



EFCO MASCHINENBAU GMBH

VALVE REPAIR AND TESTING EQUIPMENT

Serving the World

Wherever fittings, valves, and pumps are used for safe transport and efficient processing of volatile or liquid substances, EFCO equipment is also needed to rework, repair and test seals, shut-off bodies and housings. You will find our products in industries such as:

- Process industry
- Valve service
- Valve manufacturing
- Power generation
- Motor construction
- Shipbuilding
- wagon construction and many more.

Designing and manufacturing machines and devices for the machining, repair and testing of valves, flanges, and pipelines of all kinds is EFCO's core competence.

Our product range includes:

- Portable and stationary machining and repair equipment for valves, flanges and pipelines
- Surface grinding and lapping machines
- Valve test benches
- Workshops, mobile and stationary
- Planning of workshops
- Consumables and much more

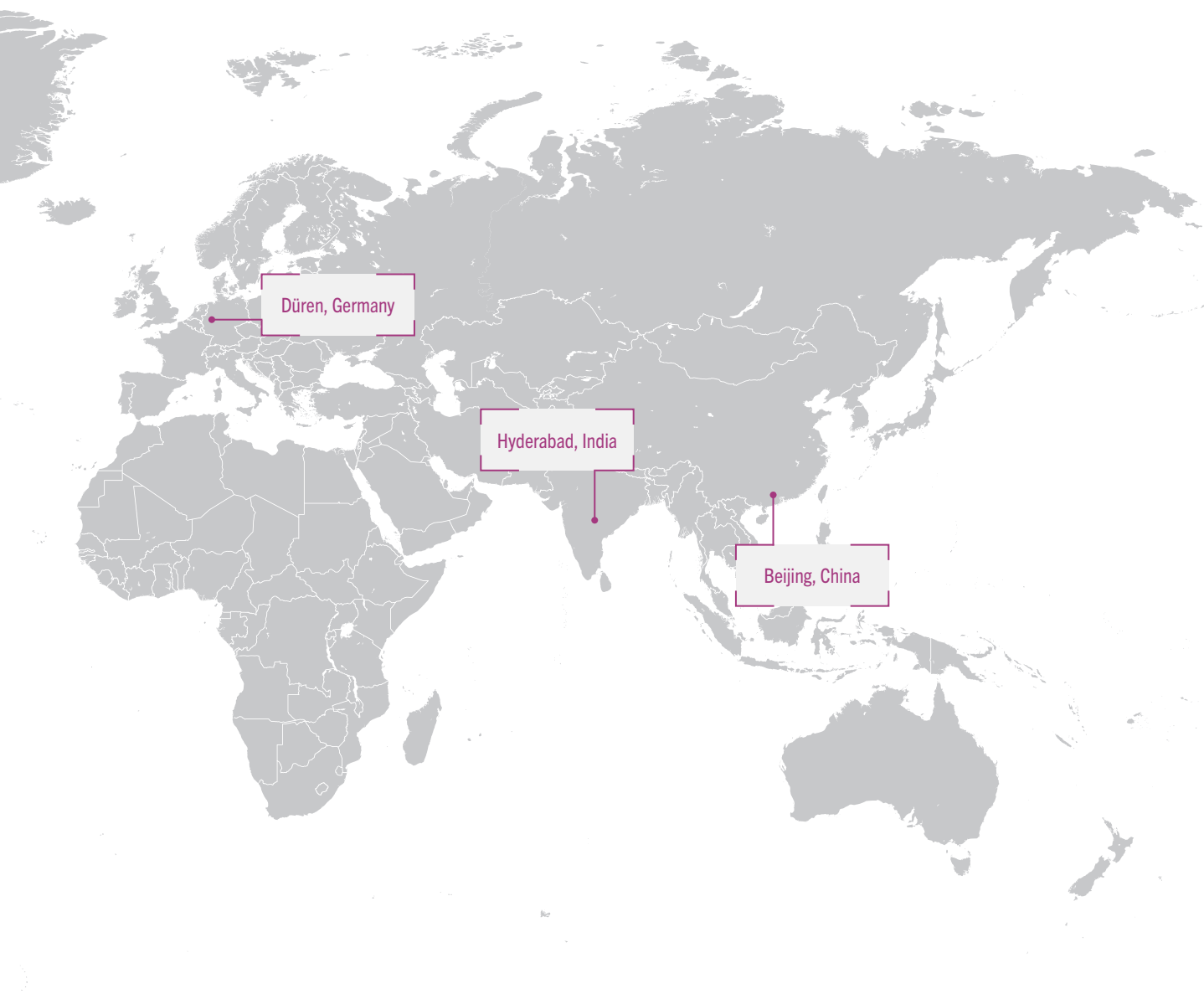
Please contact our team in Düren, our sales offices or our sales partners for further information or if you have any questions. You can also visit us on the internet at www.efco-dueren.com

We will gladly demonstrate our machines, also at your facility.



