

A Great Little Lathe

5/12/2010 Update: Penn State is no longer selling the TCLPROVS mini lathe.

I like the looks of the new 10" Swing Variable Speed Commander TCLC10VS lathe from Penn State.

I DO NOT own one and I have not used one!

It looks like an improved TCLPROVS. Still uses a DC motor and Penn State made belt changes a lot easier! Only \$299.

I think the 12" swing model with 1 HP motor for an extra \$100 is overkill.

There are sensible limits to what you can do on a mini lathe. The lathe bed, banjo, tool reset, etc. are not heavy enough to support 12" work. 8" bowls are pushing the limit on a mini lathe. Thus 10" swing is adequate.

The 1/2 HP in my TCLPROVS is plenty. The new TCLC10VS is 3/4 HP.



The TCLPROVS mini lathe from Penn State Industries is a great little lathe for only \$255.

By Carl Ford
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I recently purchased a Turncrafter TCLPROVS mini lathe from Penn State Industries (www.pennstateind.com). It is a good little mini lathe. I am very happy with it. I recommend the TCLPROVS to anyone looking for a first lathe or demo lathe. I like it better than the Jet and Delta mini



lathes I have used. Probably because the TCLPROVS is variable speed for only \$255. The variable speed versions of other mini lathes are in the \$350 range. My Wednesday night turning group also likes the TCLPROVS.

- Here is what I like about the Turncrafter TCLPROVS
- Variable Speed: 650 to 3800 RPM. (Also has 3 belt positions for better torque)
- Motor: 1/2 HP (DC motor, so I can add my own reverse switch)
- Headstock: 1" x 8tpi, #2MT
- Tailstock: #2MT
- Distance between centers: 18"
- Swing over bed: 10"
- Variable speed control box can be mounted under the lathe where it is less likely to get broken in transit.

If a mini lathe is going to be your first lathe then the #2MT on the TCLPROVS will make it easier to reuse accessories in the future on a larger lathe.

I already own 2 large lathes. A modern Delta 1642 steel bed lathe and VB36 bowl turning lathe. I purchased the TCLPROVS for demos, vacations, and Wednesday nights. I was drawn to the TCLPROVS by 2 major factors. The #2MT headstock and tailstock tapers allow me to reuse the drive and live centers from my big lathes. The DC motor would allow me to easily install my own reverse switch. You just have to reverse the input leads to a DC motor to reverse the motor with no loss of torque. I like to turn in reverse when turning small hollow vases. Some mini lathes only come with a 3/4" x 16tpi, #1MT headstock. The 1" x 8tpi on TCLPROVS is more reasonable. 1 1/4" x 8tpi to match my big lathes would be nice, but overkill. I can reuse my Nova 4 jaw chuck by just purchasing 1" x 8tpi Nova spindle insert.

I have turned several spindles, on the TCLPROVS. It is a good spindle turning lathe. I have also turned a small vase and bowls out of dry wood. The TCLPROVS was ok on the small vase. Vases are tall and thin so roughing it was like doing a spindle. It had plenty of torque for the hollowing of the vase using Ellsworth style tools. Turning a bowl was more challenging but ok. All mini lathes don't handle out of balance bowl blanks very well. The lathes simply are not heavy enough. The TCLPROVS was better than the Jet and Delta mini lathes I have used. Primarily, because I could use the variable speed to start out slow. I easily turned a nice little bowl on TCLPROVS after I got the blank round and balanced.

Here is what I don't like about the TCLPROVS: (All mini lathes may suffer from similar short comings.)

- I easily broke the cheap plastic locking handle on tailstock. I simply replaced tailstock and banjo handles with nice 8mm die cast zinc handles from www.mcmaster.com part #6848K44
- The tool rest is a joke. Too short. Fortunately, Penn State Industries also sells a nice 3 piece set of 5/8" Solid Bar Toolrests for only \$30. Part #CLTSET58.
- A small cheap 4 prong center comes with the lathe. I recommend replacing it with a Safe or Steb drive center. I have and like the cheap Super Drive Centers (aka Steb Centers) sold by Penn State Industries. Part #LCENTSS21 for #2MT 5/8" Drive Crown/Step Center for only \$20.
- The live center that comes with lathe is ok, but not impressive. The 7/8" diameter cup is kind of big for small work. Unfortunately the 1/2" Revolving Crown/Step Live Center for \$36 from Penn State Industries part # LCENTTS1 is only a #1MT. So you have to purchase a #1MT to #2MT adapter for \$8 from www.mcmaster.com part #2976A21. Or go with Penn State's 3/4" #2MT version, part #LCENTTS2.

I prefer faceplates rather than chucks. The TCLPROVS comes with an ok faceplate. When people insist on chucks, I recommend the Oneway Stronghold chuck rather than the Nova chuck I have. For a mini lathe the " Barracuda2 Key Chuck" from Penn State Industries part #CSC3000C for only \$170 looks like a good deal because it comes with 4 sets of jaws. I do not have one. Beware, it's too small for use on bigger lathes.

The Turncrafter TCLPROVS is a great little lathe for \$305. Lathe \$255 + better tool rest set \$30 + better drive center \$20 = \$305

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