



CATALOG 2019



**CONTACT
US AT**
(800) 824-8333
RAPTORWORKHOLDING.COM



RAPTOR

WORKHOLDING PRODUCTS

Raptor began with an innovative design: the original, patented dovetail fixture. Now we have products that will either work independently or together seamlessly:



Start with a Self Centering Vise.

Use the vise in two ways:

- Hold a workpiece for dovetail prep.
- Machine a complete part.



Finish with a dovetailed Pinch Block.

Use these in a variety of applications:

- Machine the sixth side of workpiece for dovetail removal.
- Secondary or final machining operations.



Then utilize a patented Dovetail Fixture.

- The combination of the dovetail and spring-loaded clamping system provides superior holding strength.
- The dovetail prep on the bottom of a workpiece means full access to five sides of a workpiece with little waste.

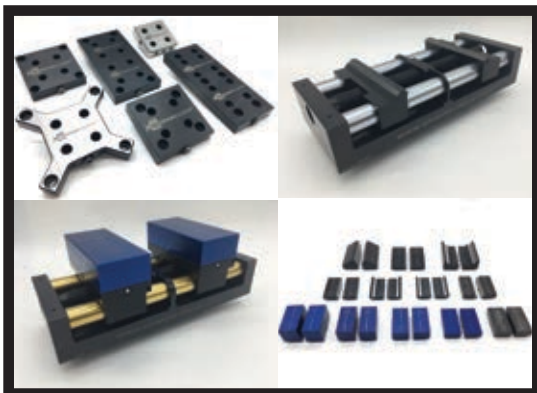


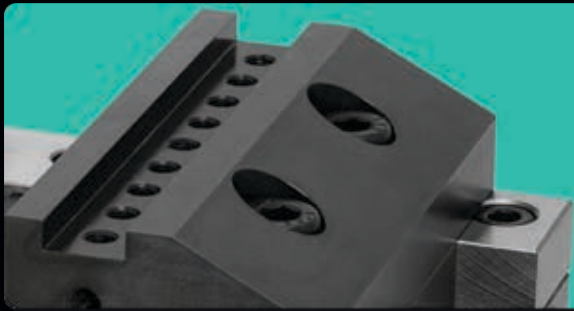
Raptor Tip

Save time! Raptor's carbide dovetail cutters complete the dovetail prep, including the flat of the dovetail edge, in a single pass!

THE BEST IN THE BUSINESS JUST BECAME EVEN STRONGER!

TE-CO/RAPTOR Workholding have entered into a partnership with PIRANHA to bring Swiss engineered precision Self-Centering Vises and versatile high pressure anodized aluminum Coolant Lines that withstand up to 80 bar (1160 psi) of pressure to the United States!





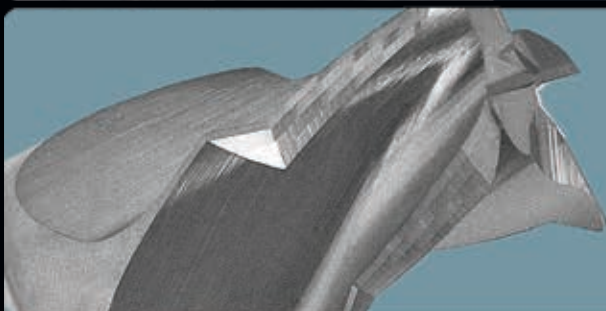
VICES



DOVETAIL FIXTURES



MULTI-FIXTURES



DOVETAIL CUTTERS & REPLACEMENT ITEMS



ADAPTERS, RISERS, CONNECTORS & EXTENDERS



PINCH BLOCKS

VISES

RWP-502

100mm Self Center Vise

- All steel construction
- Automatically positions workpiece in center of vise. Centering tolerance is $\pm 0.013\text{mm}$ (0.0005") and repeatability is 0.001".
- Jaws adjust from either end of vise.
- Jaw clamping range is 0-2.500" as shown, and 2.500"-5.620" with jaws reversed.
- Jaw insert options available for a variety of holding applications: Dovetail, Serrated, Parallels, Soft Jaws, TalonGrip™ & Stops (all sold separately).
- Jaw accessory screws included (6) FHCS

Weight	14lbs / 6.35kg
Base Width	3.94" / 100mm
Base Length	6.49" / 165mm
Bed Height	1.96" / 50mm
Jaw Opening	Standard: 0-2.5" / 63.5mm

Jaws Reversed	5.62" / 142.8mm
Maximum Allowed Torque	30ft/lbs / 40.7Nm
Clamping Force @ Maximum Torque	4000lbs / 17792N
Centering Tolerance \pm	0.0005" / .013mm



RWP-505

150mm Self Center Vise

- All steel construction
- Automatically positions workpiece in center of vise. Centering tolerance is $\pm 0.013\text{mm}$ (0.0005") and repeatability is 0.001".
- Jaws adjust from either end of vise.
- Jaw clamping range is 0-3.870" as shown, and 4.75"-9.25" with jaws reversed.
- Jaw insert options available for a variety of holding applications: Dovetail, Serrated, Parallels, Soft Jaws, TalonGrip™ & Stops (all sold separately).
- Jaw accessory screws included (6) FHCS

Weight	50lbs / 22.7kg
Base Width	5.91" / 150mm
Base Length	9.84" / 250mm
Bed Height	2.95" / 75mm
Jaw Opening	Standard: 0-3.88" / 98.4mm

Jaws Reversed	9.25" / 234.95mm
Maximum Allowed Torque	75ft/lbs / 101Nm
Clamping Force @ Maximum Torque	6000lbs / 26689N
Centering Tolerance \pm	0.0005" / .013mm



WISE JAW INSERTS

There are a variety of jaw inserts available to hold workpieces in place as illustrated below.

RWP-1027

Soft Jaw (Right)

Vise Compatibility RWP-502
Material 6061 Aluminum

RWP-1027-ST

Soft Jaw (Right)

Vise Compatibility RWP-502
Material 1018 Steel

RWP-1028

Soft Jaw (Left)

Vise Compatibility RWP-502
Material 6061 Aluminum

RWP-1028-ST

Soft Jaw (Left)

Vise Compatibility RWP-502
Material 1018 Steel

RWP-1527

Soft Jaw (Right)

Vise Compatibility RWP-505
Material 6061 Aluminum

RWP-1527-ST

Soft Jaw (Right)

Vise Compatibility RWP-505
Material 1018 Steel

RWP-1528

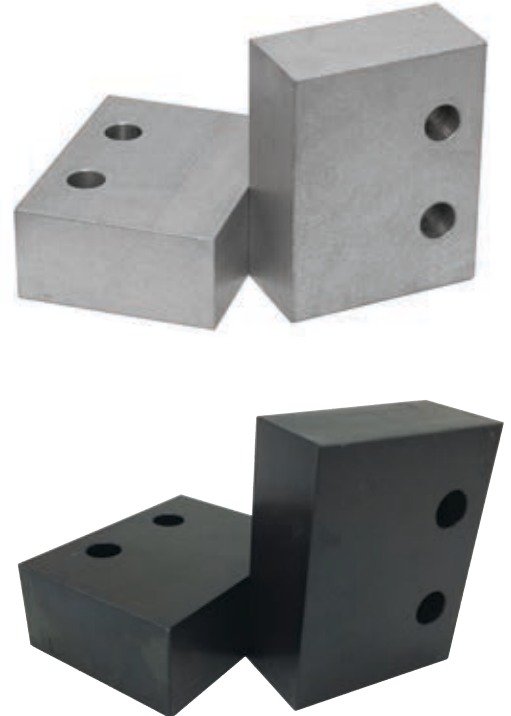
Soft Jaw (Left)

Vise Compatibility RWP-505
Material 6061 Aluminum

RWP-1528-ST

Soft Jaw (Left)

Vise Compatibility RWP-505
Material 1018 Steel



- Allows user to machine part specific profile in jaw for maximum clamping/location
- Good for secondary ops
- Dowel pins used for on/off repeatability

RWP-1050

Serrated 45° Dovetail

Vise Compatibility RWP-502

RWP-1550

Serrated 45° Dovetail

Vise Compatibility RWP-505



- Use as a dovetail clamp or serrated edge clamp
- Utilizes dovetail form for secure clamping and retention
- Dovetail width can be modified to fit different workpiece sizes
- Utilizes standard 45° dovetail form, dovetail can be cut with any standard 45° cutter
- Bite height" = .110"
- Use serrated edged to "penetrate soft material workpiece"
- Hardened and ground steel
- Sold individually (need 2 per vise)

RWP-1051

Standard Parallel (1/8" Ledge)

Vise Compatibility RWP-502

RWP-1551

Standard Parallel (1/8" Ledge)

Vise Compatibility RWP-505

- Provides precise straight edge for clamping machined workpiece
- Good for light / medium duty machining
- Rail provides maximum support while allowing clearance on bottom of workpiece
- Hardened and ground steel
- Sold individually (need 2 per vise)

**RWP-1052**

Thin Parallel (1/16" Ledge)

Vise Compatibility RWP-502

- Provides precise straight edge for clamping machined workpiece
- Good for light / medium duty machining
- Rail provides support while allowing more clearance on bottom of workpiece
- Hardened and ground steel
- Sold individually (need 2 per vise)

**RWP-1056**

Straight Edge 60° Dovetail

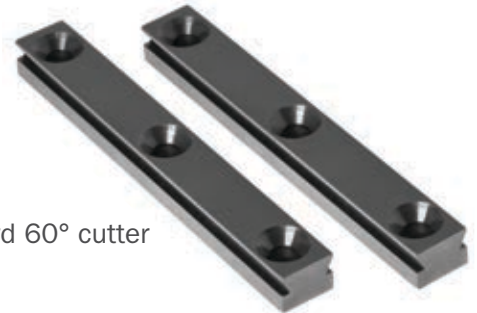
Vise Compatibility RWP-502

RWP-1556

Straight Edge 60° Dovetail

Vise Compatibility RWP-505

- Utilizes dovetail for secure clamping and retention
- Dovetail width can be modified to fit various workpiece sizes
- Utilizes standard 60° dovetail form, dovetail can be cut with any standard 60° cutter
- Hardened and ground steel
- Sold individually (need 2 per vise)
- Recommended cutter: RWP-DC410C for material prep

**RWP-33020**

Mitee-Bite End Stop

- Locates workpiece for repeat positioning
- Fits both RWP-502 & RWP-505 vises

**RWP-33050**

Mitee-Bite TalonGrip™

- Low profile clamping
- Use to secure soft material workpieces
- Position flexibility on insert slot of vise
- May be used in conjunction with end stop.
- Hardened steel
- Sold (2) per pack
- Fits both RWP-502 & RWP-505 vises



WISE ADAPTERS / RISER PLATES

The following products were designed for the RWP-502 or RWP-505 vise. There are multiple options to choose from and will mount to most rotary table/pallets.

RWP-209-V100

Emergency Adapter

The emergency adapter allows you to drill the specific mounting hole configurations necessary to connect to your machine's rotary table/pallet. Once completed then connect adapter to table/pallet and mount the vise. When mounted together the overall height is 4.471". If additional height is needed, then mount the RWP-242-V100 Riser Plate in between vise and adapter for total Z: 6.221". RWP-PLUG-208 is available upon request (sold separately).

