 3-piece design is ideal for use with a variety of lift methods, and shackles are interchangeable. Shackle-Lok™ is simply the industry's most efficient below-the-hook lifting device from a weight to load rating ratio.

Features & Benefits:

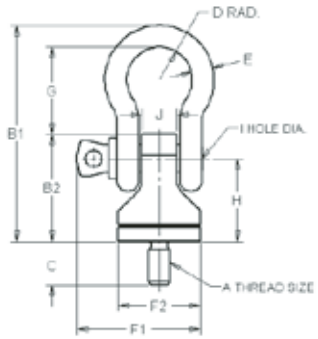
- **Internal ball bearings allow for smooth rotation under load**
- **Full 360° swivel and 180° pivot action**
- **Easy to remove shackle**
- **Rated 5:1 strength factor in vertical pull**
- **Material: alloy steel**
- **Bolt and base finish: black oxide**
- **Bolt and base are magnetic particle inspected**
- **Shackle finish: zinc plated with gold colored conversion coating**
- **Proof tested to 200% of rated load capacity**
- **Certificate of proof test provided**
- **3D Solid models available in multiple formats from www.jergensinc.com**
- **See info on bottom of pg. "Shackle-Lok™ Shackle-Style Hoist Rings" on page 525**

Conforms to:

- **ASME B30.26**
- **CE certified**
- **RR-C-271F**

AWRF | ISO 9001:2008 Quality System Certified | CE Certified | LEEA | AMERICAN MADE

Shackle-Lok™ Shackle-Style Hoist Rings



Shackle-Lok™
SHACKLE-STYLE HOIST RINGS

The Shackle-Lok™ was designed to work with numerous thread sizes. Any straight thread size, pitch, or length can be manufactured to meet application needs.

Note: When tightening the bolt, the shackle and pin must be removed. Not intended for prolonged rotation

Part Number				Length					Width								Weight (lbs)		
With Shackle	No Shackle	Thread Size A	Load[1] Capacity (lbs)	With Shackle B1	No Shackle B2	Thread Length C	Inside Shackle Radius D	Shackle Dia Size E	With Shackle F1	No Shackle F2	Inside Shackle Clearance G	Pin Hole to Base (H)	Pin Hole Dia (I)	Web Thick (J)	Torque[2] (lbs*ft)	With Shackle	No Shackle	Hex size
24400	24400NS	1/4-20	550	2.48	1.23	1/2	0.38	1/4	1.57	0.94	1.00	.95	.34	.40	3	0.26	0.15	5/32
24401	24401NS	5/16-18	800	2.48	1.23	1/4	0.38	1/4	1.57	0.94	1.00	.95	.34	.40	5	0.26	0.15	5/32
24402	24402NS	5/16-18	800	2.48	1.23	9/16	0.38	1/4	1.57	0.94	1.00	.95	.34	.40	5	0.27	0.16	5/32
24403	24403NS	3/8-16	1000	2.48	1.23	9/16	0.38	1/4	1.57	0.94	1.00	.95	.34	.40	7	0.27	0.16	5/32
24405	24405NS	1/2-13	2500	4.17	1.97	3/4	0.71	1/2	2.96	1.56	1.7	1.42	.68	.74	23	1.32	0.62	1/4
24406	24406NS	1/2-13	2500	4.17	1.97	1	0.71	1/2	2.96	1.56	1.7	1.42	.68	.74	23	1.34	0.63	1/4
24407	24407NS	1/2-13	2500	4.17	1.97	1 1/16	0.71	1/2	2.96	1.56	1.7	1.42	.68	.74	23	1.34	0.64	1/4
24408	24408NS	1/2-13	2500	4.17	1.97	1 1/4	0.71	1/2	2.96	1.56	1.7	1.42	.68	.74	23	1.35	0.65	1/4
24409	24409NS	5/8-11	4000	4.17	1.97	3/4	0.71	1/2	2.96	1.56	1.7	1.42	.68	.74	46	1.35	0.64	1/4
24410	24410NS	5/8-11	4000	4.17	1.97	1	0.71	1/2	2.96	1.56	1.7	1.42	.68	.74	46	1.37	0.66	1/4
24411	24411NS	5/8-11	4000	4.17	1.97	1 1/4	0.71	1/2	2.96	1.56	1.7	1.42	.68	.74	46	1.39	0.69	1/4
24412	24412NS	3/4-10	5000	5.56	2.71	1	0.94	5/8	3.72	2.3	2.23	2.06	.79	.98	69	3.42	1.98	3/8
24413	24413NS	3/4-10	5000	5.56	2.71	1 1/2	0.94	5/8	3.72	2.3	2.23	2.06	.79	.98	69	3.48	2.04	3/8
24414	24414NS	7/8-9	8000	7.25	3.52	1	1.31	7/8	5.63	2.9	2.85	2.62	1.06	1.36	130	7.66	3.95	7/16
24415	24415NS	7/8-9	8000	7.25	3.52	1 1/4	1.31	7/8	5.63	2.9	2.85	2.62	1.06	1.36	130	7.7	3.99	7/16
24416	24416NS	1-8	10000	7.25	3.52	1 1/4	1.31	7/8	5.63	2.9	2.85	2.62	1.06	1.36	185	7.76	4.05	7/16
24417	24417NS	1-8	10000	7.25	3.52	1 1/2	1.31	7/8	5.63	2.9	2.85	2.62	1.06	1.36	185	7.81	4.1	7/16
24418	24418NS	1-8	10000	7.25	3.52	2 1/4	1.31	7/8	5.63	2.9	2.85	2.62	1.06	1.36	185	7.98	4.27	7/16
24419	24419NS	1 1/4-7	15000	8.25	3.99	1 7/8	1.38	1	6.08	3.06	3.3	2.94	1.18	1.61	345	11.34	5.89	1/2
24420	24420NS	1 1/4-8	15000	8.25	3.99	1 7/8	1.38	1	6.08	3.06	3.3	2.94	1.18	1.61	345	11.35	5.89	1/2
24421	24421NS	1 1/2-6	24000	11.72	5.11	2 1/4	1.88	1 1/2	8.32	4.06	5.11	3.64	1.72	2.23	660	29	12.36	3/4
24424	24424NS	2-4 1/2	30000	11.72	5.11	3 1/8	1.88	1 1/2	8.32	4.06	5.11	3.64	1.72	2.23	1100	30.6	13.97	3/4
24426	24426NS	2 1/2-4	50000	14.22	6.52	4	2.25	1 3/4	9.57	5.22	6.0	4.47	2.07	2.67	2300	58.7	28.95	1
24427	24427NS	2 1/2-8	50000	14.22	6.52	4	2.25	1 3/4	9.57	5.22	6.0	4.47	2.07	2.67	2300	58.77	29.02	1

[1] Stated load capacity based on recommended thread torques as shown in chart.
[2] It is recommended that these torques be used when installing hoist rings.

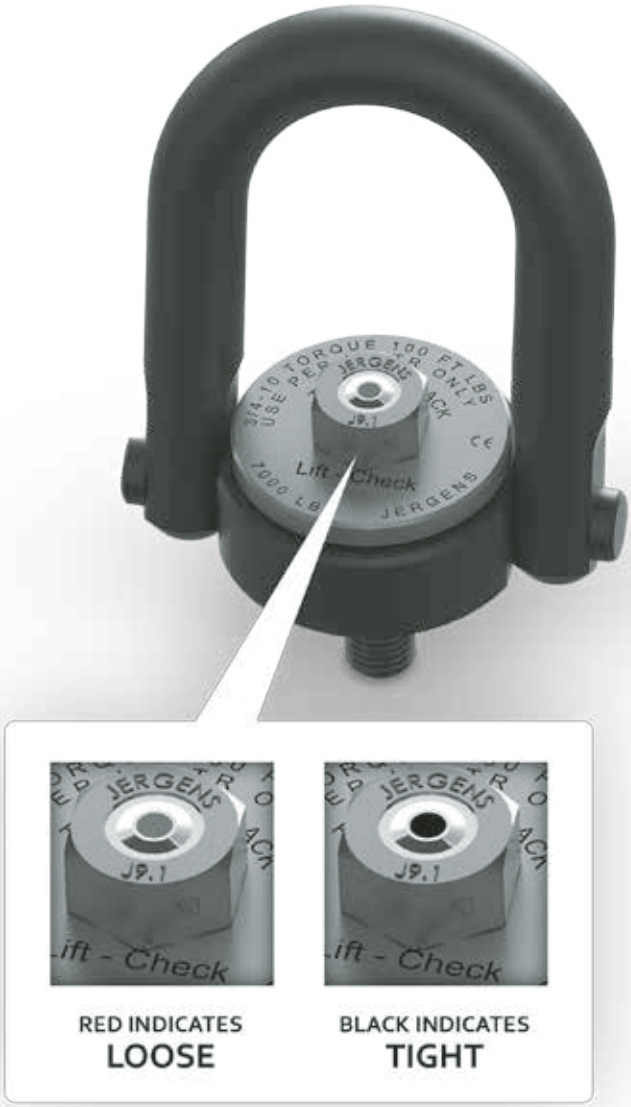
Part Number				Length					Width								Weight (kg)		
With Shackle	No Shackle	Thread Size A	Load[1] Capacity (kg)	With Shackle B1	No Shackle B2	Thread Length C	Inside Shackle Radius D	Shackle Dia Size E	With Shackle F1	No Shackle F2	Inside Shackle Clearance G	Pin Hole to Base (H)	Pin Hole Dia (I)	Web Thick (J)	Torque[2] (Nm)ft)	With Shackle	No Shackle	Hex size
24450	24450NS	M6 X 1.0	200	63.0	31.2	12	9.5	6.4	39.9	23.9	25	24.1	8.7	10.2	3	0.12	0.07	4
24451	24451NS	M8 X 1.25	400	63.0	31.2	12.5	9.5	6.4	39.9	23.9	25	24.1	8.7	10.2	7	0.12	0.07	4
24452	24452NS	M10 X 1.5	450	63.0	31.2	17.5	9.5	6.4	39.9	23.9	25	24.1	8.	10.2	10	0.13	0.08	4
24453	24453NS	M12 X 1.75	1050	105.9	50.0	19.5	18.0	12.7	75.1	39.6	43	36.1	17.1	18.8	27	0.60	0.28	8
24455	24455NS	M16 X 2.0	1900	105.9	50.0	29	18.0	12.7	75.1	39.6	43	36.1	17.1	18.8	70	0.63	0.31	8
24456	24456NS	M20 X 2.5	2150	141.2	68.8	32	23.8	15.9	94.4	58.4	57	52.3	20.0	24.9	105	1.57	0.92	10
24458	24458NS	M24 X 3.0	4200	184.2	89.4	37	33.4	22.2	143.0	71.1	72	66.5	26.9	35.4	225	3.52	1.84	12
24459	24459NS	M30 X 3.5	7000	209.6	101.3	46	34.9	25.4	154.3	77.7	83	74.7	29.8	40.9	490	5.10	2.63	14
24460	24460NS	M30 X 3.5	7000	209.6	101.3	66	34.9	25.4	154.3	77.7	83	74.7	29.8	40.9	490	5.22	2.74	14
24463	24463NS	M36 X 4.0	11000	297.7	129.8	54	47.8	38.1	211.3	103.1	130	93.0	43.6	56.6	885	13.07	5.52	19
24465	24465NS	M42 X 4.5	12500	297.7	129.8	68	47.8	38.1	211.3	103.1	130	93.0	43.6	56.6	1175	13.37	5.82	19
24466	24466NS	M48 X 5.0	13500	297.7	129.8	88	47.8	38.1	211.3	103.1	130	93.0	43.6	56.6	1420	13.87	6.32	19
24468	24468NS	M64 X 6.0	22500	361.2	165.6	96	57.2	44.5	243.0	132.6	151	113.5	52.5	67.8	3140	26.54	13.04	24

*Shackle Material: Carbon Steel
Shackle Type IVA, Grade A, Class 2

All dimensions are in millimeters.
[1] Stated load capacity based on recommended thread torques as shown in chart.
[2] It is recommended that these torques be used when installing hoist rings.

Jergens LIFTING SOLUTIONS GROUP

Lift-Check™ Hoist Rings



Jergens LIFT-CHECK™ HOIST RINGS

The NEW Jergens Lift-Check™ hoist ring assures that your application is secure and ready to lift. The Lift-Check™ is comprised of a Jergens' patent pending proprietary hex head cap screw which integrates the Visual Tension Indicator.

