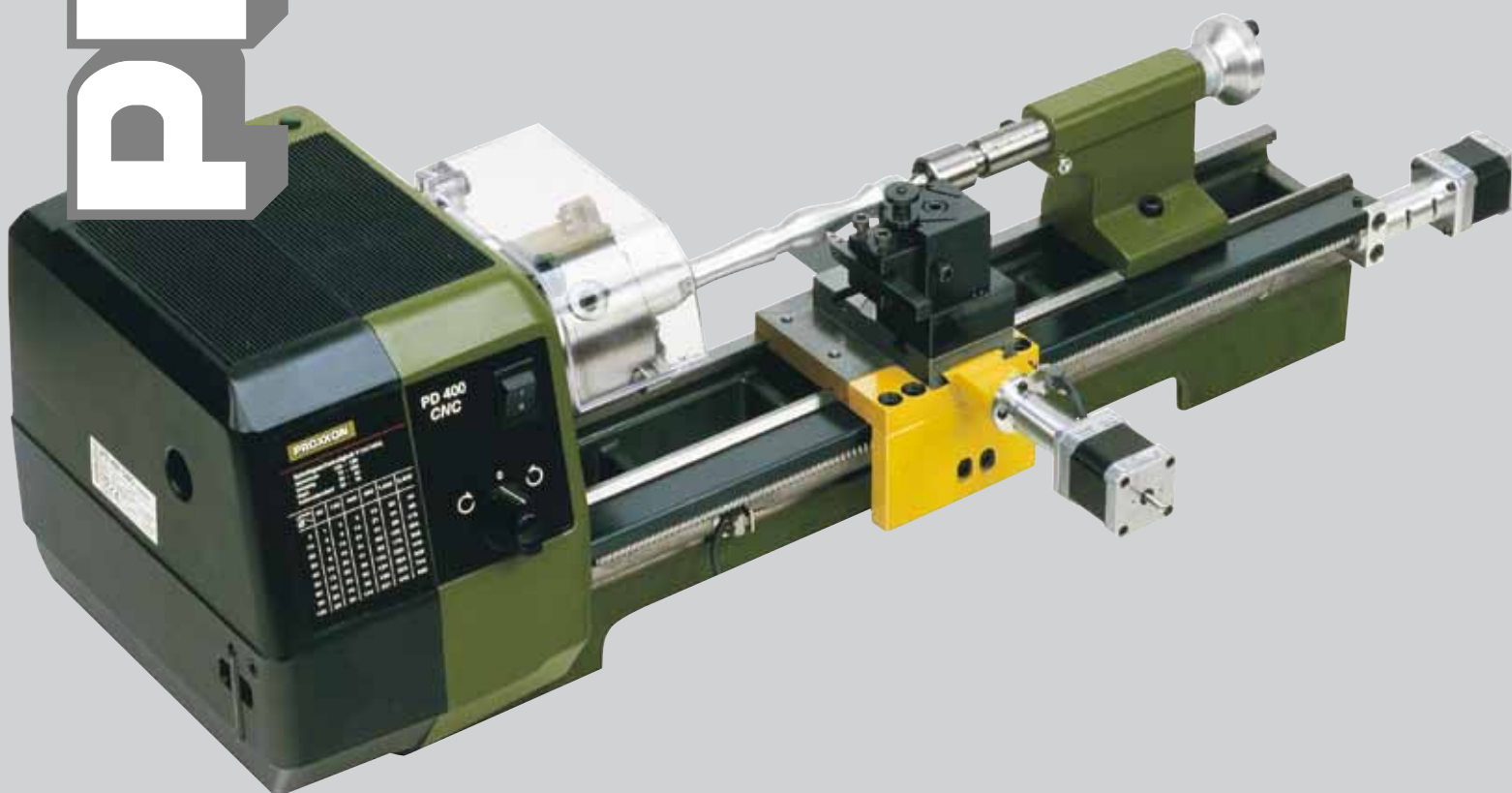
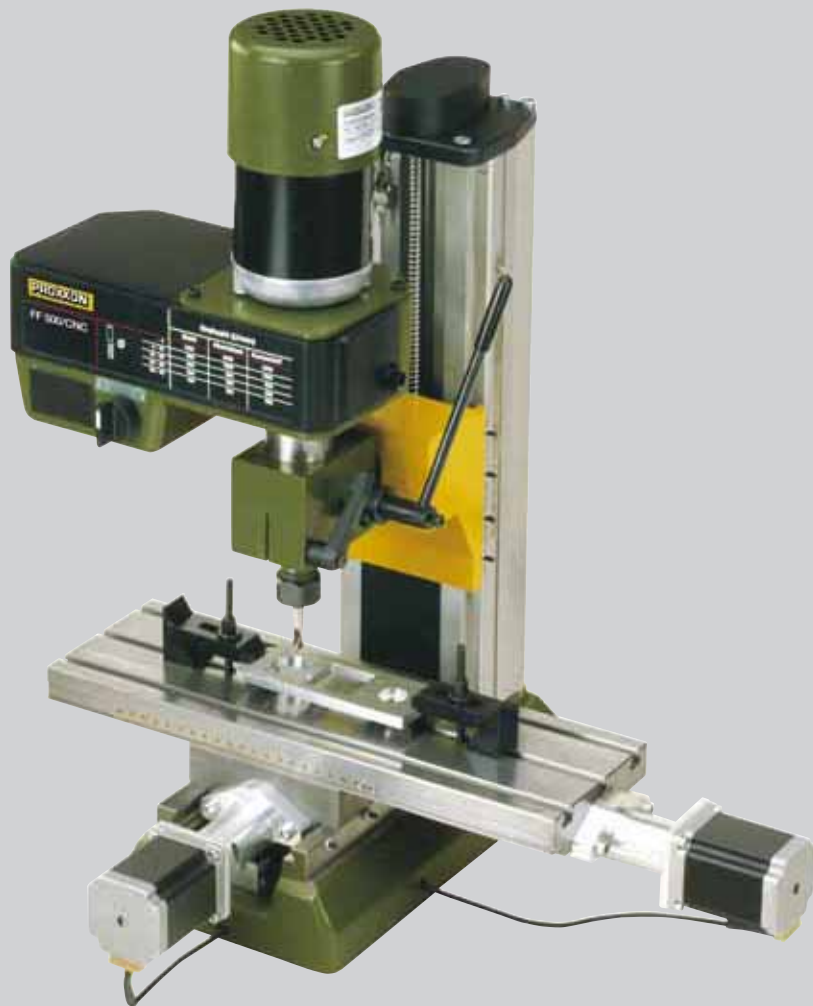


