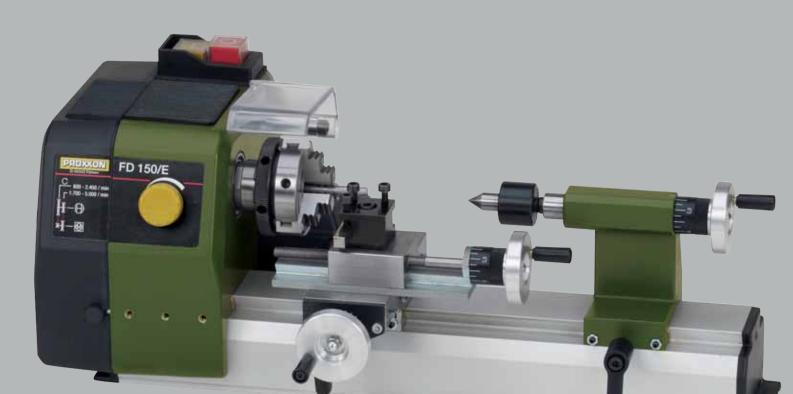




Tools with character!

Edition 2013/2014





Visible and tangible quality. Made for technology enthusiasts.

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Our website <u>www.proxxon.com</u> offers an instructional video for the articles marked with this symbol. Come have a look!



For PROXXON INDUSTRIAL hand tools there is a separate 32 page catalogue available, which we will forward to you free of charge. Please send your request to the address on the back of this catalogue.



Multiversatile equipment for delicate projects. Precise and quiet. With quick change chuck for 0.3 – 3.2mm shanks.

Precision drill/grinder FBS 240/E Strength comes from quality!

For drilling, milling, grinding, polishing, cleaning, carving and engraving.

The maximum speed of 20,000rpm is continuously variable down to 5,000rpm. The full wave electronic speed control results in virtually constant torque, even at lower speeds, in turn facilitating micro drilling, cleaning and polishing. The spindle runs in a precision ball bearing and is lifted with a lock button. The 20mm collar fits MICROMOT drill stands and vices.

The machine is fitted with a special, balanced, low noise DC motor with high life expectancy. Stable housing of glass-fibre reinforced POLYAMIDE with soft components in the finger grip area.

Complete with 43 quality inserts in a sturdy plastic case.

Technical data:

5,000 – 20,000rpm. Maximum power consumption 100W, 220 - 240V. Length 200mm. Weight 450g. Insulated according to class 2 requirements. Keyless chuck with 0.3 – 3.2mm capacity.

NO 28 472



Complete with 43 high-quality bits and cutters in a durable polypropylene case.

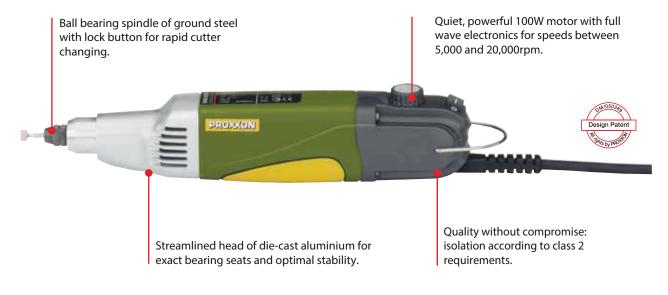


Precision electrical tools with even more power: The 2nd generation of our tools with gear head made of die-cast aluminium.

Professional drill/grinder IBS/E

NEW

- For drilling, milling, grinding, polishing, cleaning, cutting, carving, engraving and signing.
- For precision mechanics, model builders, jewellers, opticians, artists and electronic enthusiasts.





With 34 bits and cutters of industrial quality, all shafts Ø 2.35mm. Complete with six triple slit steel collets covering 1.0 to 3.2mm (see page 21).

High concentric accuracy (maximum runout 3/100mm). No runout in your bits and cutters.

This high-revving, special balanced, low noise DC motor has full-wave electronic speed control. The ground steel spindle runs in a ball bearing. Six high concentricity MICROMOT collets, (1.0-1.5-1.5)

2.0 – 2.4 – 3.0 and 3.2mm and closure nut) are included.



Technical data:

Speed 5,000 to 20,000rpm. Power consumption (max) 100W, 220 – 240V. Stable head of die-cast aluminium and main housing of glassfibre reinforced POLYAMIDE. Length 230mm. Weight approx. 500g. Insulated to class 2. The 20mm MICROMOT collar allows fitting of optional drill stands, horizontal stands, etc. Supplied with 34 bits and cutters in a stable plastic case.

NO 28 481

Note:

MICROMOT steel collets are hardened and thus have a high, consistent flexibility. They also maintain prolonged accuracy, even after regular use (these collets should not be compared with unhardened, four-slit collets of brass and aluminium). The triple slit collet is substantially more difficult to manufacture than the four-slit type,

2 but offers a better load- bearing surface. This is especially important for cutters with small shaft diameters. Also see page 21.





Storage case of high-grade polypropylene. Attractive design, very sturdy and large enough to put the machine back in the case after completing work, without having to "fumble".

A label on the side identifies the contents.

Long and slender spindle neck for working in tough-to-reach areas (including hollow forms).

Long neck angle milling/drilling unit LWB/E



With a set of gears running on several ball bearings in a stable, die-cast aluminium housing head.

Also suitable for right-angled separation of rods. With a special balanced, powerful, quiet and long-lasting DC motor. Infinitely variable rpm (full wave electronics). Main housing is made of glass-fibre reinforced POLYAMIDE.

Safely stored in an attractive and extremely stable case made from high-grade polypropylene, as described on the left.

With MICROMOT hardened steel collets (1.0 - 1.5 - 2.0 - 2.4 - 3.0 and 3.2 mm).

Technical data:

220 - 240V. 100W. 3,000 - 15,000rpm. Length 270mm. Weight 550g. Insulated to class 2.



NO 28 492

Long neck straight drill/grinder LBS/E

Bit holder for storing rotating bits and cutters is included in the delivery.



Head of die-cast aluminium with 100mm long spindle neck (and 20mm MICROMOT collar).

Ideal for internal grinding and the use in slots and channels. Special balanced, powerful, quiet and long-lasting DC motor. Variable

(full wave) electronic speed control; main housing of glass-fibre reinforced POLYAMIDE. MICROMOT collets (1.0 – 1.5 – 2.0 – 2.4 – 3.0 and 3.2mm).



Safely stored in an attractive and extremely stable case made from high-grade polypropylene, as described on the left.

Technical data:

220 – 240V. 100W. 5,000 – 20,000/min. Length 300mm. Weight 630g. Insulated to class 2.

NO 28 485

Pocket drilling machine COLT 2

Tough and durable special balanced, powerful, quiet and longlasting DC motor.

Quiet planetary gear gearbox of die-cast aluminium (main housing made of glass-fibre reinforced POLYAMIDE).

Handy switch with integrated electronic speed control and lock. The RÖHM chuck allows the precision removal of the inserts. Safely stored in an attractive and extremely stable case made from high-grade polypropylene, as described on the left.

Technical data:

220 – 240V. 100W. 0 – 3,000rpm. RÖHM chuck capacity 0.5 – 6mm. Capacity in steel 5mm. Length 225mm. Weight 900g. Insulated to class 2.





The long, slim head of die-cast aluminium makes the LHW ideal in numerous applications including detailed sanding.



For working steel, non-ferrous metals, glass, ceramics, wood and plastic. For cutting, rough-machining, grinding, precision polishing, fine polishing and carving wood. Special balanced, powerful, quiet and long-lasting DC motor. Stable head made of glass-fibre reinforced POLYAMIDE. A corundum grinding disc (grit 60), a fan sanding disc (grit 100) and a reinforced cutting disc are included. Safely stored in an attractive and extremely stable case made from polypropylene.

Technical data:

220-240V. 100W. 13,000rpm. Disc diameter 50mm with 10mm interval. Length 270mm. Weight 550g. Run down time less than 1 second. Insulated to class 2.

NO 28 547



Backing disc for LHW

Self-adhesive type, for use with corundum bound sanding discs and sanding fleece. Ø 50mm.

NO 28 548 1 piece



Corundum grinding disc for LHW

Used for de-burring, grinding, sharpening and derusting steel and non-ferrous metals. Ø 50mm.

NO 28 585 60 grit



Corundum sanding disc for LHW

Self-adhesive type, used on flat and convex surfaces. Ø 50mm.

NO 28 549 80 grit 12 pieces **NO 28 550** 150 grit 12 pieces



Silicon carbide grinding disc for LHW

Used on hard materials such as glass, stone, ceramics and even hardened steel. Ø 50mm

NO 28 587 60 grit



Sanding fleece for LHW

Self-adhesive type, used for cleaning, matting and sanding of steel, stainless steel and non-ferrous metals. Also used for paint removal. Ø 50mm.

NO 28 554 medium 5 piece **NO 28 555** fine 5 piece



Corundum fan sander for LHW

For grinding tempered cast iron, cast iron, stainless steel, non-ferrous metals, wood and plastic. Low wear-resistant. Ø 50mm.

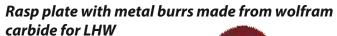
NO 28 590 100 grit



Corundum bound cutting disc for LHW

With woven reinforcement. 50 x 1 x 10mm. For cutting steel, non-ferrous metals, plastic and wood. Ø 50mm.

NO 28 154







For model-making, cleaning and smoothing of wood, plastics and glass-fibre reinforced objects. No expenditure of effort is needed, easy and precise handling. Not suitable for metal processing.

NO 29 050



Storage case of high-grade polypropylene. Attractive design, very sturdy and large enough to put the machine back in the case after completing work, without having to "fumble".

A label on the side identifies the contents.



Small, torque resistant, solid and versatile. Die-cast aluminium head for high stability!



For shape finishing, mortising, fine polishing (flat surfaces). Also for de-burring metal, paint removal and fine finishing.

Head of die-cast aluminium for high stability and precise ball bearing





fitting. Main housing made of glass-fibre reinforced POLYA-MIDE.

Variable (full wave) electronic speed control. The head rotates through 60°. Complete with 2 off 80 and 2 off 180 grit belts.

Safely stored in an attractive and extremely stable case made from high-grade polypropylene, as described on the left.

The head rotates through 60 $^{\circ}$.



Technical data

220 – 240V. 100W. Belt size 10 x 330mm (usable sanding area 10 x 110mm). Belt speed 225 – 450rpm. Length 350mm. Weight 650g. Insulated to class 2.

NO 28 536

Replacement belts for BS/E



Corundum on tear-resistant, woven backing. Sands metal, non-ferrous metals, wood and plastics efficiently. 10 x 330mm.

NO 28 583	80 grit	5 pieces
NO 28 582	120 grit	5 pieces
NO 28 581	180 grit	5 pieces

Identical with the foregoing item, but with burrs made from silicon carbide for grinding and de-burring of glass and ceramics. Also suitable for grinding brass, steel and cast iron.

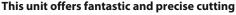
NO 28 579 180 grit 5 pieces

Super jig saw STS/E

NEW

Note:

The alternative 12V jig saw STS 12/E is described on page 14.



capacity. Stable head of die-cast zinc for precise fitting.

The housing head is made of glass-fibre reinforced POLYAMIDE. Special balanced, low noise DC motor with high life expectancy. The stroke speed is variable by means of full wave electronic speed control. Footplate adjustable up to 45° for mitre cuts. Ideal for tight curves in wood (up to 12mm), PC cards to 5mm and non-ferrous metals to 3mm. Complete with 4 Super-Cut sawing blades of various pitches for wood, plastic and metal. Safely stored in an attractive and extremely stable case made from high-grade polypropylene, as described on the left.

Technical data:

220 – 240V. 100W. Stroke speed of 2,000 – 4,500/min. Length 230mm. Weight 700g. Insulated to class 2.

NO 28 530



Jig saw blades made of special steel

Pitch of 1.5mm, teeth ground and set. Usable on hard and soft woods, plywood, fibreglass reinforced sheets as well as soft plastics. Fits STS/E and STS 12/E.

NO 28 054 Pack of 2

Jig saw blades made of HSS

Tooth pitch of 1.06mm, with teeth set and ground. Usable on metals, non-ferrous metals, aluminium and softer alloys, fibreglass, Plexiglass and insulating materials. Fits STS/E and STS 12/E.

NO 28 056 Pack of 2



Oscillating motion far better than conventional orbital motion. Hence suitable for cutting and precision carving.



The OZI/E cuts in those cases where a rotating saw blade can no longer be used (in this case using the HSS separation blade, see p. 9).



For precision square excavations, HSS immersion saw blades are available with an 8 and 14mm width of cut.

back in the case after completing work, without having to

"fumble". A label on the side identifies the contents.



Compact, light and well balanced. With an extra powerful drive for a high material removal capacity.

Sanding pads for OZI/E



High durability corundum (aluminium oxide) pads. Grain filled with special filler to prevent premature clogging. Deposited on special backing paper. Self-adhesive.

NO 28 891 80 grit 25 pieces **NO 28 893** 150 grit 25 pieces **NO 28 895** 240 grit 25 pieces

HSS cutting blade for OZI/E

Oscillates, making it ideal for cutting metal, wood, PC cards, plastics, plaster of Paris and many other materials.



The segment cut facilitates exact cutting right into corners.

NO 28 900 ø 65mm, 160 teeth

Diamond cutting blade for OZI/E

Operation as described above for the HSS blade. Cuts marble, bricks, dry walling and many other



materials. Ideal for interior finishing and sanitary and electrical installation.

NO 28 902 Ø 65mm

HSS immersion saw blades for OZI/E

For exact square excavations and other forms. For making hatchways and windows in ship and aircraft models. Cuts wood, plywood, plastics and aluminium. Max. immersion depth 16mm.



NO 28 897 Saw blade width 8mm NO 28 898 Saw blade width 14mm



Powerful special DC motor, quiet and long-lasting.

Left-justified band grinder, making it possible to process surfaces 'right to the corner'. Fine adjustment of rollers prevents lateral rolling off. Easy replacement of bands by means of a spring tension system without the use

of tools. Housing is made of glass-fibre reinforced POLYAMIDE. Complete with screw clamp and with 5 x 150 grit and 240 grit grinding bands.

Supplied in a practical case as described on page 8.

Technical data:

220 – 240V. 150W. Grinding band 40 x 260mm. Grinding surface 60 x 40mm, band speed 160m/min. Length 175mm. Weight 700g. Class 2 insulation.

NO 28 526



is included.

Grinding bands made from high-quality corundum (aluminium oxide)

Mounted on a high-performance support. For the grinding of metal, non-ferrous metals, wood and plastics. 40 x 260mm.

NO 28 922 80 grit 5 pieces NO 28 924 150 grit 5 pieces NO 28 928 240 grit 5 pieces

MICROMOT tool holder

For stationary use of MICROMOT electrical precision tools with metal head in combination with a vise.

Especially suited for industrial drill/grinder IBS/E, belt sander BS/E, longneck angle grinder LHW, super jig saw STS/E and delta sander OZI/E. Made of glass-fibre reinforced POLYAMIDE.

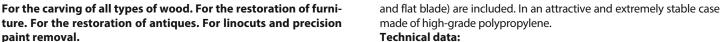




For joiners, model makers and wood carvers. With die-cast aluminium gear head.

Motor-driven carving device MSG





It is also possible to process plaster. Special, balanced, low noise DC motor with extreme high life expectancy. Gear head made of die-cast aluminium. Main housing of glass-fibre reinforced POLYAMIDE. Three high-grade Japanese knife inserts made from bimetal (U-form, V-form

Technical data: 220 - 240V. 50W. Stroke speed 10,000rpm. Length 230mm. Weight

NO 28 644



Storage case of high-grade polypropylene. Attractive design, very sturdy and large enough to put the machine back in the case after completing work, without having to "fumble". A label on the side identifies the contents.

680g. Class 2 insulation.

Replacement carving blades for MSG

Super-quality bimetal (Made in Japan). Base steel (carrier material) is bonded with extremely hard tungsten steel. The tips are hand-ground piece by piece. One blade each in V-shape large and small, rounded, and flat with straight and round corners.



NO 28 572

Multiform grindstone

For the Proxxon carving blades. Profiled for blade shapes. A pure oilstone for really sharp carving tools.





For wood processing: insertion tools with wolfram carbide burrs for model-making, cleaning and smoothing of wood and glass fibre reinforced synthetics. Not suitable for metals!

Extremely sharp and easy to work with: material is removed in a controlled way, without force, working along or against the grain. Highly durable and easy to clean, using a Bunsen burner. Also suitable for rubber, plastic foam and silicone. For working at 5,000 to 20,000rpm. Shafts 3.2mm.

NO 29 062 8.0 x 12mm Cylinder with round head NO 29 060 7.5 x 12mm NO 29 064 4.0 x 19mm **Taper**

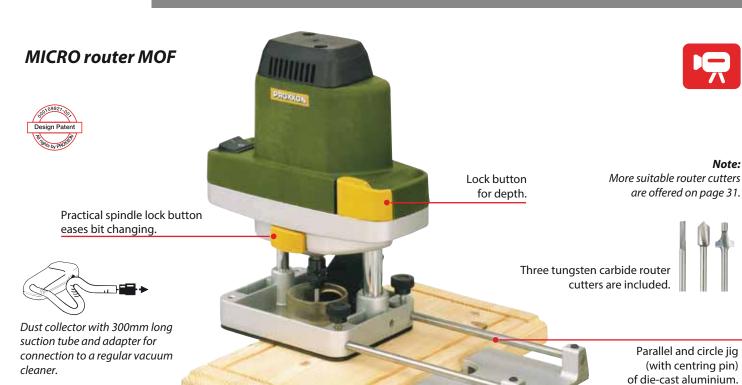


Note:

The wolfram carbide rasp plate is ideal for woodcarvers and as a supplement for a motorised carving machine MSG (material as described earlier) in connection with our long-neck angle grinder LHW. Details on page 6.