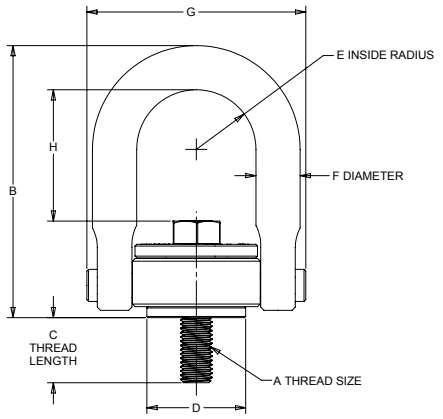
Features & Benefits:

- **Patent pending Lift-Check™ Center Pull Hoist Rings are rated at 5:1 strength Factor & Proof tested to 200% of rated load capacity, certificate of proof test provided, in accordance with ASME B30.26.**
- **Visual Tension Indicator confirms engagement – clearly illustrates whether bolt joint is loose or tight.**
- **Ensures safety and provides accuracy of +/- 10% of designed tension**
- **Hands-free inspection at a distance, prior to the lift**
- **Reduces installation time**
- **No torque wrench or calibration needed**
- **Patent pending Lift Check™ Bolt conforms to the chemical and physical requirements of ASTM A574 standards**
- **Lift-Check™ bolts are reusable and provide reliable visual indication of joint clamping force. Bolt kits available for Jergens hoist ring upgrades.**
- **Made in the USA**

Lift-Check™ hoist rings are part of a full range of lifting solutions that include other hoist rings styles, adjustable chain sling, pivoting lifting rings, eye nuts, shoulder and swivel eye bolts and hold down clips.

AWRF | ISO 9001:2008 Quality System Certified | CE Certified | LEEA

Lift-Check™ Hoist Rings



Jergens LIFT-CHECK™ HOIST RINGS

- Center Pull Hoist Rings are rated at 5:1 strength Factor & Proof tested to 200% of rated load capacity, in accordance with ASME B30.26*.
- Full 360° Swivel and 180° Pivot Action
- Material: Alloy Steel
- Finish: Black Oxide (Except Washer and Bolt)
- Washer and Bolt: Zinc Plated
- U-Bar, Bolt, Pins, Base, Washer and Bushing are Magnetic Particle Inspected

Thread Size A	Load Capacity (lbs)	Standard U-Bar Part #	Standard U-Bar B	Long U-Bar Part #	Long U-Bar B	Thread Length C	D	E	F	G	Std U-Bar H	Long U-Bar H	Torque (ft. lbs)
1/2-13	2500	**23410LC**	3.75	—	—	1 1/16	1.20	0.69	0.50	2.56	1 29/32	—	28
1/2-13	2500	**23411LC**	4.78	**23511LC**	6.72	3/4	1.50	0.88	0.75	3.52	2 1/2	4 3/8	28
1/2-13	2500	**23412LC**	4.78	**23512LC**	6.72	1	1.50	0.88	0.75	3.52	2 1/2	4 3/8	28
1/2-13	2500	**23413LC**	4.78	**23513LC**	6.72	1 1/4	1.50	0.88	0.75	3.52	2 1/2	4 3/8	28
5/8-11	4000	**23414LC**	4.78	**23514LC**	6.72	1	1.50	0.88	0.75	3.52	2 13/32	4 11/32	60
5/8-11	4000	**23415LC**	4.78	**23515LC**	6.72	1 1/4	1.50	0.88	0.75	3.52	2 13/32	4 11/32	60
5/8-11	4000	**23416LC**	4.78	**23516LC**	6.72	3/4	1.50	0.88	0.75	3.52	2 13/32	4 11/32	60
3/4-10	5000	**23417LC**	4.78	**23517LC**	6.72	1	1.50	0.88	0.75	3.52	2 5/16	4 3/16	100
3/4-10	5000	**23418LC**	4.78	**23518LC**	6.72	1 1/2	1.50	0.88	0.75	3.52	2 5/16	4 3/16	100
3/4-10	7000	**23420LC**	6.52	**23520LC**	8.11	1	2.31	1.40	1.00	5.14	3 1/8	4 3/16	100
3/4-10	7000	**23421LC**	6.52	**23521LC**	8.11	1 1/2	2.31	1.40	1.00	5.14	3 1/8	4 3/16	100

*Temperature variations may apply (-20 °C to 75 °C / -4 °F to -168 °F).

Lift-Check™ Bolt Replacement Kits

Patent pending Lift Check™ Bolt conforms to ASTM A574 standards.

Standard U-Bar Part #	Long U-Bar Part #	Bolt Kit Part #
23410LC	—	**23610LC**
23411LC	23511LC	**23611LC**
23412LC	23512LC	**23612LC**
23413LC	23513LC	**23613LC**
23414LC	23514LC	**23614LC**
23415LC	23515LC	**23615LC**
23416LC	23516LC	**23616LC**
23417LC	23517LC	**23617LC**
23418LC	23518LC	**23618LC**
23420LC	23520LC	**23620LC**
23421LC	23521LC	**23621LC**



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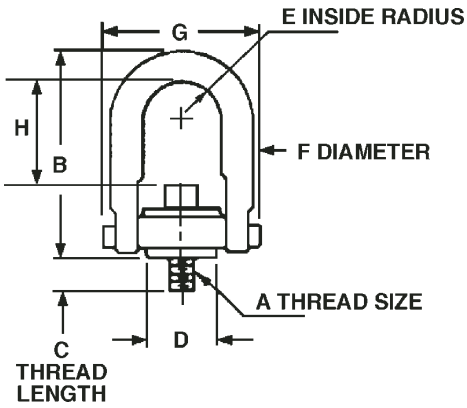
Center-Pull Traditional Style



- Full 360° Swivel and 180° Pivot Action
- Rated at 5:1 Strength Factor
- Material: Alloy Steel
- Finish: Black Oxide (Except Washer)
- U-Bar, Bolt, Pins, Base, Washer and Bushing are Magnetic Particle Inspected
- Washer: Zinc Plated with Gold Colored (Inch), Clear/Blue (Metric) Conversion Coating
- Proof Tested to 200% of Rated Load Capacity
- Certificate of Proof Test provided (See sample on page 545)
- 3D Solid Models available in multiple formats from **www.jergensinc.com**
- Available with Envirolox™ protective finish. See page 530 for more information
- Made in the USA

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Thread Size A	Load[1] Capacity (lbs)	Black Oxide				Envirolox™ Protected Coating				Thread length C	D	E	F	G	Std U-Bar H	Long U-Bar H	Torque[2] (ft. lbs)	Wt
		Standard U-Bar		Long U-Bar		Standard U-Bar		Long U-Bar										
		Part Number	B	Part Number	B	Part Number[3]	B	Part Number	B									
1/4-20	550	**23404**	2.67	—	—	**23304**	2.67	—	—	1/2	.75	.43	.38	1.84	1 5/16	—	5	.3
5/16-18	800	**23405**	2.67	—	—	**23305**	2.67	—	—	1/4	.75	.43	.38	1.84	1 1/4	—	7	.3
5/16-18	800	**23406**	2.67	—	—	**23306**	2.67	—	—	9/16	.75	.43	.38	1.84	1 1/4	—	7	.3
3/8-16	1000	**23408**	2.67	—	—	**23308**	2.67	—	—	9/16	.75	.43	.38	1.84	1 1/4	—	12	.3
1/2-13	2500	**23410**	3.75	—	—	**23310**	3.75	—	—	1 1/16	1.20	.69	.50	2.56	1 25/32	—	28	1.0
1/2-13	2500	**23411**	4.78	**23511**	6.72	**23311**	4.78	**23511-E**	6.72	3/4	1.50	.88	.75	3.52	2 3/8	4 1/4	28	2.5
1/2-13	2500	**23412**	4.78	**23512**	6.72	**23312**	4.78	**23512-E**	6.72	1	1.50	.88	.75	3.52	2 3/8	4 1/4	28	2.5
1/2-13	2500	**23413**	4.78	**23513**	6.72	**23313**	4.78	**23513-E**	6.72	1 1/4	1.50	.88	.75	3.52	2 3/8	4 1/4	28	2.5
5/8-11	4000	**23414**	4.78	**23514**	6.72	**23314**	4.78	**23514-E**	6.72	1	1.50	.88	.75	3.52	2 1/4	4 3/16	60	2.7
5/8-11	4000	**23415**	4.78	**23515**	6.72	**23315**	4.78	**23515-E**	6.72	1 1/4	1.50	.88	.75	3.52	2 1/4	4 3/16	60	2.7
5/8-11	4000	**23416**	4.78	**23516**	6.72	**23316**	4.78	**23516-E**	6.72	3/4	1.50	.88	.75	3.52	2 1/4	4 3/16	60	2.7
3/4-10	5000	**23417**	4.78	**23517**	6.72	**23317**	4.78	**23517-E**	6.72	1	1.50	.88	.75	3.52	2 1/8	4	100	3.0
3/4-10	5000	**23418**	4.78	**23518**	6.72	**23318**	4.78	**23518-E**	6.72	1 1/2	1.50	.88	.75	3.52	2 1/8	4	100	3.0
3/4-10	7000	**23420**	6.52	**23520**	8.11	**23320**	6.52	**23520-E**	8.11	1	2.31	1.40	1.00	5.14	2 15/16	4	100	7.0
3/4-10	7000	**23421**	6.52	**23521**	8.11	**23321**	6.52	**23521-E**	8.11	1 1/2	2.31	1.40	1.00	5.14	2 15/16	4	100	7.0
7/8-9	8000	**23423**	6.52	**23523**	8.11	**23323**	6.52	**23523-E**	8.11	1	2.31	1.40	1.00	5.14	2 13/16	4 3/8	160	7.0
7/8-9	8000	**23424**	6.52	**23524**	8.11	**23324**	6.52	**23524-E**	8.11	1 1/4	2.31	1.40	1.00	5.14	2 13/16	4 3/8	160	7.0
1-8	10000	**23425**	6.52	**23525**	8.11	**23325**	6.52	**23525-E**	8.11	1 1/4	2.31	1.40	1.00	5.14	2 11/16	4 3/8	230	7.5
1-8	10000	**23426**	6.52	**23526**	8.11	**23326**	6.52	**23526-E**	8.11	1 1/2	2.31	1.40	1.00	5.14	2 11/16	4 3/8	230	7.5
1-8	10000	**23427**	6.52	**23527**	8.11	**23327**	6.52	**23527-E**	8.11	2 1/4	2.31	1.40	1.00	5.14	2 11/16	4 3/8	230	7.5
1 1/4-7	15000	**23429**	8.73	—	—	**23329**	8.73	—	—	1 7/8	3.19	1.75	1.25	6.50	4 1/4	—	470	14
1 1/4-8	15000	**23429-08**	8.73	—	—	**23329-08**	8.73	—	—	1 7/8	3.19	1.75	1.25	6.50	4 1/4	—	470	14
1 1/2-6	24000	**23433**	12.47	—	—	**23333**	12.47	—	—	2 3/4	4.19	2.25	1.75	8.55	6 1/2	—	800	33
1 1/2-8	24000	**23433-08**	12.47	—	—	**23333-08**	12.47	—	—	2 3/4	4.19	2.25	1.75	8.55	6 1/2	—	800	33
2-4 1/2	30000	**23435**	12.47	—	—	**23335**	12.47	—	—	3 1/8	4.19	2.25	1.75	8.55	6	—	1100	36
2-8	30000	**23435-08**	12.47	—	—	**23335-08**	12.47	—	—	3 1/8	4.19	2.25	1.75	8.55	6	—	1100	36
2 1/2-4	50000	**23438**	16.50	—	—	**23338**	16.50	—	—	4	5.75	3	2.25	11.72	8 1/4	—	2100	89
2 1/2-8	50000	**23438-08**	16.50	—	—	**23338-08**	16.50	—	—	4	5.75	3	2.25	11.72	8 1/4	—	2100	89

[1] Stated load capacity based on recommended thread torques as shown in chart.
[2] It is recommended that these torques be used when installing hoist rings.
[3] Available from stock as Standard Clevis.

