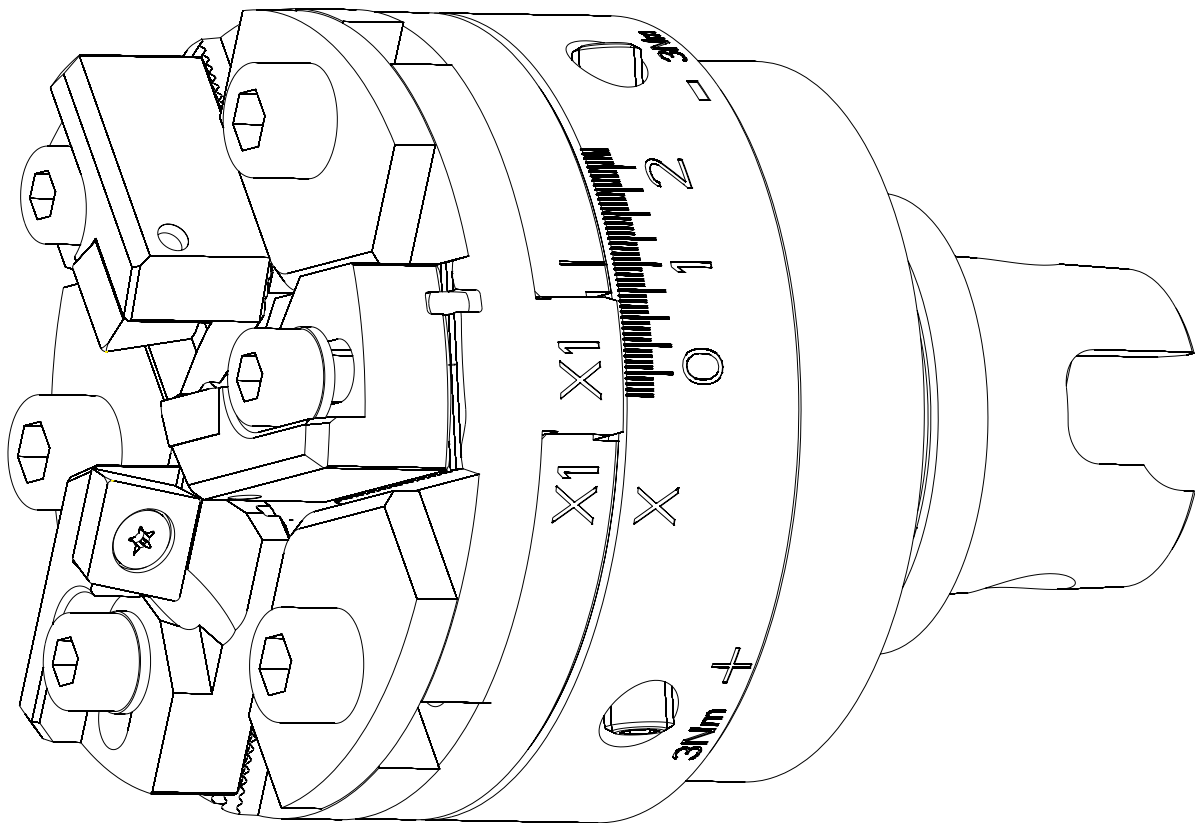


# Operating Manual

Triple-Cutter Turning Head

## DSD 16



## Brief instructions for a DSD 16

### Application area:

The DSD 16 turning head is used for cylindrically stripping workpieces. The diameter of the journal that has to be turned can be between  $\varnothing$  1 mm and  $\varnothing$  16 mm.

The DSD 16 can be used both stationary with rotating workpieces (e.g. on a turret in a lathe) and as a rotating unit with stationary workpieces.

### Operation:

The DSD 16 turning head is equipped with 3 cutting inserts, which are distributed evenly around the circumference, which enables the workpiece to be centred optimally. The toolpiece is positioned during the machining so that it is centred on the workpiece and the working feed moves it in the 'Z' direction so that it is over the workpiece. It is retracted in the 'Z' direction with the spindle still rotating after the programmed turning length has been reached. Fast traverse can be used for the retraction movement.

### Fitting the cutting inserts:

The cutting inserts are fitted compactly in the cutting insert holders [100] and a countersunk screw [110] is used to secure them in place. A T15 Torx screwdriver must be used to tighten up the screw.

