



***FLEXIBILITY PRODUCTS***

## **ANGLE HEADS & SPINDLE SPEEDER CATALOG**



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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.

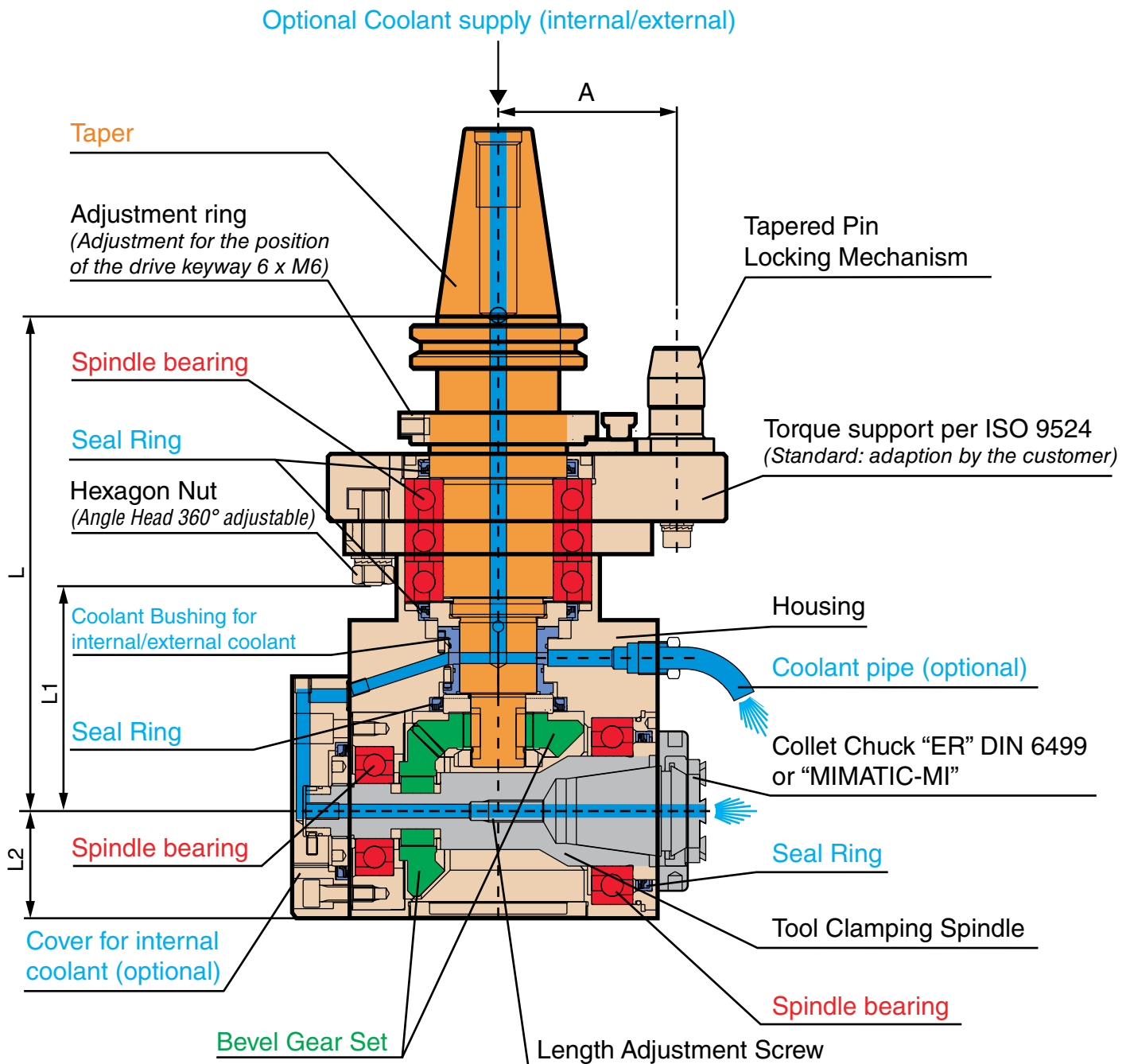


## High Precision Assembly

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 lbs-ft..

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



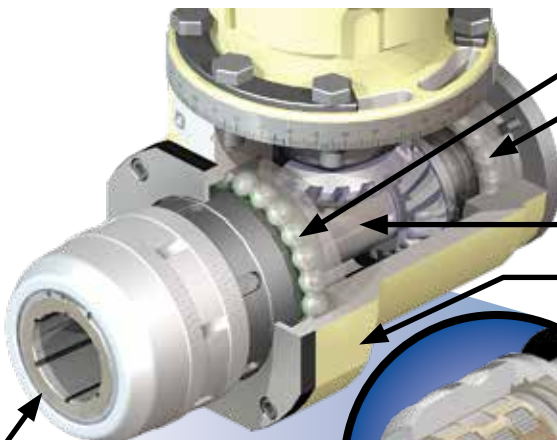


## FEATURES

- 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 lbs.-ft. of gripping strength

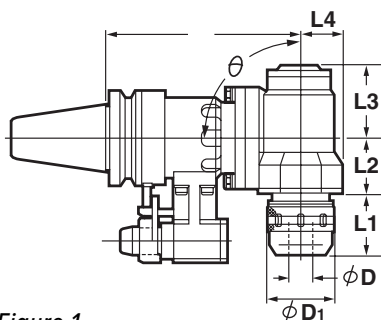


Figure 1

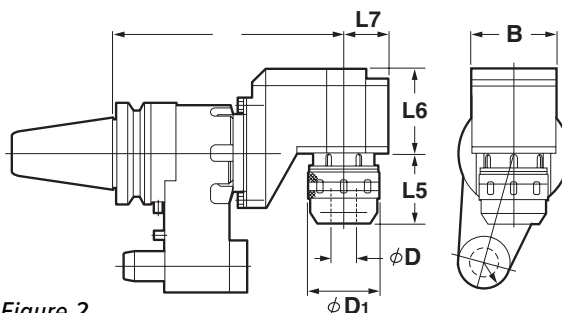
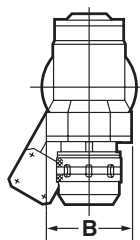


