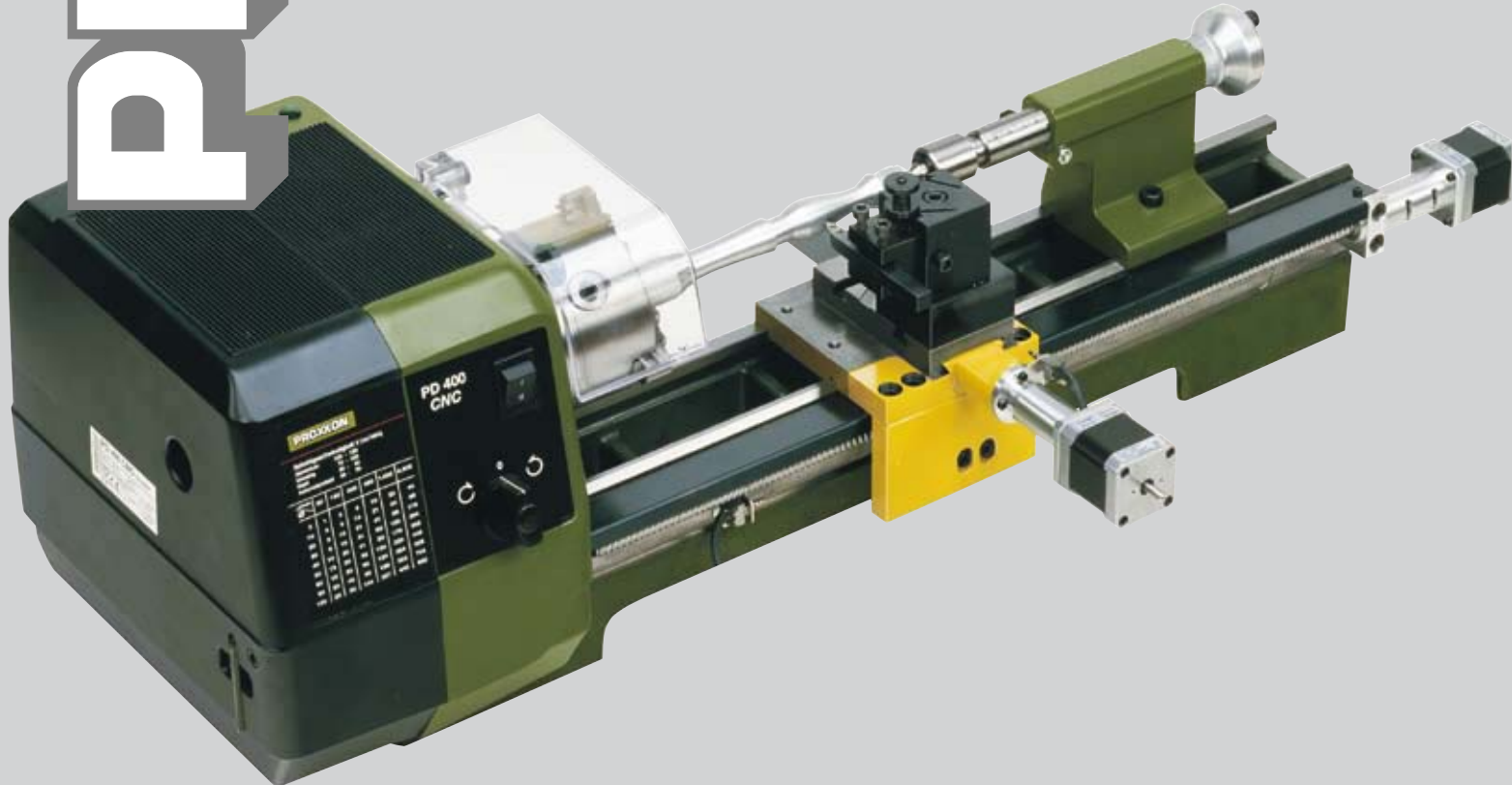
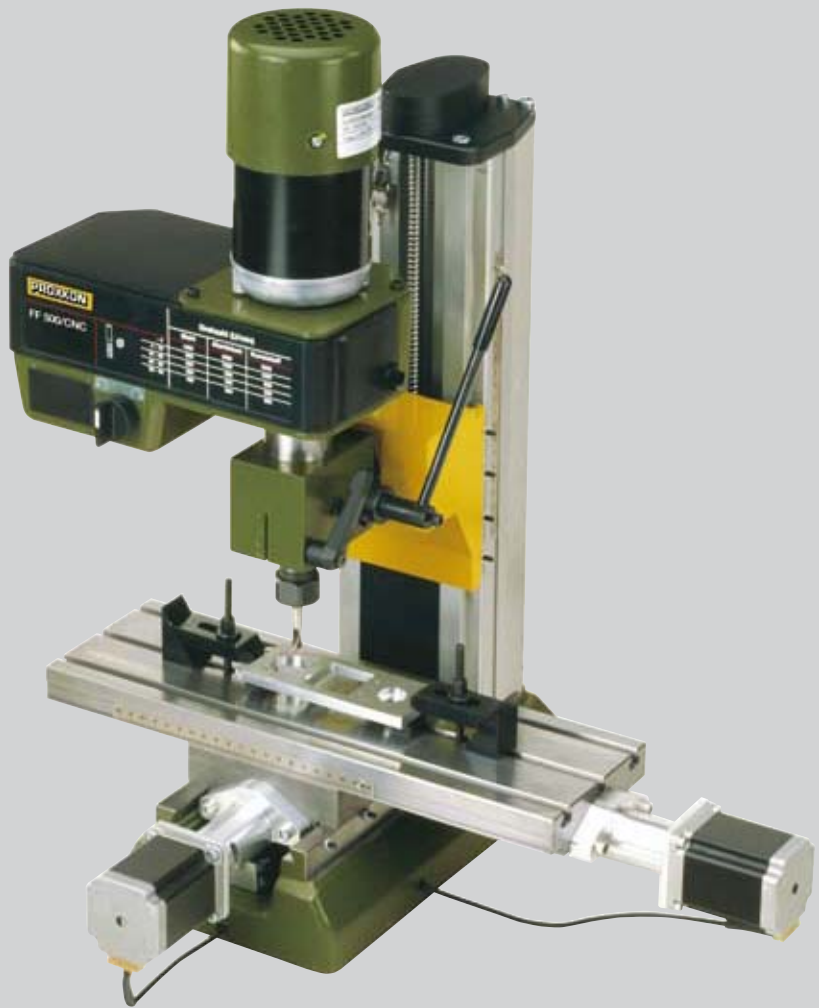