Center-Pull Traditional Style

Metric

Thread Size A	Load[1] Capacity (kg)	Black Oxide				Envirolox™ Protected Coating				Thread length C	D	E	F	G	Std U-Bar H	Long U-Bar H	Torque[2] (Nm)	Wt. (kg)
		Standard U-Bar		Long U-Bar		Standard U-Bar		Long U-Bar										
		Part Number	B	Part Number	B	Part Number	B	Part Number[3]	B									
M6 x 1.0	200	**23455**	67.8	–	–	**23355**	67.8	–	–	12.0	19.0	10.9	9.7	46.7	34.0	–	6	0.17
M8 x 1.25	400	**23456**	67.8	–	–	**23356**	67.8	–	–	12.5	19.0	10.9	9.7	46.7	32.0	–	10	0.17
M10 x 1.50	450	**23458**	67.8	–	–	**23358**	67.8	–	–	17.5	19.0	10.9	9.7	46.7	30.0	–	17	0.17
M12 x 1.75	1050	**23462**	123.0	**23562**	170.7	**23362**	123.0	**23562-E**	170.7	19.0	38.1	22.4	19.0	89.4	60.5	108	37	1.1
M16 x 2.0	1900	**23465**	123.0	**23565**	170.7	**23365**	123.0	**23565-E**	170.7	29.0	38.1	22.4	19.0	89.4	56.5	106	80	1.1
M20 x 2.5	2150	**23468**	123.0	**23568**	170.7	**23368**	123.0	**23568-E**	170.7	34.0	38.1	22.4	19.0	89.4	52.5	101	135	1.2
M20 x 2.5	3000	**23471**	163.0	**23571**	206.0	**23371**	163.0	**23571-E**	206.0	32.0	58.7	35.6	25.4	130.6	73.0	101	135	3.0
M24 x 3.0	4200	**23474**	163.0	**23574**	206.0	**23374**	163.0	**23574-E**	206.0	37.0	58.7	35.6	25.4	130.6	69.0	111	305	3.1
M30 x 3.5	7000	**23478**	221.7	–	–	**23378**	221.7	–	–	46.0	81.0	44.5	31.7	165.1	107.4	–	590	6.3
M30 x 3.5	7000	**23479**	221.7	–	–	**23379**	221.7	–	–	66.0	81.0	44.5	31.7	165.1	107.4	–	590	6.4
M36 x 4.0	11000	**23483**	316.7	–	–	**23383**	316.7	–	–	68.0	106.4	57.2	44.4	217.2	166.5	–	980	15.5
M42 x 4.5	12500	**23484**	316.7	–	–	**23384**	316.7	–	–	68.0	106.4	57.2	44.4	217.2	160.5	–	980	16.0
M48 x 5.0	13500	**23485**	316.7	–	–	**23385**	316.7	–	–	88.0	106.4	57.2	44.4	217.2	154.5	–	980	16.8
M64 x 6.0	22500	**23488**	419.1	–	–	**23388**	419.1	–	–	96.0	146.0	76.2	57.1	297.6	210.0	–	2845	40.0

All dimensions are in millimeters. [1]Stated load capacity is based upon specific thread torques shown in chart.
[2]It is recommended that these torques be used when installing hoist rings. [3]Available from stock as Standard Clevis.

Bolt Replacement Kits - Inch threads

Black Oxide Hoist Rings			Envirolox™ Coated			Kit Wt. (lbs)
Std. U-Bar Part No.	Long U-Bar Part No.	Bolt Kit Part No.	Std. U-Bar Part No.	Long U-Bar Part No.	Bolt Kit Part No.	
23404		23604	23304		23604-E	
23405		23605	23305		23605-E	
23406		23606	23306		23606-E	.03
23408		23608	23308		23608-E	.05
23410		23610	23310		23610-E	.16
23411	23511	23611	23311	23511-E	23611-E	.14
23412	23512	23612	23312	23512-E	23612-E	.16
23413	23513	23613	23313	23513-E	23613-E	.17
23414	23514	23614	23314	23514-E	23614-E	.27
23415	23515	23615	23315	23515-E	23615-E	.29
23416	23516	23616	23316	23516-E	23616-E	
23417	23517	23617	23317	23517-E	23617-E	.40
23418	23518	23618	23318	23518-E	23618-E	.46
23420	23520	23620	23320	23520-E	23620-E	.46
23421	23521	23621	23321	23521-E	23621-E	.52
23423	23523	23623	23323	23523-E	23623-E	.62
23424	23524	23624	23324	23524-E	23624-E	.66
23425	23525	23625	23325	23525-E	23625-E	.92
23426	23526	23626	23326	23526-E	23626-E	.97
23427	23527	23627	23327	23527-E	23627-E	1.13
23429		23629	23329		23629-E	2.90
23429-08		23629-08	23329-08		23329-08E	2.90
23433		23633	23333		23633-E	3.50
23433-08		23633-08	23333-08		23333-08E	3.50
23435		23635	23335		23635-E	7.30
23435-08		23635-08	23335-08		23335-08E	7.30
23438		23638	23338		23638-E	15.66
23438-08		23638-08	23338-08		23338-08E	15.96

Bolt Replacement Kits - Metric threads

Black Oxide Hoist Rings			Envirolox™ Coated			Kit Wt. (kg)
Std. U-Bar Part No.	Long U-Bar Part No.	Bolt Kit Part No.	Std. U-Bar Part No.	Long U-Bar Part No.	Bolt Kit Part No.	
		23655			23655-E	.02
23456		23656	23356		23656-E	.02
23458		23658	23358		23658-E	.03
23462	23562	23662	23362	23562-E	23662-E	.06
23465	23565	23665	23365	23565-E	23665-E	.12
23468	23568	23668	23368	23568-E	23668-E	.21
23471	23571	23671	23371	23571-E	23671-E	.23
23474	23574	23674	23374	23574-E	23674-E	.40
23478		23678	23378		23678-E	.79
23479		23679	23379		23679-E	.91
23483		23683	23383		23683-E	1.52
23484		23684	23384		23684-E	2.75
23485		23685	23385		23685-E	3.27
23488		23688	23388		23688-E	7.12

Bolt Kits contain bolt and retaining ring.

• See page 530 for Hoist Ring hold down clips.

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Envirolox™ Protective Finish



The Envirolox™ Protective Finish is a *proprietary nickle based coating that helps to prevent rusting and other environmental hazards from affecting Jergens Hoist Rings*. This coating does not contain cadmium or chromium, is *environmentally friendly,* and is proven to be *effective* in *extreme conditions*. It provides surface hardness, lubricity and more effective corrosion protection than paints. Envirolox™ Protective Finish is available on Jergens Center-Pull and Side-Pull Style Hoist Rings. It is not recommended for the Swivel Eyebolt or the SP 2000 products.

- Available on Center-Pull and Side-Pull Traditional Style Hoist Rings (See pages 528-529 and 534-535 for part numbers.)
- Available upon request for other selected Jergens lifting products.
- Added resistance to rusting
- Environmentally safe

Hoist Ring Hold Down Clips

Two or more Hoist Ring Hold Down Clips should be used to prevent ring movement when the hoist ring is not in use. These simple spring steel clips prevent ring movement, provide an additional safety feature when used around machine tools and give a neat finished appearance.

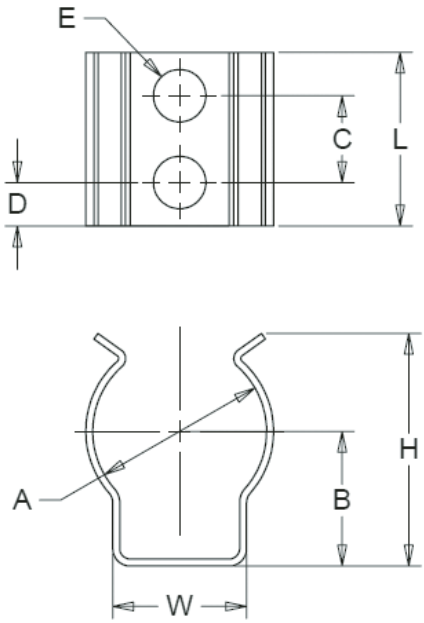
- Material: Spring, Steel
- Finish: Cadmium or Zinc

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Clip Part Number	Diameter A	B	C	D	E	H	W	L
*47331	3/8	.330	—	.250	.125	.575	.320	.500
47332	1/2	.388	.250	.125	.151	.712	.385	.500
47333	5/8	.450	.250	.125	.151	.832	.385	.500
47334	3/4	.513	.312	.156	.151	1.000	.385	.625
47335	1	.683	.312	.188	.188	1.133	.510	.687
47336	1 1/4	.750	.625	.187	.162	1.370	1.330	1.000
47337	1 3/8	.880	.312	.188	.188	1.439	.510	.688
47338	1 7/16	.850	.937	.312	.103	1.560	1.560	1.500
47339	1 3/4	1.070	.312	.188	.130	1.830	.780	.688

*One bolt hole only



Forged Center Pull - Stainless Steel



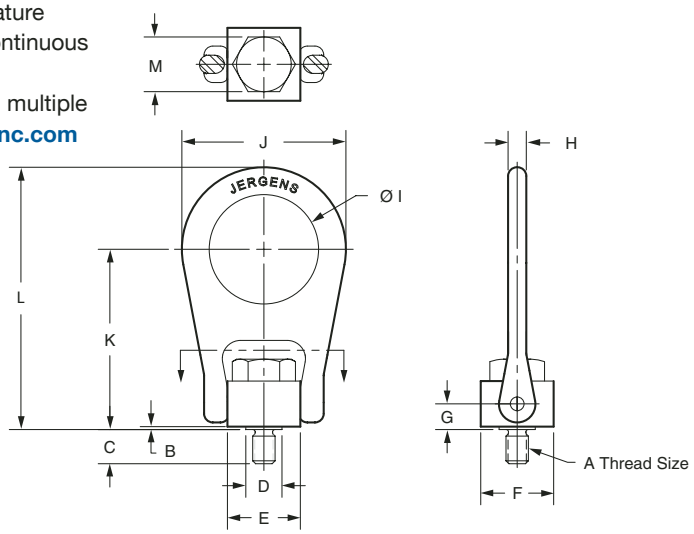
U.S. Patent No. 6,652,012

Our Forged Center Pull Hoist Ring integrates a solid center brace lift bail into our most popular style product. This design eliminates the possibility of spreading the lift ring in misapplications. Forged hoist rings are ideal for OEM and industrial use.

- Material: **17-4PH**
- Same strength/load capacity as steel
- Full (over center) 360° swivel and 180° pivot action
- Capacities up to 5,000 lbs.
- Inch and metric
- 5:1 strength factor
- Proof tested to 200% of rated load capacity
- Maximum operating temperature 800°F Intermittent, 600°F continuous
- Made in U.S.A.
- 3D Solid Models available in multiple formats from **www.jergensinc.com**

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Ring Bail

Inch

Part Number	Load Capacity (lbs)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	Torque (ft.lbs)	Weight (lbs)
23906-SS	800	5/16-18	3/64	15/32	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	7	0.6
23907-SS	800	5/16-18	3/64	5/8	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	7	0.6
23908-SS	1000	3/8-16	3/64	9/16	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	12	0.6
23909-SS	1000	3/8-16	3/64	3/4	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	12	0.6
23910-SS	2500	1/2-13	1/16	11/16	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	28	3.6
23911-SS	2500	1/2-13	1/16	1	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	28	3.6
23914-SS	4000	5/8-11	1/16	15/16	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	60	3.6
23915-SS	4000	5/8-11	1/16	1 1/4	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	60	3.6
23917-SS	5000	3/4-10	1/16	1 1/8	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	100	3.6
23918-SS	5000	3/4-10	1/16	1 1/2	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	100	3.6

Metric

Part Number	Load Capacity (kg)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	Torque (N•m)	Weight (kg)
23956-SS	400	M8 X 1.25	1.2	12	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	10	0.27
23958-SS	450	M10 X 1.5	1.2	15	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	17	0.27
23962-SS	1050	M12 X 1.75	1.6	18	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	37	1.64
23965-SS	1900	M16 X 2.0	1.6	24	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	80	1.64
23968-SS	2150	M20 X 2.5	1.6	30	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	134	1.7

Forged Center Pull



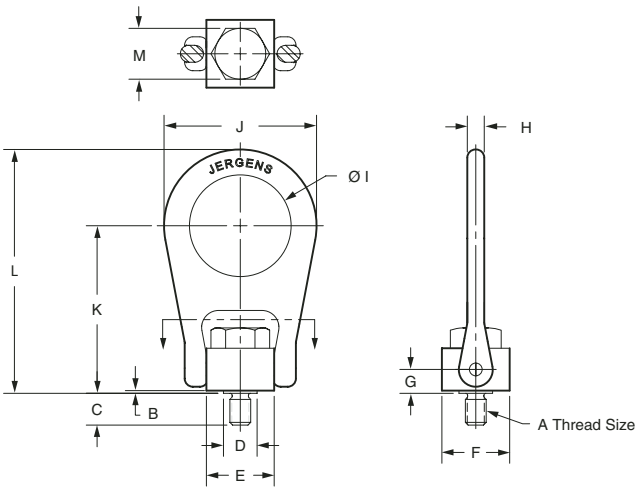
U.S. Patent No. 6,652,012

Our Forged Center Pull Hoist Ring integrates a solid center brace lift bail into our most popular style product. This design eliminates the possibility of spreading the lift ring in misapplications. Forged hoist rings are ideal for OEM and industrial use.

