

# *Quick Change Collet Chucks*



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## Commitment to Service

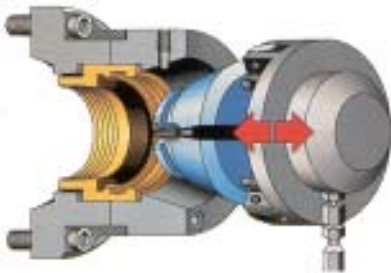
MicroCentric Quick Change Collet Chucks are available from stock and can be adapted to any machine configuration. MicroCentric is not only committed to building the world's finest workholding products, but we also strive to provide our customers with unmatched service and support.



# Quick Change Collet System Overview

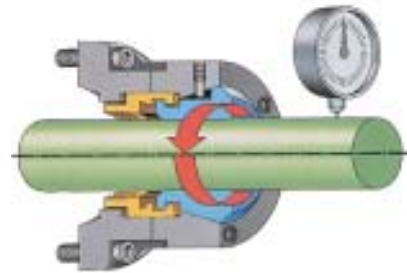
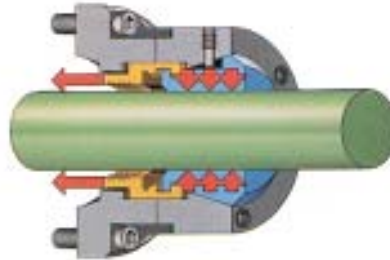
## Change Collets in 15 Seconds

- MicroCentric Collets are collapsed by a changing fixture for quick removal and insertion into the chuck



## High Clamping Force .0004" Accuracy

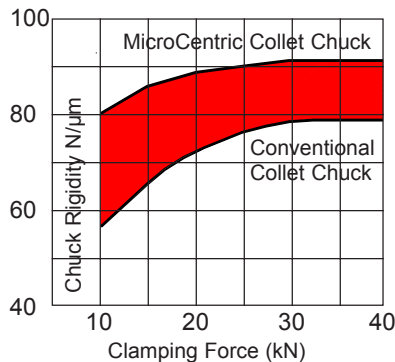
- Parallel clamping design generates higher clamping forces than traditional collet and three jaw chucks
- Runout of the workpiece (not only the tapered seat of the chuck) is guaranteed to be within .0004" (0,010mm) TIR after collet change



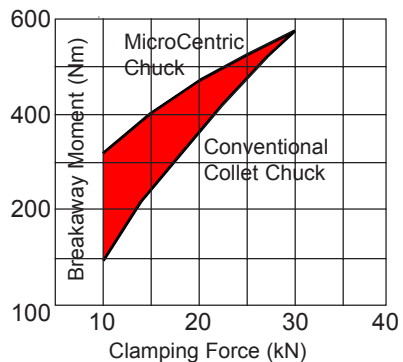
## Superior Rigidity

- Shorter overall chuck length
- Workpiece is machined closer to spindle face
- High chuck rigidity improves cutting tool life and allows higher metal removal rates for shorter cycle times

Up to 35% greater rigidity

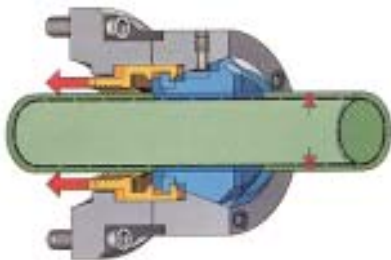


50% higher clamping force



## Large Clamp Range

- .040" (1 mm) range on models up to 2-5/8" (65 mm) capacity
- .080" (2 mm) range on larger capacity collets



## High Spindle Speeds

- MicroCentric 42 mm and 65 mm collet chucks models are rated to 6,000 rpm
- Models rated to 8,000 rpm are quoted on request

## Collets Available From Stock

- MicroCentric stocks an extensive range of inch and metric collets, in round and hex configurations.
- Quick ship collets, that are delivered in 5 days, are offered for special sizes and configurations.

## Quick Change Collet Chuck Models

All components of MicroCentric Collet Chucks are made from hardened and precision ground alloy steel for highest accuracy and long term performance. Their modular design makes it possible to adapt MicroCentric chucks to all machine spindle and draw tube configurations.

### NB Series - *Pull Back Design*



In the NB series chuck, the collet is coupled directly to the draw tube connector. As the draw tube is actuated, the collet is drawn into the tapered seat, efficiently translating draw tube force into maximum clamping force.

### ND Series - *Dead Length Design*



In the ND series models the collet is coupled directly to the chuck body and remains fixed as the tapered seat moves forward when the chuck is actuated. This design keeps the collet in a fixed Z axis position during clamping and imparts no pull back on bar.

### NDR Series - *Pull to Close Dead Length Design*



The NDR series collet chuck, is a new patented *Dead Length* design for use with servo stop bar loaders. Similar to the ND series, the collet is coupled to the chuck body, but the chuck is actuated as the draw tube is pulled into machine spindle.

### NK Series - *Combination Design for Bar & Chucking Work*



NK series chucks offer the added flexibility of being able to mount end stops inside the chuck body for easy conversion from bar to chucking applications.

### NS Series - *Dead Length Design for Sub Spindles*



The NS series is a reduced diameter *Dead Length* design for sub spindles. Similar to ND chucks, the collet is coupled directly to the chuck body and remains fixed as the chuck is actuated. The NS also includes a mounting for stops and ejectors inside the chuck.

### NR Series - *Self Contained Design for Stationary Applications*



The NR series is a pneumatic or hydraulically actuated self-contained *Pull Back* design for non-rotating applications. The collet is coupled to the built-in piston and is drawn into the tapered seat as the chuck is actuated. Part stops and ejectors can be mounted inside the chuck body.

## CB-NB Collet Chucks - Pull Back Design

In the CB-NB series collet chucks, the collet is coupled directly to the draw tube connector. As the draw tube is actuated, the collet is drawn into the tapered seat of the chuck body, efficiently translating draw tube force into maximum clamping force.



### CB-NB Features

- Pull Back design maximizes the efficiency of the clamping system by concentrating all forces in the direction of the spindle for highest accuracy and greatest overall rigidity
- Low profile OD and short overall length provides increased tool clearance and maximum utilization of the machine's Z axis
- Radial adjusting screws
- Lubricated for life design requires minimal maintenance
- All components hardened and precision ground for highest accuracy and long life
- Spindle speeds up to 6,000 rpm.

### CB-NB Specifications

| Chuck Model                | CB42-NB                | CB65-NB                | CB80NB                 | CB100-NB                | CB120-NB                | CB140-NB                |
|----------------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| <b>Collet Model</b>        | SK42BZI                | SK65BZI                | SK80BZI                | SK100BZI                | SK120BZI                | SK140BZI                |
| <b>Through Capacity</b>    | 1.625"<br>42mm         | 2.625"<br>66mm         | 3.250"<br>82.5mm       | 3.937"<br>100mm         | 4.720"<br>120mm         | 5.510"<br>140mm         |
| <b>Clamping Range</b>      | +/- .020"<br>+/- 0.5mm | +/- .020"<br>+/- 0.5mm | +/- .020"<br>+/- 0.5mm | +/- .040"<br>+/- 1mm    | +/- .040"<br>+/- 1mm    | +/- .040"<br>+/- 1mm    |
| <b>Draw Tube Stroke</b>    | .160"<br>4mm           | .160"<br>4mm           | .160"<br>4mm           | .275"<br>7mm            | .275"<br>7mm            | .275"<br>7mm            |
| <b>Max. Draw Bar Force</b> | 7,850 lbs<br>3,580 kg  | 10,095 lbs<br>4,590 kg | 11,980 lbs<br>5,450 kg | 14,580 lbs<br>6,630 kg  | 15,310 lbs<br>6,960 kg  | 16,074 lbs<br>7,310 kg  |
| <b>Max. Clamping Force</b> | 14,130 lbs<br>6,425 kg | 18,170 lbs<br>8,260 kg | 21,560 lbs<br>9,820 kg | 26,240 lbs<br>11,930 kg | 27,560 lbs<br>12,530 kg | 28,930 lbs<br>13,150 kg |
| <b>Max Speed</b>           | 6,000 rpm              | 6,000 rpm              | 5,000 rpm              | 4,500 rpm               | 4,000 rpm               | 4,000 rpm               |
| <b>Net Weight</b>          | 16.7 lbs<br>7.6 kg     | 23.9 lbs<br>10.9 kg    | 35.1 lb<br>15.9 kg     | 47.9 lbs<br>21.8 kg     | 72.6 lbs<br>33 kg       | 89.1 lbs<br>40.5 kg     |

### Standard Equipment

CB-NB collet chucks include a spindle adapter plate and a blank draw tube connector. Threaded draw tube connectors for specific machine configurations are furnished at no additional charge if draw tube dimensions are provided with your purchase order. See page 24 for spindle and draw tube data sheet.

## CB-NB Dimensions

| Chuck Model         | Fig. | Nose  | Spindle |         |         |         |        |         |         |       |
|---------------------|------|-------|---------|---------|---------|---------|--------|---------|---------|-------|
|                     |      |       | A       | B       | C       | D       | E      | F       | G       | H     |
| <b>CB42-NB/140</b>  | 1    | 140mm | 3.095"  | 4.250"  | 5.700"  | -       | -      | 2.050"  | 4.050"  | .354" |
|                     |      |       | 78.6mm  | 108mm   | 144.8mm | -       | -      | 52.1mm  | 102.9mm | 9mm   |
| <b>CB42-NB/A5</b>   | 1    | A2-5  | 3.095"  | 4.250"  | 5.700"  | -       | -      | 2.450"  | 4.450"  | .354" |
|                     |      |       | 78.6mm  | 108mm   | 144.8mm | -       | -      | 62.2mm  | 113mm   | 9mm   |
| <b>CB42-NB/A6</b>   | 2    | A2-6  | 3.095"  | 4.250"  | 5.700"  | 6.480"  | 1.000" | 2.350"  | 4.350"  | .354" |
|                     |      |       | 78.6mm  | 108mm   | 144.8mm | 164.6mm | 25.4mm | 59.7mm  | 110.5mm | 9mm   |
| <b>CB65-NB/A5</b>   | 1    | A2-5  | 3.886"  | 5.000"  | 6.480"  | -       | -      | 2.800"  | 4.300"  | .354" |
|                     |      |       | 98.7mm  | 127mm   | 164.6mm | -       | -      | 71.1mm  | 109.2mm | 9mm   |
| <b>CB65-NB/A6</b>   | 1    | A2-6  | 3.886"  | 5.000"  | 6.480"  | -       | -      | 3.350"  | 4.850"  | .354" |
|                     |      |       | 98.7mm  | 127mm   | 164.6mm | -       | -      | 85.1mm  | 123.2mm | 9mm   |
| <b>CB65-NB/A8</b>   | 2    | A2-8  | 3.886"  | 5.000"  | 6.480"  | 8.250"  | 1.625" | 3.630"  | 5.130"  | .354" |
|                     |      |       | 98.7mm  | 127mm   | 164.6mm | 209.6mm | 41.3mm | 92.1mm  | 130.2mm | 9mm   |
| <b>CB80-NB/A6</b>   | 1    | A2-6  | 4.500"  | 5.875"  | 7.700"  | -       | -      | 2.955"  | 4.955"  | .180" |
|                     |      |       | 114.3mm | 149.2mm | 195.6mm | -       | -      | 75.1mm  | 125.9mm | 4.6mm |
| <b>CB80-NB/A8</b>   | 2    | A2-8  | 4.500"  | 5.875"  | 7.700"  | 9.200"  | 1.105" | 3.210"  | 5.210"  | .180" |
|                     |      |       | 114.3mm | 149.2mm | 195.6mm | 233.7   | 28.1mm | 81.5mm  | 132.3mm | 4.6mm |
| <b>CB100-NB/A8</b>  | 1    | A2-8  | 5.704"  | 7.000"  | 9.350"  | -       | -      | 3.410"  | 4.810"  | .040" |
|                     |      |       | 144.8mm | 177.8mm | 237.5mm | -       | -      | 86.6mm  | 122.2mm | 1mm   |
| <b>CB100-NB/A11</b> | 2    | A2-11 | 5.704"  | 7.000"  | 9.350"  | 10.950" | 2.000" | 4.250"  | 5.650"  | .040" |
|                     |      |       | 144.8mm | 177.8mm | 237.5mm | 278.1mm | 50.8mm | 107.9mm | 143.5mm | 1mm   |
| <b>CB120-NB/A11</b> | 1    | A2-11 | 7.087"  | 8.950"  | 10.950" | -       | -      | 3.610"  | 5.860"  | .120" |
|                     |      |       | 180mm   | 227.3mm | 278.1mm | -       | -      | 91.7mm  | 148.8mm | 3mm   |
| <b>CB140-NB-A11</b> | 1    | A2-11 | 7.700"  | 9.950"  | 11.950" | -       | -      | 3.610"  | 5.860"  | .120" |
|                     |      |       | 195.6mm | 252.7mm | 303.5mm | -       | -      | 91.7mm  | 148.8mm | 3mm   |