PROXXON



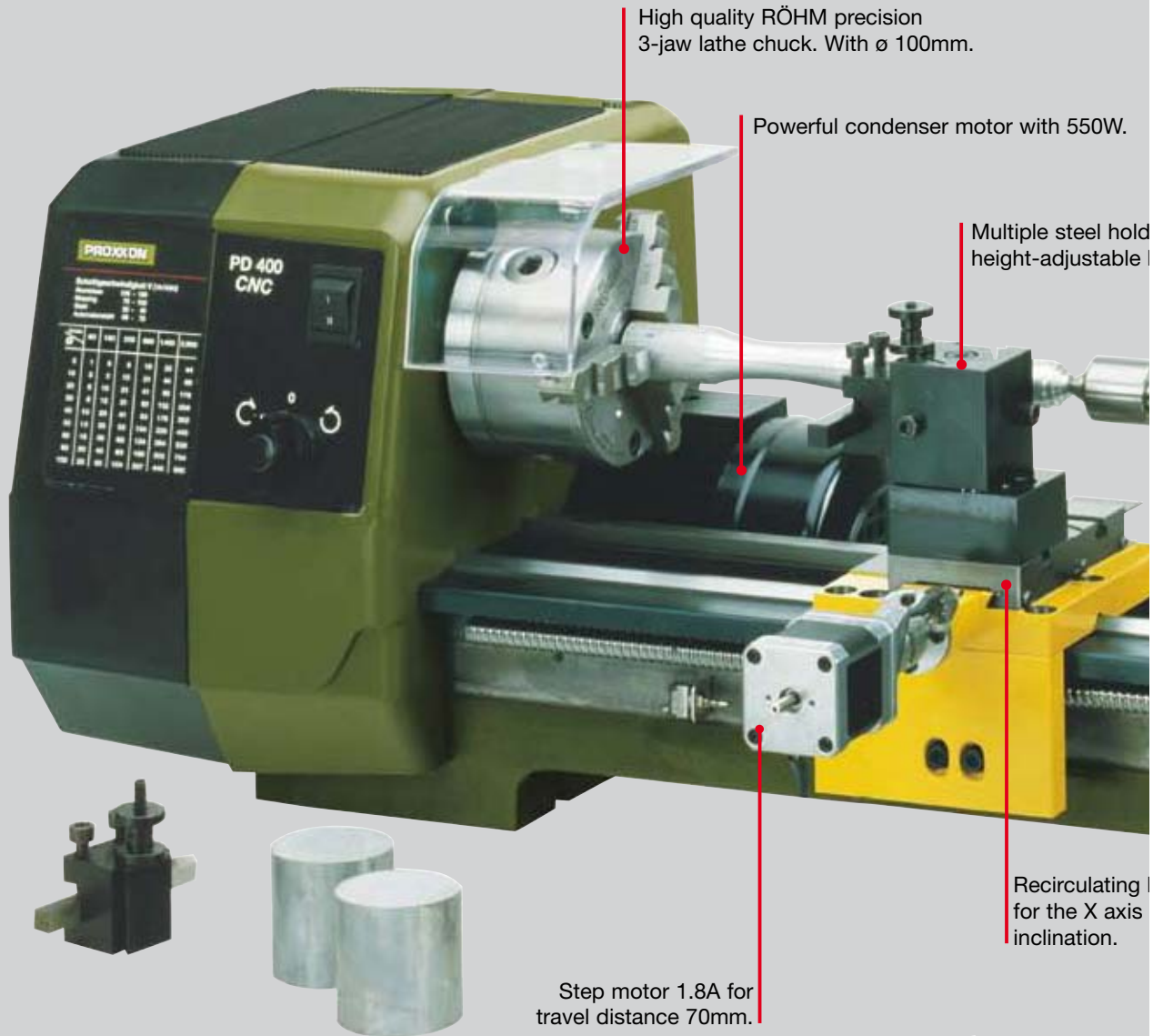
Lathe System PD 400/CNC
MICRO Miller FF 500/CNC