Material	Aluminum Plain Finish
Product Height	1.50" / 38.1 mm
Product Diameter	9.90" / 251.46mm
Vise Compatibility	RWP-502
Boss/Hole	1.000" Diameter x .30" Receiving hole

Centering plug required. RWP-PLUG-208, sold separately and may need to be modified.



RWP-222-V100

Universal Adapter

Mount directly to your machine pallet or rotary table using T-slots. When mounted together the overall height is 4.971". If additional height is needed, then mount the RWP-242-V100 Riser Plate in between vise and adapter for total Z: 6.721". RWP-PLUG-208 is available upon request (sold separately).

Material	7075 Aluminum with Black Anodize Finish
Product Height	2.0" / 50.8mm
Product Diameter	9.875" / 250.825mm
Vise Compatibility	RWP-502
Boss/Hole	1.000" Diameter x .30" Receiving hole

Centering plug required. RWP-PLUG-208, sold separately and may need to be modified.



RWP-223-V100

Universal Adapter

Mount directly to your machine pallet or rotary table using T-slots. When mounted together the overall height is 4.971". If additional height is needed, then mount the RWP-242-V100 Riser Plate in between vise and adapter for total Z: 6.721". RWP-PLUG-208 is available upon request (sold separately).

Material	7075 Aluminum with Black Anodize Finish
Product Height	2.0" / 50.8mm
Product Diameter	11.90" / 302.26mm
Vise Compatibility	RWP-502 & RWP-505
Boss/Hole	1.000" Diameter x .30" Receiving hole

Centering plug required. RWP-PLUG-208, sold separately and may need to be modified.



RWP-242-V100

Riser Plate

Mount directly to your machine pallet or rotary table. May also be used in a stacked application for higher Z, when mounted to either: RWP-209-V100, RWP-222-V100 or RWP-223-V100.

Material	7075 Aluminum with Black Anodize Finish
Product Height	1.75" / 44.45mm
Product Diameter	8.45" / 214.63mm
Vise Compatibility	RWP-502
Mounting Info	(4) C'Bores for ½-13 Or M12 SHCS on a 7.00" B.C.
Boss/Hole	1.000" Diameter x .30" Receiving hole

Centering plug required. RWP-PLUG-208, sold separately and may need to be modified.



RWP-251-V100

Riser Plate

Adapts RWP-502 vise to a Haas UMC750/UMC750ss, Matsuura MX520 300mm and other machines.

Material	7075 Aluminum with Black Anodize Finish
Product Height	4.50" / 114.3mm
Product Diameter	11.40" / 289.6mm
Vise Compatibility	RWP-502
Mounting Info	(8) C'Bores on a 9.92"/251.9mm for ½-13 Or M12 SHCS on a 7.00" B.C. Will fit pallets with (4) or (6) T-slots
Boss/Hole	1.968"/50mm x .75" Receiving hole



RWP-244-V100

2.25" Dovetail Connector Plate

This connector plate has been designed with a 2.25" dovetail base. Mounts directly to Raptor dovetail fixtures: RWP-006 or RWP-006SS. When mounting vise, dovetail connector plate, and dovetail fixture together, the total Z is 6.471".

The RWP-006(SS) connect to Raptors' standard adapters with 3.80" BC dia. interface: RWP-209 (total Z: 7.971"), RWP-222 (total Z :8.471"), RWP-223 (total Z:8.471").

Material	7075 Aluminum with Black Anodize Finish
Product Dimensions	6.5"L x 4.125" W x 1.0" H 165.1mm x 104.775mm x 25.4mm
Vise Compatibility	RWP-502



Top View



Bottom View



A FULL ACCESS PASS.

Speed up your manufacturing by machining five full sides of the workpiece in one set-up.

Raptor's patented dovetail design quickly locks the part in place for extreme clamping strength and rigidity without wasting much material on the base.

A locating pin ensures your part is positioned accurately and, unlike other products, the spring-loaded clamp can be tightened with a simple T-handle wrench. Quick and easy.

Raptor gets out of your way so you can get the job done.

TESTED AND PROVEN.

Raptor was created by manufacturers for manufacturers.

We know that workholding can be difficult because we face the same challenges. That is why we continue to create innovative products. Raptor is a strong, flexible workholding solution that has been utilized for years by some of the world's leading manufacturers. Raptor's dovetail design has been tested by an independent laboratory for strength.

FASTER JOB SETUP.

With Raptor, you can run a wide variety of parts and eliminate the changeover time. There is no need to spend time removing and replacing custom fixtures in your machines. We simplified the process. Smaller Raptor fixtures can also be attached to larger ones, allowing you to switch to any size part as fast as you can turn a hand tool. We've made workholding easier for you.

RAPTOR IS ADAPTABLE.

Our workholding products can fit any machine and any situation. We have a variety of adapters, risers, and fixtures built to attach directly to the most popular CNC machines. Multiple Raptors can be mounted to tombstones, bridges, carousels, nests and base plates. Raptor creates new products based on our customers' valuable feedback. If you need something special, let us know.

RAPTOR IS SIMPLE.

Simply load your workpiece onto the fixture and hand-tighten the spring-loaded clamp. Unloading is just as easy.



1 - SIMPLE DOVETAIL

A simple workpiece prep creates a dovetail that locks into the Raptor spring-loaded clamp.



2 - SPRING-LOADED CLAMP

Raptor's spring-loaded clamp strongly holds the part and makes releasing easy.



3 - HAND TIGHTENED

Use a T-wrench to hand-tighten the clamp and you're done. It's quick, simple and strong.



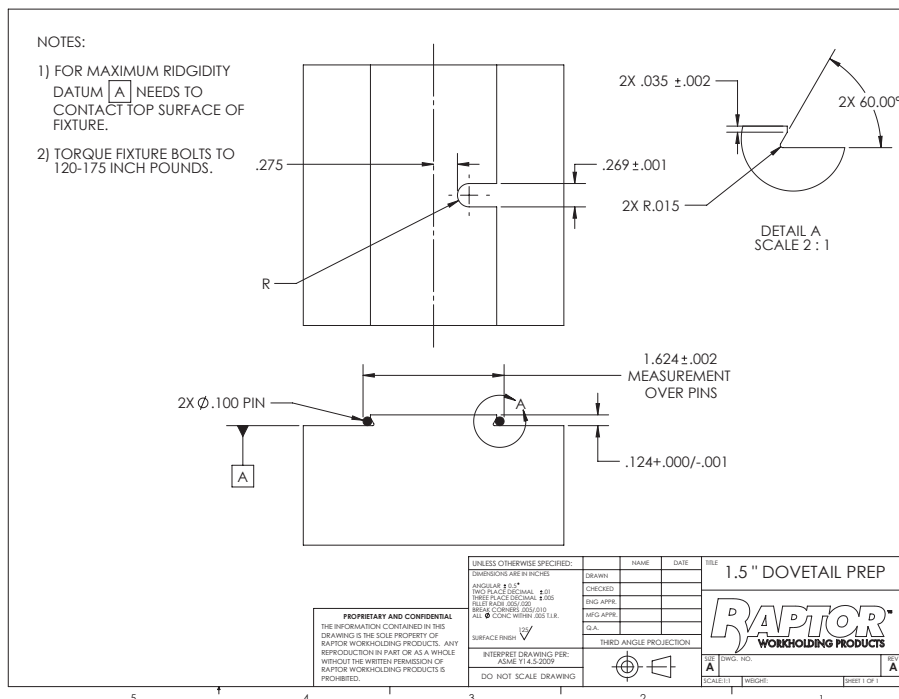
4 - STRONG BY DESIGN

Solid, super-strong stainless-steel or lightweight aluminum ensures that Raptor will hold up to repeated use.

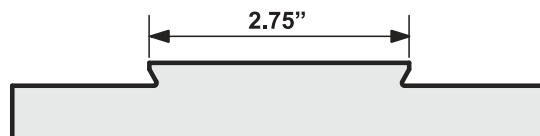


5 - FITS ANY MACHINE

We have adapters, risers and versions of Raptor to fit any machine you can think of. Yes, even that one.



2.75" DOVETAIL FIXTURES



RWP-403SS-12

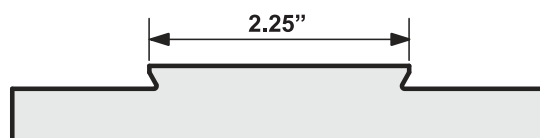
Stainless Steel 2.75" Dovetail Fixture

Max Workpiece Weight	225 Pounds / 102.058 kg
Max Workpiece Size	10.0"L x 8.0"W x 10.0"H Steel 254mm x 203.2mm x 254mm
Fixture Material	17-4 Stainless Steel
Number of Clamps	3 Clamps
Clamp Replacement Kit	RWP-KIT-3001SQ (2) required
Dovetail Height	0.25" / 6.35mm
Dovetail Width	2.75" / 69.85mm
Fixture Length	11.50" / 292.1mm
Fixture Width	7.50" / 190.5mm
Fixture Height	3.875" / 98.425mm
Contact us for cutter recommendation.	



Dovetail Fixtures

2.25" DOVETAIL FIXTURES



RWP-006

Aluminum 2.25" Dovetail Fixture



Max Workpiece Weight	80 Pounds / 36.287 kg
Max Workpiece Size	8.0"L x 10.0"W x 10.0"H 254mm x 203.2mm x 254mm
Fixture Material	7075-T6511 Aluminum

Number of Clamps	2 Clamps
Clamp Replacement Kit	RWP-KIT-303SQ
Dovetail Height	0.1875" / 4.7625mm
Dovetail Width	2.25" / 57.15mm
Fixture Dimensions	5.950"L x 3.957"W x 3.957"H 151.13mm x 100.5078 mm x 63.5mm
Bolt Circle Diameter	3.800" Raptor Interface
Recommended Cutter	RWP-DC410C

Raptor Interface=(4) C'Bores on a 3.800" B.C. for 1/2-13 or M12 SHCS with a 1.250" x .250 Boss.

RWP-006SS

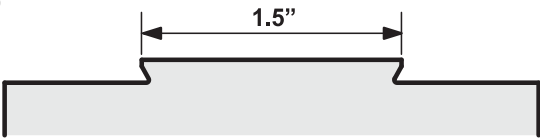
Stainless Steel 2.25" Dovetail Fixture



Max Workpiece Weight	168 Pounds / 76.203 kg
Max Workpiece Size	12.0" / 304.8mm Cubed
Fixture Material	17-4 Stainless Steel

1.5" DOVETAIL FIXTURES

The following fixtures are for parts using a dovetail width of 1.5 inches. These dovetail fixtures are available in multiple configurations constructed of aluminum or stainless steel.