CB-NB chucks with spindle adapters other than those listed above are quoted on request.

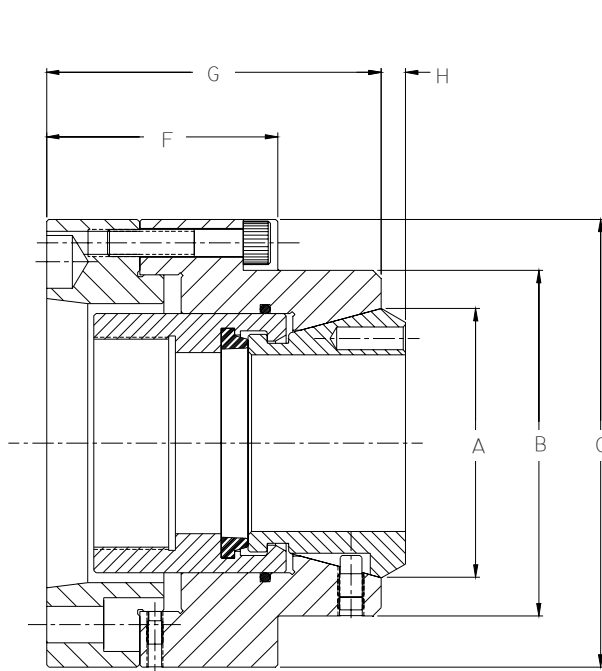


FIGURE 1

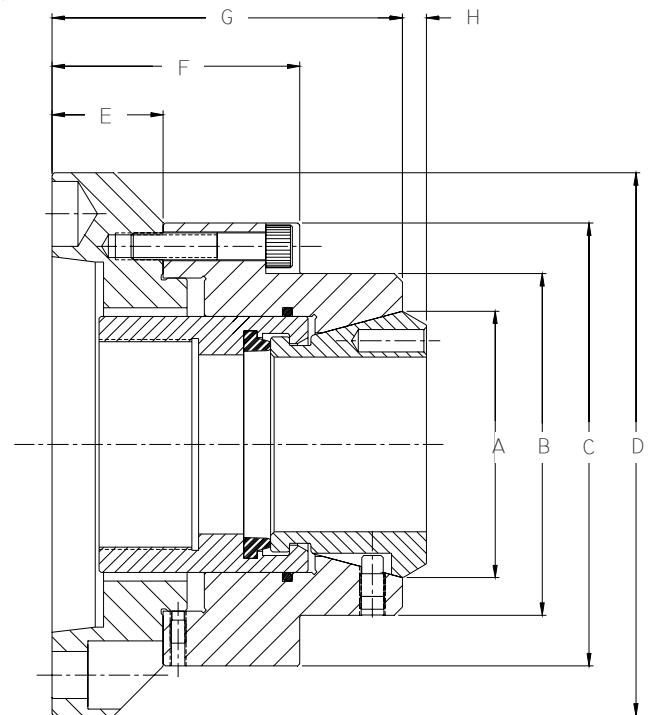


FIGURE 2

## CB-ND Collet Chucks - Dead Length Design

In the CB-ND series collet chuck, the collet is coupled to the chuck body and remains stationary as the tapered seat moves forward when the chuck is actuated. This design keeps the collet in a fixed Z axis position during clamping and does not create a pull back effect on the bar stock or workpiece.



### CB-ND Features

- *Dead Length* design produces no pull back on the workpiece
- Low profile OD and short overall length provides increased tool clearance and maximum utilization of the machine's Z axis
- Radial adjusting screws
- Lubricated-for-life design requires minimal maintenance
- All components hardened and precision ground for highest accuracy and long life
- Stop plates and stop housings can be mounted inside the chuck body for chucking applications requiring end stops or part ejectors
- Spindle speeds up to 6,000 rpm

### CB-ND Specifications

| Chuck Model                | CB42-ND                | CB65-ND                | CB80ND                 | CB100-ND                | CB120-ND                | CB140-ND                |
|----------------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| <b>Collet Model</b>        | SK42BZI                | SK65BZI                | SK80BZI                | SK100BZI                | SK120BZI                | SK140BZI                |
| <b>Through Capacity</b>    | 1.625"<br>42mm         | 2.625"<br>66mm         | 3.250"<br>82.5mm       | 3.937"<br>100mm         | 4.720"<br>120mm         | 5.510"<br>140mm         |
| <b>Clamping Range</b>      | +/- .020"<br>+/- 0.5mm | +/- .020"<br>+/- 0.5mm | +/- .020"<br>+/- 0.5mm | +/- .040"<br>+/- 1mm    | +/- .040"<br>+/- 1mm    | +/- .040"<br>+/- 1mm    |
| <b>Draw Tube Stroke</b>    | .160"<br>4mm           | .160"<br>4mm           | .160"<br>4mm           | .275"<br>7mm            | .275"<br>7mm            | .275"<br>7mm            |
| <b>Max. Draw Bar Force</b> | 7,850 lbs<br>3,580 kg  | 10,095 lbs<br>4,590 kg | 11,980 lbs<br>5,450 kg | 14,580 lbs<br>6,630 kg  | 15,310 lbs<br>6,960 kg  | 16,074 lbs<br>7,310 kg  |
| <b>Max. Clamping Force</b> | 14,130 lbs<br>6,425 kg | 18,170 lbs<br>8,260 kg | 21,560 lbs<br>9,820 kg | 26,240 lbs<br>11,930 kg | 27,560 lbs<br>12,530 kg | 28,930 lbs<br>13,150 kg |
| <b>Max Speed</b>           | 6,000 rpm              | 6,000 rpm              | 5,000 rpm              | 4,500 rpm               | 4,000 rpm               | 4,000 rpm               |
| <b>Net Weight</b>          | 16.7 lbs<br>7.6 kg     | 23.9 lbs<br>10.9 kg    | 35.1 lb<br>15.9 kg     | 47.9 lbs<br>21.8 kg     | 72.6 lbs<br>33 kg       | 89.1 lbs<br>40.5 kg     |

### Standard Equipment

CB-ND collet chucks include a spindle adapter plate and a blank draw tube connector. Threaded draw tube connectors for specific machine configurations are furnished at no additional charge if draw tube dimensions are provided with your purchase order. See page 24 for spindle and draw tube data sheet.

## CB-ND Dimensions

| Chuck Model         | Fig. | Spindle Nose | A       | B       | C       | D      | E       | F     |
|---------------------|------|--------------|---------|---------|---------|--------|---------|-------|
| <b>CB42-ND/140</b>  | 1    | 140mm        | 3.095"  | 5.700"  | -       | -      | 4.214"  | .354" |
|                     |      |              | 78.6mm  | 144.8mm | -       | -      | 107mm   | 9mm   |
| <b>CB42-ND/A5</b>   | 1    | A2-5         | 3.095"  | 5.700"  | -       | -      | 4.611"  | .354" |
|                     |      |              | 78.6mm  | 144.8mm | -       | -      | 117.1mm | 9mm   |
| <b>CB42-ND/A6</b>   | 2    | A2-6         | 3.095"  | 5.700"  | 6.480"  | 1.000" | 4.511"  | .354" |
|                     |      |              | 78.6mm  | 144.8mm | 164.6mm | 25.4mm | 114.6mm | 9mm   |
| <b>CB65-ND/A5</b>   | 1    | A2-5         | 3.886"  | 6.480"  | -       | -      | 4.780"  | .354" |
|                     |      |              | 98.7mm  | 164.6mm | -       | -      | 121.4mm | 9mm   |
| <b>CB65-ND/A6</b>   | 1    | A2-6         | 3.886"  | 6.480"  | -       | -      | 5.330"  | .354" |
|                     |      |              | 98.7mm  | 164.6mm | -       | -      | 135.4mm | 9mm   |
| <b>CB65-ND/A8</b>   | 2    | A2-8         | 3.886"  | 6.480"  | 8.250"  | 1.625" | 5.605"  | .354" |
|                     |      |              | 98.7mm  | 164.6mm | 209.6mm | 41.3mm | 142.4mm | 9mm   |
| <b>CB80-ND/A6</b>   | 1    | A2-6         | 4.500"  | 7.700"  | -       | -      | 4.955"  | .180" |
|                     |      |              | 114.3mm | 195.6mm | -       | -      | 125.9mm | 4.6mm |
| <b>CB80-ND/A8</b>   | 2    | A2-8         | 4.500"  | 7.700"  | 9.200"  | 1.105" | 5.210"  | .180" |
|                     |      |              | 114.3mm | 195.6mm | 233.7   | 28.1mm | 132.3mm | 4.6mm |
| <b>CB100-ND/A8</b>  | 1    | A2-8         | 5.704"  | 9.350"  | -       | -      | 6.600"  | .040" |
|                     |      |              | 144.8mm | 237.5mm | -       | -      | 167.6mm | 1mm   |
| <b>CB100-ND/A11</b> | 2    | A2-11        | 5.704"  | 9.350"  | 10.950" | 2.000" | 7.440"  | .040" |
|                     |      |              | 144.8mm | 237.5mm | 278.1mm | 50.8mm | 189mm   | 1mm   |
| <b>CB120-ND/A11</b> | 1    | A2-11        | 7.087"  | 10.950" | -       | -      | 6.735"  | .120" |
|                     |      |              | 180mm   | 278.1mm | -       | -      | 171.1mm | 3mm   |
| <b>CB140-ND-A11</b> | 1    | A2-11        | 7.700"  | 11.950" | -       | -      | 7.140"  | .120" |
|                     |      |              | 195.6mm | 303.5mm | -       | -      | 181.4mm | 3mm   |

CB-ND chucks with spindle adapters other than those listed above are quoted on request.