### Setting up the diameter:

The coarse adjustment is realised by offsetting the cutting insert holders in the serrations. You must always ensure that all three holders are positioned in the same way in the serrations. The serration pitch is 1 mm, i.e. if the holders are offset by one serration then the turning  $\varnothing$  setting will be changed by 2 mm.

Fine adjustment is realised centrally for all three cutting insert holders by using two threaded pins [30]. Never over-tighten the three clamping screws [80] (max. 5 Nm). The threaded pin marked with a '-' should be unscrewed until the diameter that is approx. 0.5 – 1 mm bigger than the required turning diameter can be set up by screwing in the threaded pin marked with a '+'. The '+' threaded pin should now be screwed out slightly. The threaded pin marked with a '-' should now be screwed in so that the cam ring [20] can be turned until the required setting is set up. One turn of the threaded pin effects a diameter change of 0.08 mm. The second threaded pin can now be screwed back in. The second threaded pin must only be screwed in place lightly (approx. 3 Nm); **never over-tighten!**

Tighten up the clamping screws [80] if no more adjustments are needed.

### Maintenance:

The turning head can be dismantled into separate parts for maintenance and cleaning. Proceed as follows:

1. Unscrew and remove the cylinder head bolts [120] that secure the cutting insert holders in place and then remove the cutting insert holders [100].
2. Unscrew and remove the cylinder head bolts [80] that clamp the slide bars [40] in place. Remove the disks [70] and the slide bars [40] by pulling them out of the guide in the cam ring [20] in the axial direction.
3. Unscrew the cylinder screws [90] and then detach the mounting shank from the base body [10].
4. Fully unscrew and remove the two threaded pins [30] used for setting up the diameter.

5. The cam ring [20] can now be pulled away from the base body [10].
6. Clean and lightly oil all of the parts, especially the smooth surfaces and the serrations.

**Reassembly:**

1. Slide the cam ring [20] onto the base body [10]. The grooves must be pointed in the direction base body's flat face.
2. Screw the threaded pins [30] back in and position the cam ring [20] relative to the base body [10] so that the threaded pins fit in the relevant milling grooves.
3. The base body [10] must be mounted on the holding flange and the 3 cylinder head bolts [90] must be screwed back in to hold it in place.
4. Refit the slide bars [40] in the base body's guide so that the slide bar's pin sits in the relevant recess in the cam ring [30]. You must always ensure that the numbering on the slide bar concurs with the numbering on the base body.
5. Use the disks [70] and the cylinder head bolts [80] to re-attach the slide bars [40] to the base body [10]. Tighten up the cylinder head bolts [80] so that they are only finger-tight.
6. Refit the cutting insert holders [100] in the slide bar's serrations [40] so that the required turning diameter can be set up as closely as possible. A pin or a drill shank can be used to determine the approximate turning diameter. Retighten the holder's cylinder head bolts [120].

**You must ensure that the serrations are clean, that the holder's serrations sit correctly in the slide bar's serrations and that all three holders are fitted in the same positions, i.e. in the same positions in the serrations.**

Now use the threaded pins [30] to set up the turning diameter (a pin or a drill shank can be used as the gauge) and then tighten up the cylinder screws [90] to lock the setting in place.