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GRINDING AND LAPPING EQUIPMENT



TURNING EQUIPMENT














TESTING EQUIPMENT











OTHER PRODUCTS








Flat Seats / Safety Valves:

Mobile Machining			Stationary Machining				
	VALVA	Grinding/Lapping Equipment	5		TSV	Grinding/Lapping Equipment	9
		Battery-Powered Machines	8		SM-D	Grinding/Lapping Equipment	10
	VSA	High-Speed Grinding	9		MK/ENT	Grinding Equipment	11
	TSV	Grinding/Lapping Equipment	9		CW-1000	Welding Equipment	21
	TD	Turning Equipment	12				
	TD-CNC	Turning Equipment	15				
	CW-1000	Welding Equipment	21				







Conical Seats:

Mobile Machining			Stationary Machining				
	VSK	Grinding Equipment	5		CW-1000	Welding Equipment	21
	LS	Grinding Equipment	6				
		Battery-Powered Machines	8				
	VSA	High-Speed Grinding	9				
	TD	Turning Equipment	12				
	TD-CNC	Turning Equipment	15				
	CW-1000	Welding Equipment	21				

Flanges / Bores / Pressure Seals:

Mobile Machining			Stationary Machining		
	TDFI	Turning Equipment	13		
	TDF	Turning Equipment	14		
	TDF-CNC	Turning Equipment	15		
	TD	Turning Equipment	12		
	TD-CNC	Turning Equipment	15		
	SL	Grinding/Lapping Equipment	6		
		Battery-Powered Machines	8		

Gate Valves And Check Valves:

Mobile Machining			Stationary Machining				
	SL	Grinding/Lapping Equipment	6		SM-N	Grinding/Lapping Equipment	10
	SLA/HSL	Grinding/Lapping Equipment	7		MK/ENT	Grinding Equipment	11
		Battery-Powered Machines	8		CW-1000	Welding Equipment	21

Ball valve:

Mobile Machining		Stationary Machining	
		 ROTAGO	Lapping Equipment 11

Testing Technology:

Mobile Testing Technology			Stationary Testing Technology		
	PS-T/SV5 (SV/A)	17		Standard Testing Equipment	17
	PS-T10.03 (SV/A)	17		Customised Testing Equipment	18
	K-TEST	19		K-TEST	19
	EFCO-VALVE-DOC (SV/A)	20		EFCO-Booster	20
	PS Accessories			PS Accessories	20

SV = safety valve A = shut-off and control valves

Cleaning And Inspection:

Mobile Machining			Stationary Machining		
	ARS Cleaning set	21			
	Mobile Workshops	21			
	Consumables	22			



VALVA SERIES

Portable machine for grinding and lapping of flat sealing surfaces on valves, valve disks and flanges from DN 8-1600 mm (1/4"-64").

Drive: electric 230/120 V, 50/60Hz or pneumatic 6-7 bar

The VALVA series: an impressive concept = simple, easy, one-man operation, wear-resistant tools, good price/performance ratio, high profitability and efficiency.

Type	DN	Grinding	Lapping
VALVA-S1	8-150 (1/4"-6")	•	
VALVA-1	8-150 (1/4"-6")	•	•
VALVA-S15	80-300 (3"-12")	•	
VALVA-15	80-300 (3"-12")	•	•
VALVA-2	200-700 (8"-28")	•	•
VALVA-3	500-1600 (20"-64")	•	•

Dimensions in mm (inch)

VSK SERIES

Portable machine for the grinding of conical sealing surfaces in:

- High-pressure, shut-off, control and globe valves of DN 8-300 mm (1/4"-12")
- Standard seat angles of 30° (2x15°), 40° (2x20°), 60° (2x30°), 75° (2x37,5°), 90° (2x45°) (other angles and dimensions on request)

Drive: electric 230/120 V, 50/60Hz or pneumatic 6-7 bar

VSK*	1	2	3	4	5
DN	8-50 (1/4"-2")	8-65 (1/4"-2 1/2")	8-100 (1/4"-4")	80-150 (3"-6")	80-300 (3"-12")
VSK*	6	7			
DN	8-150 (1/4"-6")	8-300 (1/4"-12")			

Dimensions in mm (inch)

*Please state seat angle in enquiries.

VSK





LS

LS SERIES

Portable machine for grinding flanged pipe ends with metallic lenticular gaskets 140° as per BASF- and DIN 2696 standard from DN 6-200 mm (¼"-8").

Drive: electric 230/120 V, 50/60Hz or pneumatic 6-7 bar
Battery drive available for LS-1

LS	1	2
DN	6-90 (¼"-3½")	6-200 (¼"-8")

Dimensions in mm (inch)



SL-2

SL SERIES

Portable grinding and lapping machine for the repair of sealing surfaces in gate valves and non-return valves and on wedges and flanges of DN 20-2000 mm (¾"-80").

Drive: electric 230/120 V, 50/60Hz or pneumatic 6-7 bar

	SL-05	SL-1	SL-15	SL-2	SL-3
DN					
Standard	20-65 (¾"-2½")	32-150 (1¼"-6")	40-300 (1½"-12")	200-700 (8"-28")	500-1200 (20"-48")
Special up to	80 (3")	200 (8")	450 (18")	900 (36")	2000 (80")
Immersion depth					
Standard	250 (9.8")	400 (15.7")	600 (23.6")	1000 (39.4")	1200 (47.2")
Special up to	400 (15.7")	600 (23.6")	1200 (47.2")	1600 (62.9")	2200 (86.6")
Min. spacing					
	15 (0.59")	28 (1.1")	41 (1.6")	69 (2.7")	102 (4")

Dimensions in mm (inch)

Other immersion depths can be supplied on request.

Option:

- Digital rocker (for the exact reproduction of the set contact pressure)
- Swing-check-adaptor (for machining the sealing surfaces in non-return valve housings with large inclination)
- VB device:
additional arm for grinding and lapping flat sealing surfaces in valve housings.



SLA SERIES

Planetary gears with driven high-speed spindles for the machining of hard sealing surfaces ($\geq 35\text{HRC}$) for SL-15 and SL-2 machines (patented).

Time saving up to 90%.

Available as option for new machines and for retrofitting to existing SL machines.