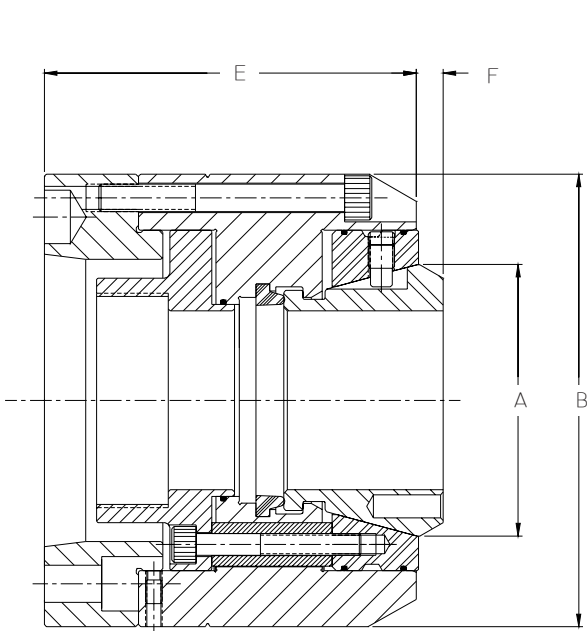


FIGURE 1

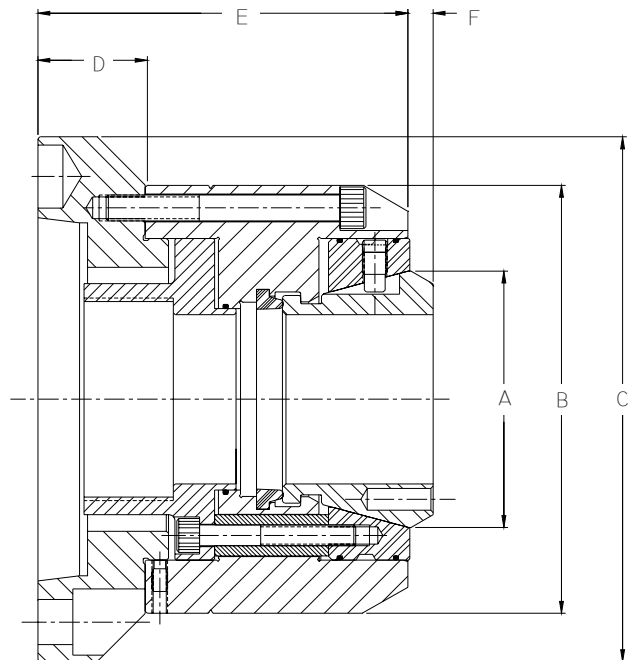


FIGURE 2



## CB-NDR Collet Chucks - Pull to Close Dead Length Design for Servo Stop Bar Loaders

The CB-NDR is a new patented *Dead Length* design collet chuck to be used with servo stop bar loaders. The NDR chuck is actuated as the draw tube is pulled into the machine spindle. The collet is coupled to the chuck body and remains stationary as the tapered seat moves forward during clamping. This feature keeps the collet in a fixed Z axis position, and since the draw tube is moving into the spindle, the bar remains positioned against the servo stop.



### CB-NDR Features

- *Pull to Close Dead Length* design produces no pull back and will not push the bar off the servo stop
- Radial adjusting screws
- Lubricated-for-life design requires minimal maintenance
- All components hardened and precision ground for highest accuracy and long life
- Spindle speeds up to 5,000 rpm

### CB-NDR Specifications

| Chuck Model                      | CB65-NDR                | CB80-NDR                |
|----------------------------------|-------------------------|-------------------------|
| <b>Quick Change Collet Model</b> | SK65BZI                 | SK80BZI                 |
| <b>Max. Through Capacity</b>     | 2.625"<br>66 mm         | 3.250"<br>82.5 mm       |
| <b>Clamping Range</b>            | +/- .020"<br>+/- 0.5 mm | +/- .020"<br>+/- 0.5 mm |
| <b>Draw Tube Stroke</b>          | .480"<br>12.2 mm        | .480"<br>12.2 mm        |
| <b>Max. Draw Bar Force</b>       | 7,060 lbs<br>3,210 kg   | 8,404 lbs<br>3,820 kg   |
| <b>Max. Clamping Force</b>       | 18,170 lbs<br>8,260 kg  | 21,560 lbs<br>9,820 kg  |
| <b>Max Speed</b>                 | 6,000 rpm               | 5,000 rpm               |
| <b>Net Weight</b>                | 37.9 lbs<br>17.2 kg     | 57.8 lbs<br>26.2 kg     |

### Standard Equipment

CB-NDR chucks include a spindle adapter plate and a blank draw tube connector. Threaded draw tube connectors for specific machine configurations are furnished at no additional charge if draw tube dimensions are provided with purchase order. See page 24 for spindle data sheet.

## CB-NDR Dimensions

| Chuck Model         | Fig. | Spindle Nose | A       | B       | C       | D      | E       | F     |
|---------------------|------|--------------|---------|---------|---------|--------|---------|-------|
| <b>CB65-NDR/140</b> | 1    | 140mm        | 3.886"  | 6.480"  | -       | -      | 5.978"  | .354" |
|                     |      |              | 98.7mm  | 164.6mm | -       | -      | 151.8mm | 9mm   |
| <b>CB65-NDR/A5</b>  | 1    | A2-5         | 3.886"  | 6.480"  | -       | -      | 6.175"  | .354" |
|                     |      |              | 98.7mm  | 164.6mm | -       | -      | 156.8mm | 9mm   |
| <b>CB65-NDR/A6</b>  | 1    | A2-6         | 3.886"  | 6.480"  | -       | -      | 6.725"  | .354" |
|                     |      |              | 98.7mm  | 164.6mm | -       | -      | 170.8mm | 9mm   |
| <b>CB65-NDR/A8</b>  | 2    | A2-8         | 3.886"  | 6.480"  | 8.250"  | 1.625" | 7.005"  | .354" |
|                     |      |              | 98.7mm  | 164.6mm | 209.6mm | 41.3mm | 177.9mm | 9mm   |
| <b>CB80-NDR/A6</b>  | 1    | A2-6         | 4.500"  | 7.700"  | -       | -      | 6.245"  | .180" |
|                     |      |              | 114.3mm | 195.6mm | -       | -      | 158.6mm | 4.6mm |
| <b>CB80-NDR/A8</b>  | 2    | A2-8         | 4.500"  | 7.700"  | 9.200"  | 1.105" | 6.500"  | .180" |
|                     |      |              | 114.3mm | 195.6mm | 233.7   | 28.1mm | 165.1mm | 4.6mm |

CB-NDR chucks with spindle adapters other than those listed above are quoted on request.

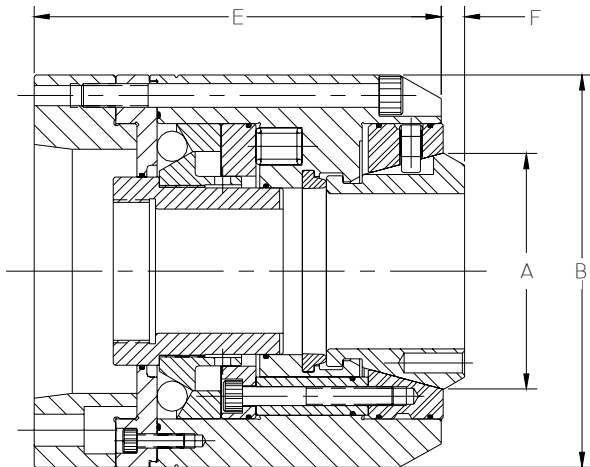


FIGURE 1

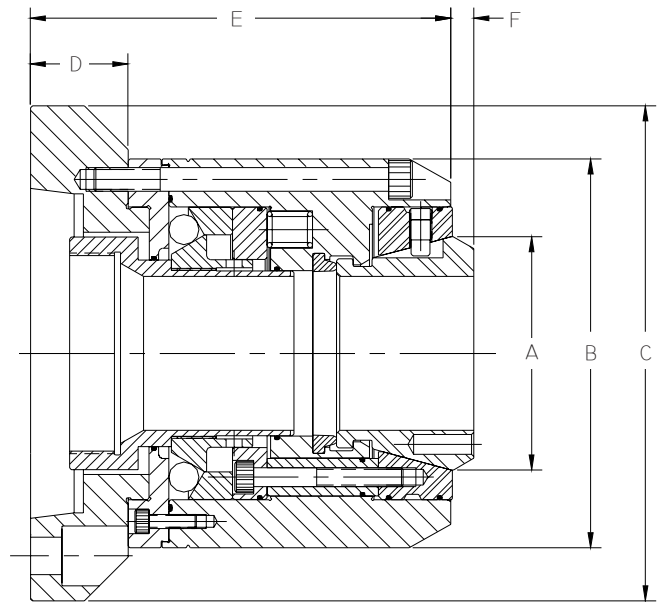


FIGURE 2

## CB-NK Collet Chucks - Combination Design

The CB-NK series collet chuck is a *Pull Back* design that offers the added flexibility of being able to mount part stops inside the chuck body for easy conversion from bar to chucking work.



