

 **MicroCentric**
Precision Workholding Solutions



"Dedicated to improving the quality and productivity of machine tools through superior workholding technology"

www.MicroCentric.com

Over 30 Years of advanced engineering

has made MicroCentric the world's leading manufacturer of high precision workholding systems. Each MicroCentric product is backed by superior design, high quality materials and workmanship, and extensive engineering support to assure reliable, long term performance. Our goal is to fully understand your machining and workholding requirements, so that we can provide you with the workholding product best suited to your application.

Precision Air Chucks

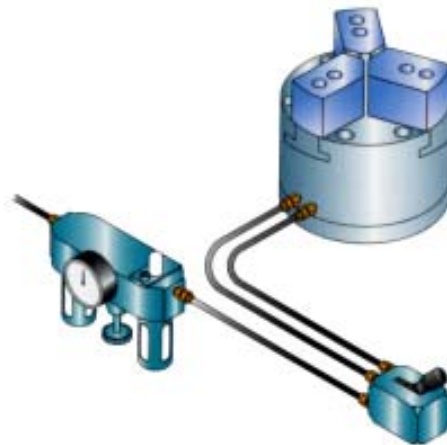
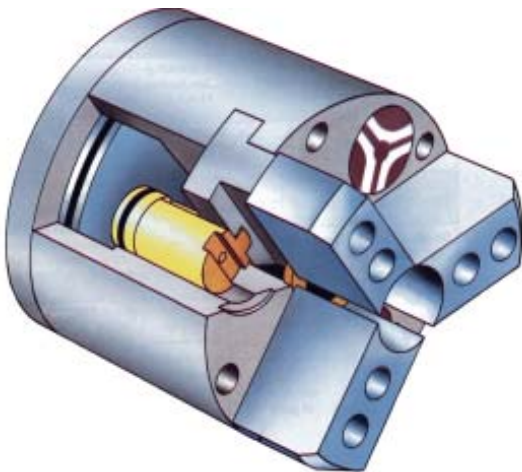


Product Features

- Standard repeating accuracy from .0001" (0.002mm) to .00005" (0.001mm) TIR
- Compact self-contained design
- Adjustable clamping force to accommodate wide range of applications
 - Hardened steel components for accuracy and long term performance
 - Sizes from 3" to 12" inch diameter (larger dia. models quoted on request)
 - 3 jaw configurations standard
 - 2 and 6 jaw models available on request
- Large range of standard models including rotating, stationary, and high speed
- Available with QC top jaw system

Chuck Design

MicroCentric Precision Air Chucks feature a patented open center design with separate actuators for each master jaw. Coolant passage through center of air tube is standard.



Rotating air chucks are actuated by an air tube assembly that has a rotary journal, through the machine spindle. A two way operating valve directs air to open and close the chuck. An air-filter-regulator-lubricator unit is used to control the operating pressure of the chuck. For stationary applications air is supplied directly into the side of the chuck body.

PPC-D Series Precision Power Chucks

New dual actuator design improves rigidity and increases clamping force with unmatched repeatability for machining precision workpieces. PPC chucks can be actuated by either a hydraulic or pneumatic cylinder, and can be adapted to all machine spindle and draw tube configurations.

NEW ! Product Features



- .0001" (0.0025mm) TIR repeating accuracy
- New dual actuator design
- Draw tube actuated
- Through hole standard on all models
- Hardened aircraft quality materials including chuck body, actuators, and base jaws
- Base jaws are precision ground and lapped to minimize lifting as chuck clamps
- Sizes from 4" to 12" inch diameter
- 3 jaw and 2 jaw models standard
- Modular chuck design can be adapted to all machine spindle and workhead configurations
- Patented QC precision top jaw locating system