Driven planetary gears

Type	SLA-15*	SLA-2**
AS-1	DN 125-175 (5"-7") (Option)	
AS-2	DN 175-225 (7"-9")	DN 200-225 (8"-9") (Option)
AS-3	DN 225-400 (9"-16")	DN 225-400 (9"-16")
AS-4		DN 400-600 (16"-24")

Dimensions in mm (inch)

* for SL-15 machines ** for SL-2 machines

AS-3



HSL-15



HSL SERIES

Portable machine for high-speed grinding of hard sealing surfaces ($\geq 35\text{HRC}$) in high-pressure gate valves and wedges of various design.

Fitted with SLA series planetary gears for use with driven GSS grinding spindles.

Drive: electric 230/120 V, 50/60Hz or pneumatic 6-7 bar

Type	HSL-15	HSL-2
Working range	DN 175-400 (7"-16")	DN 225-600 (9"-24")

Dimensions in mm (inch)

- Grinding speed up to 21 m/s (826.8"/s)
- Very high material removal of up to 2 mm/h / 0.08"/h (for Stellite 6/21 dia. 350/300 (13.8"/11.8"))
- Time saving up to 90%!
- Patented



BATTERY-POWERED MACHINES

Battery drives offer the user added ergonomics and safety. EFCO is constantly expanding our range of battery-powered grinding machines.

Optimized 18 V HighPower battery drives with Li-Ion battery feature high torque for effective grinding results and brushless motors for long service life. State-of-the-art battery technology protects the battery and machine from overload, overheating and deep discharge. The drive comes with two batteries and a quick charger as standard.

Valve type to be machined	Available with battery drive
Flat Seats	VALVA-S1
Conical Seats	VSK-1, -2, -3, -4 and -6
Lenticular Seats	LS-1
Gate Valves and Check Valves	SL-1(.02), SL-15(.02), HSL-15



BATTERY OPERATED SL-15.02

BATTERY OPERATED VALVA-S1



Benefits of EFCO's cordless machines

- Great efficiency
due to batteries with long service life and short charging cycles
- High material removal rates
thanks to powerful high-torque drives
- Long service life
due to high-quality, brushless motors with dust and splash water protection
- Optimal safety
thanks to auto-stop function in case of blockage

Optional features depending on machine and application:

- Electronic speed control
- Continuous operation
- Extra handle



TSV SERIES

Portable grinding and lapping machine with eccentricity for the machining of sealing surfaces/nozzles of in safety valves of DN 15-300 mm ($\frac{1}{2}$ "-12").

In these machines the grinding movement is overlaid by an additional eccentric movement. This results in a cross-hatch finish and absolutely flat sealing surface. Suitable for use on-site and in the workshop.

	TSV-150	TSV-300
DN range	15-150 ($\frac{1}{2}$ "-6")	25-300 (1"-12")
Max. immersion depth	350 (14")	350 (14")
Clamping range of chuck	85-450 (3.4"-17.7")	85-450 (3.4"-17.7")
Max. spindle speed	560 rpm	460 (690*) rpm
Max. eccentric speed	255 rpm	300 (450*) rpm
Eccentricity	3 (0.12")	3 (0.12")
Drive	pneumatic 6-7 bar	230/120V, 50/60 Hz or pneumatic 6-7 bar*

Dimensions in mm (inch)



VSA-2

VSA SERIES

High-speed precision grinding machine for the machining of build-up welding, sealing surfaces, conical surfaces and bores in valves, cylinders, pump housings and flanges of DN 20-1500 mm ($\frac{3}{4}$ "-59").

Drive: pneumatic 6-7 bar

Type	Working range	Immersion depth
VSA-05	DN 20-150 ($\frac{3}{4}$ "-6")	250 (9.8")
VSA-1	DN 50-400 (2"-16")	650 (25.6")
VSA-2	DN 250-800 (10"-32")	1000 (39.4")
VSA-3	DN 500-1500 (20"-59")	1500 (59")

Dimensions in mm (inch). Other dimensions on request.

A bore grinding unit and a manhole grinding unit can be supplied as accessories.



SM-550 SERIES

Stationary grinding and lapping machine for the machining of sealing surfaces in shut-off valves, wedges, safety valves, etc.

The machine can be supplied optionally with one or two tables in various configurations.