Raptor Interface=(4) C'Bores on a 3.800" B.C. for ½-13 or M12 SHCS with a 1.250" x .250 Boss

RWP-001

Aluminum 1.5" Dovetail Fixture



Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75" / 171.45mm Cubed
Number of Clamps	2 Clamps
Clamp Replacement Kit	RWP-KIT-301SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	1.5" / 38.1mm
Fixture Diameter	4.970" / 126.238mm
Fixture Height	3.0" / 76.2mm
Bolt Circle Diameter	3.800" Raptor Interface

Fixture Material 7075-T6511 Aluminum

RWP-001SS

Stainless Steel 1.5" Dovetail Fixture



Fixture Material 17-4 Stainless Steel

RWP-004

Aluminum 1.5" Dovetail Fixture

This fixture is designed to fit to the Mori Seiki MNV3000 and Matsuura 330X (Metric pallet). It can also be utilized in other machines when connected with an adapter or riser.

Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75" / 171.45mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Replacement Kit	RWP-KIT-301SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	1.5" / 38.1mm
Fixture Diameter	4.970" / 126.238mm
Fixture Height	2.0" / 50.8mm
Bolt Circle Diameter	3.740" for ½-13 or M12 SHCS
Boss/Hole	1.18" Diameter x .250" Boss



RWP-013

Aluminum 1.5" Dovetail Fixture



Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75" / 171.45mm Cubed
Number of Clamps	2 Clamps
Clamp Replacement Kit	RWP-KIT-301SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	1.5" / 38.1mm
Fixture Diameter	4.970" / 126.238mm
Fixture Height	2.0" / 50.8mm
Bolt Circle Diameter	3.800" Raptor Interface

Fixture Material 7075-T6511 Aluminum

RWP-013SS

Stainless Steel 1.5" Dovetail Fixture



Fixture Material 17-4 Stainless Steel

RWP-026

Aluminum 1.5" Dovetail Fixture: 4" Diameter Bolt Circle

Made for tombstones with a 2.0" x 2.0" hole pattern or 4.0 bolt circle - without a boss or plug.

This fixture will not mount to Raptors' adapters or risers.

Max Workpiece Weight	30 Pounds / 13.607 kg
Max Workpiece Size	6.75" / 171.45mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2
Clamp Replacement Kit	RWP-KIT-301SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	1.5" / 38.1mm
Bolt Circle Diameter	4.000"
Fixture Diameter	4.970" / 126.238mm
Fixture Height	3.0" / 76.2mm
Boss Hole	None



RWP-027

Aluminum 1.5" Dovetail Fixture

This fixture is great for small rotary tables and lathes when used with a sub-plate. May also be used for the Yukiawa TNT100L when mounted to the RWP-241 adapter plate.

Max Workpiece Weight	20 Pounds / 9.071 kg
Max Workpiece Size	6.0" / 152.4mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2
Clamp Replacement Kit	RWP-KIT-301SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	1.5" / 38.1mm
Bolt Circle Diameter	2.362" / 60mm B.C. for 5/16 or M8 SHCS
Fixture Diameter	3.0" / 76.2mm
Fixture Height	2.0" / 50.8mm
Boss Hole	1.000" Diameter x .30" Receiving hole



Centering plug required. RWP-PLUG-208, sold separately and may need to be modified.

RWP-036SS

Stainless Steel 1.5" Dovetail Fixture

Mount directly to the KME 135mm pallet used in the following KME products:

5 Axis Tombstones:	5 Axis Trunnions:
KME-TS300-2.0 300mm	KME-TR100
KME-TS400-4.0 400mm	KME-TR200
KME-TS500-4.0 500mm	KME-TR300

Fixture Material	17-4 Stainless Steel
Number of Clamps	2
Clamp Replacement Kit	RWP-KIT-301SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	1.5" / 38.1mm
Fixture Diameter	5.315" / 135.001 mm
Fixture Height	2.0" / 50.8mm
Bolt Circle Diameter	3.937"



RWP-401-11

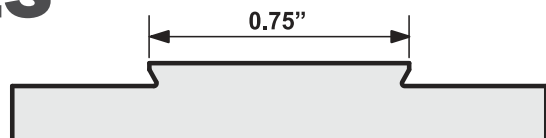
Aluminum 11" Rail with 1.5" Dovetail

Max Workpiece Weight	140 Pounds / 63.502 kg
Max Workpiece Size	17.0"L x 7.0"W x 12.0"H / 431.8mm x 177.8mm x 304.8mm
Fixture Material	7075-T6511 Aluminum
Number of Clamps	6
Clamp Replacement Kit	RWP-KIT-301SQ (3) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	1.5" / 38.1mm
Fixture Length	11.0" / 279.4mm
Fixture Width	4.40" / 111.76mm
Fixture Height	3.0" / 76.2mm



0.75" DOVETAIL FIXTURES

The following fixtures are for parts using a dovetail width of 0.75 inches. These dovetail fixtures are available in multiple configurations constructed of aluminum or stainless steel.



Raptor Interface=(4) C'Bores on a 3.800" B.C.
for 1/2-13 or M12 SHCS with a 1.250" x .250 Boss

RWP-002

0.75" Dovetail Fixture



Number of Clamps	2 Clamps
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Diameter	4.970" / 126.238mm
Fixture Height	3.0" / 76.2mm
Bolt Circle Diameter	3.800" Raptor Interface

Max Workpiece Weight	18 Pounds / 8.164 kg
Max Workpiece Size	5.75" / 146.05mm Cubed
Fixture Material	7075-T6511 Aluminum

RWP-002SS

0.75" Dovetail Fixture



Max Workpiece Weight	25 Pounds / 11.339 kg
Max Workpiece Size	6.375" / 161.925mm Cubed
Fixture Material	17-4 Stainless Steel

RWP-003

Aluminum 5C Collet Closer 0.75" Dovetail Fixture

Max Workpiece Weight	3 Pounds / 1.360 kg
Max Workpiece Size	3.0" / 76.2mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	1 Clamp
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	1.50" / 38.1mm
Fixture Inner Diameter	1.125" / 28.575mm
Fixture Outer Diameter	2.230" / 56.642mm



RWP-007SS

Stainless Steel 0.75" Dovetail Fixture

Connects directly to System 3R 54mm pallets:

MacroStd: 3R-651.7E-S / 3R-651.7E-XS and MacroHP: 3R-651.7E.P,
reducing downtime by switching to an alternate pallet in seconds.

Max Workpiece Weight	7 Pounds / 3.175 kg
Max Workpiece Size	3.75" / 95.25mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Dimensions	2.070"L x 2.070"W x 2.125"H 52.578mm x 52.578mm x 53.975mm



RWP-011SS

Stainless Steel 0.75" Dovetail Fixture with 0.75" Dovetail Bottom

Connects directly to compatible 0.75" dovetail fixtures allowing quick machining of smaller parts without removing the primary fixtures.

Max Workpiece Weight	7 Pounds / 3.175 kg
Max Workpiece Size	3.75" / 95.25mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Dimensions	2.070"L x 2.070"W x 2.001"H 52.578mm x 52.578mm x 50.825mm



RWP-012SS

Stainless Steel 0.75" Dovetail Fixture with 1.5" Dovetail Bottom

Connects directly to compatible 1.5" dovetail fixtures allowing quick machining of smaller parts without removing the primary fixtures.

Max Workpiece Weight	7 Pounds / 3.175 kg
Max Workpiece Size	3.75" / 95.25mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Dimensions	2.070"L x 2.070"W x 2.001"H 52.578mm x 52.578mm x 50.825mm



RWP-015

Aluminum 0.75" Dovetail Fixture

This fixture is designed to connect directly to the Haas TR110 and TRT-100 machines. It can also be utilized in other machines when connected with an adapter riser.

Max Workpiece Weight	18 Pounds / 8.164 kg
Max Workpiece Size	5.75" / 146.05mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Diameter	4.330" / 109.982mm
Fixture Height	2.0" / 50.8mm
Bolt Circle Diameter	3.267" for (6) 5/16 or M8 SHCS
Boss/Hole	.4992" Diameter x .19" Boss



RWP-023

Aluminum 0.75" Dovetail Fixture: 4" diameter bolt circle

Made for Tombstones with a 2.0" X 2.0" Hole Pattern or 4.0 Bolt Circle - without a boss or plug. This fixture will not mount to Raptors' adapters or risers.

Max Workpiece Weight	18 Pounds / 8.164 kg
Max Workpiece Size	5.75" / 146.05mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	2
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Diameter	4.970" / 126.238mm
Fixture Height	3.0" / 76.2mm
Bolt Circle Diameter	4.0"
Boss/Hole	None



RWP-024

Aluminum 0.75" Dovetail Fixture



Designed for modular applications. Multiple RWP-024 fixtures can be placed in-line to hold long parts. Multi-fixture options: RWP-024-2XR, RWP-024-3XR, RWP-024-4XR & RWP-024-6XC

Max Workpiece Weight	12.5 Pounds / 5.669 kg
Max Workpiece Size	4.0" / 101.6mm Cubed
Number of Clamps	1
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Dimensions	2.0"L x 2.0"W x 1.5"H
	50.8mm x 50.8mm x 38.1mm

Fixture Material 7075-T6511 Aluminum

RWP-024SS

Stainless Steel 0.75" Dovetail Fixture



Fixture Material 17-4 Stainless Steel
*EDM Screw Kits Available

RWP-025

Aluminum 6" Rail, with 0.75" Dovetail and 1.5" Dovetail Bottom

Designed for quick-change applications machining long and skinny parts.
Connects to compatible 1.5" dovetail fixtures.

Max Workpiece Weight	12.5 Pounds / 5.669 kg
Max Workpiece Size	8.0"L x 4.0"W x 4.0"H 203.2mm x 101.6mm x 101.6mm
Fixture Material	7075-T6511 Aluminum
Number of Clamps	3
Clamp Replacement Kit	RWP-KIT-302SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Dimensions	6.0"L x 2.0"W x 1.5"H 152.4mm x 50.8mm x 38.1mm



RWP-030SS

Stainless Steel 0.75" Dovetail Fixture

Max Workpiece Weight	40 Pounds / 18.143 kg
Max Workpiece Size	7.5" / 190.5 Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	3
Clamp Replacement Kit	RWP-KIT-302SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Diameter	4.970" / 126.238mm
Fixture Height	3.0" / 76.2mm
Bolt Circle Diameter	3.800" Raptor Interface



RWP-034SS

Stainless Steel 0.75" Dovetail Fixture

This fixture is designed to connect directly to the Makino A51NX-5XU.
It can also be utilized in other machines when connected with an adapter or riser.

Max Workpiece Weight	40 Pounds / 18.143 kg
Max Workpiece Size	7.5" / 190.5 Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	3
Clamp Replacement Kit	RWP-KIT-302SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Bolt Circle Diameter	3.0"
Fixture Dimensions	5.0"L x 3.90"W x 2.0"H 127mm x 99.06mm x 50.8mm
Boss/Hole	2.180" Diameter x .07" Boss



RWP-038SS

Stainless Steel 0.75" Dovetail Fixture

This fixture is designed to connect directly to either the HAAS TRT100 Compact Dual Axis Rotary Table or TR110 for milling applications. It can also be utilized in other machines when connected with an adapter or riser.