Figure 2

### 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   |

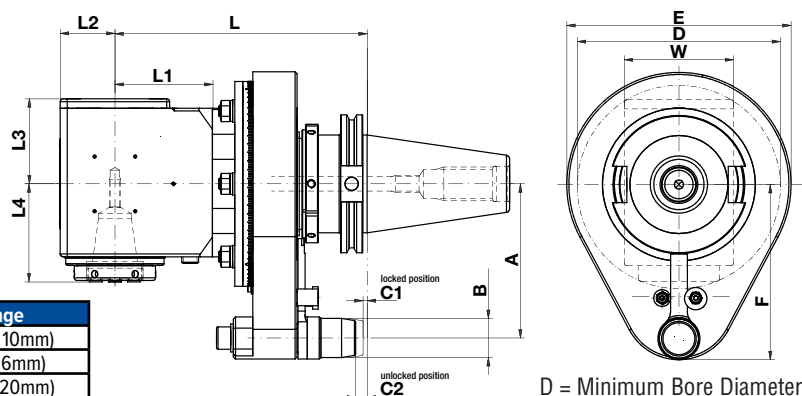
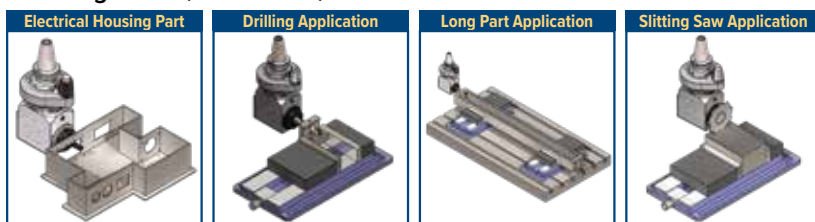
### STYLE - FIGURE 2

| 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



| Collet | Cutting Tool Range          |
|--------|-----------------------------|
| ER16   | 1/32" - 13/32" (1mm - 10mm) |
| ER25   | 1/16" - 5/8" (2mm - 16mm)   |
| ER32   | 1/8" - 25/32" (3mm - 20mm)  |
| ER40   | 5/32" - 1" (4mm - 26mm)     |

## 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  | ER16   | 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 lbs.-ft.   | 6,500   |
| C40RAM-ER25-180-65TP  | ER25   | 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 lbs.-ft.  | 8,000   |
| C40RAM-ER32-180-65TP  | ER32   | 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 lbs.-ft.  | 6,500   |
| C50RAM-ER25-180-110TP | ER25   | 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 lbs.-ft.  | 8,000   |
| C50RAM-ER32-180-110TP | ER32   | 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 lbs.-ft.  | 6,500   |
| C50RAM-ER40-215-110TP | ER40   | 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 lbs.-ft. | 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  | ER16   | 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 lbs.-ft.   | 6,500   |
| B40RAM-ER25-187-65TP  | ER25   | 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 lbs.-ft.  | 8,000   |
| B40RAM-ER32-187-65TP  | ER32   | 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 lbs.-ft.  | 6,500   |
| B50RAM-ER25-190-110TP | ER25   | 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 lbs.-ft.  | 8,000   |
| B50RAM-ER32-190-110TP | ER32   | 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 lbs.-ft.  | 6,500   |
| B50RAM-ER40-225-110TP | ER40   | 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 lbs.-ft. | 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  | ER16   | 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 lbs.-ft.   | 6,500   |
| H63ARAM-ER25-187-65TP  | ER25   | 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 lbs.-ft.  | 8,000   |
| H63ARAM-ER32-187-65TP  | ER32   | 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 lbs.-ft.  | 6,500   |
| H10ARAM-ER25-190-110TP | ER25   | 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 lbs.-ft.  | 8,000   |
| H10ARAM-ER32-190-110TP | ER32   | 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 lbs.-ft.  | 6,500   |
| H10ARAM-ER40-225-110TP | ER40   | 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 lbs.-ft. | 5,000   |

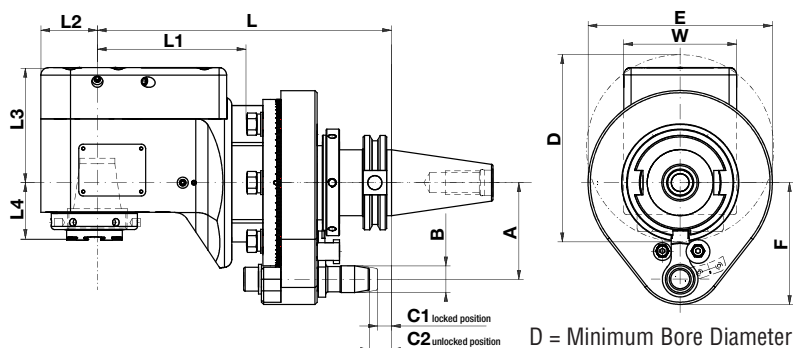
All Angle Heads come with a tapered positioning pin as standard.

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         |
|--------|----------------------------|
| ER25   | 1/16" - 5/8" (2mm - 16mm)  |
| ER32   | 1/8" - 25/32" (3mm - 20mm) |
| ER40   | 5/32" - 1" (4mm - 26mm)    |

### 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    | ER25   | 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 lbs.-ft.  | 8,000   |
| C40RAM-ER25-1800TIC-65TP  | ER25   | 14                | 7.087"  | 3.150" | 1.102" | 2.244" | 1.409" | 2.559" | 0.709" | 0.374" | 0.583" | 3.228" | 4.882" | 3.228" | 2.362" | 22.127 lbs.-ft.  | 8,000   |
| C40RAM-ER32-2000T-65TP    | ER32   | 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 lbs.-ft.  | 6,000   |
| C40RAM-ER32-2000TIC-65TP  | ER32   | 19                | 7.874"  | 3.937" | 1.496" | 3.051" | 1.268" | 2.559" | 0.709" | 0.374" | 0.583" | 3.228" | 4.882" | 3.228" | 3.150" | 51.629 lbs.-ft.  | 6,000   |
| C50RAM-ER25-1850T-110TP   | ER25   | 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 lbs.-ft.  | 8,000   |
| C50RAM-ER32-2000T-110TP   | ER32   | 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 lbs.-ft.  | 6,000   |
| C50RAM-ER32-2000TIC-110TP | ER32   | 29                | 7.874"  | 3.937" | 1.496" | 3.051" | 1.268" | 4.331" | 1.102" | 0.118" | 0.327" | 3.228" | 6.299" | 4.921" | 3.150" | 51.629 lbs.-ft.  | 6,000   |
| C50RAM-ER40-2600T-110TP   | ER40   | 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 lbs.-ft. | 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  | ER25   | 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 lbs.-ft.  | 8,000   |
| B40RAM-ER32-2070T-65TP  | ER32   | 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 lbs.-ft.  | 6,000   |
| B50RAM-ER25-1950T-110TP | ER25   | 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 lbs.-ft.  | 8,000   |
| B50RAM-ER32-2100T-110TP | ER32   | 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 lbs.-ft.  | 6,000   |
| B50RAM-ER40-2700T-110TP | ER40   | 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 lbs.-ft. | 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    | ER25   | 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 lbs.-ft.  | 8,000   |
| H63ARAM-ER25-1870TIC-65TP  | ER25   | 14                | 7.362"  | 3.150" | 1.102" | 2.244" | 1.409" | 2.559" | 0.709" | 0.374" | 0.583" | 3.228" | 4.882" | 3.228" | 2.362" | 22.127 lbs.-ft.  | 8,000   |
| H63ARAM-ER32-2070T-65TP    | ER32   | 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 lbs.-ft.  | 6,000   |
| H10ARAM-ER25-1950T-110TP   | ER25   | 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 lbs.-ft.  | 8,000   |
| H10ARAM-ER32-2100T-110TP   | ER32   | 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 lbs.-ft.  | 6,000   |
| H10ARAM-ER32-2100TIC-110TP | ER32   | 29                | 8.268"  | 3.937" | 1.496" | 3.051" | 1.268" | 4.331" | 1.102" | 0.118" | 0.327" | 3.228" | 6.299" | 4.921" | 3.150" | 51.629 lbs.-ft.  | 6,000   |
| H10ARAM-ER40-2700T-110TP   | ER40   | 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 lbs.-ft. | 5,000   |

