



## **Buddy Bar for Sherline lathes**

**Size:** Double pin end (steel) that fits in the Sherline lathe spindle (Morse #1) and tailstock spindle (Morse #0). Buddy bars are alignment aids only.

Purpose of that tool: If one wants to machine pieces with a small run-out (high centricity), the work piece must be perfectly center drilled. A rotatable tailstock is great for some applications, but it has the side effect of causing alignment problems.



How can we improve on that?

- 1) Use centers in the head and tailstock to align the lathe. That works probably to 1/32", and will give you work pieces with a run-out as large as 0.040" or so.
- 2) Turn down a round and measure the diameters of its ends. Tap the headstock to fine tune the

angle setting. That works theoretically (run-outs of 0.002" can be reached), but it is a more than tedious procedure and can take an hour all the time. (I have seen recommendations to glue -epoxy- the headstock on the lathe ... I would not do this)

- 3) We offer a third strategy that is more convenient although also not perfect. Switch off the lathe. Remove the alignment key of the lathe. Loosen up tailstock and headstock. Stick the buddy bar in the tailstock. Move tailstock all the way towards the headstock and insert pin (buddy bar) in the headstock. Jiggle around on the headstock to find a first alignment. Crank the tailstock. Push pin in headstock a little more using the hand wheel on the tailstock. Crank the headstock. You can reach an alignment that result in run-outs smaller than 0.002", depending on your skills. Good luck.
- 4) Another idea may be using a LASER pointer and shooting through headstock/tailstock centers which have a small hold drilled in. No idea how good that would work, but it would be quite expensive machining a fixture to adjust the LASER pointer. And, again that would be a rather tedious procedure. LatehCity does actually offer accessories that use a LASER pointer.
- 5) If you would like to provide your ideas and experiences, then sent us an e-mail. No compensation, however.

**Technical notes:** If the bar gets stuck in the head stock spindle, stick a rod through the spindle

end and tap it. The tailstock side can be removed by pulling the tailstock backwards. (If this does not work, then insert first a short 1/4" al round in the tailstock before inserting the buddy bar.) In addition, one can rotate the bar losing it up in that fashion. Don't force the pin into your lathe spindles.

Accessories may come with oil on their surfaces for storage (rust prevention). Wipe off the oil on Morse tapers before using it.

All LatheCity tools come with a small manual and safety booklet. The manual includes further tips and tricks about how to improve on the centricity of work pieces.

Safety Notes, Trouble Shooting, and Disclaimer: General safety rules for machine/power tools are in place. For an extended list of safety notes, consult the literature. LatheCity shall not be liable for any damage caused by unprofessional use of LatheCity accessories. We recently became aware of a safety issue of a hobbyist trying to misuse a buddy bar. Buddy bars are for alignment purposes only. Don't use an alignment bar to mount a

huge lathe chuck or something on a mini tailstock. That is NOT safe. Don't do it.

Returns in resalable condition accepted within 30 days, no questions asked. (Ebay grants 14 days, only.) However, we do NOT reimburse shipping costs (Priority mail \$5.05), credit card fees, broker fees, taxes, etc. We will charge the respective shipping costs to customers for products that were offered as free shipping when returned. Note that the return rate of LatheCity products is below 2%.

Design details (diameter of stock rod used) may deviate from the image shown which does not affect the function of the accessory.

Uwe Burghaus (LatheCity)

Fargo, North Dakota, USA www.LatheCity.com sales@lathecity.com

©, 2012, LatheCity