



STANDARDIZED NODES MACHINING MODULE 3D-01 ATC

The "3D-01 ATC" machining module is a multispindle horizontal machining center, particularly designed for the serial production of steel, cast iron and aluminum alloy workpieces. The module may simultaneously machine as many equal workpieces as there are spindles. The module may be used as an independent machine or as part of the production line.

Description of basic version

Module consists of the following basic groups: base, three axes work unit 3D-01, headstock, tool magazine, turning table, cabin, hydraulic, lubricating and cooling unit, electrical equipment. The module is fitted with a system for automatic tool changing with chain magazine. According to specific technological use, it may be supplied with tool clamps, workpiece conveyor, chip and water management system, work area air extraction system etc. Actuators and controls Siemens, linear gauge rulers Heidenhain.

Alternative version

- other number of spindles 4 (2 or 3)
- headstock with electrical spindles (max. speed 15000 min⁻¹)
- other travel along X axis
- other number of positions of turning table
- tilting table (A axis)
- other number of spots in the tool magazine

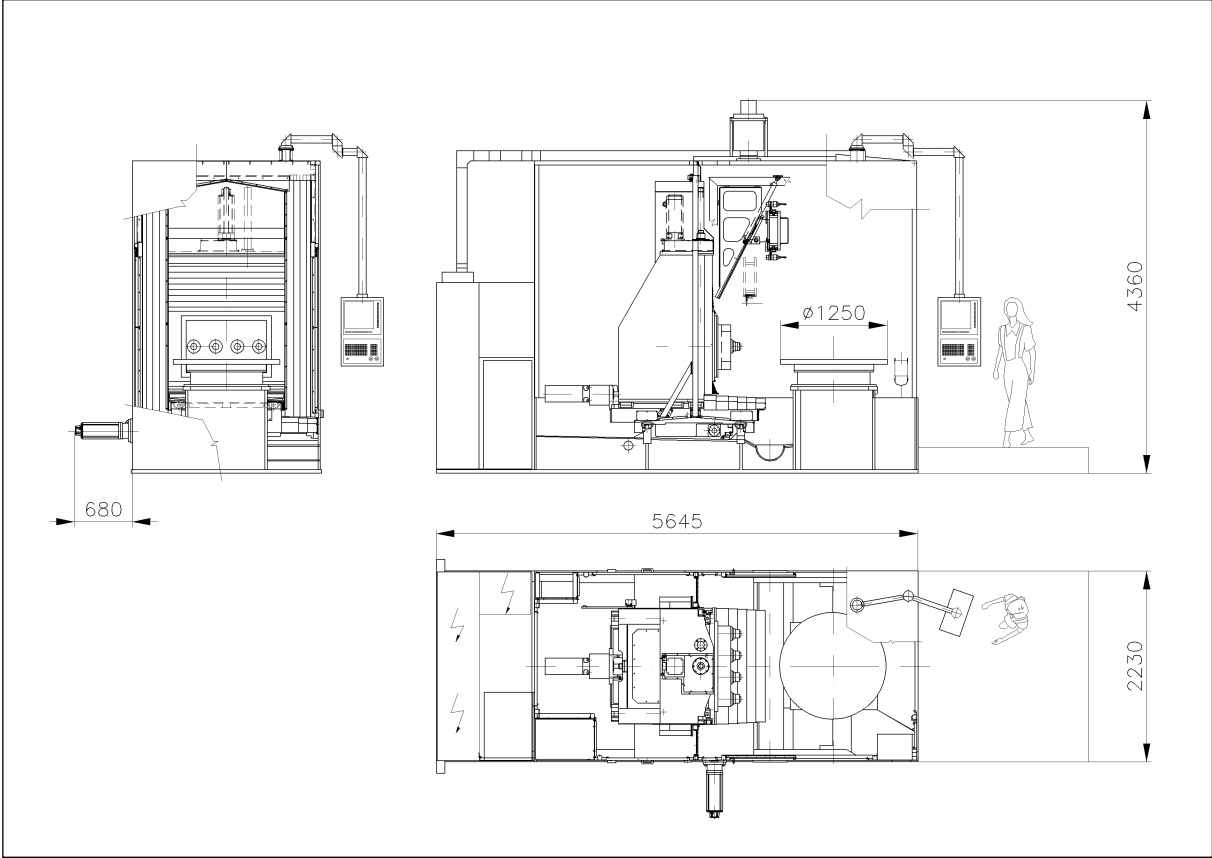
Technical parameters of basic version

Travel of X axis	300 mm (alt. more)
Travel of Y and Z axes	500 mm
Maximum travel of X,Y, Z axes	30 m.min ⁻¹
Axis force of X,Y, Z axes	15.5 kN (S1)
Number of spindles	4 (alt. 2 or 3)
Spindle distance	254 mm
Maximum speed of spindles	4500 (alt. 6000) min ⁻¹
Diameter of spindles in bearings	70 mm
Spindle ends	HSK - A63
Inner flow of cutting fluid	p _{MAX} = 70 bar
Maximum spindle output	13,5/19 kW (S1/S6-40%)
Maximum spindle torque up to n=1500 min ⁻¹	85/120 Nm (S1/S6-40%)
Number of slots in tool magazine	32 (8 for one spindle)
Maximum tool diameter	63 mm (alt. 100 mm)
Maximum tool length	200 mm
Maximum tool weight	6 kg (alt. more)
Tool changing time (tool - tool)	approx. 8 sec
Bearing capacity of turning table	5,000 kg
Number of table positions	2 (±180°) - alt. other number of positions
Cycle time of table turning by 180°	max. 4 s
Weight of module with turning table without clamps	approx. 22 tons

- *The detailed data is not binding with respect to ongoing development; the basic version can be adapted according to customer requirements.*

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basic version with turning table and four-spindle headstock



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