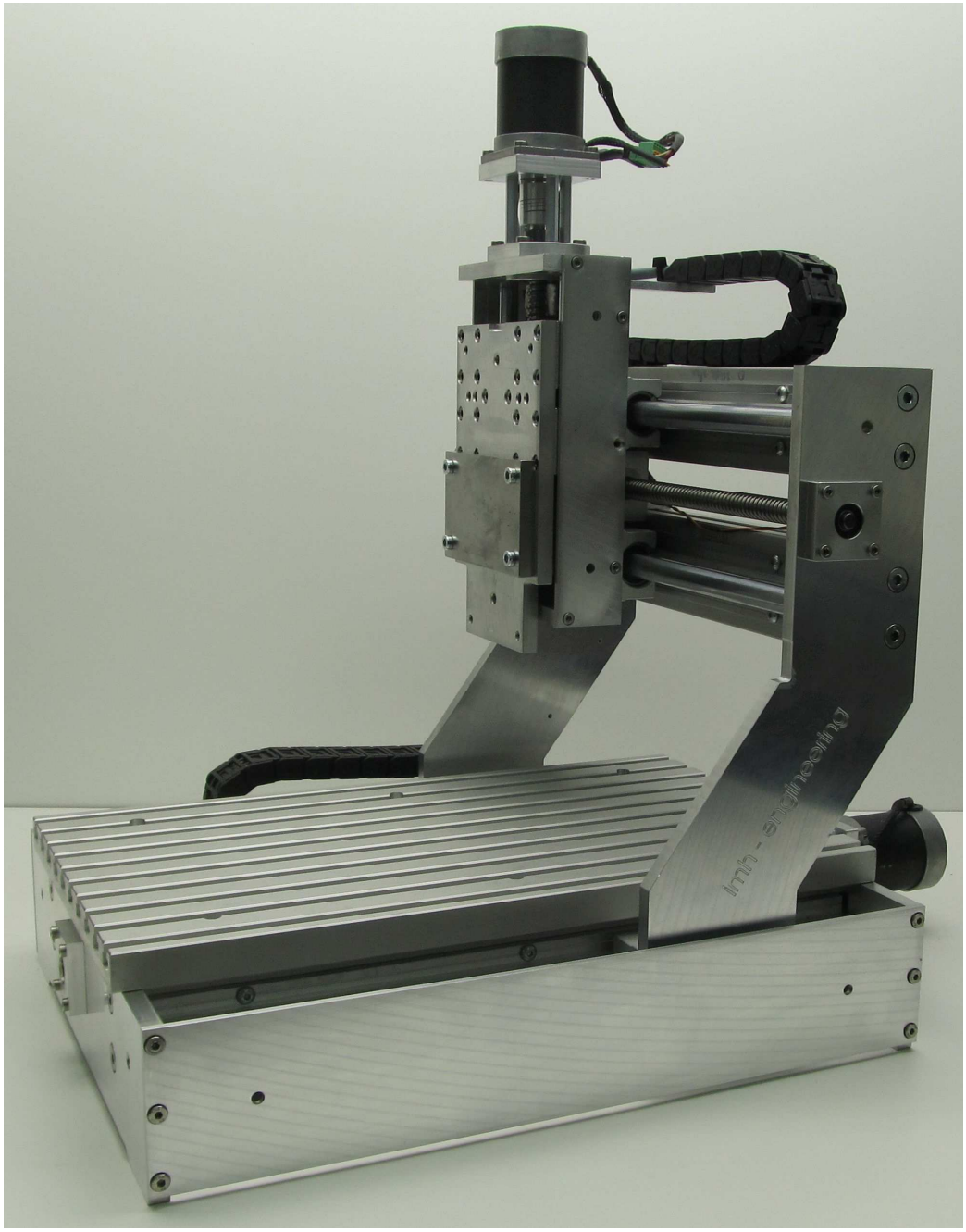
Technical Specification



General
The **DESKTOP-CNC-PM0302** 3-Axis **miniCNC-Machine** with steppermotor drives is a machine tool for **Designers, Model-Builders, CNC-Education and small series production**.

The structure of the machine is designed for machining of **non-ferrous-metals, wood and plastics in 2.5D und 3D.**

The machine is extremely well suited for **Modelmaking**, fine **Engraving works, PCB-Prototyping** or **Jewelry design.**

Spindle mount
The Z-Axis is prepared for mounting a 43mm machine flange for attaching standard Drilling- and milling spindles. Alternatively a 65mm flange for a 65mm, 0.8 kW highspeed-spindle can be attached.

