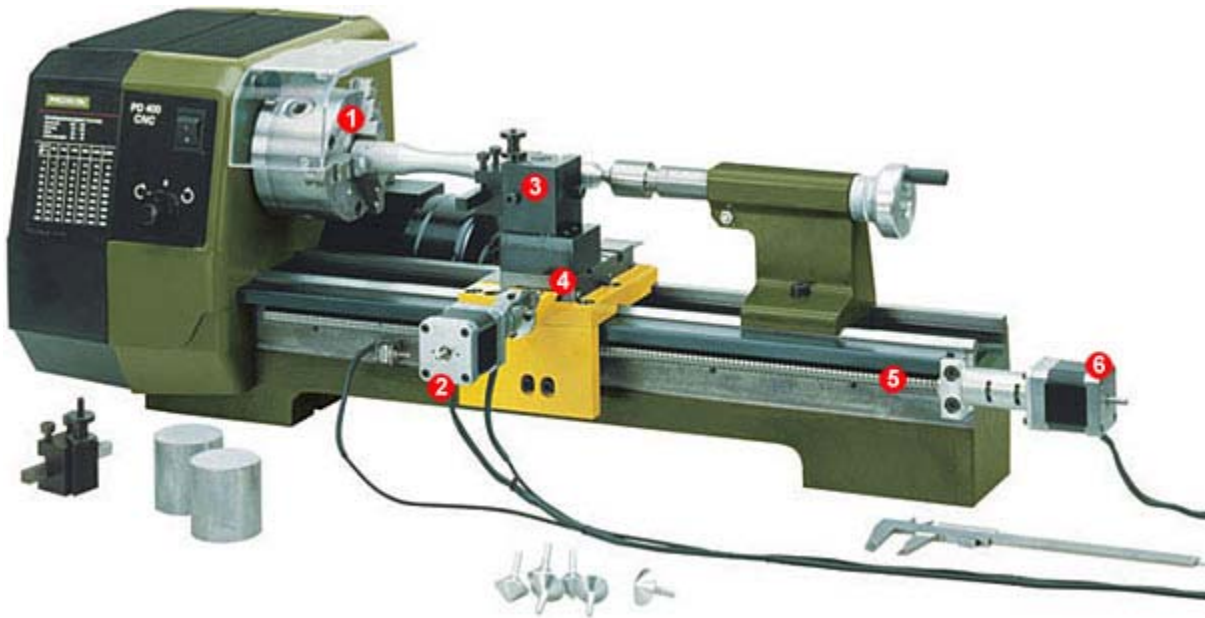




Lathe PD 400 now available with CNC control!
Multi-purpose for individual parts and small series.



Lathe System PD 400/CNC

Axle drive by step motors and recirculating ball spindles (to avoid reversal backlash). For facing and longitudinal turning, for turning balls, radii and any freely formed contours made of steel and non-ferrous metal. Workpiece machining is effected automatically by software and can be reproduced as often as required. Solid, heavy cast iron bed and ground "wide-legged" precision Vee guide ensure vibration-free working and optimum precision.

Complete with recirculating ball spindles, powerful step motors and the required limit switches, the CNC control unit, all necessary connecting cables and the software on CD-ROM.

NO 24 500



Double roller bearing recirculating ball spindle paired with powerful step motor driven in microstep guarantee high machining precision and repeat accuracy.

- ❶ High quality RÖHM precision 3-jaw lathe chuck. With \varnothing 100 mm.
- ❷ Step motor 1.8 A for travel distance 70 mm.
- ❸ Multiple steel holder with height-adjustable holder elements.
- ❹ Recirculating ball spindle for the X axis with 2.0 mm inclination.
- ❺ Recirculating ball spindle for the Z axis with 4 mm inclination.
- ❻ Step motor 1.8 A for travel distance 300 mm.

Note:

Since the mechanical design is practically identical to the PD 400, the accessories supplied for it can be used without restriction (and the PF 400 milling equipment).

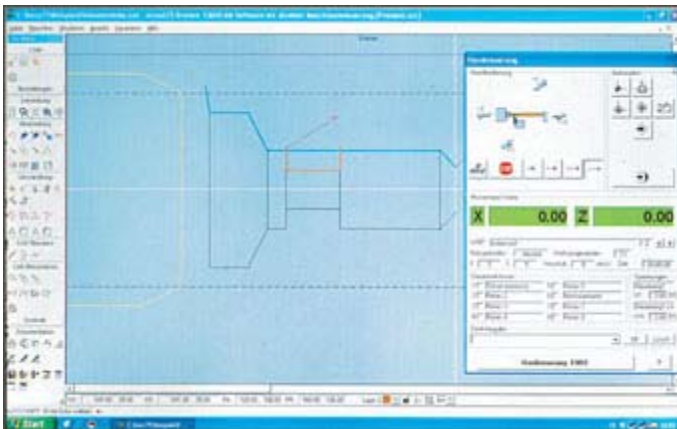


The control unit as an interface between the CAD software and the CNC controlled lathe.