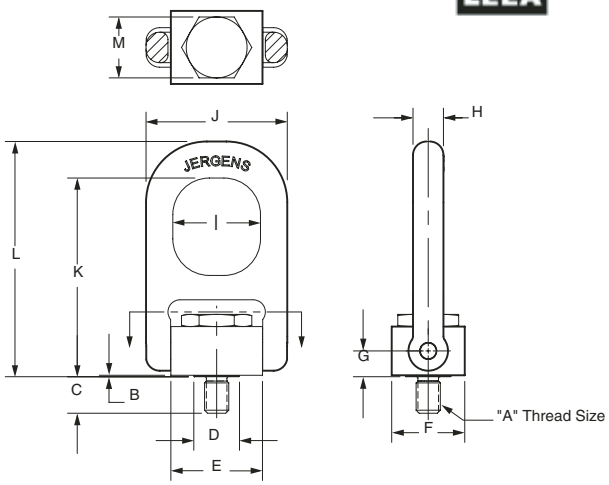
- Material: Alloy Steel
- Full (over center) 360° swivel and 180° pivot action
- Capacities up to 30,000 lbs.
- Inch and metric
- 5:1 strength factor
- Proof tested to 200% of rated load capacity
- Available in 17-4PH Stainless Steel (up to 5,000lbs/2,150kgs.) See page 531.
- Made in U.S.A.
- 3D Solid Models available in multiple formats from **www.jergensinc.com**

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Ring Bail



Large Bail

Inch

Part Number	Load Capacity (lbs)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	Torque (ft.lbs)	Weight (lbs)
23906	800	5/16-18	3/64	15/32	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	7	0.6
23907	800	5/16-18	3/64	5/8	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	7	0.6
23908	1000	3/8-16	3/64	9/16	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	12	0.6
23909	1000	3/8-16	3/64	3/4	1/2	1	1	11/32	1/4	1 1/2	2 1/4	2 15/32	3 19/32	3/4	12	0.6
23910	2500	1/2-13	1/16	11/16	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	28	3.6
23911	2500	1/2-13	1/16	1	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	28	3.6
23914	4000	5/8-11	1/16	15/16	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	60	3.6
23915	4000	5/8-11	1/16	1 1/4	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	60	3.6
23917	5000	3/4-10	1/16	1 1/8	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	100	3.6
23918	5000	3/4-10	1/16	1 1/2	1	2	1 1/2	9/16	3/4	3	4 7/16	4	6 3/8	1 1/4	100	3.6
***23926**	10000	1-8	1/16	1 1/2	1 7/8	3 25/32	3	1 1/16	1 1/4	3 19/32	5 13/16	8 5/32	9 21/32	2 1/2	230	15.7
***23927**	10000	1-8	1/16	2	1 7/8	3 25/32	3	1 1/16	1 1/4	3 19/32	5 13/16	8 5/32	9 21/32	2 1/2	230	15.9
***23929**	15000	1 1/4-7	1/16	1 7/8	1 7/8	3 25/32	3	1 1/16	1 1/4	3 19/32	5 13/16	8 5/32	9 21/32	2 1/2	470	16.0
***23930**	15000	1 1/4-7	1/16	2 1/2	1 7/8	3 25/32	3	1 1/16	1 1/4	3 19/32	5 13/16	8 5/32	9 21/32	2 1/2	470	16.2
***23933**	24000	1 1/2-6	7/64	2 1/4	2 1/2	4 7/8	4 1/2	1 7/16	1 3/4	4 1/2	7 23/32	11 7/16	13 27/32	3 1/4	800	42.3
***23934**	24000	1 1/2-6	7/64	3	2 1/2	4 7/8	4 1/2	1 7/16	1 3/4	4 1/2	7 23/32	11 7/16	13 27/32	3 1/4	800	42.7
***23935**	30000	2-4 1/2	7/64	3	2 1/2	4 7/8	4 1/2	1 7/16	1 3/4	4 1/2	7 23/32	11 7/16	13 27/32	3 1/4	800	43.8
***23936**	30000	2-4 1/2	7/64	4	2 1/2	4 7/8	4 1/2	1 7/16	1 3/4	4 1/2	7 23/32	11 7/16	13 27/32	3 1/4	800	44.7

*Denotes Large Bail

Ring Bail



Ring Bail
Part Numbers:
23906 thru **23918** (Inch)
23956 thru **23968** (Metric)

Large Bail



Large Bail
Part Numbers:
23926 thru **23936** (Inch)
23974 thru **23987** (Metric)

- **Replaces Stationary Eyebolt**
- **Lifting Tooling Columns & Large Fixtures**
- **OEM Applications**
- **Lifting Die & Molds**

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Metric

Part Number	Load Capacity (kg)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	Torque (N•m)	Weight (kg)
23956	400	M8 X 1.25	1.2	12	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	10	0.27
23958	450	M10 X 1.5	1.2	15	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	17	0.27
23962	1050	M12 X 1.75	1.6	18	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	37	1.64
23965	1900	M16 X 2.0	1.6	24	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	80	1.64
23968	2150	M20 X 2.5	1.6	30	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	134	1.7
***23974**	4200	M24 X 3.0	1.6	35.7	47.6	96.0	76.2	27.0	31.7	91.3	147.6	207.2	245.3	63.5	305	7.1
***23975**	4200	M24 X 3.0	1.6	47.6	47.6	96.0	76.2	27.0	31.7	91.3	147.6	207.2	245.3	63.5	305	7.2
***23978**	7000	M30 X 3.5	1.6	44.8	47.6	96.0	76.2	27.0	31.7	91.3	147.6	207.2	245.3	63.5	590	7.3
***23979**	7000	M30 X 3.5	1.6	60.0	47.6	96.0	76.2	27.0	31.7	91.3	147.6	207.2	245.3	63.5	590	7.4
***23982**	11000	M36 X 4.0	2.8	53.6	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	82.55	960	19.1
***23983**	11000	M36 X 4.0	2.8	71.4	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	82.55	960	19.3
***23984**	12500	M42 X 4.5	2.8	62.7	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	82.55	980	19.4
***23985**	12500	M42 X 4.5	2.8	83.3	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	82.55	980	19.6
***23986**	13500	M48 X 5.0	2.8	71.4	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	82.55	980	19.7
***23987**	13500	M48 X 5.0	2.8	95.3	63.5	123.8	114.3	36.5	44.5	114.3	196.1	290.5	351.6	82.55	980	20.0

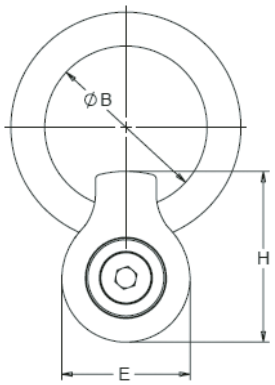
*Denotes Large Bail

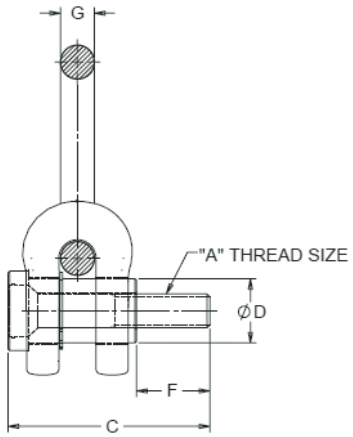
Side-Pull Traditional Style

Precision Cast Body



- Rated at 5:1 Strength Factor
- Material: Alloy Steel
- Clevis, Ring, Bushing and Cap Screw are magnetic particle inspected
- Clevis is x-rayed
- Finish: Black Oxide
- Proof Tested to 200% of Rated Load Capacity
- 3D Solid Models available in multiple formats from **www.jergensinc.com**
- Available with Envirolox™ protective finish. See page 530 for more information.
- Made in USA





360° swivel plus pivot point moves around bolt to provide greater clearances in side lifting and when lifting rotating objects.

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Inch

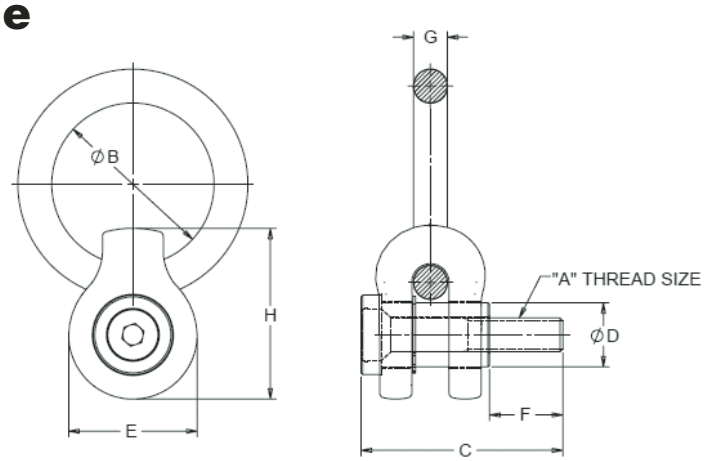
Part Number	Envirolox™ Part Number	Load[1] Capacity (lbs)	A	B	C	D	E	F	G	H	Torque[2] (ft. lbs)	Wt. (lbs)	Bolt Kit	Envirolox™ Bolt Kit
47311	**47311-E**	650	5/16-18	2	2 1/8	1-11/16	1 1/2	5/8	3/8	2	3.5	.25	47341	47341-E
47312	**47312-E**	800	3/8-16	2	2 3/8	1-11/16	1 1/2	3/4	3/8	2	4.5	.25	47342	47342-E
47313	**47313-E**	1800	1/2-13	3	3 3/8	1-3/16	2 3/8	1	5/8	3 3/16	15	3.25	47343	47343-E
47314	**47314-E**	2500	5/8-11	3	3 5/8	1-3/16	2 3/8	1 1/4	5/8	3 3/16	25	3.25	47344	47344-E
47315	**47315-E**	4100	3/4-10	4	5	1-29/32	3 3/4	1 1/2	1	5	50	11.25	47345	47345-E
47316	**47316-E**	7100	1-8	4	5 3/8	1-29/32	3 3/4	2	1	5	90	11.50	47346	47346-E
47317	**47317-E**	14000	1 1/4-7	6	6 7/8	3	4 5/8	2	1 3/8	6 13/16	150	27.75	47347	47347-E
47317-08	–	14000	1 1/4-8	6	6 7/8	3	4 5/8	2	1 3/8	6 13/16	150	27.75	–	–
47318	**47318-E**	17200	1 1/2-6	6	7 3/8	3	4 5/8	2 1/2	1 3/8	6 13/16	250	31.50	47348	47348-E
47318-08	–	17200	1 1/2-8	6	7 3/8	3	4 5/8	2 1/2	1 3/8	6 13/16	250	31.50	–	–
47319	**47319-E**	29000	2-4 1/2	5 1/4x10 1/2	10	3	4 5/8	3 1/8	1 1/2	6 13/16	300	42.00	47349	47349-E
47319-08	–	29000	2-8	5 1/4x10 1/2	10	3	4 5/8	3 1/8	1 1/2	6 13/16	300	42.00	–	–

[1] Stated load capacity based on specific thread torques as shown in chart.
[2] It is recommended that these torques be used when installing hoist rings.

Side-Pull Traditional Style

Precision Cast Body





Metric

Part Number	Envirolox™ Part Number	Load[1] Capacity (kg)	A	B	C	D	E	F	G	H	Torque[2] (Nm)	Bolt Kit	Envirolox™ Bolt Kit
47351	**47351-E**	325	M 8x1.25	50.8	61	17.4	38.1	16	9.5	50.8	4	47391	47391-E
47352	**47352-E**	500	M 10x1.50	50.8	63	17.4	38.1	20	9.5	50.8	6	47392	47392-E
47353	**47353-E**	725	M 12x1.75	76.2	85	30.1	60.3	24	15.9	81	20	47393	47393-E
47354	**47354-E**	1400	M 16x2.0	76.2	94	30.1	60.3	31	15.9	81	34	47394	47394-E
47355	**47355-E**	2290	M 20x2.5	101.6	133	48.4	95.3	40	25.4	125.4	70	47395	47395-E
47356	**47356-E**	3050	M 24x3.0	101.6	147	48.4	95.3	47	25.4	125.4	125	47396	47396-E
47357	**47357-E**	4850	M 30x3.5	152.0	173.8	76.2	43.6	43.6	31.7	173.0	340	47397	47397-E
47358	**47358-E**	7500	M 36 x 4.0	152.0	191.0	76.2	117.5	67.5	35.0	173.0	540	47391	47391-E

All dimensions are in millimeters.
[1]Stated load capacity based on specific thread torques as shown in charts.
[2]It is recommended that these torques be used when installing hoist rings.