Max Workpiece Weight	TRT100: 4 Lbs / TR100: 12 Lbs
Max Workpiece Size	5" / 127 Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	2
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Bolt Circle Diameter	3.267"
Fixture Diameter	4.330" / 109.982mm
Fixture Height	1.3" / 33.02mm
Boss/Hole	.4992" Diameter x .19" Boss



RWP-405

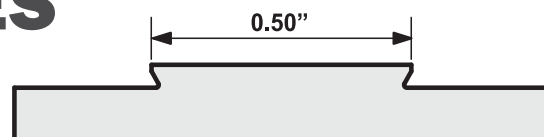
Aluminum 8" Rail with 0.75" Dovetail

Max Workpiece Weight	65 Pounds / 29.483 kg
Max Workpiece Size	4.0"L x 14.0"W x 4.0"H Steel / 101.6mm x 355.6mm x 101.6mm
Fixture Material	7075-T6511 Aluminum
Number of Clamps	4
Clamp Replacement Kit	RWP-KIT-302SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Dimensions	8.0"L x 3.8"W x 3.0"H 203.20mm x 96.52mm x 76.2mm



0.50" DOVETAIL FIXTURES

The following fixtures are for parts using a dovetail width of 0.50 inches. These dovetail fixtures are available in multiple configurations constructed of aluminum or stainless steel.



Raptor Interface=(4) C'Bores on a 3.800" B.C.
for 1/2-13 or M12 SHCS with a 1.250" x .250 Boss

RWP-017SS

Stainless Steel 0.50" Dovetail Fixture

Connects directly to System 3R 54mm pallets:
MacroStd: 3R-651.7E-S / 3R-651.7E-XS and MacroHP: 3R-651.7E.P,
reducing downtime by switching to an alternate pallet in seconds.

Max Workpiece Weight	6 Pounds / 2.721 kg
Max Workpiece Size	3.25" / 82.55 mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Replacement Kit	RWP-KIT-306SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.50" / 12.7mm
Fixture Dimensions	2.070"L x 2.070"W x 2.125"H 52.578mm x 52.578mm x 53.975mm



RWP-018

Aluminum 0.50" Dovetail Fixture



Number of Clamps	2 Clamps
Clamp Replacement Kit	RWP-KIT-306SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.50" / 12.7mm
Fixture Diameter	4.970" / 126.238mm
Fixture Height	3.0" / 76.2mm
Bolt Circle Diameter	3.800" for (4) 1/2" or M12 SHCS
Boss/Hole	1.00" Diameter x .30 Receiving hole

Max Workpiece Weight	10 Pounds / 4.535 kg
Max Workpiece Size	4.75" / 120.65mm Cubed
Fixture Material	7075-T6511 Aluminum
Raptor's plug RWP-PLUG-208, sold separately.	

RWP-018SS

Stainless Steel 0.50" Dovetail Fixture



Max Workpiece Weight	12 Pounds / 5.443 kg
Max Workpiece Size	5.0" / 127mm Cube
Fixture Material	17-4 Stainless Steel
Raptor's plug RWP-PLUG-208SS, sold separately	

RWP-022SS

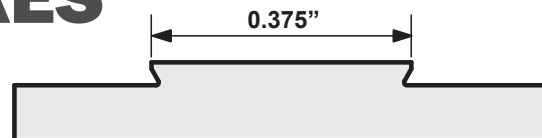
Stainless Steel 0.50" Dovetail Fixture with 1.5" Dovetail Bottom

Connects to an RWP-001(SS), RWP-004, RWP-013(SS) or RWP-026.

Max Workpiece Weight	6 Pounds / 2.721 kg
Max Workpiece Size	3.25" / 82.55 mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Replacement Kit	RWP-KIT-306SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.50" / 12.7mm
Fixture Dimensions	2.070"L x 2.070"W x 2.0"H 52.578mm x 52.578mm x 50.8mm



0.375" DOVETAIL FIXTURES



RWP-019SS

Stainless Steel 0.375" Dovetail Fixture



Fixture Material	17-4 Stainless Steel
Clamp Replacement Kit	RWP-KIT-305SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.375" / 9.525mm
Fixture Height	1.25" / 31.75mm

Max Workpiece Weight	2 Pounds / 0.907 kg
Max Workpiece Size	2.50" / 63.5mm Cubed
Number of Clamps	1 Clamp
Fixture Length	2.5" / 63.5mm

RWP-042SS

Stainless Steel 0.375" Dovetail Fixture



Max Workpiece Size	4.0"L x 2.50"W x 2.50"H 101.6mm x 63.5mm x 63.5mm
Number of Clamps	2 Clamps
Fixture Length	3.75" / 95.25mm

RWP-213SS

Stainless Steel 0.75" Adapter for RWP-019SS only



Material	17-4 Stainless Steel
Height	0.5" / 12.7mm
Adapter Length	2.5" / 63.5mm

Fixture Compatibility	RWP-002(SS), RWP-015, RWP-023, RWP-024, RWP-030SS
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RWP-214SS

Stainless Steel 1.5" Adapter for RWP-019SS only



Fixture Compatibility	RWP-001(SS), RWP-004, RWP-013(SS), RWP-026
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RWP-248SS

Stainless Steel 0.75" Adapter for RWP-042SS only



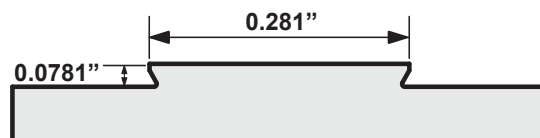
Material	17-4 Stainless Steel
Height	0.5" / 12.7mm
Adapter Length	3.75" / 95.25mm

RWP-249SS

Stainless Steel 1.5" Adapter for RWP-042SS only



0.281" x 0.0781" DOVETAIL FIXTURES



RWP-031SS

Stainless Steel 0.281" Width x 0.0781" Height Dovetail Fixture with .75" Dovetail Bottom

Compatible fixtures: RWP-002, RWP-002SS, RWP-015, RWP-023, RWP-024 and RWP-030SS.

Max Workpiece Weight	0.284 Pounds / 0.128 kg
Max Workpiece Size	1.25" / 31.75mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Replacement Kit	RWP-KIT-307SQ
Dovetail Height	0.0781" / 19.8374mm
Dovetail Width	0.281" / 7.137mm
Fixture Height	1.438" / 36.5252mm
Recommended Cutter	RWP-DC409C

This fixture replaces the discontinued RWP-010SS.



RWP-032SS

Stainless Steel 0.281" Width x 0.0781" Height Dovetail Fixture

Connects to your machine using the 4 mounting holes.

Max Workpiece Weight	0.284 Pounds / 0.128 kg
Max Workpiece Size	1.25" / 31.75mm Cubed
Fixture Material	17-4 Stainless Steel
Number of Clamps	1 Clamp
Clamp Replacement Kit	RWP-KIT-307SQ
Dovetail Height	0.0781" / 19.8374mm
Dovetail Width	0.281" / 7.137mm
Fixture Height	1.563" / 39.700mm
Recommended Cutter	RWP-DC409C

This fixture replaces the discontinued RWP-009SS.



MODULAR FIXTURE COMPATABILITY

The parts you machine come in different shapes and sizes, so we designed Raptor products with this in mind, to be versatile. To machine larger parts use a standard dovetail fixture. For smaller parts, mount a smaller dovetail fixture on top of a standard, as shown.

It's that easy. Spend time making parts, not figuring out how to hold them.



0.75" MODULAR CONFIGURATIONS

RWP-031SS / RWP-010SS	RWP-011SS	RWP-019SS +RWP-213SS
RWP-002(SS) or RWP-030SS		
RWP-015		
RWP-023		
RWP-024		

1.50" MODULAR CONFIGURATIONS

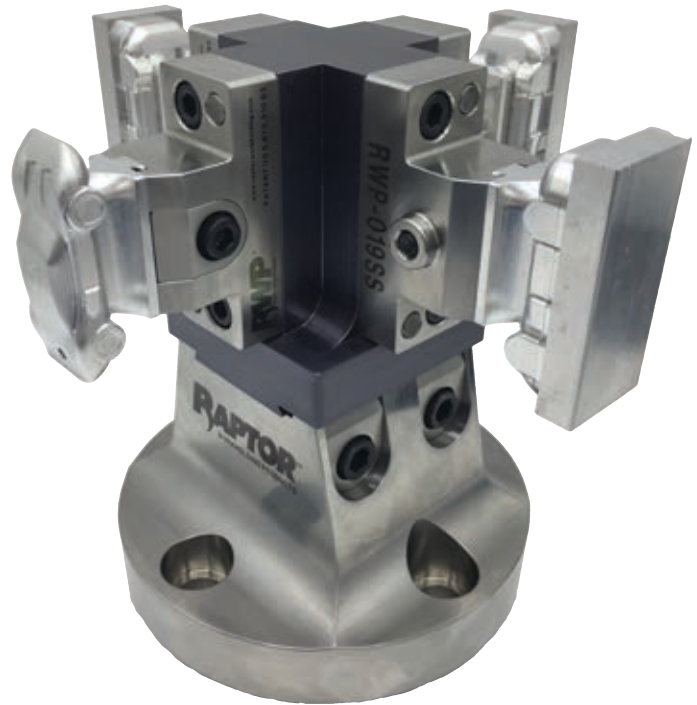
RWP-012SS	RWP-022SS	RWP-019SS +RWP-214SS	RWP-025	RWP-019-4X45T	RWP-019-4X90T
RWP-001(SS)					
RWP-004					
RWP-013(SS)					
RWP-026					
RWP-027					

Multi-Fixtures

RAPTOR IS FAST.

Raptor multi-fixtures provide a platform to attach multiple Raptor dovetail fixtures. Now you can manufacture longer parts or program your 5-axis to machine multiple parts in one load.

Some Raptor multi-fixtures can attach to the top of other Raptor fixtures or adapters for quick and easy change-out. Load up the next multi-fixture with your workpieces while the other one is cycling. Changeover time is reduced and the productivity of your machine is drastically increased.



RWP-003-4X

Aluminum 0.75" Dovetail Fixture - The Pyramid system holds 4 RWP-003 on a single base

This Raptor Pyramid utilizes four included RWP-003 0.75" dovetail fixtures. This is designed specifically for five-axis machining applications and allows you to hold four workpieces on a single base.

The RWP-003-4X Raptor Pyramid will mount to any of our standard adapters and risers.



Max Workpiece Weight	3 Pounds / 1.360 kg Each	
Max Workpiece Size	3.0" / 76.2mm Cubed Each	
Fixture Material	7075-T6511 Aluminum	
Number of Clamps	4 Clamps	
Clamp Replacement Kit	RWP-KIT-302SQ (2) required	
Dovetail Height	0.125" / 3.175mm	
Dovetail Width	0.75" / 19.05mm	
Each Fixture Height	1.50" / 38.1mm	Bolt Circle Diameter
Total Product Height	3.25" / 82.55mm	3.800" / 96.52mm Raptor Interface
		Boss / Plug
		1.250" Dia. x 0.25" / 31.75mm x 6.35mm

RWP-019-4X45T

Stainless Steel 0.375" Dovetail Fixture - The pyramid system holds 4 RWP-019SS on a single base

This Raptor Pyramid utilizes four included RWP-019SS 0.375" dovetail fixtures mounted at a 45 degree angle. This Raptor Pyramid has a 1.5" dovetail bottom and attaches to the top of other Raptor fixtures for quick and easy change-out. Load up the next pyramid with your workpieces while the other one is cycling. Changeover time is reduced and the productivity of your machine is drastically increased.

