

Universal™ burnishing tools

*For burnishing shafts, faces, tapers, contours,
and relatively large IDs (greater than 2.750
inches/69.85mm)*

- *Boring-bar style and Indexable turning-holder style designs*
- *Tool designs to suit any part size or configuration, or any turning machine*
- *Low surface finishes*
- *Standard, available off-the-shelf*
- *Adjustable for optimum burnishing pressure*
- *Hardened steel or carbide rollers*



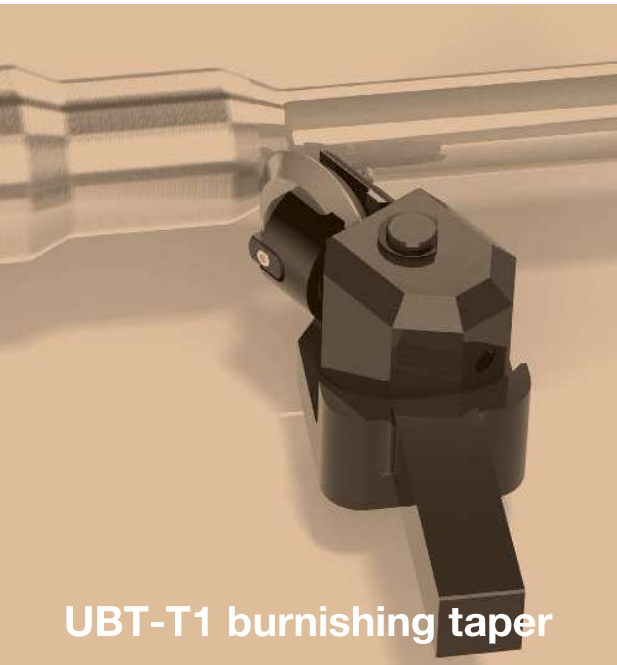
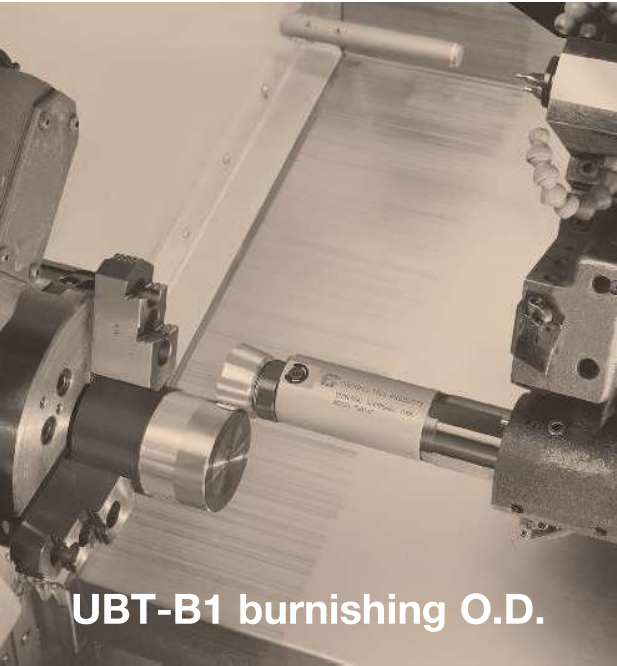
UBT-T1 indexable turning-holder style
burnishing tool for both left and right hand
machine configurations



UBT-B1 boring-bar style
burnishing tool

Versatility

Burnish any size, any configuration, on any turning machine.

