



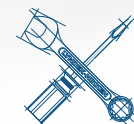
FLEXIBILITY PRODUCTS

ANGLE HEADS & SPINDLE SPEEDER CATALOG



 **AH**
ANGLE HEADS

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Our Angle Heads are equipped with hardened and ground gears and collet shafts. Units are also fitted with high-precision angular contact bearings, assuring extreme rigidity and accuracy. Compact designs maintain accurate spindle and tool centerline alignment while minimizing tool overhang - accuracy is maintained throughout the machining process from plane to plane.

Vernier Scales and Positioning Rings

Vernier scales help to orient the cutting tool location (0 - 360°).



Recessed Collet Seat

With our collet seat recessed into the body of the angle head, rigidity is optimized while maintaining a compact design.

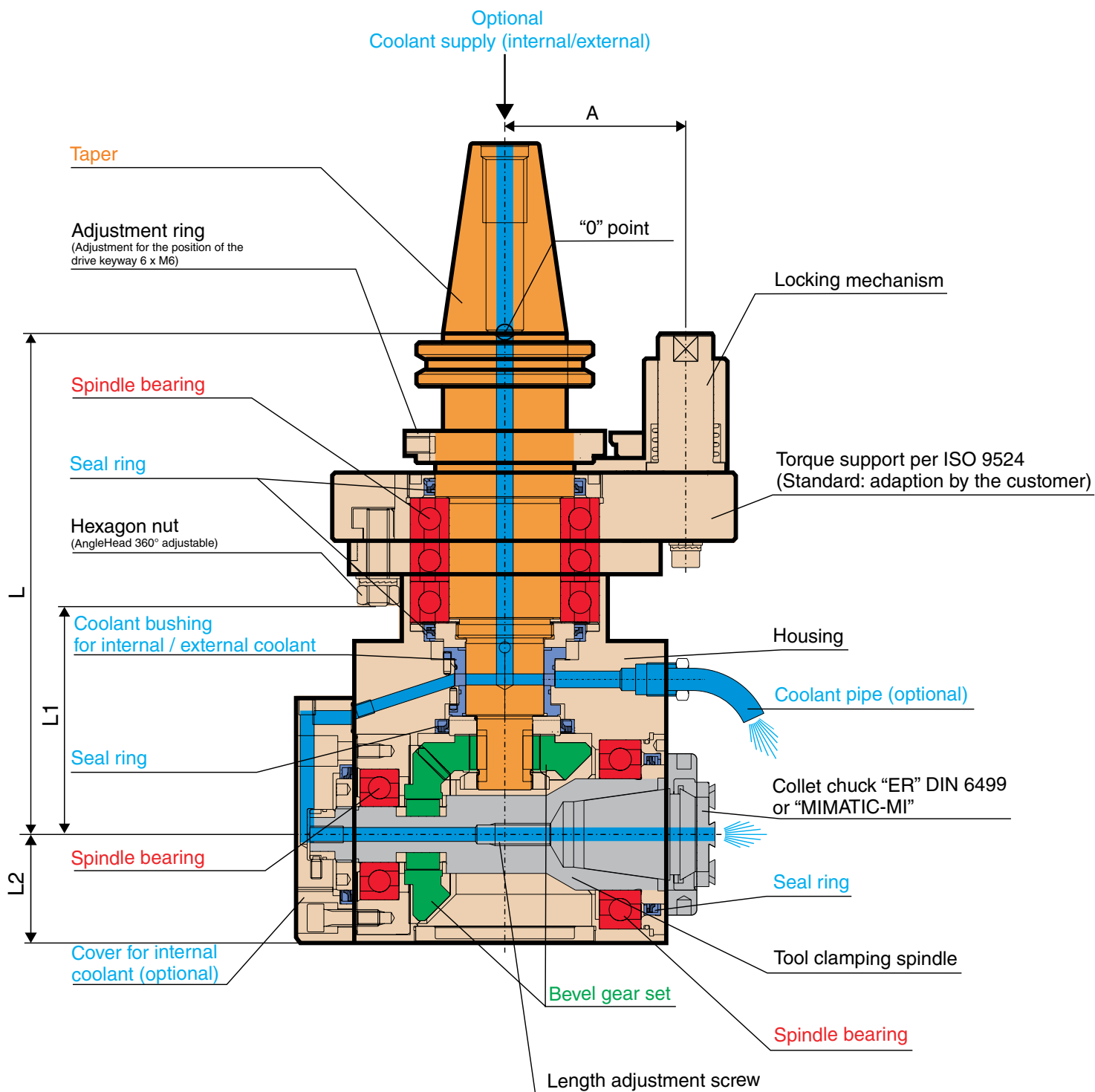


High Precision Assembly

Our angle heads are assembled with high precision, P4 quality spindle bearings that are stabilized for high speeds up to 15,000 rpm and high torques up to 110.634 ft-lbs.

The spiral beveled gears allow for high rigidity and smooth machining operations.



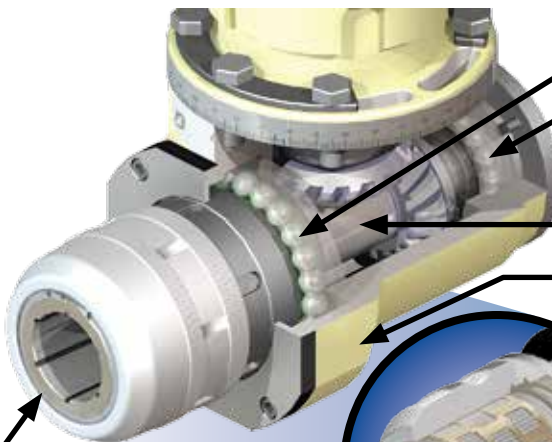


FEATURES

- Design for milling and drilling capabilities
- Multi Lock milling chuck nose ensures rigidity and accuracy
- Full 360° body rotation
- Storage case, wrenches, and instruction manual included



Thick wall and slots provide strong chucking torque and rigidity. Slots also function as an escape for oil.



Radial spindle bearings combine smooth operation and the ability to handle high radial and thrust loads

Heat-treated Nickel Chrome Molybdenum 4340 alloy shaft allows for higher torque transmission

Casting provides extra rigidity and strength while helping dampen vibration during machining operations

Forged Nickel Chrome Molybdenum 4340 nut and Nikken's patented needle roller bearing cage provide 3500 ft-lbs of gripping strength

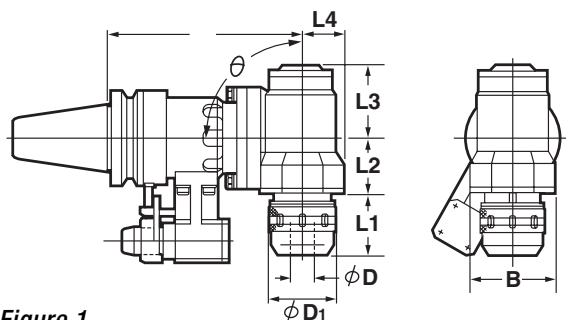


Figure 1

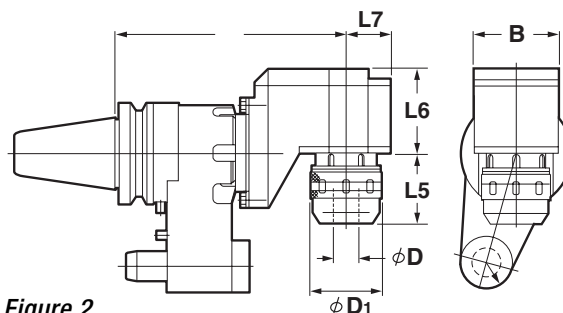


Figure 2

STYLE - FIGURE 1

LN Part Number	TAPER	Collet	Collet Range	Weight (app. LBS)	L1	L2	L3	L4	B	D	D1	Max RPM
CAT40U-AHC3/4-160-90	CAT40	KM3/4	3.175-15.875mm (1/8-5/8")	16	2.244"	2.283"	2.402"	1.457"	3.150"	0.75"	2.047"	2,000
CAT50U-AHC1.1/4-210-90	CAT50	KM 1-1/4	4.7625 - 25.4mm (3/16-1")	39	2.244"	2.362"	3.228"	1.772"	3.543"	1.25"	2.717"	2,000
BT40-AHC3/4-160-90	BT40	KM3/4	3.175-15.875mm (1/8-5/8")	16	2.244"	2.283"	2.402"	1.457"	3.150"	0.75"	2.047"	2,000

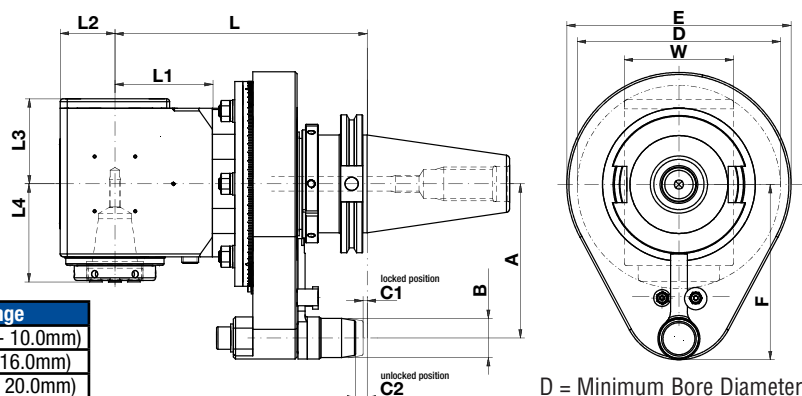
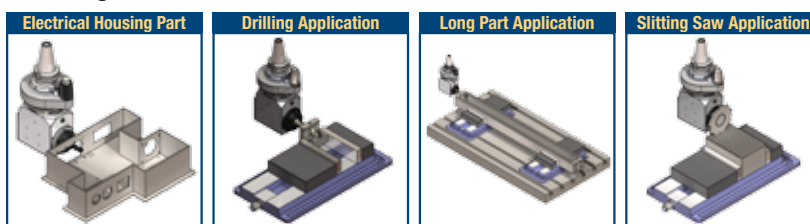
STYLE - FIGURE 2

LN Part Number	TAPER	Collet	Collet Range	Weight (app. LBS)	L5	L6	L7	B	D	D1	Max RPM
CAT40U-AFC3/4-205-90	CAT40	KM3/4	3.175-15.875mm (1/8-5/8")	19	2.205"	3.346"	1.387"	2.756"	0.75"	2.047"	2,000
CAT50U-AFC1.1/4-230-90	CAT50	KM 1-1/4	4.7625 - 25.4mm (3/16-1")	37	2.283"	3.346"	1.772"	3.307"	1.25"	2.047"	2,000
BT40-AFC3/4-200-90	BT40	KM3/4	3.175-15.875mm (1/8-5/8")	19	2.205"	3.346"	1.387"	2.756"	0.75"	2.047"	2,000



FEATURES

- Ideal for milling, drilling and tapping applications
- Submerged ER collet bore for greater rigidity
- Full 360° body rotation
- Compatible with most Automatic Tool Changes (ATCs)
- Spiral Bevel Gears for higher cutting torque capabilities
- 1000 PSI Center Thru Coolant versions available
- Storage case, wrenches, and instruction manual included



