



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

- ① Hand wheel serves as height adjustment.
- ② Poly-V drive system offers 6 speeds between 280 and 2,200rpm.
- ③ The clamps and work piece shown are not included.
- ④ Hand wheels with zero adjustable scale, 1 rev = 1/16" (1.5mm), 1 division = .002" (0.05mm).

## MICRO Mill FF 230

The MICRO Mill FF 230 is a small, accurate milling system used to mill, drill and countersink steel, cast iron, aluminum, brass and plastic. The headstock swivels through 360°, indicated on a scale. Height is adjustable. One revolution equals 1/32" (1mm) travel, 1 division equals .002" (0,05mm). The quill and headstock may be locked in position, which is essential when milling. The powerful permanent magnet motor drives via a poly-v-belt, yielding high torques, especially at lower speeds.

The machine comes with three collets of 15/64", 5/16" and 25/64" (6, 8 and 10mm). The solid table has a size of 10 5/8" x 3 5/32" (270 x 80mm) and is T-slotted to 15/32" x 15/64" x 13/64" (the MICROMOT norm of 12 x 6 x 5mm).

### Technical data:

|                |  |
|----------------|--|
| Speeds         | 280 - 550 - 870 - 1,200 - 1,500 - 2,200rpm |
| Table Size     | 10 5/8" x 3 5/32" (270 x 80mm)             |
| Column Size    | Ø 1 3/8" x 15 3/4" long (35 x 400mm)       |
| X-Y Travel     | 6 11/16" x 2 9/16" (170mm x 65mm)          |
| Overall Height | 20" (500mm)                                |
| Volts          | 110 - 120V AC, 60Hz                        |
| Weight         | 41 lb. (17kg)                              |

**NO 34 108**





See us on YouTube!

### California Residents Prop 65 Information

**⚠ WARNING:**

This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Important:**

For best results when milling, it is recommended to lock the headstock. This is easily done via the FF 230's lock levers.

**Note:**

Fine feed available separately as **NO 24 140**.

## ***Useful accessories for MICRO Mill FF 230***

### ***NEW*** ***Splash guard and chip collecting tray***



Made of 1.5mm (3/64") sheet steel, powder-coated. Secure stand thanks to two holes (hole centre distance 274mm, 10 13/16") for screwing to the surface (tray remains absolutely tight thanks to raised fixing points). Dimensions: L 388mm (15 11/40"), W 308mm (12 1/8"), H 24mm (15/16").

**NO 24 116**

### ***Splash guard and chip collecting tray***



Made of 1/16" (1.5mm) thick sheet steel, powder-coated. Secure stand due to drill holes for fastening to a work surface (the use of steel sleeves keeps the tray tightly sealed). 27 1/2" x 16/12" x 1 37/64" (L 700mm, W 420mm, H 40mm).

**NO 24 322**

## **Universal dividing attachment UT 250**

Worm drive for divisions through 360°. Feed adjustment by handwheel with graduated, zero-adjustable dial (1 revolution = 10°). Unit may be fixed horizontally or vertically. For compound tables with distances between T-slots of 45 - 60mm. The flange of the dividing attachment is the same size as that of the main spindle of the PD 250/E lathe, thus 3 jaw chuck (NO 24 034) and 4 jaw chuck (NO 24 036) may be mounted. Incl. faceplate Ø100mm and step clamp set of steel: Two each step blocks and clamps. With matching slot nuts, threaded rods and nuts. Packed in a wooden box.



**NO 24 046**

## **Fine Feed for Mill/Drill Head PF 230 and MICRO Milling Machine FF 230**

Easily installed. The feed may now be used via the height feed (vertical) or the fine feed in the tilted position. One revolution is equivalent to 1/16" (1.5mm) spindle travel, with 1 division = .002" (0.05mm). The graduated scale can be reset to zero.



**NO 24 140**

## **Five Piece Collet Set for PF 230 and FF 230**

Includes 1 each collet for round stock 3/32", 7/64", 1/8", 5/32" and 13/64" (2.4 - 3.0 - 3.2 - 4.0 and 5.0mm). Supplied in a wooden box and lid.



**NO 24 144**

## **Drill Chuck**

German industrial drill chuck for MICRO Mill PF 230 and FF 230 with 13/32" (10mm) capacity and 13/32" (10mm) arbor to fit the 10mm collet.

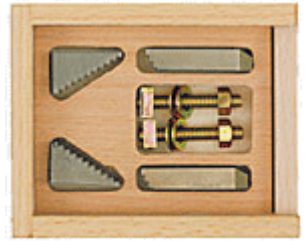
**NO 24 110**



### Step Clamp Set

Made of steel. Complete with 2 step blocks, 2 clamps, 2 nuts and 2 T-slot nuts for MICROMOT standard (29/64" x 7/16" x 5/32" / 11.5 x 11 x 4mm). For use with the lathe systems PD 230/E, KT 150 and MF 70

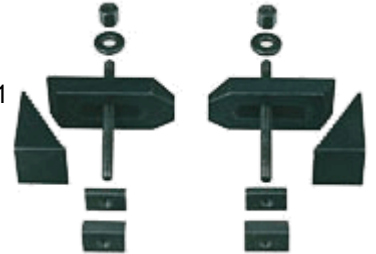
NO 24 256



### Step Clamp Set

Consists of 2 step blocks and 2 clamps, 2 nuts, 2 T-slot nuts. Secures objects to approx. 1 3/8" (35 mm) high. May be used with PD 230/E and FF 230. Supplied in wooden box.

NO 24 257



### Milling Cutter Set 5/64" - 13/64" (2 - 5mm)

HSS, all with 15/64" (6mm) shank. Cutters of Ø 5/64", 7/64", 5/32" and 13/64" (2, 3, 4 and 5mm). Double fluted. Supplied in wooden box.

NO 24 610



### Milling Cutter Set 15/64" - 13/32" (6 - 10mm)

HSS, 4 cutters Ø 15/64", 9/32", 5/16" and 13/32" (6, 7, 8 and 10mm). Four flute design. Supplied in wooden box.

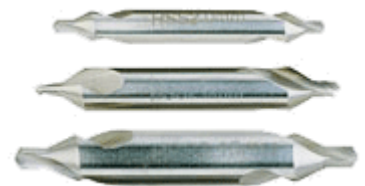
NO 24 620



### Three Piece Center Drill Set

HSS, 60°. Complete set with sizes of 2, 2.5 and 3.15mm (5/64", 3/32", 1/8"). Made from high-quality Cobalt HSS, pre-ground. Packaged in a wooden box.

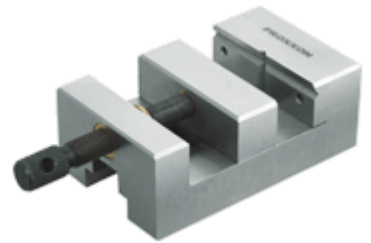
NO 24 630



## ***Precision Machine Vice***

Milled in steel. Can be used on its side and back. Width of jaws  $2 \frac{3}{8}$ " (60mm), clamping capacity  $1 \frac{2}{3}$ " (42mm). Complete with mounting bolts. Packed in a wooden box.

**NO 24 255**



## ***Precision V-Blocks***

Used to clamp various work pieces. Made from hardened steel, precision ground in pairs. Four different depths of prism incisions V, all at 90°. Size  $2" \times 1 \frac{3}{16}" \times 1 \frac{3}{16}"$  (50 x 30 x 30mm). The solid clamp and knurled knob ensure superb securing of the work piece.

**NO 24 262** 2 pieces

