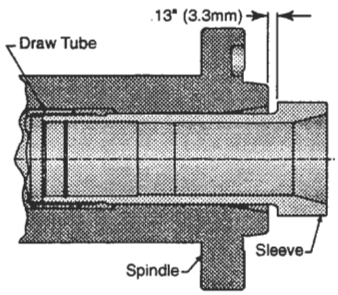
HARDINGE®

INSTRUCTIONS FOR:

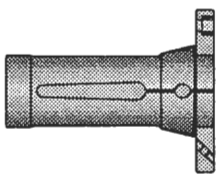
A2-5 16C to #22 B&S Adapters

Before Starting: Make certain the machine tool is set up in the "Internal Chucking Mode." When in this mode, the actuator moves the draw tube and the collet forward to "Close" the collet onto the workpiece. For information on setting the "Internal Chucking Mode", refer to the Programmer's and Operator's Manual that came with the machine.

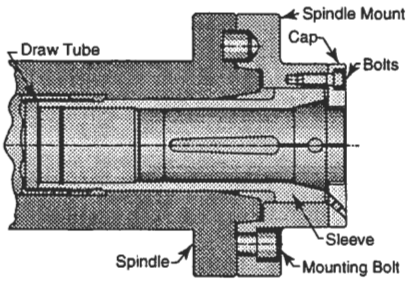
- Remove any existing spindle tooling and clean the OD and ID of the spindle.
- Move the draw tube to the "rear" position (collet open).

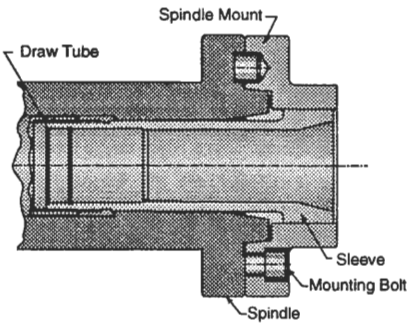


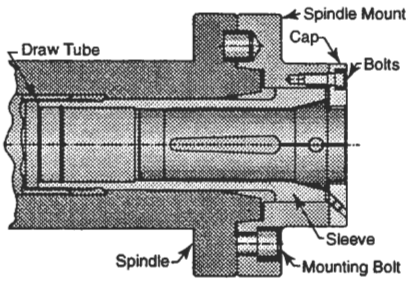
- Put the sleeve into the spindle and adjust draw bar until the back face of the sleeve is .130" (3.3mm) from the face of the spindle with the draw tube in the rear position (collet open). This dimension does not have to be exact, it can be fine tuned later. Secure draw tube in this position.
- Slide the mount over the sleeve and rotate mount to align button hole with the button on the spindle. Push mount onto the sleeve until the back face of the mount contacts the shoulder of the spindle. Attach the mount to the spindle using three M10 x 25 socket head cap screws, torquing to 40 ft-lbs.

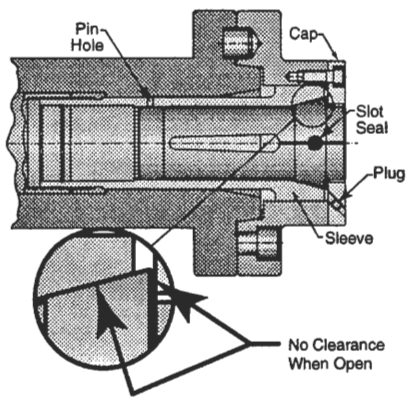


- Push cap over pilot diameter of the #22 B&S collet to be used, with the ground face of the cap (face opposite the bolt hole counterbores) toward the locating shoulder of the collet.
- Slide collet (with cap on front) into the sleeve. Attach the cap with four M6 x 16 socket head cap screws, torquing to 12 ft-lbs.
- Put the workpiece (or pin of the proper size) into the collet. Push the "Collet Close" button on the machine and check action of the collet open/close. If it is desired for the collet to open more, or open less when in the "Open" position, readjust the drawbar as required.





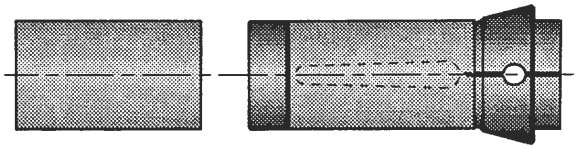


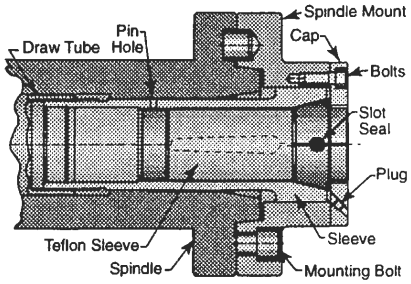


Note: *The collet should not be completely loose when in the open position. The closing angle of the collet should still be in contact with the closing angle of the sleeve and the shoulder of the collet should be against the back face of the cap. This will help to prevent chips from getting between these surfaces, causing runout, etc.*

- Coolant/Chip seals can be purchased from Hardinge to seal the slots, aiding in preventing chips and coolant from entering the collet chuck assembly.
- There are four "slinger" holes in the cap. These holes can act as an escape route for chips and coolant to exit the contact area around the collet, sleeve, and cap, providing the chips are small enough to fit through the holes. This is usually most important during operations such as thru-hole drilling where chips are forced inside the collet chuck. Some form of thru-spindle coolant or air blast is usually necessary to force the chips back out the front of the assembly.
When machining parts that have no thru-holes, the slinger holes can be plugged with the enclosed nylon plugs to prevent chips and coolant from entering the assembly.

- Three heat shrinkable Teflon sleeves are provided in order to help prevent chips from migrating from the inside of the collet, through the teardrop shaped windows, and into the inside of the collet chuck. The sleeves are shrunk over the body of the #22 B&S collets using an industrial heat gun. Additional sleeves can be ordered (part number: 3111-00-00-000012).





Collet Orientation

- There is a small hole in the sleeve into which a pin can be pressed (see above illustration). Special collets can be ordered from Hardinge with a keyway in the back bearing that will mate with this pin. In this way, orientation of live tooling work with hex, square or special shaped stock can be accomplished. The pin can be ordered from Hardinge, part number 3757-00-00-000007.

Special Collets

- All types of standard and special #22 B&S collets can be ordered from Hardinge to suit almost any requirement. Some typical examples include special shapes, eccentrics, stepped holes, extended noses and collets with stop threads in the rear. For information on how to order special collets, call Hardinge and ask for brochure #2348 "Spindle Tooling for Manual and CNC Lathes."

A2-5 16C to #22 Adapter Parts List

Description	QTY	Part Number
Sleeve	1	1717-09-00-000003
Mount	1	1717-09-00-000001
Cap	1	1717-09-00-000002
Bolts for Cap – M6 x 16	4	MS 0103617
Mounting Bolts – M10 x 25	3	MS 0104019
Slinger Hole Plug	6	1717-09-00-000004
Orientation Pin ⅛" Dia. (Option)	1	3757-00-00-000007
Teflon Sleeve	3	3111-00-00-000012

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