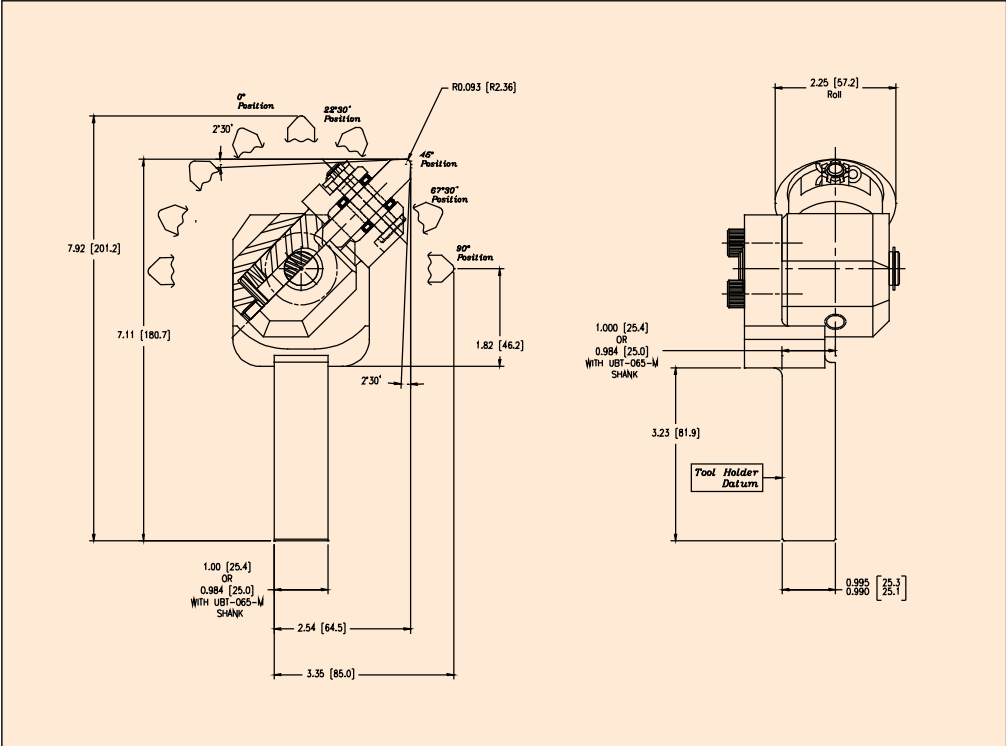


UBT-T Turning-holder style

UBT-T1



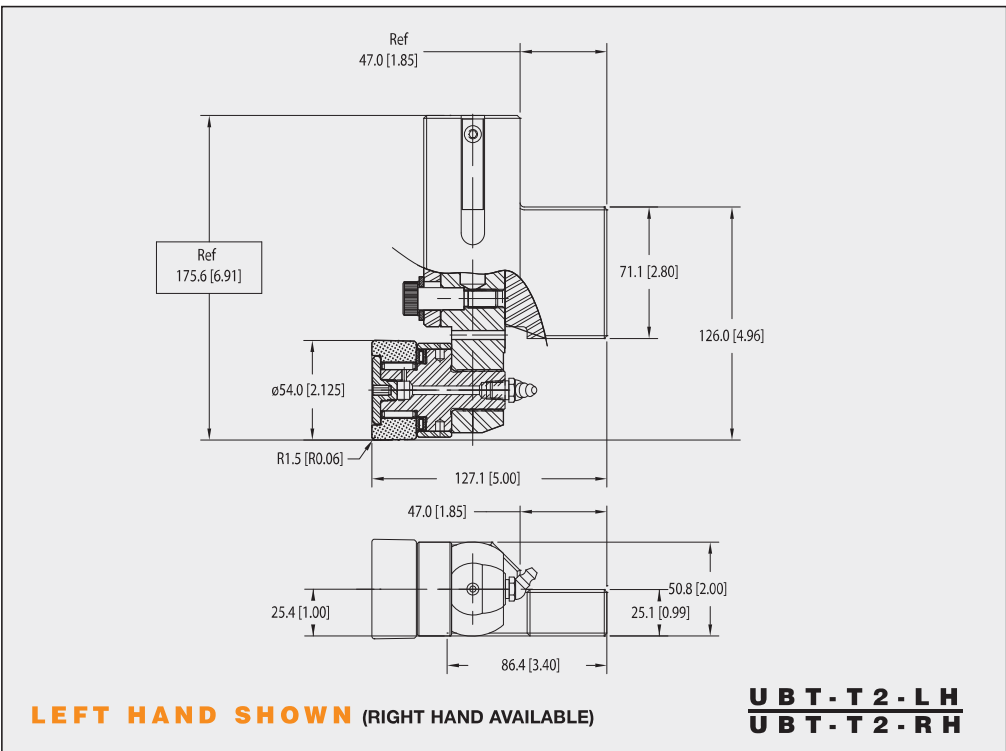
FOR
BURNISHING OUTSIDE
DIAMETERS, FACES,
TAPERS, AND
CONTOURS



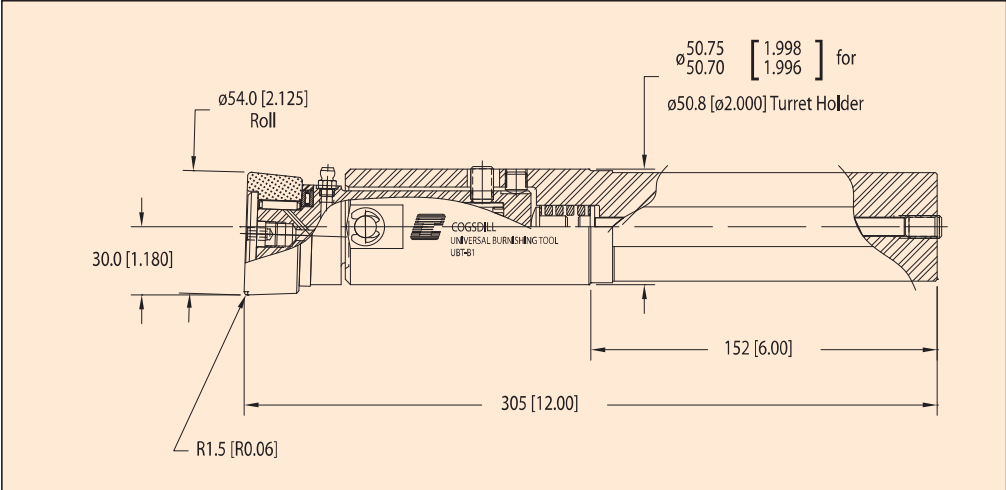
UBT-T2



FOR
BURNISHING
OUTSIDE
DIAMETERS

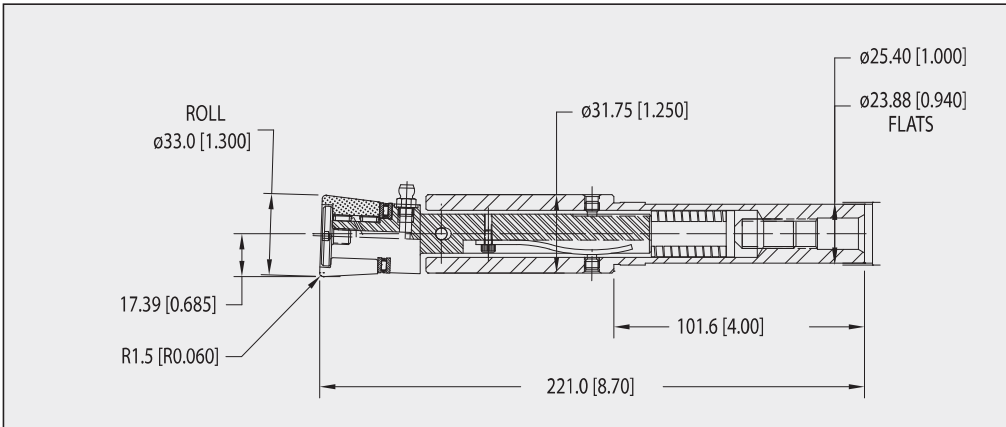


UBT-B Boring-bar style



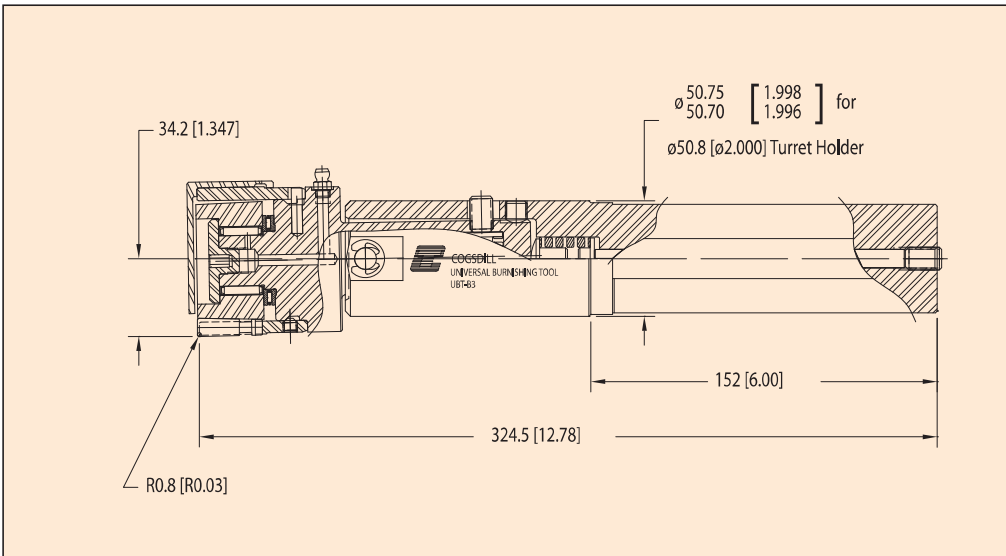
UBT-B1

FOR BURNISHING
OUTSIDE DIAMETERS,
FACES, AND LARGE INSIDE
DIAMETERS (ID'S GREATER
THAN 70mm/2.75 in.)



UBT-B2

A SMALLER VERSION
OF THE UBT-B1
(ID'S GREATER THAN
39.6mm/1.56 IN.)



UBT-B3