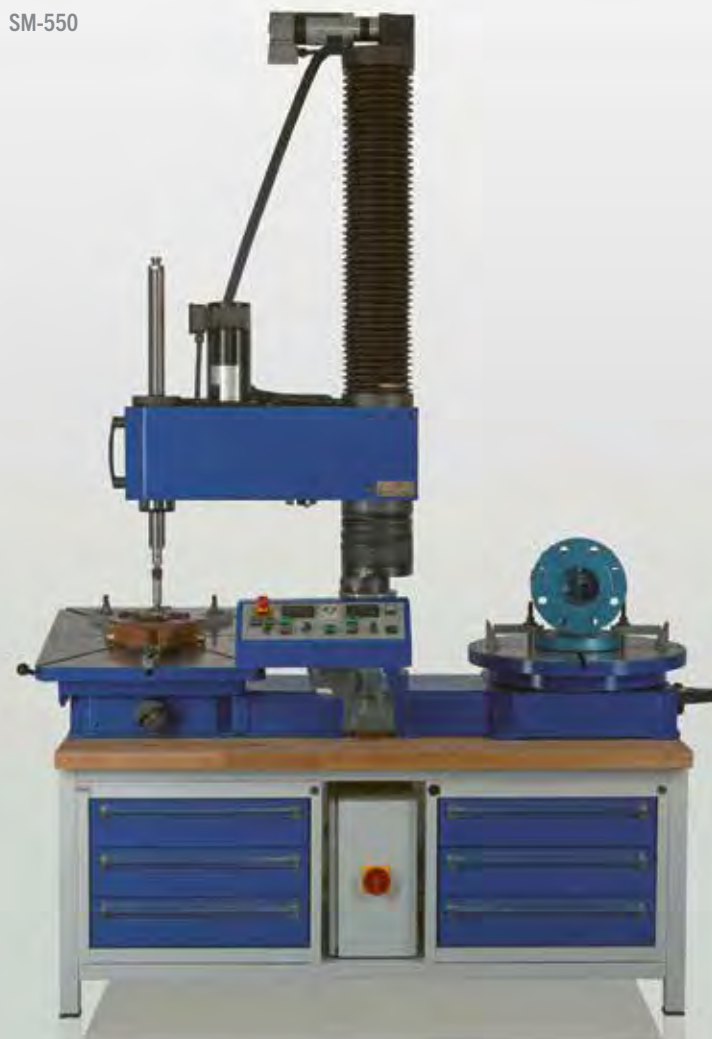
Drive: electric 230/120 V, 50/60 Hz

	Inclined table	Rotary table
Size	550 x 550 (21.7"x21.7")	Ø 550 (21.7")
Adjusting distance*	—	0-20 (0-0.78")
Inclination	± 12°	—
Max. valve diameter	Ø 900 (36")	Ø 900 (36")
Max. valve height	800 (32")	830 (33")
Max. valve weight	450 kg	450 kg

Dimensions in mm (inch)

* the movement of the turntable and the superposition of the rotating movements (work spindle to turntable) produce an optimum sealing surface on safety valves.

SM-550



SM-750

SM-750 SERIES

Stationary grinding and lapping machine for the machining of sealing surfaces in shut-off valves, wedges, safety valves, etc.

The machine can be supplied with centre or eccentric spindle and one or two inclined tables.

Drive: electric 380-480 V, 50/60 Hz

	SM-750 centred	SM-750 eccentric
Spindle	centred	eccentric 0-20 (0-0.78")
Inclined table size	750 x 750 (29.5" x 29.5")	750 x 750 (29.5" x 29.5")
Inclination	± 12°	± 12°
Max. valve diameter	Ø 950 (38")	Ø 950 (38")
Max. valve height	1000 (40")	1000 (40")
Max. valve weight	2500 kg	2500 kg

Dimensions in mm (inch)



NEW

ROTAGO

ROTAGO

To create an exact surface shape between the sealing parts of the ball valve, the ball and both sealing seats have to be match lapped together.

The ROTAGO automates this process and ensures consistently excellent quality and reproducible machining results.

	ROTAGO 8	ROTAGO 16	ROTAGO 24
DN-range	32–200 (1 1/4"–8")	150–400 (6"–16")	200–600 (8"–24")
Ball-Ø	50–300 (2"–12")	200–600 (8"–24")	300–900 (12"–36")
Maximum ball weight	100 kg (221 lbs.)	700 kg (1,543 lbs.)	1.500 kg (3,207 lbs.)
Drive	electric 230/120V 50/60 Hz compressed air 6–7 bar (87–100 psi)	electric 400V 50/60 Hz	electric 400V 50/60 Hz

Dimensions in mm (inch)

You can verify the machining results achieved with the ROTAGO with our special testing device for ball valves on page 19.



MK and ENT SERIES

The pillar or radial drilling machine with MK-ADAPTER makes it possible to use the EFCO tools of the Valva and SL series for stationary machining of sealing surfaces in and on valves and wedges.

We recommend the appropriate inclined tables (0°–12°) for fast alignment of valve housings and wedges.

Adapter	Inclined table	EFCO machines	up to DN
MK2	ENT-1 300 x 300 (11.8" x 11.8")	Valva-1, Valva-S1	150 (6")
	ENT-2 500 x 500 (19.7" x 19.7")	Valva-15	300 (12")
		SL-15	400 (16")
MK 3	ENT-3 1000 x 1000 (39.4" x 39.4")	SL-2, Valva-2	600 (24")
MK 5	ENT-4 1500 x 1500 (59" x 59")	SL-3, Valva-3	1200-1600 (48"–64")

Dimensions in mm (inch)

ENT-2 / MK





NEW



TD-05

TD SERIES

Portable lathe for on-site machining on valves, flanges, pumps, turbine housings.

Particularly suitable for turning cylindrical and conical sealing surfaces in high-pressure valves (internal seals) and for the removal of welded-in valve seats.

The TD series is now complemented by the TD-05, which is perfect for use, even in hard-to-reach areas, due to its compact design and low dead weight.