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

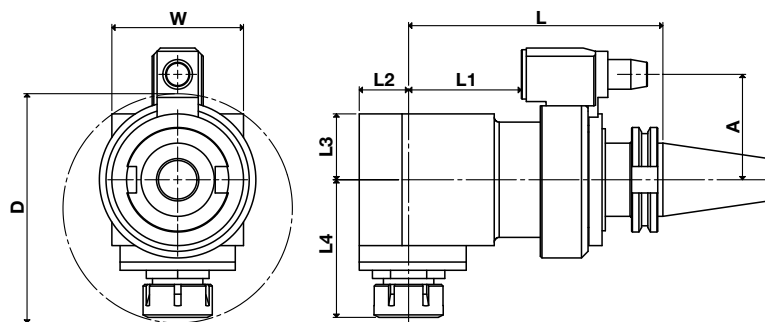
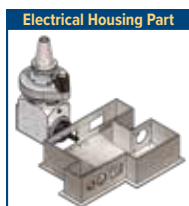
A flat pin can be made available upon request.

## ACCESSORIES

For ER Collets please see pages 18-21

## FEATURES

- Higher torque (36.8 lbs-ft.) allows for faster material removal resulting in greater productivity.
- 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

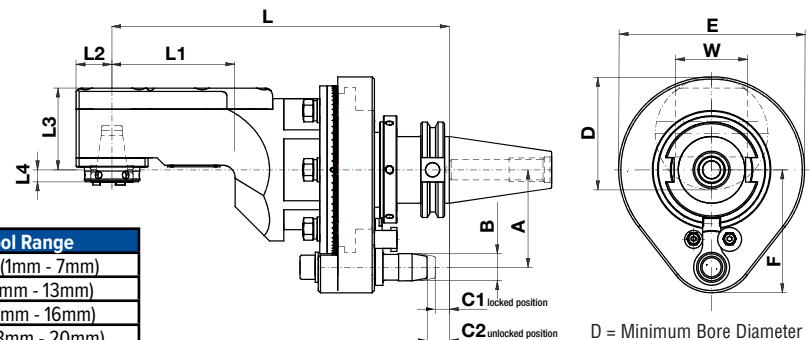
| LN Part Number | Weight (app. LBS) | L      | L1     | L2     | L3     | L4     | A      | W      | D      | Max Torque     | Max RPM |
|----------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|---------|
| C40RA-0025M    | 12   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



| Collet | Cutting Tool Range         |
|--------|----------------------------|
| ER11   | 1/32" - 17/64" (1mm - 7mm) |
| ER20   | 1/16" - 1/2" (2mm - 13mm)  |
| ER25   | 1/16" - 5/8" (2mm - 16mm)  |
| ER32   | 1/8" - 25/32" (3mm - 20mm) |

### 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  | ER11   | 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 lbs.-ft.  | 10,000  |
| C40RAM-ER20-225ST-65TP  | ER20   | 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 lbs.-ft. | 10,000  |
| C40RAM-ER25-215ST-65TP  | ER25   | 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 lbs.-ft. | 8,000   |
| C50RAM-ER11-227ST-110TP | ER11   | 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 lbs.-ft.  | 10,000  |
| C50RAM-ER25-215ST-110TP | ER25   | 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 lbs.-ft. | 8,000   |
| C50RAM-ER32-285ST-110TP | ER32   | 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 lbs.-ft. | 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  | ER20   | 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 lbs.-ft. | 10,000  |
| B40RAM-ER25-222ST-65TP  | ER25   | 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 lbs.-ft. | 8,000   |
| B50RAM-ER25-225ST-110TP | ER25   | 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 lbs.-ft. | 8,000   |
| B50RAM-ER32-295ST-110TP | ER32   | 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 lbs.-ft. | 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  | ER20   | 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 lbs.-ft. | 10,000  |
| H63ARAM-ER25-222ST-65TP  | ER25   | 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 lbs.-ft. | 8,000   |
| H10ARAM-ER25-225ST-110TP | ER25   | 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 lbs.-ft. | 8,000   |
| H10ARAM-ER32-295ST-110TP | ER32   | 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 lbs.-ft. | 6,000   |

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

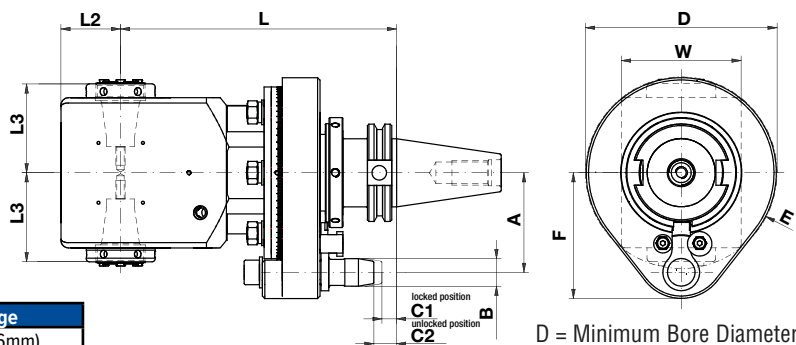
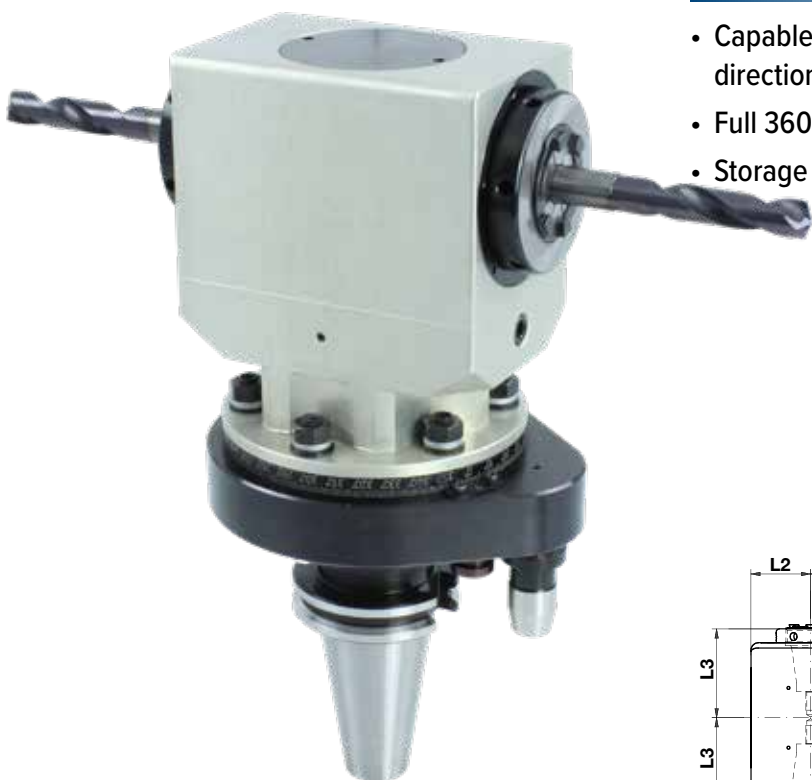
A flat pin can be made available upon request.

