

Tip #32 Turning With A Lathe Chuck

For many, Lathe Chucks are the most convenient way to turn bowls, plates and similar objects. Your workpiece doesn't have to be screwed solidly to a faceplate. No more screws going through the bottom of your turning...or gluing "scrap" blocks to your blank then screwing them to the faceplate.

You'll save a lot of time and once attached to the Chuck, your turning may be removed then re-attached again and again...quickly and with automatic self-centering.

There are many different types of Chucks to choose from. Collet Chucks and Spigot Chucks for externally grasping small to medium turnings; Three or Four-Jaw Chucks for externally grasping larger turnings; Expanding Dovetail Chucks that grasp the inside surfaces of a shallow, dovetail-shaped recess turned on the bottom of a workpiece; and more.

Of these, 4-jaw, self-centering variety is the most popular because it will either grasp the object around its outer circumference - or expand against its inside edges or against a shallow, tapered hole that's been turned on the object's bottom.

All three *Oneway* Chucks offered by Shopsmith are of the Scrolling variety. Each features a geared Scroll which moves all four Top Jaws simultaneously when it's turned by a geared Key (*Talon & Stronghold*) or by twin levers (*Original Oneway*).

There are three primary ways to grip a project with one of these chucks.

- 1): Externally, around a Foot turned on the bottom of your workpiece (See Fig. 1).
- 2): Internally, by grasping the inside edges of a turned recess on the workpiece bottom (See Fig. 2) or
- 3): With the aid of a special screw-in holder which is threaded into the bottom of your blank, then clamped into the Chuck Jaws (See Fig. 3).



Figure 1. You can grip externally around a foot turned on the bottom of your project.



Figure 2. You can grip internally, by grasping the inside edges of a turned recess on bottom.

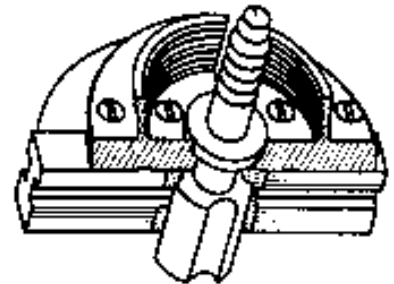


Figure 3. You can grip with the aid of a special screw in holder threaded into the bottom.

Each of the chucks offered by Shopsmith mounts to the MARK V's main spindle with a special (included) Adapter. Once the Adapter is attached to the Chuck, slide the assembly onto your MARK V Spindle until it bottoms-out with the Adapter face contacting the shoulder of the spindle. Tighten securely. Mount your workpiece to the Chuck using one of the three methods described at left, and turn the inside of your object.

Next, swing your Tool Rest around to the back side and turn the outside. When you're through, simply remove the turning from your Chuck, saw off the protruding *Foot* (if you're using the external gripping method) and you're done.

Here's an alternative, 5-step way to handle such turnings.

Step 1: Mount your turning blank to a Faceplate as shown in Fig. 4. Turn the outside and the *Foot* that will hold your stock for internal turning. Remove most of the *core* of your turning.

Step 2: Turn your project around, chuck it onto the *Foot* you turned in Step 1 and rough-turn the inside.

Step 3: Mount your project between your Tailstock-mounted Center and a Faceplate as shown in Fig. 5 and finish turning the outside. True-up your *Foot* before removing the stock.

Step 4: Chuck your turning back onto the *Foot* and finish-turn the inside.

Step 5: Attach the optional *Jumbo Jaws* (See Fig 6) to your Chuck, mount your completed turning as shown in Fig 11 and finish turning the outside of your project.

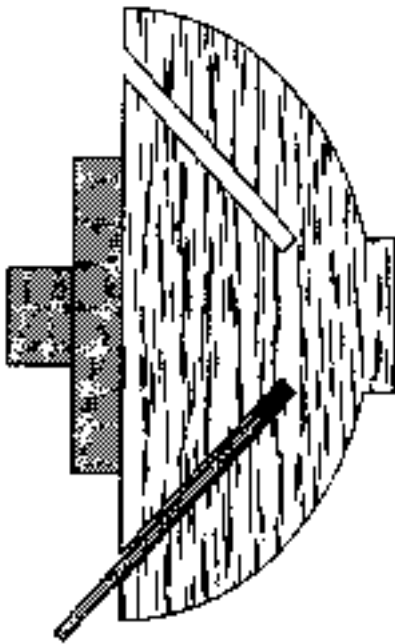


Figure 4. Mount your blank to a faceplate.

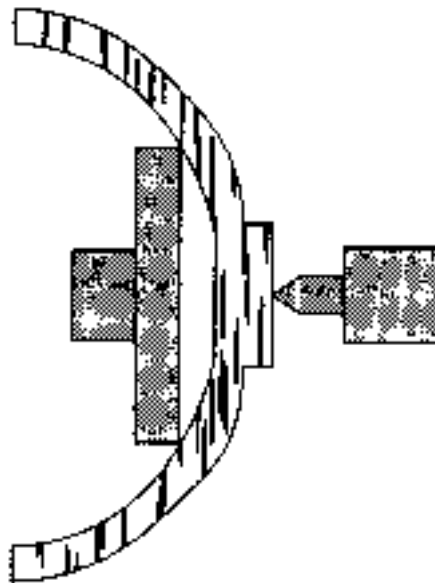


Figure 5. Mount project between your Tailstock mounted Center and a Faceplate.

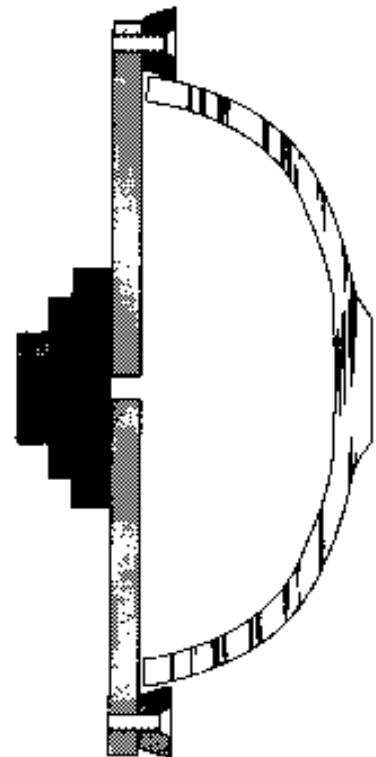


Figure 6. Attach the Jumbo Jaws to your chuck and mount your project to complete turnings.