Drive: electric 230/120 V, 50/60Hz or pneumatic 6-7 bar*

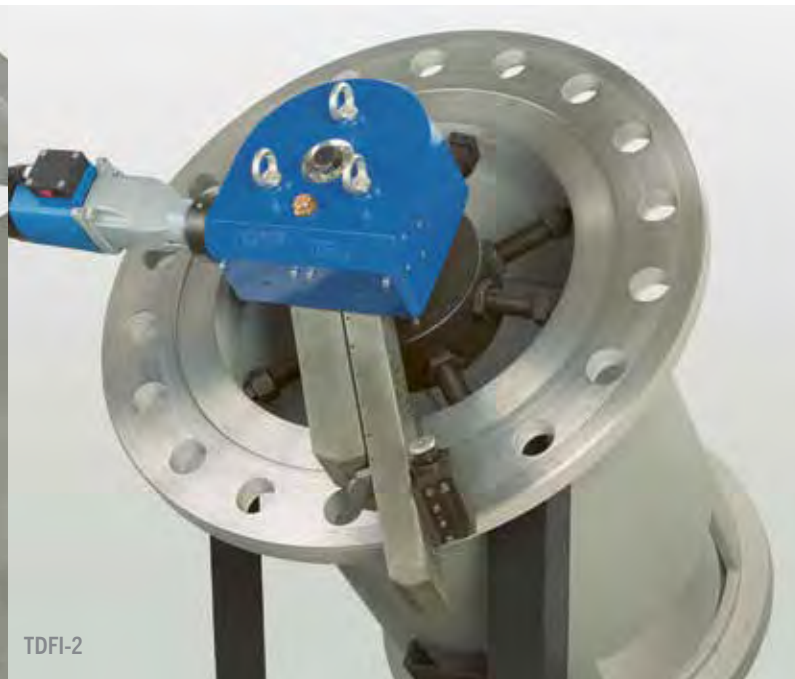
Type	TD-03*	TD-05*	TD-1.02	TD-2.02*
Machining Ø	0-150 (0-5.9")	0-200 (0-8")	0-400 (0-15.7")	0-800 (0-31.5")
Working depth	250 (9.8")	250 (10")	450 (17.7")	600 (23.6")
Radial stroke	20 (0.79")	30 (1.18")	40 (1.57")	60 (2.36")
Axial stroke	100 (3.94")	180 (7")	200 (7.87")	250 (9.8")

Dimensions in mm (inch)

Optional unit for high-speed grinding can be supplied (TD-1.02, TD-2.02).



TD-2.02



Portable flange facers with internal or external clamping for on-site machining on flanges, valves, pumps, turbine housings and heat exchangers.

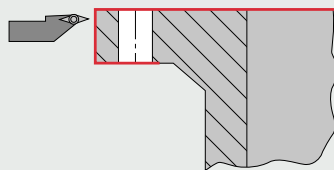
Drive: electric 230/120 V, 50/60 Hz or pneumatic 6-7 bar

(TDFI-1, TDFI-2, TDFI-2.5)

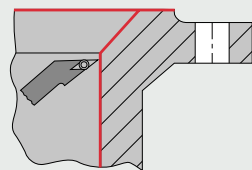
pneumatic 6-7 bar or hydraulic (TDFI-3, TDFI-4)

Numerous machining options:

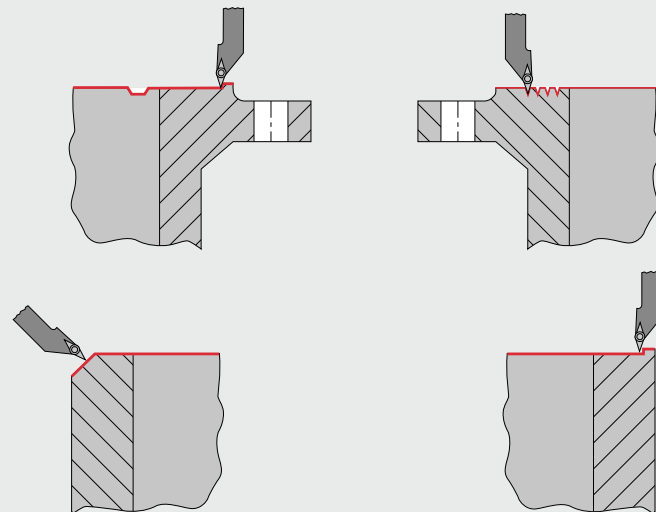
Only TDFI Series:



Only TDF Series:



TDFI Series & TDF Series:



- with internal clamping
- machining \varnothing 150-4400 mm (5.9"-173.2")
- easier handling due to separate installation of clamping device and machine unit
- precision alignment of clamping device within a short time by means of simply designed adjusting system

Type	TDFI-1	TDFI-2	TDFI-2.5
Machining \varnothing	150-630 (5.9"-24.8")	400-1200 (15.8"-47.2")	760-2040 (29.9"-80.3")
Installation \varnothing	150-460 (5.9"-18.1")	400-1000 (15.8"-39.4")	760-1840 (29.9"-72.4")
Machine height	315 (12.4")	350 (14")	500 (20")
Type	TDFI-3	TDFI-4	
Machining \varnothing	1300-3300 (51.2"-129.9")	1700-4400 (66.9"-173.2")	
Installation \varnothing	1300-3000 (51.2"-118.1")	1650-3800 (65"-149.6")	
Machine height	500 (20")	500 (20")	

All information in mm (inches)





TDF-05A

TDF SERIES

- with external clamping
- machining \varnothing 0-3500 mm (0"-137.8")