PROXXON



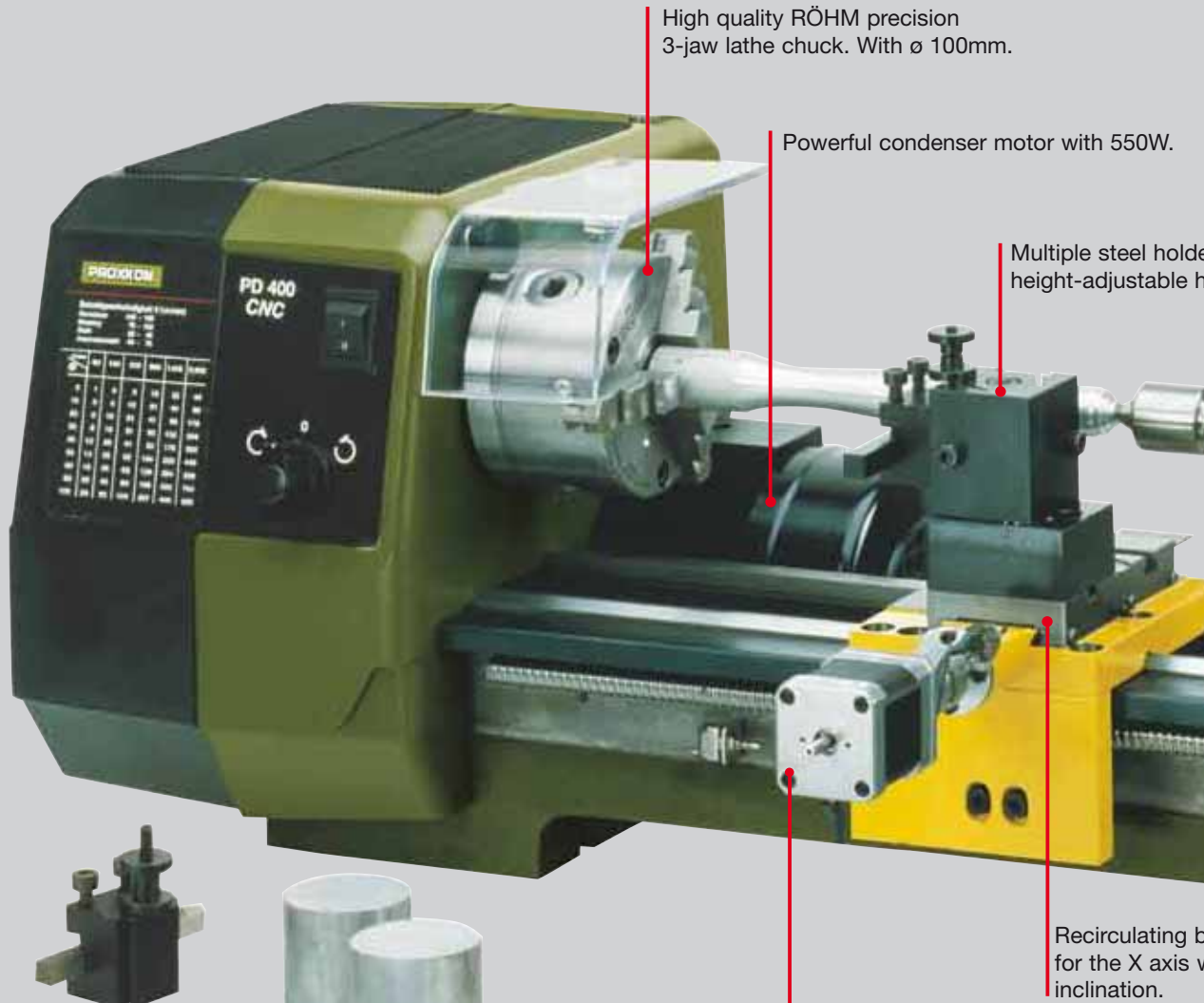
Lathe System PD 400/CNC
MICRO Miller FF 500/CNC

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 motors.
- Including user-friendly and WINDOWS® compatible software (see description on the right).



Step motor 1.8A for travel distance 70mm.



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.



Complete with CNC control unit and WINDOWS® compatible software.

CNC control of z-axis and x-axis enables precision

Axes drive with powerful step motors and recirculating ball spindles. For facing and longitudinal turning, for