D = Minimum Bore Diameter

Collet	Cutting Tool Range
ER 16	1/32" - 13/32" (1.0mm - 10.0mm)
ER 25	1/16" - 5/8" (2.0mm - 16.0mm)
ER 32	1/8" - 25/32" (3.0mm - 20.0mm)
ER 40	5/32" - 1" (4.0mm - 26.0mm)

CAT40/50

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	L4	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
C40RAM-ER16-180-65TP	ER 16	13.0	7.087"	3.150"	0.866"	1.142"	1.772"	2.559"	0.709"	0.374"	0.583"	3.150"	4.882"	3.228"	1.732"	8.850 ft-lbs	6,500
C40RAM-ER25-180-65TP	ER 25	14.0	7.087"	3.150"	1.339"	1.634"	2.264"	2.559"	0.709"	0.374"	0.583"	4.331"	4.882"	3.228"	2.677"	22.127 ft-lbs	8,000
C40RAM-ER32-180-65TP	ER 32	18.0	7.087"	3.150"	1.457"	2.402"	2.756"	2.559"	0.709"	0.374"	0.583"	5.709"	4.882"	3.228"	3.071"	51.629 ft-lbs	6,500
C50RAM-ER25-180-110TP	ER 25	23.0	7.087"	2.756"	1.339"	1.634"	2.264"	4.331"	1.102"	0.118"	0.327"	4.331"	6.299"	4.921"	2.677"	22.127 ft-lbs	8,000
C50RAM-ER32-180-110TP	ER 32	26.0	7.087"	2.756"	1.535"	2.402"	2.756"	4.331"	1.102"	0.118"	0.327"	5.709"	6.299"	4.921"	3.071"	51.629 ft-lbs	6,500
C50RAM-ER40-215-110TP	ER 40	36.0	8.465"	4.134"	2.047"	2.756"	3.799"	4.331"	1.102"	0.118"	0.327"	7.677"	6.299"	4.921"	4.094"	110.634 ft-lbs	5,000

BT40/50

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	L4	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
B40RAM-ER16-187-65TP	ER 16	13.0	7.362"	3.150"	0.866"	1.142"	1.772"	2.559"	0.709"	0.374"	0.583"	3.150"	4.882"	3.228"	1.732"	8.850 ft-lbs	6,500
B40RAM-ER25-187-65TP	ER 25	14.0	7.362"	3.150"	1.339"	1.634"	2.264"	2.559"	0.709"	0.374"	0.583"	4.331"	4.882"	3.228"	2.677"	22.127 ft-lbs	8,000
B40RAM-ER32-187-65TP	ER 32	18.0	7.362"	3.150"	1.535"	2.402"	2.756"	2.559"	0.709"	0.374"	0.583"	5.709"	4.882"	3.228"	3.071"	51.629 ft-lbs	6,500
B50RAM-ER25-190-110TP	ER 25	23.0	7.480"	2.756"	1.339"	1.634"	2.264"	4.331"	1.102"	0.118"	0.327"	4.331"	6.299"	4.921"	2.677"	22.127 ft-lbs	8,000
B50RAM-ER32-190-110TP	ER 32	26.0	7.480"	2.756"	1.535"	2.402"	2.756"	4.331"	1.102"	0.118"	0.327"	5.709"	6.299"	4.921"	3.071"	51.629 ft-lbs	6,500
B50RAM-ER40-225-110TP	ER 40	36.0	8.858"	4.134"	2.047"	2.756"	3.799"	4.331"	1.102"	0.118"	0.327"	7.677"	6.299"	4.921"	4.094"	110.634 ft-lbs	5,000

HSK63/100

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	L4	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
H63ARAM-ER16-187-65TP	ER 16	13.0	7.362"	3.150"	0.866"	1.142"	1.772"	2.559"	0.709"	0.374"	0.583"	3.150"	4.882"	3.228"	1.732"	8.850 ft-lbs	6,500
H63ARAM-ER25-187-65TP	ER 25	14.0	7.362"	3.150"	1.339"	1.634"	2.264"	2.559"	0.709"	0.374"	0.583"	4.331"	4.882"	3.228"	2.677"	22.127 ft-lbs	8,000
H63ARAM-ER32-187-65TP	ER 32	18.0	7.362"	3.150"	1.535"	2.402"	2.756"	2.559"	0.709"	0.374"	0.583"	5.709"	4.882"	3.228"	3.071"	51.629 ft-lbs	6,500
H10ARAM-ER25-190-110TP	ER 25	23.0	7.480"	2.756"	1.339"	1.634"	2.264"	4.331"	1.102"	0.118"	0.327"	4.331"	6.299"	4.921"	2.677"	22.127 ft-lbs	8,000
H10ARAM-ER32-190-110TP	ER 32	26.0	7.480"	2.756"	1.535"	2.402"	2.756"	4.331"	1.102"	0.118"	0.327"	5.709"	6.299"	4.921"	3.071"	51.629 ft-lbs	6,500
H10ARAM-ER40-225-110TP	ER 40	36.0	8.858"	4.134"	2.047"	2.756"	3.799"	4.331"	1.102"	0.118"	0.327"	7.677"	6.299"	4.921"	4.094"	110.634 ft-lbs	5,000

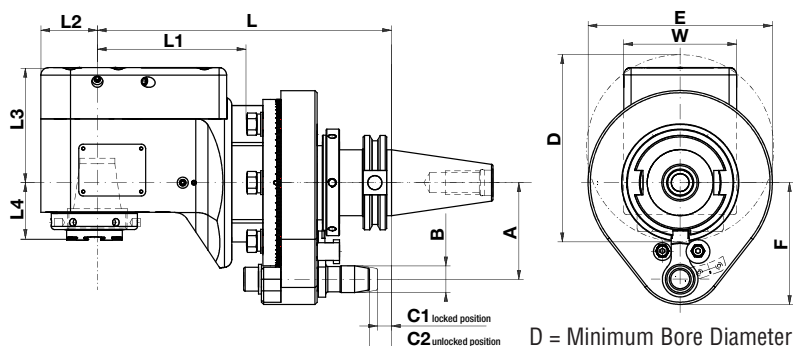
All Angle Heads come with a tapered positioning pin as standard.

A flat pin can be made available upon request.



FEATURES

- Offset type provides additional clearance and rigidity by minimizing the distance between the spindle centerline to the face of the collet nut
- Submerged ER collet bore for greater rigidity
- Full 360° body rotation
- Compatible with most Automatic Tool Changes (ATCs)
- Spiral Bevel Gears for higher cutting torque capabilities
- 1000 PSI Center Thru Coolant versions available
- Storage case, wrenches, and instructional manual included



Collet	Cutting Tool Range
ER 25	1/16" - 5/8" (2.0mm - 16.0mm)
ER 32	1/8" - 25/32" (3.0mm - 20.0mm)
ER 40	5/32" - 1" (4.0mm - 26.0mm)

CAT40/50

 = 1000 PSI Internal Coolant Thru Option

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	L4	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
C40RAM-ER25-1800T-65TP	ER 25	14	7.087"	3.150"	1.102"	2.244"	1.409"	2.559"	0.709"	0.374"	0.583"	4.055"	4.882"	3.228"	2.362"	22.127 ft-lbs	8,000
C40RAM-ER25-1800TIC-65TP	ER 25	14	7.087"	3.150"	1.102"	2.244"	1.409"	2.559"	0.709"	0.374"	0.583"	4.055"	4.882"	3.228"	2.362"	22.127 ft-lbs	8,000
C40RAM-ER32-2000T-65TP	ER 32	19	7.874"	3.937"	1.496"	3.051"	1.268"	2.559"	0.709"	0.374"	0.583"	5.039"	4.882"	3.228"	3.150"	51.629 ft-lbs	6,000
C40RAM-ER32-2000TIC-65TP	ER 32	19	7.874"	3.937"	1.496"	3.051"	1.268"	2.559"	0.709"	0.374"	0.583"	5.039"	4.882"	3.228"	3.150"	51.629 ft-lbs	6,000
C50RAM-ER25-1850T-110TP	ER 25	25	7.283"	2.953"	1.102"	2.244"	1.409"	4.331"	1.102"	0.118"	0.327"	4.055"	6.299"	4.921"	2.362"	22.127 ft-lbs	8,000
C50RAM-ER32-2000T-110TP	ER 32	29	7.874"	3.937"	1.496"	3.051"	1.268"	4.331"	1.102"	0.118"	0.327"	5.039"	6.299"	4.921"	3.150"	51.629 ft-lbs	6,000
C50RAM-ER32-2000TIC-110TP	ER 32	29	7.874"	3.937"	1.496"	3.051"	1.268"	4.331"	1.102"	0.118"	0.327"	5.039"	6.299"	4.921"	3.150"	51.629 ft-lbs	6,000
C50RAM-ER40-2600T-110TP	ER 40	40	10.236"	4.331"	2.047"	3.504"	1.370"	4.331"	1.102"	0.118"	0.327"	5.512"	6.299"	4.921"	4.094"	110.634 ft-lbs	5,000

BT40/50

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	L4	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
B40RAM-ER25-1870T-65TP	ER 25	15	7.362"	3.150"	1.102"	2.244"	1.409"	2.559"	0.709"	0.374"	0.583"	4.055"	4.882"	3.228"	2.362"	22.127 ft-lbs	8,000
B40RAM-ER32-2070T-65TP	ER 32	19	8.150"	3.937"	1.496"	3.051"	1.268"	2.559"	0.709"	0.374"	0.583"	5.039"	4.882"	3.228"	3.150"	51.629 ft-lbs	6,000
B50RAM-ER25-1950T-110TP	ER 25	26	7.677"	2.953"	1.102"	2.244"	1.409"	4.331"	1.102"	0.118"	0.327"	4.055"	6.299"	4.921"	2.362"	22.127 ft-lbs	8,000
B50RAM-ER32-2100T-110TP	ER 32	29	8.268"	3.937"	1.496"	3.051"	1.268"	4.331"	1.102"	0.118"	0.327"	5.039"	6.299"	4.921"	3.150"	51.629 ft-lbs	6,000
B50RAM-ER40-2700T-110TP	ER 40	42	10.630"	4.331"	2.047"	3.504"	1.370"	4.331"	1.102"	0.118"	0.327"	5.512"	6.299"	4.921"	4.094"	110.634 ft-lbs	5,000

HSK-A 63/100

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	L4	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
H63ARAM-ER25-1870T-65TP	ER 25	14	7.362"	3.150"	1.102"	2.244"	1.409"	2.559"	0.709"	0.374"	0.583"	4.055"	4.882"	3.228"	2.362"	22.127 ft-lbs	8,000
H63ARAM-ER25-1870TIC-65TP	ER 25	14	7.362"	3.150"	1.102"	2.244"	1.409"	2.559"	0.709"	0.374"	0.583"	4.055"	4.882"	3.228"	2.362"	22.127 ft-lbs	8,000
H63ARAM-ER32-2070T-65TP	ER 32	19	8.150"	3.937"	1.496"	3.051"	1.268"	2.559"	0.709"	0.374"	0.583"	5.039"	4.882"	3.228"	3.150"	51.629 ft-lbs	6,000
H10ARAM-ER25-1950T-110TP	ER 25	24	7.677"	2.953"	1.102"	2.244"	1.409"	4.331"	1.102"	0.118"	0.327"	4.055"	6.299"	4.921"	2.362"	22.127 ft-lbs	8,000
H10ARAM-ER32-2100T-110TP	ER 32	29	8.268"	3.937"	1.496"	3.051"	1.268"	4.331"	1.102"	0.118"	0.327"	5.039"	6.299"	4.921"	3.150"	51.629 ft-lbs	6,000
H10ARAM-ER32-2100TIC-110TP	ER 32	29	8.268"	3.937"	1.496"	3.051"	1.268"	4.331"	1.102"	0.118"	0.327"	5.039"	6.299"	4.921"	3.150"	51.629 ft-lbs	6,000
H10ARAM-ER40-2700T-110TP	ER 40	39	10.630"	4.331"	2.047"	3.504"	1.370"	4.331"	1.102"	0.118"	0.327"	5.512"	6.299"	4.921"	4.094"	110.634 ft-lbs	5,000

All Angle Heads come with a tapered positioning pin as standard.