The CNC control unit is located in a solid aluminium casing and contains a micro processor and the output stages for the step motors.

It controls the step motors of both the axles drives and the drive for the main spindle using the PC data and, with two freely useable output relays, additionally offers the possibility to control an automatic cooling unit or signal display, for example.

The installed mains supply circuit makes it possible to connect directly to the 220 - 240 V mains voltage. The data transfer from the PC to the control unit is effected via an RS 232 interface. All connecting cables required to control the main spindle, the step motors and the limit switches are pre-assembled and equipped with suitable connectors, and are part of the scope of delivery.



Simple creation of workpiece geometry

When the program is started, the CAD window initially appears on the screen. The contour of the workpiece is created in the usual Windows® environment.

In the graphic, colour elements help to show the difference between lathe chuck, blank and designed workpiece.

Comprehensive aids make it easier for the user to operate the program; in addition to use of the mouse, it also supports entry of co-ordinates (absolute and relative). It is possible to import existing files in the current data formats (e.g. dxf or hpgl).

Technology information is allocated to each character element. Various processing speeds and manual tool replacement are, for example, possible when machining the workpiece.

Automatic generation of CAM data

The finished drawing of the tool is converted, by a mouse click, into the instruction set for the machine. So, machining can be started immediately. The instruction set generated in this way is in accordance with DIN/ISO 66025 and can be manually edited and exported. Conversely, the system also permits importing or complete self writing of data sets.

CNC simulation

If requested, the travel distances of the tool are simulated in the graphic window. In this way, faults in the programming can be recognised in time.

Manual work

With the PD 400/CNC, the handwheels are replaced with high-precision step motors. Manual machining is possible with the help of the cursor buttons, since the step motors can be operated manually.

Software installation

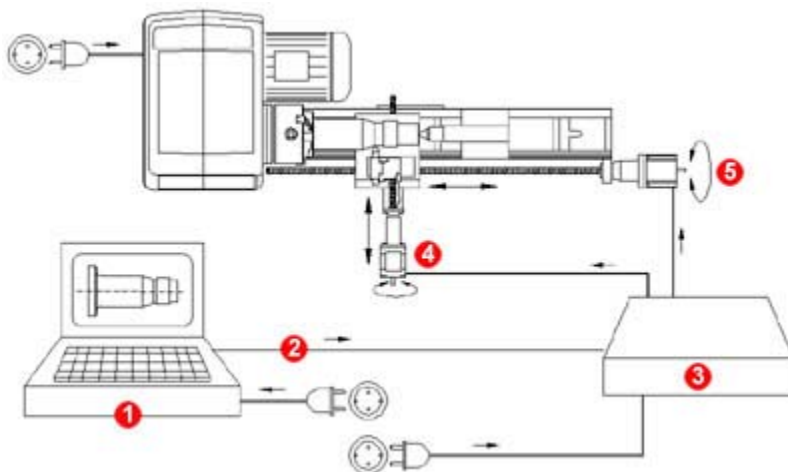
The PC software is supplied on a CD ROM. The problem-free installation is effected automatically under Windows®.

Note:

PC or laptop are not part of the scope of delivery. Minimum requirements for the hardware:
Pentium processor with 400 MHz frequency (or comparable), high-quality graphic card (64 MB RAM) and at least 40 MB free hard disc storage.

Lathe System PD 400/CNC - Technical Data:

Centre distance	400 mm
Height of centres	85 mm
Spindle take-up	MK 3
Spindle aperture	20.5 mm
Spindle rotation	5/1,000 mm
precision	
Lathe chuck	Precise RÖHM 3-jaw chuck, centrally tensioning (up to 100 mm)
Sleeve	MK 2, with scale
Steel holder	Multiple steel holder with height-adjustable holder elements
Spindle revolutions	Selectable with switch (two-stage) and by placing drive belt: 80 - 160 - 330 - 660 - 1,400 - 2,800 rpm
Drive	Induction motor with 550 W
Spindle drive Z axis	Recirculating ball spindle with 4mm inclination, flank diameter 12 mm. Step motor with 1.8 A and 50 Ncm dwell moment; travel distance: 300 mm
Spindle drive X axis	Recirculating ball spindle with 2.0 mm inclination, flank diameter 8 mm. Step motor with 1.8 A and 50 Ncm dwell moment; travel distance: 70 mm
Control of the step motors	via CNC control unit (included in scope of delivery)
Power supply	220 - 240 V / 50 Hz-mains voltage
Software	on CD ROM, installation under Windows®
Size (L x D x H)	PD 400/CNC: 900 x 460 x 300 mm Control unit: 450 x 270 x 60 mm
Total weight	PD 400/CNC: approx. 45 kg Control unit: approx. 4 kg



- ❶ Computer with software
- ❷ RS 232
- ❸ MCS-multicontroller
- ❹ Step motor (X axis)
- ❺ Step motor (Z axis)