

img1510X5

**5-axis simultaneous milling machine
for high-precision production.**

The massive

- innovative steel/granite sandwich construction
- state-of-the-art control technology based on Heidenhain
- automatic tool changer with tool measurement / control
- optionally with highly dynamic linear motors or ball screw drives
- 4th / 5th axis as fork head version or swivel unit on machine bed
- RTCP, TLC, axis kinematics and clamping position compensation



IMG1510X5 | The massive

The steel/granite sandwich construction for the moving axes such as the gantry and traverse can be driven either by AC servomotors via ball screws or by linear motors. In conjunction with high-precision linear guides, it forms the basis of the solid steel/granite machine construction.

The advantages of natural stone granite in combination with high-strength light metal offer maximum rigidity with simultaneous weight savings. This is the only way to achieve the desired dynamics and high feed speeds. High-frequency spindles with up to 6.0 KW and 45,000 rpm with HSK25 / HSK32 mountings are used as milling spindles.

The 18-tool changer (expandable to 36 tools) installed outside the working area moves automatically from the protective housing to the milling spindle. With the 4th/5th axis as a fork head design and the integrated high-precision gear drive modules, almost all positions of a complex workpiece can be reached with the milling tool.

The machine is rounded off with new, state-of-the-art CNC control functions and an easy-to-operate user interface. These allow 5-axis simultaneous machining via the RTCP function (Rotation Tool Center Point). The control and operating components from Heidenhain include a touchscreen monitor and a convenient manual control panel. Different workpiece clamping systems can be mounted on the universal granite table using steel threaded bushes with a 150x150 mm grid.

Features

- Metal/granite sandwich construction
- Rotating and swiveling cable head (4th and 5th axis)
- Highly dynamic linear motors in X and Y axes
- 18-position tool changer expandable to 36 tools
- Heidenhain® TNC640 high-end control system
- Tool measurement by toolsetter or laser
- 3D edge finder
- Modern control panel

Options

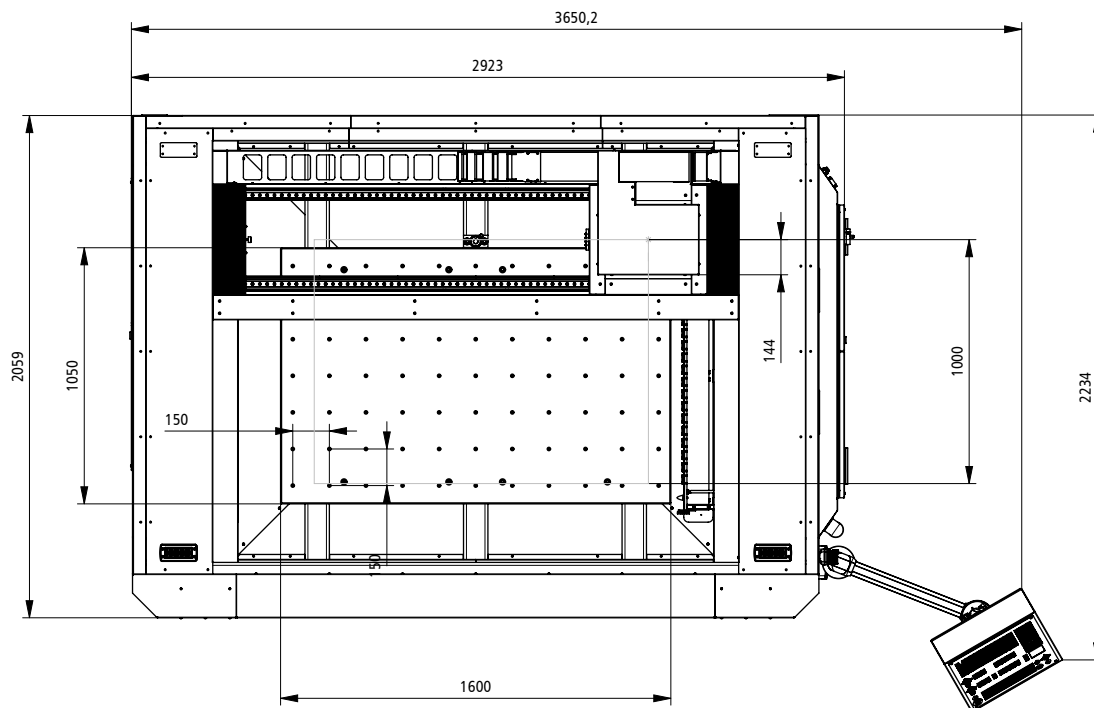
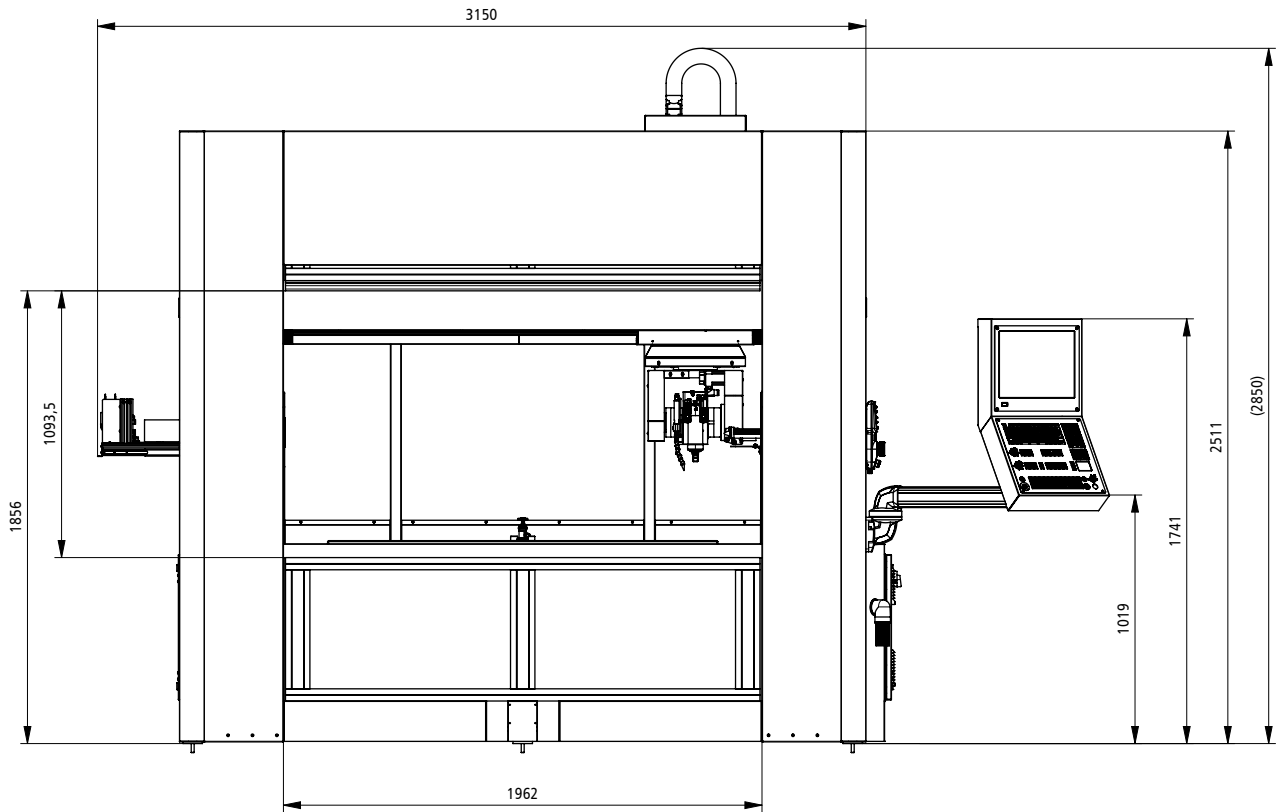
- Water cooling
- Heidenhain® LMT TT160 optional laser measurement
- 3D measuring probe
- Hand control unit
- Minimum quantity cooling
- Tool holders