Small, handy, precise and particularly easy to handle. Main housing of die-cast aluminium.



Ideal for slotting, rounding over, counter boring and stock removal in wood, plastic, acrylic plastic, MDF, URIOL, ceilings and many more. Powerful universal AC motor. Base housing of die-cast aluminium and face of smooth gliding synthetic material. Main housing of glass-fibre reinforced POLYAMIDE. With MICROMOT collets (1.0 - 1.5 - 2.0 - 2.4 - 3.0 and 3.2 mm). Parallel and circle jig and fitted with a dust collector. Supplied in an attractive and very sturdy case of high-grade POLYPROPYLENE. Three tungsten carbide

router cutters (slot cutter 3.2mm, V-slot cutter and core box bit) are included

Technical data:

220 - 240V. 130W. 27,500rpm. Footprint 70 x 100mm. Total height 180mm. Weight 1,400g. Class 2 insulation.

NO 28 568

MICRO-Cutter MIC

For cutting wood, plastics, glass fibre reinforced plastic, paper, cardboard, foils and similar materials. With 0.5mm cutting width.

Slim and light: A diameter of just 36mm makes the ergonomically shaped casing easy to handle. For fatigue-proof work and accurate guiding. A powerful DC special motor in this compact device ensures an astonishingly high cutting performance. With screwdriver for saw blade replacement.

Technical Data:

220 - 240V. 30W. 15,000rpm. Maximum cutting depth 4mm. Cutting width 0.5mm. Weight approx. 300g. Class 2 insulation.

NO 28 650

Replacement cutting disc for MICRO Cutter MIC



Made of spring steel (hardness 55 HRC). With cleanly ground crossed teeth. 23 x 0.3mm. With 2.6mm bore.

NO 28 652

Diamond-coated cutting disc for MICRO Cutter MIC



With cooling holes: For cutting porcelain, ceramics, plastics, glass fibre reinforced plastic and PC cards.

23 x 0.6mm. With 2.6mm bore.

NO 28 654



work piece surface (e.g. for cut-outs). The cutting disc guard moves up automatically during cutting.

Note:



Precision milling/drilling machines MICROMOT 50 and 50/E. Ball bearing spindle and high-quality collets for efficient insertion of tools.

MICROMOT 50 und 50/E



- For milling, drilling, grinding, polishing, brushing, cleaning, de-rusting, cutting, engraving, signing.
- For working steel, precious metals, glass, ceramics, plastics and precious stones.
- Ideal for electronic hobbyists, model-builders, mechanics, jewellers, opticians, artists, chiropodists, dental technicians, tool and casting makers, etc.
- 12V supply allows the safe use of coolant (wet grinding and cutting)!





With a diameter of only 35mm it is unsurpassed easy to manage. Besides the weight of only approx. 230g, the effortless drive via balanced motor with ground spindle and collar bearing allows for quiet run with a pleasing sound to the ear. The high-quality MICROMOT steel collets (see page 4) ensure accurate clamping of the cutters, without rattling or vibrating of bits and cutters. The size of the machine dictates a 12V drive system, use of a mains adapter of at least 1.0A is thus required. We recommend MICROMOT mains adapters NG 2/S, NG 2/E or NG 5/E (see page 17).

Mill/drill unit MICROMOT 50/E

Variable speed control from 5,000 - 20,000rpm.

Special balanced, low noise DC motor with high life expectancy. Variable electronic speed control with feedback effect (high engine power also at lower speeds). High precision due to ball bearing spindle. Housing of glass-fibre reinforced POLYAMIDE with soft component in the finger grip area. 20mm-collar for fitting MICRO-MOT accessories. Six MICROMOT steel collets (one each of 1.0-1.5-2.0-2.4-3.0 and 3.2mm) are included.

Technical data: Direct voltage 12 - 18V. Power consumption is 40W max. Stroke speed from 5,000 to 20,000rpm. Length 220mm. Weight 230g.

NO 28 510

Mill/drill unit MICROMOT 50

Without electronic speed control (continuously 20,000rpm).

Other technical specifications and design as the above mentioned MICROMOT 50/E.

NO 28 500

Manual for creative model-makers

Over 370 pages of information and tips from all areas of model building. All illustrations in colour.

Attractively produced, this book affords a good insight into the areas of materials and their application possibilities. It describes tools and work techniques in general and gives comprehensive technical explanations concerning MICROMOT devices and available accessories.

A large portion is devoted to practical tips and a clear appendix of useful tables completes the contents of this helpful manual.

German only!





The 50/EF with quick-action chuck. Practical for use with different shaft diameters.

Note:

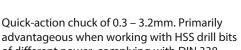
The MICROMOT 50/EF can also be used with MICROMOT steel clamping devices. This is recommended when milling continuously at high lateral prossure. This makes it



ing devices. This is recommended when milling continuously at high lateral pressure. This makes it impossible for the shafts to become loosened after prolonged working. Using clamping devices makes

true running better than using the quick-action chuck.

MICROMOT 50/EF



advantageous when working with HSS drill bits of different power, complying with DIN 338.

20mm-system adaptation. For flange mounting of MICROMOT accessories.

Stable housing made of glass-fibre reinforced POLYAMIDE. With a pleasantly soft handle.

MICROMOT extension cord. 300cm.



For all 12V machines. Plug and wall-socket reverse polarity-protected.

NO 28 992

Footswitch FS For free-hand precision work.



For all machines with a Euro plug (class 2 insulation) and maximum power absorption of 500W. Ideal for both portable and stationary machines. Housing of glass-fibre reinforced NYLON. The connecting cord (230V) is 250cm in length and the output cord 50cm. The transformer is connected to the FS when using 12V machines.

NO 28 700

Slim, easily handled and light.

Quick-action chuck and electronic revolutions adjustment, with feedback effect (high engine power in the lower revolutions area). Special, balanced, low noise DC motor with high life expectancy. A transformer is required for operation. We recommend MICROMOT network devices from 1.0A.

Technical data:

Direct voltage 12 – 18V. Power absorption up to 40W. 5,000 – 20,000/min. Length 220mm. Weight 230g.

NO 28 512



Model building and engraving set. Complete with MICROMOT drill/grinder 50/E, mains adapter and 34 bits and cutters of dental quality.

MICROMOT drill/grinder 50/E (as described on the left). The set includes 34 industrial respectively dental quality bits and cutters:

1 diamond grinding bit, 1 fine miller, 0.5 and 1.0mm micro-drills, 1 brass brush, 4 high-grade corundum grinding bits (cylinder, sphere, disc and cone shaped), 1 saw blade, 4 grinding wheels (2 corundum, 2 silicon carbide), 20 cutting discs and 1 arbor. The 6 MICROMOT collets ranging from 1.0 – 3.2mm (description on page 4) are also included. With mains adapter for 220 - 240V operation (12V, 1.0A).

NO 28 515



Both sets are packed in an attractive plastic case, with 34 industrial respectively dental quality bits and cutters.







Power and precision also when wet grinding. Includes keyless chuck (capacity 0.3 – 3.2mm).

Precision drill grinder FBS 12/EF

For precision drilling, milling, sanding, polishing, brushing, derusting, engraving, chiselling and cutting.

Includes keyless chuck (capacity 0.3 - 3.2mm). A precision ball bearing minimises spindle side play. Spindle lock button for bit changing obviates the need for spanners. Recessed spindle head for inserting MICROMOT steel collets (see page 4). Special, balanced, low noise DC motor with high life expectancy. Variable speed control with feedback effect (high engine power in the lower revolutions area). Housing of glass fibre-reinforced POLYAMIDE.

Technical data:

Direct voltage 12 – 18V. Maximum power consumption 100W. Stroke 3,000 - 15,000rpm. Length 185mm. Weight 450g. We recommend the use of MICROMOT transformers of at least 2.0A (see page 17).

NO 28 462

20mm MICROMOT standard collar. Efficient forced ventilation cooling for extended periods of use without power loss. Balanced DC special motor. Powerful, with high life expectancy. Speed control with feedback effect for speeds of 3,000 – 15,000rpm.

Note:

The speed control of our 12 volt devices only works when operated via nonstabilised power supply units (e.g. all MICROMOT mains adapters). Connection to stabilised power supply units is possible. However, the devices will then operate with maximum rotational speeds (also applies to operation with batteries).

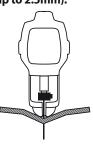
Jig saw STS 12/E NEW



Jig saw blades can be found on page 7.

Ideal for curved sawing of wood (up to 10mm), printed circuit boards (up to 3mm), and non-ferrous metal (up to 2.5mm).

Powerful special low noise DC motor with high life expectancy. Variable speed control with feedback effect (high engine power in the lower speed range). Housing of glass-fibre reinforced POLYAMIDE. With additional ball adapter for working on convex and concave surfaces. Is exchanged for the normal saw table by unscrewing a screw. Includes 2 saw blades (coarse and fine). We recommend MICROMOT mains adapters as of 2.0A for operation.



Technical Data:

Direct voltage 12 - 18V. Maximum power consumption 100W. Stroke 6mm (adjustable from 2,000 - 5,000rpm). Length 180mm. Weight 480g.



Superfine sander with linear (not rotary) sanding motion.

Pensander PS 13



Ideal for working on surfaces in recesses, slots and small corners.

Linear (not rotating) stroke. Long-lasting special DC motor. Housing of glass-fibre reinforced POLYAMIDE. Four sanding arbors with straight shanks and four angled (all different shapes) as well as three sheets of pre-profiled self-adhesive sanding pads are included.



The sheets are of grits 180, 240 and 400 with 5 of each shape per sheet.

Technical data:

Direct voltage 12 - 18V. 8,000 linear strokes/min. (2.5mm stroke length). Length 160mm. Weight 130g.





Note:

For operation a mains adapter of at least 1.0A is required. We recommend MICROMOT mains adapters NG 2/S, NG 2/E or NG 5/E (see page 17).



Additional sandpaper for PS 13

Three sheets, each with 20 pads in different shapes. Silicon carbide, self-adhesive.

NO 28 822 180 grit NO 28 824 240 grit NO 28 826 400 grit

MICRO screwdriver MIS 1

With pre-selectable torques of 0.35 - 2.0Nm.

Small, light and easy to handle. An ideally positioned rocker switch provides on/off/reverse. A RÖHM chuck facilitates acceptance of all bit shanks of up to 6.5mm (also for standard 1/4" bits). Housing of glass fibre-reinforced POLYAMIDE. Complete with 16 inserts of chrome molybdenum steel.

Technical data:

Direct voltage 12 – 18V. Maximum power consumption 50W. Torques of 0.35 - 1.0Nm (the sixth stage bypasses the clutch and yields approx. 2Nm). Length 200mm. Weight 415g. We recommend the use of MICROMOT mains adapters of at least 2.0A.

NO 28 690



The depicted mains adapter MICROMOT NG 5/E is not included.



Slot: 0.3 x 1.5 / 0.35 x 2.0 / 0.4 x 2.5mm

Philips: Size 0 and 1

Torx: T 6, T 8, T 10

Allen key, internal: 3.0 - 3.5 - 4.0 - 4.5 - 5.0mm

Allen key, external: 1.5 - 2.0 and 2.5mm



The ideal complete starter kit including the tried and tested engraving tool GG 12!

Complete engraving kit with "trial glass".

Engraving kit GG12 with special balanced, powerful, quiet and longlasting DC motor.

Housing of glass fibre-reinforced POLYAMIDE. Plus mains adapter, trial glass, motifs and instruction booklet as well as all necessary bits: 1.0 and 1.8mm diamond grinding bits with spherical head for engraving and line work, silicon carbide grinding bits in both conical and bullet shape for frosting glass as well as one corundum grinding bit in ball and cylinder shape for grinding and engraving. Including bit holder usable for holding MICROMOT rotating bits. Complete with mains adapter 0.5A.

Technical data for GG 12:

Direct voltage 12 – 18V. 20,000rpm. Length 145mm. Weight 50g. **NO 28 635**

Engraving tool GG 12, available individually

Includes 1 diamond bit (spherical head, 1.8mm). For operation a mains adapter is required. We recommend MICROMOT mains adapters NG 2/S or NG 2/E.





Every piece has its own place in the attractive, extremely durable plastic storage case.

MICROMOT flexible shafts with precision aluminium handle. Optionally available with steel collets or quick-action chuck.



MICROMOT Flexishaft 110/P

Dual ball-bearinged milled steel shaft with tool holder for MICROMOT steel collets. Ball-bearinged shaft end on machine. Highly flexible core (does not run hot when working on tight radii). Length 100cm. For a maximum of 25,000rpm. Includes 6 steel collets (1.0 – 1.5 – 2.0 – 2.4 – 3.0 and 3.2mm).

NO 28 620

MICROMOT Flexishaft 110/BF



As described above, but with 0.3 to 3.2mm quick-action chuck. Practical when working with different shaft diameters.

MICROMOT mains adapters: safe and efficient power sources for MICROMOT low-voltage tools.

MICROMOT mains adapter NG 2/E



Note:

Power consumption of hand-held power tools is measured according to the internationally accepted ICE-745-1 specification. The current drawn is measured, not the power consumption with a hot motor just before stalling. In practice, this condition seldom appears, if ever. All PROXXON mains adapters are suitably dimensioned for the recommended purposes.

The adapters do not include the illustrated mill/drill units.

NORYL casing (heat resistant – a necessity for transformer enclosures).

Polarised socket for MICROMOT plug. Red LED indicates readiness for use. PTC (Positive temperature coefficient) element prevents overload (and plugged in tool will not automatically restart). After cooling down the mains plug should be disconnected briefly to reset the adapter. With holes for storing bits. Foldable tool rest provides a secure place for keeping the MICROMOT tools at the ready. Variable speed control with feedback effect for adjusting bit speed to suit the job, as well as providing high torque at low speeds.

Technical data:

220 – 240V. Supplies 2.0A at 16 Volt open circuit and 12 Volt under load. Weight 1,000g. Class 2 insulation.

NO 28 707

MICROMOT mains adapter NG 2/S

Without electronic speed control, otherwise exactly as mains adapter NG 2/E.

NO 28 706

MICROMOT mains adapter NG 5/E

With superior capacity of 5A. In compact NORYL casing (heat resistant – recommended for transformers).

Variable speed control with feedback effect for optimum tool speed and high torque at low speeds. Three polarised sockets for MICROMOT machines. A pair of sockets for standard banana plugs (4mm diameter) is also supplied. Master switch for turning off the transformer without needing to unplug. Red LED indicates 'ready'. PTC (Positive temperature coefficient) protection against overload (plugged in machine will not restart automatically. After cooling down, the mains plug should briefly be unplugged to reset the adapter). With storage holes for tools with 2.35mm and 3mm shafts. Foldable tool rest for the MICROMOT tool.

Technical data:

220 – 240V. Supplies 5.0A at 16 Volt open circuit and 12 Volt under load. Weight 2,000g. Class 2 insulation.





MICROMOT drill stand made of die-cast aluminium parts. With CNC-machined guides and fits. A world of difference.



MICROMOT drill stand MB 200

Head with dovetail guides can be tilted through 90° (scale ring available). Enables bevelled drilling and versatile milling operations.

Geared rack and pinion feed with return spring allowing effortless and sensitive operation. Practical drill depth scale with adjustable limit stop (maximum travel 40mm). With standard 20mm collar for MICROMOT drilling and milling devices. With solid, hard chromium-plated steel column (280 x 20mm), throat capacity (column inside to centre of tool) 140mm.

Plane-milled table (220 x 120mm) with parallel limit stop and scale. Drilled, tapped holes for securing the MICRO compound table KT 70 and holes to fix the drill stand itself are also provided. Weight 2.2kg.

NO 28 600

Machine vice MS 4

Die-cast zinc.

With three machined sides. The slot fits the adjustable fence of the drill stand MB 140/S and bench drill TBM 220.

Horizontal and vertical V-slots in jaw. <u>Jaw width 50mm and height 10mm.</u> <u>Maximum clamping width 34mm.</u>

NO 28 132



Universal holder UHZ

With ball joint. To be rotated and swivelled in all directions.

20mm collar for MICROMOT drilling and milling devices, such as FBS 240/E, FBS 12/E,

IBS/E, LBS/E, MICROMOT 50, 50/E and 50/EF. Made of die-cas

50/EF. Made of die-cast ZINC. With clamp for quick and secure fastening to workbenches and table tops up to

60mm thickness. Alternatively, it can also be fixed to any workplace with 2 standard screws.



The KT 70, small and accurate. Ideal for MICROMOT drill stands and drill press TBM 220.

MICRO compound table KT 70

Made of solid aluminium with surface treatment and fitted with adjustable dovetail gibs and three T-slots of the MICROMOT standard (12 x 6 x 5mm). Adjustable ruler eases workpiece positioning. Both handwheels have zero-resettable dials with graduations indicating 1 revolution = 1.0mm and 1 division = 0.05mm. The clamps and securing bolts for the MB 140/S and TBM are included.