## 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         |
|--------|----------------------------|
| ER25   | 1/16" - 5/8" (2mm - 16mm)  |
| ER32   | 1/8" - 25/32" (3mm - 20mm) |
| ER40   | 5/32" - 1" (4mm - 26mm)    |

D = Minimum Bore Diameter

### CAT40/50

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

### BT40/50

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

### HSK-A 63/100

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

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

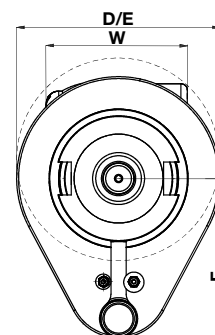
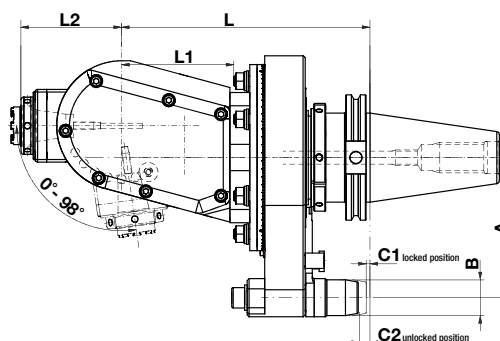
A flat pin can be made available upon request.



## 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

Universal Flexhead



D = Minimum Bore Diameter

| Collet | Cutting Tool Range          |
|--------|-----------------------------|
| ER25   | 1/16" - 5/8" (2mm - 16mm)   |
| ER25   | 7/32" - 5/8" (6mm - 16mm)   |
| ER32   | 1/4" - 25/32" (10mm - 20mm) |

### 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    | ER25   | 21                | 7.677" | 3.150" | 3.425" | 2.559" | 0.709" | 0.374" | 0.583" | 4.882" | 3.228" | 3.386" | 22.127 lbs.-ft. | 7,000   |
| C40FHM-ER25-195IC-65TP  | ER25   | 21                | 7.677" | 3.150" | 3.425" | 2.559" | 0.709" | 0.374" | 0.583" | 4.882" | 3.228" | 3.386" | 22.127 lbs.-ft. | 7,000   |
| C50FHM-ER25-195IC-110TP | ER25   | 31                | 7.677" | 3.150" | 3.425" | 4.331" | 1.102" | 0.118" | 0.327" | 6.299" | 4.921" | 3.386" | 22.127 lbs.-ft. | 7,000   |
| C50FHM-ER32-220IC-110TP | ER32   | 32                | 8.464" | 3.543" | 4.134" | 4.331" | 1.102" | 0.118" | 0.327" | 6.299" | 4.921" | 4.843" | 51.629 lbs.-ft. | 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  | ER25   | 21                | 7.953" | 3.150" | 3.425" | 2.559" | 0.709" | 0.374" | 0.583" | 4.882" | 3.228" | 3.386" | 22.127 lbs.-ft. | 7,000   |
| B50FHM-ER25-205IC-110TP | ER25   | 33                | 8.071" | 3.150" | 3.425" | 4.331" | 1.102" | 0.118" | 0.327" | 6.299" | 4.921" | 3.386" | 22.127 lbs.-ft. | 7,000   |
| B50FHM-ER32-220IC-110TP | ER32   | 34                | 8.661" | 3.543" | 4.134" | 4.331" | 1.102" | 0.118" | 0.327" | 6.299" | 4.921" | 4.843" | 51.629 lbs.-ft. | 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  | ER25   | 21                | 7.953" | 3.150" | 3.425" | 2.559" | 0.709" | 0.374" | 0.583" | 4.882" | 3.228" | 3.386" | 22.127 lbs.-ft. | 7,000   |
| H10AFHM-ER25-205IC-110TP | ER25   | 30                | 8.071" | 3.150" | 3.425" | 4.331" | 1.102" | 0.118" | 0.327" | 6.299" | 4.921" | 3.386" | 22.127 lbs.-ft. | 7,000   |
| H10AFHM-ER32-220IC-110TP | ER32   | 31                | 8.661" | 3.543" | 4.134" | 4.331" | 1.102" | 0.118" | 0.327" | 6.299" | 4.921" | 4.843" | 51.629 lbs.-ft. | 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

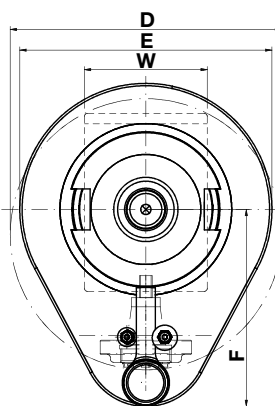
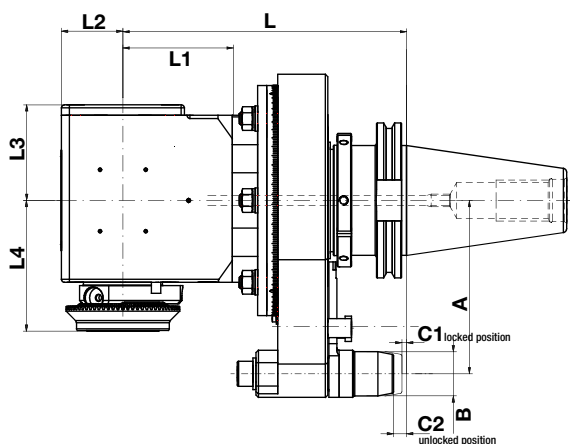
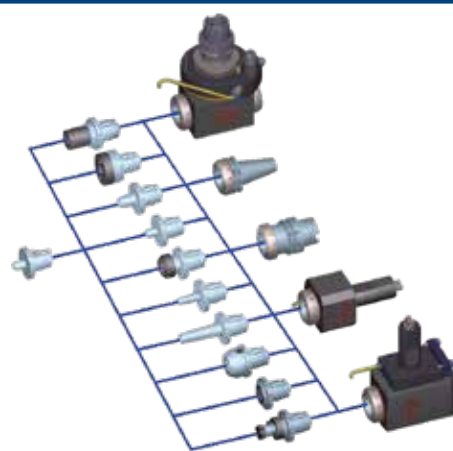