Technical data

	IMG1010X5	IMG1510X5	IMG2010X5	IMG2015X5
Travel ranges (3-axle) X/Y/Z [mm]*	1000/1000/350	1500/1000/350	2000/1000/350	2000/1500/350
Rotating/swivel clevis A/C	±115°/±250°			
Travel speeds X/Y/Z	8m/min. Spindle drive, 30m/min. linear motors			
Z-diffuser	450 mm			
Drive motors	AC servo motors with precision ball screws or linear motors			
Milling spindles	High frequency spindle up to 6 kW / 45,000 rpm			
Resolution measuring system	0,001 mm			
Dimensions WxDxH [mm]	2300 x 1950 x 2000	2800 x 1950 x 2200	3300 x 1950 x 2200	2800 x 2450 x 2200
Control	Heidenhain®			
Software	Heidenhain®			
Operation	Heidenhain® operating unit with touchscreen, operating buttons, keyboard and handwheel			
Part No.	on request	282015 SDU 8300	on request	on request

*without installed components on the axes.

img1510XS | Dimensional drawing [dimensions in mm]



img1510XS | Areas of application

For a wide range of applications, we offer various workpiece clamping systems that can be attached to the universal granite table using steel threaded bushes with a grid of 150x150 mm. Alternatively, a T-slotted plate can also be used.

The machine is also equipped with the latest CNC control functions and has a user-friendly interface that enables 5-axis simultaneous machining via the RTCP (Rotation Tool Center Point) function. The control and operating components from Heidenhain include a touchscreen monitor.

Typical materials

- graphite
- ceramics
- plastics such as PMMA/composites
- copper
- special materials

Application areas

- Medical technology
- Precision engineering
- Micromachining
- Mold and prototype construction
- Dental technology
- Jewelry industry



The 18-position tool changer, which is installed outside the working area, moves automatically from its protective housing to the milling spindle.

With the 4th / 5th axis in the form of a fork head and the built-in high-precision gear drive modules, you can reach pretty much all positions of a complicated workpiece with your milling tool. For the milling spindles, we use high-frequency spindles with up to 6.0 KW and 45,000 rpm with HSK25 mounting.