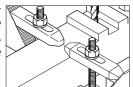
Other technical data:

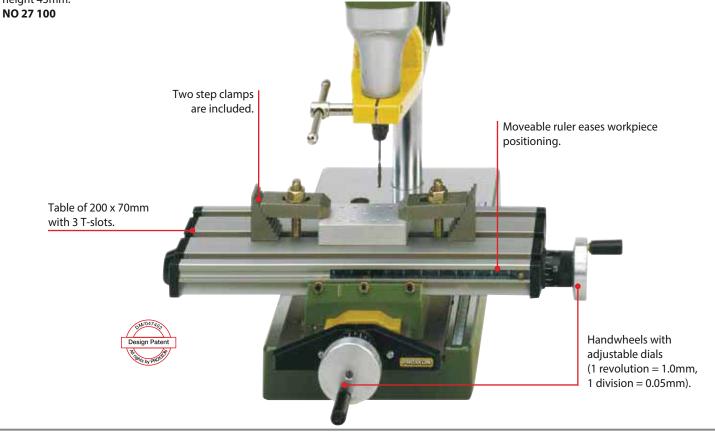
Table size 200 x 70mm. X travel 134mm and Y travel 46mm, maximum height 43mm.

Step clamps made of steel

The step clamps set is supplied with the KT 70, but can also be ordered separately. Set consists of 2 stepped blocks and clamps, T-slot nuts of the MICROMOT standard (11.5 x 11 x 4mm), bolts. This set also fits the mill/lathe systems PD 230/E and PD 400.

NO 24 256





Precision vice FMZ with integrated clamp

Rotates in all directions. Made of die-cast zinc.

Easily clamps to workbenches and tables of up to 60mm. Alternatively, use 2 standard screws to secure to the work surface. Ball and socket: rotates in all directions (even downwards). 75mm jaws with protective covers (for delicate workpieces). Maximum clamping width 70mm and weight 1.6kg.

NO 28 608

Precision vice FMS 75

As detailed above, but without clamp.

A strong suction cup facilitates instantaneous fixing to any smooth, flat surface.





The clever solution for a clean working environment: with direct connection for electric tools from 25 – 2,000W.

Compact workshop vacuum cleaner CW-matic



Practical holder for the nozzle included in the scope of delivery:

For retaining the vacuum cleaner hose by inserting the holder's 20mm adapter into the universal holder UHZ or clamping its strap into any vice.



The vacuum cleaner runs as long as the machine runs. There is a follow-up time of 5 seconds after switching off the power tool.

Smooth operation with high suction capacity. With large fluted filter made of POLY-PROPYLENE to be cleaned and washed manually. Additional fine dust paper filter (not essential for this function). Container is easily emptied by removing the appliance lid with the motor unit. Blowing function available by refitting the vacuum hose. Also suitable for vacuuming liquids. Complete with 3.5m vacuum hose, 2-part aluminium vacuum pipe (98cm), floor nozzle, brush nozzle, crevice nozzle and adapter for connection to standard adapter of all such equipped PROXXON machines. Practical holder for the suction connection included (description on the left). Supplied with 6 fine dust paper filters.

220 - 240V. 1,100W. Connection for electric tools from 25 to 2,000W. Container 18l. With 5m connection cable.

Fine dust paper filter for CW-matic

For additional filter function. Must be removed when vacuuming liquids.

NO 27 494 5 pieces

Fluted filter for CW-matic

Made of polypropylene. Can be cleaned dry or wet.

NO 27 492 1 piece



Drilling device BV 2000

An accurate device for parallel drilling, thread-cutting and milling. Made of high-precision aluminium die-casting.

With two-way pivotable articulated arm and 20mm standard collar. Once the device is clamped, it always remains vertically aligned. This means that, e.g. drill holes are always exactly perpendicular to the work piece surface! Preselectable drill depth using depth control with easy-to-read scale. After drilling, an adjustable spring automatically pulls the device back into its top rest position. Plane-milled solid base plate with 200 x 200mm usable table area and two continuous MICROMOT standard T-slots (12 x 6 x 5mm). Stable drill column (Ø 45mm, 500mm long).

The standard 20mm collar enables the precise clamping of the drilling devices, such as the precision drill/grinder FBS 240/E, professional drill grinder IBS/E, long-neck straight drill/grinder LBS/E, MICOMOT 50, 50/E and 50/EF.

NO 20 002

Protective device for hand-operated MICROMOT machines with standard 20mm collar

For work with saw blades, cutting discs, milling bits, grinding tools, steel brushes and polishing tools. Maximum useable



tool diameter 22mm. Easy to assemble.



Selected sets for various applications in industrial and dental quality.

Glass working



4-piece glass working set.

2 diamond grinding bits and 2 silicon carbide grinding bits. For engraving, grinding or frosting glass. Diamond bit 1: ball ø 1.0mm, diamond bit 2: ball ø 1.8mm, silicon carbide bit cone 3/2 x 5mm, and bullet 2/2.5 x 7mm. All shafts ø 2.35mm.

NO 28 920

Modeller's set



13-piece set for model makers.

For cutting, grading, milling, polishing and drilling. 1 fine milling bit each of 2.3mm ball shape and cylinder shape. One white corundum grinding bit each of 5.0mm ball shape and cone shape. One micro drill each of 1.0mm and 2.3mm, 5 separating discs ø 22mm. One ø 22mm saw blade and ø 2.35mm arbor. NO 28 910



Drill chuck or collet?

Drill chucks provide more convenience to quickly change the tools when working with shafts of varying diameters (e.g. HSS drills as per DIN 338). However, because of their technical setup, they have a few drawbacks compared to collets: Less clamping force and higher concentricity tolerances. If high precision is necessary, then working with MICROMOT steel collets is a must (also refer to the note on page 4).

Complete polishing set



10-piece complete polishing set

For polishing metal, glass, precious metals, porcelain and plastic. Consisting of 3 felt polishing bits (cylinder, cone and wheel shapes), 3 silicon polishing bits (bullet, cylinder and disc shape), cotton polishing disc, chamois buffing wheel and polishing paste. Includes 2.35 x 44mm arbor.

NO 28 285

Holders for bits and cutters





Holder for bits and cutters

For the clean storage of micro drills, grinding bits, brushes and other rotating tools with shaft diameters of 2.35 - 3.2mm. Without bits and cutters.

NO 28 359

2 pieces

MICROMOT steel collet set



Triple slit and hardened. 1 each of 1.0 - 1.5 - 2.0 - 2.4 - 3.0 and 3.2mm. With clamping nut and holder for storage (see note at left).

NO 28 940

Three-jaw steel drill chuck



For all prepared MICROMOT devices. Advantageous when working with different shafts. Capacity 0.3 - 3.2mm.

NO 28 941

Rasp cutter with wolfram carbide burrs



Unrivalled for sculpting, cleaning and smoothing wood and fibre glass.

Extremely sharp and easy to handle: The material can be removed with control and without physical effort. High stability and easy to clean with a Bunsen burner. Also for use on rubber, foam and silicone. Rpm range: 5.000 - 20,000. Shafts ø 3.2mm. Not for use on metal!

Ball nose cylinder 7.5 x 12mm NO 29 060

Cone 8 x 12mm NO 29 062

Taper 4 x 19mm

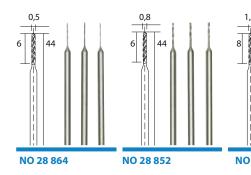
NO 29 064

Bits and cutters for MICROMOT drills and mills of industrial and dental qua

Rotational speed for spiral drills of HSS and tungsten carbide in rpm												
Drill	ill Wood		Aluminium		Brass		Steel		Stainless Steel		Plastics	
Ø	HSS	TC	HSS	TC	HSS	TC	HSS	TC	HSS	TC	HSS	TC
0,5	20000	23000	35000	60000	25000	40000	15000	30000	9000	22000	19000	33000
1,0	12000	17000	22000	45000	15000	25000	8000	18000	5000	10000	11000	20000
1,5	9000	12000	14000	30000	10000	15000	5500	13000	3500	9000	8000	15000
2,0	7000	9000	11000	23000	8000	12000	4000	9000	3000	8000	6000	10000
2,5	6000	7000	9000	19000	6000	10000	3500	7500	2500	7000	5000	8000
3,0	5000	6000	7500	15000	5000	8000	3000	6500	2000	6000	4000	7000
3,5	4000	5000	6000	13000	4500	7000	2500	5500	1500	4500	3500	6000
4,0	3000	4500	5500	10000	4000	6000	2000	4500	1000	3000	3000	5000

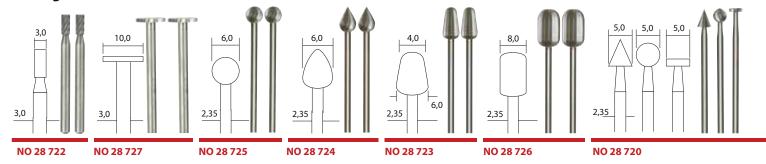
The specified rotational speeds are approximate values for spiral drills made of HSS and tungsten carbide. They must be appropriate for the material of the workpiece. The use of coolant is recommended for aluminium, brass, steel and stainless steel. Plastic can be cooled with compressed air to prevent the drilling chips from fusing. The hardness of derived timber products varies distinctly, therefore only an approximate value can be specified. The harder the wood, the lower the rotational speed!

HSS drill bits



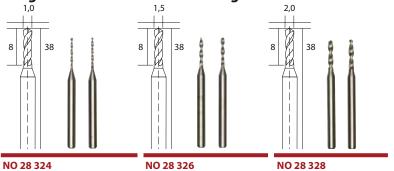
HSS drill bits Selected steel quality. Purpose-mad factured from a one-piece blank. High hardness for metals, plastic, PC cards and wood. Work speeds: shanks 2.35mm.

Milling bits

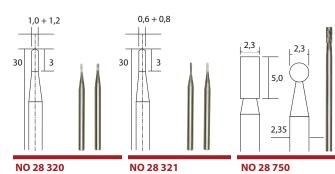


Wolfram vanadium steel milling bits Selected wolfram vanadium steel. Purpose-made stable construction with head and shaft out of a single blank. The precise flutes and free-hand precision work. For use on hard and soft woods, non-ferrous and precious metals, as well as plastics and plaster of Paris. All shafts Ø 2.35 or 3.0mm. Ideal for mill powerful fitting of the milling bits we recommend the use of MICROMOT steel collets as described above.

Tungsten carbide drills and milling bits



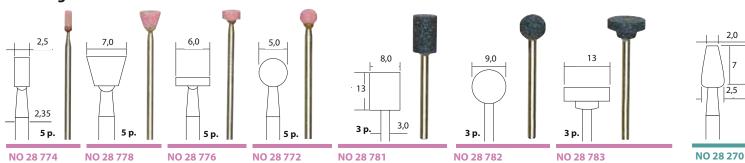
Tungsten carbide drills Made of wear-resistant tungsten carbide. For drilling glass, semiprecious stones, porcelain, ceramics, marble and other hard stones. The hard stones are subdivided according to the degree of hardness from 1 - 10. Tungsten carbide can be used up to hardness degree 6. Drilling hard stones with a hardness degree of more than 6 calls for the use of diamond tools. Shaft Ø 3.0mm. With ideal cutting angle of 6°.



Tungsten carbide milling drills (spear drills)For drilling, milling and cutting fibre glass or PER-TINAX circuit boards. Also for drilling pearls and similar. Shaft Ø 2.35mm.

Tungsten carbide millersMade of wear-resistant highly well, avoiding accidents. For ing of PC cards. Shafts Ø 3.0

Grinding bits

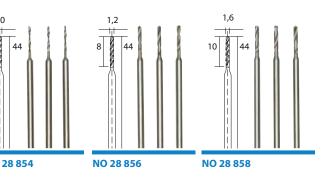


High quality corundum grinding bits. Bits and sets of fine, high quality materials of consistent hardness. Various shapes for the widest possible range of applications. For grinding and chiselling hard materials such as cast iron, cast steel, malleable cast iron as well as hard metal alloys and refined steel. Accurately dimensioned shafts of Ø 2.35 or 3.0mm ensure maximum concentricity. **Grinding rule:** soft materials = hard grinding bits; hard materials = soft grinding bits!

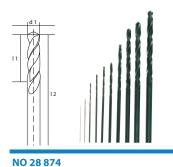
Silicon carbide frosting of glass iron and other h

lity.

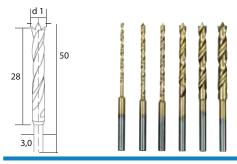
Note: All measures are in mm.



e stable construction with high concentricity. Shaft and bit are manuoptimum life expectancy and elasticity. For drilling metal, non-ferrous soft materials approx. 8,000rpm, hard materials approx. 3,000rpm. Ø



HSS twist drill set to DIN 338 One each of 0.3-0.5-0.8-1.0-1.2-1.5-2.0-2.5-3.0-3.2mm diameter. For drilling non-ferrous metals, steel, high-quality steel. 10 pieces.

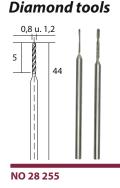


NO 28 876

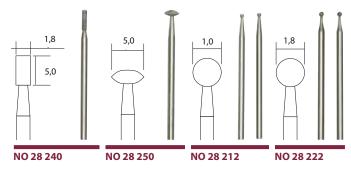
HSS twist drill set with centring pin \emptyset 1.5 - 2.0 - 2.5 - 3.0 - 3.5 - 4.0 mm. For precision tapping of wood and plastics; also non-ferrous metal, steel and stainless steel sheets. Titanium coating reduces friction and increases service life. Shaft \emptyset 3mm, 6-piece set.

2,3 2,3 2,3 2,3 NO 28 710

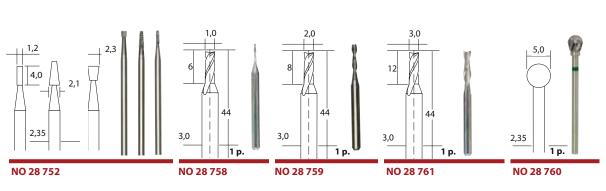
optimal concentricity ensure best life expectancy. Ideal for ling, routing, shaping, profiling and slotting. For clean and



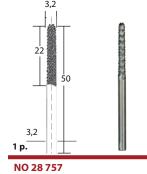
Diamond twist drillsFor drilling holes in (semi) precious stones, etc. Shaft Ø 2.35mm.



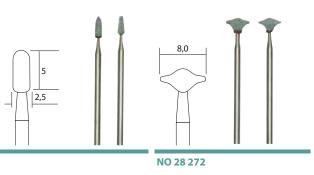
Diamond grinding bits With consistently even coating of diamond dust. Bodies and shafts made from stainless steel. Used for grinding, engraving and chiselling steel (even chrome-cobalt alloy), glass, ceramics, porcelain and plastics. All shafts Ø 2.35mm.



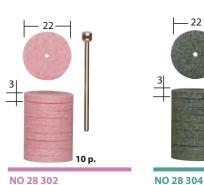
compressed fine-granular tungsten. Used for vibration-free milling of high accuracy dimensions. It is advisable to secure workpieces milling steel, cast steel, non-ferrous metals, plastics and extremely hard materials. May be used for technical work, for engraving and millor 2.35mm. Here also we recommend the use of MICROMOT steel collets.



Rasp cutter
For cutting and milling tiles, stoneware, wood and plastics.
Spare cutter for FEX.

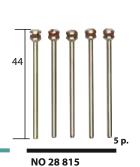


grinding bits Fine particles of consistent hardness for engraving and ceramics and stellites. Also for grinding tungsten carbide, chilled cast ard steel alloys. Shafts Ø 2.35mm.



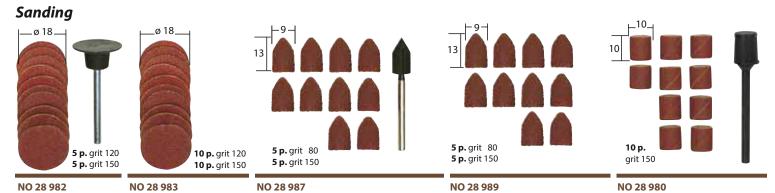
High quality corundum and silicon carbide grinding wheels Wheels for free-hand and stationary grinding, sharpening, de-burring and smoothening of various metals and materials.

10 p.

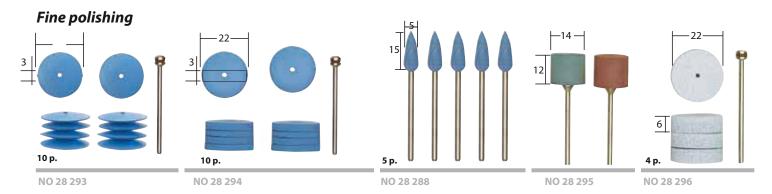


Spare arbors Shaft 2.35 x 44mm.

Selected cutting, sanding and polishing bits for professional use and longe



Sanding discs, caps and bands are made of standard corundum. The sanding compounds have a tough consistency and different grits for preliminary and refinishing work. E polishing of malleable cast iron, grey cast iron, stainless steel, steel, non-ferrous metals, wood and plastic. Can also be used for chamfering. Adapt the rotational speed to bands and caps can also be used for refinishing radii and grooves. Shaft ø 3.0.