## FEATURES

- 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

## MI QUICK CHANGE ATTACHMENTS ON PAGE 13



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 lbs.-ft. | 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 lbs.-ft. | 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 lbs.-ft. | 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 lbs.-ft. | 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 lbs.-ft. | 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 lbs.-ft. | 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 lbs.-ft. | 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 lbs.-ft. | 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 lbs.-ft. | 8,000   |

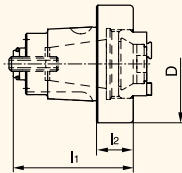
## MI50/63 Type Specifications

| 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 lbs.-ft.  | 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 lbs.-ft.  | 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 lbs.-ft.  | 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 lbs.-ft.  | 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 lbs.-ft.  | 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 lbs.-ft.  | 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 lbs.-ft. | 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 lbs.-ft. | 8,000   |



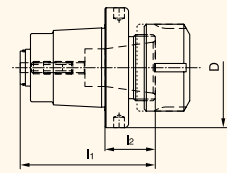
### Collet Chuck DIN 6499 - Type ER

Short type, clamping nut inside



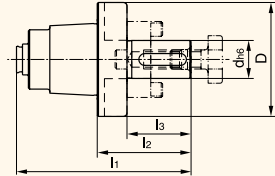
| Part Number | Size | Collet | I1     | I2     | D      |
|-------------|------|--------|--------|--------|--------|
| MI32-ER11   | MI32 | ER11   | 1.634" | 0.591" | 1.654" |
| MI32-ER16   | MI32 | ER16   | 1.634" | 0.591" | 1.654" |
| MI40-ER16   | MI40 | ER16   | 1.772" | 0.433" | 1.890" |
| MI40-ER20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

Long type, clamping nut outside



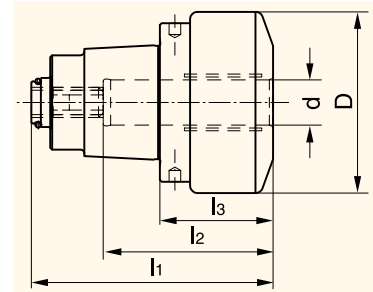
| Part Number | Size | Collet | I1     | I2     | D      |
|-------------|------|--------|--------|--------|--------|
| MI32-ER11   | MI32 | ER11   | 2.461" | 1.417" | 1.654" |
| MI32-ER16   | MI32 | ER16   | 1.988" | 0.945" | 1.654" |
| MI40-ER16   | MI40 | ER16   | 2.283" | 0.945" | 1.890" |
| MI40-ER20   | 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" |

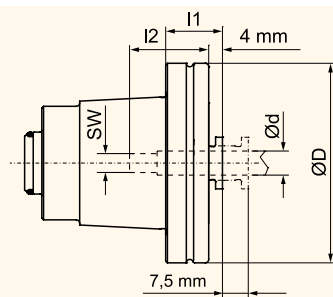
### Hydraulic Chuck



| 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" |

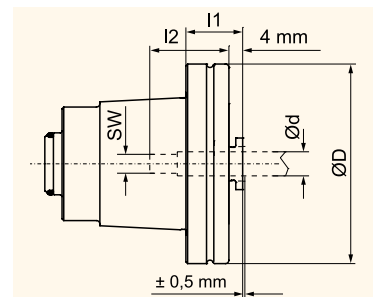
### SYNAX® Tapping Quick Change Holder

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

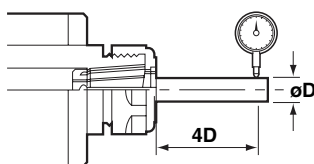
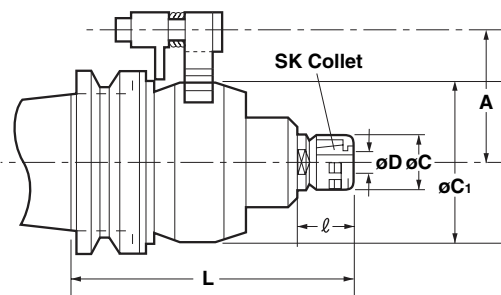


## Titanium Nitrided Bearing Nut (HV2,200) (US Patent 6923451)

- 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

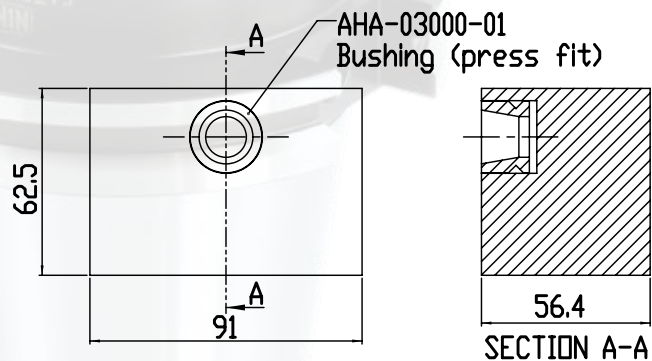
Spindle speeders that rotate beyond the main spindle's maximum RPM, and toolholders that induce a side flow of coolant through cutting tools, require a positioning pin to operate.

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.

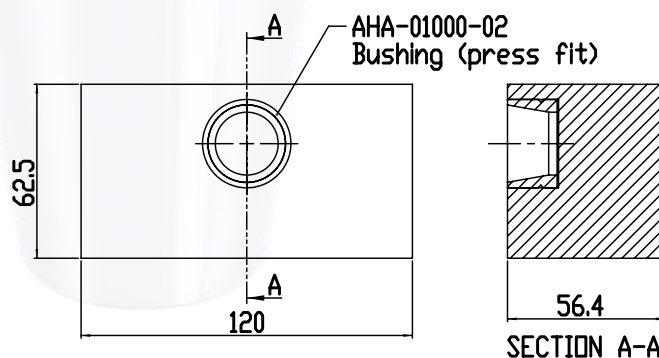
### Positioning Block - Blank

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)



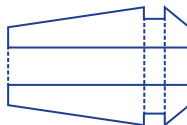
Part #: PB-RAN50-BLANK (50 Taper)



## ER Collet



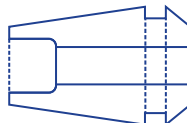
## ER Standard Type Collet



### Flexibility and Durability:

We offer the ultimate trifecta: wide clamping range, ultra precision, and super high pressure. Our 1300 psi capable collets have a wide 0.031" collapse range and the ability to maintain less than 0.0001" run out at the collet nose.