A flat pin can be made available upon request.



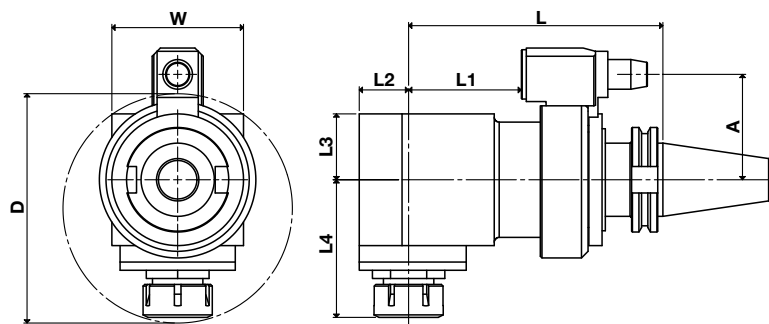
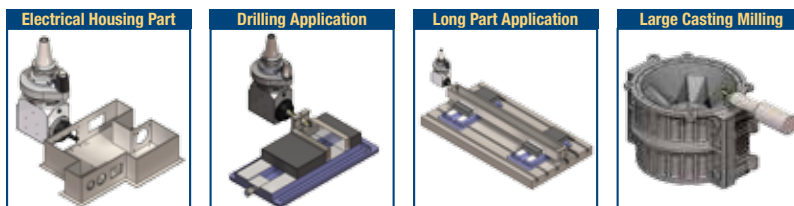
ACCESSORIES

For ER Collets please see pages 18-21



FEATURES

- The ER Economy Right Angle Head permits you to realize the benefits of a Right Angle Head at a lower cost than one of our deluxe models - Its speed and work load ratings are sufficient for most operations.
- Full 360° body rotation with positive compression locking
- Compatible with most Automatic Tool Changes (ATCs)
- Chuck nut wrench and instruction manual included



D = Minimum Bore Diameter

CAT40

LN Part Number	Weight (app. LBS)	L	L1	L2	L3	L4	A	W	D	Max Torque	Max RPM
C40RA-0025M	12	6.102"	2.047"	1.181"	1.575"	3.335"	2.559"	3.150"	5.433"	36.878 ft-lbs	8,000

BT40

LN Part Number	Weight (app. LBS)	L	L1	L2	L3	L4	A	W	D	Max Torque	Max RPM
B40RA-0025*	16	5.906"	2.677"	1.181"	1.575"	3.294"	2.559"	3.150"	5.591"	36.878 ft-lbs	8,000

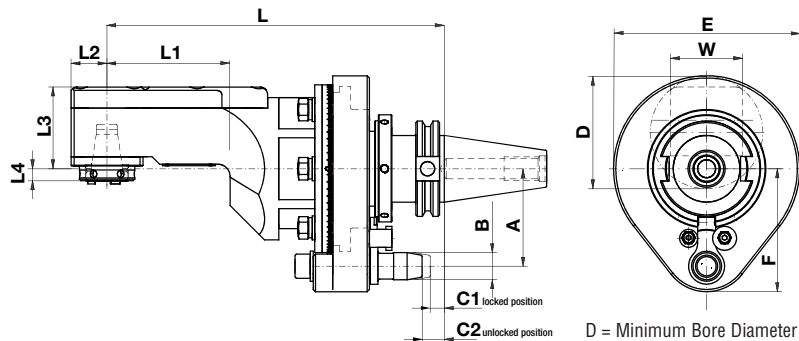




FEATURES

- Ideal for machining operations in tight quarters
- Submerged ER collet bore for greater rigidity
- Full 360° body rotation
- Compatible with most Automatic Tool Changes (ATCs)
- Spiral Bevel Gears for higher cutting torque capabilities
- Storage case, wrenches, and instructional manual included

ID Keyway Part



Collet	Cutting Tool Range
ER 11	1/32" - 13/32" (1.0mm - 10.0mm)
ER 20	1/16" - 1/2" (2.0mm - 13.0mm)
ER 25	1/16" - 5/8" (2.0mm - 16.0mm)
ER 32	1/8" - 25/32" (3.0mm - 20.0mm)

CAT40/50

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	L4	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
C40RAM-ER11-208ST-65TP	ER 11	15.5	8.189"	2.992"	1.465"	1.465"	0.075"	2.559"	0.709"	0.374"	0.583"	1.969"	4.882"	3.228"	1.417"	4.425 ft-lbs	10,000
C40RAM-ER20-225ST-65TP	ER 20	13	8.858"	3.150"	0.945"	2.146"	0.441"	2.559"	0.709"	0.374"	0.583"	2.953"	4.882"	3.228"	1.890"	11.063 ft-lbs	10,000
C40RAM-ER25-215ST-65TP	ER 25	14	8.465"	3.150"	1.102"	2.559"	0.394"	2.559"	0.709"	0.374"	0.583"	3.228"	4.882"	3.228"	2.205"	22.127 ft-lbs	8,000
C50RAM-ER11-227ST-110TP	ER 11	26	8.189"	2.992"	1.465"	1.465"	0.075"	4.331"	1.102"	0.118"	0.327"	1.969"	6.299"	4.921"	1.417"	4.425 ft-lbs	10,000
C50RAM-ER25-215ST-110TP	ER 25	26	8.465"	3.150"	1.102"	2.559"	0.394"	4.331"	1.102"	0.118"	0.327"	3.228"	6.299"	4.921"	2.205"	22.127 ft-lbs	8,000
C50RAM-ER32-285ST-110TP	ER 32	27.5	11.220"	3.937"	1.496"	2.598"	0.394"	4.331"	1.102"	0.118"	0.327"	4.016"	6.299"	4.921"	3.150"	51.629 ft-lbs	6,000

BT40/50

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	L4	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
B40RAM-ER20-232ST-65TP	ER 20	13	9.134"	3.150"	0.945"	2.146"	0.441"	2.559"	0.709"	0.374"	0.583"	2.953"	4.882"	3.228"	1.890"	11.063 ft-lbs	10,000
B40RAM-ER25-222ST-65TP	ER 25	14	8.740"	3.150"	1.102"	2.559"	0.394"	2.559"	0.709"	0.374"	0.583"	3.228"	4.882"	3.228"	2.205"	22.127 ft-lbs	8,000
B50RAM-ER25-225ST-110TP	ER 25	27.5	8.858"	3.150"	1.102"	2.559"	0.394"	4.331"	1.102"	0.118"	0.327"	3.228"	6.299"	4.921"	2.205"	22.127 ft-lbs	8,000
B50RAM-ER32-295ST-110TP	ER 32	30	11.614"	3.937"	1.496"	2.598"	0.394"	4.331"	1.102"	0.118"	0.327"	4.016"	6.299"	4.921"	3.150"	51.629 ft-lbs	6,000

HSK-A 63/100

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	L4	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
H63ARAM-ER20-232ST-65TP	ER 20	13	9.134"	3.150"	0.945"	2.146"	0.441"	2.559"	0.709"	0.374"	0.583"	2.953"	4.882"	3.228"	1.890"	11.063 ft-lbs	10,000
H63ARAM-ER25-222ST-65TP	ER 25	14	8.740"	3.150"	1.102"	2.559"	0.394"	2.559"	0.709"	0.374"	0.583"	3.228"	4.882"	3.228"	2.205"	22.127 ft-lbs	8,000
H10ARAM-ER25-225ST-110TP	ER 25	25	8.858"	3.150"	1.102"	2.559"	0.394"	4.331"	1.102"	0.118"	0.327"	3.228"	6.299"	4.921"	2.205"	22.127 ft-lbs	8,000
H10ARAM-ER32-295ST-110TP	ER 32	26	11.614"	3.937"	1.496"	2.598"	0.394"	4.331"	1.102"	0.118"	0.327"	4.016"	6.299"	4.921"	3.150"	51.629 ft-lbs	6,000

All Angle Heads come with a tapered positioning pin as standard.

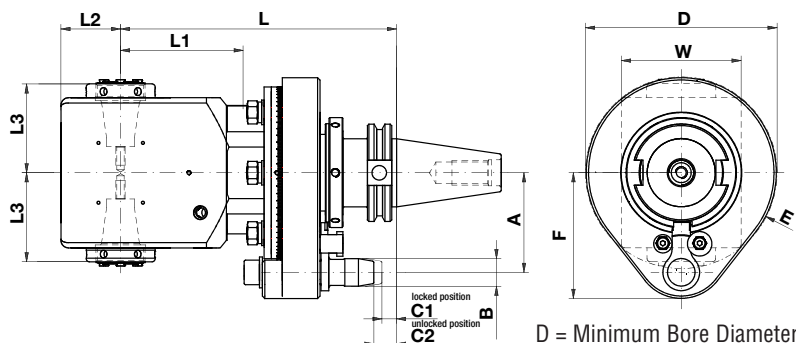
A flat pin can be made available upon request.