FOR USE IN SMALLER INSIDE
DIAMETERS (IDS GREATER
THAN 70MM/2.75 IN.) OR ON
LARGE OUTSIDE DIAMETERS
(GREATER THAN
100mm/4.00in.)

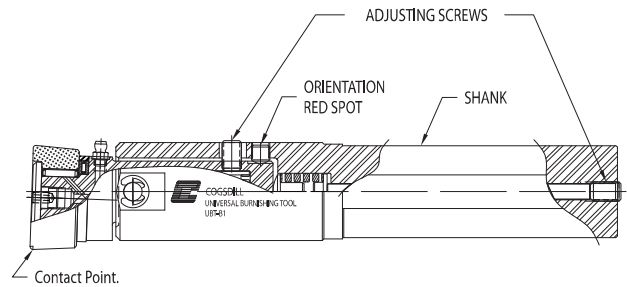
Set-up and operating instructions for UBT-B Tools

Note: UBT™ single-roll burnishing tools do not have the advantage of an overlapping effect as with multi-roll tools, and for this reason slower feed rates and/or multiple passes over the part may be required in order to produce the desired finish.

UBT-B1 tool set-up

Loosen the load *adjusting screws*. Retighten the *adjusting screws* until they come into contact with the spring. Continue to tighten both screws one turn past snug. This is a recommended starting point for mild steel.

Adjustments can be made to the burnishing force to achieve optimum finish. Tighten the *adjusting screws* clockwise to increase the burnishing force, three turns total, or counterclockwise to reduce the force.

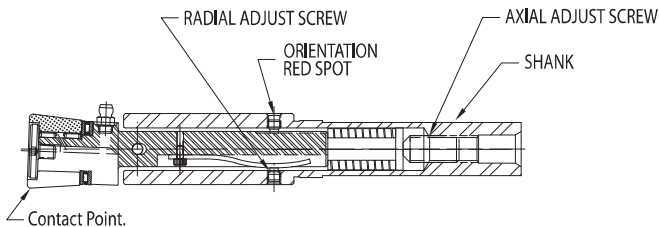


UBT-B2 tool set-up

Loosen the load *adjusting screws*. Retighten the *axial adjusting screw* until it comes into contact with the spring. Continue to tighten three turns past snug. This is a recommended starting point for mild steel.

