Vertical Machining Centers

X.mill T 1000 SI

SKU : 181440

The X.mill T series is the newest generation of our vertical machining centers, with modern high-performance compact CNC controls. Whether equipped with Siemens or Fanuc controls, this series offers an excellent price-performance ratio. Wide range of accessories for easy adaptation to meet your specific requirements. Using state-of-the-art FEM Analysis Software, we were able to achieve the highest machine frame rigidity in this machine class

- Optimized frame design using FEM analysis
- Extra wide Y-shaped column for increased rigidity
- Ø32 mm C3 preloaded ball screws for high accuracy
- Available with Siemens or Fanuc control
- High customization and automation possibilities

TECHNICAL SPECS

WORKING AREA

Table dimensions	1100 mm x 550 mm
Table load capacity	800 kg
Spindle nose-to-table surface distance	150 mm - 700 mm
Spindle center-to-stand distance	520 mm
T-slot (width x spacing)	18 mm x 100 mm
Number of T-slots	5 positions

TRAVELS

Travel X-axis	1000 mm
Travel Y-axis	550 mm
Travel Z-axis	550 mm

HEADSTOCK

Spindle speed	10000 1/min
Spindle mount	SK 40 ISO 7388-1 (DIN 69871)
Torque, constant	63.7 Nm

RAPID FEED

Rapid feed X-, Y-, Z- axis	36000 mm/min

FEED

Work feed X / Y / Z axis	10 m/min x 10 m/min

TOOLING

Number of tool stations	20 positions
Tool Ø	100 (130) mm
Tool weight max.	8 kg
Tool-change time tool/tool	10 sec

ACCURACIES

Positioning accuracies	± 0,005 mm
Repeatabilities	± 0,003 mm

DRIVE CAPACITY

Motor rating main drive	9 kW
Motor rating X-axis	2.3 kW
Motor rating Y-axis	2.3 kW
Motor rating Z-axis	3.3 kW
Total power consumption	15 kVA - 20 kVA

CONTROL

Control	Siemens

MEASURES AND WEIGHTS

Overall dimensions (length x width x height)	2.62 m x 2.2 m x 2.7 m
Weight	4600 kg

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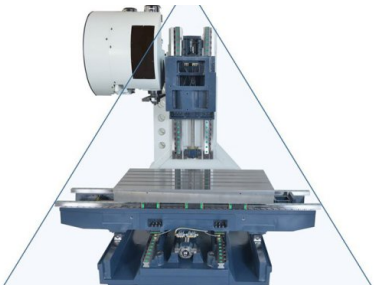
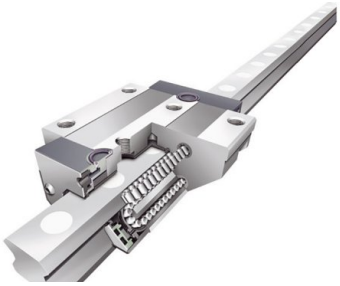
Solid machine table with 5 slots

Cast iron body with large span



Delta column design for excellent cutting stability



High quality roller guides

Control Siemens Sinumerik 828D

PRODUCT DETAILS

- The new X.mill series is ideally suited for streamlined and cost-effective series production
- The entire series is optionally available with modern compact CNC controls from Siemens or Fanuc and thus offers the right control solution for many companies.

Machine Design

- The X.mill series machine frame was developed using the most advanced FEM analysis software on the market
- The thorough analysis of the entire machine bed construction and wide column base resulted in a design that is optimized for all load conditions
- All axes move on premium, fully enclosed linear guideways and precision ball screws and are driven by dynamic servo-motors

Spindle

- The main spindle is supported by multiple bearings to ensure excellent absorption and dissipation of forces during machining
- The advanced design of our spindles ensure low heat accumulation under load
- Large pre-loaded bearings ensure radial stability during heavy-duty machining operations
- High-temperature lubricants ensure optimum lubrication at any operating temperature and a long tool life

Tool Changer

- The robust armless 20-station tool changer brings flexibility to everyday production operations
- An optional 30-station tool changer with dual-arm gripper is also available

Handling

- The totally enclosed workspace features a large door and side doors for easy access, safety and cleanliness
- An electronic hand-wheel simplifies machine set-up
- Electrical equipment is divided into separate control cabinets for high and low voltage systems, which results in a significant reduction of heat accumulation and noise
- The automatic central lubrication system ensures proper lubrication of all lube points

CONTROLS & SOFTWARE

Siemens 828D control

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SINUMERIK 828 D – The workhorse in the compact class of CNCs

Highlights

- Compact, robust, maintenance-free control panel-based CNC
- Comfortable program and parameter input via QWERTY keyboard
- Maximum machining precision
- Intelligent kinematic transformations for machining of cylindrical parts, and for angled workpiece levels
- SINUMERIK MDynamics with the new Advanced Surface feature: for perfect part surfaces and shortest machining times in mold making applications
- ProgramGUIDE: fastest machining time and maximum flexibility for large series productions
- Unique spectrum of technology cycles - from milling contours with residual material recognition to process measurements
- Animated Elements: unique operation and programming assistance with animated sequences
- Modern data transfer options via USB stick, CF card and network (Ethernet)