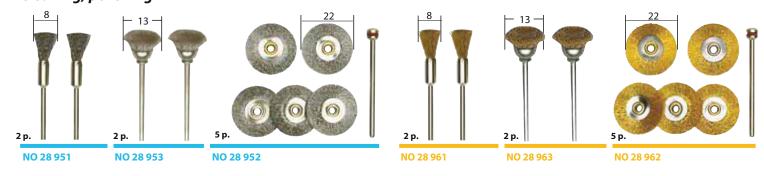


Flexible silicon discs, wheels and bullets

Used for surface smoothing and polishing of precious metals, non-ferrous metals, high-grade metals, glass, porcelain, wood, rubber and plastic. The bullets are very suitable for working tough-to-reach insides. Shafts of Ø 2.35mm.

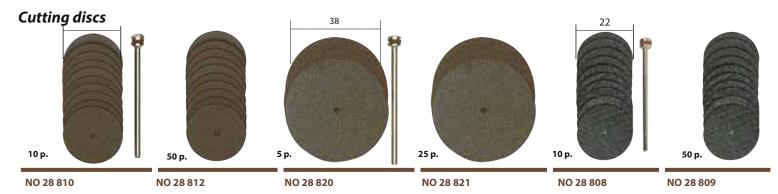
Flexible polishing pad set Especially suitable for working gold, platinum, silver as well as for tool making and castings. Shafts of Ø 2.35mm.

Cleaning, polishing



Steel brushes, cups and wheels High quality components for best operation. For cleaning, removing rust, sanding, frosting, roughening, rounding-off, etc. of metal, cast iron, plastic, stone and wood. Shaft of Ø 2.35mm.

Brass brushes, cups and wheels Ideal for working on brass, brass alloys, copper, precious metals, semiprecious stones, plastic and wood. For cleaning of electronic components and circuit boards. Shaft of \emptyset 2.35mm.



Corundum cutting discs

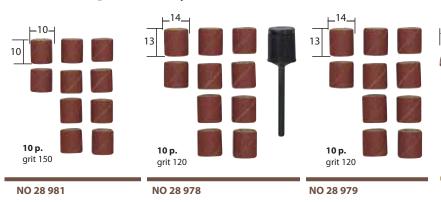
Discs made of a special compound of diameter 22 or 38×0.7 mm. Used to part alloys and metals, stainless steels and nonferrous metals. Can also be used for cutting wood and plastic. Shaft of \emptyset 2.35mm.

Aluminium oxide cutting discs with reinforcem

The cutting discs are available in \emptyset 22 x 0.8mm and \emptyset 38 x stock. Will cut alloyed, standard and stainless steels, no 2.35mm.

est life expectancy!

All measures are in mm.



grit 120

NO 28 984

NO 28 985

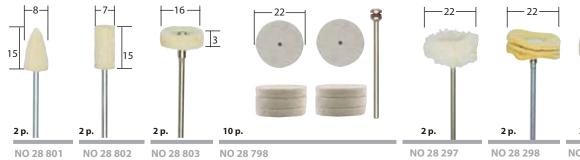
Extreme toughness. Different versions for different application areas. For sanding, smoothing and the material to be sanded. Steel high, wood medium and plastic low rotational speed. Sanding

Nylon fleece brushes for cleaning, frosting and sanding steel, stainless steel, non-ferrous metals, etc. Shaft Ø 2.35.

NO 28 282

Flapwheels of standard corundum are elastic and adapt to the contours of the work piece being processed. For machining inaccessible spots. Shaft ø 3.0.

High polishing



2 p. 2 p. 2 p. NO 28 299 NO 28 299 NO 28 292

Felt polishers and felt discs.

For preliminary and high burnish polishing of metal, gold, silver, brass and aluminium with the use of polishing paste. Also for final polishing in mould and die-making. Shaft \emptyset 2.35. Work with a lower rotational speed when polishing. Soften hard polishing paste with oil or heat up lightly.

Cotton, chamois and felt polishers

For high burnish polishing of metal, gold, silver, non-ferrous metals, brass, aluminium, ceramics and porcelain with the use of polishing paste. Also for reconditioning painted woods and plastics. Shaft Ø 2.35.

Polishing paste

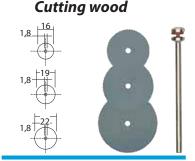
Absolutely essential for polishing metal and plastic.



Stainless steel brushes, cups and wheels For cleaning, brushing and cleansing stainless steel. Remove cinders and scales on stainless steel welding seams and soldering points. Can also be used on aluminium and non-ferrous heavy metal. Shaft Ø 2.35.

Permit the brushes to work only with gentle contact pressure and at the recommended rotational speed! If the pressure is too high, the individual wires will be bent too strongly and afterwards straighten up again due to the centrifugal force. This excessive flexural fatigue stress of the wires on their seating promotes the notch effect. They are prone to breakage!

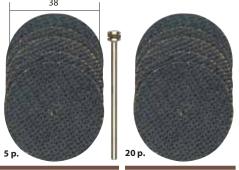
Note:



NO 28 830

Cutting blades made of spring steel

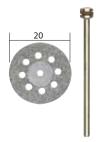
0.1mm thick. For plastic, wood and nonferrous metal. Shaft Ø 2.35. For free-hand work, we recommend using the protective device 28 944 on page 20.



NO 28 819



38





NO 28 840

NO 28 842

Diamond cutting discsOnly 0.6mm thick. For cutting and sanding of porcelain, ceramics, glass fibre boards, plastic and nonferrous metals. Shaft of Ø 2.35mm.

NO 28 844 NO 28 846

Diamond-coated cutting discs with cooling holes For cutting, grinding and deburring. Same application as described on the left. Less heating up due to cooling holes. No burn marks! Shaft Ø 2.35.

ent

NO 28 818

Ø 38 x 1.0mm. Nearly unbreakable, making them usable less steels, non-ferrous metals and even wood and plastic.



For shrinking sleeves (many devices available on the market are simply too large) and 1000 kinds of other applications.



Small, robust and powerful. Complete with 3 additional nozzles.

For shrinking sleeves, shaping and welding plastics, soldering and de-soldering of electronic components. For removing layers of paint and varnish without aggressive chemicals (pickling agents). For drying and accelerating curing processes (adhesives, paints). For applying and removing films (stickers). For browning wood.

Housing of glass fibre reinforced POLYAMIDE with soft components in the grip area and footprints for stationary use. A powerful heating element ensures a consistent temperature in 2 stages with an air flow of approx. 180l/min. Installed thermostat as security against overheating. Main nozzle and spare nozzles of rust-proof steel.

Technical Data:

220 – 240V. 500W. Air temperature in Stage 1: 350°C. Stage 2: 550°C. Air volume approx. 180l/min. Weight approx. 500g.

NO 27 130

MICROFLAME burner MFB/E

Used for soldering, de-soldering, brazing, heating of workpieces, tinning.

Individually controllable gas and air supply. Super fine flame shape with temperature attaining 1,200 °C. Ideal for precision work. Fitted with an electronic piezo crystal lighter.



Soldering iron LG 12

With thermostat for precisely set 250°C. Therefore ideal for soldering electronic components.

Lightweight and handy. Short heating time. Switch with latch. Soldering point lighting for adequate views even in casings and difficult-to-access areas. Replaceable soldering tip (available in stores). With spiral cable and standard MICROMOT jack plug for connection to all MICROMOT mains adapters (min. 1.0A).



Replacement soldering tip

For LG 12. Easy to replace by loosening the clamping screw. **NO 28 141**



Precision screwdriver for electronic engineers, camera builders, watchmakers, jewellers, precision engineers and model makers.

MICRO-screwdrivers

Shafts of high alloy nickel-chrome-molybdenum (SAE 8660) for maximum hardness and toughness. Chromed with brinelled tip. The ergonomically formed plastic handles are oil and impact resistant. The revolving top and finger mould improve ease of use.

Slot: 1.0 x 40, 2.0 x 40, 3.0 x 40

Philips: PH 0-3 x 40, PH 0 x 40, PH 1-2 x 40

Torx: T 5 x 40, T 6 x 40, T 8 x 40, T 10 x 40, T 15 x 40

Allan-key: 1.5 x 40, 2.0 x 40, 2.5 x 40, 3.0 x 40

NO 28 148 15 pieces in a stand

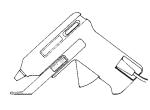




Note:

It is important to use the MICRO screwdrivers with care and feel. The brute force associated with larger screwdrivers is best left for other tools. The revolving top and finger mould improve ease of use.

MICROMOT glue gun HKP 220



Quick and reliable gluing of metal, wood, plastic (including Plexiglass), glass, ceramics, stoneware, cardboard, leather, polystyrene foams and textiles. Depending on the material and on the adhesive quantity applied, the adhesive sets after about 30 seconds, allowing positional corrections within this period of time

(impossible with instant glues).

The 7mm glue sticks are perfect for delicate work such as model building, toy and jewellery making, dried flower arrangements, etc. Sensitive mechanical feed ensures correct glue quantity delivery. Integral stand positions gun on worktop when not in use. Short heating time.

Technical data:

220 - 240V. PTC controlled element for exact temperature of 200 °C. Four glue sticks 7 x 100mm and 3 interchangeable metal nozzles are included in the set.

NO 28 192

Replacement glue sticks for HKP 220

For metal, wood, plastic, ceramics, cardboard, leather, polystyrene foams and textiles. Ø 7mm. Length 100mm. Colourless.

NO 28 194 12 pieces



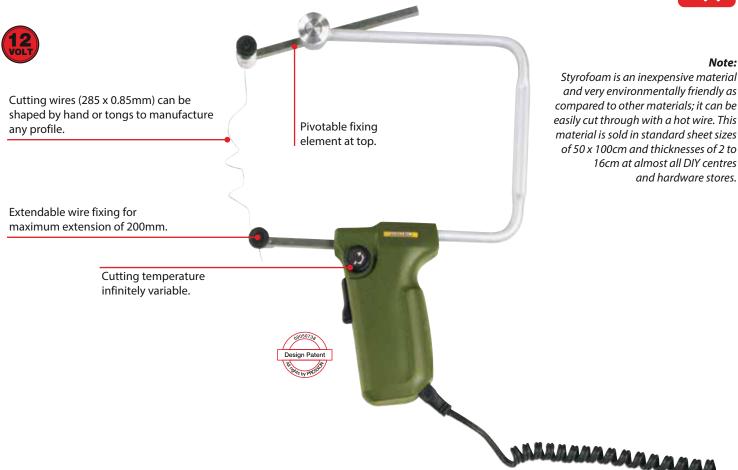
Including 3 interchangeable metal nozzles.



For free modelling in Styrofoam. No "crumbling" as found when working with traditional tools.

Hot wire cutter THERMOCUT 12/E





Also for cutting free in thick Styrofoam sheets for Diorama model railway construction. For the manufacture of any profile.



Other application areas:

Architecture modelling, prototype construction, for designers, decorators, or for fine work on construction insulation. And of course for classical model building.

Stable frame with pivotable fixing element at top and extendable lower wire fixing. Maximum total extension 200mm. Maximum work piece height 150mm

Cutting wire temperature infinitely variable. With a little practice, you can achieve optimum cuts depending on the material density and thickness. Usually at medium temperatures and without too much pressure. Heat-up time 1 second. Complete with five deformable cutting wires 285 x 0.85mm.

Technical data:

12V. 60W. 50/60Hz. Cutting wire temperature controllable from approx. 150 - 350 $^{\circ}$ C. We recommend MICROMOT mains adapters as of a capacity of 2.0A for operation.

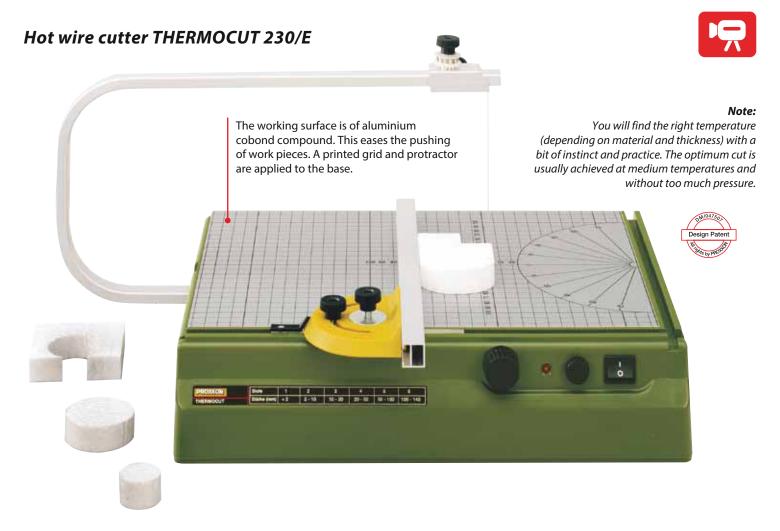
NO 27 082

Replacement cutting wire

For the THERMOCUT 12/E. Easy to bend, therefore ideal for modelling. **NO 28 082** 10 pieces



Used to cut styrofoam and thermoplastic materials, both freehand and with stencils.



Ideal for architectural models, designers, decorators, artists, teaching too, prototypes as well as classical railroad, plane and boat model building.

Note:

The unit's double wound transformer and insulation to class 2 ensure the cutter is absolutely safe. The cutting wire operates at 10V, 1A.

The large base with 390 x 280mm table with surface of aluminium cobond compound ensures smooth and easy movement of the workpiece. The printed grid and protractor ease division and cutting. The solid aluminium overarm has a 350mm throat and offers 140mm capacity in height. The holder and wire coil (30m, 0.2mm diameter is included) may be shifted along the overarm to enable mitre cutting. A LED indicates operation and prevents burnt fingers (the cutting wire heats to maximum in less than 1 second).

Note:

The correct temperature, being material type and thickness dependent, is easily learnt. Optimum profiles are cut at lower temperatures and cutting force.

Other technical data:

220 – $240V,\,50/60$ Hz. Transformer secondary max. 10V, 1A. Cutting wire temperature with 0.2mm diameter is variable between approx. 100 and 200 °C. Weight approx. 3kg. Insulated to class 2 requirements.

NO 27 080

Spare cutting wire

Used on the THERMOCUT 230/E and other similar units. Made of NiCr 8020. Spool of 30m x 0.2mm.





Double function fence with lockable feed bar (German Patent 100 00 102.5).



Crosscuts are achieved by means of a simple yet efficient solution: secure drawing-pin to table by means of tape, it serves as a fixed centre.



Centre distance 250mm and 40mm swing. Variable speed control covering 1,000 – 5,000rpm.

MICRO woodturning lathe DB 250



Turning in miniature is a pleasing hobby. One can make glasses, cups, saucers, vases and columns for a doll house. In model trains, one can make lighting masts, windows, tanks. Limbs for mario-



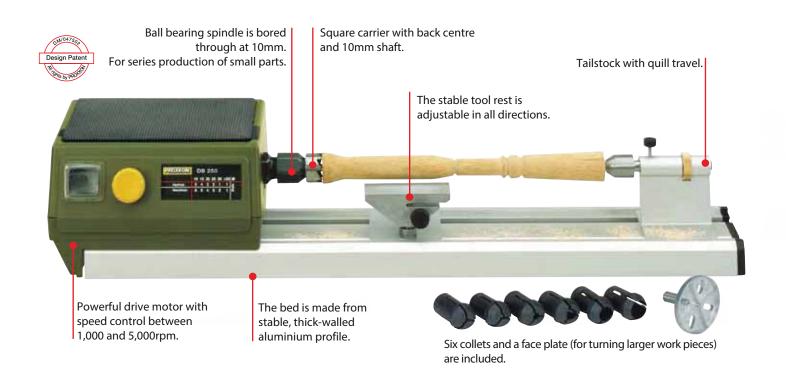
nettes and hundreds of classical miniature turning tasks may be carried out with ease. The electronic speed control assists in the lower range in a 'semi-automated' painting process.

Technical data:

Motor 220 – 240V. 100W. 50/60Hz. Centre distance of 250mm, 40mm swing. 25mm swing over support. Variable speed control covering between 1,000 and 5,000rpm. Headstock spindle bore of 10mm. Tailstock travel 20mm.

Includes 6 collets (2 - 3 - 4 - 6 - 8 - 10mm), drive centre, live centre and face plate.

NO 27 020



Five piece HSS chisel set

A high quality set with the most frequently used turning tools: gouge, skew, parting tool, beading tool and scraper. Neatly packed in a wooden box.

NO 27 023



Drill chuck with sliding sleeve for the tailstock of the DB 250

Clamps up to 5.0mm. Is inserted on the spot of the rotating back centre. The feed movement results from sliding the complete tailstock.



Independent four jaw chuck for the DB 250. With individually adjustable jaws.

Used to clamp asymmetrical pieces such as rectangles. The reversible jaws clamp from 1.5 – 35mm (inside) and from 14 - 67mm (outside). The DB 250 headstock spindle of thread M16 x 1 screws directly into the chuck.





Made from steel and offering 1.5 to 32mm and 12 to 65mm when reversing the jaws. The chuck has a M16 x 1 thread for fitting directly to the DB 250 headstock spindle.

NO 27 026

For precise machining of edges and longitudinal cuts in wood, fibreboard and suitable plastics.

MICRO shaper MP 400

For chamfering, cutting grooves, slots, recesses, radii and other profiles. For crafting picture frames and for separating. Also enables exact manufacturing of edges and longitudinal cuts (for model building, e.g. for doors, flaps and housing parts). Powerful dust-protected motor with toothed belt drive. Double ball-bearing spindle. Tool holder with triple slit precision collets (one each of 2.4-3.0 and 3.2mm are included).

Milling cutter height adjustment by hand wheel. Stable aluminium table with longitudinal and angle stop as well as cutter guard.