### CB-NK Features

- *Pull Back* design maximizes the efficiency of the clamping system by concentrating all forces in the direction of the spindle for highest accuracy and greatest overall rigidity
- Low profile OD and short overall length provides increased tool clearance and maximum utilization of the machine's Z axis
- Radial adjusting screws
- Lubricated-for-life design requires minimal maintenance
- All components hardened and precision ground for highest accuracy and long life
- Removable stop plates and stop housings can be mounted inside the chuck body for chucking applications requiring end stops or part ejectors
- Spindle speeds up to 6,000 rpm

### CB-NK Specifications

| Chuck Model                | CB42-NK    | CB65-NK    | CB100-NK   | CB120-NK   | CB140-NK   |
|----------------------------|------------|------------|------------|------------|------------|
| <b>Collet Model</b>        | SK42BZI    | SK65BZI    | SK100BZI   | SK120BZI   | SK140BZI   |
| <b>Through Capacity</b>    | 1.420"     | 2.245"     | 3.670"     | 4.140"     | 4.920"     |
|                            | 36mm       | 57mm       | 93.2mm     | 105mm      | 125mm      |
| <b>Clamping Range</b>      | +/- .020"  | +/- .020"  | +/- .040"  | +/- .040"  | +/- .040"  |
|                            | +/- 0.5mm  | +/- 0.5mm  | +/- 1mm    | +/- 1mm    | +/- 1mm    |
| <b>Draw Tube Stroke</b>    | .160"      | .160"      | .275"      | .275"      | .275"      |
|                            | 4mm        | 4mm        | 7mm        | 7mm        | 7mm        |
| <b>Max. Draw Bar Force</b> | 7,850 lbs  | 10,095 lbs | 14,580 lbs | 15,310 lbs | 16,074 lbs |
|                            | 3,580 kg   | 4,590 kg   | 6,630 kg   | 6,960 kg   | 7,310 kg   |
| <b>Max. Clamping Force</b> | 14,130 lbs | 18,170 lbs | 26,240 lbs | 27,560 lbs | 28,930 lbs |
|                            | 6,425 kg   | 8,260 kg   | 11,930 kg  | 12,530 kg  | 13,150 kg  |
| <b>Max Speed</b>           | 6,000 rpm  | 6,000 rpm  | 4,500 rpm  | 4,000 rpm  | 4,000 rpm  |
| <b>Net Weight</b>          | 16.7 lbs   | 23.9 lbs   | 47.9 lbs   | 72.6 lbs   | 89.1 lbs   |
|                            | 7.6 kg     | 10.9 kg    | 21.8 kg    | 33 kg      | 40.5 kg    |

### Standard Equipment

Each CB-NK collet chuck includes a removable stop plate, spindle adapter plate, and a blank draw tube connector. Threaded draw tube connectors for specific machine configurations are furnished at no additional charge if draw tube dimensions are provided with your purchase order. See page 24 for spindle and draw tube data sheet.

## CB-NK Dimensions

| Chuck Model         | Fig. | Spindle<br>Nose | Spindle |         |         |         |        |         |         |       |
|---------------------|------|-----------------|---------|---------|---------|---------|--------|---------|---------|-------|
|                     |      |                 | A       | B       | C       | D       | E      | F       | G       | H     |
| <b>CB42-NK/140</b>  | 1    | 140mm           | 3.095"  | 4.750"  | 5.700"  | -       | -      | 3.880"  | 4.700"  | .354" |
|                     |      |                 | 78.6mm  | 120.7mm | 144.8mm | -       | -      | 98.6mm  | 119.4mm | 9mm   |
| <b>CB42-NK/A5</b>   | 1    | A2-5            | 3.095"  | 4.750"  | 5.700"  | -       | -      | 4.280"  | 5.100"  | .354" |
|                     |      |                 | 78.6mm  | 120.7mm | 144.8mm | -       | -      | 108.7mm | 129.5mm | 9mm   |
| <b>CB42-NK/A6</b>   | 2    | A2-6            | 3.095"  | 4.750"  | 5.700"  | 6.480"  | 1.000" | 4.180"  | 5.000"  | .354" |
|                     |      |                 | 78.6mm  | 120.7mm | 144.8mm | 164.6mm | 25.4mm | 106.2mm | 127mm   | 9mm   |
| <b>CB65-NK/A5</b>   | 1    | A2-5            | 3.886"  | 4.700"  | 6.480"  | -       | -      | 4.485"  | 5.375"  | .354" |
|                     |      |                 | 98.7mm  | 119.4mm | 164.6mm | -       | -      | 113.9mm | 136.5mm | 9mm   |
| <b>CB65-NK/A6</b>   | 1    | A2-6            | 3.886"  | 4.700"  | 6.480"  | -       | -      | 5.035"  | 5.925"  | .354" |
|                     |      |                 | 98.7mm  | 119.4mm | 164.6mm | -       | -      | 127.9mm | 150.5mm | 9mm   |
| <b>CB65-NK/A8</b>   | 2    | A2-8            | 3.886"  | 4.700"  | 6.480"  | 8.250"  | 1.625" | 5.310"  | 6.200"  | .354" |
|                     |      |                 | 98.7mm  | 119.4mm | 164.6mm | 209.6mm | 41.3mm | 134.9mm | 157.5mm | 9mm   |
| <b>CB100-NK/A6</b>  | 1    | A2-8            | 5.704"  | 7.000"  | 9.350"  | -       | -      | 4.755"  | 6.790"  | .040" |
|                     |      |                 | 144.8mm | 177.8mm | 237.5mm | -       | -      | 120.8mm | 172.5mm | 1mm   |
| <b>CB100-NK/A8</b>  | 1    | A2-8            | 5.704"  | 7.000"  | 9.350"  | -       | -      | 4.855"  | 6.890"  | .040" |
|                     |      |                 | 144.8mm | 177.8mm | 237.5mm | -       | -      | 123.3mm | 175.0mm | 1mm   |
| <b>CB100-NK/A11</b> | 2    | A2-11           | 5.704"  | 7.000"  | 9.350"  | 10.950" | 2.000" | 5.695"  | 7.730"  | .040" |
|                     |      |                 | 144.8mm | 177.8mm | 237.5mm | 278.1mm | 50.8mm | 144.7mm | 196.3mm | 1mm   |
| <b>CB120-NK/A11</b> | 1    | A2-11           | 7.087"  | 8.500"  | 10.950" | -       | -      | 5.525"  | 6.750"  | .120" |
|                     |      |                 | 180mm   | 215.9mm | 278.1mm | -       | -      | 140.3mm | 171.5mm | 3mm   |
| <b>CB140-NK-A11</b> | 1    | A2-11           | 7.700"  | 9.500"  | 11.950" | -       | -      | 5.725"  | 6.950"  | .120" |
|                     |      |                 | 195.6mm | 241.3mm | 303.5mm | -       | -      | 145.4mm | 176.5mm | 3mm   |

CB-K chucks with spindle adapters other than those listed above are quoted on request.

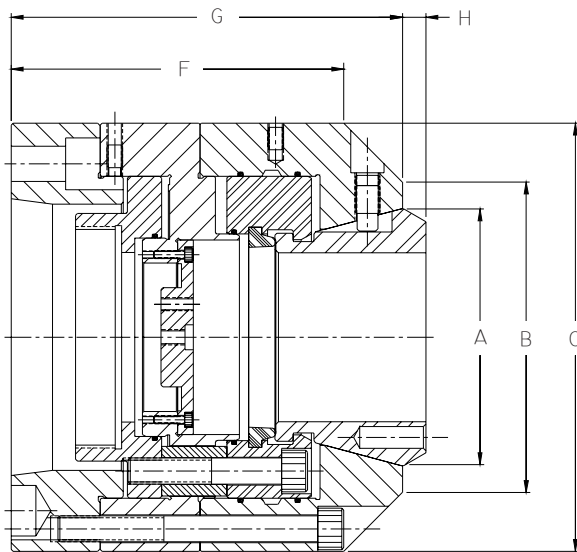


FIGURE 1

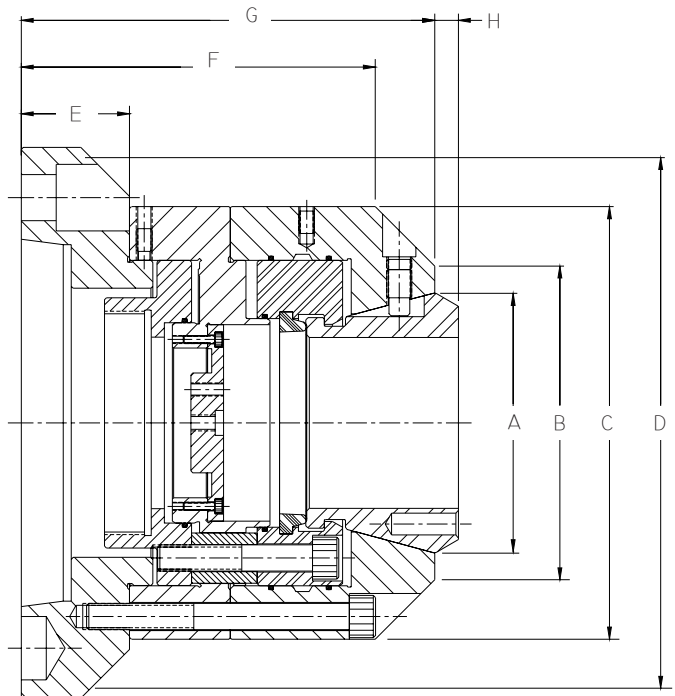


FIGURE 2

## CB-NS Collet Chucks - Sub Spindle Design

The NS series is a reduced diameter *Dead Length* design for sub spindles. Similar to ND chucks, the collet is coupled directly to the chuck body and remains fixed as the chuck is actuated. NS chucks also include a provision for mounting stops and ejectors inside the chuck body.



### CB-NS Features

- Small OD for maximum tool clearance on sub spindles.
- *Dead Length* design produces no pull back on the workpiece.
- Lubricated-for-life design requires minimal maintenance.
- All components hardened and precision ground for highest accuracy and long life.
- Stop plates and stop housings can be mounted inside the chuck body for applications requiring end stops or ejectors
- Spindle speeds up to 6,000 rpm

### CB-NS Specifications

| Chuck Model                | CB42-NS                | CB65-NS                |
|----------------------------|------------------------|------------------------|
| <b>Collet Model</b>        | SK42BZI                | SK65BZI                |
| <b>Through Capacity</b>    | 1.625"<br>42mm         | 2.625"<br>66mm         |
| <b>Clamping Range</b>      | +/- .020"<br>+/- 0.5mm | +/- .020"<br>+/- 0.5mm |
| <b>Draw Tube Stroke</b>    | .160"<br>4mm           | .160"<br>4mm           |
| <b>Max. Draw Bar Force</b> | 7,850 lbs<br>3,580 kg  | 10,095 lbs<br>4,590 kg |
| <b>Max. Clamping Force</b> | 14,130 lbs<br>6,425 kg | 18,170 lbs<br>8,260 kg |
| <b>Max Speed</b>           | 6,000 rpm              | 6,000 rpm              |
| <b>Net Weight</b>          | 16.7 lbs<br>7.6 kg     | 23.9 lbs<br>10.9 kg    |

### Standard Equipment

CB-NS collet chucks include a spindle adapter plate and a blank draw tube connector. Threaded draw tube connectors for specific machine configurations are furnished at no additional charge if draw tube dimensions are provided with your purchase order. See page 24 for spindle and draw tube data sheet.

