

## Buddy Bar for “China” lathes MT3 to MT2

**Size:** Double pin end (steel) that fits in the lathe spindle (Morse #3) and tailstock spindle (Morse #2) of a typical “China” import tabletop lathe.

**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. An adjustable tailstock is great for some applications, but it has the side effect of causing alignment problems.

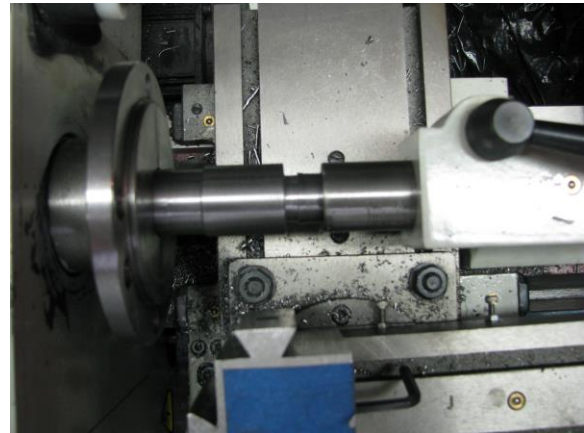
**Specs.** Total length about 3.75”. MTs are reduced length and have a taper length of about 1.5” (MT3) and 1.25” (MT2). MTs are cut off at the SD end. The MT2 end is tapped to insert #10-32 screw. This screw can be adjusted such that the MT2 end pops out of the tailstock. We use this design since it is compatible with 98% of all tabletop lathes. Most tailstock and headstock spindles of China import lathes are reduced length. You will need to move as close to the headstock as you can and extend tailstock spindle by about one inch. This depends on the width of your cross-slide however. If you have a very large lathe then this buddy bar may be too short. In that case use our 3 piece Buddy bar for China lathes. The standard version of our

buddy bars are machined on a lathe in non-hardened steel.

**Trouble with a misaligned tailstock?  
How can we improve on that?**

1) Use centers in the head and tailstock to align the lathe. That works probably to 1/16”, and will give you work pieces with a run-out as large as 0.060” or so.

2) Play card trick. You know that one, we guess, but ... about the same precision and it is a tedious procedure



3) We offer a third strategy that is more convenient although also not perfect. Switch off the lathe. Loosen up the alignment of the tailstock. 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 tailstock to find a first alignment. Crank the tailstock. Push pin in headstock a little more using the hand wheel on the tailstock. Fix the tailstock. You can reach an alignment that result in run-outs smaller than 0.002", depending on your skills. Good luck. However, if you have still the original factory alignment then don't use this accessory.

4) Another idea may be using a LASER pointer and shooting through headstock/tailstock centers which have a small hole 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. LatheCity 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.

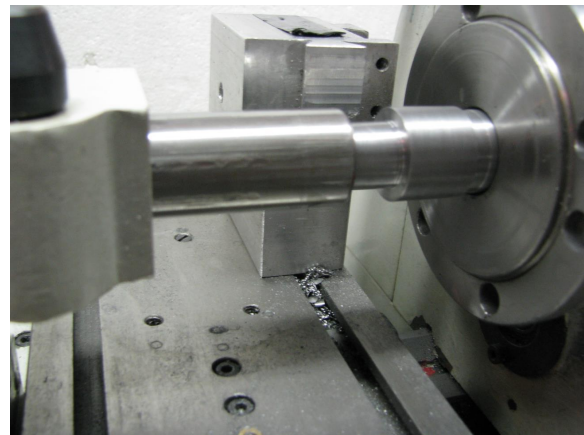
**Technical notes:** If the bar gets stuck in the head stock spindle, stick a rod through the spindle end and tap it. The tailstock side can be removed by pulling the tailstock backwards. (Adjust the screw on the MT2 side.) In addition, one can rotate the bar losing it up in that fashion. Don't force the pin into your lathe spindles.

**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. **The buddy bar is an alignment bar and is only used when the lathe is switched off. Don't use the buddy bar as an adapter to mount a Jacobs or lathe chuck or something.**

**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 1%.**

Design details (diameter of stock rod used, surface finish, surface coatings, etc.) may deviate from the images shown which does, however, not affect the function of the accessory.