QC Precision Locating Top Jaw System

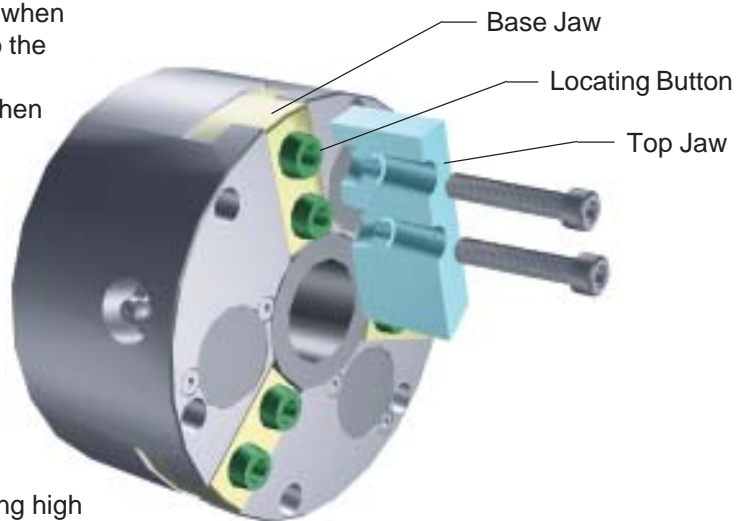
Patented jaw locating system reduces setup time by maintaining .0002" TIR maximum workpiece runout after jaws are changed without remachining the top jaws.

QC System Accuracy

- .0002" (0.005mm) TIR maximum runout when top jaws are machined and replaced onto the same chuck
- .0008" (0.02mm) TIR maximum runout when jaws are machined on another QC chuck.

QC System Design

QC top jaws are located by two tapered buttons that are mounted in jig ground locating holes in the chuck's base jaws. QC top jaws feature ground tapered seats that locate on the tapered buttons. QC top jaws seat on the OD of the tapered buttons as well as on the face of the base jaw, assuring high accuracy and superior rigidity.



Quick Change Collet Chucks

Product Features

- Change collets in 15 seconds
- .0004" (0.010mm) TIR max. runout
- Parallel clamping design
- Large clamping range
- All chuck components hardened and precision ground for accuracy
- Available in *dead length*, *pull back*, and *low profile sub spindle* models
- Modular chuck design can be adapted to any machine configuration

Quick Change Collet Models

| Model | Capacity | Range |
|----------|----------|-----------|
| SK42BZI | 1.65" | +/- .020" |
| | 42mm | +/- 0.5mm |
| SK65BZI | 2.56" | +/- .020" |
| | 65mm | +/- 0.5mm |
| SK100BZI | 3.94" | +/- .040" |
| | 100mm | +/- 1mm |
| SK120BZI | 4.72" | +/- .040" |
| | 120mm | +/- 1mm |
| SK140BZI | 5.51" | +/- .040" |
| | 140mm | +/- 1mm |



Collets Available From Stock

- MicroCentric stocks an extensive range of inch and mm size collets, in round and hex sizes.
- Quick ship collets, that are delivered within 5 working days, are available for special bore sizes and configurations.

Collet Chucks for “S” Style Collet Pads

Product Features

- Vulcanized master collet
- Parallel clamping design
- Shorter chuck length for greater rigidity and maximum use of Z axis travel
- Clamping range of +/- .020" (0.5mm)
 - All chuck components hardened and precision ground for accuracy and long term performance
 - Available in *dead length*, *pull back*, and *low profile sub spindle* models
- Modular chuck design can be adapted to any machine configuration
- Available for S-16, S-20, S-22, S-26, and S-30 collet pads



5W Wide Opening Collets

MicroCentric introduces the revolutionary 5W collet with a wide opening for machining headed parts. 5W collets will open up to .394" (10mm) larger than the clamping diameter. Dead length design collet chucks are available to adapt the 5W system to all machine makes and models.



Product Features

- Openings up to .394" (10mm) above nominal clamping diameter
- Capacity up to .750" (19mm)
- Six segmented design
- Dead length design collet chuck requires only .370" (9.4mm) draw tube stroke
- All chuck components made from hardened alloy steel precision ground for accuracy and long term performance
- Modular chuck design can be adapted to any machine configuration
- Chuck rated up to 6,000 rpm

Dead Length Collet Chucks

Product Features

- Available for 5C, 16C, & 3J collets
- Dead length design produces no pull back on the workpiece
- All components made from hardened alloy steel precision ground for accuracy and long term performance
- Modular chuck design can be adapted to any machine spindle configuration



MBS Series Diaphragm Chucks

MicroCentric MBS Chucks are ideal for high production turning, grinding, and milling applications, as well as clamping delicate workpieces with minimum distortion. MBS Chucks are low maintenance, and do not require lubrication or frequent cleaning since there are no exposed moving parts.