## CB-NS Dimensions

| Chuck Model | Fig. | Spindle Nose | Spindle |         |         |         |        |        |         |       |
|-------------|------|--------------|---------|---------|---------|---------|--------|--------|---------|-------|
|             |      |              | A       | B       | C       | D       | E      | F      | G       | H     |
| CB42-NS/110 | 1    | 110mm        | 3.095"  | 4.625"  | 4.950"  | -       | -      | 1.280" | 4.050"  | .354" |
|             |      |              | 78.6mm  | 117.5mm | 125.7mm | -       | -      | 32.5mm | 102.9mm | 9mm   |
| CB42-NS/140 | 1    | 140mm        | 3.095"  | 4.625"  | 4.950"  | 5.950"  | .750"  | 1.510" | 4.030"  | .354" |
|             |      |              | 78.6mm  | 117.5mm | 125.7mm | 151.1mm | 19mm   | 38.4mm | 102.4mm | 9mm   |
| CB42-NS/A4  | 1    | A2-4         | 3.095"  | 4.625"  | 4.950"  | -       | -      | 1.530" | 4.050"  | .354" |
|             |      |              | 78.6mm  | 117.5mm | 125.7mm | -       | -      | 38.9mm | 102.9mm | 9mm   |
| CB42-NS/A5  | 2    | A2-5         | 3.095"  | 4.625"  | 4.950"  | 5.250"  | .780"  | 1.510" | 4.030"  | .354" |
|             |      |              | 78.6mm  | 117.5mm | 125.7mm | 164.6mm | 19.8mm | 38.4mm | 102.4mm | 9mm   |
| CB65-NS/140 | 1    | 140mm        | 3.886"  | 5.500"  | 6.250"  | -       | -      | 1.588" | 4.538"  | .354" |
|             |      |              | 98.7mm  | 139.7mm | 158.7mm | -       | -      | 40.3mm | 115.3mm | 9mm   |
| CB65-NS/A5  | 2    | A2-5         | 3.886"  | 5.500"  | 6.250"  | -       | -      | 1.790" | 4.740"  | .354" |
|             |      |              | 98.7mm  | 139.7mm | 158.7mm | -       | -      | 45.3mm | 120.3mm | 9mm   |
| CB65-NS/A6  | 2    | A2-6         | 3.886"  | 5.500"  | 6.250"  | 6.480"  | .875"  | 1.790" | 4.740"  | .354" |
|             |      |              | 98.7mm  | 139.7mm | 158.7mm | 164.6mm | 22.2mm | 45.3mm | 120.3mm | 9mm   |

CB-NS chucks with spindle adapters other than those listed above are quoted on request.

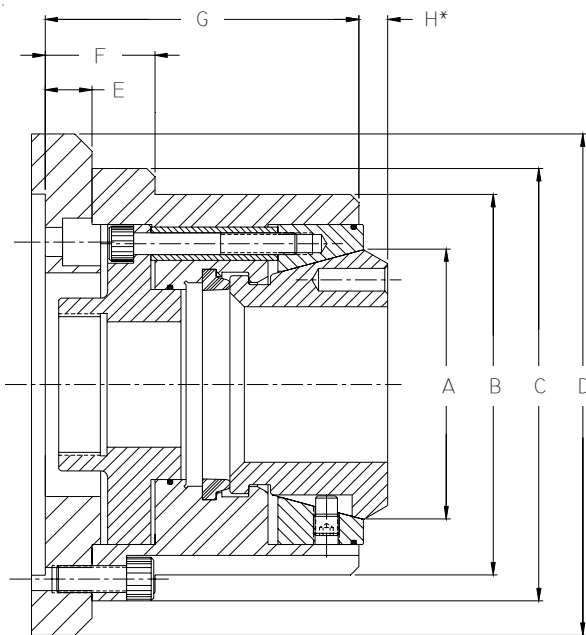


FIGURE 1

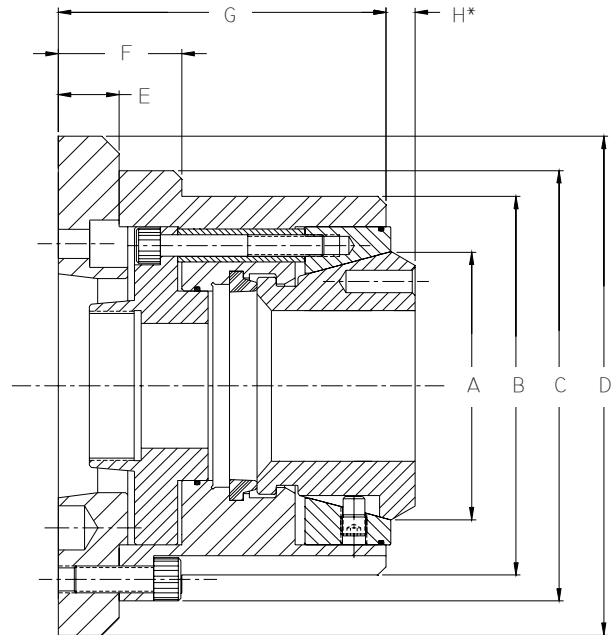


FIGURE 2

\* WHEN THE CLAMPING LENGTH IS UNDER .500" (12.7MM), A REDUCED NOSE COLLET MUST BE USED.

## CB-NR Collet Chucks - Stationary Design

The NR series is a pneumatic or hydraulically actuated self-contained *Pull Back* design for stationary applications. The collet is coupled to the built-in piston and is drawn into the tapered seat as the chuck is actuated. Part stops and ejectors can be mounted inside the chuck body.



### CB-NR Features

- Self-contained design with built-in cylinder can be hydraulic or pneumatically operated
- *Pull Back* design maximizes the efficiency of the clamping system by concentrating the chucking force in the direction of the machine table, in addition to drawing the workpiece against the part stop
- Lubricated-for-life design requires minimal maintenance
- All components hardened and precision ground for highest accuracy and long life.

### CB-NR Specifications

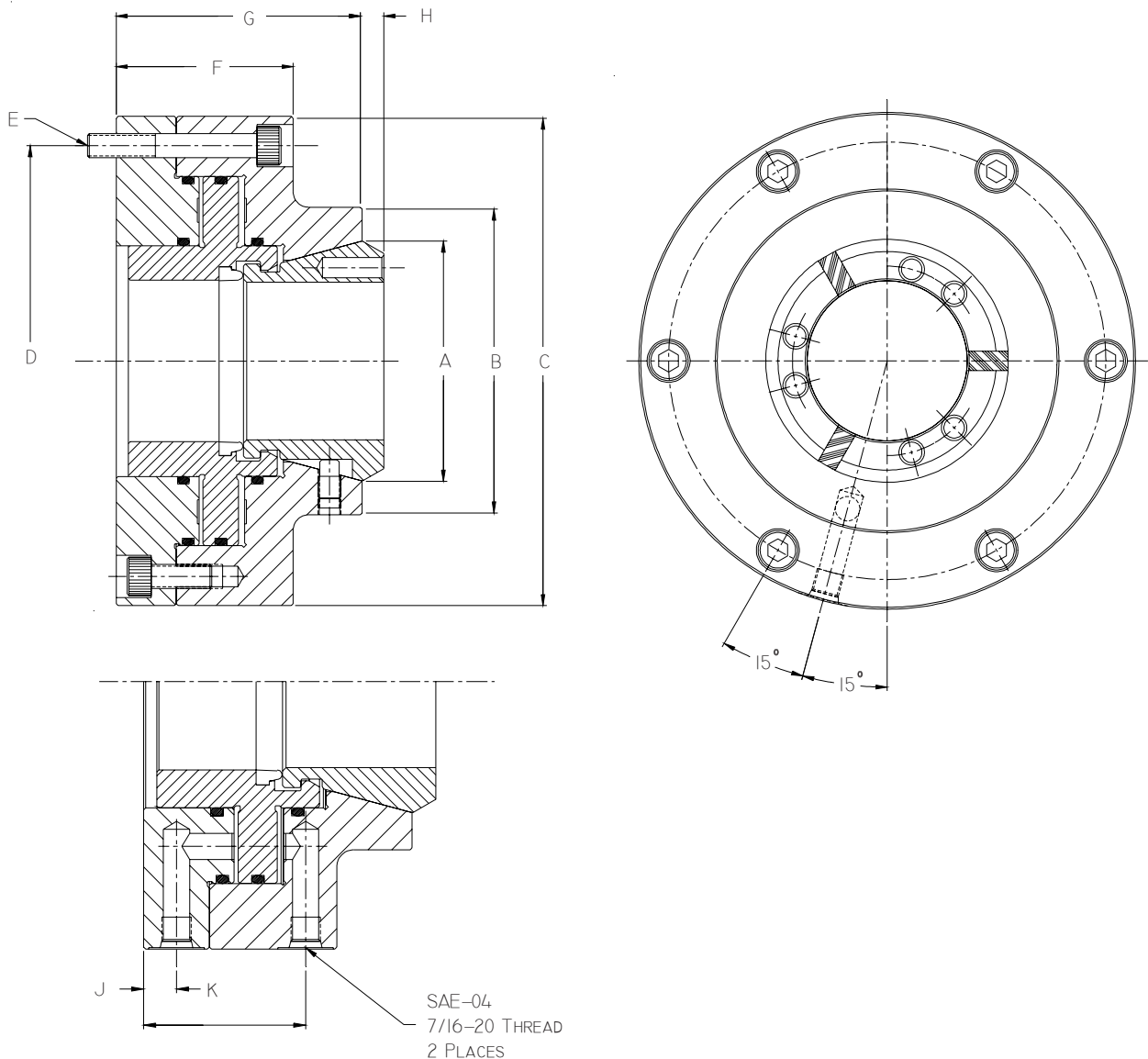
| Chuck Model                 | CB42-NR                | CB65-NR                | CB100-NR               |
|-----------------------------|------------------------|------------------------|------------------------|
| <b>Collet Model</b>         | SK42BZI                | SK65BZI                | SK100BZI               |
| <b>Through Capacity</b>     | 1.625"<br>42mm         | 2.625"<br>66mm         | 3.937"<br>100mm        |
| <b>Clamping Range</b>       | +/- .020"<br>+/- 0.5mm | +/- .020"<br>+/- 0.5mm | +/- .040"<br>+/- 1mm   |
| <b>Piston Stroke</b>        | .160"<br>4mm           | .160"<br>4mm           | .275"<br>7mm           |
| <b>Max. Hydraulic Force</b> | 500 psi<br>3,5 MPa     | 500 psi<br>3.5 MPa     | 500 psi<br>3.5 MPa     |
| <b>Max. Clamping Force</b>  | 9,420 lbs<br>4,280 kg  | 12,115 lbs<br>5,510 kg | 17,500 lbs<br>7,950 kg |
| <b>Net Weight</b>           | 18.6 lbs<br>8.5 kg     | 27.5 lbs<br>12.5 kg    | 54.6 lbs<br>24.8 kg    |

Non-rotating dead length designs are quoted on request.  
CB120-NR & CB140-NR models are also quoted on request.