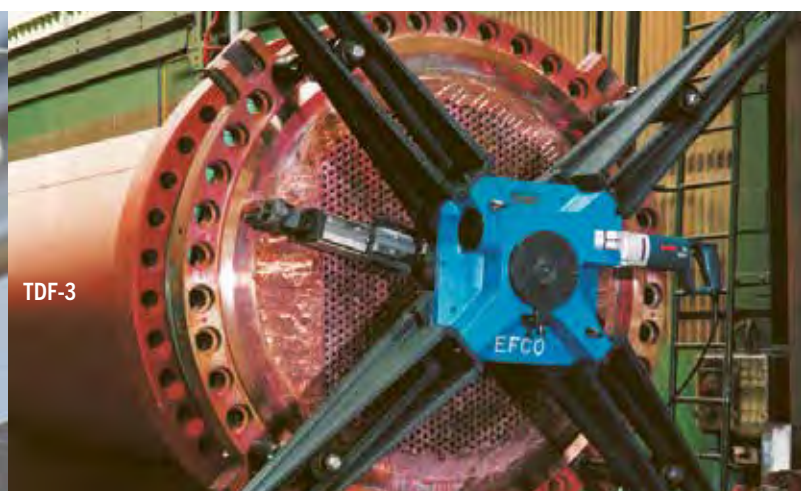
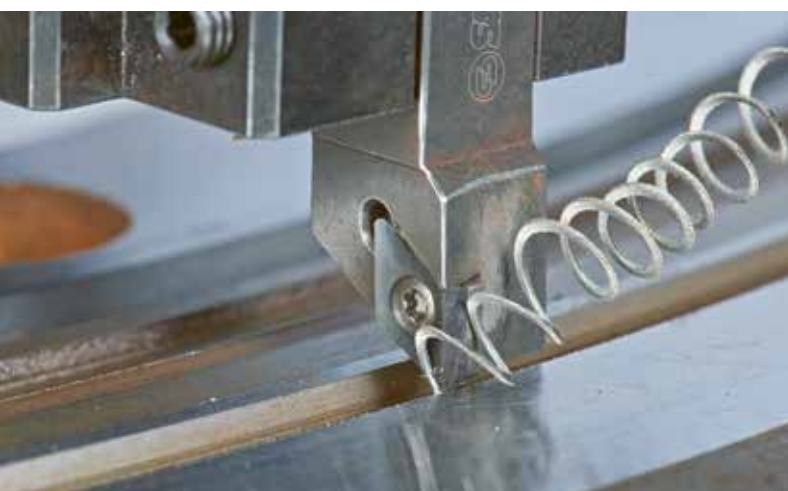
Type	TDF-05	TDF-05A	TDF-1	TDF-1A
Machining dia.	0-250 (0-9.8")	0-250 (0-9.8")	0-500 (0-19.7")	0-400 (0-15.7")
Mounting dia.	250-400 (9.8"-15.7")	250-400 (9.8"-15.7")	260-600 (10.2"-23.6")	260-600 (10.2"-23.6")
Machine height	265 (10.4")	310 (12.2")	265 (10.4")	310 (12.2")
Axial stroke	—	30 (1.2")	—	30 (1.2")
Axial stroke with angular head (optional)	60 (2.36")	60 (2.36")	60 (2.36")	60 (2.36")
Radial stroke	80 (3.15")	80 (3.15")	80 (3.15")	80 (3.15")

Dimensions in mm (inch)

Type	TDF-2	TDF-3	TDF-4
Machining dia.	300-1200 (11.8"-47.2")	500-2200 (19.7"-86.6")	1500-3500 (59"-137.8")
Mounting dia.	485-1345 (19.1"-53")	660-2710 (26"-106.7")	1500-3700 (59"-145.7")
Machine height	350 (13.8")	480 (18.9")	760 (29.9")
Axial stroke	—	—	—
Axial stroke with angular head (optional)	80 (3.15")	80 (3.15")	80 (3.15")
Radial stroke	100 (3.9")	150 (5.9")	200 (7.9")

Dimensions in mm (inch)

Special versions on request



TDF-3

Portable CNC-controlled lathes and flange facers with two controlled axes (X+Z) for on-site use on flanges, valves, pumps, turbine housings and heat exchangers.

End faces and holes, tapers, radii and grooves can be machined in one clamping operation using these machine variants.

Drive: electric 380-480 V, 50/60 Hz

TDF-CNC SERIES

Portable CNC-controlled flange facer with external clamping.

Type	TDF-1 CNC	TDF-2 CNC
Machining Ø	0-600 (0"-23.6")	500-1700 (19.7"-67")
Installation Ø	400-1100 (15.8"-43.3")	1200-2600 (47.2"-102.4")
Axial stroke	100 (3.9")	80 (3.2")
Radial stroke	120 (4.7")	400 (15.8")

All information in mm (inches)

Other dimensions on request

TD-CNC SERIES

Portable CNC-controlled lathe with external clamping.

Particularly suitable for machining with large immersion depths.

Type	TD-1.02 CNC	TD-2.02 CNC
Machining Ø	0-400 (0-15.7")	0-800 (0-31.5")
Installation Ø	350-750 (13.8"-29.5")	400-1100 (15.8"-43.3")
Working depth*	450 (17.7") (Standard)	600 (23.6") (Standard)
Axial stroke	200 (7.9")	250 (9.8")
Radial stroke	40 (1.6")	60 (2.4")

Type	TD-3.02 CNC
Machining Ø	150-1450 (5.9"-57.1")
Installation Ø	780-1780 (30.7"-70.1")
Working depth*	1000 (39.4") (Standard)
Axial stroke	600 (23.6")
Radial stroke	130 (5.1")

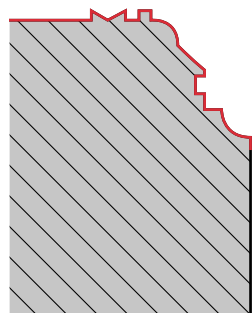
All information in mm (inches)

Other dimensions on request

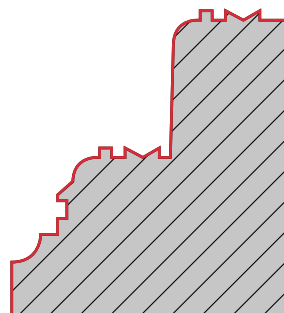
*Working depths of more than 1500 mm (59") possible

Machining options:

TDF-CNC



TD-CNC



TDF-2 CNC



TD-2.02 CNC





EFCO TEST BENCHES

Valve test benches can be used for various applications.

