TD Series

Portable lathes for on-site machining of valves, flanges, pumps, turbine housings etc.

A forward-looking solution for machining the valves of today

EFCO-TD
The portable TD machine for turning drill holes and sealing surfaces in vales, cylinders, pumps, turbine housings, flanges etc. It is particularly suitable for turning cylindrical sealing surfaces in high-pressure valves (board-cutting seal) and for turning complete valve seatings. Also suitable for turning conical sealing surfaces.

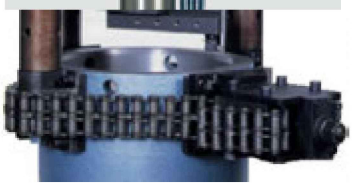
The TD machines are suitable for use on site and in the workshop, in nuclear and conventional power stations, for servicing equipment, in chemical engineering and petrochemicals, in structural steel engineering, in shipyards and oilfields.

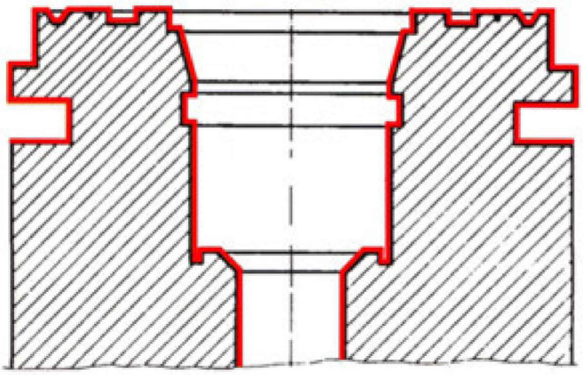
They are operated via Mobile Panel. The controls for fine adjustments are located on the gear housing. Intervention into the turning head is not necessary. Through this, the safe and easy control of the machine is possible in any mounting position.

The axial and radial paths are limited by limit switches. These machines are supplied equipped with all the necessary accessories.

The TD machines are normally installed on a flange. The machine is adjusted to the appropriate diameter of hole by means of replaceable tensioning arms. The horizontal adjustment is carried out using bolts with fine threads, whilst setscrews are used for centering.

Alternatively, there is also a chain tensioning device which enables flanges to be turned as well.
Thus the machine can even be installed in situations where there is no flange.





Machining options

<u>Its outstanding features include:</u>

- Fully-automatic radial and axial feed
- Axial feed, continuously adjustable
- Excellent stability even when removing large amounts of swarf (robust rotary head)
- Suitable for installation in any situation – on site or in the workshop
- Variety of installation systems
- Precision height and center adjustment
- Control on the mobile panel (no accessing of rotating parts)
- Use of standard square tool holders
- Extension of immersion depth possible

Taper lathe (only TD-1.02,TD-2.02)

As well as machining cylindrical and flat surfaces, the TD-lathes also allow conical surfaces to be machined. This application requires a taper lathe instead of the facing head. There are two different sizes:

LKD 1 with a max. rotational diameter of 180 mm (7") (carriage travel = 36 mm (1.4"))
LKD 2 with a max. rotational diameter of 400 mm (15.7") (carriage travel = 60 mm (2.4"))

Taper lathes allow any angle to be machined from 0° (= facing) to 90° (=hole drilling).

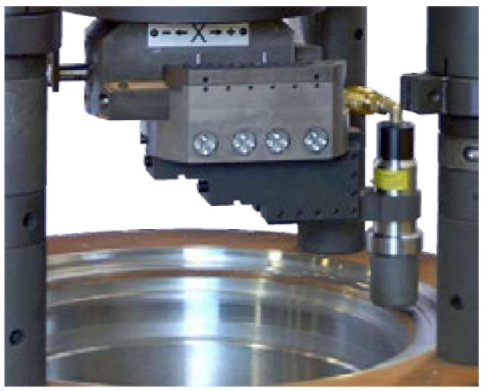
Axial plunging tools (only TD-1.02,TD-2.02, TD-3.02)

Time and again, the separation of welding seams when seating sections are welded in represents an insuperable problem.
By deploying **axial plunging tools** in conjunction with the TD machines, this job becomes almost child's play.
The way that the tool is assembled using a modular system gives it the greatest possible degree of flexibility. Thus, even with the basic version, seatings up to a depth of approx. 600 mm (23.6") can be plunged.
The standard range comprises three different tool heads (core bits):

Size 1:	Ø100 – 155 mm (3.9" – 6.1")	(2 cuts)
Size 2:	Ø150 – 210 mm (5.9" – 8.3")	(4 cuts)
Size 3:	Ø190 – 250 mm (7.5" – 9.8")	(4 cuts)

All core bits are equipped with interchangeable cutter elements (HSSE or HM). Plunging depth is 30 mm (1.2").
The central guide pin means that the tool can be controlled superbly well. It also offers the opportunity to punch materials through absolutely safely without the core tipping on its edge.

Grinding device for machining drill holes and flat surfaces (only TD-1.02,TD-2.02, TD-3.02)



The TD series of portable lathes can be used to produce dressed-quality finishes.
For most applications this is perfectly satisfactory. However, if a superior-quality finish is required, then the workpiece should be ground.

For this purpose, EFCO can supply a pneumatic grinding device which can be fitted to the TD machine as a special accessory.
The machine, which is aligned with the workpiece, does not need to be dismantled in order to fit the grinding device.

EFCO-TD – The Universal Solution

Technical data	TD-03	TD-1.02	TD-2.02	TD-3.02
Turning range	up to Ø 150 (up to Ø 5.9”)	up to Ø 400 (up to Ø 15.7”)	up to Ø 800 (up to Ø31.5“)	Ø 400-1250 (Ø 15.7“-49.2“)
Working depth	max. 250 (max. 9.8”)	max. 350 (max. 13.8”)	max. 600 (max 23.6“)	max. 1000 (max. 39.4“)
Radial stroke	20 (0.79”)	40 (1.57“)	60 (2.36“)	130 (5.1“)
Axial stroke	100 (3.94“)	120 (4.2“)	250 (9.8“)	600 (23.6“)
Installation Ø	Ø 80-300 (Ø 3.2”-11.8”)	Ø 330-750 (Ø 13”-29.5”)	Ø 400-1100 (Ø 15.8“-43.3“)	Ø 780-1780 (Ø 30.7“-70.1“)
Machine height	660 (26”)	950 (37.4“)	1150 (45.3“)	1800 (70.9“)
Drive	electric 230/110 V, 50/60 Hz or pneumatic 6-7 bar			

Dimensions in mm (inch)

The TD machines, like all EFCO machines, form a complete repair system.

The wealth of accessories supplied with these machines enables them to be fitted and adjusted precisely to virtually any equipment. The standard accessories include a range of turning tools.
The machine and its accessories are accommodated in a practical workshop trolley.

The possibilities for upgrading and variations in configuration are virtually limitless.
Examples include:

- Working at greater depths
- Interchangeable drive motors (electric / compressed air).
- Additional adjustable support when submerged at great depth.
- Variable or special installation accessories

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