## CB-NR Dimensions

| Chuck Model     | A       | B      | C      | D      | E   | F      | G      | H     | J      | K      |
|-----------------|---------|--------|--------|--------|-----|--------|--------|-------|--------|--------|
| <b>CB42-NR</b>  | 3.095"  | 4.25"  | 6.95"  | 6.34"  | M8  | 2.58"  | 3.45"  | .354" | .49"   | 2.08"  |
|                 | 79 mm   | 108 mm | 177 mm | 161 mm | M8  | 66 mm  | 88 mm  | 9mm   | 12.4mm | 53 mm  |
| <b>CB65-NR</b>  | 3.886"  | 5.00"  | 7.95"  | 7.00"  | M10 | 2.88"  | 4.00"  | .354" | .49"   | 2.41"  |
|                 | 98.7 mm | 127 mm | 202 mm | 178 mm | M10 | 73 mm  | 102 mm | 9 mm  | 12.4mm | 61 mm  |
| <b>CB100-NR</b> | 5.700"  | 7.50"  | 9.95"  | 8.86"  | M12 | 4.35"  | 6.00"  | .043" | .75"   | 3.50"  |
|                 | 145 mm  | 191 mm | 253 mm | 225 mm | M12 | 110 mm | 152 mm | 1 mm  | 19.0mm | 88.9mm |

Mounting plates for CB-NR collet chucks are quoted on request.





## Collet Changing Fixtures

MicroCentric Collets can be changed in 15 seconds. A changing fixture is used to couple and uncouple the collet from the chuck. Pins in the pivoting jaws of the changing fixture are inserted into the holes on the face of the collet. When the changing fixture is actuated, the rear of the collet is collapsed and can now be installed or removed from the chuck.

### Changing Fixture Configurations



#### CP Pneumatic Fixture

The CP fixture is the fastest and easiest way to change MicroCentric Collets



#### CM Manual Fixture

The CM manual fixture is an efficient way to change MicroCentric Collets



#### CH Hydraulic Fixture

CH hydraulic fixtures are used to change SK120BZI & SK140BZI collets

### Changing Fixture Models

| Changing Fixture | Type            | Collet Model |
|------------------|-----------------|--------------|
| <b>CP42</b>      | Pneumatic       | SK42BZI      |
| <b>CM42</b>      | Manual          | SK42BZI      |
| <b>CP65</b>      | Pneumatic       | SK65BZI      |
| <b>CM65</b>      | Manual          | SK65BZI      |
| <b>CP80</b>      | Pneumatic       | SK80BZI      |
| <b>CM80</b>      | Manual          | SK80BZI      |
| <b>CP100</b>     | Pneumatic       | SK100BZI     |
| <b>CH120</b>     | Hydraulic       | SK120BZI     |
| <b>CH140</b>     | Hydraulic       | SK140BZI     |
| <b>EN162</b>     | Hydraulic Pump* |              |

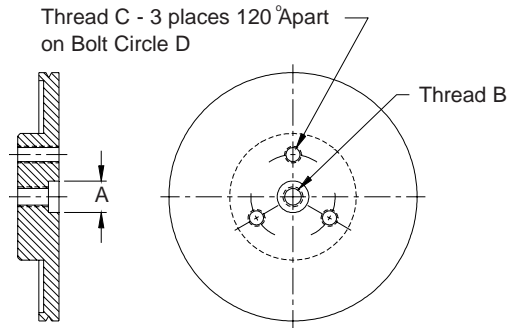
\* The EN162 Hydraulic Pump is an air driven unit used to actuate the CH series changing fixtures

# Collet Chuck Accessories

## Stop Plates

| Model           | Chuck      | A      | B   | C  | D      |
|-----------------|------------|--------|-----|----|--------|
| <b>SP-42/D</b>  | CB42-ND&NS | .375   | M6  | M5 | 1.000" |
|                 |            | 9.5mm  |     |    | 25.4mm |
| <b>SP-42/K</b>  | CB42-NK    | .375   | M6  | M5 | 1.000" |
|                 |            | 9.5mm  |     |    | 25.4mm |
| <b>SP-65/D</b>  | CB65-ND&NS | .375   | M6  | M5 | 1.000" |
|                 |            | 9.5mm  |     |    | 25.4mm |
| <b>SP-65/K</b>  | CB65-NK    | .375   | M6  | M5 | 1.000" |
|                 |            | 9.5mm  |     |    | 25.4mm |
| <b>SP-100/D</b> | CB100-ND   | .600   | M10 | M8 | 1.500" |
|                 |            | 15.2mm |     |    | 38.1mm |
| <b>SP-100/K</b> | CB100-NK   | .600   | M10 | M8 | 1.500" |
|                 |            | 15.2mm |     |    | 38.1mm |

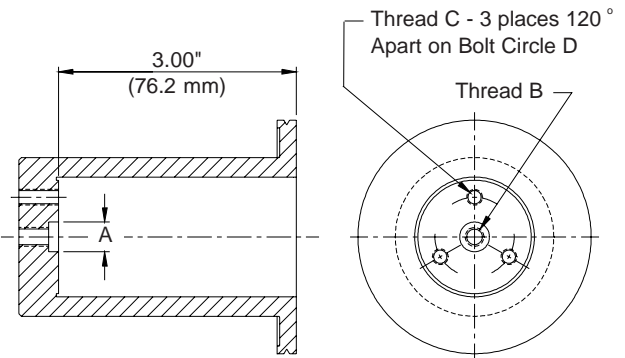
Stop plates are made from hardened and ground alloy steel.



## Stop Housings

| Model           | Chuck      | A      | B   | C  | D      |
|-----------------|------------|--------|-----|----|--------|
| <b>SH-42/D</b>  | CB42-ND&NS | .375   | M6  | M5 | 1.000" |
|                 |            | 9.5mm  |     |    | 25.4mm |
| <b>SH-42/K</b>  | CB42-NK    | .375   | M6  | M5 | 1.000" |
|                 |            | 9.5mm  |     |    | 25.4mm |
| <b>SH-65/D</b>  | CB65-ND&NS | .375   | M6  | M5 | 1.000" |
|                 |            | 9.5mm  |     |    | 25.4mm |
| <b>SH-65/K</b>  | CB65-NK    | .375   | M6  | M5 | 1.000" |
|                 |            | 9.5mm  |     |    | 25.4mm |
| <b>SH-100/D</b> | CB100-ND   | .600   | M10 | M8 | 1.500" |
|                 |            | 15.2mm |     |    | 38.1mm |
| <b>SH-100/K</b> | CB100-NK   | .600   | M10 | M8 | 1.500" |
|                 |            | 15.2mm |     |    | 38.1mm |

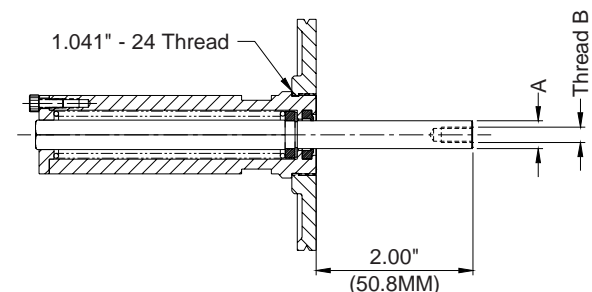
Stop housings are made from hardened and ground alloy steel. Stop housings deeper than 3.00" (76.2 mm) are quoted on request.



## Ejector Assemblies

| Model          | Chuck      | A    | B     |
|----------------|------------|------|-------|
| <b>AW-42/D</b> | CB42-ND&NS | .375 | M5    |
|                |            | 51mm | 9.5mm |
| <b>AW-42/K</b> | CB42-NK    | .375 | M5    |
|                |            | 51mm | 9.5mm |
| <b>AW-65/D</b> | CB65-ND&NS | .375 | M5    |
|                |            | 51mm | 9.5mm |
| <b>AW-65/K</b> | CB65-NK    | .375 | M5    |
|                |            | 51mm | 9.5mm |

Ejector assemblies are made from hardened and ground alloy steel, and include an adapter plate. Ejector assemblies with larger stroke and adapter plates that position the ejector deeper into the chuck are quoted on request.



# MicroCentric Quick Change Collets

## One Piece Vulcanized Design

MicroCentric Quick Change Collets are hardened and precision ground segments held together by vulcanized rubber. The vulcanized design produces a seal that prevents chips and sludge from accumulating inside the collet chuck. MicroCentric's one piece vulcanized design is also more accurate and easier to handle than quick change collets held together with replaceable rubber inserts. And MicroCentric collets always stay intact in the chuck and during change over.

## Vulcanized Rubber is Guaranteed for Life

MicroCentric's vulcanizing technology produces a permanent bond between rubber and metal. If the bond ever separates during the life of the collet, the collet will be revulcanized free of charge.

## Collet Configurations



### SK Standard Collet

Recommended for bar and most chucking application



### SG Reduced Nose

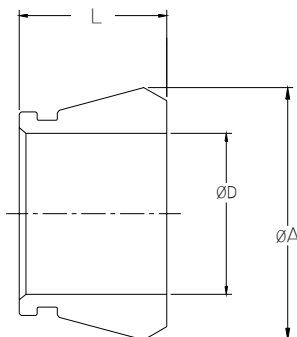
Recommended for chucking applications, when the clamping length is under .500" (12.7mm)



### SW Machinable Collet

Can be machined to special bore diameters or other special configurations

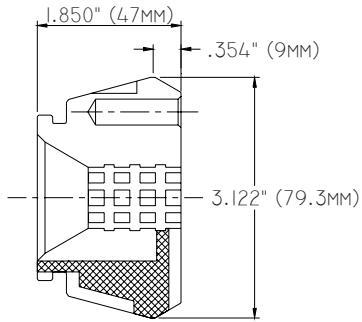
## Collet Models & Capacities



| Model    | No. of Segments | ød max. | øA      | L      | Range     |
|----------|-----------------|---------|---------|--------|-----------|
| SK42BZI  | 3               | 1.625"  | 3.122"  | 1.850" | +/- .020  |
|          |                 | 42mm    | 79.3mm  | 47mm   | +/- 0.5mm |
| SK65BZI  | 3               | 2.625"  | 3.917"  | 2.284" | +/- .020" |
|          |                 | 66mm    | 99.5mm  | 58mm   | +/- 0.5mm |
| SK80BZI  | 4               | 3.250"  | 4.500"  | 2.085" | +/- .020" |
|          |                 | 82.5mm  | 114.3mm | 58mm   | +/- 0.5mm |
| SK100BZI | 6               | 3.937"  | 5.689"  | 2.323" | +/- .040" |
|          |                 | 100mm   | 144.5mm | 59mm   | +/- 1.0mm |
| SK120BZI | 6               | 4.724"  | 7.087"  | 2.402" | +/- .040" |
|          |                 | 120mm   | 180mm   | 61mm   | +/- 1.0mm |
| SK140BZI | 6               | 5.512"  | 7.700"  | 2.480" | +/- .040" |
|          |                 | 140mm   | 195.6mm | 63mm   | +/- 1.0mm |