Bolt Replacement Kits

Inch Thread

Hoist Ring Part No.	Bolt Kit Part No.	Envirolox™ Bolt Kit Part No.	Thread Size	Wt. (lbs)
47311	**47341**	**47341-E**	5/16-18	.05
47312	**47342**	**47342-E**	3/8-16	.06
47313	**47343**	**47343-E**	1/2-13	.17
47314	**47344**	**47344-E**	5/8-11	.28
47315	**47345**	**47345-E**	3/4-10	.59
47316	**47346**	**47346-E**	1-8	1.27
47317	**47347**	**47347-E**	1 1/4-7	2.50
47317-08	**47347-08**		1 1/4-8	2.50
47318	**47348**	**47348-E**	1 1/2-6	4.70
47318-08	**47348-08**		1 1/2-8	4.70
47319	**47349**	**47349-E**	2-4 1/2	9.50
47319-08	**47349-08**		2-8	9.50

Metric Thread

Hoist Ring Part No.	Bolt Kit Part No.	Envirolox™ Bolt Kit Part No.	Thread Size	Wt. (kg)
47351	**47391**	**47391-E**	M 8	.02
47352	**47392**	**47392-E**	M 10	.03
47353	**47393**	**47393-E**	M 12	.07
47354	**47394**	**47394-E**	M 16	.14
47355	**47395**	**47395-E**	M 20	.32
47356	**47396**	**47396-E**	M 24	.53
47357	**47397**	**47397-E**	M 30	1.03
47358	**47398**	**47398-E**	M 36	2.0

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Bolt Kits contain bolt and retaining ring.
Bolt Kits with -E are for use with Envirolox™ Hoist Rings.

• See page 530 for Hoist Ring hold down clips.

Jergens LIFTING SOLUTIONS GROUP

SP 2000™ Side-Pull Style
Extended D Ring



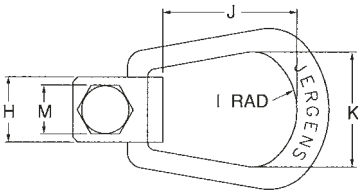
The Jergens SP2000 Side-Pull Style Hoist Ring is ideal for flipping fixtures, dies and molds. It swivels 360° and pivots around the center bolt providing the ring with greater clearances in side lifting applications and when lifting rotating objects. The hoist ring is low profile and has a unique bolt retention design. The oversized forged ring, and single piece forging, easily adapts to larger hoist hooks. Its relatively light weight makes it easier to handle than similar hoist rings and the installation is conveniently done with external wrenching (47531, 47532) or internal/external wrenching (all other sizes). All parts are made in the U.S.A.

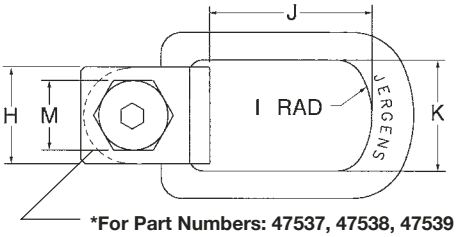
- Can Be Used for Top Lifting as well as side lifting applications
- Full Swivel & Pivot Action
- Rated at 5:1 strength factor at any angle
- Material: Alloy Steel
- Finish: Black Oxide
- Proof Tested to 200% of Rated Load Capacity
- Available in Metric sizes. See page 537.
- 3D Solid Models available in multiple formats from **www.jergensinc.com**
- Made in USA

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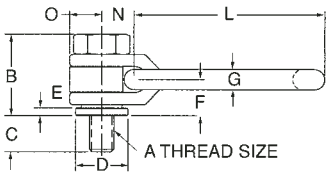
LEEA

Patent Nos. 6,068,310
and 409,895

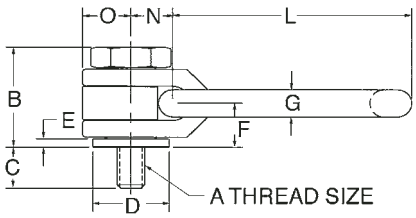




*For Part Numbers: 47537, 47538, 47539



External Wrench Mounting
Part Numbers: 47531 & 47532



Internal/External Wrench Mounting
Part Numbers: 47533 thru 47539

Inch Threads (Includes Gold Colored Spacer)

Part Number	Load Capacity (lbs)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Torque (ft. lbs)	Hex Size	Wt. (lbs)
47531	650	5/16-18	1 9/32	15/32	13/16	1/8	9/16	5/16	1	1	2 1/16	1 3/4	3	3/4	1/2	1/2	4	—	.5
47532	800	3/8-16	1 9/32	5/8	13/16	1/8	9/16	5/16	1	1	2 1/16	1 3/4	3	3/4	1/2	1/2	5	—	.5
47533	1800	1/2-13	1 7/8	3/4	1 3/8	5/32	13/16	1/2	1 3/4	1 1/2	3 3/8	2	4 3/4	1 1/4	3/4	7/8	15	1/4	2
47534	2500	5/8-11	1 7/8	15/16	1 3/8	5/32	13/16	1/2	1 3/4	1 1/2	3 3/8	2	4 3/4	1 1/4	3/4	7/8	25	5/16	2
47535	4100	3/4-10	2 5/16	1 1/8	1 7/8	1/4	1 1/32	5/8	2 1/4	2	4	2 5/8	5 11/16	1 3/4	1	1 1/8	50	3/8	4
47536	7100	1-8	2 5/16	1 1/2	1 7/8	1/4	1 1/32	5/8	2 1/4	2	4	2 5/8	5 11/16	1 3/4	1	1 1/8	130	1/2	4.5
***47537**	14000	1 1/4-7	4 9/16	1 7/8	3 1/4	23/64	2 5/32	1 1/16	3 3/4	3	7 11/16	4 3/8	10 7/16	3	1 5/16	1 7/8	150	3/4	24.50
***47538**	17200	1 1/2-6	4 9/16	2 1/4	3 1/4	23/64	2 5/32	1 1/16	3 3/4	3	7 11/16	4 3/8	10 7/16	3	1 5/16	1 7/8	250	3/4	30
***47539**	29000	2-4 1/2	4 9/16	3	3 1/4	23/64	2 5/32	1 1/16	3 3/4	3	7 11/16	4 3/8	10 7/16	3	1 5/16	1 7/8	300	3/4	26.50

SP 2000™ Side-Pull
Metric - Extended D Ring



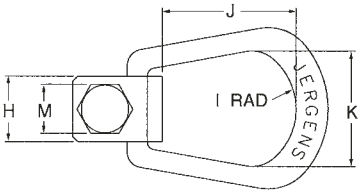
Patent Nos. 6,068,310
and 409,895

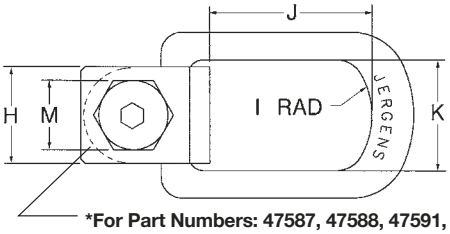


SIDE PULL APPLICATION

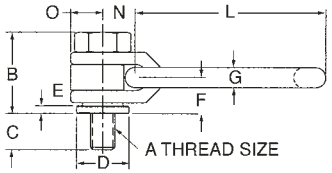


TOP PULL APPLICATION

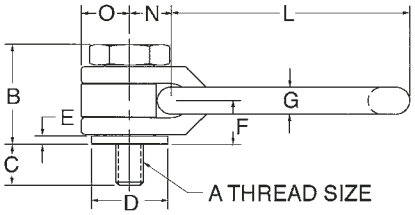




*For Part Numbers: 47587, 47588, 47591, 47589



External Wrench Mounting
Part Numbers: 47581 & 47582



Internal/External Wrench Mounting
Part Numbers: 47583 thru 47589, 47591

Metric Threads (Includes Blue Colored Spacer)

Part Number	Load Capacity (kg)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Torque (N•m)	Hex Size	Wt. (kg)
47581	325	M8 x 1.25	33	16	21	3	14	8	25	25	52	44	76	19	13	13	5	—	.25
47582	500	M10 x 1.5	33	20	21	3	14	8	25	25	52	44	76	19	13	13	10	—	.25
47583	725	M12 x 1.75	48	24	35	4	21	13	44	38	86	51	120	32	19	22	20	6	1
47584	1400	M16 x 2	48	32	35	4	21	13	44	38	86	51	120	32	19	22	40	8	1
47585	2290	M20 x 2.5	59	40	48	6	26	16	57	51	102	67	145	44	25	29	70	10	2
47586	3050	M24 x 3	59	48	48	6	26	16	57	51	102	67	145	44	25	29	140	12	2
***47587**	4850	M30 x 3.5	117	60	83	9	52	27	95	76	196	111	265	76	49	48	350	41.3	11.1
***47588**	7500	M36 x 4	117	72	83	9	52	27	95	76	196	111	265	76	49	48	550	41.3	11.3
***47591**	8700	M42 x 4.5	117	84	83	9	52	27	95	76	196	111	265	76	49	48	800	41.3	11.8
***47589**	10000	M48 x 5	122	96	83	9	52	27	95	76	196	111	265	80	49	48	1200	41.3	12.5

All dimensions are in millimeters.

CE CERTIFIED

LEEA

Side Swivel



U.S. Patent No. 6,443,514

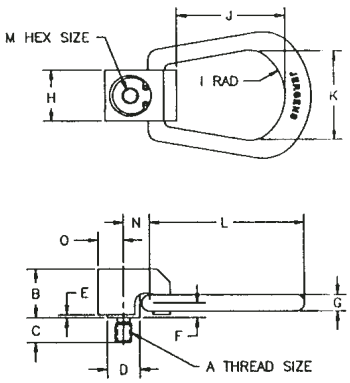
Jergens new Side Swivel™ Lifting Ring is designed specifically for OEM type applications. It replaces potentially dangerous eyebolts on commercial, military, and industrial lifts requiring full swivel and pivoting action.

- 5:1 strength factor-forged ring
- Unique 3 piece design
- Made in U.S.A.
- Capacities up to 4100 lbs.
- Inch and metric
- OEM Pricing
- 3D Solid Models available in multiple formats from **www.jergensinc.com**
- Material: Alloy Steel

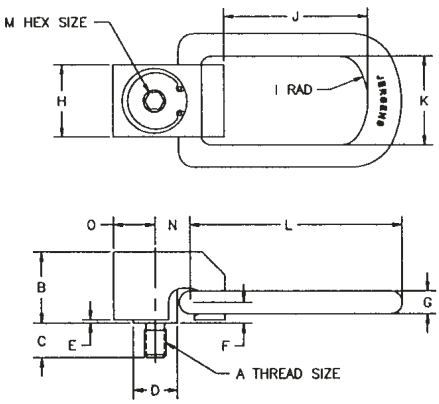
Ideally suited for OEM applications



Small Side Swivel*



Large Side Swivel



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Part Number	Load Capacity (lbs)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	N	O	Torque (ft.lbs)	Weight (lbs)
47800*	650	5/16-18	15/16	15/32	5/8	1/16	9/32	5/16	1	1	2 1/16	1 3/4	2 31/32	1/4	1/2	1/2	3.5	0.6
47801*	800	3/8-16	15/16	9/16	5/8	1/16	9/32	5/16	1	1	2 1/16	1 3/4	2 31/32	1/4	1/2	1/2	4.5	0.6
47802	1800	1/2-13	1 37/64	3/4	1	5/64	7/16	1/2	1 5/8	1 1/2	3 1/4	2	4 3/4	3/8	25/32	15/16	15	2.5
47803	2500	5/8-11	1 37/64	15/16	1	5/64	7/16	1/2	1 5/8	1 1/2	3 1/4	2	4 3/4	3/8	25/32	15/16	25	2.5
47804	4100	3/4-10	1 37/64	1 1/8	1	5/64	7/16	1/2	1 5/8	1 1/2	3 1/4	2	4 3/4	3/8	25/32	15/16	50	2.5

* Small Side Swivel

Metric

Part Number	Load Capacity (kg)	Thread Size A	B	C	D	E	F	G	H	I	J	K	L	Hex Size M	N	O	Torque (N•m)	Weight (kg)
47850*	325	M8 x 1.25	23.8	15.8	15.8	1.6	7.2	7.9	25.4	25.4	52.4	44.5	75.4	6	12.7	12.7	4.2	.27
47851*	500	M10 x 1.5	23.8	19.8	15.8	1.6	7.2	7.9	25.4	25.4	52.4	44.5	75.4	6	12.7	12.7	6	.27
47852	725	M12 x 1.75	40.1	23.8	25.4	2.0	11.1	12.7	41.3	38.1	82.6	50.8	120.7	10	20	24	20	1.14
47853	1400	M16 x 2.0	40.1	31.8	25.4	2.0	11.1	12.7	41.3	38.1	82.6	50.8	120.7	10	20	24	40	1.14
47854	2290	M20 x 2.5	40.1	39.7	25.4	2.0	11.1	12.7	41.3	38.1	82.6	50.8	120.7	10	20	24	70	1.18

* Small Side Swivel

Swivel Eyebolt

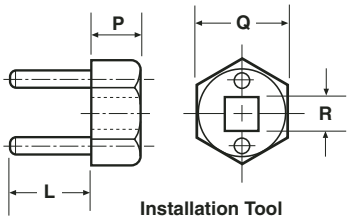


The Jergens Swivel Eyebolt™ lifting product has a full swivel and pivoting action that allows for the flipping and turning of the part without unhooking. The patented tamper resistant design is ideal for permanent mounting on OEM applications or on molds, dies and fixtures.

