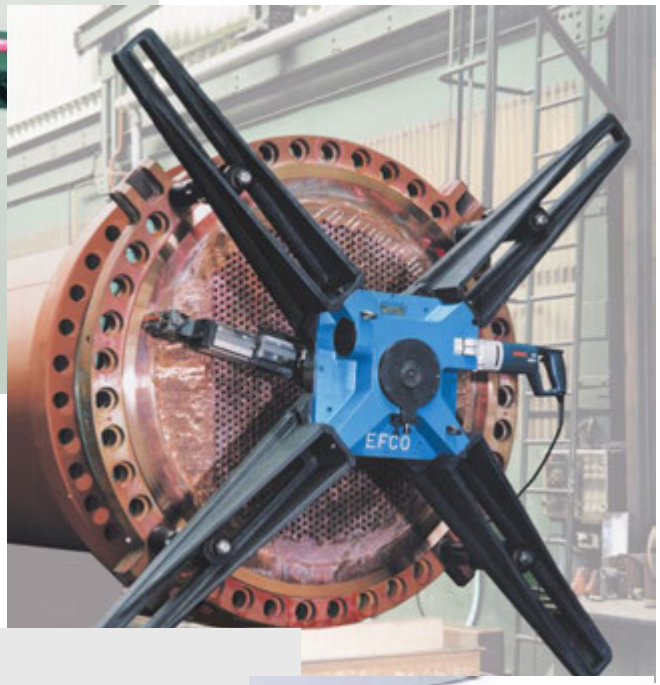
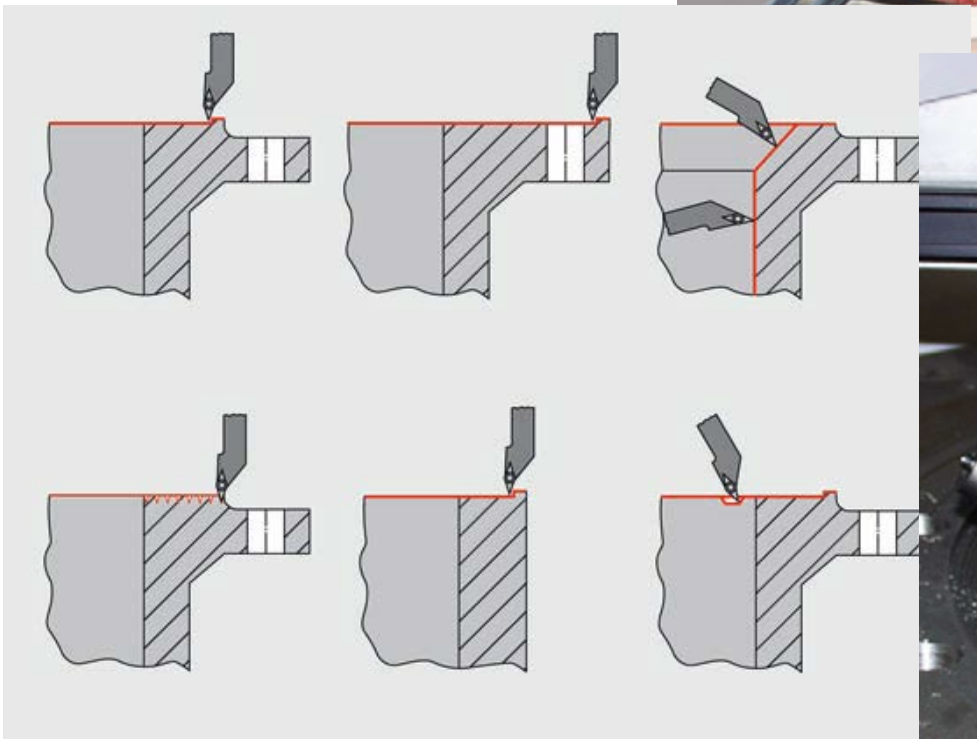
TDF Series

PORTABLE FLANGE TURNING MACHINE WITH EXTERNAL CLAMPING



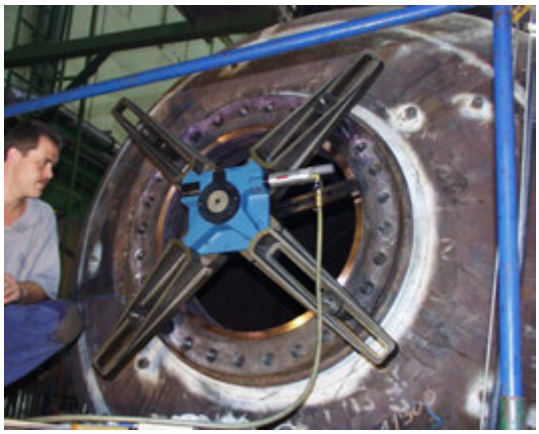
Numerous machining options



QUALITY, RELIABILITY AND INNOVATIVE TECHNOLOGY

Due to the constantly rising pressure on the costs of industrial maintenance, the demands made on the machines and tools required also increase.

The particular low profile and low weight of the portable TDF series turning machines create new possibilities for flange machining on site.