## ER Counter-Bored Type Collet



### Ultra Precision for Micro Cutters:

Our high precision "On Size" collets have 25% longer collet bore lengths than competitors, resulting in stronger gripping power at higher RPMs. The high-pressure coolant collet's special design reduces cutter vibration due to high pressure.

## STANDARD (INCH)

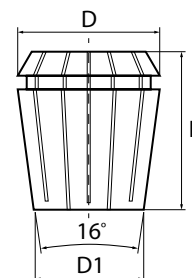
| SIZE   | ER11    | ER16    | ER20    | ER25    | ER32    | ER40    |
|--------|---------|---------|---------|---------|---------|---------|
| 1/32"  | E11-002 | E16-002 | -       | -       | -       | -       |
| 3/64"  | E11-003 | -       | -       | -       | -       | -       |
| 1/16"  | E11-004 | E16-004 | E20-004 | E25-004 | -       | -       |
| 5/64"  | E11-005 | -       | -       | -       | -       | -       |
| 3/32"  | E11-006 | E16-006 | E20-006 | E25-006 | -       | -       |
| 7/64"  | E11-007 | -       | -       | -       | -       | -       |
| 1/8"   | E11-008 | E16-008 | E20-008 | E25-008 | E32-008 | -       |
| 9/64"  | E11-009 | -       | -       | -       | -       | -       |
| 5/32"  | E11-010 | E16-010 | E20-010 | E25-010 | E32-010 | E40-010 |
| 11/64" | E11-011 | -       | -       | -       | -       | -       |
| 3/16"  | E11-012 | E16-012 | E20-012 | E25-012 | E32-012 | E40-012 |
| 13/64" | E11-013 | -       | -       | -       | -       | -       |
| 7/32"  | E11-014 | E16-014 | E20-014 | E25-014 | E32-014 | E40-014 |
| 15/64" | E11-015 | -       | -       | -       | -       | -       |
| 1/4"   | E11-016 | E16-016 | E20-016 | E25-016 | E32-016 | E40-016 |
| 17/64" | E11-017 | -       | -       | -       | -       | -       |
| 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   | ER8     | ER11    | ER16    | ER20    | ER25    | ER32    | ER40     |
|--------|---------|---------|---------|---------|---------|---------|----------|
| 1.0mm  | ER8-039 | E11-039 | E16-039 | -       | -       | -       | -        |
| 1.5mm  | ER8-059 | E11-059 | E16-059 | -       | -       | -       | -        |
| 2.0mm  | ER8-078 | E11-078 | E16-078 | E20-078 | E25-078 | -       | -        |
| 2.5mm  | ER8-098 | E11-098 | E16-098 | -       | -       | -       | -        |
| 3.0mm  | ER8-118 | E11-118 | E16-118 | E20-118 | E25-118 | E32-118 | -        |
| 3.5mm  | ER8-137 | E11-137 | E16-137 | E20-137 | E25-137 | E32-137 | -        |
| 4.0mm  | ER8-157 | E11-157 | E16-157 | E20-157 | E25-157 | E32-157 | E40-157  |
| 4.5mm  | ER8-177 | E11-177 | E16-177 | -       | -       | -       | -        |
| 5.0mm  | ER8-196 | E11-196 | E16-196 | E20-196 | E25-196 | E32-196 | E40-196  |
| 5.5mm  | -       | E11-216 | E16-216 | -       | -       | -       | -        |
| 6.0mm  | -       | E11-236 | E16-236 | E20-236 | E25-236 | E32-236 | E40-236  |
| 6.5mm  | -       | E11-255 | E16-255 | -       | -       | -       | -        |
| 7.0mm  | -       | E11-275 | E16-275 | E20-275 | E25-275 | E32-275 | E40-275  |
| 7.5mm  | -       | -       | E16-295 | -       | -       | -       | -        |
| 8.0mm  | -       | -       | E16-314 | E20-314 | E25-314 | E32-314 | E40-314  |
| 8.5mm  | -       | -       | E16-334 | -       | -       | -       | -        |
| 9.0mm  | -       | -       | E16-354 | E20-354 | E25-354 | E32-354 | E40-354  |
| 9.5mm  | -       | -       | E16-374 | -       | -       | -       | -        |
| 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 Collet Dimensional Data

| Style | D      | D1     | L      | Collet Range   | Coolant Collet Size Range | Nut Tightening Torque |     |
|-------|--------|--------|--------|----------------|---------------------------|-----------------------|-----|
|       |        |        |        |                |                           | Lbs-Ft.               | Nm  |
| ER8   | 0.330" | 0.216" | 0.535" | 0.019 - 0.196" | N/A                       | 4                     | 9   |
| ER11  | 0.460" | 0.307" | 0.709" | 0.019 - 0.275" | 0.157 - 0.275"            | 11                    | 15  |
| ER16  | 0.677" | 0.445" | 1.063" | 0.019 - 0.393" | 0.157 - 0.393"            | 40                    | 54  |
| ER20  | 0.835" | 0.571" | 1.220" | 0.039 - 0.511" | 0.196 - 0.511"            | 45                    | 61  |
| ER25  | 1.031" | 0.728" | 1.378" | 0.039 - 0.629" | 0.236 - 0.629"            | 70                    | 95  |
| ER32  | 1.307" | 0.960" | 1.575" | 0.078 - 0.787" | 0.393 - 0.787"            | 90                    | 129 |
| ER40  | 1.622" | 1.228" | 1.811" | 0.118 - 1.023" | 0.393 - 1.023"            | 115                   | 156 |



## ER Coolant Collet

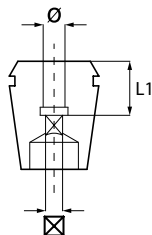


## COOLANT (INCH)

| 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)

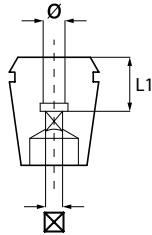
| SIZE   | ER11       | ER16       | ER20       | ER25       | ER32       | ER40        |
|--------|------------|------------|------------|------------|------------|-------------|
| 4.0mm  | E11-157(C) | E16-157(C) | -          | -          | -          | -           |
| 4.5mm  | E11-177(C) | E16-177(C) | -          | -          | -          | -           |
| 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.

