

Enco Introduction to Lathe Chucks



2 Jaw Self-Centering



3 Jaw Self-Centering



4 Jaw Independent



6 Jaw Independent

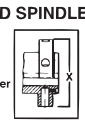


THREADED SPINDLE

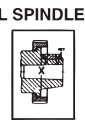


A SPINDLE

NOTE:
A1 Series
Shown.
A2 has outer
bolt circle
only.



D SPINDLE



L SPINDLE

To determine which type of spindle nose mounting your lathe requires, consult the diagrams below, then read the chart beneath the appropriate diagram. Make the measurement required. This will give you the exact type of mounting for the lathe spindle nose.

Note - Plain Back Chucks Require Adapter or Converter Which May Require Machining to Fit Back of Chuck.

CHUCK TYPES

American Standard "A" Series Spindle

X Dimension refers to largest portion of taper.

| | | | |
|---------|-----|-----|-----|
| Spindle | A5 | A6 | A8 |
| X = | 3¼ | 4¾ | 5½ |
| Spindle | A11 | A15 | A20 |
| X = | 7¾ | 11¼ | 16¼ |

Camlock "D" Series Spindle

X Dimension refers to outside diameter of spindle nose.

| | | | |
|---------|------|------|-------|
| Spindle | D1-3 | D1-4 | D1-5 |
| X = | 3¾ | 4¾ | 5¾ |
| Spindle | D1-6 | D1-8 | D1-11 |
| X = | 7½ | 8¾ | 11¾ |

Long Taper Key Drive "L" Series Spindle

X Dimension refers to largest portion of taper.

| | | | |
|---------|-----|----|----|
| Spindle | L00 | L0 | L1 |
| X = | 2¾ | 3¼ | 4½ |
| Spindle | L2 | L3 | |
| X = | 5¼ | 6½ | |

Threaded Size

X Dimension refers to major diameter of thread.

| | |
|------------------------|--------|
| X = Dia. (In.) x Pitch | |
| 1 x 8 | 2¼ x 8 |
| 1 x 10 | 2¾ x 6 |
| 1½ x 8 | 2¾ x 8 |
| 1¾ x 8 | |

Self-Centering Chucks are ideal for gripping cylindrical or concentric work because all jaws work in unison and automatically center the piece. Independent chucks are suited for gripping irregularly shaped workpieces or for eccentric operations because jaws work independently. Adjustable chucks operate like a self-centering chuck but are used where extreme accuracy is required. User may adjust within .0005 T.I.R.

MOUNTING INSTRUCTIONS: LATHE MUST BE LEVELLED WITH A PRECISION LEVEL

Chuck Mounting Information: Using Intermediate Plates - For Standard Flat Back Lathe Chucks-

NOT for "Adjustable Run-Out" models (see separate instructions). When using a Chuck Adapter Plate to mount a flat back lathe chuck:

1. The lathe must be levelled with a precision level, this assures machining accuracy
2. Adapter plate or chuck plate is to be mounted on lathe spindle
3. A skim facing cut across the full face of the adaptor must be made. This assures that the face is at 90° to the centerline of the lathe spindle
4. The chuck plate has a boss onto which the recess in back of the chuck must mount. Turn the boss to fit tightly into the chuck body. The accuracy of this operation is directly relative to best results
5. Turn the O.D. of chuck plate to match the chuck - not always the same size of the chuck body, especially with 4 jaw independent chucks
6. In most cases the chuck has threaded holes in the chuck body, to accept mounting bolts, or the chuck plate has threaded holes, for chucks having through holes in the body for front insertion. In some instances it may be necessary to transfer hole locations and drill clearance holes
7. "A" type adaptors come in two versions: A-1 has two bolt circles (inner & outer), A-2 has a single outer bolt circle of tapped holes. The chuck adaptor is fastened to spindle separately, then the chuck is fastened to the plate
8. Lathes having threaded spindle noses follow similar procedures 1 thru 6

Chuck Mounting Information: Using Intermediate Adaptors - For ADJUSTABLE Run-Out Chucks, known as: "Adjust-Tru", "Set-Tru", "Zero-Set", "Set-Rite", "Hi-Tru", "Accu-Chuck".

This type of chuck is designed so that the chuck body can be moved by utilizing adjusting screws. A ground pin is held firmly in the chuck mounted on the lathe. The pin is trammed with a test indicator and the adjusting screws used to correct the run-out. The design of the chuck adaptor permits the chuck adjusting screws to contact an extended boss on the plate, facilitating adjustment. Each brand chuck requires it's matching adaptor - same manufacturer or specific identification - they are not interchangeable (unless so indicated). These adaptors are to be "zeroed in" prior to actually mounting the chuck by taking a skim facing cut across the flange. All other dimensions should be compared to the back of the specific chuck and machined accordingly, if necessary. Once the mounted chuck has been "zeroed-in" in all respects, the chuck must be "locked" into the adjusted position. Double check with ground pin and test indicator.



3 Jaw Plain Back Scroll Chucks - 2 Pc. Jaws

Gibraltar & Bison:

- Two piece hardened reversible jaws
- Semi-steel body • Self-centering

Gibraltar:

- Scroll and jaws hardened and ground
- Requires Gibraltar back plate (Sold separately. See page 484)

Bison:

- Balanced scroll and jaws made of fine alloy steel
- Hard top jaws and master jaws
- 1 chuck wrench
- 1 set of mounting screws
- Requires Bison back plate (Sold separately. See page 484)
- Made in Poland



Gibraltar



Bison

ORDERING INFORMATION

| Chuck Dia. (In.) | Runout (In.) | | Gibraltar | | | | Bison | | | |
|------------------|--------------|--------|-----------------|------------|-----------------|-----------|-----------------|------------|-----------------|-----------|
| | | | Thru Hole (In.) | Wt. (Lbs.) | Model | Low Price | Thru Hole (In.) | Wt. (Lbs.) | Model | Low Price |
| 5 | 0.0012 | 0.0012 | 1.181 | 12 | 328-0326 | \$276.22 | 1.250 | 10 | 891-5833 | \$339.98 |
| 6¼ | 0.0012 | 0.0012 | 1.575 | 20 | 328-0321 | 298.24 | 1.650 | 18.9 | 271-4020 | 368.98 |
| 8 | 0.0016 | 0.0016 | 2.559 | 31 | 328-0322 | 346.15 | 2.160 | 34.4 | 271-4025 | 430.98 |
| 10 | 0.0016 | 0.0016 | 3.149 | 51 | 328-0323 | 453.54 | 2.990 | 57.8 | 271-4030 | 567.98 |
| 12 | 0.0024 | 0.0024 | 3.937 | 101 | 328-0325 | 669.89 | 4.050 | 97.8 | 890-9817 | 782.98 |
| 16 | 0.0024 | 0.0024 | 5.118 | 157 | 328-0324 | 1152.80 | 5.350 | 177.8 | 271-4040 | 1339.98 |

¹ Truck shipment