Adapter for vacuum cleaner fits standard household vacuum cleaners. Three tungsten carbide router cutters (slot cutter 3.2mm, V-slot cutter and core box bit) are included.

Technical data:

220 – 240V. 100W. 50/60Hz. 25.000/min. Height adjustment with scale ring adjustable to 0 (1 revolution = 1.0, 1 graduation = 0.05mm). Milling table 300 x 150mm. Weight approx. 2.0kg. $\bf NO$ 27 050



Tungsten carbide router cutters for MP 400

For wood, fibreboard and plastics. Clean relief grinding for good work results and surface quality. High stability. Shafts 3.2mm.

NO 29 024	slot cutter ø 3.2mm	1
NO 29 026	slot cutter ø 50mm	2
NO 29 028	slot cutter ø 6.5mm	3
NO 29 030	Rounding over cutter ø 6.4mm	4
NO 29 032	<i>V-slot cutter</i> ø 6.5mm	(5)
NO 29 034	Combi cutter 6.5/2.5mm	6
NO 29 036	Core box bit R 3.2mm	7
NO 29 038	Rebating cutter 6.4mm	8
NO 29 040	Edge cutter with pin 5.0mm	9
NO 29 042	Half round cutter ø 13mm	100
1 2	3	9 0 10 12 12 12 12 12 12 12 12 12 12 12 12 12
	6.5 R 3,2 6.5 16.5 R 3,2 3	.2 R 2,5 R 5

10-piece wood router cutter set

1 piece each of the cutters offered here. Neatly packed in wooden box.



Attention:

The wood router cutters offered here may only be used with working devices that have a safety mechanism. For example, MICRO router MOF (page 11) or MICRO shaper MP 400.



For perfect straight cuts in wood, non-ferrous metals, plastic and PC cards.

Bench circular saw KS 230



The 'Super-Cut' saw blade (Ø 58mm) cuts soft wood up to a thickness of 8mm.

Low noise and persevering AC motor with high life expectancy. Power transmission by toothed belt ensures the right blade speed for the job with approx. a doubling of torque. Cutting performance in wood up to 8mm, plastics (also PERTINAX printed circuit boards) up to approx. 3mm, non-ferrous metals up to approx. 1.5mm. Even fibreglass reinforced PC cards can be cut by using a carbide saw blade. Adjustable mitre fence with scale. Angle stop with degree graduation. Flat-milled worktop of die-cast aluminium (160 x 160mm).

Technical Data:

220 – 240V. 85 W. 5,000rpm. Weight approx 1.8kg.

NO 27 006

Diamond blade. 50mm diameter (10mm bore).



With 0.5mm layer of class 'D107' diamond for cutting ceramics, porcelain, tiles, stone as well as PC cards.

NO 28 012

Crosscut 'Super-Cut' blade 58mm diameter (10mm bore).



80 alternately set teeth. Ideal for hard and soft wood as well as plastic and Pertinax. For fast, clean cuts. Teeth are individually set and sharpened. Superior cutting power!

NO 28 014

Solid carbide saw blade



50mm diameter (10mm bore). 0.5mm thick. Fine toothed: ideal for cutting fibreglass sheets up to 3mm, non-ferrous metals, duro-plastics and other 'difficult' materials.

NO 28 011

Saw blade made of high-alloy special steel. 50mm diameter (10mm



bore). Alloy holding a high proportion of tungsten, vanadium and molybdenum for an even structure, high hardness and long lifetime. Fine-toothed. For very fine cuts in non-ferrous metals (aluminium, brass, copper). Also suitable for cutting compound materials like PC cards, and sawing wood and plastics.

NO 28 020

Tungsten tipped saw blades



50mm \emptyset x 1.1mm (10mm bore). 10 teeth. Used to cut hard and soft woods, PC cards, PERTINAX and aluminium.

NO 28 016



50mm Ø x 1.1mm (10mm bore). 20 teeth. For extremely clean cuts of balsa, plywood. Can also be used for cutting PC cards and POLYCARBONATE.

NO 28 017

Note:

You will find the larger version of the circular saw KS 230 (type FET) on pages 38/39.

'Super-Cut' blade (58mm diameter), 80 teeth, individually set and sharpened, is included.

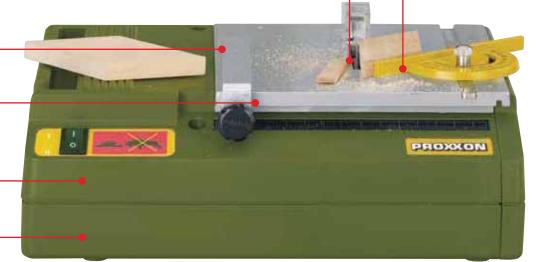
Adjustable fence with scale.

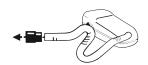
Graduated mitre stop.

Machined, die-cast aluminium table of 160 x 160mm.

Motor: low noise and persevering for prolonged use.

Base of ABS with a sawdust door on the right.





Design Patent

Very important when sawing: use our vacuum cleaner adapter for a cleaner work environment.



Cuts aluminium, wood, PC cards and plastics with standard scroll saw blades. With electronically controllable stroke rate.



The ideal machine for the delicate job: model building, toy making and precision mechanics. With electronic speed control.

Cuts soft wood up to 40mm, hard wood up to 10mm, plastics (including PC cards) up to approx. 4mm and non-ferrous metals up to 2mm. Plane-milled die-cast aluminium table (160 x 160mm).

Saw frame with 300mm throat made from very stable ribbed die-cast aluminium. <u>Blade guide with integrated blower.</u> Height adjustable head (3 positions) offering two advantages:

Blade usage is improved as the head may be lowered in two steps, making new blade teeth available. This effectively triples blade life.

- The lowest head position still allows blades, shortened by 60mm, to be used.

Low noise and persevering AC motor with high life expectancy. Quiet and wear-resistant drive via

toothed belts. Adjustable mitre fence and angle stop with scale. Includes 5 saw blades (3 coarse-toothed and 2 fine-toothed).

Technical Data:

220 – 240V. 85W. Electronically controllable stroke rate from 150 - 2,500rpm. Weight approx 2kg.

NO 27 088

'Super-Cut' scroll saw blades. High quality steel for extended use and prolonged cutting capacity. Standard version without pin.

Hard and soft woods, plastic, Perspex and soft non-ferrous metal.

riard and soft woods, plastic, i crispex and soft non-icrious metal.					
Coarse-toothed blades NO 28 116	No. 9: 14 teeth per 25mm 130 x 1.50 x 0.48mm	12 pieces			
Standard-toothed blades NO 28 117	No. 5: 17 teeth per 25mm 130 x 1.20 x 0.38mm	12 pieces			
Fine-toothed blades NO 28 118	No. 3: 34 teeth per 25mm 130 x 0,77 x 0.34mm	12 pieces			

Hard materials such as steel and PERTINAX.

riara materiais saeri as steer and i Eminoria					
	П				
Standard-toothed blades	No. 5: 36 teeth per 25mm				
NO 28 112	130 x 0.85 x 0.4mm	12 pieces			
		•			
Fine-toothed blades	No. 3: 41 teeth per 25mm				
NO 20 112	130 x 0.75 x 0.36mm	12 pieces			
NO 28 113	130 X 0.75 X 0.36mm	12 pieces			
Van dina ta atla ad la la da a	No. 1. CO to oth man 25 mans				
Very fine-toothed blades	No. 1: 50 teeth per 25mm				
NO 28 114	130 x 0.6 x 0.3mm	12 pieces			
		p.cccs			



For 50mm discs and brushes. With electronic speed control from 8 to 24m/sec.

Grinding and polishing machine SP/E



The slim housing facilitates the grinding of long workpieces and includes an adapter to connect a vacuum cleaner to the unit.

The tool rests and eye guards are both adjustable. A spindle lock eases the changing of wheels and discs. Supplied with a 50 x 13mm corundum (grade N) and silicon carbide (soft compound) wheel for general grinding/sharpening and hard materials respectively.



The right hand spindle accepts the polishing arbor, which is supplied as standard equipment.

Technical data:

220 - 240V. 3,000 - 9,000rpm. Wheels 50 x 13 x 12.7mm. Grinding speed 8 - 24m/sec. Weight approx. 1,200g.

Size approx. 250 x 130 x 100mm.

NO 28 030

Polishing set

Steel wire brush for de-rusting and cleaning steel and non-ferrous metals. Brass wire brush to polish non-ferrous metals and precious metals. Felt wheel is used on painted surfaces and the chamois and cotton wheels provide a high gloss finish on non-ferrous metals and precious metals.



NO 28 312

Complete set

Spare discs for the SP/E and BSG 220 (50 x 13mm)

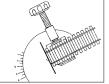
Corundum (grade N) with 12.7mm bore **NO 28 308**

Silicon carbide with 12.7mm bore. Soft compound for very hard materials. **NO 28 310**

Cut off saw KG 50

Accurately cuts small items of metal, wood and plastic.

Table moveable through 45°, allowing mitre cuts. Workpiece is fastened tightly and accurately by means of the integrated clamping device. Clamp jaws 27mm wide and maximum workpiece diameter 20mm. Depth of cut to 13mm. A special slot is provided to clamp HO model tracks.



The fence accepts lengths up to 140mm. Five ceramic cutting discs 50 \times 1.0 \times 10mm are also included suitable for cutting steel, non-ferrous metals as well as wooden or plastic rods.

Technical Data: 220 – 240V. 85W. 50/60Hz. Peripheral speed 20m/sec. Weight approx. 1.5kg.

NO 27 150

Replacement cutting discs

Made of ceramic compound: 50% aluminium oxide and 50% silicon carbide. Suitable for cutting steel, non-ferrous metal as well as small wood and ceramic bars.





You will find the larger version of the KG 50, our Cut off/mitre saw KGS 80, on page 43!



Easy sharpening of drill bits from 3 to 13mm diameter, standard angle of 118°.

Drill sharpener BSG 220





Note:

The PROXXON Drill Sharpener comes complete with full instructions to ensure even a novice can sharpen drill bits. These instructions will help to get good results every time.

The sharpening operation is controlled exactly by means of the movable carriage.



This moves from left to right and also rotates the drill bit on its own axis. This operation yields the correct relief angle. The carriage is fitted with a feed screw for fine feed. A dressing stone, ensuring a sharp cutting surface, is also fitted.

Other technical data:

220 - 240V, 85W. Corundum grinding disc size 50×13 mm. ABS housing with fixing holes. Weight 1.7kg. An easy to understand operating manual and replacement disc accompany the unit. For further spare discs see page 34.

NO 21 200

Adapters for sharpening of small drill bits

These adapters extend the BSG 220's range to cover 1.5 - 3mm. One each adapter for sizes 1.5 - 1.6 - 2.0 - 2.4 - 2.5 and 3.0mm. Neatly packed in a wooden box with sliding lid.

NO 21 232



MICRO compressor MK 240. Complete with airbrush AB 100.

Note:

This set-up is only suitable for airbrush work! Only watercolours, graining colours, pigment colours and temperas can be processed (no oil paints, synthetic resin paints or other paints that need to be thinned with solvents).



A practical product combination for model builders, for working with templates, and for technical illustrations.

Low-noise running. With 200cm air hose for connection to the air-brush AB 100. This has a single-action function and an adjustable nozzle which makes it easy to operate even for beginners. Two paint containers are included.

Technical data of the compressor:

220 – 240V. 85W. Air flow rate 12l/min. Air pressure max. 2.0bar. Size 140 x 120 x 95mm. Weight 1,300g. Only suitable for airbrush work!

NO 27 120



460mm throat! Extremely light magnesium saw arms reduce the approx. 40% compared to die-cast aluminium. For smooth running



Sturdy construction: Vibration-reducing base housing of cast steel, neatly CNC-processed and powder-coated. For stability and working without vibrations.

Magnesium saw arms precisely mounted on bearings: Extremely light and firm with a slender-shaped cutting area for an unobstructed view of the work piece. Chip blowing device with adjustable nozzle. Additional suction connection to connect a vacuum cleaner.

Large saw table made of die-cast aluminium (400 x 250mm). For easier saw blade replacement, it can be unlocked and pushed back (see description at top right). Regular scroll saw blades are fastened by saw blade holders with high clamping force: This ensures true alignment in the saw arm! The machine has also been prepared for saw blades with pin ends that are used without blade holders. Extremely important for these types of scroll saws: A handy adjusting knob enables sensitive clamping of the saw blades!

Table angle adjustment possible from 5° to 50° (see bottom right).

Cutting performance in wood 60mm, in non-ferrous metals (depending on type) 10 - 15mm. Also easily cuts Plexiglas, glass fibre reinforced plastic, foam, rubber, leather or cork. Includes 5 each coarse and fine saw blades.

Technical Data:

220 – 240V. Powerful, brushless 2-speed motor (205W). Throat 460mm. Stroke alternatively 900 or 1,400rpm. Saw stroke 18mm. Table size 400 x 250mm. Maximum work piece passage 65mm (at 45° mitre 32mm). L 580mm, W 320mm, H 300mm. Weight 20kg.

NO 27 094

Blade holders for DS 460 (one pair is already included with the machine).

For clamping regular saw blades with high clamping force: for true alignment of the saw arm.

NO 27 096 2 pieces



weight of the mass moved by and clean cuts.



Innovative solution (patented): To enable easy saw blade replacement, the horizontally positioned table can be unlocked and pushed back by 80mm. For an unobstructed view of the bottom saw arm when fitting the saw blade holders or pin end blades.



Patented saw blade holders with high clamping force ensure true alignment of the saw blades. Recesses in the table surface serve as guide line in assembly to define position and distance of the saw blade holders.



Table angle adjustment possible from 5° to 50°. With large dimensioned serrations at 0°, 10°, 20°, 30° and 45°. Additional fine adjustment for precise mitre and angle cuts.

Standard scroll saw blades with pin ends. 127mm:

For cutting soft and hard wood, plastics as well as other soft materials and especially thicker work

pieces. Coarse-toothed (10 TPI per 25mm):

NO 28 741 127 x 2.61 x 0.51mm 12 pieces

NO 28 741 127 x 2.61 x 0.51mm For cutting thin materials, soft and hard wood as well as plastics.

Normal toothed (18 TPI per 25mm):

NO 28 743 127 x 1.86 x 0.24mm 12 pieces

For cutting non-ferrous metals, glass-fibre reinforced plastics, plastics, Plexiglas and wood.

Fine-toothed (25 TPI per 25mm):

NO 28 745 127 x 1.76 x 0.25mm 12 pieces

Spiral blade. 125mm long with plain ends (without pins).

These blades cut all directions and obviate the turning of the workpiece (advantageous, especially with bigger workpieces). A 1.5mm hole is required. Ideal for plastic, hard and soft woods.

NO 28 747

125 x 1.2mm

12 pieces

"Super-Cut" scroll saw blades without pins. 130mm:

For cutting hard and soft woods, plastic, Perspex and soft non-ferrous metal. Coarse-toothed blades No. 9: 14 teeth per 25mm NO 28 116 130 x 1.50 x 0.48mm 12 pieces Standard-toothed blades No. 5: 17 teeth per 25mm NO 28 117 130 x 1.20 x 0.38mm 12 pieces Fine-toothed blades No. 3: 34 teeth per 25mm NO 28 118 130 x 0.80 x 0.34mm 12 pieces

Hard materials such as steel and PERTINAX.

 Standard-toothed blades
 No. 5: 36 teeth per 25mm

 NO 28 112
 130 x 0.85 x 0.4mm
 12 pieces

 Fine-toothed blades
 No. 3: 41 teeth per 25mm

 NO 28 113
 130 x 0.75 x 0.36mm
 12 pieces

 Very fine-toothed blades
 No. 1: 50 teeth per 25mm

 NO 28 114
 130 x 0.60 x 0.3mm
 12 pieces

2-speed scroll saw DSH. The 10,000-fold proven standard model with 400mm throat.



Cutting performance 50mm in wood, 30mm in plastic, 10mm in non-ferrous metals.

For cutting Plexiglas, glass fibre reinforced plastic, foam, rubber, leather or cork. Slender saw arm of die-cast aluminium for unobstructed view from top. Air blower with adjustable air nozzle. Sturdy table of die-cast aluminium (360 x 180mm), can be tilted by 45° for mitre sawing. Base housing of cast steel for stability and working without vibrations. Includes 5 each coarse and fine saw blades.

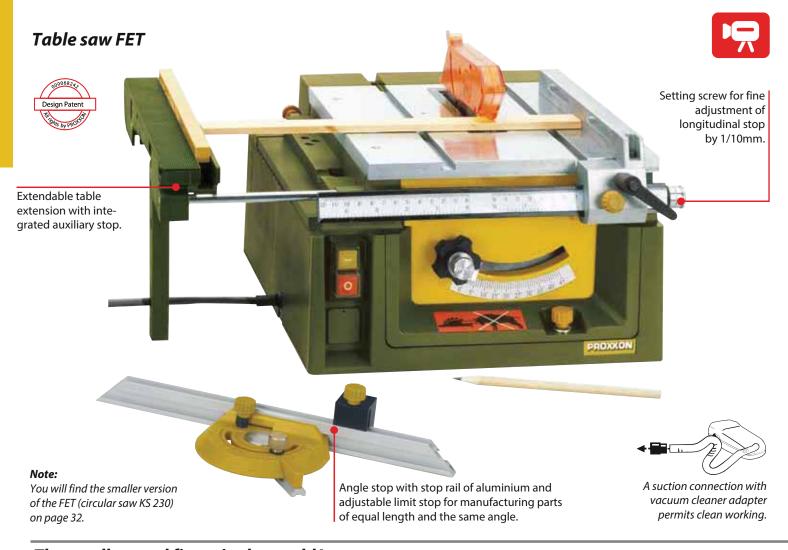
Technical Data:

220 – 240V. Powerful, brushless 2-speed motor (205W). Stroke alternatively 900 or 1,400rpm. Stroke length 19mm. Throat 400mm. Maximum cutting depth 50mm, at 45° mitre 25mm. Weight approx. 20kg.