Machine base
The stable however light structure with plane face milled aluminium parts and aluminium profiles represents a solid and stiff machine base with low weight and precise linear axis guides.

By its compact structure size the machine requires only a small footprint and thus can be positioned on the desktop.

Axis guides
The axis guides consist of precise, supported linear rails and free of play, low friction ball guides.

Drives
The machine is equipped with powerful stepper motors and achieves moving speeds up to 2000 mm / min. The linear movement is established by ballscrews and reaches a repeating accuracy better than 0,02mm. The positioning step resolution comes to 5µm per 800 microsteps per revolution.
All axes are equipped with 2 end position switches for homing the machine to its zero reference points.
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T-Slot plate
The machine has a precision T-slot-plate for mounting workpieces with holding clamps or for installing a precision machining vise.

Optional 4th Axis
A 4th Axis can be installed for machining of complex volume bodies.

CNC-Control
The control of the axes takes place by a stepper motor controller iCNC CSP404, which is connected to the Control-PC through an USB-port. The stepper motor controller is designed for processing of machining programs in G-code and for import of dxf-files.
The controller is prepared for connecting a handwheel (MPG) to drive the axes manually.

Technical data PM0302

- Travel length X / Y / Z 300 x 200 x 110 mm
- Mounting area table X-Y 425 x 250 mm
- massive precision T-slot-plate
- feed through height Z 115 mm
- dimensions W x D x H mm 535 x 480 x 540 (with motors)
- precise linear guides 16mm, free of play (supported rail)
- ball screw spindle drives SFU-1604 C7
- NEMA 23 stepper motors 1.9 Nm
- moving speed max. 2000 mm/min
- repeating accuracy 0,02 mm
- Step resolution 5 µm (800 micro steps per revolution)
- 2 end position switches on all axis
- workpiece material : wood, plastics, aluminium
- weight 25 kg
- EMV-Design according to EMC-directive 2004/108/EG
- conformity according to Machine-directive 2006/42/EG
- Article-number 0815-2012

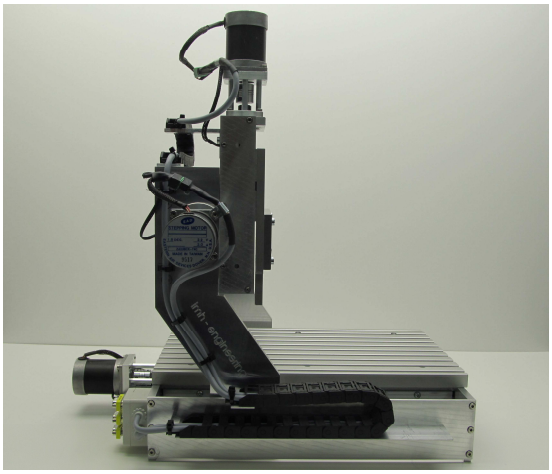
*the following options are not included in the delivery content of the machine and can be ordered separately.

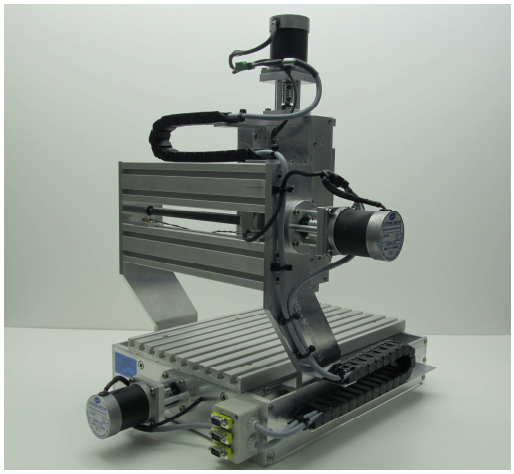
Options

- Control 3-Axis Stepper Motor Controller iCNC-CSP203
- Control 4-Axis Stepper Motor Controller iCNC-CSP204
- Control 3-Axis Stepper Motor Controller iCNC-CSP403
- Control 4-Axis Stepper Motor Controller iCNC-CSP404
- Software USB-CNC Control program for Windows XP / W7
- Handwheel (MPG) to drive the axes manually