Precision and high repeat accuracy for individual parts



Lathe System PD 400/CNC

- Z-axis and X-axis with recirculating ball spindles and two powerful step motors.
- Control unit for connecting to PC or laptop with activation of the main spindle and the step motor.
- Including user-friendly and WINDOWS® compatible software (see description on the right).



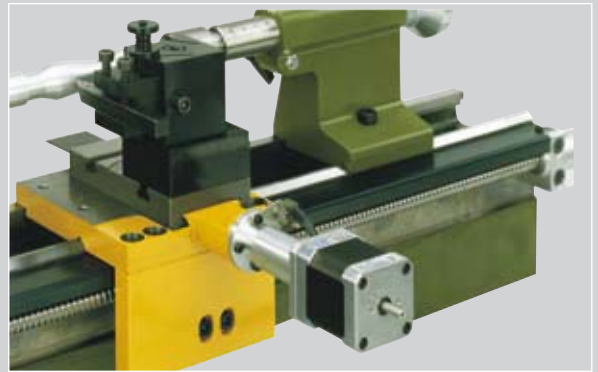
Complete with CNC control unit and WINDOWS® compatible software.

CNC control of z-axis and x-axis enable

Axes drive with powerful step motors and recirculating ball spindles for longitudinal turning, for turning balls, radii and any non-ferrous metal. Work piece machining is effected and reproduced as often as required. Otherwise the mechanical proven PROXXON Lathe PD 400: Solid, cross-braced and legged prism guide for apron and tailstock ensure vibration-free operation. High quality RÖHM precision 3-jaw lathe chuck (\varnothing 100mm) is provided via belt drive. Including rotating centre