NO 28 092



With set-screw for fine adjustment of the longitudinal stop by 1/10mm. For precise, straight cuts without refinishing!



NEW

The smallest and finest in the world!

Surface planer AH 80

Supporting construction all made of die-cast aluminium with CNC-machined fits. Pre-condition for vibration-free, clean planing of soft and hard woods.

The heart of the machine: Ball-bearing mounted planer block with exchangeable HSS blades. Belt-driven by special low noise DC motor. Plane-milled table, of which the right table half is fine adjustable via toggle screw. Adjustable longitudinal stop, to both sides inclinable through 45° (scale available). Practical safety milling protection that does not interfere during work. Main switch with emergency-stop and restart protection. Including suction connection and push stick.

Technical data:

220 – 240V. 200W. 50/60Hz. Table 400 x 80mm. Planing width 80mm. Maximum chip removal (infeed) 0.8mm. Speed 6,000rpm. Weight 5.5kg. Insulated to class 1.

NO 27 044

Replacement planer blades for AH 80 HSS steel, 82mm long.

NO 27 046 2 pieces





Height adjustable tungsten-tipped saw blade, tilting through 45°.

For fine mechanics, model building, mould construction, toy manufacture, architects, model carpenters and fitters.

For cutting wood, non-ferrous metals, plastics, Plexiglas, glass fibre reinforced sheets, foam and many other materials. Stable construction because load bearing parts and plane-milled table are made of die-cast aluminium.

The micro-adjustable, precise and stable longitudinal stop provides decisive advantages: Corrections even smaller than 1/10 mm can be made after coarse adjustment using an adjusting screw. The height adjustable and 45° tiltable saw blade makes it possible to cut double mitres when used together with the angle stop.

Low-noise drive using DC special motor with Optibelt toothed belts. Ball-bearinged saw blade shaft. Tungsten tipped saw blade $80 \times 1.6 \times 10$ mm (24 T). Additional work piece pusher and non-slotted ABS sawing gap cover for tight tolerances between saw blade and table.

Technical data:

220 – 240V. 7,000rpm. Mitre infinitely adjustable up to 45°. Table size 300 x 300mm. Cutting depth 1 - 22mm. Saw blades between 50 - 85mm can be used (with 10mm centre hole). Weight approx. 6kg. **NO 27 070**



Non-slotted sawing cap cover of ABS for tight tolerances between saw blade and table (is slotted from below by the FET saw blade). For cutting very small parts.



Table and drive can be lifted up and supported like an engine bonnet. For cleaning the device and easy saw blade replacement.









Thicknesser DH 40

Load bearing components are all made of die-cast aluminium, with milled seats for bearings and spindles.

These characterics are essential for vibration-free, smooth thicknessing of soft and hard woods. Triple-spindled table (of die-cast aluminium, flat-milled) which can be accurately adjusted to 1/10mm by handwheel (zero adjustable). Automatic even feed with anti-kickback device: The knurled, spring-mounted infeed roller transports even irregularly shaped work pieces. A rubber-coated outfeed roller prevents marking the newly planed surface. Precision planer block with two HSS planer blades.

Technical Data:

220 – 240V. 200W. 50/60Hz. Thicknessing up to 40mm thick and up to 80mm wide. Maximum depth of cut 0.8mm. Cutter speed 6,000rpm. Feed rate 4.8m/min. Table length 232mm. Weight approx. 8kg.

NO 27 040

Spare blades

For thicknesser DH 40. Made of HSS. Length 82mm.

NO 27 042 1 pair





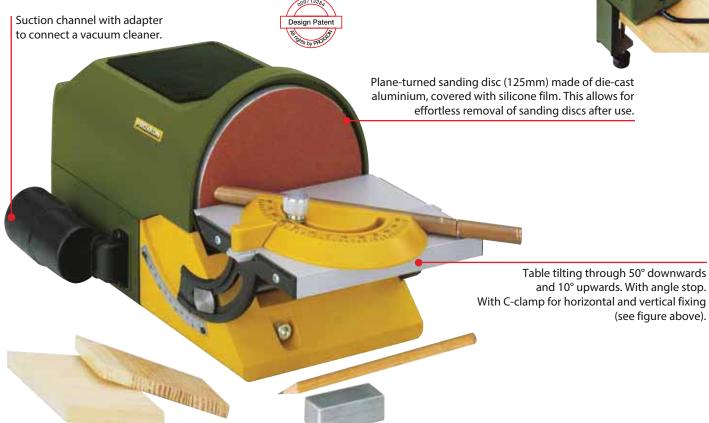
A precision machine for fine sanding work and minor material correction. Variable sanding speeds 250 – 800m/min.

Disc sander TG 125/E



With associated horizontal C-clamp (with table), but can also be fixed vertically quickly and safely (to sharpen tools).





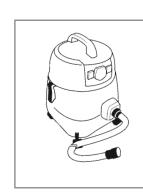
For all wood types, steel, non-ferrous metals, precious metals, plastics (also Plexiglas and glass-fibre reinforced plastics).

Powerful drive and vibration-free running thanks to balanced DC motor. Housing of glass-fibre reinforced POLYAMIDE. Aluminium table tilting downwards through 50°, 10° upwards, with angle stop. Planeturned sanding disc of die-cast aluminium covered with silicone film. This allows for effortless removal of sanding discs after use. Two additional square silicone films offer easy storage after use and thus re-use when needed. Machine can be secured both horizontally (with table) on the workbench, and also quickly and safely in vertical position. Suction connection and adapter to connect a vacuum cleaner for dust-free working. With each 2 sanding discs grit 80, grit 150 and grit 240.



220 – 240V. 140W. 50/60Hz. Adjustable grinding speed of approx. 250 – 800m/min (corresponds to 1,150 – 3,600rpm). Sanding disc ø 125mm. Table 98 x 140mm. Sanding height 62.5mm. Size 300 x 140 x 160mm. Weight approx. 3kg.

NO 27 060



Self-adhesive white corundum sanding discs for TG 125/E

Industrial quality. For sanding soft and hard woods, chipboards, fibre boards, non-ferrous metals, steel, plastics, cork, rubber and minerals. Ø 125mm. One quadratic silicone film for storage and reuse of used sanding discs is included.

 NO 28 160
 80 grit
 5 pieces

 NO 28 162
 150 grit
 5 pieces

 NO 28 164
 240 grit
 5 pieces

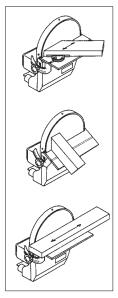


Disc sander TSG 250/E

Sands long edges, end sections, radii, mitres, and, by turning the workpiece over - accurate flat surfaces at right angles.

Used on soft and hard woods, non-ferrous metals, steel, plastics (perspex and PC cards), cork and rubber. A simple chart indicates the recommended speeds on

different materials.



Sturdy construction:

Main body of ribbed die-cast aluminium (no steel tube or sheet metal construction). Turned flat grinding disc, provided with silicone film: This ensures that affixed sanding discs can be removed effortlessly after use. Two additional square silicone films for storage and reuse of used sanding discs are included. With dust collection adapter for connection to a vacuum cleaner for dust-free working. Complete with mitre gauge and 2 each sanding discs in grain 80 and 240.

Technical data:

220 – 240V with drive via Optibelt toothed belt (reduction ratio 7.3:1). Electronic speed control approx. 250 – 750m/min. Disc diameter 250mm. Maximum sanding height 135mm, table 275 x 105mm (tilts 15° in, 45° out). Overall size without table 330 x 280 x 230mm.

NO 28 060

Both machines are equipped with suction connection and adapter for dust-free, clean sanding. We recommend our Compact Workshop vacuum cleaner CW-matic (see page 20) with integrated automatic switch control. The vacuum cleaner runs as long as the machine runs. There is a follow-up time of 5 seconds after switching off the power tool.

Self-adhesive corundum sanding discs for TSG 250/E

Industrial quality. For sanding soft and hard woods, chipboards, fibre boards, non-ferrous metals, steel, plastic, cork, rubber and minerals. Ø 250mm. Includes silicone film for storing used sanding discs.

 NO 28 970
 80 grit
 5 discs

 NO 28 972
 150 grit
 5 discs

 NO 28 974
 240 grit
 5 discs



Self-adhesive silicone carbide sanding discs for TSG 250/E

For sanding non-ferrous metals, steel, glass, PC cards, plastics and ceramics. \emptyset 250mm. Includes silicone film for storing used sanding discs.

NO 28 976 320 grit 5 discs

Self-adhesive silicone film for easy sanding disc removal (\$\textit{g}\$ 250 mm).

For retrofitting older disc sanders TG 250/E (production before 2007 with serial no. up to 14190). The film needs to be placed on the aluminium sanding disc and ensures easy removal of sandpaper discs after use. With 4 square silicone films for storage of used sanding discs and re-use when needed.

NO 28 968 set



Perfect cuts in steel, non-ferrous metals, wood and plastic. Even cuts glass and ceramics with diamond blade.

MICRO bandsaw MBS 240/E







Solid, ribbed die-cast aluminium housing (no tubular or sheet metal construction). Double ball bearing mounted aluminium

pulleys. Sturdy, plane-milled table with slot for mitre gauge (tilts through 45° for accurate mitre sawing). Triple ball bearing blade guide system, adjustable in height and width for different widths of saw blades. Low noise 220V motor (high quality, for quiet, prolonged use) with Optibelt toothed belt.

Electronically controlled speed for exceptionally accurate cutting (no subsequent finishing necessary!).

A table indicates the recommended speed for practically all kinds of material. The blade size of 5.0 x 0.4mm is ideal for fine work and allows for cutting of small radii.

PROXXON MBS 240/E

Technical data:

220 - 240V. Blade speed adjustment from 180 to 330m/min (feedback effect). Throat 150mm, maximum height 80mm. Table 200 x 200mm (tiltable from 0° to

45°). One blade 1,065 x 5.0 x 0.4mm (14 TPI) is included.

NO 27 172

Blade guide, separately (see figure above) NO 28 187

Standard bandsaw blade for MBS 240/E

Of hardened Swedish steel. Fine-toothed (24 TPI). For steel and brass.

NO 28 174 1.065 x 5.0 x 0.4mm

As above, but coarse toothed (14 TPI) NO 28 176 1065 x 5.0 x 0.4mm

Extra narrow bandsaw blade (3.5mm) for tight radii

Of special tempered steel, with induction-hardened coarse teeth (14 TPI). Especially suited for aluminium and plastics.

NO 28 180 1.065 x 3.5 x 0.5 mm

Bandsaw blade of bimetal for MBS 240/E

Carrier belt of alloyed tempering steel, sawing teeth of wear-resistant high-speed steel. Varying teeth 10 – 14 TPI. Ideal for cutting all standard steel qualities, non-ferrous metals and stainless steel.

NO 28 172 1,065 x 6.0 x 0.6mm

Diamond blade for MBS 240/E

For cutting stone, ceramics, glass or glass-fibre reinforced plastics.

NO 28 186 1.065 x 3.0 x 0.3mm

Note:

TPI stands for the number of teeth per inch (25mm) per bandsaw blade.



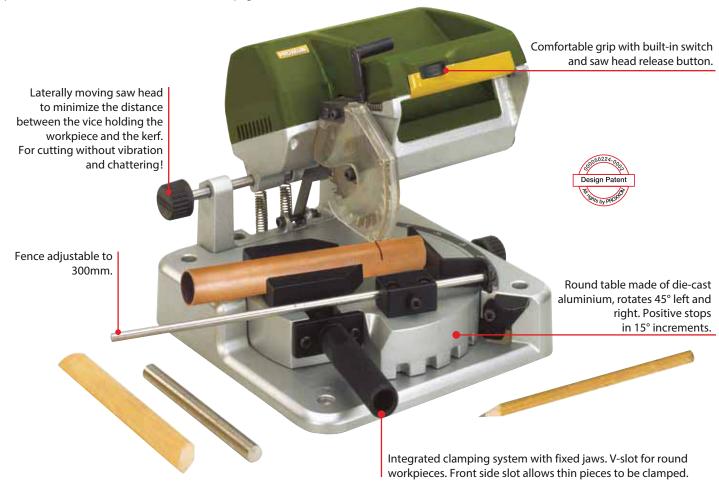
For clean, safe cutting to length of non-ferrous metals, plastic and wood.

Cut off/mitre saw KGS 80

Note:

You will find the smaller version of the KGS 80, our mini cut-off saw KG 50 (weighs only 1.5kg instead of 6.0kg) on page 34. Optional saw blades for the KGS 80 are offered on page 39.





Ideal for mitre cuts: Adjustments are made to the round table (with clamped work piece) and not to the headstock!

The opposite angle for a second frame part of identical length occurs through simple shifting with the longitudinal stop and by rotating the table by 2 x 45°. Powerful, quiet DC-motor. Smooth toothed belt drive ensures power transmission. Tungsten-tipped saw blade for non-ferrous metal, wood and plastics (80 x 1.6×10 mm, 24 TPI).

Other technical data:

220 – 240V. 200W. 50/60Hz. 6,000rpm. Base with round table of highly stable die-cast aluminium with CNC-milled fittings and slides. Table 230 x 230mm. Weight 6kg. See table for cutting capacity.

Cutting capacity at 90° (right angle cut)			Cutting capacity at 45° (mitre cut)		
Material size (in mm)	Max. material width (in mm)	Round material (in mm)	Material size (in mm)	Max. material width (in mm)	Round material (in mm)
10	65		5	36	
18	50		10	30	
21	40		15	25	
25	25	Ø max. 25	20	18	Ø max. 20

Cutting disc, with reinforcement.



Corundum-bound and shatter-proof. For cutting alloyed and non-alloyed steel, stainless steel and non-ferrous metals. Also suitable for wood and plastics.

NO 28 729 80 x 1.0 x 10mm

Tungsten tipped circular saw blade (36 T).



Extremely clean cut edges thanks to high tooth count when cutting balsa, plywood, soft wood and glass reinforced plastic boards. Also for cutting hard wood, POLYCARBONATE, plastics and aluminium.

NO 28 732 80 x 1.6 x 10mm



For precision work: even 0.5mm holes may be drilled. With three step pulleys for easy speed change.

Bench drill machine TBM 220

The optional MICRO compound table KT 70 is described on page 19.



3 spindle speeds by shifting the flat belt for more than the triple torque in the lower rotational speed range.



6 MICROMOT steel collets are included in the scope of delivery.

Machine vice MS 4 made of die-cast zinc is an invaluable accessory and is described in detail on page 19.

Fully adjustable depth gauge.

Plane-milled worktable of die-cast aluminium (220 x 120mm) with adjustable fence and scale as well as threaded holes for securing the MICRO compound table KT 70. Machined worktop of high quality, ribbed die-cast aluminium (220 x 120mm). Adjustable fence with scale. Solid, hard-chromed steel column, 340mm high, 20mm diameter. Super stable die-cast head with VDE approved 220 - 240V motor. Very quiet and of long life expectancy type. Power transmission by aluminium pulleys and flat belt. Three spindle speeds (triple torque at low speeds). Feed lever with adjustable depth scale.

Technical data:

220 - 240V. 85W. 50 - 60Hz. Spindle speeds of 1,800, 4,700 and 8,500 rpm. Extremely high rotational accuracy, 30mm feed. Throat depth (column to drill spindle) 140mm. Six triple slit precision collets for shaft sizes 1.0 - 1.5 - 2.0 - 2.4 - 3.0 - 3.2mm are included. 3/8" thread. Weight 3.3kg.

NO 28 128

RÖHM-Chuck

For drill shank sizes 0.5 to 6.0mm. Max. speed 10,000rpm. Industrial quality with extra high speed accuracy. With 3/8" thread for MICROMOT bench drill TBM 220.





Precision machine vices Ease of operation. With precise jaw guide:





Sublime precision tool. Ideal for the lab, workshop and delicate operations.

Bench drill press TBH

Ideal for jig boring with the compound table KT 150 (page 62).



Note

Table and arm of the table drilling machine offered here are made of die-cast aluminium. A refined, rust-proof and statically very solid material. Fittings and feeds are machined on our highly modern CNC-controlled machines (milled, line-bored, lathed, etc.).

Practical height adjustment via toothed rack with easy to operate crank. Powerful, long-lasting direct current motor. Spindle drive

6

via triple belt pulley with the advantage of roughly 6 times the torque in the lower rotational speed range.

Practical drill depth indicator with adjustable limit stop. Drill spindle with precision bearing. Spindle head with 1/2" thread for the corresponding RÖHM chuck (industrial quality). Spindle with additional fit for steel collets NO 28 200.

Technical data:

220 – 240 Volt. Spindle rotational speeds 1,080 – 2,400 and 4,500rpm. Sliding sleeve stroke 63mm. Height adjustment via crank 70mm. Throat 140mm. Usable table surface 200 x 200mm. Column 45 x 500mm. Tool holder up to 10mm. Drilling performance in steel 10mm. Weight approx. 10kg.

