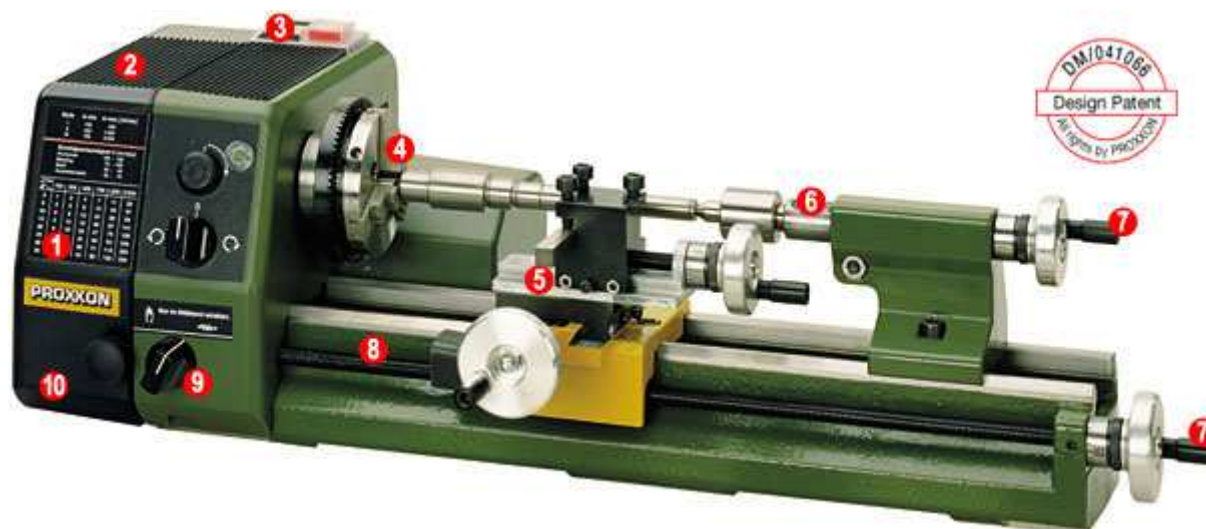




Expandable lathe/milling system made in Europe.  
Visible and tangible constant precision.



## Lathe system PD 230/E

Usable on materials such as steel, brass, aluminium and plastic. Complete with automatic feed, thread cutting capability, headstock chuck, live centre and top slide for taper turning. Used to part, machine stock and cut tapers. The numerous optional accessories allow one to drill, mill and slot.

### Technical data:

Centre distance of 230mm, swing 52mm. Height over cross slide 28mm. Cross slide travel 60mm and top slide 45mm. Steel tool holder accepts 8 x 8mm cutters. The MK1 (short) spindle has a 10.5mm bore. It runs in precision ball bearings, yielding an accuracy of 0.01mm without chuck. The thread cutting capability covers the most important pitches of 0.5 - 0.625 - 0.7 - 0.75 - 0.8 - 1.0 - 1.25 and 1.5mm.

Spindle speeds are changed by means of a belt and offer 300 - 900 and 3,000rpm. The electronic speed control further extends the speed range down from 100rpm (which is important when cutting threads) to 3,000rpm. The automatic feed offers 0.05 or 0.1mm per revolution. The tailstock spindle has a MK1 (short) bore and 30mm travel. The quiet 220 - 240V motor is fitted with a forward/reverse switch.

The three jaw chuck offers 2 - 35mm capacity (internal jaws) and 24 - 68mm (external jaws). The handwheels are fitted with zero adjustable scales. One revolution equals 1mm feed (20 divisions) and hence 0.05mm/division. Weight approx. 10kg and dimensions approx. 530 x 250 x 150mm.

NO 24 004

- 1 Gear casing with table showing the appropriate speed for the material and diameter.
- 2 Headstock spindle with 10.5mm bore and MK1 taper.
- 3 Main switch with emergency stop function and restart protection.
- 4 Three jaw chuck, 2 - 68mm capacity.
- 5 The top slide, used for taper turning, and the tool holder are included as standard!
- 6 MK 1 live centre included as standard.
- 7 Practical handwheels with zero adjustable scales.  
1 division = 0.05mm,  
1 revolution = 1mm.
- 8 Cast iron bed with ground prism for tool rest and tailstock ensures minimal deflection, even at high loads.
- 9 Enclosed lead screw for automatic feed of 0.05 or 0.1mm/revolution.
- 10 Combination of three speeds (attained by swapping drive belt position) and electronic speed control yield speeds of 100 to 3,000rpm.