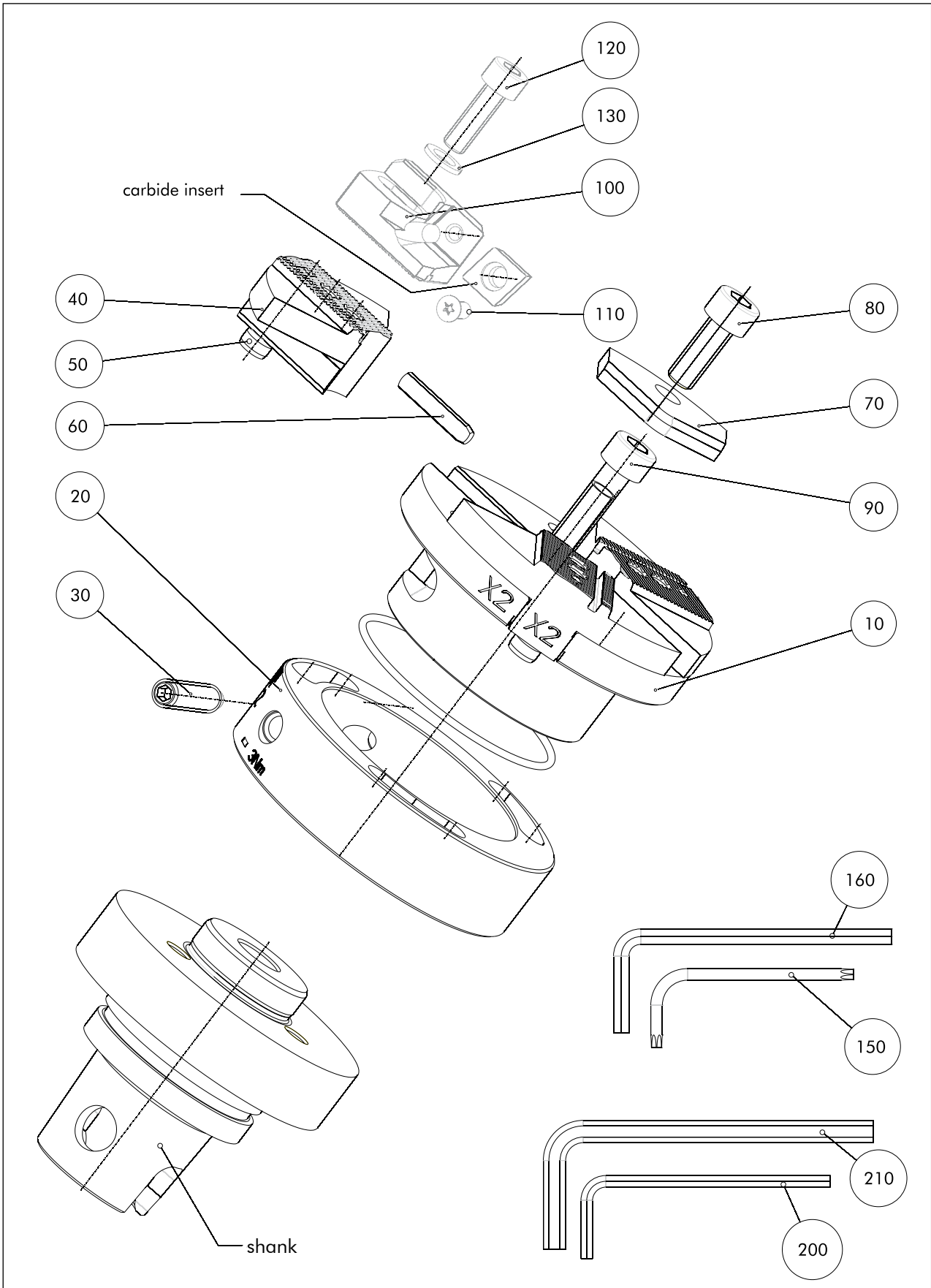
**Spare parts / accessories DSD 16**

| Item | Quantity | Designation                  | Article No. |
|------|----------|------------------------------|-------------|
| 10   | 1        | base body                    | 74490200    |
| 20   | 1        | cam ring                     | 74490100    |
| 30   | 2        | threaded pin                 | 03016131    |
| 40   | 3        | slide bar                    | 78055800    |
| 50   | 3        | pin                          | 74612000    |
| 60   | 3        | feather key (4x2x20)         | 71881900    |
| 70   | 3        | disk                         | 74490400    |
| 80   | 3        | cylinder head bolts M 6 x 16 | 02015105    |
| 90   | 3        | cylinder head bolts M 6 x 30 | 02015110    |
| 200  | 1        | screwdriver 3                | 02677003    |
| 210  | 1        | screwdriver 5                | 02677005    |