- Spindlemotor
- 4th Rotary Axis
- Machine housing
- Pedestal

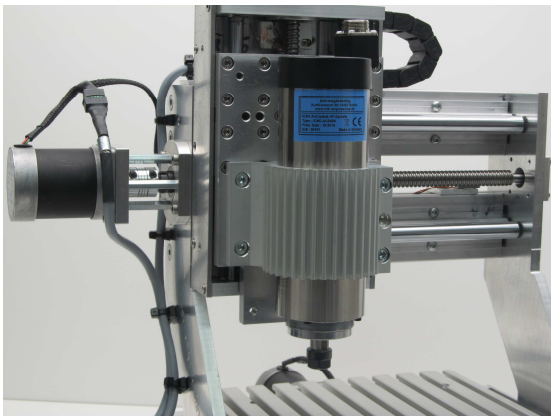
machine views



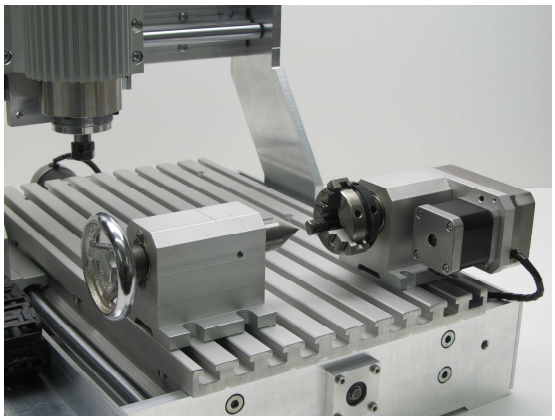


OPTIONS

Highspeed Spindle



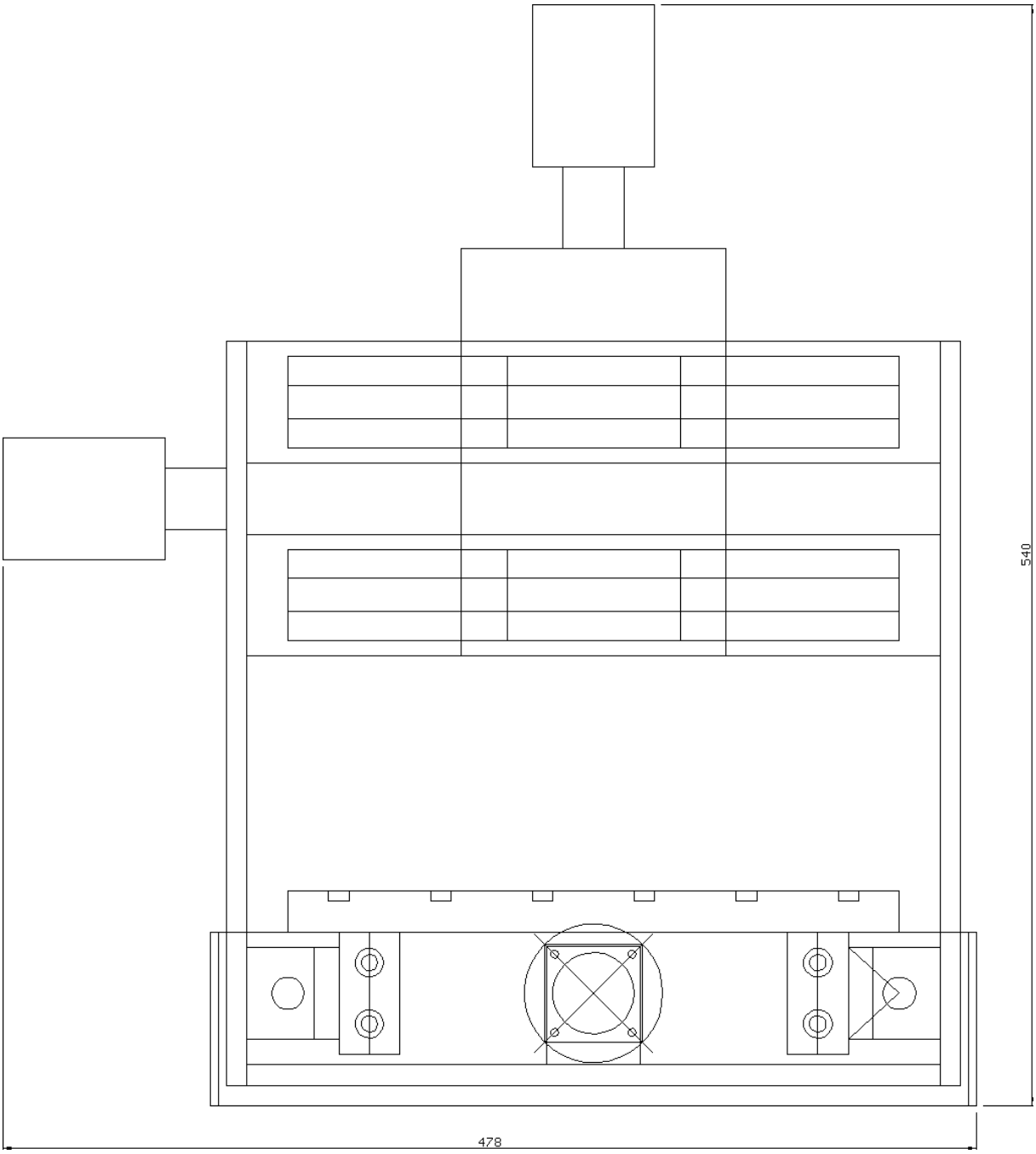