ACCESSORIES

For ER Collets please see pages 18-21

FEATURES

- Capable of performing machining operations in opposite directions with one right angle head.
- Full 360° body rotation
- Storage case, wrenches, and instruction manual included



Collet	Cutting Tool Range
ER 25	1/16" - 5/8" (2.0mm - 16.0mm)
ER 32	1/8" - 25/32" (3.0mm - 20.0mm)
ER 40	5/32" - 1" (4.0mm - 26.0mm)

CAT40/50

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
C40RAM-ER25-180TS-65TP	2x ER 25	16.5	7.087"	3.150"	1.339"	2.407"	2.559"	0.709"	0.374"	0.583"	4.921"	4.882"	3.228"	2.677"	22.127 ft-lbs	8,000
C40RAM-ER32-180TS-65TP	2x ER 32	19	7.087"	3.150"	1.535"	2.803"	2.559"	0.709"	0.374"	0.583"	5.984"	4.882"	3.228"	3.071"	51.629 ft-lbs	6,500
C50RAM-ER25-180TS-110TP	2x ER 25	25	7.087"	2.756"	1.339"	2.407"	4.331"	1.102"	0.118"	0.327"	4.921"	6.299"	4.921"	2.677"	22.127 ft-lbs	8,000
C50RAM-ER32-180TS-110TP	2x ER 32	30	7.087"	2.756"	1.535"	2.803"	4.331"	1.102"	0.118"	0.327"	5.984"	6.299"	4.921"	3.071"	51.629 ft-lbs	6,500
C50RAM-ER40-215TS-110TP	2x ER 40	43	8.465"	6.496"	2.126"	4.055"	4.331"	1.102"	0.118"	0.327"	8.267"	6.299"	4.921"	4.252"	110.634 ft-lbs	4,000

BT40/50

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
B40RAM-ER25-187TS-65TP	2x ER 25	16.5	7.362"	3.150"	1.339"	2.407"	2.559"	0.709"	0.374"	0.583"	4.921"	4.882"	3.228"	2.677"	22.127 ft-lbs	8,000
B40RAM-ER32-187TS-65TP	2x ER 32	19	7.362"	3.150"	1.535"	2.803"	2.559"	0.709"	0.374"	0.583"	5.984"	4.882"	3.228"	3.071"	51.629 ft-lbs	6,500
B50RAM-ER25-190TS-110TP	2x ER 25	25	7.480"	2.756"	1.339"	2.407"	4.331"	1.102"	0.118"	0.327"	4.921"	6.299"	4.921"	2.677"	22.127 ft-lbs	8,000
B50RAM-ER32-190TS-110TP	2x ER 32	30	7.480"	2.756"	1.535"	2.803"	4.331"	1.102"	0.118"	0.327"	5.984"	6.299"	4.921"	3.071"	51.629 ft-lbs	6,500
B50RAM-ER40-225TS-110TP	2x ER 40	44	8.858"	6.496"	2.126"	4.055"	4.331"	1.102"	0.118"	0.327"	8.267"	6.299"	4.921"	4.252"	110.634 ft-lbs	4,000

HSK-A 63/100

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	L3	A	B	C1	C2	D	E	F	W	Max Torque	Max RPM
H63ARAM-ER25-187TS-65TP	2x ER 25	16.5	7.362"	3.150"	1.339"	2.407"	2.559"	0.709"	0.374"	0.583"	4.921"	4.882"	3.228"	2.677"	22.127 ft-lbs	8,000
H63ARAM-ER32-187TS-65TP	2x ER 32	19	7.362"	3.150"	1.535"	2.803"	2.559"	0.709"	0.374"	0.583"	5.984"	4.882"	3.228"	3.071"	51.629 ft-lbs	6,500
H10ARAM-ER25-190TS-110TP	2x ER 25	25	7.480"	2.756"	1.339"	2.407"	4.331"	1.102"	0.118"	0.327"	4.921"	6.299"	4.921"	2.677"	22.127 ft-lbs	8,000
H10ARAM-ER32-190TS-110TP	2x ER 32	27.5	7.480"	2.756"	1.535"	2.803"	4.331"	1.102"	0.118"	0.327"	5.984"	6.299"	4.921"	3.071"	51.629 ft-lbs	6,500
H10ARAM-ER40-225TS-110TP	2x ER 40	42	8.858"	6.496"	2.126"	4.055"	4.331"	1.102"	0.118"	0.327"	8.267"	6.299"	4.921"	4.252"	110.634 ft-lbs	4,000

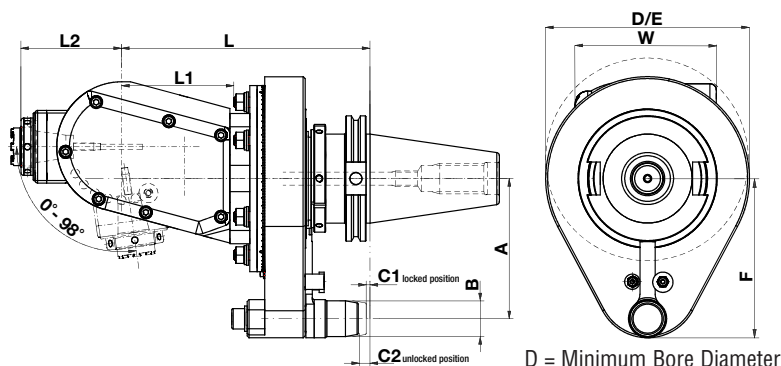
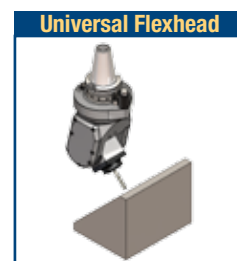
All Angle Heads come with a tapered positioning pin as standard.

A flat pin can be made available upon request.



FEATURES

- 0-98° angle positioning with precise vernier alignment
- Body can be rotated 360°
- Compatible with most Automatic Tool Changes (ATCs)
- Storage case, wrenches, and instructional manual included



Collet	Cutting Tool Range
ER 25	1/16" - 5/8" (2.0mm - 16.0mm)
ER 25	7/32" - 5/8" (6.0mm - 16.0mm)
ER 32	1/8" - 25/32" (3.0mm - 20.0mm)

CAT40/50

 = 1000 PSI Internal Coolant Thru Option

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	A	B	C1	C2	E	F	W	Max Torque	Max RPM
C40FHM-ER25-195-65TP	ER 25	21	7.677"	3.150"	3.425"	2.559"	0.709"	0.374"	0.583"	4.882"	3.228"	3.386"	22.127 ft-lbs	7,000
C40FHM-ER25-195IC-65TP	ER 25	21	7.677"	3.150"	3.425"	2.559"	0.709"	0.374"	0.583"	4.882"	3.228"	3.386"	22.127 ft-lbs	7,000
C50FHM-ER25-195IC-110TP	ER 25	31	7.677"	3.150"	3.425"	4.331"	1.102"	0.118"	0.327"	6.299"	4.921"	3.386"	22.127 ft-lbs	7,000
C50FHM-ER32-215IC-110TP	ER 32	32	8.464"	3.543"	4.134"	4.331"	1.102"	0.118"	0.327"	6.299"	4.921"	4.843"	51.629 ft-lbs	6,000

BT40/50

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	A	B	C1	C2	E	F	W	Max Torque	Max RPM
B40FHM-ER25-202IC-65TP	ER 25	21	7.953"	3.150"	3.425"	2.559"	0.709"	0.374"	0.583"	4.882"	3.228"	3.386"	22.127 ft-lbs	7,000
B50FHM-ER25-205IC-110TP	ER 25	33	8.071"	3.150"	3.425"	4.331"	1.102"	0.118"	0.327"	6.299"	4.921"	3.386"	22.127 ft-lbs	7,000
B50FHM-ER32-220IC-110TP	ER 32	34	8.661"	3.543"	4.134"	4.331"	1.102"	0.118"	0.327"	6.299"	4.921"	4.843"	51.629 ft-lbs	6,000

HSK-A 63/100

LN Part Number	Collet	Weight (app. LBS)	L	L1	L2	A	B	C1	C2	E	F	W	Max Torque	Max RPM
H63AFHM-ER25-202IC-65TP	ER 25	21	7.953"	3.150"	3.425"	2.559"	0.709"	0.374"	0.583"	4.882"	3.228"	3.386"	22.127 ft-lbs	7,000
H10AFHM-ER25-205IC-110TP	ER 25	30	8.071"	3.150"	3.425"	4.331"	1.102"	0.118"	0.327"	6.299"	4.921"	3.386"	22.127 ft-lbs	7,000
H10AFHM-ER32-220IC-110TP	ER 32	31	8.661"	3.543"	4.134"	4.331"	1.102"	0.118"	0.327"	6.299"	4.921"	4.843"	51.629 ft-lbs	6,000

All Angle Heads come with a tapered positioning pin as standard.



A flat pin can be made available upon request.



ACCESSORIES

For ER Collets please see pages 18-21

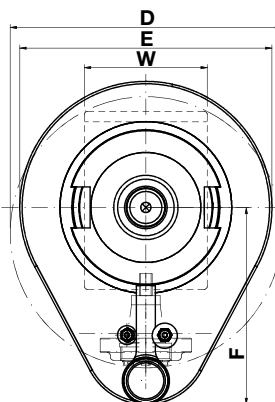
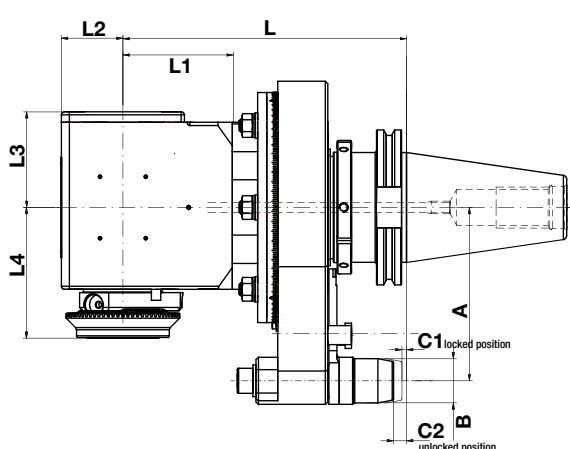




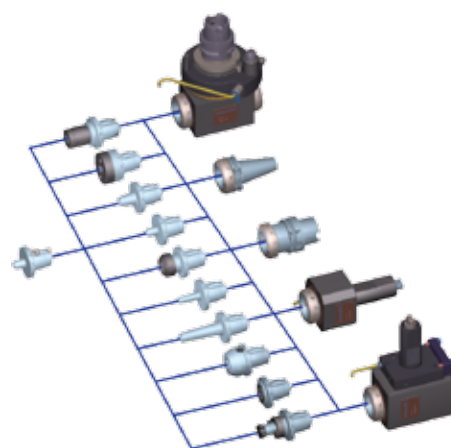
FEATURES

- Ideal for milling, drilling and tapping applications
- Submerged ER collet bore for greater rigidity
- Full 360° body rotation
- Compatible with most Automatic Tool Changes (ATCs)
- Spiral Bevel Gears for higher cutting torque capabilities
- 1000 PSI Center Thru Coolant versions available**
- Storage case, wrenches, and instructional manual included

QUICK CHANGE ATTACHMENTS ON PAGES 13-15



D = Minimum Bore Diameter



MI32 Type Specifications

****Call for availability - 1000 PSI Internal Coolant Thru Option**

LN Part Number	TAPER	Weight (app. LBS)	L	L1	L1*	L2	L3	L4	A	W	D	D2	Max Torque	Max RPM
C40RAM-MI32-180-65TP	CAT40	13	7.087"	3.150"	2.559"	0.866"	1.142"	1.772"	2.559"	1.732"	3.150"	3.583"	8,850 ft-lbs	6,500
B40RAM-MI32-187-65TP	BT40	13	7.362"	3.150"	2.559"	0.866"	1.142"	1.772"	2.559"	1.732"	3.150"	3.583"	8,850 ft-lbs	6,500
H63ARAM-MI32-187-65TP	HSK63	13	7.362"	3.150"	2.559"	0.866"	1.142"	1.772"	2.559"	1.732"	3.150"	3.583"	8,850 ft-lbs	6,500