turning balls, radii and contours made of steel and non-ferrous metal. Work piece made automatically by software and can be reproduced as often as required. The mechanical design is almost identical to the proven PROXXON. Solid, cross-braced cast iron bed with ground and wide legged apron and tailstock ensure vibration-free working and optimum quality RÖHM precision 3-jaw lathe chuck (\varnothing 100mm). 6 spindles (2,800/min) are provided via belt drive. Including rotating centre M

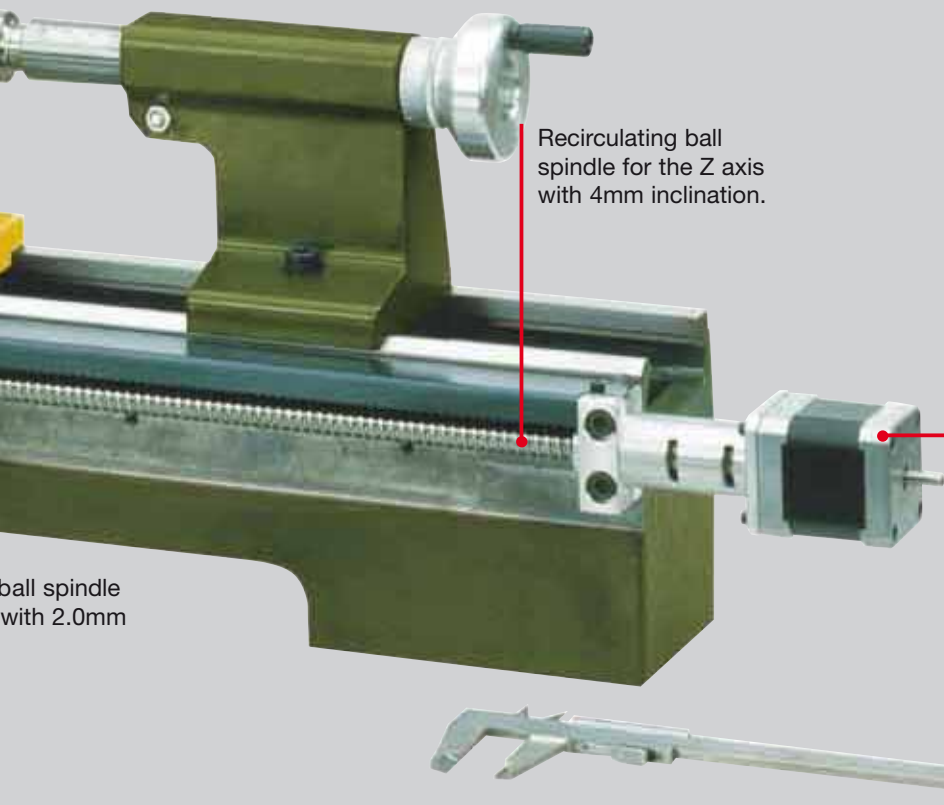
ts and small series manufacture. Made in Europe.