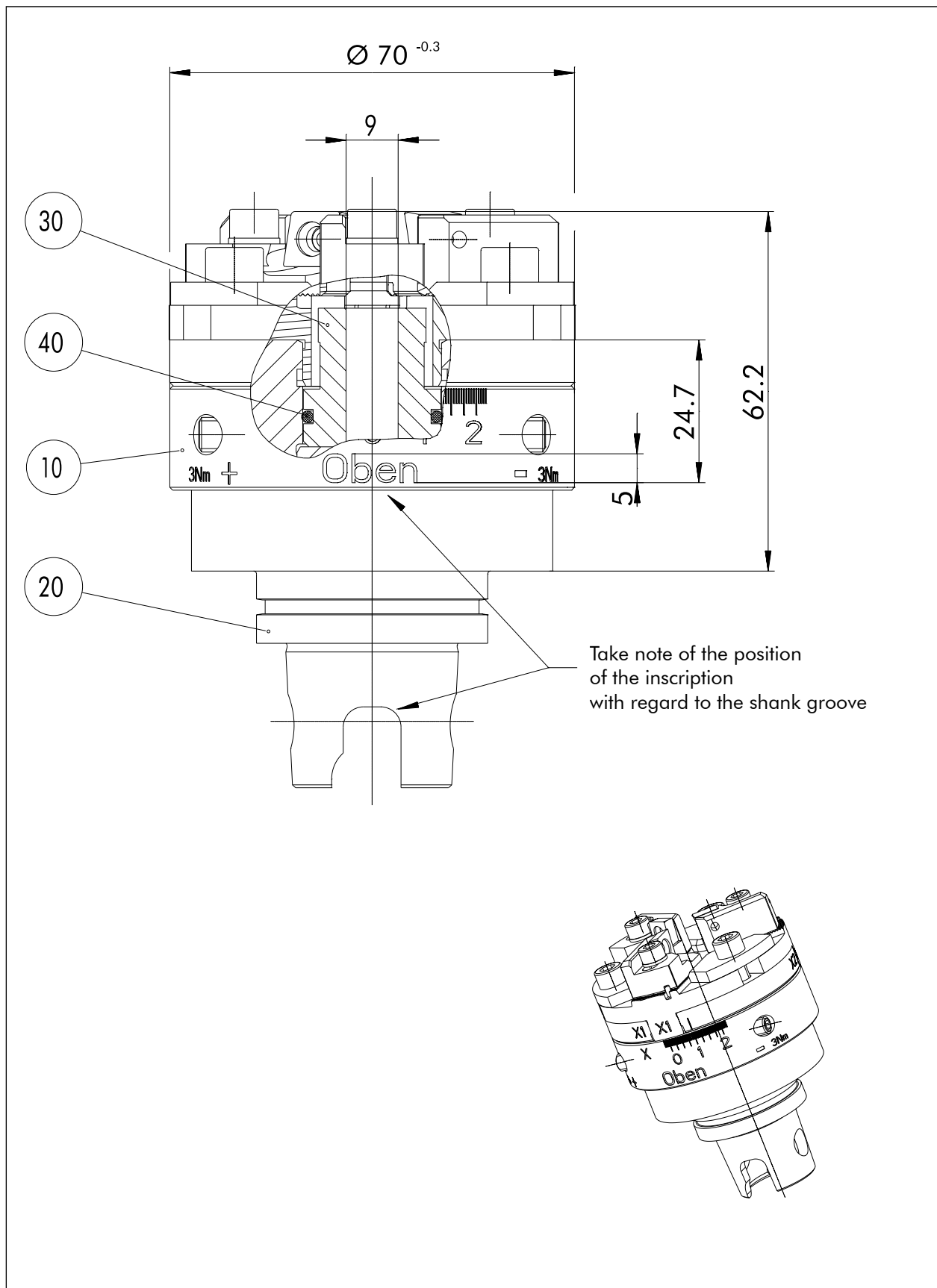
**DSD carbide insert holder**

|     |       |                              |            |
|-----|-------|------------------------------|------------|
| 100 | 1 set | carbide insert holder        | on request |
| 110 | 3     | countersink screw M 3.5 x 9  | 74162500   |
| 120 | 3     | cylinder head bolts M 5 x 16 | 02015055   |
| 130 | 3     | stop disc                    | 72193200   |
| 140 | 1     | T15 Torx screwdriver         | 02676915   |
| 150 | 1     | screwdriver 4                | 02677004   |

Drawing No. 74490000



Drawing No. 74490000-2



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WAGNER® Werkzeugsysteme Müller GmbH  
Gutenbergstraße 4/1  
D-72124 Pliezhausen

Phone: +49(0) 71 27/ 97 33-00

Fax: +49(0) 71 27/ 97 33-90

Email: [info@wagner-werkzeug.de](mailto:info@wagner-werkzeug.de)

[www.wagner-werkzeug.de](http://www.wagner-werkzeug.de)