NO 28 124

PRIMUS 75

Base body made of special cast iron with CNC-machined guides. Interchangeable gripping jaws. Flat-milled working surface. Spindles with rolled trapezoid thread for ease of operation even during high axial load. Width of jaws 75mm. Jaw opening 65mm. Distance from long slot centre to long slot centre 100mm. Long slots 80 x 11mm. Weight 2.5kg.

NO 20 392

PRIMUS 100

Width of jaws 100mm. Jaw opening 75mm. Distance from long slot centre to long slot centre 135mm. Long slots 105 x 15mm. Weight 5.0kg. Other details as for the PRIMUS 75.

NO 20 402

T-nut set for PRIMUS vices

2 T-nuts, screws and the necessary accessories. For fixing to the drill tables of: BFB 2000, KT 150 and bench drill press TBH.

NO 20 394



Collet set for drill press TBH

Triple slit and hardened. 1 each of 2.35 – 3.0 – 3.2 – 4.0 - 5.0 and 6.0 mm. With collet closure nut (M 17)

Neatly packed in wooden box with sliding lid.

NO 28 200



For engraving letters and numbers in metal or plastic. For name plates, jewellery or valuable materials.

Engraving device GE 70



MICRO miller MF 70 and collets are not included in the delivery.

The work piece is

aligned and fixed

on the movable guide block with clamping jaws or a vice. lined letters. Also for scribing printed circuit boards for later breaking out.

NO 28 764

Engraving stylus for V-shaped letters. Letter width at base 0.5mm.

Solid carbide stylus for use with engraving

For machining steel, cast steel, non-ferrous metals, plastics, glass, stoneware and tiles. Nose angle 60° for high stability. Shaft

Scribing stylus for forming thin lines and engraving fine-

diameter 3.2mm. Not suitable for freehand work.

NO 28 765

device GE 70

Stencil set for engraving device GE 70

Letters A – Z, incl. hyphen, full stop and slash. Also numbers 0 - 9. For use with guide bar of the GE 70.

NO 27 104

Accurate letter templates fixed in a guide bar. Template contours are precisely followed using the guide marker (ball handle).

Note:

It is also equally easy to manufacture miniature, individual shapes, engravings, cut-outs and outline shapes, even in series, using self-made templates or commercially available templates (plants, animals, coats of arms).

A practical accessory for the MF 70. To be fitted in place of the compound table for engraving.

The lettering to be milled is scaled down during transfer. The transfer ratio can be fixed at 2:1, 3:1, 4:1 or 5:1 by simply adjusting two screws. Guide bar (template holder) holds a maximum of 14 letters.

Complete with two sets of letters from A to Z, full stop and hyphen (total 52 items), two sets of numbers from 0 to 9 (20 items), fixing screws for the MF 70 base and a comprehensive instruction manual.

NO 27 102

Dividing head for MICRO miller MF 70 and MICRO compound table KT 70

For machining circular work pieces, manufacturing off-set holes and milled out portions, milling key surfaces, four-sided, six-sided materials, etc. Absolute accurate division due to nonius at the base body. With reversed chuck jaws: Capacity inside 1.5 to 32mm, outside 12 to 65mm. Bore of

11mm (for processing longer spindles in a vertical position). With fastening bores for horizontal and vertical mounting and suitable slot nuts and fastening screws for mounting to the MICRO miller MF 70 and the MICRO compound table KT 70. Size $72 \times 64 \times 38$ mm. In wooden box with sliding lid.





Small and beautiful: the accurate miller for lab technicians, optician, jeweller, electronic/model builder.

Handwheels with zero adjustable scales, 1 revolution = 1.0mm, 1 division = 0.05mm.

MICRO miller MF 70

Tungsten milling cutters

Two flute cutters and a fishtail profile ensure cutting to the centre, allowing boring. Usable on grey cast iron, hardened cast iron, steel, cast steel, brass, aluminium, glass and even plastics and carbon fibre. One each of 1.0 - 2.0 and 3.0mm. 3.0mm shaft diameter. Can also be ordered separately (see page 23).



NO 27 116 3 pieces

> Supplied complete with stepped clamp blocks of steel. These are shown on page 19 (offered separately).

Table of stable aluminium. Both axes are fitted with adjustable dovetail slides.

> MICROMOT steel collets, triple slit and hardened, from 1.0 to 3.2mm.



speed from 5,000 -20,000rpm, perfect for even the smallest milling cutter.

> **Cutter clamping** in MICROMOT system collets.

For work with extremely small cutters.

Base of grey cast iron. Including both vertical column and compound table of treated, quality aluminium. All axes are play-free and have adjustable gibs. Headstock of die-cast aluminium contains the 24 pole special (balanced) motor which is super stable even at high operating speeds. This stability facilitates the use of the finest cutters. The triple slit, hardened steel MICROMOT collets cover 1.0 -1.5 - 2.0 - 2.35 - 3.0 - 3.2mm. The table is fitted with 3 T-slots of the 12 x 6 x 5mm MICROMOT norm. An adjustable ruler scale eases the positioning of the workpiece. All handwheels are zero adjustable with 1 revolution = 1.0mm, 1 division = 0.05mm.

Technical data:

220 - 240V, 100W, 50/60Hz. Spindle speeds 5,000 - 20,000rpm. Table 200 x 70mm with X-Y travel of 134 and 46mm respectively, with vertical travel 80mm. Footprint size 130 x 225mm and overall height 370mm. Weight approx. 7kg. The clamping blocks depicted are included too, but not the workpiece!

Precision steel vice PM 40

Milled from steel for precision. Completely angular.

Jaw width 46mm, clamping capacity 34mm. Total length 70mm. Especially suited for filigree and accurate working with the MICRO miller MF 70 or the compound table KT 70. Sliding blocks and fixing screws included. Comes in a wooden box.



Stable cast iron base.

NO 24 260

NO 27 110



Light, sturdy and precise. 2-stage belt drive and additional electronic for larger work pieces and for the appropriate cutting speed, even for

Precision lathe FD 150/E



For facing and longitudinal turning, for boring, taper turning, slicing and drilling. Complete with three-jaw chuck and live centre.

 $\textbf{Machine bed} \ with \ dove tail \ guides \ of \ continuous \ casting \ aluminium.$

Die-cast aluminium **spindle headstock**. With quiet special DC motor, 2-stage belt drive and additional electronic speed control for high engine power at low speeds for larger work pieces and for the appropriate cutting speed, even for the smallest pieces. Main switch with emergency stop function and restart protection. Precision bearing mounted main spindle with continuous 8.5mm bore. Chuck fit for standard ER 11 type collets.

Three-jaw chuck, self-centering (inside jaws 1.5 – 32mm), outside jaws 20 – 60mm).

Die-cast aluminium **tailstock** with spindle and live centre (fitting MK 0/short).

Support: To be shifted manually on the bed and clamped with lever. Rotating tool post for turning steels 6×6 mm.

Processing via top slide (60mm, travel distance Z) and cross slide (40mm, travel distance X). The angle adjustment of the upper carriage makes it possible to turn tapers up to \pm 45°.

Handwheels with zero adjustable scale ring (1 division = 0.05mm, 1 revolution = 1.0mm).

Other technical data:

220 – 240V. 50/60Hz. Distance between centres 150mm. Swing 55mm. Height over cross slide 33mm. Cross slide travel (X) 40mm, top slide travel (Z) 60mm. Steel tool post for turning steels 6 x 6mm. Spindle bore 8.5mm. 2-stage belt drive with electronic speed control: Stage 1 = 800 – 2,800rpm. Stage 2 = 1,500 – 5,000rpm. Dimensions approx. $360 \times 150 \times 15$

speed control for spindle speeds up to 5,000rpm. For high engine power at low speeds smallest pieces.





6-piece turning tool set. Made of high-quality cobalt HSS steel. Ground.



One each boring, roughing out, parting, finishing, right and left cutter.

Size $6 \times 6 \times 60$ mm. For FD 150/E, supplied in wooden box.

NO 24 524 6 pieces

RÖHM drill chuck. Capacity 0.5 – 6.5mm.



Industrial quality with high concentricity (allowed up to 10,000rpm).

Complete with arbour B 10 x MK 0/short. For the tail-stock of the FD 150/E.

NO 24 152

Multiple range standard ER 11 type collets (DIN 6499/B))



Offering high concentricity. May be reduced up to 0.5mm below their nominal diameter (intermediate sizes not required). D = 11.5mm, L = 18mm. One each of 2.0-2.5-3.0-4.0-5.0-6.0 and 7.0mm are included. With clamping nut M 16 x 1. Suitable for the main spindle of the FD 150/E. Supplied in a wooden box.

NO 24 154 7 pieces

Manual for creative modelmakers

Over 370 pages of information and tips from all areas of model building. All illustrations in colour.

Attractively produced, this book affords a good insight into the areas of materials and their application possibilities. It describes tools and work techniques in general and gives com-



prehensive technical explanations concerning MICRO-MOT devices and available accessories.

A large portion is devoted to practical tips and a clear appendix of useful tables completes the contents of this helpful manual.

<u>Available in German only!</u>

NO 28 996

Lathe practice for model makers

By Tilmann Wallroth. 230 pages, written without reference to trademarks.

An interesting book describing in detail all important lathe components and working stages 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. Available in German only!





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

Lathe 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 \times 250 \times 150mm.



Accessories for the lathe PD 230/E (also compatible with its predecessor PD 210).



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.

Supplied in a wooden box with sliding lid.

NO 24 042



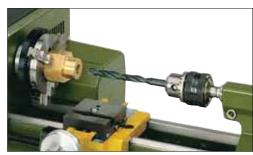
Four jaw chuck. The 4 jaws are adjusted independently, thus clamping unsymmetrical pieces, ovals, squares and odd-shaped work pieces. Capacity of 80mm. **NO 24 030**



Centre turning attachment. Used for highest accuracy with high rotational precision.

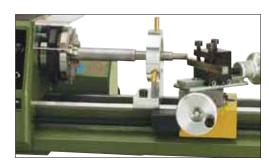
One face plate, 2 fixed MK 1 (short) centres and 1 drive dog are included. <u>Supplied in wooden box with sliding</u> lid.

NO 24 070



Gear chuckCapacity to 10mm, with key and MK1, for tailstock. **NO 24 020**

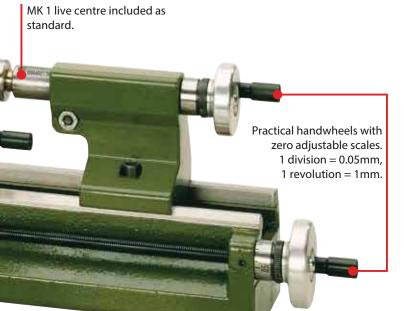
As above, but with 10mm arbor for mill/drill unit. **NO 24 110**

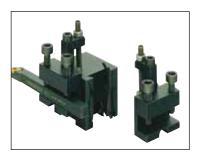


Fixed steady

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

NO 24 080





Quick change tool post for PD 230/E

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

NO 24 022

Additional quick change tool holder (separately)

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

NO 24 024 piece

Lathe system PD 230/E. Versatile and expandable. Precision made in Europe.

Splash quard 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



Dividing attachment TA 230 For lathe PD 230/E, MICRO miller PF 230 and FF 230

For accurate machining of circular work pieces (e.g. production of gear wheels). 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 und 48. The taper of the dividing attachment is the same size as that of the main spindle of the PD 230/E lathe, thus 3 jaw chuck (to be ordered separately under NO 24 028, see below) and 4 jaw chuck (NO 24 030, see page 51) may be mounted. Horizontal fitting (e.g. on the cross-slide of the lathe) and vertical fitting (on the machine bed) are possible. With matching nuts and screws for fixation in MICROMOT standard T-slots (12 x 6 x 5mm). Supplied in a wooden box with sliding lid. The 3 jaw chuck depicted here is not included in the scope of delivery.

NO 24 131

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 above described dividing attachment NO 24 131.

NO 24 028

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 5mm. 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 (see page 53). Three collets of sizes 6 – 8 and 10mm are included.





A small, high accuracy machining system to mill, drill and bore.

MICRO miller FF 230

The headstock swivels through 360°, indicated on a scale.

Height is adjusted via a zero adjustable handwheel, also used as fine feed when milling (one revolution equals 1mm travel). The quill and headstock may be locked in position, essential when milling. The powerful motor effects drive via a poly-V belt, yielding high torques, especially at lower speeds. Collets of 6 – 8 and 10mm are included. The solid table is T-slotted to the MICROMOT standard of 12 x 6 x 5mm.

Other technical data:

220 – 240V. 140W. 50/60Hz. Spindle speeds of 280 – 550 – 870 – 1,200 – 1,500 and 2,200rpm. 30mm travel. Table size 270 x 80mm, column 35 x 400mm long. X-Y-travel is 170 x 65mm. Maximum height 180mm and depth 130mm. Overall height approx. 500mm. Weight approx. 17.0kg.

NO 24 108

The clamps (not included) are described on page 60.

Note:

For more lathe and milling accessories and bits and cutters, see pages 60/61.

Important!

For clean milling we recommend to clamp the quill as well as the headstock onto the column. With the FF 230 this is easily done with the clamp.

Handwheel serves as both height adjustment and mill fine feed. Poly-V drive system offers 6 speeds between 280 and 2,200rpm. The fine step feed is not included. Handwheels with zero adjustable scale (1 rev = 1.5 mm,1 division = 0.05 mm).

Compound table KT 230

As described above, but excluding headstock and column. 35mm bore. Fits the PF 230 and PF 210. Weight approx. 11kg.

NO 24 106

Five piece collet set for PF 230 and FF 230

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 24 140

Fine feed for milling machine PF 230 and MICRO miller FF 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).





Accuracy and versatility made in Europe. DIN 8606. With gearbox.



The Lathe PD 400 is the heart of a multifunctional and expandable system and is unequalled in its class!

Ideal for straight and cross cuts, taper turning, internal and external thread cutting, slotting, etc. Useable on materials such as steel, nonferrous metals, aluminium and alloys. Negligible tolerances even under heavy loads. The wide range of accessories complements the lathe's functions. The bed is already equipped with a milled and tapped surface for securing mill/drill PF 400.

Technical data:

Distance between centres 400mm and cross slide travel 85mm, over the top slide is 116mm. Solid, ribbed bed is made from quality cast iron with ground and hardened ways. Oversized spindle with 2 adjustable taper bearings, MK3 taper and 20.5mm bore. Run-out, without chuck, 5/1,000mm. Includes the precision 3 jaw chuck, 100mm diameter.

Six spindle speeds are provided via belt drive: stage 1: 80 – 330

1 ,400rpm and stage 2: 160 - 660 - 2,800rpm. Powerful, quiet motor

with 550W power output. Practical handwheels with zero adjustable graduated collar (2 parts). For cross slide and upper carriage: 1 divisi-

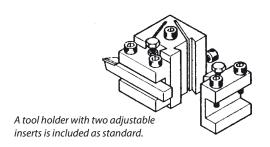
on = 0.025mm. 1 rev. = 1.0mm. For tailstock and leading spindle: 1 division = 0.05mm. 1 rev. = 1.5mm. The activatable auto feed has speeds of 0.07 or 0.14mm/rev. An integrated gearbox, for LH and RH threads, with change gears provides 19 metric pitches: 0.2 - 0.25 - 0.3 - 0.35 - 0.4 - 0.45 - 0.5 - 0.6 - 0.7 - 0.75 - 0.8 - 0.9 -1.0 - 1.25 - 1.5 - 1.75 - 2.0 - 2.5 -3.0mm. Imperial threads of 10 - 48 TPI are also possible.

A rotating centre MK 2 and tailstock





Insertion tools and additional accessories for the PD 400 system are described on pages 56, 60 and 61.



Protected lead screw with 12 x 1.5

Acme thread.

chuck of 10mm capacity, B12 taper, are included. Lead screw with acme thread 12 x 1.5, top slide 52mm and adjustable to turn tapers,

Tool post

Including two holders. Provides quick tool changes with easy height adjustment.

NO 24 415

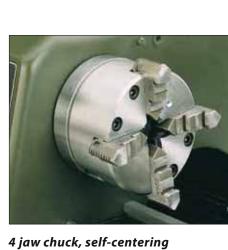
Individual quick-change holder
Fits the tool post of PD 400.
NO 24 416



4 jaw chuck with independent jaws

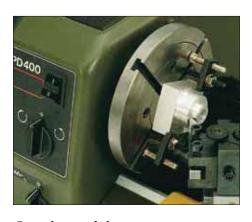
Used to mount irregularly and asymmetrically shaped objects. Each jaw is adjusted individually and centering is thus achieved manually. Hardened, reversible jaws. Chuck diameter 100mm.

NO 24 410



The jaws are not independently adjustable, i.e. they are self-centering. High accuracy. Chuck diameter 100mm.

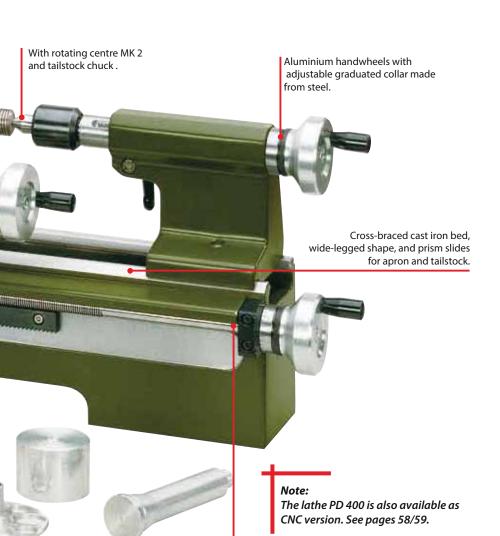
NO 24 408



Faceplate and clamps

Is fitted instead of the standard chuck. Ideal for clamping larger and asymmetrically shaped work pieces. Ø 125 mm. 2 continuous T-slots. With clamping jaws.

