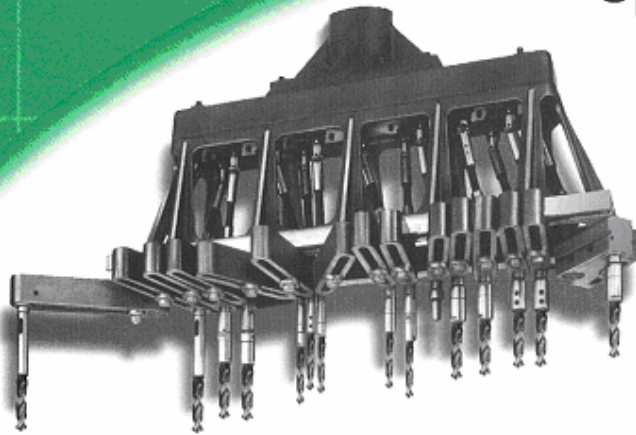


Spindle Assemblies



The value and versatility of your Commander equipment is increased by the wide variety of spindle assemblies available for all Commander MULTI-DRILL products.

Basic Types of Spindle Assemblies



Collet Type Spindle Assemblies

For maximum versatility, it is advisable to use collet spindle type assemblies in all applications that are within the collet capacity range.



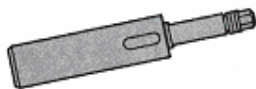
Bored Spindle Type Assemblies

Bored Spindle Assemblies are internally precision ground, providing greater capacity than the collet type and minimum run-out – an important feature where close center distances are required, or where large diameter hole work is being done in materials of low machineability.



Booted Universal Joint Spindle Assemblies

Booted Universal Joint Spindle Assemblies will last longer under harsh shop conditions. The rubber gasket at the end of the assembly protects the joint from grease and other shop contaminants.



Other Types

Spindles are also available in:

- #1 and #2 Morse Taper
- #0, #1 and #2 Jacobs Taper for adaptation to adjustable chucks
- Internal and External Threaded and Automotive Types

Spindle Assemblies for Special Applications



3" Extension Spindle Assemblies

Used where the hole to be drilled falls under the flange or the base housing of the MULTI-DRILL or to a maximum of 3" beyond the normal working area. Available in both Standard and Heavy-Duty types and can be used for either drilling or tapping.



6-3/4" Extension Spindle Assemblies

Used on all COMMANDER universal joint MULTI-DRILL and MULTI-TAPPING Units. Increase effective working range up to 13-1/2" beyond normal drilling area. Chain-driven, complete ball bearing it is available as a Collet, Bored, or Morse Taper type spindle assembly, with adjustable depth or pitch compensating features. Operates outside the base housing. Mounting and removal is quick and easy – the same as Commander standard spindle assemblies. Available in both standard and heavy-duty type.



Adjustable Depth Spindle Assemblies

Used for drilling or tapping holes of different depths, or where staggered breakthrough is desired. Equipped with a fine micrometer type scale. Calibrated settings are easily made, and a positive lock holds the spindle firmly in place after the setting has been made.



Pitch Compensating Spindle Assemblies

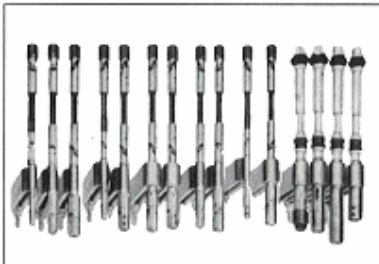
Commander pitch compensating spindle assemblies allow tapping multiple pitches simultaneously. A spring loaded device within the spindle allows the spindle to advance into the work at a faster rate than other taps of a finer pitch. The pitch compensating spindle assembly must be used on all but the finest pitch taps when various pitches are being tapped. Available in all spindle types.



CONVENTIONAL

- 125 Collet Type
- 265 Collet Type
- 375 Collet Type
- 125 Bored Type
- 265 Bored Type
- 375 Bored Type
- #1MT Morse Taper Type
- 375 Collet Type / Ball Bearing
- 375 Bored Type / Ball Bearing
- #1MT Morse Taper Type / Ball Bearing

Conventional



ADJUSTABLE DEPTH

- 125 Collet Type
- 265 Collet Type
- 375 Collet Type
- 125 Bored Type
- 265 Bored Type
- 375 Bored Type
- 375 Collet Type / Ball Bearing
- 375 Bored Type / Ball Bearing

Adjustable Depth



6-3/4" Extension

6-3/4" EXTENSION

- 375 Collet Type / Ball Bearing
- 375 Bored Type / Ball Bearing
- #1MT Morse Taper Type / Ball Bearing
- 375 Collet Type / Adjustable Depth / Ball Bearing
- 375 Bored Type / Adjustable Depth / Ball Bearing
- 375 Collet Type / Pitch Compensating
- 500 Collet Type / Heavy-Duty / Ball Bearing
- #1MT Morse Taper Type / Heavy-Duty / Ball Bearing
- #2MT Morse Taper Type / Heavy-Duty / Ball Bearing
- 500 Bored Type / Heavy-Duty / Ball Bearing



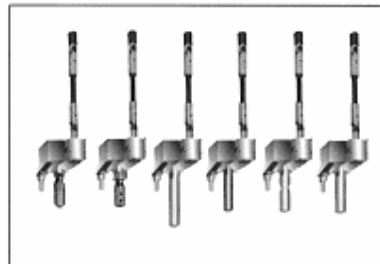
PITCH COMPENSATING

- 265 Collet Type
- 375 Collet Type
- 125 Bored Type
- 375 Collet Type / Ball Bearing