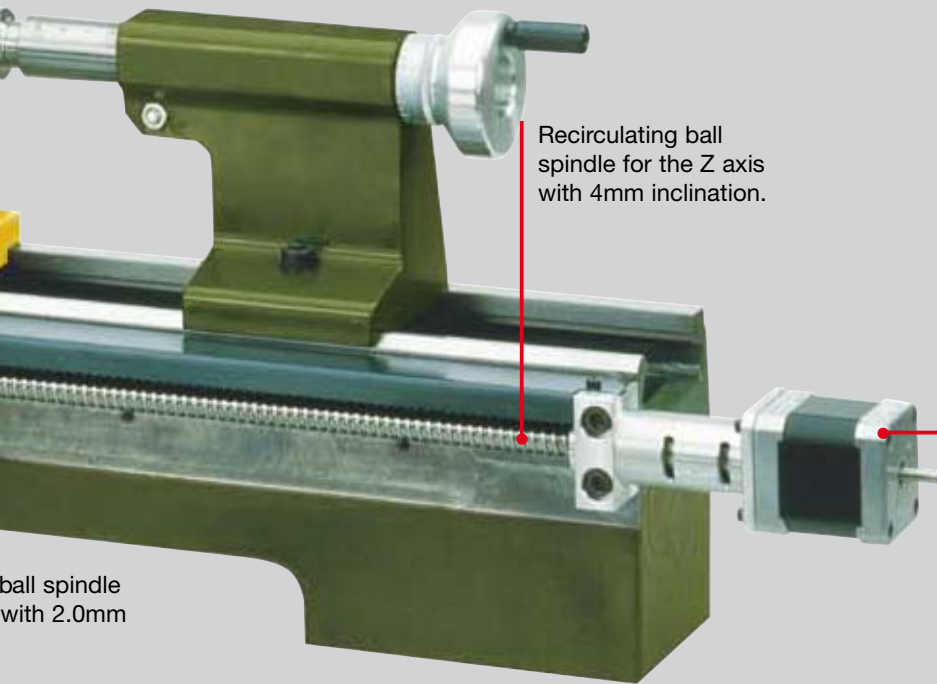
ts and small series manufacture. Made in Europe.

s.



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

er with holder elements.



Recirculating ball spindle for the Z axis with 4mm inclination.

Step motor 1.8A for travel distance 300mm.

ball spindle with 2.0mm



es precise turning, facing and longitudinal turning of steel and non-ferrous metal.

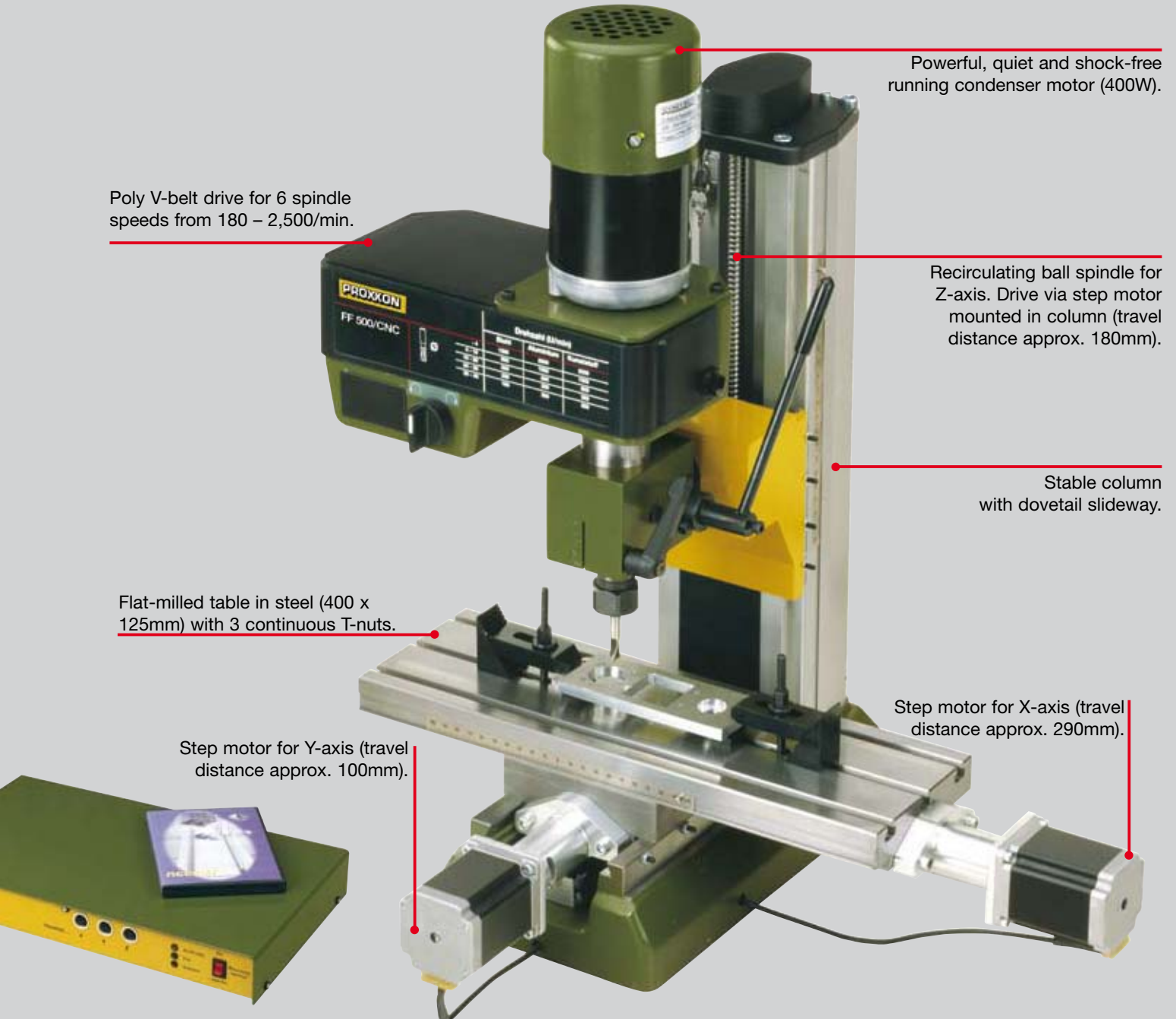
g ball spindles (no backlash). For facing freely formed contours made of steel and d automatically by software and can be mechanical design is almost identical to the ed cast iron bed with ground and wide ation-free working and optimum precision. 0mm). 6 spindle speeds (80 – 2,800/min) MK 2 and tailstock chuck. With quick-