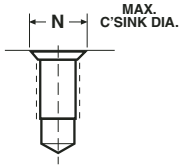
- Tamper Resistant Design
- Swivels 360°, Pivots 180°
- Eliminates Bending (of Eyebolt) Problem
- Forged, Oversized, One-Piece Lift Ring
- Rated at 5:1 Strength Factor
- Load Capacities to 4000 Lbs / 2000 Kg
- Economically Priced
- Material: Alloy Steel, or 316 Stainless Steel
- Finish: Black Oxide, or Passivated (SS)
- 3D Solid Models available in multiple formats from **www.jergensinc.com**
- Made in USA

U.S. Patent Nos. 5,634,734
and 5,743,576
Foreign Patent Pending

CE CERTIFIED



Installation Tool

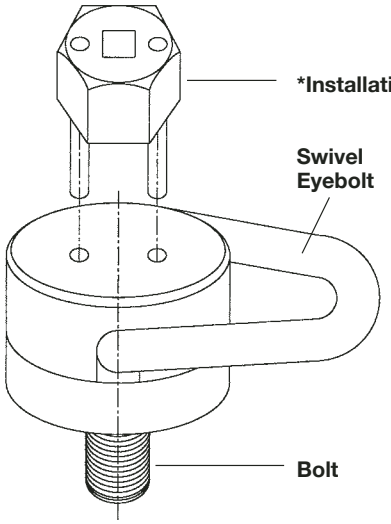


TO PREVENT BINDING, THE MOUNTING HOLE COUNTERSINK SHOULD NOT EXCEED 'N' DIMENSION.

Installation Tool Information

Installation Tool Part Number	Pin Length L	Head Thickness P	Hex Size Q	Square Drive R
47641	11/16	.55	15/16	1/4
47643	1 1/8	.65	1 1/4	3/8

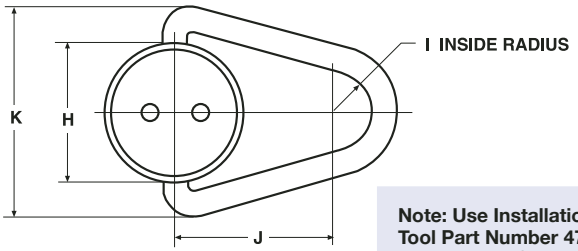
Swivel Eyebolt Part Number	Installation Tool Part Number	Recommended Torque	Maximum Countersink Diameter N
47621	**47641**	7 ft. lbs.	1/2
47622	**47641**	20 ft. lbs.	5/8
47631	**47641**	7 ft. lbs.	1/2
47632	**47641**	20 ft. lbs.	5/8
47671	**47641**	10 N•m	13 mm
47672	**47641**	25 N•m	16 mm
47681	**47641**	10 N•m	13 mm
47682	**47641**	25 N•m	16 mm
47625	**47643**	35 ft. lbs.	3/4
47626	**47643**	55 ft. lbs.	7/8
47633	**47643**	35 ft. lbs.	3/4
47634	**47643**	55 ft. lbs.	7/8
47675	**47643**	50 N•m	19 mm
47676	**47643**	80 N•m	22 mm
47683	**47643**	50 N•m	19 mm
47684	**47643**	80 N•m	22 mm

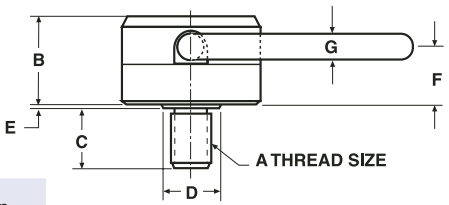


***Installation tool is required.**

Jergens LIFTING SOLUTIONS GROUP

Small Swivel Eyebolt





Jergens Swivel Eyebolt™

Note: Use Installation Tool Part Number 47641 for this style Swivel Eyebolt on page 539.

CE CERTIFIED LEEA

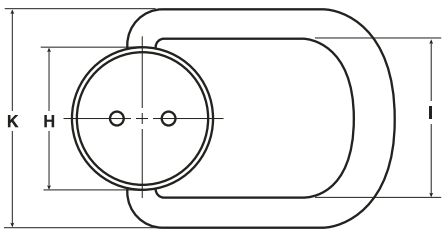
Swivel Eyebolt

Part Number		Load Capacity (lbs)		Thread Size A	B	C	D	E	F	G	H	I	J	K
Alloy Steel	Stainless Steel	Alloy Steel	Stainless Steel											
47621	**47631**	1000	500	3/8 - 16	1 3/32	9/16	3/4	3/64	45/64	5/16	1 3/4	1/2	2	2 5/8
47622	**47632**	2000	1000	1/2 - 13	1 3/32	3/4	3/4	3/64	45/64	5/16	1 3/4	1/2	2	2 5/8

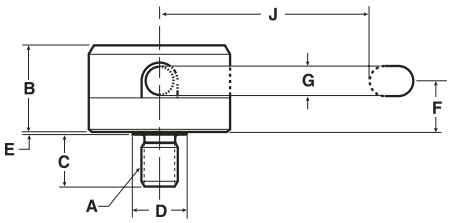
Metric Swivel Eyebolt

Part Number		Load Capacity (Kg)		Thread Size A	B	C	D	E	F	G	H	I	J	K
Alloy Steel	Stainless Steel	Alloy Steel	Stainless Steel											
47671	**47681**	500	250	M10 x 1.5	27.8	14.6	19.1	1.2	17.9	7.9	44.5	12.7	50.8	66.7
47672	**47682**	700	350	M12 x 1.75	27.8	19.1	19.1	1.2	17.9	7.9	44.5	12.7	50.8	66.7

Large Swivel Eyebolt



Note: Use Installation Tool Part Number 47643 for this style Swivel Eyebolt on page 539.



CE CERTIFIED LEEA

Swivel Eyebolt

Part Number		Load Capacity (lbs)		Thread Size A	B	C	D	E	F	G	H	I	J	K
Alloy Steel	Stainless Steel	Alloy Steel	Stainless Steel											
47625	**47633**	3000	1500	5/8 - 11	1 33/64	15/16	7/8	1/32	57/64	1/2	2 1/2	2 3/4	3 1/2	3 13/16
47626	**47634**	4000	2000	3/4 - 10	1 33/64	1 1/8	1	1/32	57/64	1/2	2 1/2	2 3/4	3 1/2	3 13/16

Metric Swivel Eyebolt

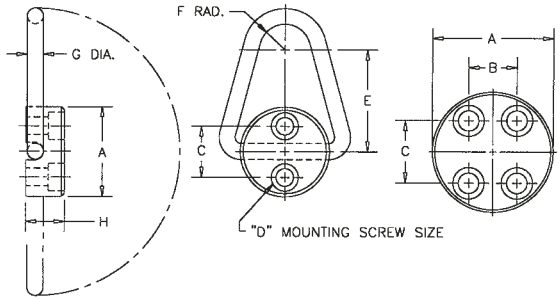
Part Number		Load Capacity (Kg)		Thread Size A	B	C	D	E	F	G	H	I	J	K
Alloy Steel	Stainless Steel	Alloy Steel	Stainless Steel											
47675	**47683**	1500	750	M16 x 2.0	38.5	23.8	22.2	.8	22.6	12.7	63.5	70	93	97
47676	**47684**	2000	1000	M20 x 2.5	38.5	30.2	25.4	.8	22.6	12.7	63.5	70	93	97

Pivoting Lift Ring



The Jergens Pivoting Lift Ring is a low profile lifting device that pivots 180˚. It is one of the most economical lifting devices available and is ideal for applications that do not require a swivel action. This Lift Ring is easy to install and is available in five sizes. Load ratings range from 2,000 - 20,000 lbs. The product is manufactured from alloy steel, heat treated and magnafluxed.

- Base: Precision Machined Alloy Steel
- Ring: Alloy Steel forging, heat treated, magnafluxed and certified
- Finish: Black Oxide
- Rated at 6:1 Strength Factor
- 3D Solid Models available in multiple formats from **www.jergensinc.com**
- Made in USA



Pivoting Lift Rings

Ring Part Number	Load Capacity (lbs)	A	B	C	Mounting Bolt Part Number	Thread & Length D	E	F	G	H
47411	2000	1 3/4	–	1	**47421**	5/16-18 x 1 1/4	2	1/2	5/16	3/4
47412	2500	2 1/4	–	1 1/8	**47422**	3/8-16 x 1 1/2	2 1/2	5/8	3/8	7/8
47413	5000	2 1/2	–	1 1/2	**47423**	1/2-13 x 1 3/4	3	3/4	1/2	1 1/8
47414*	12000	3 1/8	1 1/4	1 5/8	**47424**	1/2-13 x 2 1/2	4	7/8	3/4	1 3/8
47415*	20000	3 5/8	1 1/4	2 1/16	**47425**	5/8-11 x 2 1/2	5	1	1	1 7/8

* The larger load capacity rings have four mounting holes.
***Note**: Mounting Bolts must be ordered separately.

Metric Pivoting Lift Rings

Ring Part Number	Part Number with Pull Test & Metric Screws	Load Capacity (kg)	A	B	C	Mounting Bolt Part Number	Thread & Length D	E	F	G	H
47411	**47411-PTMS**	900	45	–	25.4	**47471**	M 8 x 1.25 x 35 mm	51	13	8	19
47412	**47412-PTMS**	1100	57	–	28.6	**47472**	M 10 x 1.5 x 40 mm	64	16	10	22
47413	**47413-PTMS**	2250	64	–	38.1	**47473**	M 12 x 1.75 x 45 mm	76	19	13	29
47414*	**47414-PTMS**	5400	80	31.8	41.3	**47474**	M 12 x 1.75 x 55 mm	102	22	19	35
47415*	**47415-PTMS**	9000	92	31.8	52.4	**47475**	M 16 x 2.0 x 65 mm	127	25.4	25.4	48

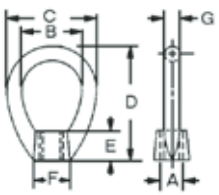
* The larger load capacity rings have four mounting holes.
***Note**: Mounting Bolts must be ordered separately.

CE CERTIFIED

Eye Nuts

Inch





- ASTM A 105
- Material: C-1030 Forge
- In Vertical Pull Only

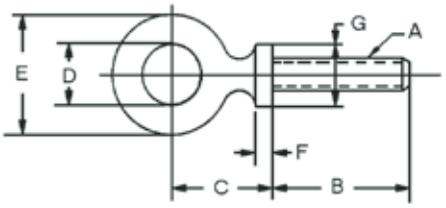
Part Number	A	B	C	D	E	F	G	Load Wt (lbs)	Capacity (lbs)
18900*		1 1/4	2	2 1/2	5/8	7/8	3/8	.22	2700
18901	3/8-16	1 1/4	2	2 1/2	5/8	7/8	3/8	.22	2700
18902	1/2-13	1 1/4	2	2 1/2	5/8	7/8	3/8	.22	2700
18903	5/8-11	1 1/2	2 1/2	3	3/4	1 3/8	1/2	.50	5000
18904	3/4-10	1 1/2	2 1/2	3	3/4	1 3/8	1/2	.50	5000
18905*		1 1/2	2 1/2	3	3/4	1 3/8	1/2	.50	5000

*Blank

Shoulder Eye Bolts

Inch

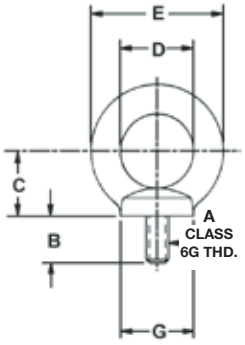




- Material: C-1030 Forge
- Finish: Mill
- Thread: 2A
- ASME B 18.15
- Rated at 5:1 strength factor
- Recommended for vertical loads ONLY

For other than vertical loads, general practice is to use 60% of the working load capacity for a load 30° from vertical; 33% of vertical load for load 45° from vertical; and 20% of vertical load for load 90° from vertical.

NOTE: 2 1/2 threads runout on threaded portion.



Part Number	A	B	C (Ref.)	D	E	F (Ref.)	G	Wt (lbs)	Load Capacity (lbs)
18501	1/4-20	1	11/16	3/4	1 3/16	3/16	1/2	.05	500
18502	5/16-18	1 1/8	7/8	7/8	1 7/16	3/16	5/8	.10	900
18503	3/8-16	1 1/4	1 1/16	1	1 21/32	3/16	11/16	.16	1300
18504	1/2-13	1 1/2	1 5/16	1 3/16	2 1/16	1/4	7/8	.36	2400
18505	5/8-11	1 3/4	1 19/32	1 3/8	2 1/2	1/4	1 1/8	.65	4000
18506	3/4-10	2	1 23/32	1 1/2	2 13/16	5/16	1 1/4	1.00	5000
18507	7/8-9	2 1/4	2 3/16	1 11/16	3 1/4	3/8	1 7/16	1.70	7000
18508	1-8	2 1/2	2 13/32	1 13/16	3 9/16	13/32	1 9/16	2.36	9000
18509	1 1/8-7	2 3/4	2 23/32	2	4	15/32	1 11/16	3.41	12000
18510	1 1/4-7	3	2 15/16	2 3/16	4 7/16	1/2	1 7/8	4.68	15000
18511	1 1/2-6	3 1/2	3 7/16	2 1/2	5 3/16	9/16	2 3/16	7.77	21000
18512	1 3/4-5	3 3/4	3 31/32	2 7/8	6 1/16	5/8	2 1/2	11.35	28000
18513	2-4 1/2	4	4 1/2	3 1/4	6 7/8	3/4	2 7/8	16.70	38000

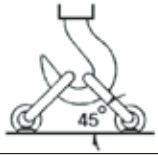
Metric - Short

Loads given ensure a strength factor of four against deformation of any kind and strength factor of five against fracture.