MI40 Type Specifications

LN Part Number	TAPER	Weight (app. LBS)	L	L1	L2	L3	L4	A	W	D	Max Torque	Max RPM
C40RAM-MI40-180-65TP	CAT40	14	7.087"	3.150"	1.339"	1.634"	2.264"	2.559"	2.677"	4.331"	22,127 ft-lbs	8,000
C50RAM-MI40-180-110TP	CAT50	23	7.087"	2.756"	1.339"	1.634"	2.264"	3.150"	2.677"	4.331"	22,127 ft-lbs	8,000
B40RAM-MI40-187-65TP	BT40	14	7.362"	3.150"	1.339"	1.634"	2.264"	2.559"	2.677"	4.331"	22,127 ft-lbs	8,000
B50RAM-MI40-190-110TP	BT50	23	7.480"	2.756"	1.339"	1.634"	2.264"	3.150"	2.677"	4.331"	22,127 ft-lbs	8,000
H63ARAM-MI40-187-65TP	HSK63	14	7.362"	3.150"	1.339"	1.634"	2.264"	2.559"	2.677"	4.331"	22,127 ft-lbs	8,000
H10ARAM-MI40-190-110TP	HSK100	23	7.480"	2.756"	1.339"	1.634"	2.264"	3.150"	2.677"	4.331"	22,127 ft-lbs	8,000

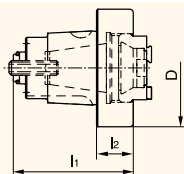
MI50/63 Type Specifications

LN Part Number	TAPER	Weight (app. LBS)	L	L1	L2	L3	L4	A	W	D	Max Torque	Max RPM
C40RAM-MI50-180-65TP	CAT40	18	7.087"	3.150"	1.457"	2.402"	2.756"	2.559"	3.071"	5.709"	51,629 ft-lbs	8,000
C50RAM-MI50-180-110TP	CAT50	26	7.087"	2.756"	1.535"	2.402"	2.756"	3.150"	3.071"	5.709"	51,629 ft-lbs	8,000
B40RAM-MI50-187-65TP	BT40	18	7.362"	3.150"	1.535"	2.402"	2.756"	2.559"	3.071"	5.709"	51,629 ft-lbs	8,000
B50RAM-MI50-190-110TP	BT50	26	7.480"	2.756"	1.535"	2.402"	2.756"	3.150"	3.071"	5.709"	51,629 ft-lbs	8,000
H63ARAM-MI50-187-65TP	HSK63	18	7.362"	3.150"	1.535"	2.402"	2.756"	2.559"	3.071"	5.709"	51,629 ft-lbs	8,000
H10ARAM-MI50-190-110TP	HSK100	26	7.480"	2.756"	1.535"	2.402"	2.756"	3.150"	3.071"	5.709"	51,629 ft-lbs	8,000
C50RAM-MI63-215-110TP	CAT50	36	8.465"	4.134"	2.047"	2.756"	3.799"	3.150"	4.094"	7.283"	110,634 ft-lbs	8,000
H10ARAM-MI63-225-110TP	HSK100	36	8.858"	4.134"	2.047"	2.756"	3.799"	3.150"	4.094"	7.283"	110,634 ft-lbs	8,000



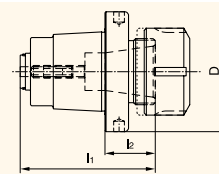
Collet Chuck DIN 6499 - Type ER

Short type, clamping nut inside



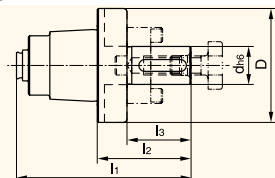
Part Number	Size	Collet	I1	I2	D
MI32-ER11I	MI32	ER11	1.634"	0.591"	1.654"
MI32-ER16I	MI32	ER16	1.634"	0.591"	1.654"
MI40-ER16I	MI40	ER16	1.772"	0.433"	1.890"
MI40-ER20I	MI40	ER20	1.929"	0.591"	1.890"
MI40-ER25I	MI40	ER25	2.165"	0.827"	1.890"
MI50-ER25I	MI50	ER25	2.165"	0.551"	2.283"
MI50-ER32I	MI50	ER32	2.322"	0.708"	2.283"
MI63-ER32I	MI63	ER32	2.480"	0.551"	2.953"
MI63-ER40I	MI63	ER40	2.716"	0.787"	2.953"

Long type, clamping nut outside



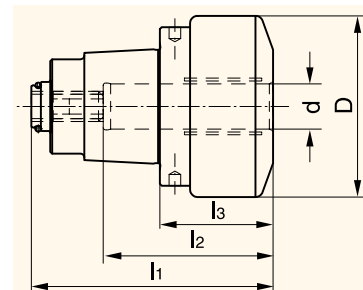
Part Number	Size	Collet	I1	I2	D
MI32-ER11	MI32	ER11	2.461"	1.417"	1.654"
MI32-ER16	MI32	ER16	1.988"	0.945"	1.654"
MI40-ER16	MI40	ER16	2.283"	0.945"	1.890"
MI40-ER20	MI40	ER20	2.520"	1.181"	1.890"
MI50-ER25	MI50	ER25	3.228"	1.614"	2.283"
MI50-ER32	MI50	ER32	3.464"	1.850"	2.283"
MI63-ER32	MI63	ER32	3.779"	1.850"	2.953"
MI63-ER40	MI63	ER40	3.720"	1.791"	2.953"

Combination Shell End Mill Arbor



Part Number	Size	I1	I2	I3	d(h6)	D
MI32-SM16	MI32	2.598"	1.555"	1.063"	16mm (.630")	1.654"
MI40-SM16	MI40	2.894"	1.555"	0.984"	16mm (.630")	1.890"
MI50-SM16	MI50	3.228"	1.614"	1.063"	16mm (.630")	2.283"
MI50-SM22	MI50	3.464"	1.850"	1.220"	22mm (.866")	2.283"
MI63-SM22	MI63	3.779"	1.850"	1.220"	22mm (.866")	2.953"
MI63-SM27	MI63	3.858"	1.929"	1.299"	27mm (1.063")	2.953"

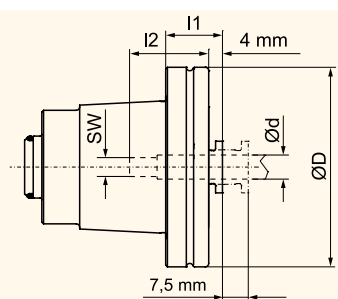
Hydraulic Chuck



Part Number	Size	I1	I2	I3	d(h6)	D
MI40-HC12	MI40	2.520"	1.772"	1.181"	12mm (.472")	1.890"
MI50-HC20	MI50	2.795"	2.047"	1.181"	20mm (.787")	2.283"

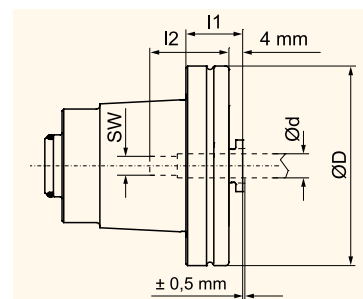
SYNAX® Tapping Quick Change Holder

without internal coolant,
with synchronization and length
compensation



Part Number	Size	I1	I2	d	D	SW
MI40-TAP3.5	MI40	0.669"	0.984"	3.5mm (.138")	1.890"	0.106"
MI40-TAP4.5	MI40	0.669"	0.984"	4.5mm (.177")	1.890"	0.134"
MI40-TAP6	MI40	0.669"	1.063"	6mm (.236")	1.890"	0.193"
MI40-TAP8	MI40	0.669"	1.063"	8mm (.315")	1.890"	0.244"
MI40-TAP9	MI40	1.496"	1.102"	9mm (.354")	1.890"	0.276"
MI40-TAP10	MI40	1.496"	1.142"	10mm (.394")	1.890"	0.315"
MI40-TAP12	MI40	1.496"	1.181"	12mm (.472")	1.890"	0.354"
MI50-TAP3.5	MI50	0.650"	0.984"	3.5mm (.138")	2.283"	0.106"
MI50-TAP4.5	MI50	0.650"	0.984"	4.5mm (.177")	2.283"	0.134"
MI50-TAP6	MI50	0.650"	1.063"	6mm (.236")	2.283"	0.193"
MI50-TAP8	MI50	0.650"	1.063"	8mm (.315")	2.283"	0.244"
MI50-TAP9	MI50	0.650"	1.102"	9mm (.354")	2.283"	0.276"
MI50-TAP10	MI50	0.650"	1.142"	10mm (.394")	2.283"	0.315"
MI50-TAP12	MI50	0.650"	1.181"	12mm (.472")	2.283"	0.354"
MI50-TAP16	MI50	1.732"	1.299"	16mm (.630")	2.283"	0.472"

with internal coolant (70 bar),
only synchronization



Part Number	Size	I1	I2	d	D	SW
MI40-TAP6C	MI40	0.669"	1.063"	6mm (.236")	1.890"	0.193"
MI40-TAP8C	MI40	0.669"	1.063"	8mm (.315")	1.890"	0.244"
MI40-TAP9C	MI40	1.496"	1.102"	9mm (.354")	1.890"	0.276"
MI40-TAP10C	MI40	1.496"	1.142"	10mm (.394")	1.890"	0.315"
MI40-TAP12C	MI40	1.496"	1.181"	12mm (.472")	1.890"	0.354"
MI50-TAP6C	MI50	0.650"	1.063"	6mm (.236")	2.283"	0.193"
MI50-TAP8C	MI50	0.650"	1.063"	8mm (.315")	2.283"	0.244"
MI50-TAP9C	MI50	0.650"	1.102"	9mm (.354")	2.283"	0.276"
MI50-TAP10C	MI50	0.650"	1.142"	10mm (.394")	2.283"	0.315"
MI50-TAP12C	MI50	0.650"	1.181"	12mm (.472")	2.283"	0.354"
MI50-TAP16C	MI50	1.732"	1.299"	16mm (.630")	2.283"	0.472"



FEATURES

- Ideal for all high speed small tool milling and drilling applications
- Gear Ratio 1:5 (1 X input RPM: 5 X output RPM) - Max RPM: 20,000
Example: 2,000 RPM input : 10,000 RPM output
- .0002 inch run out guaranteed at 4X Dia. Out
- Double gripping force compared to traditional ER systems thanks to Nikken's patented SK collets and TiN bearing nut
- Wrenches and manual included

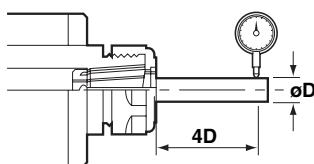
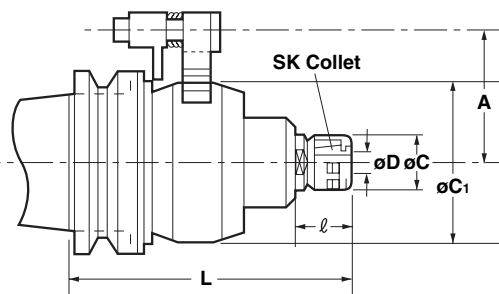


Titanium Nitrided Bearing Nut (HV2,200) (US Patent 6923451)

- More efficient than conventional ball bearing built-in nut!
- Good sliding effect due to surface hardness of HV2,200
- No damage, no friction
- No corrosion occurs internally
- Less micro vibration with collet flange contact
- Increase cutting performance and tool life durability
- More cutting rigidity

Accuracy and Flexibility

Due to Nikken's special heat treatment, grinding and custom slotting process, they are the only collet chuck manufacturer in the world that guarantees a 3 micron runout tolerance for their "on size" fractional and metric size precision collets.