*Note: Diameter and Square size are in accordance with U.S. Standard Taps.*

| Part Number | ER Series | Tap Inch Style | Tap Metric Size | L1 (mm) | Ø      | ⊠      |
|-------------|-----------|----------------|-----------------|---------|--------|--------|
| ET16-168    | ER16      | #8, 5/32"      | M4              | 15      | 0.168" | 0.131" |
| ET16-194    | ER16      | #10, 3/16"     | M4.5, M5        | 15      | 0.194" | 0.152" |
| ET16-220    | ER16      | #12, 7/32"     | -               | 15      | 0.220" | 0.165" |
| ET16-255    | ER16      | #14, 1/4"      | M6, M6.5        | 22      | 0.255" | 0.191" |
| ET20-168    | ER20      | #8, 5/32"      | M4              | 15      | 0.168" | 0.131" |
| ET20-194    | ER20      | #10, 3/16"     | M4.5, M5        | 15      | 0.194" | 0.152" |
| ET20-220    | ER20      | #12, 7/32"     | -               | 15      | 0.220" | 0.165" |
| ET20-255    | ER20      | #14, 1/4"      | M6, M6.5        | 20      | 0.255" | 0.191" |
| ET20-318    | ER20      | 5/16"          | M7, M6.5, M8    | 20      | 0.318" | 0.238" |
| ET20-323    | ER20      | 7/16"          | -               | 20      | 0.323" | 0.242" |
| ET20-367    | ER20      | 1/2"           | M12, M12.5      | 25      | 0.367" | 0.275" |
| ET20-381    | ER20      | 3/8"           | M10             | 20      | 0.381" | 0.286" |
| ET25-168    | ER25      | #8, 5/32"      | M4              | 15      | 0.168" | 0.131" |
| ET25-194    | ER25      | #10, 3/16"     | M4.5, M5        | 15      | 0.194" | 0.152" |
| ET25-220    | ER25      | #12, 7/32"     | -               | 15      | 0.220" | 0.165" |
| ET25-255    | ER25      | #14, 1/4"      | M6, M6.5        | 20      | 0.255" | 0.191" |
| ET25-318    | ER25      | 5/16"          | M7, M6.5, M8    | 20      | 0.318" | 0.238" |
| ET25-323    | ER25      | 7/16"          | -               | 20      | 0.323" | 0.242" |
| ET25-367    | ER25      | 1/2"           | M12, M12.5      | 25      | 0.367" | 0.275" |
| ET25-381    | ER25      | 3/8"           | M10             | 20      | 0.381" | 0.286" |
| ET25-429    | ER25      | 9/16"          | M14             | 25      | 0.429" | 0.322" |
| ET25-437    | ER25      | 1/8" NPT(L)    | -               | 18      | 0.437" | 0.328" |
| ET25-480    | ER25      | 5/8"           | M16             | 25      | 0.480" | 0.360" |
| ET32-168    | ER32      | #8, 5/32"      | M4              | 15      | 0.168" | 0.131" |
| ET32-194    | ER32      | #10, 3/16"     | M4.5, M5        | 15      | 0.194" | 0.152" |
| ET32-220    | ER32      | #12, 7/32"     | -               | 15      | 0.220" | 0.165" |
| ET32-255    | ER32      | #14, 1/4"      | M6, M6.5        | 20      | 0.255" | 0.191" |
| ET32-318    | ER32      | 5/16"          | M7, M6.5, M8    | 20      | 0.318" | 0.238" |
| ET32-323    | ER32      | 7/16"          | -               | 20      | 0.323" | 0.242" |
| ET32-367    | ER32      | 1/2"           | M12, M12.5      | 25      | 0.367" | 0.275" |
| ET32-381    | ER32      | 3/8"           | M10             | 20      | 0.381" | 0.286" |
| ET32-429    | ER32      | 9/16"          | M14             | 25      | 0.429" | 0.322" |
| ET32-437    | ER32      | 1/8" NPT       | -               | 18      | 0.437" | 0.328" |
| ET32-480    | ER32      | 5/8"           | M16             | 25      | 0.480" | 0.360" |
| ET32-542    | ER32      | 11/16"         | M18             | 30      | 0.542" | 0.406" |
| ET32-562    | ER32      | 1/4" NPT       | -               | 18      | 0.562" | 0.421" |
| ET32-590    | ER32      | 3/4"           | -               | 30      | 0.590" | 0.442" |
| ET32-652    | ER32      | 13/16"         | M20             | 30      | 0.652" | 0.489" |
| ET40-255    | ER40      | #14, 1/4"      | M6, M6.5        | 25      | 0.255" | 0.191" |
| ET40-318    | ER40      | 5/16"          | M7, M6.5, M8    | 25      | 0.318" | 0.238" |
| ET40-323    | ER40      | 7/16"          | -               | 25      | 0.323" | 0.242" |
| ET40-367    | ER40      | 1/2"           | M12, M12.5      | 25      | 0.367" | 0.275" |
| ET40-381    | ER40      | 3/8"           | M10             | 25      | 0.381" | 0.286" |
| ET40-429    | ER40      | 9/16"          | M14             | 25      | 0.429" | 0.322" |
| ET40-437    | ER40      | 1/8" NPT       | -               | 18      | 0.437" | 0.328" |
| ET40-480    | ER40      | 5/8"           | M16             | 25      | 0.480" | 0.360" |
| ET40-542    | ER40      | 11/16"         | M18             | 30      | 0.542" | 0.406" |
| ET40-562    | ER40      | 1/4" NPT       | -               | 18      | 0.562" | 0.421" |
| ET40-590    | ER40      | 3/4"           | -               | 30      | 0.590" | 0.442" |
| ET40-652    | ER40      | 13/16"         | M20             | 30      | 0.652" | 0.489" |
| ET40-687    | ER40      | 1/2" NPT       | -               | 18      | 0.687" | 0.515" |
| ET40-697    | ER40      | 7/8"           | M22             | 30      | 0.697" | 0.523" |
| ET40-700    | ER40      | 3/8" NPT       | -               | 18      | 0.700" | 0.531" |
| ET40-760    | ER40      | 15/16"         | M24             | 35      | 0.760" | 0.570" |
| ET40-800    | ER40      | 1"             | M25             | 35      | 0.800" | 0.600" |



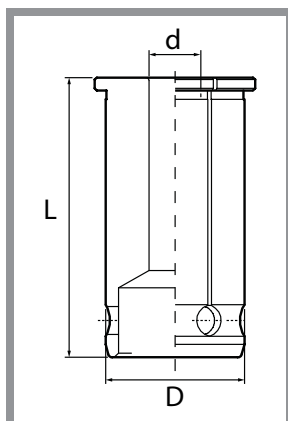
Lyndex-Nikken has combined the versatility of our ER Tapping Collets with the popularity of our Coolant Collets to create our patented ER Coolant Tap Collets. 1300 psi capable Coolant Tap Collets increase tool life by dissipating heat and preventing chip build-up.