- Material: C-15 Annealed (AISI 1015)
- Finish: Mill
- Thread: 6g

Part Number	A	B	C (Ref.)	D	E	G	Wt. (kg)	Maximum permissible loads in lbs. For one bolt firmly tightened	Maximum permissible loads in lbs. For two bolts total
18551	M6 x 1	13.0	17.5	19.1	36.5	20.0	.023	150	100
18552	M8 x 1.25	13.0	22.2	22.2	36.5	20.0	.045	300	200
18554	M12 x 1.75	20.5	33.3	30.2	52.4	30.0	.163	700	500
18555	M16 x 2	27.0	40.5	34.9	63.5	35.0	.295	1500	1100





All Dimensions in Millimeters.

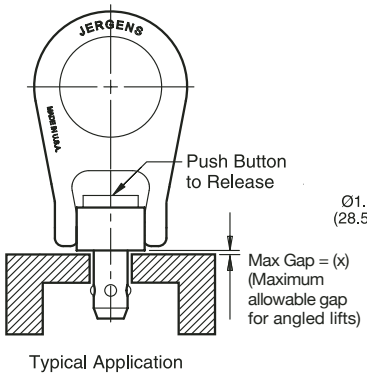
Metric - Standard

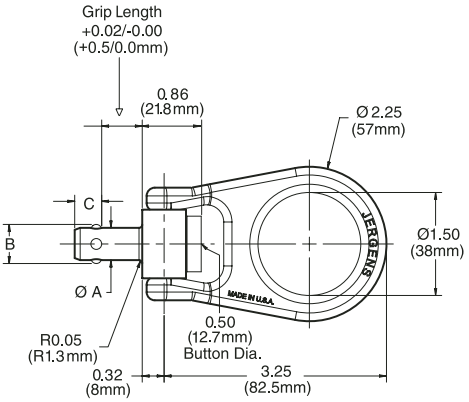
Part Number	A	B	C (Ref.)	D	E	F (Ref.)	G	Wt (lbs)	Load Capacity (kg)	Load Capacity (lbs)
18561	M6 x 1.0	25.4	20.6	19	30.0	3.9	13.5	.06	210	462
18562	M8 x 1.25	31.7	29.4	25	43.0	4.8	17.5	.17	500	1110
18563	M10 x 1.5	35.0	33.3	27	46.0	5.2	19.8	.24	740	1628
18564	M12 x 1.75	38.0	36.5	30	54.0	5.6	22.2	.36	1030	2266
18565	M16 x 2.0	44.5	43.6	35	65.0	6.3	27.0	.69	1600	3520
18566	M20 x 2.5	57.0	55.6	41	81.0	9.5	36.5	1.51	2860	6292
18567	M24 x 3.0	63.5	61.1	44	90.4	10.3	39.7	2.36	3850	8470
18568	M30 x 3.5	76.0	74.6	55	112.7	12.7	47.6	4.68	6400	14080
18569	M36 x 4.0	89.0	87.3	63	131.8	14.3	55.6	7.77	8970	19734
18570	M42 x 4.5	95.0	93.6	73	152.4	15.1	60.3	11.10	11960	26312
18571	M48 x 5.0	101.6	107.9	82	174.6	17.5	69.8	15.90	16400	36080

- Material: C-1030 Forge
- Finish: Mill
- Thread: 6g

Kwik-Lok® Lifting Pins







- All stainless steel construction and components
- 17-4 PH stainless steel forged, heat treated lifting ring with large opening
- Lifting ring with Load Spreader Bar
- 5 to 1 strength factor
- 360° Swivel
- 180° Pivot
- Also chosen for lashing applications

Lifting Pin Specifications - Inches

Nom Pin Dia	Max. Load Rating (lbs)*	ØA		+/-0.005 B	+0.00/ -0.04 C	Max. Gap (X) (in)	Required Hole Diameter (in)	
		Min	Max				Max	Min
1/4	400	.2470	.2485	.286	.290	0.06	0.2540	0.2500
5/16	700	.3095	.3110	.375	.330	0.06	0.3165	0.3125
3/8	1,000	.3720	.3735	.440	.365	0.06	0.3790	0.3750
1/2	1,250	.4970	.4985	.594	.460	0.06	0.5050	0.5000
5/8	1,400	.6220	.6235	.750	.580	0.06	0.6300	0.6250

Lifting Pin Specifications - Metric

Nom Pin Dia	Max. Load Rating (kg)*	ØA		+/-0.25 B	+0.0/ -1.0 C	Max. Gap (X) (mm)	Required Hole Diameter (mm)	
		Min	Max				Max	Min
10	450	9.92	9.96	12.00	9	1.5	10.1	10.0
12	560	11.92	11.96	14.27	10	1.5	12.1	12.0
16	630	15.92	15.96	19.00	14	1.5	16.1	16.0

*Dimensions in millimeters

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LEEA

Kwik-Lok® Lifting Pin - Inches

Dia.	Grip Length							
	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00
1/4	807216	807217	807218	807219	807220	807222	807224	807225
5/16	807232	807233	807234	807235	807236	807238	807240	807241
3/8	807248	807249	807250	807251	807252	807254	807256	807257
1/2	807280	807281	807282	807283	807284	807286	807288	807289
5/8	807312	807313	807314	807315	807316	807318	807320	807321

Kwik-Lok® Lifting Pin - Metric

Dia.	Grip Length							
	15	20	25	30	35	40	50	75
10	857237	857238	857239	857240	857299	857241	857242	857307
12	857249	857250	857251	857252	857300	857253	857254	857308
16	857261	857262	857263	857264	857301	857265	857266	857309

Important: Please review all operating instructions that are included in the packaging or online before use.

Note: If the required hole size cannot be achieved; Jergens recommends the use of our threaded receptacle (see page 544); Please Contact Customer Service with any questions.

*Lifting load ratings are based on tests with hardened tool steel plates or shoulder bushings. Load ratings may be reduced if oversized holes or parent material under 80,000 psi tensile are used.

*Kwik-Lok® Lifting Pins are not suited for continuous rotation under load.

Threaded Receptacles

High Strength Stainless Steel, 17-4 PH heat treated

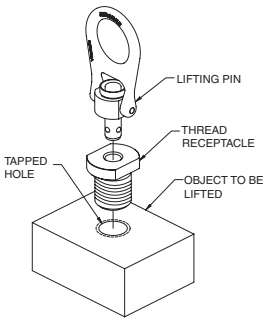


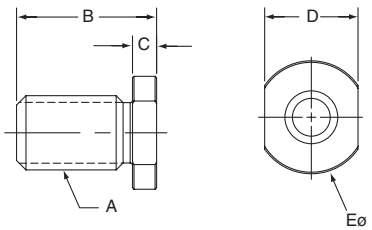
KLP Threaded Receptacles - Inch

For Kwik-Lok® Lifting Pin		Use Receptacle	Thread Size	Overall Length	Head Height	Head Flats	Diameter	Install Torque
Size	Part Number	Part Number	A	B	C	D	E	(ft-lbs)
1/4×0.5	807216	**845100**	1/2-13	0.930	0.16	.62	.75	7
5/16×0.5	807232	**845101**	3/4-10	1.100	0.28	.87	1.12	18
3/8×0.5	807248	**845102**	3/4-10	1.100	0.28	.87	1.12	25
1/2×0.5	807280	**845103**	1 1/8-7	1.625	0.37	1.25	1.62	47
5/8×0.5	807312	**845104**	1 1/8-7	1.625	0.37	1.25	1.62	53

KLP Threaded Receptacles - Metric

For Kwik-Lok® Lifting Pin		Use Receptacle	Thread Size	Overall Length	Head Height	Head Flats	Diameter	Install Torque
Size	Part Number	Part Number	A	B	C	D	E	(Nm)
10×15	857237	**855100**	M20x2.5	29	7	26	34.8	35
12×15	857249	**855101**	M22x2.5	37	9	30	34.8	49
16×15	857261	**855102**	M27x3	41	10	32	41.2	68







Kwik-Lok® Lifting Pin Kits - Inch

Kit Part Number	Kwik-Lok® Lifting Pin Size	Receptacle Thread Size	Kwik-Lok® Lifting Pin Part Number	Threaded Receptacle Part Number
847216	1/4 x 0.5	1/2-13	807216	845100
847232	5/16 x 0.5	3/4-10	807232	845101
847248	3/8 x 0.5	3/4-10	807248	845102
847280	1/2 x 0.5	1 1/8-7	807280	845103
847312	5/8 x 0.5	1 1/8-7	807312	845104

*Each kit contains one Kwik-Lok® lifting pin and one corresponding Threaded Receptacle.

Kwik-Lok® Lifting Pin Kits - Metric

Kit Part Number	Kwik-Lok® Lifting Pin Size	Receptacle Thread Size	Kwik-Lok® Lifting Pin Part Number	Threaded Receptacle Part Number
877237	M10 x 15	M20 x 2.5	857237	855100
877249	M12 x 15	M22 x 2.5	857249	855101
877261	M16 x 15	M27 x 3	857261	855102

*Each kit contains one Kwik-Lok® lifting pin and one corresponding Threaded Receptacle.

Quality Standards
Center-Pull Traditional and
Side-Pull Traditional Style Hoist Rings

Load Bearing Member Components

- All material is domestically manufactured certified alloy steel.
- All components are machined prior to manufacture to remove any surface defects.
- All components are heat treated and certified to manufacturing specifications.
- Bolts are:

Inch	Thread Class	Metric	Metric Thread Class
Socket Screw Grade Tensile Strength -180,000 psi - 1/2" or Smaller -170,000 psi - Over 1/2" 100% Magnetic Particle Inspected to ASTM E709-08 & ASTM A574	Up to 1" 3A Over 1" 2A	Grade 12.9 Tensile Strength -1220 MPa - (177,000 psi) 100% Magnetic Particle Inspected to ASTM E709-08 & ASTM A574M	Class 6g

- All other load bearing components are magnetic particle inspected based upon ASTM E709-08 and MIL-STD-1916 with zero defects permissible.
- Bolt torque and hoist ring load limit permanently marked on washer.
- **ISO 9001: 2008 Certified**

Individual certificate of proof-test accompanies Center-Pull and Side-Pull Style hoist rings in final packaging.

Jergens MANUFACTURING EFFICIENCY

CERTIFICATE OF PROOF TEST

(1) Distinguishing Mark	(2) Description of Item Tested	(3) Quantity Tested	(4) Date Tested	(5) Load Applied	(6) Rated Load
AX	23408 HOIST RING	1	1/1/2016	2,000 LBS	1,000 LBS

(7) Name and Address of Supplier:	Jergens Inc., 15700 Waterloo Rd., Cleveland, OH 44110
(8) Name and Address of Company performing test:	Jergens Inc., 15700 Waterloo Rd., Cleveland, OH 44110
(9) Position of Signatory in Company	Quality Assurance Manager

Jergens Inc. certifies that all hoist rings have been proof tested and examined in accordance with Jergens QSWI 3.10 and that this test completes all procedures as required.

CE ISO9001:2008 Quality System Certified (Signature)

AMERICAN MADE

In substantial agreement with (OSHA) 29 CFR 1918, ANSI/ASME B30-26, MIL-STD-1365C, MIL-STD-209K

Quality Standards For Center-Pull and Side-Pull Traditional Style Hoist Rings

Assembly Data

- Traditional Center Pull and Side Pull hoist ring assemblies are pull-tested and certified to 200% of rated load capacity and stamped with identifying date code.
- All hoist rings are designed for 5:1 strength factor.
- Hoist rings are color coded for easy identification: gold washer denotes inch sizes, silver/clear blue washer denotes metric sizes.
- Finished assembly is black oxide (with the exception of the washer).
- The Jergens name or logo is prominently displayed on assembly for identification of original manufacturer.
- Special plating or marking is available upon customer's request.
- Proper warning label is affixed to each clevis.
- Proof load testing, magnafluxing and heat treating are on file at Jergens, Inc.
- Material Certs available for nominal cost and must be requested with initial order.
- The finished hoist ring product is individually boxed.

