PDM series

CNC-controlled vertical lathes for machining end faces, cylindrical surfaces, tapers, radii and grooves.

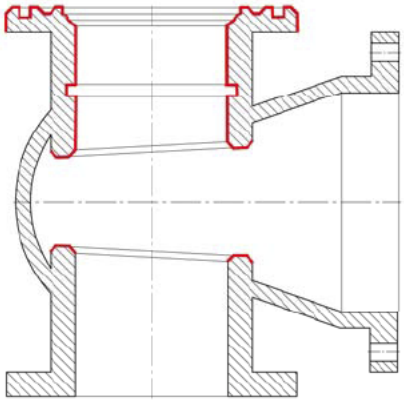
- Particularly suitable for **machining / repairing fitting housings**
- **Machining of both sealing surfaces of gate valves in a single chucking mechanism**
- **Easy operation**, no in-depth CNC experience required
- **Extremely stable** due to gantry design
- **Easy to load** due to adjustable machine table
- **Personnel protection** provided by ergonomic machine panelling

- The forward-looking technology for machining fittings in repair workshops -

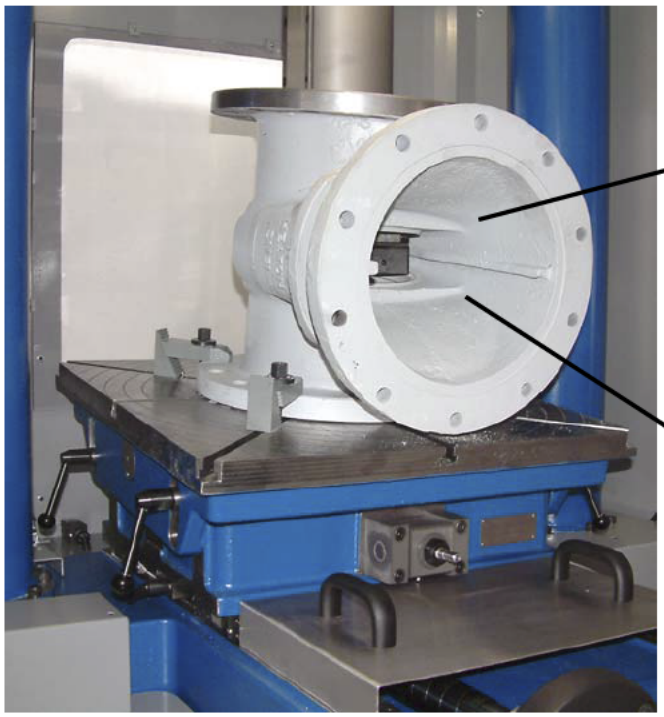
PDM machines are designed for the axial machining and facing of fitting housings (gate valves, valves, check valves), pumps and similar rotationally symmetrical components. They have infinitely variable speed control and axial and radial feeds (Z and X axis) with infinitely variable control that make it possible to move both axes simultaneously at different speeds.

Machining options:

- **Facing**
- **Longitudinal turning**
- **Taper turning**
- **Radius turning**
- **Punching**



Both sealing surfaces of gate valves can be machined by changing the angle setting of the tilting table **in a chucking mechanism** of the fitting.

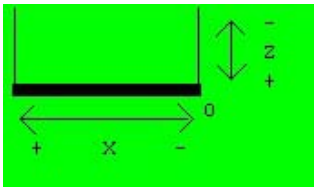


Machining can take place inside the fitting housing without extension tools with a directly clamped steel holder by immersing the plunger (including facing head).

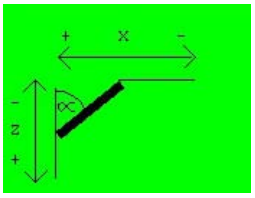
- Easy operation of machine controller by using standard programs -

The PDM machines are equipped with CNC programs that are specially tailored to turning requirements. During program development, special attention was paid to making operation as simple as possible. Operation takes place using a portable electronic control unit.

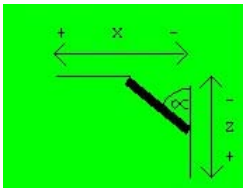
The following **CNC programs with automatic machining cycles** are available:



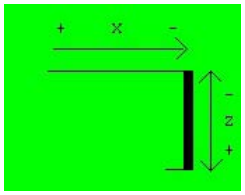
Top facing



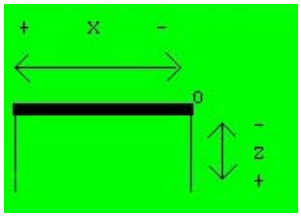
Outer taper turning



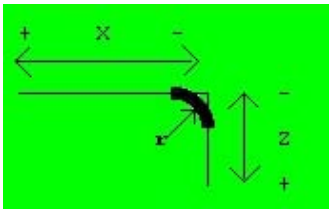
Inner taper turning



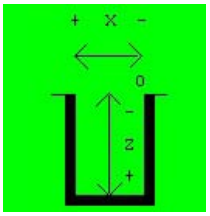
Longitudinal turning



Bottom facing



Radius turning



Axial punching

Procedure for use of CNC programs:

In order to determine the starting point for the automatic machining cycle, the facing and drilling surfaces are scratched. The required spindle speed, the feed and the chip thickness for machining must be entered. After entering the required final values for the machining program, (e.g. for the X and Z axes during facing or the radius during radius turning) the machining cycle can be started and runs automatically.
During the machining cycle, the program calculates how many passes are needed to remove the material. The machine removes the material in stages. A finishing allowance is left on the surfaces that are created, which is subsequently removed in a finishing pass.

Machining tasks that cannot be fulfilled with the standard programs can be carried out manually. You can move along the X axis and the Y axis by pressing the relevant buttons with the spindle rotating. This makes it possible to **perform machining cycles manually**.

Technical data

	PDM-600	PDM-1000
Machining Ø	80 - 400 mm (3.2” - 15.7”)	350 - 800 mm (13.8” - 31.5”)
Machine table		
Size	600 x 600 mm (23.6” x 23.6”)	1000 x 1000 mm (39.4” x 39.4”)
Clamping diameter	max. 700 mm (27.5”)	max. 1100 mm (43.3”)
Tilt angle [Q]	± 10°	± 10°
Shift [Y]	+ 75 mm / - 300 mm (+3” / - 11.8”)	+ 150 mm / - 600 mm (+ 6” / - 23.6”)
Q / Y operation	manual	manual
Q / Y clamping	manual	manual
Load	max. 500 kg	max. 1500 kg
Height below facing head	max. 700 mm (27.6”)	max. 1500 mm (59”)
Passage between columns	780 mm (30.7”)	1400 mm (55.1”)
Crossbeam stroke {H}		500 mm (19.7”)
Plunger stroke [Z]	500 mm (19.7”)	800 mm (31.5”)
Facing head stroke [X]	60 mm (2.4”)	100 mm (3.9”)
Spindle speed	0 – 200 rpm (0 – 7.9”)	0 – 150 rpm (0 – 5.9”)
Cutting depth (with St / GG)	max. 2.5 mm (0.1”)	max. 3 mm (0.12”)
Space requirement (Width x Depth x Height)	2400 x 2700 x 3200 mm (96”x108”x128”)	3000 x 3500 x 5000 mm (120”x140”x200”)

PDM-600 *

PDM-1000 *

*Shown without machine panelling

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