**Quick change tool post for PD 230/E****Easy to use!**

Enables quick tool changes and easy height adjustments. Including 2 tool holders for lathe tools up to 10 x 10mm.



**NO 24 022**

**Additional quick change tool holder (separately)**

Can be used with the above mentioned quick change tool post.

**NO 24 024** piece

**Splash guard and chip collecting tray for PD 230/E**

Made from 1.5mm thick sheet metal, powder coated. Bevelled edges at the front and back allow slight cleaning. Mounting hole and raised base to secure lathe are pre-drilled. Length 495mm, width 215mm, height 150mm. The depicted lathe is not included in the offer.



**NO 24 006**

**Self-centering 3 jaw chuck**

Identical to the chuck of lathe PD 230/E. Radius 2 - 68mm (with reversing chucks). Body of steel. Suitable for lathe PD 230/E and the dividing attachment TA 230.

**NO 24 028**

**Four jaw chuck**

The 4 jaws are adjusted independently, thus clamping unsymmetrical pieces, ovals, squares and odd-shaped work pieces. Capacity of 80mm.

**NO 24 030**

**Collet set covering 2.0 - 10mm for concentric accuracy better than 0.02mm**

For accurate use on round components. The collets are mounted in the place of the headstock chuck. Eight collets (one each 2.0 - 2.5 - 3.0 - 4.0 - 5.0 - 6.0 - 8.0 and 10mm) are included.



**NO 24 042**

**Centre turning attachment**

Used for highest accuracy with high rotational precision.

One face plate, 2 fixed MK 1 (short) centres and 1 drive dog are included. Supplied in wooden box with sliding lid.

**NO 24 070**

**Fixed steady**

Used when turning long, slender pieces, capacity up to 40mm (Ø). Also used when the tailstock cannot be utilised.

**NO 24 080**

**Radius cutting attachment**

Usable on both the PD 230 and PD 400 systems, is mounted on the cross slide in place of the tool holder. Cuts convex and concave shapes to depth of 1.0mm in steel as well as in non-ferrous metals and plastics. Radii or 3/4" spheres of diameter up to max. 32mm are possible. Comes with one finishing cutter 8 x 8 x 80mm in a wooden box with sliding lid.

**NO 24 061**

**Gear chuck**

Capacity to 10mm, with key and MK1, for tailstock.

**NO 24 020**

**Gear chuck**

Capacity to 10mm, with key and MK1, for tailstock. With 10mm arbor for mill/drill unit.

**NO 24 110**



**Cutting tools of high quality cobalt HSS steel, ground****Five piece set**

One each roughing out, parting, finishing cut, left and right cutter. Supplied in wooden box with sliding lid.

8 x 8 x 80mm

**NO 24 530**

**Three piece thread cutting set**

One cutter for external thread (ground to 60°, metric) one for internal thread, one general cutting. Supplied in wooden box with sliding lid.

8 x 8 x 80mm

**NO 24 540**

**Cutter set with tungsten inserts**

Three holders (90mm long):

- ❶ for roughing out;
- ❷ for longitudinal work;
- ❸ for 90mm boring bar, holes from 12mm.

Standard tungsten inserts, 55°, plated (commercially available version). Three additional inserts securing screw and key TX 8 are included. 8 x 8mm.

**NO 24 555**

**Tungsten disposable tips**

For the holders as described above.

**NO 24 557** Ten piece set

**Three piece centre drill set**

Made of HSS steel. DIN 333 (type A) 60°. Complete set centre drills with sizes of 2.0 - 2.5 and 3.15mm.

**NO 24 630**



**HSS boring tool set, 6 pieces**

One each cutter for 60 degree (metric) and 55 degree (Whitworth) inside threads, 1.3mm - 2.65mm and 4mm. Shaft of Ø 6mm. Length 95mm. The cutters are held by a tool holder that mounts to the tool post of the PD 230/E. Comes in a wooden box.



**NO 24 520**

**Tool holder for rotary tools****For use on lathe machines.**

Made of steel 30 x 10 x 65mm. This holder allows mounting of our rotary tool LB/E or IB/E to the tool post of the lathe PD 230/E for grinding or polishing purposes. MICROMOT collar size Ø 20mm. Shaft 8 x 10mm for tool holder PD 230/E.



**NO 24 098**

**14-piece parallel supports set**

Ground in pairs. For adjusting work on drilling machines, lathes and milling machines. Made of high-alloy, hardened steel (58 - 62 HRC). Parallel accuracy 0.002mm. 2 each of 8 x 10, 15, 20, 25, 30, 35 and 40mm. Length 100mm. Packed in a wooden box.