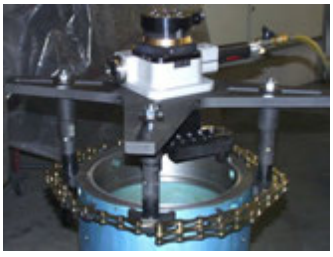

TDF-2 with compressed air drive

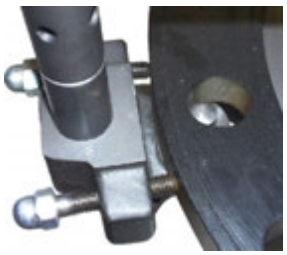
TDF-2 with electric drive

EFCO TDF machines are particularly suitable for:

- Machining of flanges of all types
- Valve housings
- Bottles
- Heat exchangers
- Fittings in shipbuilding
- Columns in refineries and the chemical industry
- Smooth and helically fluted flange sealing faces
- Internal cones and bores (special facing head)

Three different setup types:





Basic mounting on the flange bore
TDF machines can be mounted directly on the flange.
The machines can be aligned precisely with regard to the face to be machined using the integral adjustment system.

Chain clamping
If there is no flange, for example on Brettschneider closures, the chain tensioning system is the ideal solution.
The four clamping points required for mounting are provided by this system.

Mounting on tensioning blocks
Tensioning blocks are another universally adjustable clamping device for flanges with clearance holes. They form part of the scope of supply for many models of the TDF range.

Machine descriptions

	TDF-05	TDF-1	TDF-2	TDF-3	TDF-4
Face turning ranges	**0-250 mm (0-9.8“)**	**0-500 mm (0-19.7“)**	**300-1200 mm (11.8”-47.2”)**	**500-2200 mm (19.7“-86.6“)**	**1500-3500 mm (59“-137.8“)**

The low weight and low profile make mounting easier as this is normally handled by only one person. The machines are particularly suitable for the on-site repair of sealing faces of flanges in pipelines.
The simply designed clamping and adjustment system permits mounting of the machines extremely quickly precisely centred and level to the flange.
Both machines are fitted with a facing head. It has 2 automatic feeds (0.1 mm (0.004”)/rotation for finishing and 1 mm (0.04”)/rotation for turning of spiral grooves or a surface roughness Rz 160 The cutting tool feed is 20 mm (0.8”) (50 mm (2”) for the TDF-3).
Indexable inserts with appropriate inserts are part of the standard equipment.

As an option, both machines can be fitted with an angled facing head.
The facing slide of this head can be continuously adjusted from 0° (facing) to 120°.
The stroke is 60 mm (2.36”).

This means that bores, too, can be machined at the 90° setting.

TDF-1

TDF-05-A

	TDF-05A	TDF-1A
Face turning ranges	**0-250 mm (0-9.8“)**	**0-400 mm (0-15.7“)**

These machine types have an additional manual axial feed of 30 mm (1.2”). Despite this additional function, the machine height is only 310 mm (12.2”).
These models, too, can be mounted and operated by only one person without effort.
Due to the additional axial feed, the TDF-A machines are particularly suitable for cutting sealing grooves of all types.
Whilst the cutting tool feed on TDF machines can be operated only with the machine stationary, the axial feed which is arranged centrally to the machine, can also be moved with the cutting steel rotating.
The 2-feed facing head (0.1 mm (0.004”)/rotation and 1 mm (0.04”/rotation) used on TDF machines is also used here.
As an option, the machines can be fitted with the angled facing head.

Angled facing head

All machines are low-maintenance and have lifetime lubrication.

Specifications - all dimensions in mm / inch

Type	TDF-05	TDF-05A	TDF-1	TDF-1A	TDF-2	TDF-3	TDF-4
Machining dia.	0-250 0-9.8”	0-250 0-9.8”	0-500 0-19.7”	0-400 0-15.7”	300-1200 11.8”-47.2”	500-2200 19.7”-86.6”	1500-3500 59”-137.8”
Mounting dia.	250-400 9.8”-16”	250-400 9.8”-16”	260-600 10.2”-23.6”	260-600 10.2”-23.6”	485-1345 19.1”-53”	600-2710 23.6”-106.7”	1500-3700 59”-145.7”
Machine height	230 9.1”	310 12.2”	230 9.1”	310 12.2”	350 13.8”	450 17.7”	760 29.9”
Radial stroke	80 3.15”	80 3.15”	80 3.15”	80 3.15”	100 3.9”	150 5.9”	200 7.9”
Radial feed, Fine (automatic)	0.1 0.004”	0.1 0.004”	0.1 0.004”	0.1 0.004”	0.1 0.004”	0.1 0.004”	-
Radial feed, Coarse (automatic)	1 0.04”	1 0.04”	1 0.04”	1 0.04”	1 0.04”	1 0.04”	-
Axial stroke (manual)	-	30 1.2”	-	30 1.2”	-	-	-
Cutting tool feed	20 0.8”	-	20 0.8”	-	20 0.8”	50 2”	80 3.15”
Axial stroke with angled head (optional)	60 2.36”	60 2.36”	60 2.36”	60 2.36”	80 3.15”	80 3.15”	80 3.15”

All machines can be supplied with an electric as well as a compressed air drive.

Extensive accessories

All tools required for mounting are part of the scope of supply of the TDF machines. In addition, all TDF machines are equipped with a range of cutting tools.

Subject to technical change.

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