## 1-5/8" (42mm) Capacity Collet

### SK42BZI Quick Change Collets

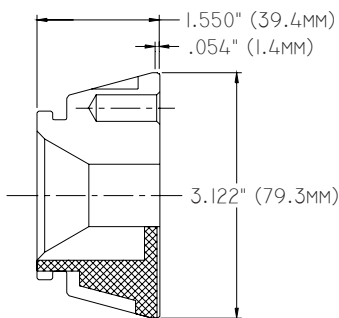


| Configuration   |                 | Accuracy        | Range                     |
|-----------------|-----------------|-----------------|---------------------------|
| ● <b>Round</b>  | RSR (Serrated)* | .0004"<br>.01mm | .312 - 1.625"<br>8 - 42mm |
|                 | RSM (Smooth)*   | .0004"<br>.01mm | .187 - 1.625"<br>5 - 42mm |
| ⬠ <b>Hex</b>    | HEX (Smooth)*   | .001"<br>.025mm | .187 - 1.406"<br>5 - 36mm |
| ■ <b>Square</b> | SQR (Smooth)    | .001"<br>.025mm | .250 - 1.125"<br>6 - 29mm |

\* available from stock in 1/32" and 1mm increments

Ultra Accuracy collets with maximum runout of .0002" (.005mm) TIR for RSM, and .0005" (.001mm) TIR for HEX and SQR quoted upon request

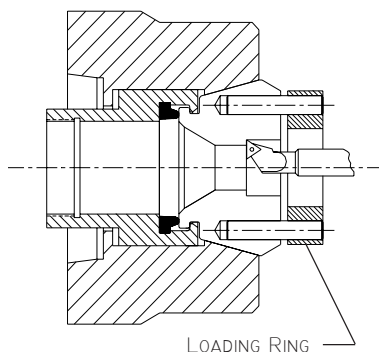
## SG42BZI Reduced Nose Collets



| Configuration   |               | Accuracy        | Range                     |
|-----------------|---------------|-----------------|---------------------------|
| ● <b>Round</b>  | RSM (Smooth)* | .0004"<br>.01mm | .187 - 1.625"<br>5 - 42mm |
|                 | HEX (Smooth)* | .001"<br>.025mm | .187 - 1.406"<br>5 - 36mm |
| ■ <b>Square</b> | SQR (Smooth)  | .001"<br>.025mm | .250 - 1.125"<br>6 - 29mm |

Ultra Accuracy collets with maximum runout of .0002" (.005mm) TIR for RSM, and .0005" (.001mm) TIR for HEX and SQR quoted upon request

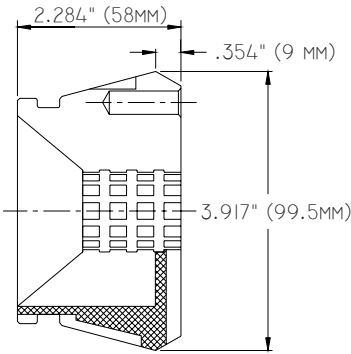
## SW42BZI Machinable Collets & AR42 Loading Rings



| Item    | Description       | Bore Size   |
|---------|-------------------|-------------|
| SW42BZI | Machinable Collet | .312" (8mm) |
| AR42    | Loading Ring      |             |

The SW42BZI collet is case hardened to Rc 38-42 and can be bored out directly in the collet chuck to the diameter or configuration required. The AR42 loading ring is used to preload the collet during machining.

## 2-5/8" (65mm) Capacity Collet SK65BZI Quick Change Collets

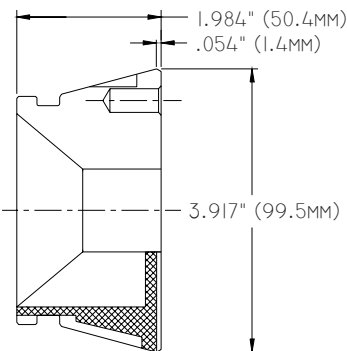


| Configuration   |                 | Accuracy        | Range                     |
|-----------------|-----------------|-----------------|---------------------------|
| ● <b>Round</b>  | RSR (Serrated)* | .0004"<br>.01mm | .375 - 2.562"<br>9 - 65mm |
|                 | RSM (Smooth)*   | .0004"<br>.01mm | .187 - 2.625"<br>5 - 66mm |
|                 | HEX (Smooth)*   | .001"<br>.025mm | .250 - 2.250"<br>6 - 57mm |
| ■ <b>Square</b> | SQR (Smooth)    | .001"<br>.025mm | .250 - 1.750"<br>6 - 44mm |

\* available from stock in 1/32" and 1mm increments

Ultra Accuracy collets with maximum runout of .0002" (.005mm) TIR for RSM, and .0005" (.001mm) TIR for HEX and SQR quoted upon request

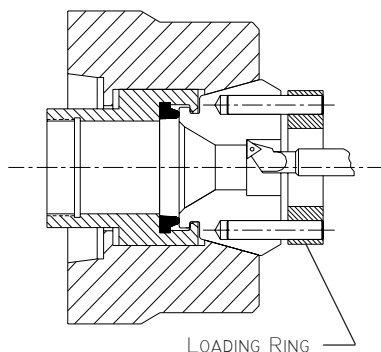
## SG65BZI Reduced Nose Collets



| Configuration   |               | Accuracy        | Range                     |
|-----------------|---------------|-----------------|---------------------------|
| ● <b>Round</b>  | RSM (Smooth)* | .0004"<br>.01mm | .187 - 2.625"<br>5 - 66mm |
|                 | HEX (Smooth)* | .001"<br>.025mm | .250 - 2.250"<br>6 - 57mm |
| ■ <b>Square</b> | SQR (Smooth)  | .001"<br>.025mm | .250 - 1.750"<br>6 - 44mm |

Ultra Accuracy collets with maximum runout of .0002" (.005mm) TIR for RSM, and .0005" (.001mm) TIR for HEX and SQR quoted upon request

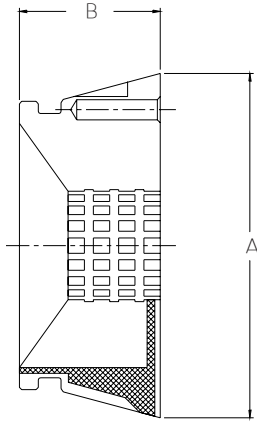
## SW65BZI Machinable Collets & AR65 Loading Rings



| Item           | Description       | Bore Size   |
|----------------|-------------------|-------------|
| <b>SW65BZI</b> | Machinable Collet | .312" (8mm) |
| <b>AR65</b>    | Loading Ring      |             |

The SW65BZI collet is case hardened to Rc 38-42 and can be bored out directly in the collet chuck to the diameter or configuration required. The AR65 loading ring is used to preload the collet during machining.

# Large Capacity Collets

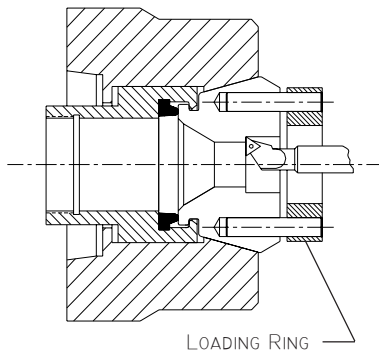


## Collet Dimensions

| Collet          | A       | B      |
|-----------------|---------|--------|
| <b>SK80BZI</b>  | 4.500"  | 2.085" |
|                 | 114.3mm | 52.9mm |
| <b>SK100BZI</b> | 5.689"  | 2.323" |
|                 | 144.5mm | 59mm   |
| <b>SK120BZI</b> | 7.087"  | 2.402" |
|                 | 180mm   | 61mm   |
| <b>SK140BZI</b> | 7.700"  | 2.480" |
|                 | 195.6mm | 63mm   |

| Configuration   |                | Accuracy | Range          |
|-----------------|----------------|----------|----------------|
| <b>SK80BZI</b>  |                |          |                |
| ● <b>Round</b>  | RSR (serrated) | .0004"   | .750 - 3.250"  |
|                 | RSM (smooth)   | .01mm    | 19 - 82.5mm    |
| ● <b>Hex</b>    | HEX (smooth)   | .0004"   | .500 - 3.250"  |
|                 | SQR (smooth)   | .01mm    | 12 - 82.5mm    |
| ■ <b>Square</b> | HEX (smooth)   | .001"    | .500 - 2.750"  |
|                 | SQR (smooth)   | .025mm   | 12 - 71mm      |
| ■ <b>Square</b> | HEX (smooth)   | .001"    | .500 - 2.250"  |
|                 | SQR (smooth)   | .025mm   | 12 - 58mm      |
| <b>SK100BZI</b> |                |          |                |
| ● <b>Round</b>  | RSR (serrated) | .0008"   | 1.000 - 3.937" |
|                 | RSM (smooth)   | .02mm    | 25 - 100mm     |
| ● <b>Hex</b>    | HEX (smooth)   | .0008"   | 1.000 - 3.937" |
|                 | SQR (smooth)   | .02mm    | 25 - 100mm     |
| ■ <b>Square</b> | HEX (smooth)   | .0015"   | 1.250 - 3.375" |
|                 | SQR (smooth)   | .038mm   | 31 - 86mm      |
| ■ <b>Square</b> | HEX (smooth)   | .0015"   | 1.250 - 2.750" |
|                 | SQR (smooth)   | .038mm   | 31 - 70mm      |
| <b>SK120BZI</b> |                |          |                |
| ● <b>Round</b>  | RSR (serrated) | .0008"   | 1.000 - 4.718" |
|                 | RSM (smooth)   | .02mm    | 25 - 120mm     |
| ● <b>Hex</b>    | HEX (smooth)   | .0008"   | 1.000 - 4.718" |
|                 | SQR (smooth)   | .02mm    | 25 - 120mm     |
| ■ <b>Square</b> | HEX (smooth)   | .0015"   | 1.250 - 4.062" |
|                 | SQR (smooth)   | .038mm   | 31 - 103mm     |
| ■ <b>Square</b> | HEX (smooth)   | .0015"   | 1.250 - 3.343" |
|                 | SQR (smooth)   | .038mm   | 31 - 85mm      |
| <b>SK140BZI</b> |                |          |                |
| ● <b>Round</b>  | RSR (serrated) | .0008"   | 1.000 - 5.500" |
|                 | RSM (smooth)   | .02mm    | 25 - 140mm     |
| ● <b>Hex</b>    | HEX (smooth)   | .0008"   | 1.000 - 5.500" |
|                 | SQR (smooth)   | .02mm    | 25 - 140mm     |
| ■ <b>Square</b> | HEX (smooth)   | .0015"   | 1.250 - 4.750" |
|                 | SQR (smooth)   | .038mm   | 31 - 121mm     |
| ■ <b>Square</b> | HEX (smooth)   | .0015"   | 1.250 - 3.906" |
|                 | SQR (smooth)   | .038mm   | 31 - 99mm      |

## Machinable Collets & Loading Rings



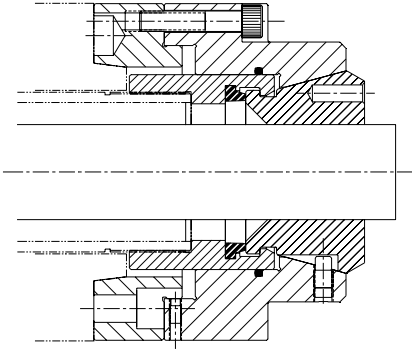
| Item            | Description       | Bore Size       |
|-----------------|-------------------|-----------------|
| <b>SW80BZI</b>  | Machinable Collet | .750" (19mm)    |
| <b>AR80</b>     | Loading Ring      |                 |
| <b>SW100BZI</b> | Machinable Collet | 1.000" (25.4mm) |
| <b>AR100</b>    | Loading Ring      |                 |
| <b>SW120BZI</b> | Machinable Collet | 1.500" (38.1mm) |
| <b>AR120</b>    | Loading Ring      |                 |
| <b>SW140BZI</b> | Machinable Collet | 1.500" (38.1mm) |
| <b>AR140</b>    | Loading Ring      |                 |

SW series collets are case hardened to Rc 38-42 and can be bored out directly in the collet chuck to the diameter or configuration required. A plug or loading ring is used to preload the collet during machining.