change tool post with 2 holders (with stop and height adjustability). The accessories supplied for the PROXXON Lathe PD 400 can be used without restriction (including the Mill/Drill PF 400). Complete with recirculating ball spindles, powerful step motors and the required limit switches, the CNC control unit, all necessary connecting cables and WINDOWS® compatible software on CD-ROM. Detailed technical data are listed on the back!

NO 24 500

MICRO Miller FF 500/CNC

- With recirculating ball spindles on all three axes and three powerful step motors for driving compound table and milling head.
- Large travel distances: X-axis: approx. 290mm, Y-axis: approx. 100mm, Z-axis: approx. 180mm.
- Stable column with dovetail slideway.
- Including user-friendly software. Runs under WINDOWS® (see description on the right).



Thanks to CNC control of 3 tool axes machining of steel and non-ferrous metals is possible in all dimensions. This also applies to larger work pieces !

Axes drive with recirculating ball spindles (no backlash) and powerful step motors. Otherwise the mechanical design is almost identical to the MICRO Miller FF 500: Solid, flat-milled compound table in steel with 3 continuous T-slots for size 8 standard T-nuts. Base of vibration-damping cast steel. Stable column with dovetail slideway. Milling head can be pivoted to the left and right by 90°, with powerful, quiet and shock-free running condenser motor. Poly V-belt drive for 6 spindle speeds (180 – 2,500/min). Additional sleeve feed (30mm) using drilling lever with scale ring (1 graduation line = 1mm).

Work piece fixing using steel collets. The accessories supplied for the PROXXON MICRO Miller FF 500 can be used without restriction.

Complete with CNC control unit, CNC programme software, all connecting cables, one each steel collets 6 – 8 – 10 and 12mm and detailed manual.

Detailed technical data are listed on the back !

NO 24 340



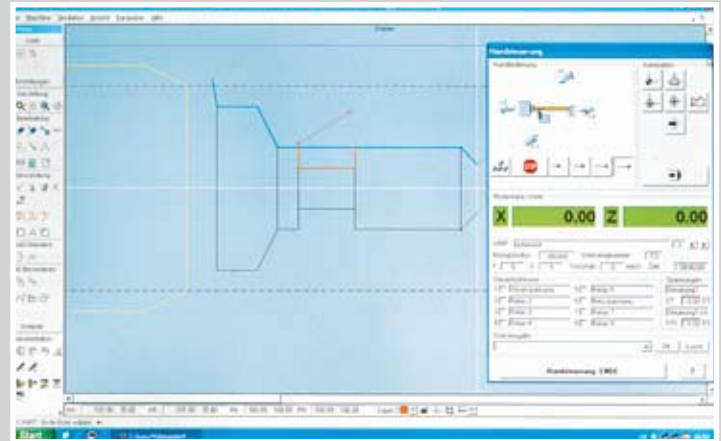
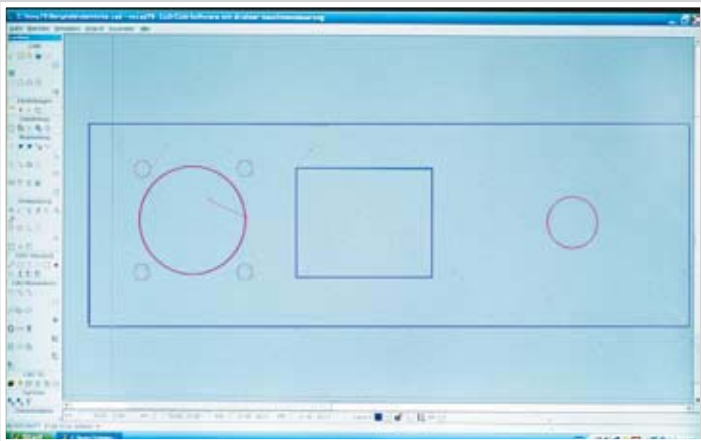
Brief description of software and hardware