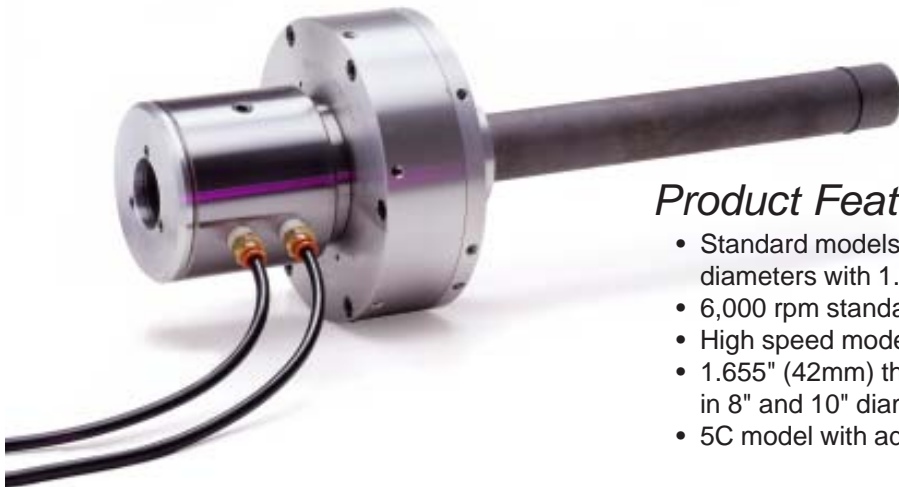


Product Features

- .0001" (0.0025mm) TIR accuracy
- Low maintenance, no lubrication required, no moving parts to wear out or become contaminated by chips and swarf
- Double acting for both OD and ID clamping
 - Pull back clamping action
 - Large jaw opening for load clearance (up to .060" / 1.5mm)
 - Adjustable clamping force to minimize distortion of thin-walled workpieces
- High-Low clamping capability
- Large range of standard models including self-contained rotating and stationary models, and draw tube actuated designs
- 6 jaw configuration standard
- 2 and 3 jaw models available on request
- Quick change feature allows diaphragm assembly (with top jaws and part stop) to be changed while maintaining .0002" TIR runout

LDZ Air Cylinders

LDZ Air Cylinders feature a high performance precision rotary air bearing assembly. The air bearing incorporates a hardened steel journal and a housing supported by high speed ball bearings. This advanced proven design is combined with MicroCentric's precision manufacturing capability to produce a line of air cylinders of unmatched performance and reliability.



Product Features

- Standard models available in 6", 8", and 10" diameters with 1.355" (34.4mm) through hole
- 6,000 rpm standard on 6" model
- High speed models to 10,000 rpm
- 1.655" (42mm) through hole models available in 8" and 10" diameters
- 5C model with adjustable draw tube

Turnkey Workholding Systems

In addition to offering a wide range of standard workholding products, MicroCentric also specializes in designing and building custom engineered workholding systems for specific workpiece and machine applications. Our technical salesmen and engineers work with you to design special top jaws, special configuration collets, part stops, ejectors, as well as other custom tooling. We can also modify standard chuck models, or design completely special chucks and workholding fixtures to meet your specific application requirements.

The Process - Proposal, Design, Manufacture

Fax or email us your workpiece drawings and machine specifications with a description of the machining operation. One of our application engineers will contact you to review your application and will develop a detailed quotation, often with concept drawings of the system we propose. Upon receipt of an order a project engineer will design the workholding system and submit detailed layout drawings to you for design approval prior to manufacture. After the design is approved our skilled tool makers will manufacture and runoff the complete system. Installation is quoted upon request.

Performance Guarantee

MicroCentric fully guarantees each turnkey workholding system to perform to agreed upon accuracy and specifications. Our superior engineering, quality manufacturing, and advanced workholding technology are your assurance that the system we supply will be the finest system available from any source for your application.





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