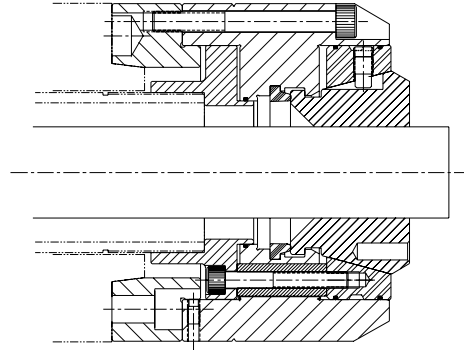
# Quick Change Collet Chuck Applications

## Bar Work Applications:

*Pull Back Chuck*

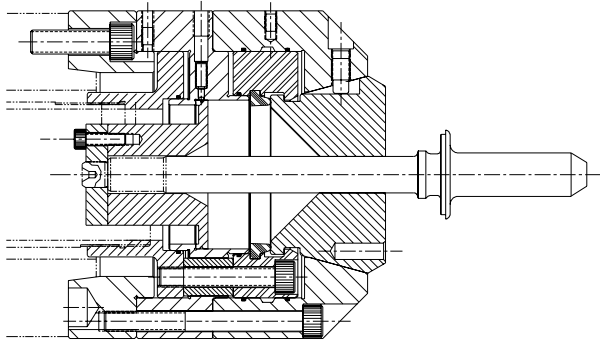


*Dead Length Chuck*

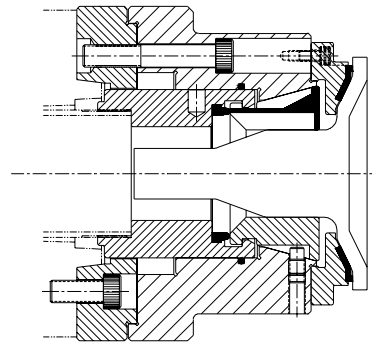


## Chucking Work Applications:

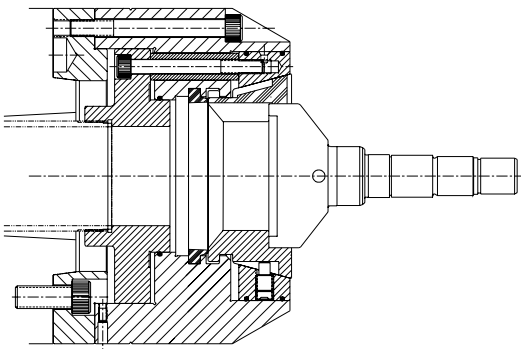
*Pull Back Chuck with internal part stop*



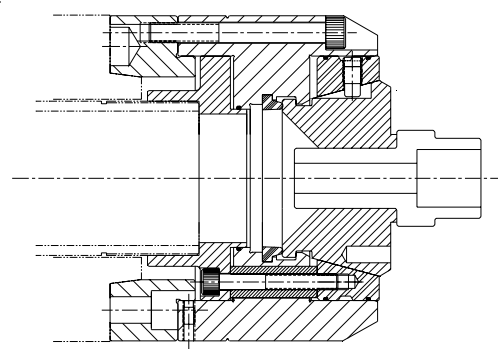
*Pull Back Chuck with external part stop*



*Dead Length Chuck with locating face inside collet to stop workpiece*

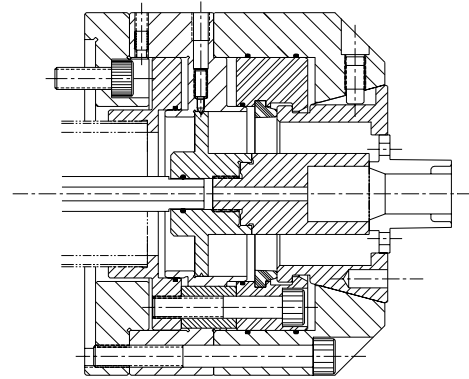
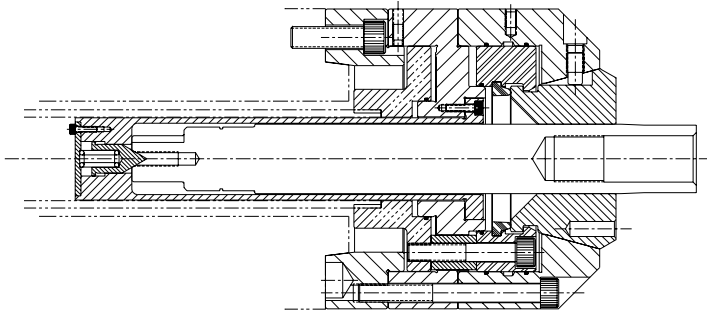


*Dead Length Chuck with face of collet used to end stop workpiece*



*Pull Back Chuck with spring loaded center to locate and support workpiece inside draw tube*

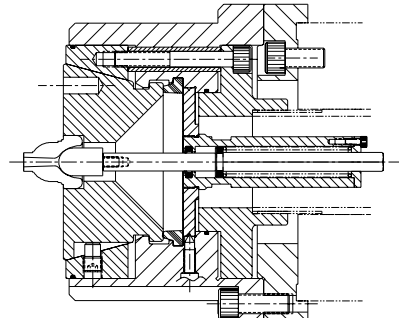
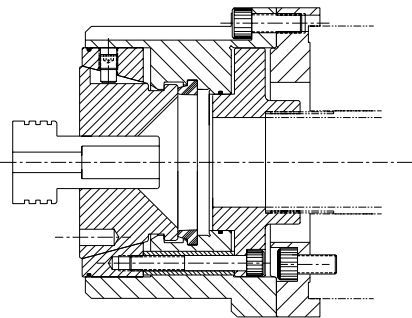
*Pull Back Chuck with internal part stop and coolant flush through spindle to evacuate chips*



### Sub Spindle Applications:

*Low Profile Dead Length Chuck clamping workpiece picked off by sub spindle*

*Low Profile Dead Length Chuck with spring ejector mounted in chuck body*

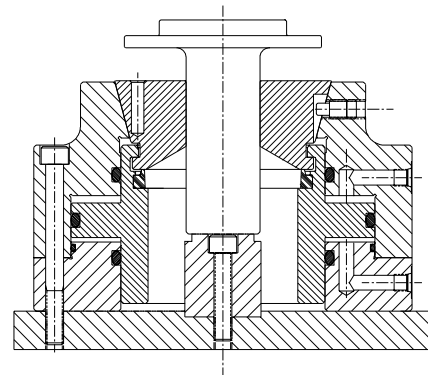
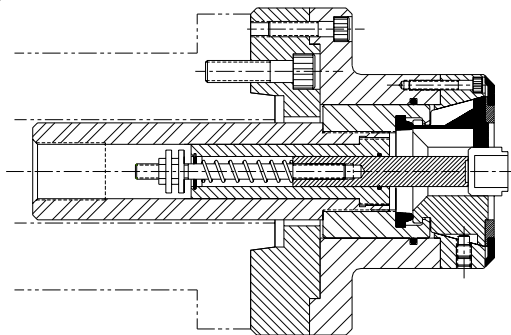


### ID Grinding Application:

*Pull Back Chuck with special lip seal collet that keeps ID of chuck free of grinding swarf*

### Drilling Application:

*Self Contained - Non Rotating Chuck with internal part stop mounted to machine table*

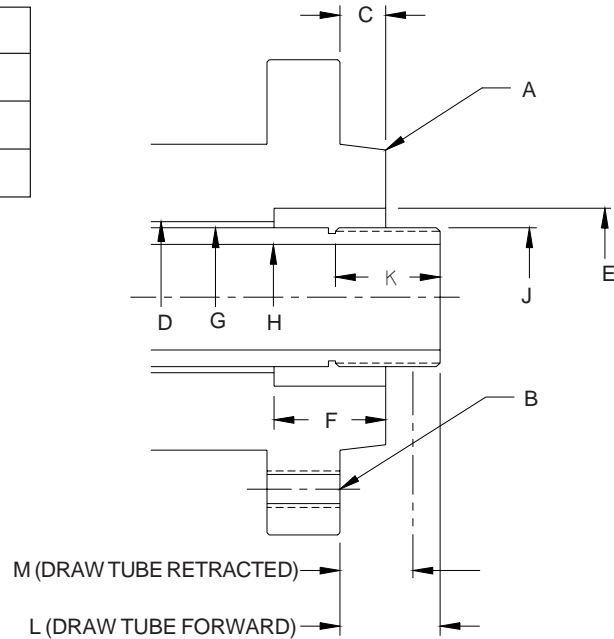




# Spindle & Draw Tube Data Sheet

|             |  |
|-------------|--|
| Company     |  |
| Chuck Model |  |
| Date        |  |
| Ref. No.    |  |

Contact us at **1-800-573-1139** if you have any questions about completing this data sheet.



|                                    |                                     |                                    |
|------------------------------------|-------------------------------------|------------------------------------|
| Machine Make                       |                                     |                                    |
| Machine Model                      |                                     |                                    |
| Machine Serial No.                 |                                     |                                    |
| A* taper size                      |                                     |                                    |
| B mounting thread                  |                                     |                                    |
| C length of pilot                  |                                     |                                    |
| D through hole diameter            |                                     |                                    |
| E ID counterbore or taper (if any) |                                     |                                    |
| F depth of counterbore (if any)    |                                     |                                    |
| G OD of draw tube                  | H ID of draw tube                   |                                    |
| J thread data                      | thread diameter                     |                                    |
|                                    | thread pitch                        |                                    |
|                                    | <input type="checkbox"/> right hand | <input type="checkbox"/> left hand |
|                                    | <input type="checkbox"/> OD thread  | <input type="checkbox"/> ID thread |
| K length of thread                 |                                     |                                    |
| L** forward position               |                                     |                                    |
| M retracted position               |                                     |                                    |

\* For machines with a straight spindle pilot a detail drawing of the spindle must be submitted

\*\* Positive (+) indicates draw tube is in front of the spindle face (as shown)

Negative (-) indicates draw tube is behind the spindle face



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**1-800-573-1139**

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