Within .0002" at 4D

LN Part Number	TAPER	Weight (app. LBS)	D	L	C	C1	I	A	Max RPM
CAT40U-NX5-153	CAT40	11	1.75-10mm (.069-.394")	6.024"	1.083"	3.346"	1.26"	2.362"	20,000
CAT50U-NX5-151	CAT50	15	1.75-10mm (.069-.394")	5.945"	1.083"	3.346"	1.811"	3.228"	20,000
BT40-NX5-153	BT40	11	1.75-10mm (.069-.394")	6.024"	1.083"	3.346"	1.26"	2.362"	20,000

Lyndex-Nikken HiSpinners offer substantial increases in spindle speeds for high speed milling applications.

Excellent accuracy, rigidity and durability are achieved through the use of our integral shank spindle, tempered and ground gears, and high precision pre-loaded spindle bearings.

- For use with all kinds of materials and applications; including drilling, milling, and grinding
- Lightweight and easy to use
- Capable of working in most Automatic Tool Changes (ATCs)
- Accuracy of .0002" or better

Highly Accurate

A main spindle supported at four points by high precision (P4 grade) bearings, ensure smooth, precise rotation and increased surface finish quality.

Durable

HiSpinner bearings and gear chamber are isolated from contamination by specially designed seals.

Positioning Pins

Spindle speeders that rotate beyond the main spindle's maximum RPM, and toolholders that induce a side flow of coolant through cutting tools, require a positioning pin to operate.

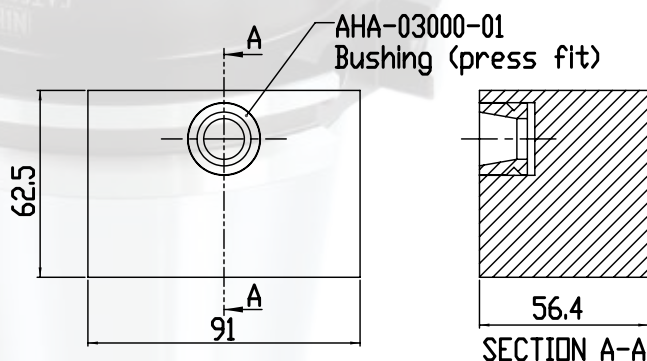
This pin, which is seated into a positioning block, locks the toolholder's body into a stationary position relative to the spindle face. With its body properly aligned and secured, the toolholder's internal mechanisms are ready to perform their designed operations.

Positioning Block - Blank

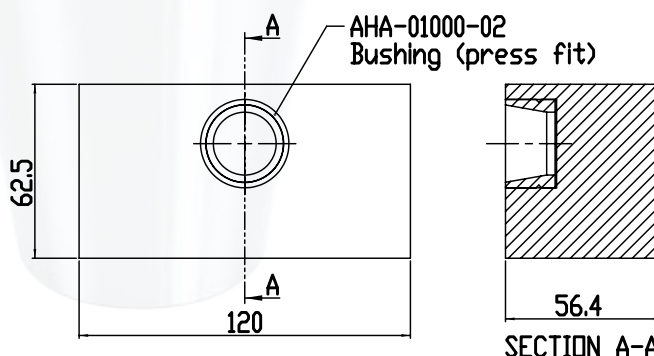
A positioning block may require slight modifications to accommodate your particular machine.

Please contact Lyndex-Nikken for additional support to help design the Positioning Block for your machine.

Part #: PB-RAN40-BLANK (40 Taper)



Part #: PB-RAN50-BLANK (50 Taper)

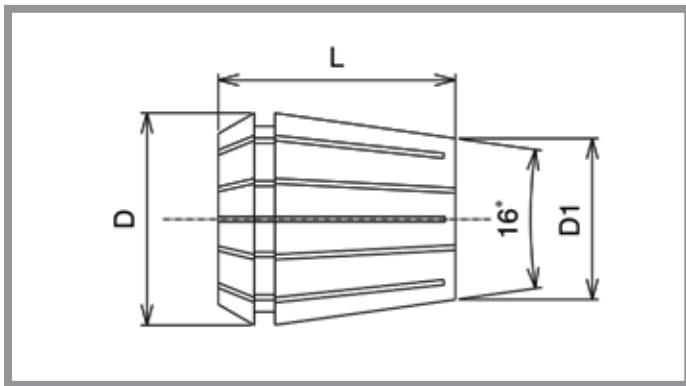


STANDARD (INCH)

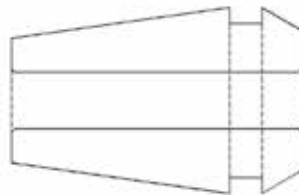
SIZE	ER11	ER16	ER20	ER25	ER32	ER40
1/32"	E11-002	E16-002	-	-	-	-
1/16"	E11-004	E16-004	E20-004	E25-004	-	-
3/32"	E11-006	E16-006	E20-006	E25-006	-	-
1/8"	E11-008	E16-008	E20-008	E25-008	E32-008	-
5/32"	E11-010	E16-010	E20-010	E25-010	E32-010	E40-010
3/16"	E11-012	E16-012	E20-012	E25-012	E32-012	E40-012
7/32"	E11-014	E16-014	E20-014	E25-014	E32-014	E40-014
1/4"	E11-016	E16-016	E20-016	E25-016	E32-016	E40-016
9/32"	-	E16-018	E20-018	E25-018	E32-018	E40-018
5/16"	-	E16-020	E20-020	E25-020	E32-020	E40-020
11/32"	-	E16-022	E20-022	E25-022	E32-022	E40-022
3/8"	-	E16-024	E20-024	E25-024	E32-024	E40-024
13/32"	-	E16-026	E20-026	E25-026	E32-026	E40-026
7/16"	-	-	E20-028	E25-028	E32-028	E40-028
15/32"	-	-	E20-030	E25-030	E32-030	E40-030
1/2"	-	-	E20-032	E25-032	E32-032	E40-032
17/32"	-	-	-	E25-034	E32-034	E40-034
9/16"	-	-	-	E25-036	E32-036	E40-036
19/32"	-	-	-	E25-038	E32-038	E40-038
5/8"	-	-	-	E25-040	E32-040	E40-040
21/32"	-	-	-	-	E32-042	E40-042
11/16"	-	-	-	-	E32-044	E40-044
23/32"	-	-	-	-	E32-046	E40-046
3/4"	-	-	-	-	E32-048	E40-048
25/32"	-	-	-	-	E32-050	E40-050
13/16"	-	-	-	-	-	E40-052
27/32"	-	-	-	-	-	E40-054
7/8"	-	-	-	-	-	E40-056
29/32"	-	-	-	-	-	E40-058
15/16"	-	-	-	-	-	E40-060
31/32"	-	-	-	-	-	E40-062
1"	-	-	-	-	-	E40-064

STANDARD (METRIC)

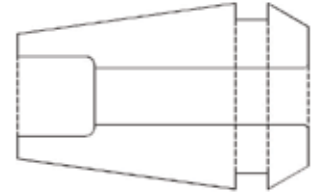
SIZE	ER11	ER16	ER20	ER25	ER32	ER40
1.0mm	E11-039	E16-039	-	-	-	-
1.5mm	E11-059	E16-059	-	-	-	-
2.0mm	E11-078	E16-078	E20-078	E25-078	-	-
3.0mm	E11-118	E16-118	E20-118	E25-118	E32-118	-
3.5mm	E11-137	E16-137	E20-137	E25-137	E32-137	-
4.0mm	E11-157	E16-157	E20-157	E25-157	E32-157	E40-157
5.0mm	E11-196	E16-196	E20-196	E25-196	E32-196	E40-196
6.0mm	E11-236	E16-236	E20-236	E25-236	E32-236	E40-236
7.0mm	E11-275	E16-275	E20-275	E25-275	E32-275	E40-275
8.0mm	-	E16-314	E20-314	E25-314	E32-314	E40-314
9.0mm	-	E16-354	E20-354	E25-354	E32-354	E40-354
10.0mm	-	E16-393	E20-393	E25-393	E32-393	E40-393
11.0mm	-	-	E20-433	E25-433	E32-433	E40-433
11.5mm	-	-	E20-452	E25-452	E32-452	E40-452
12.0mm	-	-	E20-472	E25-472	E32-472	E40-472
13.0mm	-	-	E20-511	E25-511	E32-511	E40-511
14.0mm	-	-	-	E25-551	E32-551	E40-551
15.0mm	-	-	-	E25-590	E32-590	E40-590
16.0mm	-	-	-	E25-629	E32-629	E40-629
17.0mm	-	-	-	-	E32-669	E40-669
18.0mm	-	-	-	-	E32-708	E40-708
19.0mm	-	-	-	-	E32-748	E40-748
19.5mm	-	-	-	-	E32-767	E40-767
20.0mm	-	-	-	-	E32-787	E40-787
21.0mm	-	-	-	-	-	E40-826
22.0mm	-	-	-	-	-	E40-866
23.0mm	-	-	-	-	-	E40-905
24.0mm	-	-	-	-	-	E40-944
25.0mm	-	-	-	-	-	E40-984
26.0mm	-	-	-	-	-	E40-1023



**ER Standard
type collet**



**ER Counter-Bored
type collet**



Style	D	D1	L	Collet Range	Coolant Collet Size Range	Nut Tightening Torque	
						Standard collet	Counter-bored collet
ER16	17.2mm	11.3mm	27.0mm	0.5 - 10.0mm	4.0 - 10.0mm (3/16" - 17/64")	30 - 37 ft-lbs	18 - 22 ft-lbs
ER20	21.2mm	14.5mm	31.0mm	1.0 - 13.0mm	5.0 - 13.0mm (5/32" - 1/2")	60 - 74 ft-lbs	42 - 52 ft-lbs
ER25	26.2mm	18.5mm	35.0mm	1.0 - 16.0mm	6.0 - 16.0mm (7/32" - 5/8")	77 - 96 ft-lbs	54 - 67 ft-lbs
ER32	33.2mm	24.4mm	40.0mm	2.0 - 20.0mm	10.0 - 20.0mm (1/4" - 25/32")	100 - 125 ft-lbs	77 - 96 ft-lbs
ER40	41.2mm	31.2mm	46.0mm	3.0 - 26.0mm	10.0 - 26.0mm (1/4" - 1 1/32")	125 - 157 ft-lbs	130 - 162 ft-lbs

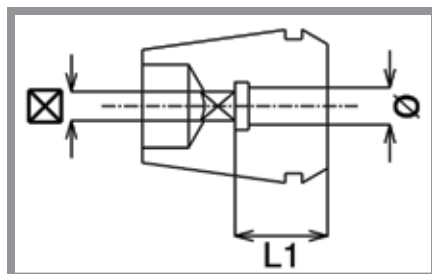
COOLANT (INCH)