CNC hardware

- Control-panel based high-performance CNC Control
- Robust front control panel made of magnesium die-casting
- Integreated full-size QWERTY keyboard
- Maintenance-free design (no buffer battery required)

CNC performance data and functions

- Dynamic feed-forward control
- Linear, circular and helical interpolation
- Tapping without compensating chuck, plus thread cutting
- Toggle between inch and metric units
- FRAME concept for individual coordinate transformations, rotations, scaling and mirroring
- 100 adjustable zero offsets
- Synchronous actions and quick help function output

CNC technology cycles

- Large selection of drilling cycles
- Large selection of milling cycles for standard geometry
- Large selection of position patterns for drilling and milling operations
- High-speed settings for mold making applications
- Geometry calculator for free contour input
- Machining cycle for contour pockets / contour spigots with isolated contours

Graphic features

- Graphical online help system, similar to PC system
- Graphical CNC simulation with level display

CNC tool management

- Display of tool and magazine data on one screen
- Tool management with plain-text tool names
- Loading/unloading feature for easy magazine assignment
- Tool management with tool life monitoring
- 10.4“ TFT color monitor

STANDARD EQUIPMENT

Siemens 828D control
Shield-type 20-station tool changer
Screw-type chip conveyor with bucket
Ridgid tapping
Autom. power off
Manual coolant spray gun
Coolant system
Spindle air system
Heat Exchanger for electric control cabinet
Fully enclosed work space (without top cover)
Electronic hand-wheel
USB port

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Automatic central lubrication
Work lamp
3-color signal lamp
Operating tools
Leveling bolts and blocks
Preparation for Renishaw TS 27 R

OPTIONAL EQUIPMENT

- Top cover for X.Mill/Vector 650-1000, SKU : 252819
- Renishaw OMP 40 Workpiece Measuring, SKU : 252820
- Connection for 4th axis (wiring only and axis chart), SKU : 253019
- CTS 30 bar system with dual filter system, SKU : 253369
- Siemens Function: P17: Shopmill, SKU : 253377
- Siemens Function: P25: 3D Simulation, SKU : 253378
- Siemens Function: P13: Residual Material Detection, SKU : 253379
- Siemens Function: P22: Simultaneous Recording, SKU : 253380
- Disc Type Oil Skimmer, SKU : 253383
- Chip Wash System, SKU : 253384
- Renishaw Tool Setter TS27R, SKU : 253386
- Arm Type BT-40/SK 40 24-Tool-Changer, SKU : 253436
- Measuring Cycles, SKU : 253438
- Spindle Oil Cooler, SKU : 253440
- Renishaw OTS wireless tool setter (OTS), SKU : 253598
- Ø125mm 4th axis (4th axis, servo motor, driver, air brakes)(Si), SKU : 253604
- Ø170mm 4th axis (4th axis, servo motor, driver, air brakes)(Si), SKU : 253605
- Ø210mm 4th axis (4th axis, servo motor, driver, air brakes)(Si), SKU : 253606
- Ø250mm 4th axis (4th axis, servo motor, driver, air brakes)(Si), SKU : 253607
- Spindle speed upgrade to 12.000 rpm direct drive no CTS, SKU : 253610
- Arm type ATC upgrade from 24 to 30 tools (BT40) for X.Mill T, SKU : 253611
- preparation for Renishaw OMP40, SKU : 253613
- manual tailstock ST-125T for rotary table for X.mill, SKU : 253617
- manual tailstock ST-170T for rotary table for X.mill, SKU : 253618
- manual tailstock ST-255T for rotary table for X.mill, SKU : 253620
- manual 5'' chuck for rotary table for X.mill, SKU : 253621
- manual 6'' chuck for rotary table for X.mill, SKU : 253622
- manual 9'' chuck for rotary table for X.mill, SKU : 253624
- Z axis travel upgrade from 550 to 800 mm for X.mill, SKU : 253625
- Z axis travel upgrade from 550 to 800 mm for X.mill, SKU : 253626
- CTS 20 bar system with dual filter system, SKU : 253627
- Upgrade from 10.4” to 15” touch screen (for PPU260 or higher), SKU : 253674
- Renishaw OMP 60 workpiece measuring system (BT40), SKU : 253681
- Spindle speed upgrade to 12000 rpm, belt-type, SKU : 253781
- Air through spindle for Vector, SKU : 253782
- Upgrade from 828D PPU260 to 840DSL IPC447E 10.4" for Vector, SKU : 253835
- Upgrade from worm-gear to chain-type chip conveyor for X.Mill T 1000, SKU : 253837
- Upgrade Spindle Taper from SK40 to BBT 40, SKU : 253951
- 200 mm 4th and 5th axis for X.Mill T (Si), SKU : 254175

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