The RWP-019-4X45T Raptor mini tombstone will mount the any fixture with a 1.5" dovetail.

Max Workpiece Weight	2 Pounds / 0.907 kg Each
Max Workpiece Size	2.50" / 63.5mm Cubed Each
Fixture Material	17-4 Stainless Steel Fixtures Aluminum Base
Number of Clamps	4 Clamps
Clamp Replacement Kit	RWP-KIT-305SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.375" / 9.525mm
Each Fixture Height	1.25" / 31.75mm
Total Product Height	2.69" / 68.326mm



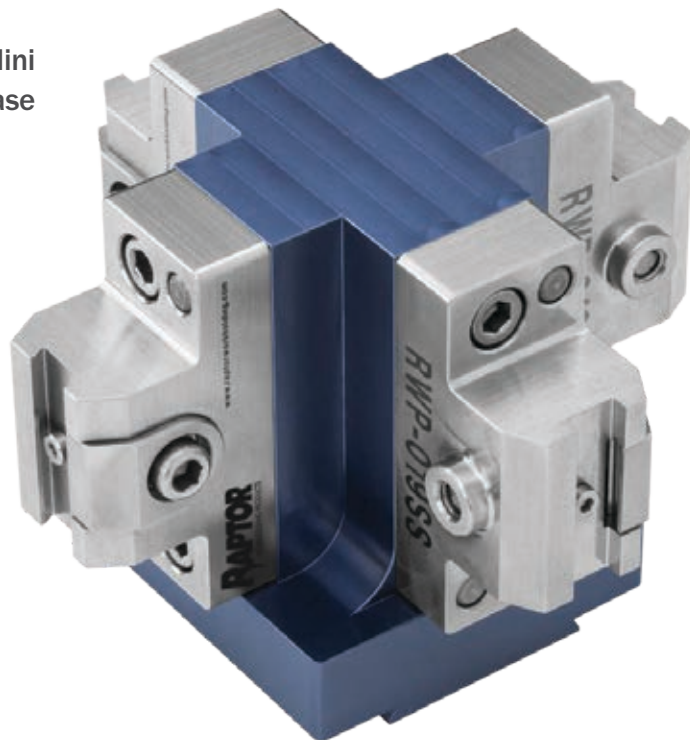
RWP-019-4X90T

Stainless Steel 0.375" Dovetail Fixture - The Mini Tombstone system holds 4 RWP-019SS on a single base

This Raptor Mini Tombstone utilizes four included RWP-019SS 0.375" dovetail fixtures mounted at a 90 degree angle. This Raptor Mini Tombstone has a 1.5" dovetail bottom and attaches to the top of other Raptor fixtures for quick and easy change-out. Load up the next Mini Tombstone with your workpieces while the other one is cycling. Changeover time is reduced and the productivity of your machine is drastically increased.

The RWP-019-4X90T Raptor mini tombstone will mount the any fixture with a 1.5" dovetail.

Max Workpiece Weight	2 Pounds / 0.907 kg Each
Max Workpiece Size	2.50" / 63.5mm Cubed Each
Fixture Material	17-4 Stainless Steel Fixtures Aluminum Base
Number of Clamps	4 Clamps
Clamp Replacement Kit	RWP-KIT-305SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.375" / 9.525mm
Each Fixture Height	1.25" / 31.75mm
Total Product Height	3.13" / 79.502mm

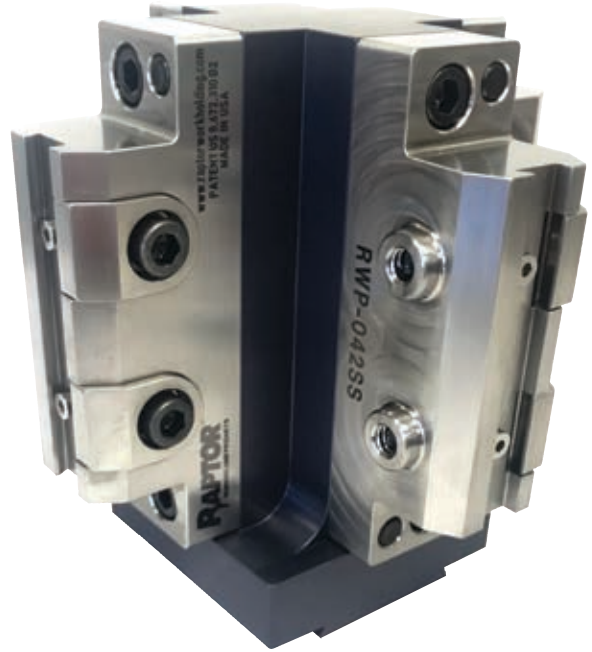


RWP-042-4X90T

Stainless Steel 0.375" Dovetail Fixture - The Mini Tombstone system holds 4 RWP-042SS on a single base

This Raptor Mini Tombstone utilizes four included RWP-042SS 0.375" dovetail fixtures mounted at a 90 degree angle. This Raptor Mini Tombstone has a 1.5" dovetail bottom and attaches to the top of other Raptor fixtures for quick and easy change-out. Load up the next Mini Tombstone with your workpieces while the other one is cycling. Changeover time is reduced and the productivity of your machine is drastically increased.

The RWP-042-4X90T Raptor mini tombstone will mount the any fixture with a 1.5" dovetail.



Max Workpiece Weight	7 Pounds / 3.47 kg Each
Max Workpiece Size	4.0" L x 2.50" W x 2.50" H
Fixture Material	17-4 Stainless Steel Fixtures Aluminum Base
Number of Clamps	4 Clamps
Clamp Replacement Kit	RWP-KIT-305SQ (4) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.375" / 9.525mm
Each Fixture Height	1.25" / 31.75mm
Total Product Height	4.38" / 111.252mm

RWP-024-2XR

Aluminum 0.75" Dovetail Fixture - In-Line bridge system holds 2 RWP-024 on a single base

The RWP-024-2XR is a 0.75" dovetail bridge system for milling applications. This product is designed for modular applications: utilizing two RWP-024 0.75" fixtures in-line to hold longer parts.



Fixture Material	7075-T6511 Aluminum
Number of Clamps	2 Clamps
Clamp Replacement Kit	RWP-KIT-302SQ
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.875" / 73.025mm
Base Length	7.0" / 177.8mm

1 Workpiece (Total)

Max Workpiece Weight	16 Pounds / 7.257 kg
Max Workpiece Size	8.5"L x 4.0"W x 4.0"H 215.9mm x 101.6mm x 101.6mm

2 Workpieces (Each)

8 Pounds / 3.628 kg
4.0" / 101.6mm Cubed

RWP-024-3XR

Aluminum 0.75" Dovetail Fixture - In-Line bridge system holds 3 RWP-024 on a single base

The RWP-024-3XR is a 0.75" dovetail bridge system for milling applications. This product is designed for modular applications: utilizing three RWP-024 0.75" fixtures in-line to hold longer parts.



Fixture Material	7075-T6511 Aluminum
Number of Clamps	3 Clamps
Clamp Replacement Kit	RWP-KIT-302SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.875" / 73.025mm
Base Length	10.0" / 254mm
1 Workpiece (Total)	
Max Workpiece Weight	24 Pounds / 10.886 kg
Max Workpiece Size	12.5"L x 4.0"W x 4.0"H 317.5mm x 101.6mm x 101.6mm

3 Workpieces (Each)	
	8 Pounds / 3.628 kg
	4.0" / 101.6mm Cubed

RWP-024-4XR

Aluminum 0.75" Dovetail Fixture - In-Line bridge system holds 4 RWP-024 on a single base

The RWP-024-4XR is a 0.75" dovetail bridge system for milling applications. This product is designed for modular applications: utilizing four RWP-024 0.75" fixtures in-line to hold longer parts.



Fixture Material	7075-T6511 Aluminum
Number of Clamps	4 Clamps
Clamp Replacement Kit	RWP-KIT-302SQ (2) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	2.875" / 73.025mm
Base Length	13.0" / 330.2mm
1 Workpiece (Total)	
Max Workpiece Weight	32 Pounds / 14.514 kg
Max Workpiece Size	16.5"L x 4.0"W x 4.0"H 419.1mm x 101.6mm x 101.6mm

4 Workpieces (Each)	
	8 Pounds / 3.628 kg
	4.0" / 101.6mm Cubed

RWP-024-6XC

Aluminum 0.75" Dovetail Fixture - 6 Fixture Carousel

The RWP-024-6XC is a 0.75" dovetail carousel for milling applications. This product is designed for modular applications: utilizing 6 RWP-024 fixtures on a carousel base to machine multiple items in 1 operation. This carousel base mounts to either RWP-006 or RWP-006SS

Max Workpiece Weight	8 Pounds / 3.628 kg
Max Workpiece Size	4.0" / 101.6mm Cubed
Fixture Material	7075-T6511 Aluminum
Number of Clamps	1
Clamp Replacement Kit	RWP-KIT-302SQ (3) required
Dovetail Height	0.125" / 3.175mm
Dovetail Width	0.75" / 19.05mm
Fixture Height	1.5" / 38.1mm



NEED DOVETAIL CUTTERS?

We have a solution for that too. Raptor dovetail cutters machine the flat on the dovetail edge of your workpiece in one pass. This prevents a sharp edge on the dovetail from pressing into the corner of the fixture. Our dovetail cutters are available in a variety of dovetail heights and diameters depending on your need.

RWP-DC403U

3 Flute Uncoated 0.75" Dia.
0.125" High Dovetail Cutter
Works well with aluminum or softer materials. Works well with 1.50, .750, .500 & .375 dovetail sizes.

RWP-DC407C

4 Flute Coated 0.35" Dia.
0.125" High Dovetail Cutter
Designed for prolonged life & for harder materials. Works well with 1.50, .750, .500 & .375 dovetail sizes.

RWP-DC404C

4 Flute Coated 0.75" Dia.
0.125" High Dovetail Cutter
Designed for prolonged life & for harder materials. Works well with 1.50, .750, .500 & .375 dovetail sizes.

RWP-DC408C

4 Flute Coated 0.45" Dia.
0.125" High Dovetail Cutter
Designed for prolonged life & for harder materials. Works well with 1.50, .750, .500 & .375 dovetail sizes.

RWP-DC405C

4 Flute Coated 0.248" Dia.
0.0469" High Dovetail Cutter
Designed for prolonged life & for harder materials. Works well with .281 X .046 dovetail size (old style).

RWP-DC409C

4 Flute Coated 0.248" Dia.
0.0781" High Dovetail Cutter
Designed for prolonged life & for harder materials. Works well with .281 X .0781 dovetail (current style).

RWP-DC410C

4 Flute Coated 0.75" Dia.
0.750" Shank, 0.138" High Dovetail Cutter
Designed for prolonged life & for harder materials. Works well with 2.25" dovetail size.

See website for Speeds & Feed Rates for Raptor Dovetail Cutters.

REPLACEMENT PARTS

RWP-KIT-301SQ

Replacement Clamp Kit

Fits 1.500" Dovetail size.

(2) Clamp assemblies per kit.