These are, for example, the incoming goods test when new valves are delivered, the intermediate and final inspection during/after valve manufacture, checking the valve repair result or routine testing of, for example, safety valves.

The tests comprise mainly pressure tests of valve housings, leakage tests of the valve seats and testing of the set pressure of safety valves in particular.

In addition to valves, other components, too, can obviously be subjected to a pressure test. These are, for example, tanks, motor housings, pump housings, pipe fittings, insulators, etc. Special clampings are frequently required to clamp these test pieces.

An EFCO valve test bench consists of a clamping unit and a control panel for operation, measurement, and control. The test piece is held securely by the clamping device and sealed on inlet and outlet for the test. Clamping forces up to about 1500 t can be implemented (on request even higher).

The operating/measuring/control unit (console) is used for the actual test (filling of the valve, building up of test pressure, controlling the clamping unit, measuring of test pressure).

We also offer small, portable test units for mobile applications. These test units do not have a clamping unit and can be used to build up test pressure and measure it (e.g. for tank tests).

Construction of valve test benches

- Stationary / portable (available up to about 10 t clamping force)
- Manual / automatic
- Horizontal/vertical/tilting

For the testing of

- Gate valves
- Control valves
- Check valves
- Ball valves
- Safety valves
- Hollow bodies (motor housings, pipe fittings, tanks, etc.)

Design of test piece ends (inlet/outlet)

- Flange
- Thread
- Welding socket pieces
- Flangeless ("sandwich" / "wafer")

Test medium

- Water
- Air
- Nitrogen
- Special test media (e.g. oil, kerosene)

Test types

- Shell/body tests
- Leakage test of spindle gland
- Leakage test of shut-off device
- Set pressure of safety valves

Test pressure

- Water up to 1380 bar (20000 psi) (higher on request)
- Air / nitrogen up to 300 bar (4350 psi) (higher on request)
- Vacuum testing

PS-15M





STANDARD TESTING EQUIPMENT

Well-tries technology, standardised and with modular design. Cost-effective and with short delivery times. Basic product range in various versions and many options.

The standard testing technology is characterised by:

- Easy to operate
- Manual operation
- Infinitely variable clamping force
- Suitable for pressure testing of shut-off/control valves and safety valves
- Water tank made from stainless steel (VA)
- All parts of clamping device with anticorrosive coating

Vertical clamping

Type	DN	Clamping force (t)
PS-T/SV5	10-80 (3/8"-3")	5
PS-T10.03	10-200 (3/8"-8")	10
PS-15M	15-250 (1/2"-10")	15
PS-SV15M	15-250 (1/2"-10")	15
PS-30/50/75M	25-400 (1"-16")	30/50/75
PS-SV30/50/75M	25-400 (1"-16")	30/50/75
PS-100	50-500 (2"-20")	100
PS-150	50-500 (2"-20")	150

Horizontal clamping

Type	DN	Clamping force (t)
PS-H200M	50-600 / 100-1000 (2"-24"/4"-40")	200
PS-H250M	50-600 / 100-1000 (2"-24"/4"-40")	250
PS-H300M	50-600 / 100-1000 (2"-24"/4"-40")	300
PS-H350M	50-600 / 100-1000 (2"-24"/4"-40")	350
PS-H400M	50-600 / 100-1000 (2"-24"/4"-40")	400
PS-H450M	50-600 / 100-1000 (2"-24"/4"-40")	450
PS-H500M	50-600 / 100-1000 (2"-24"/4"-40")	500
PS-H550M	50-600 / 100-1000 (2"-24"/4"-40")	550

Other variants on request

Dimensions in mm (inch)

PS-T/SV5



PS-T10.03





CUSTOMISED TESTING EQUIPMENT SELECTED SAMPLES

Individually adapted testing equipment, coordinated to your particular specifications and needs.

Our particular strength lies in creating a product for you that meets your requirements exactly. You benefit from our many years of experience in implementing customer-specific projects.

Here is a small selection of a wide range of options:

- Nominal test specimen widths (DN10/ 3/8") up to (DN1000/ 40") and larger
- Manual, semi-automatic or automatic operation
- Repeated test cycles (endurance testing)
- Underwater testing
- Vacuum testing
- Testing of 2-way / 3-way / multi-way test specimens
- Individual or multiple clamping
- Recording of test specimen ID using handheld scanner
- Output of test result data via defined interface

PS-50UW

- Automatic air and water shut-off valve testing
- Air testing under water
- Clamping unit that swings out to allow for easy installation

PS-30A

- Automatic air and water testing of 2 and 3-way control valves
- Actuator for closing and opening the test specimen
- Proportional clamping to protect housing



PS-50UW



PS-30A



PS-H90A



PS-H7.5UW

- Fully automatic testing of ball valves
- Air testing under water
- Torque measurement when closing
- Horizontal clamping

PS-H1500

- For testing valves up to DN 1000 (40")
- Water testing up to 1380 bar (20.000 psi)
- Housing-protecting horizontal clamping with self-sealing test tables

PS-H7.5UW



PS-H550M



K-TEST

- For verifying sealing tightness between ball and sealing seat in ball valves
- Fast and efficient
- Safe and easy to operate

PS-H90A

- Fully automatic air and water testing of gate valves and butterfly valves DN40-600 (1½"-24")
- Torque measurement when closing
- Horizontal clamping
- Test specimen ID recorded using hand scanner
- Transfer of test result data to network interface
- Proportional, housing-protecting clamping

K-TEST





VALVE-DOC

EFCO-VALVE-DOC

The EFCO-Valve-Doc is a documentation and administration system for valve test:

- Mobile or stationary device for the acquisition, analysis and documentation of valve tests
- Suitable for all test benches on the market
- User friendly
- Designed with the latest technology
- Available in several languages

The EFCO-Valve-Doc is ready to be used; all software is installed and configured. It only needs to be plugged in, and the pressure transducers need to be connected to the valve test bench.