NOTE: Specifications for side pull style hoist rings are identical to center pull style with the exception that the clevis is of precision cast alloy material which is serialized and conforms to X-ray specifications.

Contact Jergens for quality standards on all other lifting products.

Multi-lingual safety data instructions included in each package

IMPORTANT
GIVE TO SAFETY MANAGER

IMPORTANT
À FOURNIR AU
DIRECTEUR DE SÉCURITÉ

IMPORTANTE
ENTREGAR AL
SUPERVISOR DE SEGURDAD

IMPORTANTE
CONSEGNARE AL
RESPONSABILE PER LA
SICUREZZA

IMPORTANTE
DÊ PARA O GERENTE
DE SEGURANÇA

WICHTIG
AN DEN
SICHERHEITSMANAGER
WEITERGEBEN

重要
安全管理担当者様

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Cleveland, Ohio 44110-3898
Phone: (216) 486-5540 • Fax: (216) 481-6193

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Jergens MANUFACTURING EFFICIENCY

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FW	Flat USAE HD Washer	408
TV	4" (100mm) Jergens BOCK Brand Interlocking	110
TV	6" (150mm) Jergens BOCK Brand Interlocking	113



In 1942, Jergens Inc. opened its doors and began its journey to grow into one of the world's largest manufacturers of standard tooling components, vises and other workholding equipment. In the decades since the beginning, there have been numerous milestones that have not only shaped the company, but industry on the whole. Today, three separate divisions provide superior engineered solutions, products and services, supporting manufacturing customers around the globe. Yet, through the many changes, one thing has remained a constant – the core values of Jergens. A dedication to honesty, hard work, excellence in all we do and a commitment to family. These values are the foundation upon which the company was built, the standard for how every Jergens employee conducts themselves today, and will continue to set the direction into the future.



1940's

Christy & Jack Schron open Glenn Tool and Manufacturing to support, among other things, the war effort. Later, Jergens is launched as the selling arm for Glenn Tool.

1942

Christy & Jack Schron open Glenn Tool and Manufacturing Company using machinery located in both their home garage & a small rented garage on East 152nd Street. Glenn Tool and Manufacturing Company receives the Certificate of Appreciation for Meritorious Performance of Subcontracts for War Material Vital to Victory. Glenn Tool and Manufacturing Company completes their first job making spring seats for Timken Axle Division, used in International Harvester's Army halftracks.

1943

Glenn Tool and Manufacturing Company moves to a building off of East 163rd off St. Clair, adding office space, an engineering room, a coffee room and additional manufacturing space.

1944

Jergens Tool Specialty Company is launched to sell the products made by Glenn Tool & Manufacturing Company. Glenn Tool and Manufacturing Company receives the Army Navy Production Award for Excellence in War Production.



1950's

Jergens Tool Specialty Company gains momentum with its first printed catalog and merges with Glenn Tool.

1952 The first Jergens Tool Specialty Company catalog is published. The catalog is hand-assembled and distributed by personal visits from Jack and Esther Schron to manufacturers' representatives.

1955 Glenn Tool and Manufacturing Company and Jergens Tool Specialty Company are merged to create one company, Jergens Tool Specialty Company. The Sine Fixture Key becomes the first patented item in Jergens' product line.

1959 Christy Schron passes away on September 9, 1959. His son, Jack H. Schron carries on his legacy and the role of President of Jergens Tool Specialty Company.



1960's

Jergens outgrows the original location and moves to a larger facility, purchases a dramatic new machine called a computer, celebrates twenty-five years and introduces hoist rings.

1961 Jergens Specialty Tool Company outgrows their facilities on E 163rd and relocates to 19520 Nottingham Road.

1965 Jack Schron Sr. embarks on the first International Trade Mission, pioneering Jergens' involvement in international markets. This also marks the beginning of Jergens' long-term relationship with Japanese Distributor, IMAO Corporation©. Jergens, Inc. invests in their first computer, an IBM® 64, to assist with the increasing volume of paperwork.

1967 Jergens, Inc. celebrates the company's 25th Anniversary. The first issue of the News & Views, Jergens' employee publication, is introduced in October.

1968 Jergens, Inc. brand Hoist Rings are introduced as a lifting solution for many industrial applications.



1970's

ACME Industrial is purchased and Jergens develops an award winning A/V program.

1973 Jergens, Inc. acquires Acme Industrial.

1976 Jergens, Inc. sells their first HIOS© Screwdriver. Audio visual program created by Corky Schron for the HIOS product line receives an award at the Triple Mill Convention.

1978 Jergens, Inc. acquires Cutting Tools Inc. Jergens, Inc. purchases its first computer-controlled machine tool.



1980's

Acquisitions and investments continue and then Jack H. Schron, Sr. retires after 45 years of leadership.

1981 Jergens, Inc. acquires California distributor Liberty Industrial Company.

1982 Jergens Industrial Products is created as a supplier for third-party manufacturers in the limited market of Northeast Ohio. Jergens, Inc. introduces the first CAD computer database coupled with a management system to help tool designers create fixtures.

1983 Jergens, Inc. and ACME Industrial invest over $1 million to improve the manufacturing process with heat treat equipment, N.C. machines, broaching machines and heavy duty drilling machines.

1987 Jack H. Schron, Sr. retires after 45 years of leadership, and remains Chairman of the Board of Directors. Jack Schron, Jr. is elected President by the board. Jack Schron, Jr. creates three marketing divisions within Jergens, Inc.: the Assembly Systems Group (ASG), Jergens Industrial Supply (JIS) and the Tooling Component Division (TCD). Jergens, Inc. develops Ball Lock® and brings it to market for quick and accurate fixture location.



1990's

Jergens hits the internet, celebrates fifty years, receives multiple awards of excellence and moves into the brand new Waterloo facility.

1991 John Evans is elected Acme President by the Acme Board of Directors.

1992 Jergens, Inc. launches their first website. Governor of Ohio, George Vonovich, honors Jergens with a resolution of Jergens' 50th Anniversary.

1994 Jergens, Inc. receives the State of Ohio Governor's E Award for Excellence in Exporting. Jergens, Inc. mourns the death of Courtney Schron, who led the growth and development of ASG from its inception to becoming a leader in the electronic assembly market.

1996 Jergens, Inc. receives The American Supply & Machinery Manufacturers Association's highest honor, The American Eagle Award, for demonstrating excellence & leadership in the industry.

1999 After outgrowing their previous facility, Jergens, Inc. leaves their 19520 Nottingham Road location to enter a brand new facility on Waterloo Road. Jergens Industrial Supply acquires TabPro, Inc. to assist in gaining access to the Tool & Die industry.



2000's

Acquisitions continue, Tooling U is launched and Kwik-lok® pins, the largest product line of its kind, is introduced.

2000 Jergens, Inc. launches a new product line, the Kwik-lok® pins, which grew to be the largest product line offered.

2001 Acme Industrial acquires Economy Drill Bushing, a former competitor. Jergens, Inc. launches Tooling U©, an online training venue for industrial manufacturing skills, through the programming of Chad Schron.

2002 Jergens Industrial Supply installs their first vending machine for a customer.

2003 ASG develops the SmartTorq controller.

2005 Acme Industrial begins manufacturing key locking studs.

2006 Jergens Shanghai is established. ASG expands its product line to include pneumatic screwdrivers and nutrunners, creating the ASG branded H Series line.

2007 Jergens Industrial Supply wins an American Eagle Award.

2008 Jack H. Schron Sr. passes away on September 4, 2008, marking the end of an era of his leadership at Jergens. Jergens, Inc. acquires Bock Workholding from Pennsylvania.



2010's

Modern day sees rapid growth including more acquisition, distinct business units and a new benchmark in five axis workholding.

2010

Jergens, Inc. segments their product offerings into distinct business units: The Workholding Solutions Group, Specialty Fasteners Group and the Lifting Solutions Group. This provided the opportunity to get closer to the unique channels and customers that purchased these products. ASG acquires MicroTorq, LLC., a leading manufacturer of precision torque and angle DC electric fastener systems.

2011

Jergens, Inc. introduces the Fixture-Pro® Line, which is the first comprehensive, modular system approach to 5-Axis Workholding available. Jergens, Inc. sells Tooling U® to the Society of Manufacturing Engineers® and it grows to become the largest online learning tool focused on manufacturing.

2012

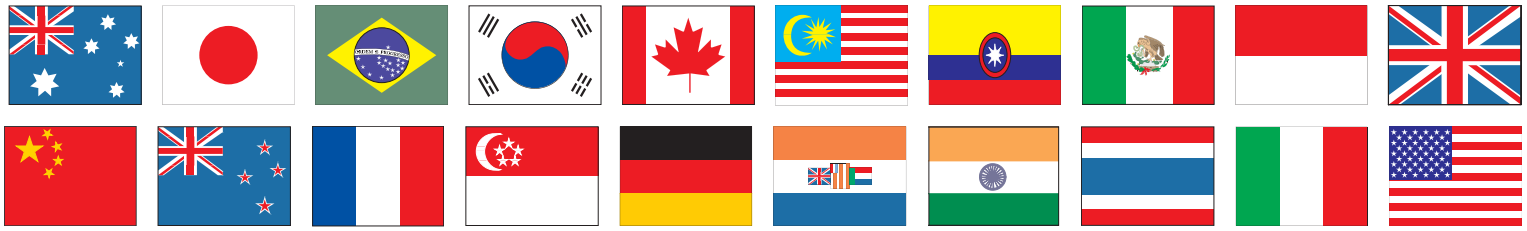
Jergens Industrial Supply acquires certain assets of the John M. Allen Company, which brought in an influx of new customers, increased sales coverage & growth and added services for the JIS' customer base. Jergens Industrial Supply establishes their first website to connect customers across the world with product from their established suppliers.

2013

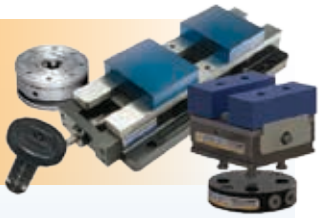
Jergens Industrial Supply acquires assets of Gray Industrial Supply, including the web-based Spectrum Supply and custom bandsaw blade weld shop on East 25th Street. Jergens Industrial Supply begins rebranding itself as JIS to establish the company in the marketplace as a competitor and to differentiate itself from its parent company, Jergens, Inc.

2016

ASG establishes a European Sales Office in an effort to expand their global presence. Jergens, Inc. is awarded the Mission Builder Award by WIRE-net for being a mission-focused, visionary, community responsive, collaborative and innovative company in the greater Cleveland area. JIS acquires B&G Supply Inc. from Akron, Ohio and extends their reach to the southern areas of Ohio such as Dayton and Cincinnati. JIS opens new Akron/Canton Branch to provide enhanced support to customers within the Akron/Canton area.



WORKHOLDING SOLUTIONS



SUPPORT, LOCATE AND HOLD:

From standard components to vises and quick change fixture systems like Ball Lock®, ZPS and Fixture-Pro® Multi-Axis.

SPECIALTY FASTENERS



FASTEN, STRENGTHEN AND SECURE:

From threaded inserts and toggle clamps to Kwik-Lok® Pins.

LIFTING SOLUTIONS



LIFT, TURN AND TRACK:

From chain sling and eye bolts to hoist rings and our proprietary Lift-Check™ hoist rings.

Setting the Standard, Worldwide

Jergens is one of the world's largest manufacturers of standard tooling components. We have over 200 service and off-the-shelf distributors in manufacturing centers internationally. Our staff of R&D and applications engineers is constantly working to provide the latest technology to improve production around the world.

Jergens®
MANUFACTURING EFFICIENCY

Jergens®

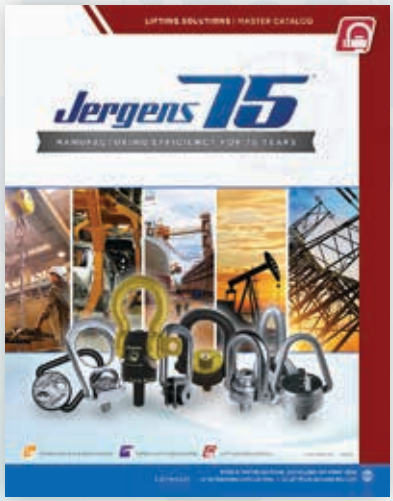
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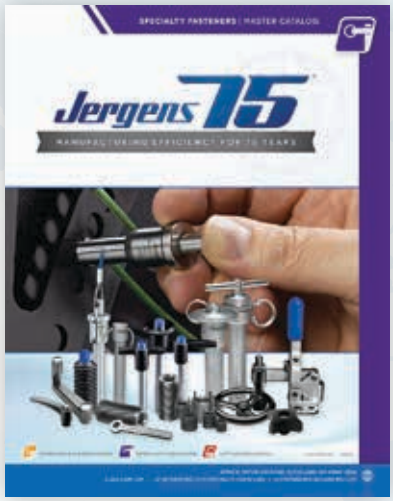
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