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

The MICRO Miller ready for CNC version.
Without control unit.
Three standard plug connections to connect the control unit. The design is identical to the PROXXON MICRO Lathe.

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

...dles (no backlash).
...any freely formed
...chining is effected
...required. Otherwise
...ON Lathe PD 400:
...ed prism guide for
...m precision. High
...ndle speeds (80 –
...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



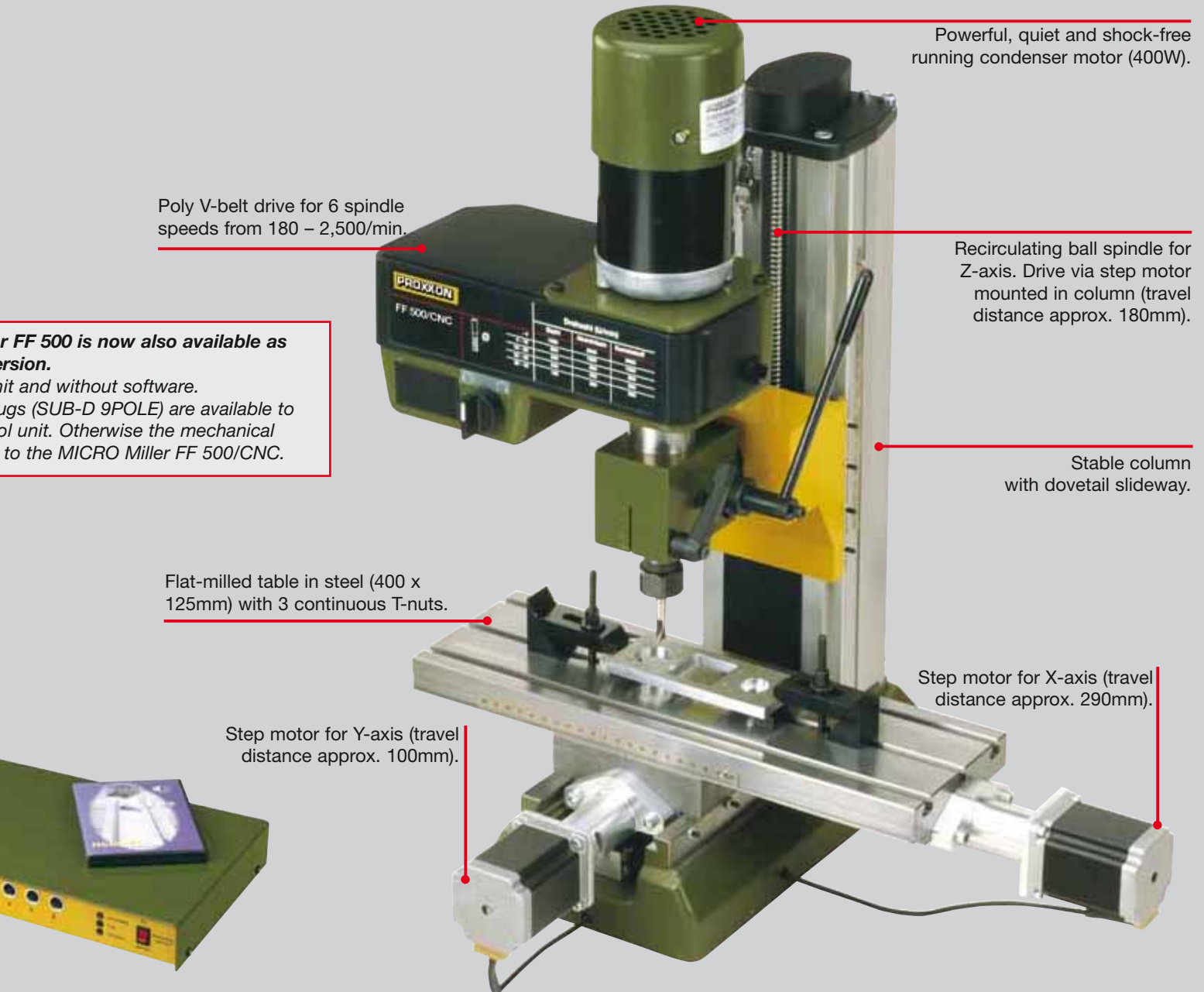
Thanks to CNC control.
This also applies to the PROXXON MICRO Lathe.

