

Using Guide of OD Stepped Shaft Burnishing Tools

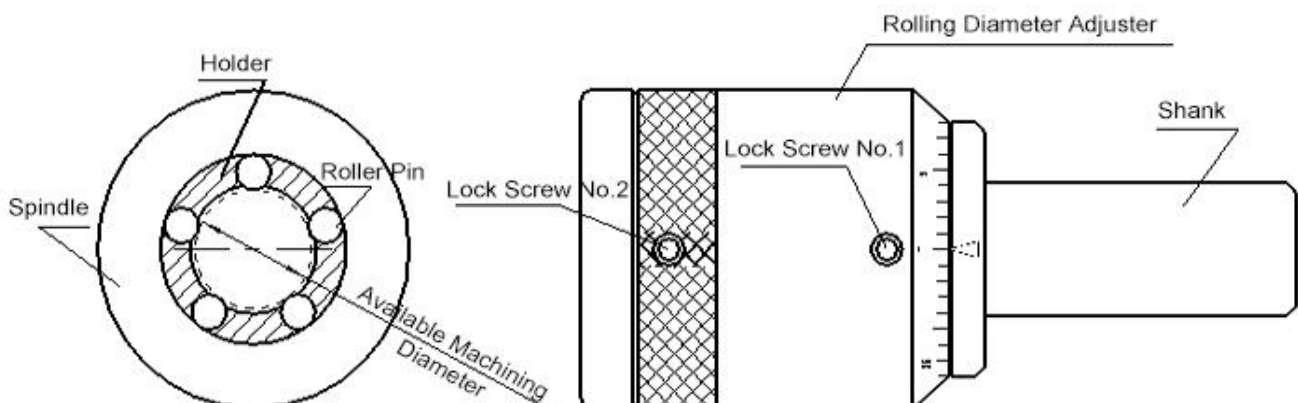


Features

- 1) The OD stepped shaft burnishing tool can be used at drilling machine, lathe, milling machine, CNC machine, machining center, etc.
- 2) Suitable for all kinds of metal workpiece with hardness below HRC40.
- 3) The surface roughness of workpiece can achieve about $Ra0.2 \mu m$ after burnishing.

Using guide

1) Structure of drawing



2) Rolling diameter adjustment

Please use the Allen wrench to loose Lock Screw No.1, hold the Rolling Diameter Adjuster, and then rotate the shaft to clockwise and anticlockwise to adjust the rolling diameter of tool, clockwise direction is

larger rolling diameter, otherwise anticlockwise is smaller rolling diameter. The value of each scale is 0.0025mm; The Lock Screw No.1 should be locked after adjustment.

Parameter setting

In order to achieving the best burnishing allowance, the machining parameter is set according to the situation of workpiece, such us material, hardness, surface roughness before burnishing, etc. The best parameter should be set before batch machining.

Diameter(mm)	3-10	11-20	21-30	31-50	51-70	71-100
Rotate Speed(r/min)	1200-900	900-700	700-500	500-400	400-200	200-100
Feed Rate (mm/rev)	0.1-0.2	0.15-0.25	0.2-0.3	0.4-0.5	0.6-0.7	1.0-1.2

Maintenance

In order to extend the service life of tool, daily maintenance is very important. RBT has some proposal as below:

- 1) Replace Roller Pin: Loose the Lock Screw No.2, take off the Holder, and then replace the Roller Pins, please be sure to keep in mind, the Roller Pin should be replaced in group.
- 2) Replace Holder: Loose the Lock Screw No.2, replace the holder.
- 3) Replace Spindle: Clamp the shank, loose the Lock Screw No.2, and then replace the Spindle.
- 4) It is necessary to keep the working part of the tool with clean and lubricate, it regularly to clean up the accumulation between the Roller Pin and the Holder.
- 5) During the lubricant is used in circulation, please use the filter to chip, and keep density of the filter is within 5-40um.

Notes

- 1) In order to achieving the best burnishing allowance, the machining parameter is set according to the situation of workpiece, such us material, hardness, surface roughness before burnishing, etc. Please to machine 2-3 piece in initial stage to achieve the best rolling value before bathe machining.
- 2) Choose a clean low viscosity cooling lubricant, the reference table from RBT as below:

Material	Coolant Oil	Ratio
Steel	Engine oil + Diesel oil	3:7
Aluminum	Engine oil + Kerosene	3:7
Copper	White oil or Sewing-machine oil	-
Cast Iron	Engine oil + Diesel oil	3:7

Demonstration Videos

- 1) <https://www.youtube.com/watch?v=VsgyyM5ATzk>
- 2) <https://www.youtube.com/watch?v=2-Rypbvvs9Y>