HEAVY-DUTY BALL BEARING

- 500 Collet Type
- #1MT Morse Taper Type
- #2MT Morse Taper Type
- 500 Bored Type

Pitch Compensating / HD Ball-Bearing / 3" Extension



Lock-In Position

LOCK-IN POSITION

- 125 Collet Type
- 125 Bored Type
- 125 Collet Type / Adjustable Depth
- 125 Bored Type / Adjustable Depth
- 125 Bored Type / Pitch Compensating
- 375 Collet Type
- 375 Bored Type
- #1MT
- 375 Collet Type / Adjustable Depth
- 375 Bored Type / Adjustable Depth
- 375 Collet Type / Pitch Compensating



3" Extension HD Ball-Bearing

3" EXTENSION

- 375 Collet Type / Ball Bearing
- 375 Bored Type / Ball Bearing
- #1MT Morse Taper Type / Ball Bearing
- 375 Collet Type / Adjustable Depth / Ball Bearing
- 375 Bored Type / Ball Bearing
- 375 Collet Type / Pitch Compensating

3" EXTENSION HEAVY-DUTY BALL BEARING

- 500 Collet Type
- #1MT Morse Taper Type
- #2MT Morse Taper Type
- 500 Bored Type



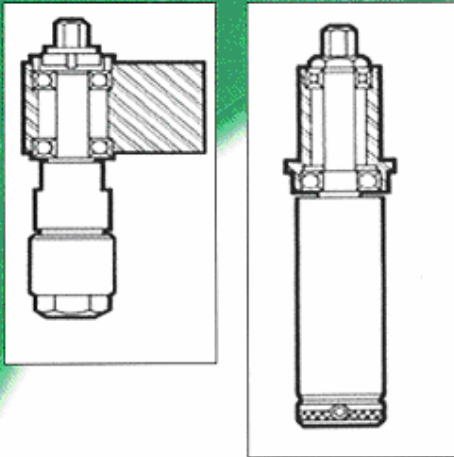
Ball Bearing Lock-In Position

BALL BEARING LOCK-IN POSITION

- 375 Collet Type
- 375 Bored Type
- #1MT
- 375 Collet Type / Adjustable Depth
- 375 Bored Type / Adjustable Depth
- #1MT Morse Taper Type / Heavy-Duty
- #2MT Morse Taper Type / Heavy-Duty
- 500 Collet / Heavy-Duty
- 500 Bored / Heavy-Duty
- 500 ASA / Heavy-Duty

Ball Bearing Spindle Assemblies

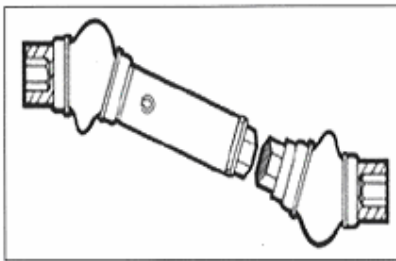
For Heavy-Duty Applications where higher thrust is a factor



- Sealed ball bearing construction
- Extra heavy duty booted universal joint
- Spindle locating pilot (allows the use of spindle locating templates)
- Longer life
- Higher thrust capabilities

Typical Construction

Spindle Center Distance is 1-1/4" Select spindle type from below.

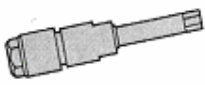
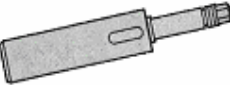






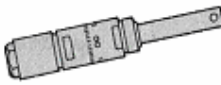

Slip Spindle (Lock-in-position) Assembly

Includes heavy-duty booted universal joint

Adjustable Arm Spindle Assembly

Includes heavy-duty booted universal joint

<p>375, 500 Collet Type</p> 	<p>Sealed ball bearing, booted construction spindle assembly. Most versatile assembly available with full range of drill and tap collets.</p>
<p>1MT, 2 MT</p> 	<p>Sealed ball bearing, booted construction spindle assembly. Ideal for shops (woodworking) that use Morse taper shank tooling, to get larger drills on closer centers.</p>
<p>5/8 ASA, 7/8 ASA</p> 	<p>Sealed ball bearing, booted construction spindle assembly. Designed for automotive plants, or where vertical height adjustment is required. Blind hole and multiple plane applications.</p>
<p>Stub ASA Collet Type</p> 	<p>Sealed ball bearing, booted construction spindle assembly. Same as std. "ASA" assembly, but shorter in length. Ideal for applications where vertical space is limited. Also offers vast selection of 375/500 type drill and tap collets.</p>

<p>Q.T. Floating Tap Spindle</p> 	<p>Sealed ball bearing, booted construction spindle assembly. A self-centering tap holding system that will allow for slight tap misalignment.</p>
<p>Q.C. Floating Tap Spindle</p> 	<p>Sealed ball bearing, booted construction spindle assembly. Same as Q.T. floating spindles, but also offers quick tap release system. BILZ TYPE.</p>
<p>Adjustable Depth</p> 	<p>Sealed ball bearing construction spindle assembly. Permits holding of fine adjustment in drill or tap depths. 3/16" range in increments of .001."</p>
	<p>Sealed ball bearing construction spindle assembly. Permits simultaneous tapping with taps of different pitch. Use with coarse pitch taps. 5/16" compensation.</p>



Commander Versa-Spindle

The Versa-Spindle greatly increases the versatility of universal joint heads. The same spindle can be used inside or outside the base housing of a universal joint head, or directly under the base housing flange. This spindle is gear-driven, and the universal joint can be attached to any one of the five power hex pick-offs.

The Versa-Spindle is also adaptable to other makes of universal joint drill heads and machines. When requesting a quotation, please specify the manufacturer and model number of the universal joint head that the Versa-Spindle should fit.