RWP-KIT-302SQ

Replacement Clamp Kit

Fits .750" Dovetail size.

(2) Clamp assemblies per kit.



RWP-KIT-303SQ

Replacement Clamp Kit

Fits 2.250" Dovetail size.

(2) Clamp assemblies per kit.

RWP-KIT-304SQ

Replacement Clamp Kit

Fits .281" X .0461 Dovetail size.

(2) Clamp assemblies per kit.

RWP-KIT-305SQ

Replacement Clamp Kit

Fits .375" Dovetail size.

(2) Clamp assemblies per kit.

RWP-KIT-306SQ

Replacement Clamp Kit

Fits .500" Dovetail size.

(2) Clamp assemblies per kit.

RWP-KIT-307SQ

Replacement Clamp Kit

Fits .281" X .0781 Dovetail size.

(2) Clamp assemblies per kit.

RWP-KIT-3001SQ

Replacement Clamp Kit

Fits 2.75" Dovetail size.

(2) Clamp assemblies per kit.

RWP-PLUG-208

Blank 2.500" Diameter allows customer to modify to fit specific application.

Precision 1.000" Diameter fits in the bottom of fixtures/risers that have a Raptor interface.



RWP-8-32

8/32 x 1/4 Replacement Locating Pins

These replacement locating pins are for all Raptor Fixtures except the RWP-019SS and RWP-042SS.

Five replacement pins per pack.

These are for fixtures that were manufactured before 2017.



RWP-8-32CLS

8/32 x 1/4 Replacement Locating Pins

These replacement locating pins are for all Raptor Fixtures except the RWP-019SS and RWP-042SS.

These are for fixtures that were manufactured 2017 or after.

Five replacement pins per pack.



RWP-8-32MO

8/32 x 8/32 x .165 Replacement Locating Pins

These replacement locating pins are for the RWP-019SS and RWP-042SS only.

Five replacement pins per pack.



RAPTOR IS FLEXIBLE.

The parts you make come in different sizes and so does Raptor. Our Micro-Raptors work great for small parts while our Raptor Rails, Raptor Nests and Raptor Tombstone solutions can hold multiple parts or workpieces as heavy as 150 pounds.



RAPTOR IS **ADAPTABLE.**



Our workholding products can fit any machine and any situation. We have a variety of adapters, risers, and fixtures built to attach directly to the most popular CNC machines. Multiple Raptors can be mounted to tombstones, multi- fixtures and base plates.

Raptor creates new products based on our customers' valuable feedback. If you need something special, let us know.

RWP-202

Adapter

Enables compatible fixtures to be mounted on the Haas TR210, HRT210 & HRC210

Material	7075-T6511 Aluminum
Product Height	2.0" / 50.8mm
Product Diameter	8.20" / 208.28mm
Bolt Circle Diameter	6.50" / 165.1mm
Connection Bolts	(6) 1/2" SHCS
Boss / Hole	2.000" Dia x .375" Boss
Mounts	All Fixtures with Raptor interface



RWP-203

Adapter

Enables compatible fixtures to be mounted on the following Haas machines:
TR160, TR160-2, TR200Y, HRT160 & TRT160.

Material	7075-T6511 Aluminum
Product Height	1.5" / 38.1mm
Product Diameter	6.30" / 160.02mm
Bolt Circle Diameter	5.40" / 137.16mm
Connection Bolts	(6) 3/8" SHCS T-NUTS
Boss / Hole	1.499" Dia x 0.313" Boss
Mounts	All Fixtures with Raptor interface



RWP-206

Riser for Mori Seiki NMV3000

While supplies last. Replaced by Universal Riser RWP-262.
For metric pallet see Universal Riser RWP-262.
Enables compatible fixtures to be mounted on the Mori Seiki NMV3000.

Material	7075-T6511 Aluminum
Product Height	3.5" / 88.9mm
Product Diameter	8.980 / 228.092mm
Bolt Circle Diameter	175mm (RWP-205) / 7.0" (RWP-206)
Connection Bolts	(4) M12 SHCS (RWP-205) / (4) 1/2" SHCS (RWP-206)
Boss / Hole	1.180" Dia x 0.250 Boss
Connects to	Mori Seiki NMV3000
Mounts	All Fixtures with Raptor interface



RWP-262

Medium Universal Riser

Enables compatible fixtures to be mounted to multiple machines.

Material	7075-T6511 Aluminum
Product Height	3.5" / 88.9mm
Product Diameter	8.980 / 228.092mm
Bolt Circle Diameter	6.000 to 7.030 range
Connection Bolts	1/2-13 or M12 SHCS
Boss / Hole	1.000" Dia x 0.30" Receiving hole
Connects to	Mori Seiki NMV5000, DMU50/50eco, NMV3000 Metric/English & multiple other machines
Mounts	All Fixtures with Raptor interface

*Raptor's plug RWP-PLUG-208, sold separately, may need to be modified.



RWP-208

Emergency Adapter

Emergency adapter plate enables any compatible fixtures to be mounted on the pallet of your machine. You simply add the mounting holes.

Material	6061 Aluminum
Product Height	1.5" / 38.1mm
Product Diameter	7.950" / 201.93mm
Boss / Hole	1.000" Dia x 0.30" Receiving hole
Connects to	Any Machine
Mounts	All Fixtures with Raptor interface

*Raptor's plug RWP-PLUG-208, sold separately, may need to be modified.



RWP-209

Emergency Adapter

Emergency adapter plate enables any compatible fixtures to be mounted on the pallet of your machine. You simply add the mounting holes.

Material	6061 Aluminum
Product Height	1.5" / 38.1mm
Product Diameter	9.055" / 229.997mm
Boss / Hole	1.000" Dia x 0.30" Receiving hole
Connects to	Any Machine
Mounts	All Fixtures with Raptor interface

*Raptor's plug RWP-PLUG-208, sold separately, may need to be modified.



RWP-239

Small Machine Adapter

Small adapter allows RWP-024 and RWP-024SS (.75" Dovetail), RWP-019SS and RWP-042SS (.375" Dovetail) to be adapted to the following machines: Haas TRT70 & TRT100, Nikken 100FA & 130FA, Yukiwa TNT100L, Sankyo RT80 & RT100 and others.

Material	6061 Aluminum with Blue Anodize Finish
Product Height	.75" / 19mm
Product Diameter	3.940 / 100mm
Boss / Hole	.3755" Dia x .38" Receiving hole
Includes	Centering plug .375" Dia. with 2.50" Blank machinable diameter and a 3/8" x .75 LG dowel pin



There are many CNC machines and rotary table sizes. That's why we offer universal adapters. Our universal adapters are 2 inches tall and are available in 9 inch and 11 inch diameters. Both universal adapters have multiple mounting slots so they are guaranteed to fit your machine.

Combine the universal adapters with extenders available in either 1 inch or 2 inch sizes to provide additional height without unnecessary bulk. Please refer to charts for options.

RWP-222

Universal Adapter 9.875" Diameter, 2" Height

Has multiple slots to allow for use on multiple machine pallets or rotary tables. This universal adapter is modular in design with many options



Material	7075 Aluminum with Black Anodized Finish
Product Height	2.0" / 50.8mm
Product Diameter	9.875" / 250.825mm
Bolt Circle Diameter	T-Slots for 3/8" or M10 SHCS on 5.50"-8.50"/139.7mm-215.9mm B.C.
Connection Bolts	(4) 1/2"-13 UNC-2B
Boss / Hole	1.00" Dia x 0.30" Receiving Hole
Connects to	RWP-206, RWP-601, RWP-602
Mounts	All Fixtures with Raptor interface

*Centering plug required. Raptor's plug RWP-PLUG-208, sold separately, may need to be modified.

RWP-222 Universal Adapter Configuration Options

RWP-001(SS) RWP-002(SS) / RWP-030SS RWP-006(SS) RWP-013(SS) RWP-018(SS)

RWP-222 direct mount with fixture only



RWP-222 direct mount with fixture and RWP-601 one inch extender



RWP-222 mount with fixture and RWP-602 two inch extender



RWP-222 mount with fixture and RWP-206 riser



RWP-223

Universal Adapter 11.95" Diameter, 2" Height














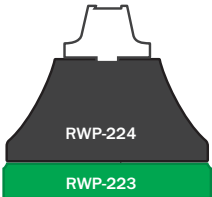
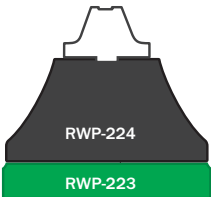
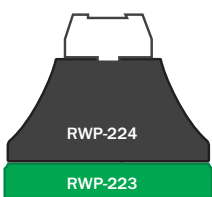
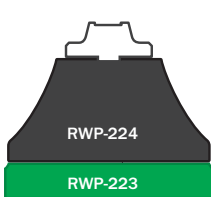
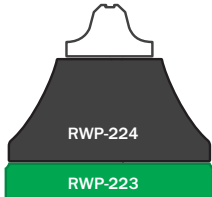
Has multiple slots to allow for use on multiple machine pallets or rotary tables. This universal adapter is modular in design with many options

Material	7075 Aluminum with Black Anodized Finish
Product Height	2.0" / 50.8mm
Product Diameter	11.950" / 303.53mm
Bolt Circle Diameter	T-Slots for 1/2" or M12 SHCS on 6.00"-10.00"/152.4mm-254mm B.C.
Connection Bolts	(4) 1/2"-13 UNC-2B
Boss / Plug	1.250" Dia x 0.30" Receiving Hole
Connects to	RWP-224, RWP-601, RWP-602
Mounts	All Fixtures with Raptor interface



*Centering plug required. Raptor's plug RWP-PLUG-208, sold separately, may need to be modified.

RWP-223 Universal Adapter Configuration Options

RWP-001(SS)	RWP-002(SS) / RWP-030SS	RWP-006(SS)	RWP-013(SS)	RWP-018(SS)
RWP-223 direct mount with fixture only				
				
RWP-223 direct mount with fixture and RWP-601 one inch extender				
				
RWP-223 mount with fixture and RWP-602 two inch extender				
				
RWP-223 mount with fixture and RWP-224 riser				
				

RWP-224

Riser

This riser can be used in a modular configuration when combined with the Universal Adapter: RWP-223.

Material	7075 Aluminum
Product Height	6.0" / 152.4mm
Product Diameter	11.950" / 303.53mm
Bolt Circle Diameter	10.150" / 257.81mm
Connection Bolts	(4) 1/2"-13 SHCS
Boss / Hole	1.000" Dia. X .300" Receiving Hole
Connects to	Any Machine, RWP-223
Mounts	All Fixtures with Raptor interface

*Centering Plug required, RWP-PLUG-208, sold separately, may need to be modified.



RWP-228

Riser

While supplies last. Replaced by Universal Riser RWP-262.
Enables compatible fixtures to be mounted on the pallet of the DMG Mori DMU50/50eco machine.

Material	7075 Aluminum
Product Height	3.494" / 88.7476mm
Product Diameter	8.96" / 227.584mm
Bolt Circle Diameter	7.015" / 178.181mm
Connection Bolts	(4) M12 SHCS
Boss / Hole	1.180" Dia x .250" Boss
Connects to	DMG Mori DMU50/50eco
Mounts	All Fixtures with Raptor interface



RWP-234

Riser

Enables compatible fixtures to be mounted on the Haas UMC-750 / UMC-750SS or Matsura MX-520 300MM.