SIZE	ER11	ER16	ER20	ER25	ER32	ER40
3/32"	-	E16-006(C)	-	-	-	-
7/64"	-	E16-007(C)	-	-	-	-
1/8"	-	E16-008(C)	-	-	-	-
9/64"	-	E16-009(C)	-	-	-	-
5/32"	-	E16-010(C)	E20-010(C)	-	-	-
11/64"	-	E16-011(C)	E20-011(C)	-	-	-
3/16"	E11-012(C)	E16-012(C)	E20-012(C)	-	-	-
13/64"	E11-013(C)	E16-013(C)	E20-013(C)	-	-	-
7/32"	E11-014(C)	E16-014(C)	E20-014(C)	E25-014(C)	-	-
15/64"	E11-015(C)	E16-015(C)	E20-015(C)	E25-015(C)	-	-
1/4"	E11-016(C)	E16-016(C)	E20-016(C)	E25-016(C)	E32-016(C)	-
17/64"	E11-017(C)	E16-017(C)	E20-017(C)	E25-017(C)	E32-017(C)	-
9/32"	-	E16-018(C)	E20-018(C)	E25-018(C)	E32-018(C)	-
19/64"	-	E16-019(C)	E20-019(C)	E25-019(C)	E32-019(C)	-
5/16"	-	E16-020(C)	E20-020(C)	E25-020(C)	E32-020(C)	E40-020(C)
21/64"	-	E16-021(C)	E20-021(C)	E25-021(C)	E32-021(C)	-
11/32"	-	E16-022(C)	E20-022(C)	E25-022(C)	E32-022(C)	-
23/64"	-	E16-023(C)	E20-023(C)	E25-023(C)	E32-023(C)	-
3/8"	-	E16-024(C)	E20-024(C)	E25-024(C)	E32-024(C)	E40-024(C)
25/64"	-	E16-025(C)	E20-025(C)	E25-025(C)	E32-025(C)	-
13/32"	-	E16-026(C)	E20-026(C)	E25-026(C)	E32-026(C)	-
27/64"	-	-	E20-027(C)	E25-027(C)	E32-027(C)	-
7/16"	-	-	E20-028(C)	E25-028(C)	E32-028(C)	E40-028(C)
29/64"	-	-	E20-029(C)	E25-029(C)	E32-029(C)	-
15/32"	-	-	E20-030(C)	E25-030(C)	E32-030(C)	-
31/64"	-	-	E20-031(C)	E25-031(C)	E32-031(C)	-
1/2"	-	-	E20-032(C)	E25-032(C)	E32-032(C)	E40-032(C)
33/64"	-	-	-	E25-033(C)	E32-033(C)	-
17/32"	-	-	-	E25-034(C)	E32-034(C)	-
35/64"	-	-	-	E25-035(C)	E32-035(C)	-
9/16"	-	-	-	E25-036(C)	E32-036(C)	E40-036(C)
37/64"	-	-	-	E25-037(C)	E32-037(C)	-
19/32"	-	-	-	E25-038(C)	E32-038(C)	-
39/64"	-	-	-	E25-039(C)	E32-039(C)	-
5/8"	-	-	-	E25-040(C)	E32-040(C)	E40-040(C)
41/64"	-	-	-	-	E32-041(C)	-
21/32"	-	-	-	-	E32-042(C)	-
43/64"	-	-	-	-	E32-043(C)	-
11/16"	-	-	-	-	E32-044(C)	-
45/64"	-	-	-	-	E32-045(C)	-
23/32"	-	-	-	-	E32-046(C)	-
47/64"	-	-	-	-	E32-047(C)	-
3/4"	-	-	-	-	E32-048(C)	-
49/64"	-	-	-	-	E32-049(C)	-
25/32"	-	-	-	-	E32-050(C)	-

COOLANT (METRIC)

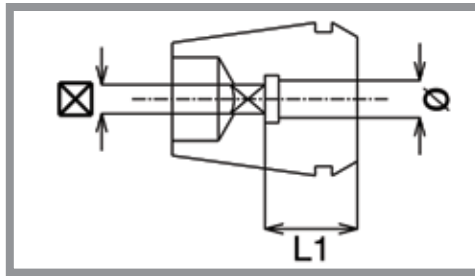
SIZE	ER11	ER16	ER20	ER25	ER32	ER40
4.0mm	E11-157(C)	E16-157(C)	-	-	-	-
4.5mm	E11-177(C)	E16-177(C)	-	-	-	-
5.0mm	E11-196(C)	E16-196(C)	E20-196(C)	-	-	-
5.5mm	E11-216(C)	E16-216(C)	E20-216(C)	-	-	-
6.0mm	E11-236(C)	E16-236(C)	E20-236(C)	E25-236(C)	-	-
6.5mm	E11-255(C)	E16-255(C)	E20-255(C)	E25-255(C)	-	-
7.0mm	E11-275(C)	E16-275(C)	E20-275(C)	E25-275(C)	-	-
7.5mm	-	E16-295(C)	E20-295(C)	E25-295(C)	-	-
8.0mm	-	E16-314(C)	E20-314(C)	E25-314(C)	-	-
8.5mm	-	E16-334(C)	E20-334(C)	E25-334(C)	-	-
9.0mm	-	E16-354(C)	E20-354(C)	E25-354(C)	-	-
9.5mm	-	E16-374(C)	E20-374(C)	E25-374(C)	-	-
10.0mm	-	E16-393(C)	E20-393(C)	E25-393(C)	E32-393(C)	E40-393(C)
10.5mm	-	-	E20-413(C)	E25-413(C)	E32-413(C)	E40-413(C)
11.0mm	-	-	E20-433(C)	E25-433(C)	E32-433(C)	E40-433(C)
11.5mm	-	-	E20-452(C)	E25-452(C)	E32-452(C)	E40-452(C)
12.0mm	-	-	E20-472(C)	E25-472(C)	E32-472(C)	E40-472(C)
12.5mm	-	-	E20-492(C)	E25-492(C)	E32-492(C)	E40-492(C)
13.0mm	-	-	E20-511(C)	E25-511(C)	E32-511(C)	E40-511(C)
13.5mm	-	-	-	E25-531(C)	E32-531(C)	E40-531(C)
14.0mm	-	-	-	E25-551(C)	E32-551(C)	E40-551(C)
14.5mm	-	-	-	E25-570(C)	E32-570(C)	E40-570(C)
15.0mm	-	-	-	E25-590(C)	E32-590(C)	E40-590(C)
15.5mm	-	-	-	E25-610(C)	E32-610(C)	E40-610(C)
16.0mm	-	-	-	E25-629(C)	E32-629(C)	E40-629(C)
16.5mm	-	-	-	-	E32-649(C)	E40-649(C)
17.0mm	-	-	-	-	E32-669(C)	E40-669(C)
17.5mm	-	-	-	-	E32-688(C)	E40-688(C)
18.0mm	-	-	-	-	E32-708(C)	E40-708(C)
18.5mm	-	-	-	-	E32-728(C)	E40-728(C)
19.0mm	-	-	-	-	E32-748(C)	E40-748(C)
19.5mm	-	-	-	-	E32-767(C)	E40-767(C)
20.0mm	-	-	-	-	E32-787(C)	E40-787(C)
20.5mm	-	-	-	-	-	E40-807(C)
21.0mm	-	-	-	-	-	E40-826(C)
21.5mm	-	-	-	-	-	E40-846(C)
22.0mm	-	-	-	-	-	E40-866(C)
22.5mm	-	-	-	-	-	E40-885(C)
23.0mm	-	-	-	-	-	E40-905(C)
23.5mm	-	-	-	-	-	E40-925(C)
24.0mm	-	-	-	-	-	E40-944(C)
24.5mm	-	-	-	-	-	E40-964(C)
25.0mm	-	-	-	-	-	E40-984(C)
25.5mm	-	-	-	-	-	E40-1003(C)
26.0mm	-	-	-	-	-	E40-1023(C)





ER Tap Collets feature a unique design that incorporates an internal square drive with our popular ER Series collets. The square drive matches the tap square, providing a tight fit for all rigid tapping applications.

PART NUMBER	TAP INCH SIZE	TAP METRIC SIZE	L1	Ø	⊠
ET16-168	#8, 5/32"	M4	15.0mm	0.168"	0.131"
ET16-194	#10, 3/16"	M4.5, M5	15.0mm	0.194"	0.152"
ET16-220	#12, 7/32"	-	15.0mm	0.220"	0.165"
ET16-255	#14, 1/4"	M6, M6.5	22.0mm	0.255"	0.191"
ET20-168	#8, 5/32"	M4	15.0mm	0.168"	0.131"
ET20-194	#10, 3/16"	M4.5, M5	15.0mm	0.194"	0.152"
ET20-220	#12, 7/32"	-	15.0mm	0.220"	0.165"
ET20-255	#14, 1/4"	M6, M6.5	20.0mm	0.255"	0.191"
ET20-318	5/16"	M7, M6.5	20.0mm	0.318"	0.238"
ET20-323	7/16"	-	20.0mm	0.323"	0.242"
ET20-367	1/2"	M12, M12.5	25.0mm	0.367"	0.275"
ET20-381	3/8"	M10	20.0mm	0.381"	0.286"
ET25-168	#8, 5/32"	M4	15.0mm	0.168"	0.131"
ET25-194	#10, 3/16"	M4.5, M5	15.0mm	0.194"	0.152"
ET25-220	#12, 7/32"	-	15.0mm	0.220"	0.165"
ET25-255	#14, 1/4"	M6, M6.5	20.0mm	0.255"	0.191"
ET25-318	5/16"	M7, M6.5	20.0mm	0.318"	0.238"
ET25-323	7/16"	-	20.0mm	0.323"	0.242"
ET25-367	1/2"	M12, M12.5	25.0mm	0.367"	0.275"
ET25-381	3/8"	M10	20.0mm	0.381"	0.286"
ET25-429	9/16"	M14	25.0mm	0.429"	0.322"
ET25-437	1/8" NPT(L)	-	18.0mm	0.437"	0.328"
ET25-480	5/8"	M16	25.0mm	0.480"	0.360"
ET32-168	#8, 5/32"	M4	15.0mm	0.168"	0.131"
ET32-194	#10, 3/16"	M4.5, M5	15.0mm	0.194"	0.152"
ET32-220	#12, 7/32"	-	15.0mm	0.220"	0.165"
ET32-255	#14, 1/4"	M6, M6.5	20.0mm	0.255"	0.191"
ET32-318	5/16"	M7, M6.5	20.0mm	0.318"	0.238"
ET32-323	7/16"	-	20.0mm	0.323"	0.242"
ET32-367	1/2"	M12, M12.5	25.0mm	0.367"	0.275"
ET32-381	3/8"	M10	20.0mm	0.381"	0.286"
ET32-429	9/16"	M14	25.0mm	0.429"	0.322"
ET32-437	1/8" NPT	-	18.0mm	0.437"	0.328"
ET32-480	5/8"	M16	25.0mm	0.480"	0.360"
ET32-542	11/16"	M18	30.0mm	0.542"	0.406"
ET32-562	1/4" NPT	-	18.0mm	0.562"	0.421"
ET32-590	3/4"	-	30.0mm	0.590"	0.442"
ET32-652	13/16"	M20	30.0mm	0.652"	0.489"
ET40-255	#14, 1/4"	M6, M6.5	25.0mm	0.255"	0.191"
ET40-318	5/16"	M7, M6.5	25.0mm	0.318"	0.238"
ET40-323	7/16"	-	25.0mm	0.323"	0.242"
ET40-367	1/2"	M12, M12.5	25.0mm	0.367"	0.275"
ET40-381	3/8"	M10	25.0mm	0.381"	0.286"
ET40-429	9/16"	M14	25.0mm	0.429"	0.322"
ET40-437	1/8" NPT	-	18.0mm	0.437"	0.328"
ET40-480	5/8"	M16	25.0mm	0.480"	0.360"
ET40-542	11/16"	M18	30.0mm	0.542"	0.406"
ET40-562	1/4" NPT	-	18.0mm	0.562"	0.421"
ET40-590	3/4"	-	30.0mm	0.590"	0.442"
ET40-652	13/16"	M20	30.0mm	0.652"	0.489"
ET40-687	1/2" NPT	-	18.0mm	0.687"	0.515"
ET40-697	7/8"	M22	30.0mm	0.697"	0.523"
ET40-700	3/8" NPT	-	18.0mm	0.70"	0.531"
ET40-760	15/16"	M24	35.0mm	0.76"	0.570"
ET40-800	1"	M25	35.0mm	0.80"	0.600"