**NO 24 266**

**Die holder for round dies, threads M3 to M10**

Sizes: M 3 - 4 - 5 - 6 - 8 - 10. The straight shaft fits the holder Ø 10mm when mounted in the tailstock of the PD 230/E. The holder is held by hand while cutting the threads. Comes in a wooden box.



**NO 24 082**



## Mill/drill head PF 230

### Converts the lathe PD 230/E into a complete machining centre.

Set includes column (35 x 400mm), mounting bracket and bolts. The mounting position on the PD 230/E is already milled. The lathe's top slide is replaced with the table (supplied) of 110 x 70mm, with 3 T-slots 12 x 6 x 6mm. The lathe now functions as a compound table, with X-Y travel being longitudinally and cross-wise respectively. The mill/drill head is identical to the MICRO miller FF 230. Three collets of sizes 6 - 8 and 10mm are included.

#### Other technical data:

220 - 240 V. 140 W. 50-60 Hz. Spindle revolutions 280 - 550 - 870 - 1,200 - 1,500 and 2,200/min.

NO 24 104

#### Note:

Lathe not included.

**Fine feed for milling machine PF 230**

Easily installed in a few seconds. The feed may be used via either the height feed (vertical) or the fine feed in the tilted position. The graduated scale may be zero reset. One revolution is equivalent to 1.5mm spindle travel (1 division = 0.05mm).

**NO 24 140****Dividing attachment TA 230 for PF 230**

Facilitates the machining of gear teeth and non-concentric patterns. Supplied with two dividing discs (40 and 48 teeth), enabling standard divisions of 2, 3, 4, 5, 6, 8, 10, 12, 16, 20, 24, 40 and 48. The spindle of the attachment is identical to that of the lathe PD 230/E. The 3 jaw chuck and 4 jaw chuck may therefore be fitted to it as well (the chuck is an optional accessory). May be fitted to the lathe's cross slide or to the bed. Supplied in a wooden box with sliding lid. The 3 jaw chuck depicted here is not included in the offer.

**NO 24 131****Five piece collet set**

Includes 1 each of 2.4 - 3.0 - 3.2 - 4.0 and 5.0mm, for milling cutters. Supplied in a wooden box with sliding lid.

**NO 24 144****Step clamps made of steel**

For safe fixing of small work pieces (up to 18 mm thick). Set consists of 2 stepped blocks and clamps, T-slot nuts of the MICROMOT standard (11.5 x 11 x 4mm), bolts. In wooden box with sliding lid.

**NO 24 256****Step clamp set, of milled steel**

2 each step blocks, 2 clamps, 2 nuts and 2 T-slot nuts (B = 7mm, E = 12mm, D = 4mm, C = 7.2mm). For work pieces up to approx. 35mm thickness. In wooden box with sliding lid.

**NO 24 257**

**Milling cutter set (2 - 5mm)**

All cutters with 6mm shaft. Cutters of Ø 2 - 3 - 4 and 5mm. Double fluted according to DIN 327. Made of HSS. Supplied in wooden box with sliding lid.

**NO 24 610**

**Milling cutter set (6 - 10mm)**

4 cutters Ø 6 - 7 - 8 and 10mm. Four flute design according to DIN 844. Shafts 6.0 and 10.0mm respectively. Made of HSS. Supplied in wooden box with sliding lid.

**NO 24 620**

**Edge finder set**

Used for fast and accurate location of starting point of work pieces with respect to the machine spindle on milling machines. Size 6 x 6 x 50mm and 6 x 5 x 75mm. Neatly packed in a wooden box.

**NO 24 434**

**Precision vise, milled in steel**

May be used on its side and back. Jaw width of 60mm, clamping capacity 42mm. Complete with securing bolts and packed in a wooden box with sliding lid.

**NO 24 255**

**Precision V-blocks**

Used to clamp various work pieces. Made from hardened steel, precision ground in pairs. Four different depths of prism incisions V, all at 90°. Size 50 x 30 x 30mm. The solid clamp and knurled knob ensure superb securing of the workpiece. Supplied in a wooden box with sliding lid.

**NO 24 262** 2 pieces





**Lathe practice for model makers**

An interesting book by Tilman Wallroth, in which all important lathe components and working stages are dealt with in a practical manner. Included are many easily understood examples, clear and informative illustrations and many tips for use. Highly scientific advice was deliberately omitted. 230 pages, written without reference to trademarks. German only!

**NO 24 999**