4th Rotary Axis

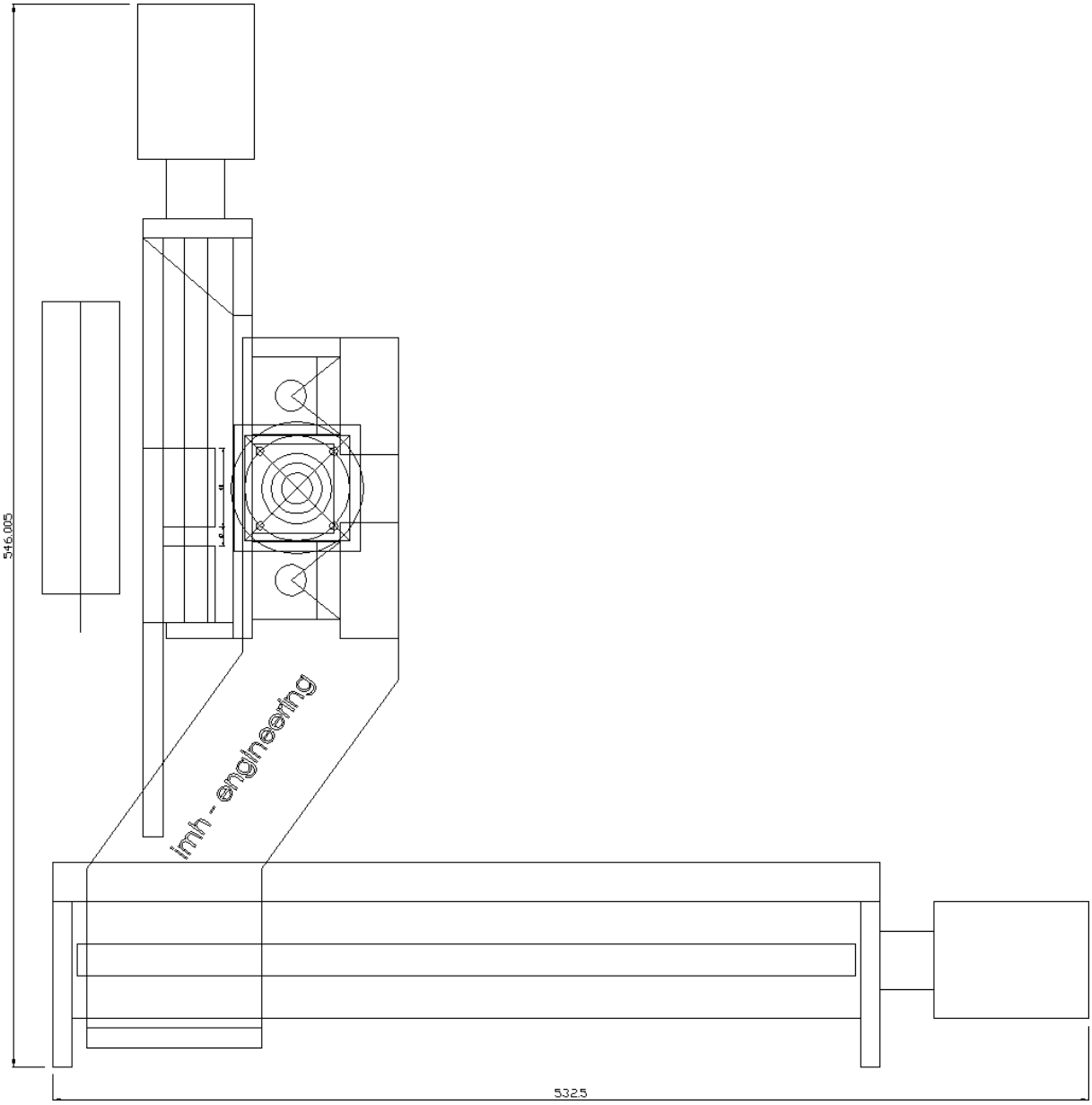


Handwheel (PMG)

Highspeed Spindle

Dimensions





*Technical changes reserved *

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