Tighten the *radial adjusting screw* until it comes into contact with the spring. Continue to tighten 1-1/2 turns past snug. Do not tighten beyond this point; overloading this screw will not allow the tool to float on its spring travel and will impede tool function.

Adjustments can be made to the burnishing force to achieve optimum finish. Tighten the *axial adjusting screw* only. Turn clockwise to increase burnishing force, for a total of 6-1/2 turns, or counterclockwise to reduce the force.

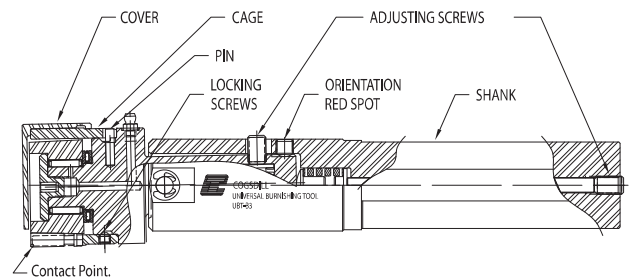


UBT-B3 tool set-up

Loosen the load *adjusting screws*. Retighten the *adjusting screws* until they come into contact with the spring. Continue to tighten both screws one turn past snug. This is a recommended starting point for mild steel.

Adjustments can be made to the burnishing force to achieve optimum finish. Tighten the *adjusting screws* clockwise to increase the burnishing force, for a total of three turns, or counterclockwise to reduce the force.

To index to a new roll station, pull off *cover*. Loosen *locking screws* and slide *cage* forward approximately 0.157 (4.0mm) until it disengages from *pin*. Rotate *cage* approximately 60°, until *pin* aligns with slot in *cage*, and push back. Tighten *locking screws* and replace *cover* in position, exposed *roll* opposite orientation red spot.





UBT-B TOOLS

Set-up and operating instructions for UBT-B tools

UBT-B tool operation

Mount any UBT-B tool in the desired boring bar station. (Note: The red orientation spot *must* be opposite the contact point.) Bring the tool into contact with the part to be burnished.

Feed the tool another 0.003-0.005 inch (0.08-0.13mm) into the part to provide interference between the roll and part so that the roll will float

in its spring travel. Interference should not be used to increase burnishing force; burnishing force should only be adjusted with the load adjusting screws. This ensures the tool can be fed on/off the part and across interruptions without damage to the tool or workpiece.

For optimum results and long tool life, coolant is required. Any soluble,

synthetic, or straight oil can be used. Whenever possible, and for best results, the tool should be fed towards the spindle when burnishing diameters and towards the centerline when burnishing faces. (Note: the UBT-B3 tool cannot be used to burnish faces.)

BORING BAR STYLE			
TOOL #	ROLL (STANDARD)	OPTIONAL HSS ROLLS	OPTIONAL CARBIDE ROLLS
UBT-B1	UBT-001 (HSS .060 Radius)	STANDARD .060 HSS	UBT-002 (.060 Radius)
		UBT-003 (.030 Radius)	UBT-004 (.030 Radius)
UBT-B2	UBT-018N (HSS .060 Radius)	STANDARD .060 HSS	UBT-019N (.060 Radius)
UBT-B3	6100-708-00312 (.030 Radius)	N/A	

UBT-B1 & UBT-B3 tools have a 2.00" shank. optional roll and/or 50mm shank must be specified.

UBT-B2 tools have a 1.00" shank. optional roll and/or 25mm shank must be specified.

Special tooling and rolls available upon request. please contact Cogsdill for additional information.

Speed and feed recommendations for UBT-B tools

SPEED	
SFM	M/MIN.
750	230

FEED	
IPR	MM/REV.
0.001/0.006	0.02/0.15

Lubrication of UBT-B tools

All UBT-B tools should be periodically greased (approximately every 24 hours of operation). We recommend the use of high-quality Lithium complex grease.