The mechanical design (see MICROMOT catalogue) dovetail sideways. Milling additional sleeve feed (sleeve = 1mm). Work piece fix PROXXON MICRO Miller to the new dividing attachment. Complete with CNC control cables, one each steel collar. **Detailed technical data**

NO 24 340

MICRO Miller FF 500/CNC

- With double roller bearing recirculating ball spindles at all 3 axes (no backlash) and 3 powerful step motors for driving compound table and milling head. For high machining precision and repeat accuracy.
- 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).



Powerful, quiet and shock-free running condenser motor (400W).

Poly V-belt drive for 6 spindle speeds from 180 – 2,500/min.

Recirculating ball spindle for Z-axis. Drive via step motor mounted in column (travel distance approx. 180mm).

FF 500 is now also available as a mechanical version.

Control unit and without software. Three standard plugs (SUB-D 9POLE) are available to connect to the control unit. Otherwise the mechanical version is available to the MICRO Miller FF 500/CNC.

Stable column with dovetail slideway.

Flat-milled table in steel (400 x 125mm) with 3 continuous T-nuts.

Step motor for X-axis (travel distance approx. 290mm).

Step motor for Y-axis (travel distance approx. 100mm).

Control of 3 tool axes machining of steel and non-ferrous metals is possible in all dimensions. Suitable for larger work pieces !

The design is almost identical to the MICRO Miller FF 500 (see description on the left page): Base of vibration-damping cast steel. Stable column with dovetail slideway. The milling head can be pivoted to the left and right by 90°. The table travel is 290mm (30mm) using drilling lever with scale ring (1 graduation line per 10mm). The table is fixed using steel collets. The accessories supplied for the MICRO Miller FF 500 can be used without restriction. This also applies to the attachment UT 400/CNC for the 4th axis!

The control unit, CNC programme software, all connecting cables and detailed manual.

Technical data are listed on the back!

MICRO Miller FF 500 – ready for CNC

As described, but without control unit and without software. An interesting offer for users who already have a control unit. Three standard plugs (SUB-D 9POLE) are available to connect the control unit.

NO 24 344

Note:

Dividing attachment UT 400/CNC: The 4th axis to the MICRO Miller FF 500/CNC is depicted on the left outer page!

PROXXON CAD/CAM software for WINDOWS®



Brief description of software

For optimum performance the software is precisely harmonized with the CNC machine. The CNC control unit controls the step motors of the machine and is connected to your PC via RS 232 interface (or a USB adapter).

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.

Complete with connecting cables with suitable plugs.