The software is harmonized with mechanics, motors and the control unit of the CNC machine, thus offering the optimum performance.

The CNC control unit controls the step motors of the machine. The PC software provides the machine with the geometry information for travel of the tools (via RS 232 interface). This means that the control unit is the interface between software and the mechanics of the machine. Powerful micro processors and accordingly dimensioned step motors and phases ensure that the motors always provide enough power for any machining processes. Two freely usable output relays in the casing of the control unit provide facilities for control of additional functions, e.g. a working lamp. Including connection cables with suitable plugs and built-in power supply for connection to 220 – 240V.

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.



Simple creation of work piece geometry in the PC.

Simple creation of work piece geometry

The CAD window is displayed when the programme starts. The work piece contour is created in the familiar WINDOWS® environment. Numerous auxiliary aids help during programme operation, which supports both coordinate entry (absolute and relative) in addition to mouse use. Read-in of existing files in standard file for-

ats (e.g. .dxf or .hpgl) is possible.

Technology information is allocated to every drawing element. This makes, for example, different processing speeds and manual tool replacement possible.

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.

Manual work

The handwheels are replaced with the step motors of the CNC machine. Nevertheless, manual machining is possible with the help of cursor buttons, since the step motors can be operated manually.

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.

Software installation

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



	PD 400/CNC	FF 500/CNC
Power supply	220 – 240V / 50/60Hz	220 – 240 V/ 50/60Hz
Drive	condenser motor with 550W	condenser motor with 400W
Spindle drive X-axis	Recirculating ball spindle with 2.0mm inclination, flank diameter 8mm. Step motor with 1.8A and 50Ncm dwell moment; travel distance: approx. 70mm	Recirculating ball spindle with 4.0mm inclination, flank diameter 12mm. Step motor with 2.2A und 1.27Nm dwell moment; travel distance: approx. 290mm
Spindle drive Y-axis		Recirculating ball spindle with 4.0mm inclination, flank diameter 12mm. Step motor with 2.2A and 1.27Nm dwell moment; travel distance: approx. 100mm
Spindle drive Z-axis	Recirculating ball spindle with 4.0mm inclination, flank diameter 12mm. Step motor with 1.8A und 50Ncm dwell moment; travel distance: approx. 300mm	Recirculating ball spindle with 4.0mm inclination, flank diameter 12mm. Step motor with 2.2A and 1.27Nm dwell moment; travel distance: approx. 220mm
6 spindle revolutions	80 – 160 – 330 – 660 – 1,400 – 2,800/min Selectable with switch (two-stage) and by placing drive belt.	180 – 350 – 550 – 800 – 1,300 – 2,500/min Selectable by placing drive belt.
Control of the step motors	via CNC control unit (included in scope of delivery)	via CNC control unit (included in scope of delivery)
Software	on CD-ROM, installation under Windows 98, Windows 2000 and Windows XP	on CD-ROM, installation under Windows 98, Windows 2000 and Windows XP
Drive connection	via RS 232 interface (or: use of a USB adapter), connecting cables to PC included in scope of delivery	via RS 232 interface (or: use of a USB adapter), connecting cables to PC included in scope of delivery
Sizes	Machine: L 900 x W 460 x H 300mm Control unit: L 450 x W 270 x H 60mm	Machine: work table 370 x 350mm, table 400 x 125mm, total height approx. 780mm Control unit: L 450 x W 270 x H 60 mm
Total weight	Machine: approx. 45kg / Control unit: approx. 4kg	Machine: approx. 50kg / Control unit: approx. 4kg