It is to log, record and analyse:

- Set-pressure and seat leakage tests of safety valves and / or
- Body leakage and seat leakage tests of shut-off valves

EFCO-BOOSTER

Water pressure generation with appropriate high-pressure pumps is integrated in every EFCO valve test bench intended for a water test.

The air/nitrogen test pressure required for testing is provided either via a high-pressure bottle pre-filled by the customer or via an EFCO Booster.

The EFCO Booster compresses air or nitrogen to 300 bar (4350 psi) (higher pressures are possible on request).

BOOSTER



PS ACCESSORIES

All EFCO valve test benches are equipped with standard accessories and their function can be extended with optional accessories.

The following are some of the accessories available:

- O-ring sealing plates
- Polyurethane sealing plates (Vulkollan)
- Safety plugs (specially for safety valves)
- Threaded adapters (for the testing of test pieces with threaded end)
- Accumulators
- Digital displays

EFCO WELDING EQUIPMENT

CW-1000 SERIES

DN 30-1000 mm (1¼"-40").

Complete solution for MIG/MAG welding in and on valves.

Automatic welding of sealing faces/circular welding of:

- bores, circular and conical surfaces

The machine is equipped with automatic feed and has integrated water cooling.

Drive: electric 230/120 V, 50/60 Hz

Type	CW 1000
Axial stroke	175 (6.89")
Radial stroke	90 (3.54")
Axial feed /rev.	3 (0.12")
Radial feed /rev.	3 / 3,8 / 4,6 (adjustable) (0.12"/0.15"/0.18")
Speed range	0,1 - 5,0 rpm
Adjustment angle	of head 0 - 90° (manually)

Dimensions in mm (inch)

CW-1000



ARS

EFCO-ARS-SERIES

Professional cleaning set for valves to remove rust, seal residues, scale, slag, paint residue and other contamination.

Developed for cleaning of dirty valves or housings using high-speed rotating twisted brushes.

Drive: electric 230/120 V, 50/60Hz or pneumatic 6-7 bar

MOBILE WORKSHOPS

As fixed lorry superstructure or in an ISO container

Fast reaction times and flexibility are required for on-site valve service. EFCO can provide you with a mobile workshop equipped to your requirements. It is equipped with EFCO turning, grinding and lapping technology and can also be fitted with a lathe, drilling machine, valve test bench and everything else you require.





GSS SERIES

EFCO GSS grinding tools are coated with electroplated cubic crystalline boron nitride (CBN).

CBN is highly suitable for grinding hard sealing surfaces with a minimum hardness of 35 HRC such as, for example, steel on cobalt and nickel basis, highly alloyed steels, chromium steel, etc.

The good heat resistance of CBN in combination with its great hardness makes economic grinding at the higher machining temperatures of these steels possible (long life).

EFCO ABRASIVES

The EFCO abrasives are perfectly formulated and matched to EFCO machines through extensive testing. We supply coated abrasives in various grit sizes and formulations optimised for the application.

- | | |
|-------------------|---|
| Abrasive backing: | <ul style="list-style-type: none">• Paper• Cloth• Film |
| Grain types: | <ul style="list-style-type: none">• Aluminium oxide (Al_2O_3)• Silicon carbide (SiC)• Zirconium corundum ($\text{ZrO}_2 + \text{Al}_2\text{O}_3$) |
| Grain size: | <ul style="list-style-type: none">• Standard grit sizes: P80-P1800(other grit sizes on request) |



EFCOBOR LAPPING COMPOUNDS

In accordance with DIN 8589, lapping is a microfinishing process using a grain distributed loosely in a liquid or paste (lapping compound) which is held on a, usually shaped, counterpart (lapping tool).

EFCOBOR lapping compounds are oil soluble lapping pastes of boron carbide.

Independent of the material hardness, with EFCOBOR it is possible to achieve:

- High surface quality
- Highest dimensional accuracy
- Close dimensional tolerances

EFCOBOR Lapping Paste comes in various grit sizes from F80-F1500 (FEPA) and pack sizes.



EFCO also supplies other equipment, machinery and materials for valve repair on-site or in the workshop and for the repair of pipelines.

- **SEAL AND PACKING CUTTING MACHINES AND EQUIPMENT**
- **INCLINOMETER FOR GATE VALVE SEALING SURFACES**
- **TSM TELESCOPIC INSPECTION MIRROR**
- **HYDRAULIC NUT OPENER**

Advice, Project Planning and Training

We offer training with our machines and equipment in our company or at your site. Valve repair training, too, is carried out competently.

Our core competence is valve repair/valve testing. We are happy to advise you and work together with you on drawing up concepts for valve repair.

Our partners are companies of different sizes from many industries.

We can design and build special machines for you which match the requirements of your company.

Within Europe, we would be pleased to visit you by arrangement with one of our demonstration vehicles to introduce you personally and competently to a large section of our product range.

We will gladly advise you at your site and also to provide any special information specific to your requirements.

You can also find us on the Internet with further product details and up-to-date information.

www.efco-dueren.com



SCAN CODE TO FIND YOUR LOCAL EFCO PARTNER



EFECO-DUEREN.COM