NO 24 412



graduations).

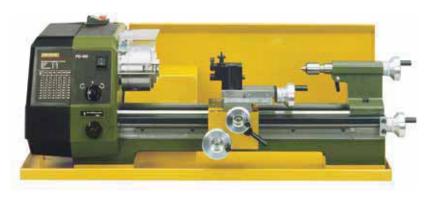
10 x 10mm.

with graduations up to 45°. Tailstock with MK 2. 24mm diameter and 40mm travel (with

Overall size approx. 900 x 400 x 300mm (L x W x H). Weight approx. 45kg. Uses cutting tools



Carefully thought-out accessories for the PD 400 lathe system solve milling and turning problems.



Splash guard and chip collecting tray for lathe PD 400

Made from 1.5mm steel plate, powder coated. A welded cover protects the motor. Mounting holes and raised base to secure the lathe are pre-drilled. Seeping through of coolant is impossible. Length 800 x width 270 x height 290mm.

NO 24 402



Collet attachment including collets

For accurate use on round components. One hardened collet each hardened collet 2.0 - 3.0 - 4.0 - 5.0 -6.0-8.0-10-12 and 14mm are included. Concentric accuracy better than 0.002mm, much better than a chuck. One soft collet for making a custom size yourself. The included collet attachment is mounted in the place of the headstock chuck. Supplied in a wooden box.

NO 24 419

complete

Mill/drill PF 400

With round column, mounting flange and screws (mounting surface on the bed of the PD 400 is already machined). Steel work table (150 x 110mm) with 3 T-slots to the MICRO-MOT standard (12 x 6 x 5mm). Two fastening screws secure the work table to the lathe's cross slide. The milling head is identical to the one of the MICRO Miller FF 500 depicted on page 57.





Fixed steady

Used on the PD 400 when turning long, slender work pieces. Fitted directly to the bed-ways and is used when the tailstock support is inadequate. Maximum Ø 50mm.

NO 24 404



Travelling steady

Fitted to the carriage of the lathe. Indispensable when turning long, slender work pieces. Maximum Ø 50mm.

NO 24 406



Centre turning accessory for the PD 400

Ideal when turning with highest possible accuracy. Supplied with 2 dead centres (MK2 and MK3), drive/ face plate with 30mm bore as well as reducing bushes 30/20mm and 30/15mm. A threaded drive pin screws into the headstock flange and the drive plate.

NO 24 414

Gear tooth chuck (10mm) with adapter

Industrial quality, however not as accurate as the collets. With 10mm adapter which fits into the 10mm collet. Includes the chuck key.





MICRO miller for precision work to 0.05mm accuracy! Quiet, looking good and multifunctional.



Note: The MICRO Miller FF 500 is also available as CNC version (see page 59).

A machining centre for milling, drilling and countersinking. With solid column of aluminium continuous casting.

Milling head can be pivoted to the left and right by 90° (with degree graduation). Simple pre-selection of rotational speed by shifting the Poly V-belt. Switch for clockwise and counter-clockwise rotation. Sleeve feed (30mm) via lever with scale ring (1 graduation = 1mm).

Tool holder using multiple range standard ER 20 type collets (DIN 6499-B): One each of 6-8-10 and 12mm are included (detailed description see below). Extension height adjustment using hand wheel with scale ring (1 rev. = 2mm). Solid, plane-milled steel compound table with three continuous MICROMOT standard T-slots (12 x 6 x 5mm).

Technical Data:

220 – 240V. 400W. 50/60Hz. Spindle speeds 180 – 350 – 550 – 800 – 1,300 – 2,500rpm. Throat (to spindle centre) 125mm. Sleeve stroke 30mm. Column 120 x 100 x 420mm. Table 400 x 125mm. Traverse range vertical (z-axis) 220mm, transverse (x-axis) 310mm, depth (y-axis) 100mm. Total height max. 780mm. Weight approx. 47kg.

NO 24 320

Multiple range standard type ER 20 collets (DIN 6499-B)

For the Mill/drill PF 400 (from production no. 401-10910) and MICRO Miller FF 500 (from production no. 5648). High concentricity and repeat accuracy. May be reduced to 0.5mm under their nominal diameter (intermediate sizes not required). D = 21mm, L = 31.5mm. One each of 2.4-3.0-3.2-4.0 and 5.0mm are included. Supplied in wooden box with sliding lid.

NO 24 253



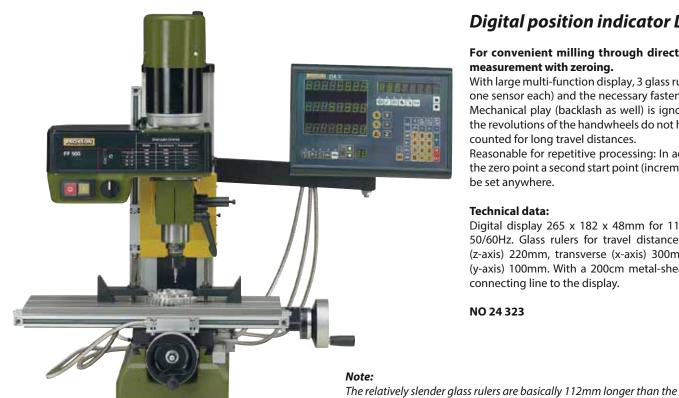
Fine feed for accurate adjustments

Quick and easy to install. The clutch system enables feed via either the drill handle or the handwheel.

The handwheel has 0.025 graduations and may be set to zero. 1 division = 0.05mm.



Digital position indicator for the MICRO Mill FF 500 and other lathes and milling machines.



Digital position indicator DA 3

For convenient milling through direct position measurement with zeroing.

With large multi-function display, 3 glass rulers (with one sensor each) and the necessary fastening parts. Mechanical play (backlash as well) is ignored. And: the revolutions of the handwheels do not have to be counted for long travel distances.

Reasonable for repetitive processing: In addition to the zero point a second start point (incremental) can be set anywhere.

Technical data:

Digital display 265 x 182 x 48mm for 110 - 230V. 50/60Hz. Glass rulers for travel distances: vertical (z-axis) 220mm, transverse (x-axis) 300mm, depth (y-axis) 100mm. With a 200cm metal-sheated plug connecting line to the display.

NO 24 323

travel distances (therefore 212, 332 and 412mm) and only 17mm wide.

Height including sensor: 36.5mm.

The most important computing functions of the system DA 3:

- · Calculation and indication of a centre position
- Basic arithmetic operations as well as cos/sin functions with transfer of values to the position indicator
- · Positioning of drill holes on any straight lines and circular paths
- Milling of crooked planes
- Milling of radii in different planes





MICROMOT adapter

For the use of high-speed MICROMOT rotary tools

in combination with the MICRO Miller FF 500. And especially for use with the MICRO Miller FF 500/CNC. The standard milling head is exchanged for the adapter in just a few steps. Our 20mm collar enables to fasten all appliances of the MICROMOT 50 series, the MICROMOT precision drill/ grinder FBS 240/E and the MICROMOT professional drill/grinder IBS/E. Especially for applications that require high speeds for small milling cutters (e.g. milling electronic boards), but also for micro drilling. Complete with fastening screws.



CNC systems made in Europe. Precision with high repeat accuracy!

MICRO Miller FF 500/CNC

Complete with CNC controller and user-friendly software (runs under WINDOWS®).

Double roller bearing mounted recirculating ball spindles on all 3 axes (no backlash) and 3 powerful step motors. Large travel distances: X-axis approx. 290mm, Y-axis approx. 100mm, Z-axis approx. 200mm. The mechanical design is almost identical to the MICRO Miller FF 500 (see page 57).

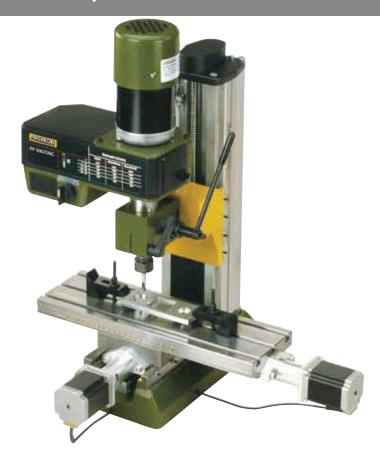
NO 24 340

Note:

The MICRO Miller FF 500 is also available as ready for CNC version, without controller and without software. Connection to the controller by three standard plugs (SUB-D 9POL).

Note:

For the lathe system PD 400/CNC and the MICRO Miller FF 500/CNC there is a special brochure with detailed description, which you may inquire for under NO 95 157 (German) or NO 95 372 (English). Or just visit our website at www.proxxon.com!



Lathe PD 400/CNC

Also this machine is supplied complete with CNC controller and user-friendly software (runs under WINDOWS°).

Axle drive via two powerful step motors and recirculating ball spindles (no backlash). The mechanical design is almost identical to the proven PROXXON Lathe PD 400 (see pages 54/55).

NO 24 500

Universal dividing table UT 400

For accurate machining of circular work pieces.

The table may be fixed horizontally or vertically. Worm drive for division through 360° allowing for almost all possible divisions below 100. Supplied with 4 index plates: 27/42, 33/40, 34/39 and 36/38. Used to manufacture sprockets, gearboxes and drives, ratchets, cams, etc. (the faceplate is not included). The taper is identical to the main spindle of the lathe. With matching nuts and screws for fixation in MICROMOT standard T-slots ($12 \times 6 \times 5$ mm). Supplied in a wooden box with sliding lid.







Accessories and tools for the lathe systems PD 230/E and PD 400



Radius cutting attachment For the lathe systems PD 230/E and PD 400,

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



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 LBS/E or IBS/E to the tool post of the lathes PD 230/E and PD 400 for grinding or polishing purposes. MICROMOT collar size Ø 20mm. Shaft 8 x 10mm for tool holders PD 230/E and PD 400.

NO 24 098

Precision-milled steel machine vices.

Perfectly rectangular. To be placed sideways and on the end face. With matching nuts and screws for fixation in MICROMOT standard T-slots (12 x 6 x 5mm). Supplied in wooden box with sliding lid.

Step clamp set, of milled steel



For work pieces up to 35mm thickness.

Two each step blocks and clamps. With matching nuts and screws for fixation in T-slots of the MICROMOT standard (12 x 6 x 5mm). Supplied in wooden box with sliding lid.

NO 24 257

Note:

You will find smaller step clamps on page 19!

Die holder for round dies, threads M 3 to M 10



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 or PD 400. The holder is held by hand while cutting the threads. Comes in a wooden box.

NO 24 082

Precision vice PM 40



Jaw width of 46mm. Clamping capacity 34mm. Total length 70mm.

NO 24 260

Precision V-blocks



14-piece parallel supports set



Precision vice PM 60



Jaw width 60mm. Clamping capacity 42mm. Total length 100mm.

NO 24 255

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

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.

Milling cutter set (2 - 5mm)

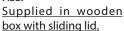
All cutters with 6mm shaft. Cutters of Ø 2 – 3 – 4 and 5mm.
Double fluted according to DIN 327. Made of HSS. Supplied in wooden box with sliding lid.



NO 24 610

Milling cutter set (6 - 10mm)

4 cutters \emptyset 6 – 7 – 8 and 10mm. Four flute design according to DIN 844. Shafts 6.0 and 10.0mm respectively. Made of HSS.





NO 24 620

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

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

Parting tool holder and tool

Used in the PD 400 quick-change system. Used to part stock and cut slots. The 12 x 3 x 85mm HSS tool contains cobalt.



NO 24 417

Spare tool for parting tool holder As described above. NO 24 554

HSS steel, ground.

Cutting tools of high quality cobalt

Five piece set

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



8 x 8 x 80mm (for PD 230/E). **NO 24 530** 10 x 10 x 80mm (for PD 400) **NO 24 550**

Three piece thread cutting set

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



8 x 8 x 80mm (for PD 230/E) **NO 24 540** 10 x 10 x 80mm (for PD 400) **NO 24 552**

Cutter set with tungsten inserts for PD 230/E and PD 400



Three holders (90mm long)

- ① for roughing out;
- ② for longitudinal work;
- ③ 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.

NO 24 555 8 x 8mm (for PD 230/E) **NO 24 556** 10 x 10mm (for PD 400)

Tungsten disposable tips

For the holders as described above. **NO 24 557** Ten piece set.

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 either the PD 230/E or PD 400. Comes in a wooden box.

NO 24 520

Cutting tool set for precision lathe FD 150/E. Made of high-quality cobalt HSS steel. Ground, 6-piece.



One each boring, roughing out, parting, finishing, right and left cutter. Size 6 x 6 x 60mm. For FD 150/E.

Supplied in wooden box.

NO 24 524 6 pieces

Complete work centre for milling and drilling: mill/drill unit BFB 2000, compound table KT 150 and mill/drill system BFW 40/E.

Mill/drill system BFW 40/E, with controller for speeds of 900 - 6,000rpm.

The triple ball bearing armature provides direct drive (no gearing).

Die-cast aluminium head with spindle neck of 43mm (European standard). Large, easy to use switch with emergency function. Chart indicates optimum speeds for milling and drilling of various materials.

Other technical data:

Control unit with full wave electronics for 220 - 240V, 40VDC secon-





dary voltage. Power consumption up to max. 250W. Spindle speed infinitely variable between 900 and 6,000rpm. Complete with triple slit, hardened collets covering 2.35 – 3.0 – 3.2 – 4.0 – 5.0 and 6.0mm as well as 2 spanners.

NO 20 165

Die-cast aluminium compound table KT 150

With precision milled dovetail slides, thus also suitable for metal work

For routing, milling, slotting of steel, non-ferrous metals, plastics and wood. Each slide provided with locking screws. With re-adjustable dovetail guides to eliminate play. Feed adjustment by means of 2 handwheels with graduated, zero-adjustable dials (1 revolu-



tion = 2mm feed, 1 graduation = 0.05mm feed). Plane-milled table. Three continuous MICROMOT standard T-slots (12 x 6 x 5mm). Fence with predrilled positioning holes, fastening screws. A practical screw clamp used when routing. Table 200

x 200mm. Maximum travel 150 x 150mm. Overall height 75mm. Weight 4.9kg. The step clamps depicted on the right are not included in the scope of delivery.

NO 20 150

Note:

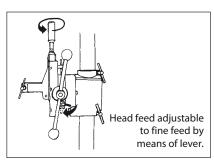
The motor operates at 40V, supplied from the power pack/controller. At this level, the control characteristics are ideal and yield high torque, even at lower speeds.

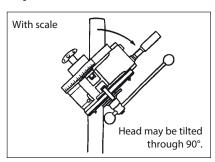
(The compound table, drill stand and step clamps are not included.)

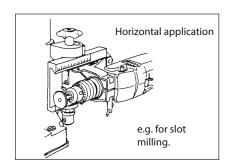




Mill/drill unit BFB 2000 For standard drills with 43mm spindle neck.







Adjustable zero position for fine feed.

Head tilts through 90°, thus offering a multitude of capabilities:

Diagonal drilling, versatile milling without need of special milling bits, milling of diagonal slots.

Fine feed selectable allowing fine head feed for milling. With dial and depth scale. Geared rack and pinion feed for effortless drilling. 45mm diameter drill column, 500mm long. Approx. 140mm throat (column outside to tool centre). 65mm stroke. Plane-milled, solid base plate approx. 200 x 200mm with two continuous MICROMOT standard T-slots (12 x 6 x 5mm). Easy clamping of all common drills with standard 43mm spindle collar. Weight approx. 6.5kg.

NO 20 000

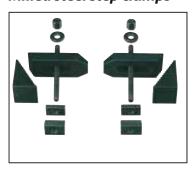
HSS milling cutter set (2 - 5mm) Ideal for mill/drill system BFW 40/E



HSS, all with 6mm cylindrical shaft. Consists of cutters of 2 – 3 – 4 and 5mm diameter. Double fluted, according to DIN 327. Made of HSS. Supplied in wooden box with sliding lid.

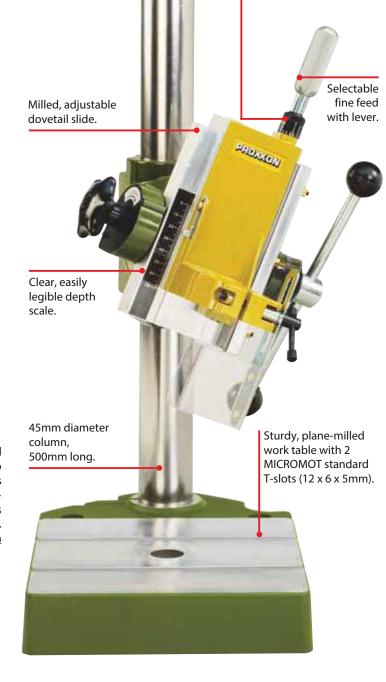
NO 24 610

Milled steel step clamps



For MICROMOT standard T-slots (12 x 6 x 5mm). Two each step blocks and clamps with matching nuts and fixation screws. For work pieces up to a thickness of approx. 35mm. Neatly packed in wooden box with sliding lid.

NO 24 257



For more accessories, see page 61!



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