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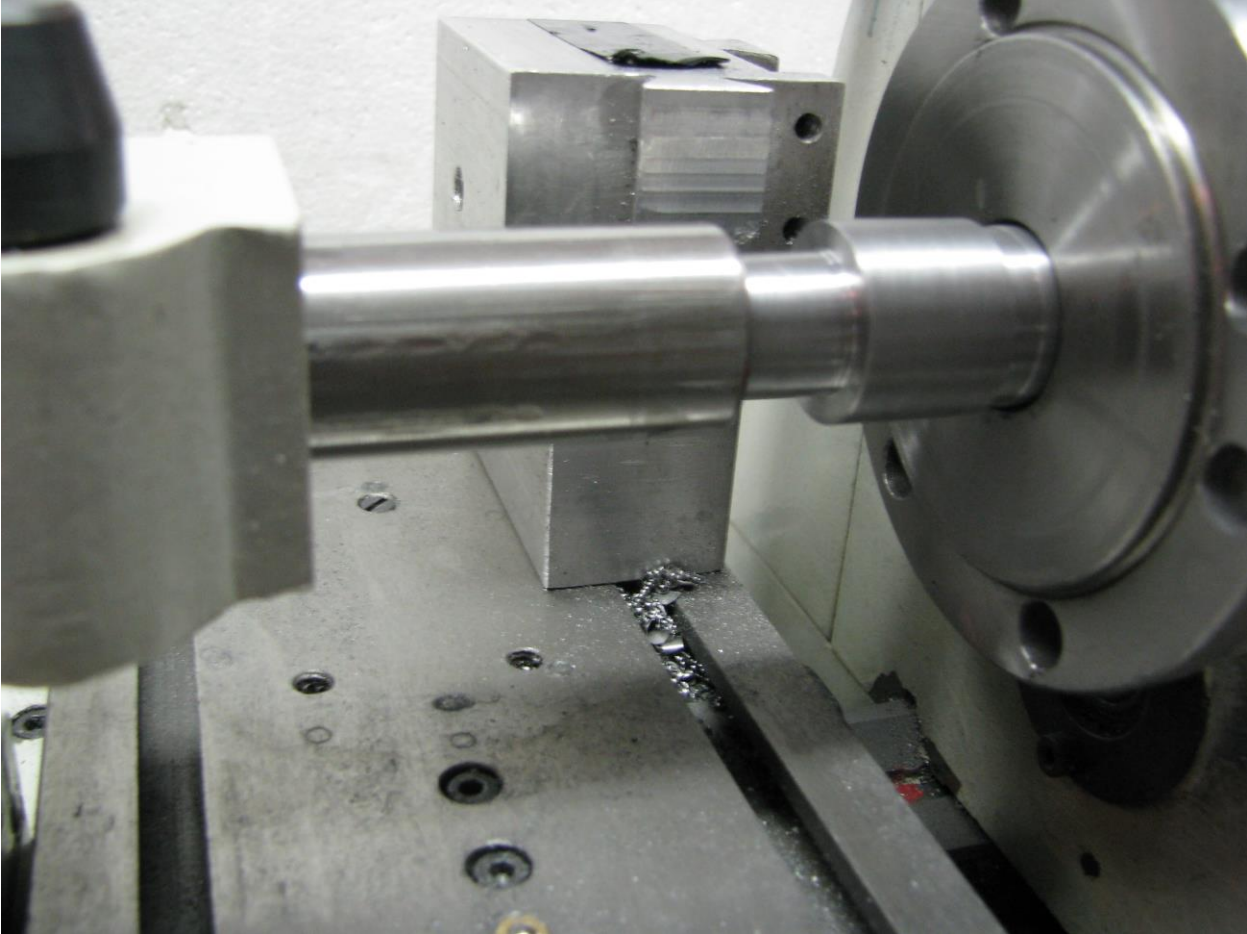




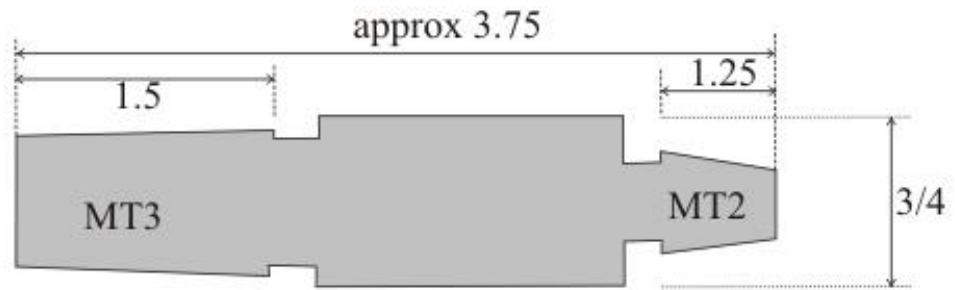












shop hand drawing, not scaled, approximate dimensions

China Lathe Buddy Bar

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