Tips and Tricks

End mill holders BLANKS

Sherline, UNIMAT, Craftsman, etc.

UNIMAT: M12-1.0 or M14-1.0

Typical application: You will obtain the most true running end mill holder when you true the screw-on accessory directly on your lathe spindle. Therefore, we offer various blanks with ¾-16", M12-1.0, M14-1.0, etc. bushings ends, long or short versions.

Procedure. 1) Screw the blank on the lathe spindle of your Sherline, UNIMAT, etc. lathe. Fixing the blank well hand-tight is typically good enough. **2)** Turn down the blank by a few 0.1". For example, when starting with an O.D. 1-1/4" turn is down to about an O.D. of 1". Less than that is often also good enough. That will perfectly true the holder with respect to your spindle. **3)** Square the blank by facing it off. This is as important as step 2. **4)** Remove any small pin on the center line of the part with a file and/or sand paper. **5)** Use your best center drill to center drill the blank. **6)** Bore the hole for the cutting tool using a drill bit and reamer. Having, the exact hole diameter for the cutting tool is important or the end mill will not run true. Thus, indeed use a reamer or a boring bar. The end mill must fit tight into the boring! **7)** Add holes for a set screw and spindle bar or use our hex bar blanks which allow one using a wrench. **8)** Finished.

When working with steel adapters use inserted tip carbide cutters (inserts). Some steel varieties generate hot chips.

Procedure-2. If you have difficulties to properly drill the adapter centered then use a boring bar. The hole you get with a boring bar should be perfectly centered and has naturally the same TIR as your lathe spindle. The tricky part the hole diameter need to match the tool shank perfectly.

Safety/Disclaimer: Adapters are not cutting tools in themselves. Still, general safety rules for machine tools are in place. For an extended list of safety notes, consult the literature or go to our website for a free download of a safety booklet (http://www.lathecity.com/Books/Safety-Booklet-Lathe-City.pdf). We do not warrant that any accessories can be used for any particular application. Damage on equipment (particularly damage on the spindle of the mill by over tightened screws) caused by usage of accessories is the customer's responsibility. End mills are very sharp and have to be handled with caution. End mills are not like lathe cutters and are sharp. Make sure that the auxiliary screw is tight at all times; otherwise, the end mill will pop out of the holder. In most cases, the end mill may land on the work piece. However, this can result in unstable and dangerous

situations with any end mill holder. Use end mills with a flat and clamp the end mill at the flat. If you encounter heavy vibrations then replace the steel set-screws with Nylock (vibration tolerant) set-screws. Hobby machinists tend to stick their nose too close to the machinery. Use safety glasses and protective clothing. This manual does not replace books about metal working and/or proper training. Neither LatheCity nor its owner shall be liable for damage arising from unprofessional use or misuse of LatheCity accessories. Max RPM 1800 for most accessories, some accessories have max RPM of 100! Replace set screws with Nyclock screws in case that heavy vibrations can be expected. Any legal action brought against LatheCity/Uwe Burghaus shall be tried in the State of North Dakota in Fargo, USA. WARRANTY: we do not provide any warranty for our products. In no event shall LaheCity's liability exceed the purchase price paid for the product. We shall in no event be liable for death, injuries to persons or property or incidental, contingent, special or consequential damage arising from the use of our products. None of our accessories or custom designs is intended to be used for transportation applications including but not limited to cars, motorcycles, airplanes, roller skates, bicycles, agriculture vehicles, etc., for civilian or military applications. Similarly none of our accessories or custom designs is intended to be used as components of weapons including but not limited to firearms for civilian or military applications. We herewith explicitly exclude any warrantee or liability if LatheCity products were used directly or indirectly or misused directly or indirectly for the above-mentioned applications (transportation, weapons). Trademarks used in our products (books, manuals, etc.) or used on our website: All trademarks and copyrights are the property of their respective owners.

Returns in resalable conditions are accepted within 30 days (Factory direct) or 2 weeks (eBay) after shipment. All shipping costs will be covered by the customer including taxes, broker fees, whatever fees, and all credit card fees. No restocking fees, no questions asked. No returns of custom designs or customized designs. No returns of bulk orders. No returns of messed-up blanks. General sells and business terms and disclaimer as given on our web site are active.

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