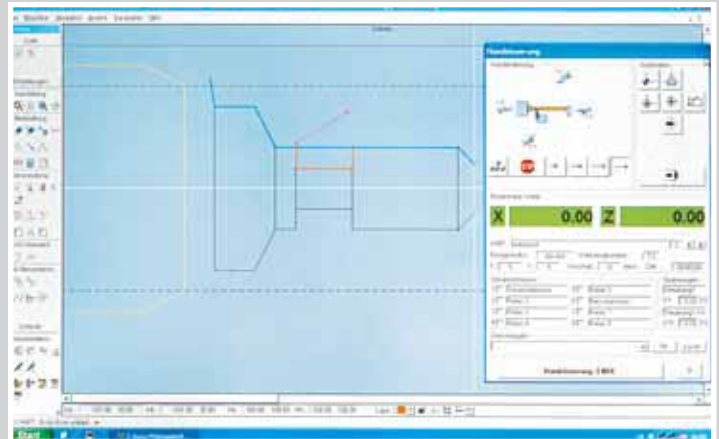
Simple creation of work piece geometry

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 formats (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.



Simple creation of work piece geometry in the PC.

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®.

Dividing attachment UT 400/CNC 4th axis to the PROXXON MICRO Miller FF 500/CNC finally available. For perfect 3D processing!

For individual parts or small series production. For manufacturing divisions, gear wheels and (including irregular) profiles.

All angle positions can be approached by computer control. Easy horizontal and vertical construction. Driven by powerful step motor (2.0A) through toothed belts, and virtually free from play, adjustable worm gear.

The high transfer ratio (40:1) provides enormous torque.

Suitable for main spindle with 14mm drill hole and flange to suit face plates and for all lathe chucks from the PD 400 lathe system.

Smallest increment 0.003°. Recognition of reference position through light barrier.

NO 24 423

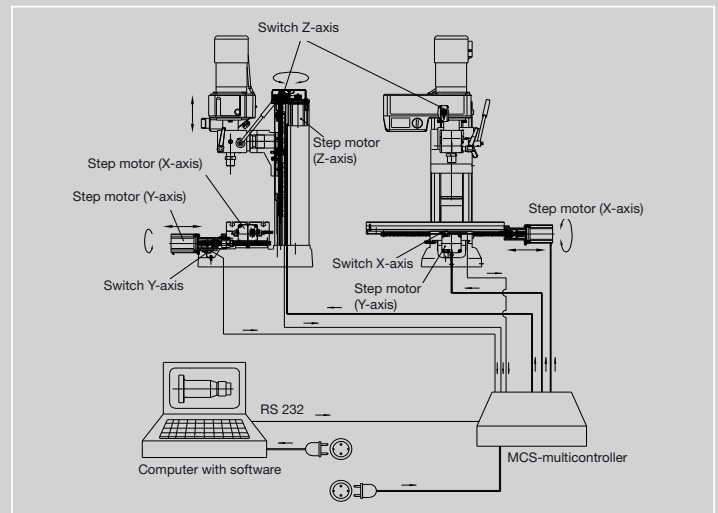
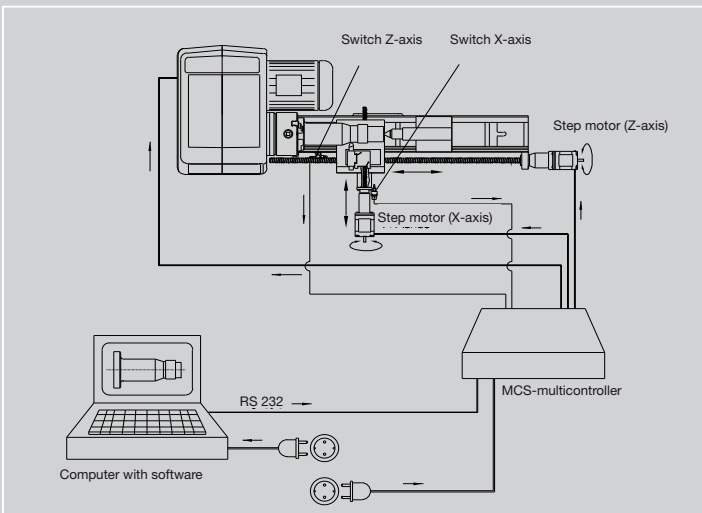
Note: The 4th axis is implemented in the MICRO Miller FF 500/CNC software as standard. However, for all machines delivered before September 2009 the control unit (hardware side) needs to be equipped with the necessary driver stage. If you should be interested in an update of your control unit, please contact our service department for detailed information!



Technical data



	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



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