Material	7075-T6511 Aluminum
Product Height	4.50" / 114.3 mm
Product Diameter	11.40" / 289.56
Bolt Circle Diameter	9.92" / 251.968 mm
Connection Bolts	(4) M12 SHCS
Boss / Hole	1.970" Dia. x .750" Receiving Hole
Connects to	Haas UMC-750 / UMC-750SS or Matsura MX-520 500MM
Mounts	All Fixtures with Raptor interface



RWP-237

Nest Riser

The RWP-237 is an aluminum Nest riser, designed for the Haas UMC-750 / UMC-750SS or Matsuura MX-520 300MM.

Material	7075-T6511 Aluminum
Product Height	6.550" / 166.37mm
Product Diameter	14.75" / 374.65mm
Bolt Circle Diameter	13.20" / 335.28mm
Connection Bolts	(8) 1/2" SHCS
Boss / Hole	1.970" Dia x .750" Receiving Hole
Connects to	Haas UMC-750 / UMC-750SS or Matsuura MX-520 500MM
Mounts	All Fixtures with Raptor interface

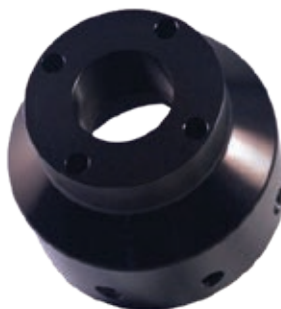


RWP-238-8

Adapter 8 Thread

Aluminum Adapter to connect RWP-003 5C Rotary Indexer Spindle Nose 8TPI.

Material	7075 Aluminum
Machine Type	5C Rotary Indexer
Connects to	RWP-003



RWP-238-10

Adapter 10 Thread

Aluminum Adapter to connect RWP-003 5C Rotary Indexer Spindle Nose 10TPI.

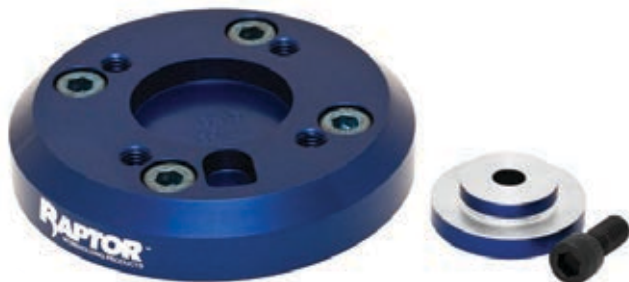
Material	7075 Aluminum
Machine Type	5C Rotary Indexer
Connects to	RWP-003

RWP-241

Adapter

This adapter has the mounting interface for the RWP-027, 1.5" dovetail fixture, and is designed for the Yukiwa TNT100L.

Material	7075-T6511 Aluminum
Product Height	0.75" / 166.37mm
Product Diameter	3.938" / 374.65mm
Bolt Circle Diameter	2.677" / 68mm
Connection Bolts	(4) M8 SHCS
Boss / Hole	1.968" Dia x 0.230"
Machine Type	Yukiwa TNT100L
Fixture Compatibility	RWP-027



RWP-601

Aluminum Extender 1" Height

The 1" Extender is to add height when used with either Universal Adapter: RWP-222 or RWP-223 in lieu of using a riser.



Material	7075 Aluminum
Connects to	RWP-222, RWP-223
Boss / Plug	1.25" Dia x 0.25 31.75mm Dia x 6.35mm
Mounts	All Fixtures with Raptor interface

RWP-602

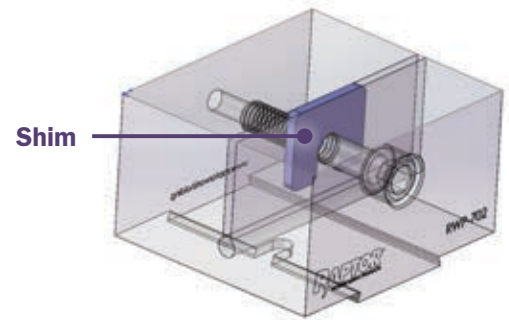
Aluminum Extender 2" Height

The 2" Extender is to add height when used with either Universal Adapter: RWP-222 or RWP-223 in lieu of using a riser.



PINCH BLOCKS

The Pinch Block connects directly to a Raptor dovetail fixture and is designed to offer a quick solution for secondary or final operations. Allows for quick dovetail removal and part completion. Convenient size and shape. Simply tighten with T-Handle wrench. Available in three sizes



RWP-702

Aluminum Pinch Block

Utilizes a single 3/8-16 Socket Head Cap Screw to actuate it.

Material	7075-T6511 Aluminum
Product Dimensions	2.350" L x 2.950" W x 1.820" H 59.69mm x 74.93mm x 46.228mm
Dovetail Width	1.50" / 38.1mm
Fixture Compatibility	RWP-001(SS), RWP-004, RWP-013(SS), RWP-026, RWP-027, RWP-036SS
*Screw and shim are included	



RWP-703

Aluminum Pinch Block

Utilizes two 3/8-16 Socket Head Cap Screws to actuate it.

Material	7075-T6511 Aluminum
Product Dimensions	5" L x 2.950" W x 1.820" H 127mm x 74.93mm x 46.228mm
Dovetail Width	1.50" / 38.1mm
Fixture Compatibility	RWP-001(SS), RWP-004, RWP-013(SS), RWP-026, RWP-027, RWP-036SS
*Screw and shim are included	



RWP-704

Aluminum Pinch Block

Utilizes a single 3/8-16 Socket Head Cap Screw to actuate it.

Material	7075-T6511 Aluminum
Product Dimensions	2.350" L x 2.950" W x 1.820" H 59.69mm x 74.93mm x 46.228mm
Dovetail Width	0.75" / 38.1mm
Fixture Compatibility	RWP-002(SS), RWP-015, RWP-023, RWP-030SS, RWP-034SS, RWP-038SS, RWP-405
*Screw and shim are included	



The benefits of Raptors' workholding products are widespread!

Our customers have reported that by utilizing Raptor products in their facilities, there have been numerous benefits:

- Saving time and money by becoming more efficient.
- Ultimately increasing overall company health by:
 - * Decreasing production time while increasing yield of finished goods
 - * Opening up production schedules to accommodate more orders.
 - * Improving employee performance by streamlining application processes, while increasing their enthusiasm and morale,
 - * Growing their customer base due to greater production capacity, improving pricing and even increasing on-time delivery.

As we always say:

"Spend time making parts not figuring out how to hold them – Raptor is your solution!"

Policies & Warranty

Engineering Changes

Specification and engineering data are subject to change without notice.

Manufacturing Policy

Products supplied by Raptor are high quality and adhere to manufacturing standards. Tolerances are uniformly held in accordance with catalog specifications. Our products are simple to use and we provide support material with each shipment to ensure that your applications go smoothly. We are happy to provide you with additional support, just contact us.

Damaged, Short or Lost Items

UPS is our primary carrier. If your package and subsequent product is damaged/lost in transit, immediately place a claim with your UPS office. Keep all damaged product and packaging for inspection by UPS. Notify Raptor so we can help replace the merchandise.

Returned Goods

Materials cannot be returned without authorization. Final credit will be determined as follows:

- *Only catalog items suitable for resale may be returned.*
- *Customers need to obtain an RGA# by contacting a Raptor Customer Service representative and reference the RGA# on the returned goods.*
- *Invoice number and date must be furnished.*
- *Follow packing instructions, if applicable, for returning goods.*
- *Transportation charges must be prepaid.*
- *Credit value will be issued at invoiced price less a minimum 20% restocking charge. Specials cannot be returned.*

Warranty

Raptor Products are protected with a 1 year limited warranty for parts*

* Subject to the terms as described in our Limited Warranty Policy.

■ RWP-001 Aluminum 1.5" Dovetail Fixture	11	■ RWP-027 Aluminum 1.5" Dovetail Fixture	12
■ RWP-001SS Stainless Steel 1.5" Dovetail Fixture	11	■ RWP-030SS Stainless Steel 0.75" Dovetail Fixture	17
■ RWP-002 0.75" Dovetail Fixture	14	■ RWP-031SS Stainless Steel Dovetail Fixture	21
■ RWP-002SS 0.75" Dovetail Fixture.	14	■ RWP-032SS Stainless Steel Dovetail Fixture	21
■ RWP-003 Aluminum 0.75" Dovetail Fixture.	14	■ RWP-034SS Stainless Steel 0.75" Dovetail Fixture	17
■ RWP-003-4X Pyramid System	23	■ RWP-036SS Stainless Steel 1.5" Dovetail Fixture	12
■ RWP-004 Aluminum 1.5" Dovetail Fixture	11	■ RWP-038SS Stainless Steel 0.75" Dovetail Fixture	18
■ RWP-006 Aluminum 2.25" Dovetail Fixture.	10	■ RWP-042-4X90T Mini Tombstone System	25
■ RWP-006SS Stainless Steel 2.25" Dovetail Fixture	10	■ RWP-042SS Stainless Steel 0.375" Dovetail Fixture	20
■ RWP-007SS Stainless Steel 0.75" Dovetail Fixture.	15	■ RWP-1027 Soft Jaw (Right)	4
■ RWP-011SS Stainless Steel 0.75" Dovetail Fixture	15	■ RWP-1027-ST Soft Jaw (Right)	4
■ RWP-012SS Stainless Steel 0.75" Dovetail Fixture	15	■ RWP-1027-ST Soft Jaw (Right)	4
■ RWP-013 Aluminum 1.5" Dovetail Fixture	11	■ RWP-1028 Soft Jaw (Left).	4
■ RWP-013SS Stainless Steel 1.5" Dovetail Fixture	11	■ RWP-1028-ST Soft Jaw (Left).	4
■ RWP-015 Aluminum 0.75" Dovetail Fixture.	16	■ RWP-1050 Serrated 45° Dovetail.	4
■ RWP-017SS Stainless Steel 0.50" Dovetail Fixture	19	■ RWP-1051 Standard Parallel (1/8" Ledge)	5
■ RWP-018 Aluminum 0.50" Dovetail Fixture.	19	■ RWP-1052 Thin Parallel (1/16" Ledge).	5
■ RWP-018SS Stainless Steel 0.50" Dovetail Fixture	19	■ RWP-1056 Straight Edge 60° Dovetail	5
■ RWP-019-4X45T Pyramid System	24	■ RWP-1527 Soft Jaw (Right)	4
■ RWP-019-4X90T Mini Tombstone System	24	■ RWP-1527-ST Soft Jaw (Right)	4
■ RWP-019SS Stainless Steel 0.375" Dovetail Fixture	20	■ RWP-1528 Soft Jaw (Left).	4
■ RWP-022SS Stainless Steel 0.50" Dovetail Fixture	19	■ RWP-1528-ST Soft Jaw (Left).	4
■ RWP-023 Aluminum 0.75" Dovetail Fixture:	16	■ RWP-1550 Serrated 45° Dovetail	4
■ RWP-024 Aluminum 0.75" Dovetail Fixture.	16	■ RWP-1551 Standard Parallel (1/8" Ledge)	5
■ RWP-024-2XR In-Line Bridge System	25	■ RWP-1556 Straight Edge 60° Dovetail	5
■ RWP-024-3XR In-Line Bridge System	26	■ RWP-202 Adapter	30
■ RWP-024-4XR In-Line Bridge System	26	■ RWP-203 Adapter	31
■ RWP-024-6XC Carousel	27	■ RWP-206 Riser for Mori Seiki NMV3000	31
■ RWP-024SS Stainless Steel 0.75" Dovetail Fixture	16	■ RWP-208 Emergency Adapter.	32
■ RWP-025 Aluminum Rail	17	■ RWP-209 Emergency Adapter.	32
■ RWP-026 Aluminum 1.5" Dovetail Fixture	12	■ RWP-209-V100 Emergency Adapter	6