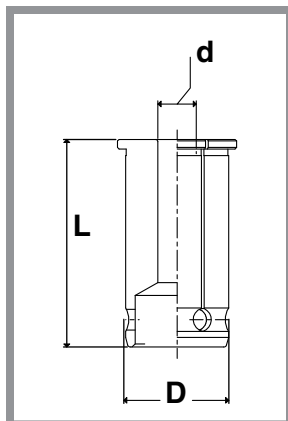


Lyndex-Nikken has combined the versatility of our ER tapping collets with the popularity of our coolant collets to create our patented ER Coolant Tap Collets.

PART NUMBER	TAP INCH SIZE	TAP METRIC SIZE	L1	Ø	⊗
ET16-255(C)	#14, 1/4"	M6, M6.5	22.0mm	0.255"	0.191"
ET16-318(C)	5/16"	M7, M6.5	22.0mm	0.318"	0.238"
ET20-255(C)	#14, 1/4"	M6, M6.5	25.0mm	0.255"	0.191"
ET20-318(C)	5/16"	M7, M6.5	25.0mm	0.318"	0.238"
ET20-323(C)	7/16"	-	25.0mm	0.323"	0.242"
ET20-367(C)	1/2"	M12, M12.5	25.0mm	0.367"	0.275"
ET20-381(C)	3/8"	M10	25.0mm	0.381"	0.286"
ET25-255(C)	#14, 1/4"	M6, M6.5	25.0mm	0.255"	0.191"
ET25-318(C)	5/16"	M7, M6.5	25.0mm	0.318"	0.238"
ET25-323(C)	7/16"	-	25.0mm	0.323"	0.242"
ET25-367(C)	1/2"	M12, M12.5	27.0mm	0.367"	0.275"
ET25-381(C)	3/8"	M10	25.0mm	0.381"	0.286"
ET25-429(C)	9/16"	M14	30.0mm	0.429"	0.322"
ET25-480(C)	5/8"	M16	30.0mm	0.48"	0.36"
ET32-255(C)	#14, 1/4"	M6, M6.5	25.0mm	0.255"	0.191"
ET32-318(C)	5/16"	M7, M6.5	25.0mm	0.318"	0.238"
ET32-323(C)	7/16"	-	25.0mm	0.323"	0.242"
ET32-367(C)	1/2"	M12, M12.5	27.0mm	0.367"	0.275"
ET32-381(C)	3/8"	M10	25.0mm	0.381"	0.286"
ET32-429(C)	9/16"	M14	30.0mm	0.429"	0.322"
ET32-480(C)	5/8"	M16	30.0mm	0.48"	0.36"
ET32-542(C)	11/16"	M18	35.0mm	0.542"	0.406"
ET32-590(C)	3/4"	-	35.0mm	0.59"	0.442"
ET32-652(C)	13/16"	M20	35.0mm	0.652"	0.489"
ET40-323(C)	7/16"	-	25.0mm	0.323"	0.242"
ET40-367(C)	1/2"	M12, M12.5	27.0mm	0.367"	0.275"
ET40-381(C)	3/8"	M10	25.0mm	0.381"	0.286"
ET40-429(C)	9/16"	M14	30.0mm	0.429"	0.322"
ET40-480(C)	5/8"	M16	30.0mm	0.48"	0.36"
ET40-542(C)	11/16"	M18	35.0mm	0.542"	0.406"
ET40-590(C)	3/4"	-	35.0mm	0.59"	0.442"
ET40-652(C)	13/16"	M20	35.0mm	0.652"	0.489"
ET40-697(C)	7/8"	M22	38.0mm	0.697"	0.523"
ET40-760(C)	15/16"	M24	38.0mm	0.76"	0.57"
ET40-800(C)	1"	M25	40.0mm	0.8"	0.6"

Note: Seals up to maximum coolant pressure of 1000 PSI.

Milling chuck collets are designed to ensure uniform fit around the cutting tool shank. This provides maximum gripping power as well as concentric positioning of the cutting tool.



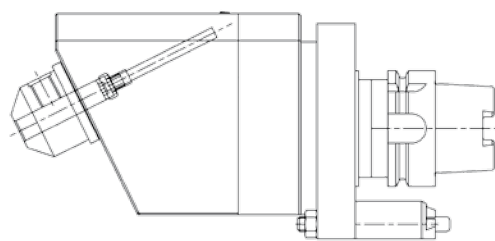
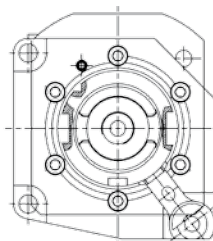
Collet Series	L	D	d = Collet Range
KM3/4	2.08" (53mm)	0.75" (19.05mm)	1/8" - 5/8"
KM1.1/4	2.53" (64.5mm)	1.25" (31.75 mm)	3/16" - 1"

KM Collets do not collapse.

Collet Series	INCH		METRIC	
	SIZE	Part Number	SIZE	Part Number
KM 3/4"	1/8"	KM3/4-1/8	6mm	KM3/4-6
	3/16"	KM3/4-3/16	7mm	KM3/4-7
	1/4"	KM3/4-1/4	8mm	KM3/4-8
	5/16"	KM3/4-5/16	10mm	KM3/4-10
	3/8"	KM3/4-3/8	12mm	KM3/4-12
	7/16"	KM3/4-7/16	14mm	KM3/4-14
	1/2"	KM3/4-1/2	16mm	KM3/4-16
	9/16"	KM3/4-9/16	-	-
	5/8"	KM3/4-5/8	-	-
KM 1.1/4"	3/16"	KM1.1/4-3/16	6mm	KM1.1/4-6
	1/4"	KM1.1/4-1/4	8mm	KM1.1/4-8
	5/16"	KM1.1/4-5/16	10mm	KM1.1/4-10
	3/8"	KM1.1/4-3/8	12mm	KM1.1/4-12
	7/16"	KM1.1/4-7/16	14mm	KM1.1/4-14
	1/2"	KM1.1/4-1/2	16mm	KM1.1/4-16
	9/16"	KM1.1/4-9/16	20mm	KM1.1/4-20
	5/8"	KM1.1/4-5/8	25mm	KM1.1/4-25
	3/4"	KM1.1/4-3/4	-	-
	7/8"	KM1.1/4-7/8	-	-
	1"	KM1.1/4-1	-	-

FIXED ANGLE HEADS

Fixed Angle Heads ensures an accurate angle without the need to adjust or verify the cutting angle. Ideal for families of parts with a common fixed angle, or for high production where optimized rigidity is required to reduce cycle times.



MULTI-SPINDLE DRILL HEADS

Ideal for high production operations where drilling speed and accuracy must be optimized, Lyndex-Nikken Multi Spindle units can be designed for all materials, multiple drill sizes, and a varying number of output spindles to match your application.



SPECIAL ANGLE HEADS

From Gear Hobbing, Deep Bore Milling, High Torque Shell Mill Angle Heads, to High Speed Spindle Multiplier Angle Heads, we have your applications covered. Contact us for more details!



*Saw Blade / Arbor Milling Head
with additional support pins*



*Heavy Duty Offset Arbor Milling Head
for diesel engine blocks*



*ER32 1-meter Extended
Length Modular Tool with
internal coolant*



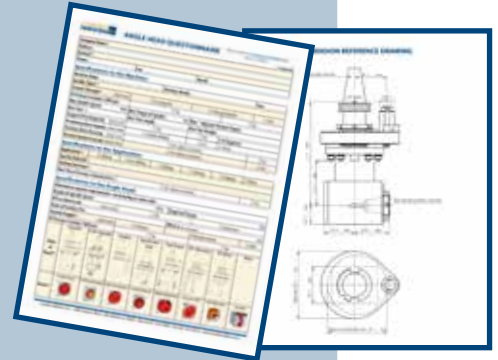
*ER11 Extended Length Slim
Line Angle Head for ID pocket
milling*

Complete engineering support from start to finish!



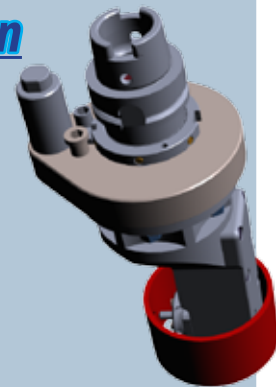
Selecting the best Angle Head

- Fill out our Angle Head Questionnaire
- Provide dimensional and material information about your part via 3D model and/or CAD drawing
- Additional information about the machine, current processes and cycle times are gathered



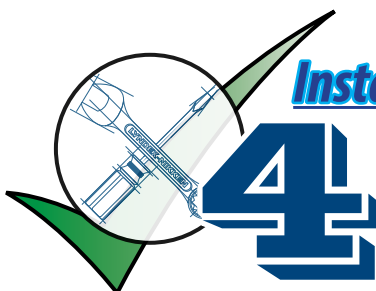
Verification of Clearance and Application

- 3D models of angle heads are used to verify internal motion in space critical locations
- Applications are qualified by determining torque calculations of the machining operation, and is verified again that the Angle Head can sustain the desired process



Automatic Tool Change & Weight Confirmation

- ATC and weight clearances are confirmed
- 3D printed Angle Heads and positioning blocks are available to ensure 100% dimensional accuracy and guarantees clearance while reducing cost and risk to the customer



Installation & Additional Support

- Additional support for positioning block design and integration of the unit are also available
- Positioning blocks are made to specifications, ensuring that the angle head is positioned and locked into place during final installation



**SPECIAL CUSTOM
POSITIONING
BLOCK**

Why risk your investment?

We have you covered from design to installation!



Lyndex-Nikken website:

Be sure to check out our website
www.lyndexnikken.com
to find out more about our products,
services and all we have to offer!
This customer-friendly site provides a
complete overview of our product line,
and features technical data, videos,
CAD drawings, catalogs and more.



www.lyndexnikken.com

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Fax: (847) 367-4815

CAT2015-ANGLEHEAD