*Note: Diameter and Square size are in accordance with U.S. Standard Taps.*

| Part Number | ER Series | Tap Inch Style | Tap Metric Size | L1 (mm) | Ø      | ⊠      |
|-------------|-----------|----------------|-----------------|---------|--------|--------|
| ET16-255(C) | ER16      | #14, 1/4"      | M6, M6.5        | 22      | 0.255" | 0.191" |
| ET16-318(C) | ER16      | 5/16"          | M7, M6.5, M8    | 22      | 0.318" | 0.238" |
| ET20-255(C) | ER20      | #14, 1/4"      | M6, M6.5        | 25      | 0.255" | 0.191" |
| ET20-318(C) | ER20      | 5/16"          | M7, M6.5, M8    | 25      | 0.318" | 0.238" |
| ET20-323(C) | ER20      | 7/16"          | -               | 25      | 0.323" | 0.242" |
| ET20-367(C) | ER20      | 1/2"           | M12, M12.5      | 25      | 0.367" | 0.275" |
| ET20-381(C) | ER20      | 3/8"           | M10             | 25      | 0.381" | 0.286" |
| ET25-255(C) | ER25      | #14, 1/4"      | M6, M6.5        | 25      | 0.255" | 0.191" |
| ET25-318(C) | ER25      | 5/16"          | M7, M6.5, M8    | 25      | 0.318" | 0.238" |
| ET25-323(C) | ER25      | 7/16"          | -               | 25      | 0.323" | 0.242" |
| ET25-367(C) | ER25      | 1/2"           | M12, M12.5      | 25      | 0.367" | 0.275" |
| ET25-381(C) | ER25      | 3/8"           | M10             | 27      | 0.381" | 0.286" |
| ET25-429(C) | ER25      | 9/16"          | M14             | 25      | 0.429" | 0.322" |
| ET25-480(C) | ER25      | 5/8"           | M16             | 30      | 0.480" | 0.360" |
| ET32-255(C) | ER32      | #14, 1/4"      | M6, M6.5        | 30      | 0.255" | 0.191" |
| ET32-318(C) | ER32      | 5/16"          | M7, M6.5, M8    | 25      | 0.318" | 0.238" |
| ET32-323(C) | ER32      | 7/16"          | -               | 25      | 0.323" | 0.242" |
| ET32-367(C) | ER32      | 1/2"           | M12, M12.5      | 25      | 0.367" | 0.275" |
| ET32-381(C) | ER32      | 3/8"           | M10             | 27      | 0.381" | 0.286" |
| ET32-429(C) | ER32      | 9/16"          | M14             | 25      | 0.429" | 0.322" |
| ET32-480(C) | ER32      | 5/8"           | M16             | 30      | 0.480" | 0.360" |
| ET32-542(C) | ER32      | 11/16"         | M18             | 30      | 0.542" | 0.406" |
| ET32-590(C) | ER32      | 3/4"           | -               | 35      | 0.590" | 0.442" |
| ET32-652(C) | ER32      | 13/16"         | M20             | 35      | 0.652" | 0.489" |
| ET40-323(C) | ER40      | 7/16"          | -               | 35      | 0.323" | 0.242" |
| ET40-367(C) | ER40      | 1/2"           | M12, M12.5      | 25      | 0.367" | 0.275" |
| ET40-381(C) | ER40      | 3/8"           | M10             | 27      | 0.381" | 0.286" |
| ET40-429(C) | ER40      | 9/16"          | M14             | 25      | 0.429" | 0.322" |
| ET40-480(C) | ER40      | 5/8"           | M16             | 30      | 0.480" | 0.360" |
| ET40-542(C) | ER40      | 11/16"         | M18             | 30      | 0.542" | 0.406" |
| ET40-590(C) | ER40      | 3/4"           | -               | 35      | 0.590" | 0.442" |
| ET40-652(C) | ER40      | 13/16"         | M20             | 35      | 0.652" | 0.489" |
| ET40-697(C) | ER40      | 7/8"           | M22             | 35      | 0.697" | 0.523" |
| ET40-760(C) | ER40      | 15/16"         | M24             | 38      | 0.760" | 0.570" |
| ET40-800(C) | ER40      | 1"             | M25             | 38      | 0.800" | 0.600" |

**Note: Seals up to a 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.



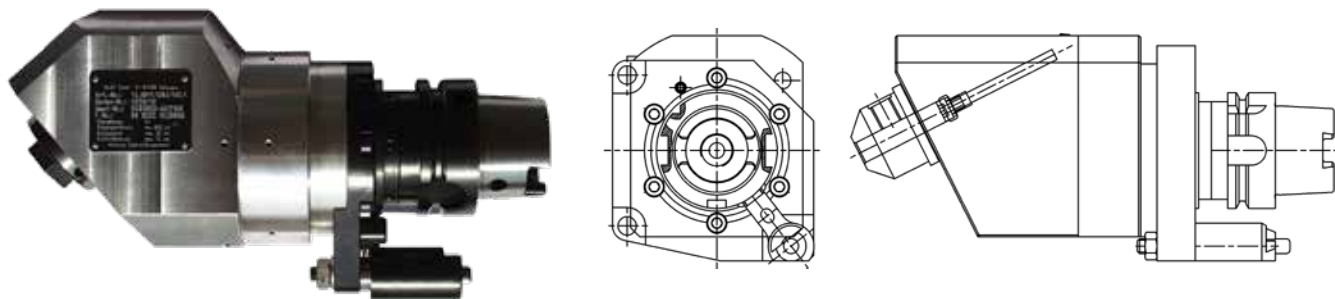
| Collet Series | L                 | D                   | d = Collet Range |
|---------------|-------------------|---------------------|------------------|
| KM3/4         | 2.08"<br>(53mm)   | 0.75"<br>(19.05mm)  | 1/8" - 5/8"      |
| KM1.1/4       | 2.53"<br>(64.5mm) | 1.25"<br>(31.75 mm) | 3/16"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



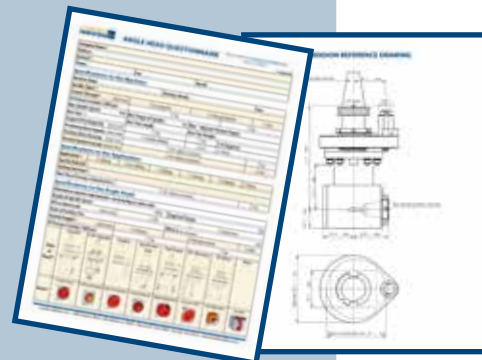
*ER11 Extended Length Slim  
Line Angle Head for ID  
pocket milling*

# Complete engineering support from start to finish!

## Selecting the best Angle Head

1

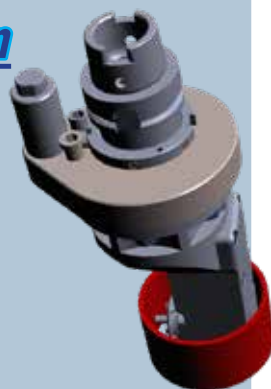
- Fill out our Angle Head Questionnaire.
- Provide dimensional and material information about your part via 3D model and/or CAD drawing.
- Additional information about the machine, current processes and cycle times are gathered.



## Verification of Clearance and Application

2

- 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

3

- 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

4

- 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](http://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.



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**CAT2019-ANGLEHEAD**