● RWP-213SS Stainless Steel 0.75"	20	● RWP-704 Aluminum Pinch Block	37
● RWP-214SS Stainless Steel 1.5" Adapter	20	● RWP-8-32 8/32 x 1/4 Replacement Locating Pins	28
● RWP-222 Universal Adapter.	33	● RWP-8-32CLS 8/32 x 1/4 Replacement Locating Pins	28
● RWP-222-V100 Universal Adapter	6	● RWP-8-32MO Replacement Locating Pins	28
● RWP-223 Universal Adapter.	34	● RWP-DC403U 3 Flute Uncoated 0.75"	27
● RWP-223-V100 Universal Adapter	6	● RWP-DC404C 4 Flute Coated 0.75"	27
● RWP-224 Riser	35	● RWP-DC405C 4 Flute Coated 0.248"	27
● RWP-228 Riser	35	● RWP-DC407C 4 Flute Coated 0.35"	27
● RWP-234 Riser	35	● RWP-DC408C 4 Flute Coated 0.45"	27
● RWP-237 Nest Riser	36	● RWP-DC409C 4 Flute Coated 0.248"	27
● RWP-238-10 Adapter 10 Thread	36	● RWP-DC410C 4 Flute Coated 0.75"	27
● RWP-238-8 Adapter 8 Thread.	36	● RWP-KIT-3001SQ Replacement Clamp Kit	28
● RWP-239 Small Machine Adapter	32	● RWP-KIT-301SQ Replacement Clamp Kit	28
● RWP-241 Adapter	36	● RWP-KIT-302SQ Replacement Clamp Kit	28
● RWP-242-V100 Riser Plate	7	● RWP-KIT-303SQ Replacement Clamp Kit	28
● RWP-244-V100 2.25" Dovetail Connector Plate	7	● RWP-KIT-304SQ Replacement Clamp Kit	28
● RWP-248SS Stainless Steel 0.5" Adapter	20	● RWP-KIT-305SQ Replacement Clamp Kit	28
● RWP-249SS Stainless Steel 0.5" Adapter	20	● RWP-KIT-306SQ Replacement Clamp Kit	28
● RWP-251-V100 2.25" Dovetail Connector Plate	7	● RWP-KIT-307SQ Replacement Clamp Kit	28
● RWP-262 Riser	31	● RWP-PLUG-208	28
● RWP-33020 Mitee-Bite End Stop	5		
● RWP-33050 Mitee-Bite TalonGrip™	5		
● RWP-401-11 Aluminum 11" Rail with 1.5" Dovetail	13		
● RWP-403SS-12 Stainless Steel 2.75" Dovetail Fixture	10		
● RWP-405 Aluminum 8" Rail with 0.75" Dovetail	18		
● RWP-502 100mm Self Center Vise	3		
● RWP-505 150mm Self Center Vise	3		
● RWP-601 Aluminum Extender	36		
● RWP-602 Aluminum Extender	36		
● RWP-702 Aluminum Pinch Block	37		
● RWP-703 Aluminum Pinch Block	37		

- | | |
|----------------------------|--------------------------------|
| ● Vises | ● Cutters & Parts |
| ● Dovetail Fixtures | ● Adapters & Risers |
| ● Multi-Fixtures | ● Pinch Blocks |



THE BEST IN THE BUSINESS JUST BECAME EVEN STRONGER!

TE-CO has entered into a partnership to bring Swiss engineering and 100% Swiss made high pressure coolant lines to the United States.



The patented

PIRANHA COOLING LINE

solves all cooling problems
on chip-removing processing



Fits on all standard tool holders



Flexible and available in both ($\frac{1}{2}$ and $\frac{1}{4}$ inch)



Withstands pressures up to 80 bar



Versatile use (cooling and high pressure chip removal)



Cost-Effective



Long lifespan thanks to anodized coating



Light Weight



New Design



100% Swiss Engineered and Manufactured

1/4 INCH

FOR HIGH
PRESSURE
80 BAR

THREADED CONNECTOR

GA-1/8"

Threaded Connector 1/8"



GA-M10

Threaded Connector M10



GA-1/8" NPT

Threaded Connector 1/8" NPT



GA-M10x1

Threaded Connector M10x1



GA-1/4"

Threaded Connector 1/4"



GA-M12x1

Threaded Connector M12x1



GA-1/4" NPT

Threaded Connector 1/4" NPT



GA-R1/8"-L

Threaded Connector R1/8" Long



GA-M8

Threaded Connector M8



GA-R

Threaded Connector Blank



GA-M8-L

Threaded Connector M8 Long



SPACER

D-12.5/28

Spacer 28mm



D-12.5/43

Spacer 43mm



D-12.5/70

Spacer 70mm



NOZZLE

RD-12.5-1.5

Round Nozzle Ø1.5mm



RD-12.5-3.5

Round Nozzle Ø3.5mm



RD-12.5-4.5

Round Nozzle Ø4.5mm



RD-12.5-5.5

Round Nozzle Ø5.5mm



RD-12.5-7/1.5

Round Nozzle Multi-Hole



SDK-12.5/90°

Special Nozzle Ø1.8mm / 90° Short



SDL-12.5/90°

Special Nozzle Ø1.8mm / 90° Long



SDK-12.5/60°

Special Nozzle Ø1.8mm / 60° Short



SDL-12.5/60°

Special Nozzle Ø1.8mm / 60° Long



FD-12.5-20

Flat Nozzle 20mm



DISTRIBUTOR

L-12.5

90° Elbow



Quatro-12.5

Quatro Distribution Block



T-12.5

T-Distributor



Y-12.5

Y-Distributor



H-12.5

Ball Valve 1/4"



1/4 INCH

ACCESSORIES

M-SW16

Nut SW16



D-SW16

Cap SW16



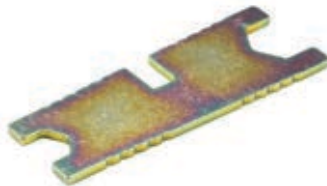
Ring 12.5

O-Ring 1/4"



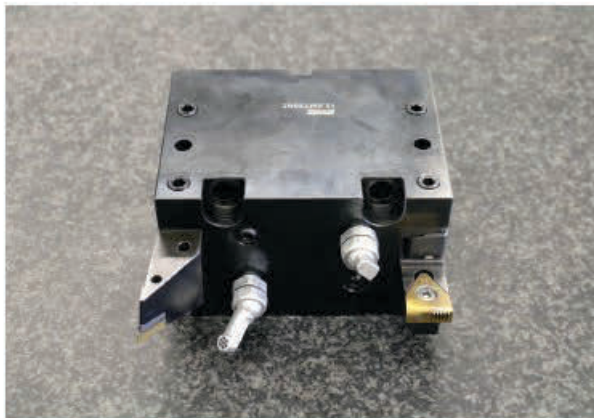
S-11/16

Hexagon Wrench



CUSTOMIZED PRODUCTS

Can be produced by request



COOLING LINE STARTER KIT

Set

PCL-1/4 SET 1

Cooling Line Starter Kit

Piranha Cooling Line Starter Kit Content:

- | | |
|-------------------------------|---------------------------------|
| 3 Spacer 28.0mm | 1 Round Nozzle Ø5.5mm |
| 3 Spacer 43.0mm | 1 Special Nozzle Ø1.8/60° Short |
| 3 Spacer 70.0mm | 1 Special Nozzle Ø1.8/60° Long |
| 1 Threaded Connector 1/4" | 1 Special Nozzle Ø1.8/90° Short |
| 1 Threaded Connector 1/4" NPT | 1 Special Nozzle Ø1.8/90° Long |
| 1 Threaded Connector 1/8" NPT | 5 Nuts SW 16x7mm |
| 1 Threaded Connector M10x1 | 1 90° Elbow |
| 1 Threaded Connector M12x1 | 1 Y-Distributor |
| 1 Round Nozzle Ø3.5mm | 2 Hexagon Wrench SW11/SW16 |
| 1 Round Nozzle Ø4.5mm | L x W x H 210 x 150 x 40mm |



1/2 INCH

FOR HIGH
PRESSURE
80 BAR

THREADED CONNECT-

GA-22-3/8" NPT

Threaded Connector 3/8" NPT



GA-22-3/8"

Threaded Connector 3/8"



GA-22-1/2" NPT

Threaded Connector 1/2" NPT



GA-22-1/2"

Threaded Connector 1/2"



SPACER

D-22-46

Spacer 46.5mm



D-22-63

Spacer 63.5mm



D-22-80

Spacer 80mm



NOZZLE

RD-22-6

Round Nozzle Ø6mm



RD-22-8

Round Nozzle Ø8mm



RD-22-10

Round Nozzle Ø10mm



RD-22-12-19.2

Round Nozzle Ø10mm Multi-Hole



SDK-22/60°

Special Nozzle Multi-Hole / 60° Short



SDL-22/60°

Special Nozzle Multi-Hole / 60° Long



SDK-22/90°

Special Nozzle Multi-Hole / 90° Short



SDL-22/90°

Special Nozzle Multi-Hole / 90° Long



1/2 INCH

DISTRIBUTOR

L-1/2"

90° Elbow



T-1/2"

T-Distributor



Y-1/2"

Y-Distributor



Y-1/2" - 1/4"

Y-Distributor



H-22

Ball Valve 1/2"



ACCESSORIES

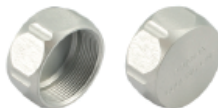
M-SW27

Nut SW27



D-SW27

Cap SW27



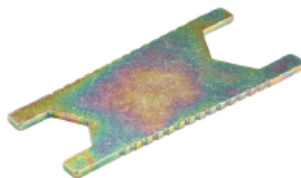
Ring 22

O-Ring 1/2"



S-21/27

Hexagon Wrench



FLAT NOZZLE

FD-22-30

Flat Nozzle 30



FD-22-40

Flat Nozzle 40



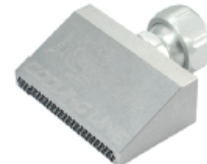
FD-22-50

Flat Nozzle 50



FD-22-60

Flat Nozzle 60



FD-22-80

Flat Nozzle 80



FD-22-100

Flat Nozzle 100





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NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings visible on the paper.

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RaptorWorkholding.com



Patent No. US8,672,310 B2

Patent No. US9,126,299 B2