Vertical Machining Centers
X.mill T 800 SI

SKU : 181446

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	900 mm x 550 mm
Table load capacity	800 kg
Spindle nose-to-table surface distance	110 mm - 660 mm
Spindle center-to-stand distance	520 mm
Number of T-slots	5 positions
T-slot (width x spacing)	18 mm x 80 mm

TRAVELS

Travel X-axis	800 mm
Travel Y-axis	520 mm
Travel Z-axis	550 mm

HEADSTOCK

Spindle speed	10000 1/min
Spindle mount	SK 40 ISO 7388-1 (DIN 69871)
Torque, constant	45 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
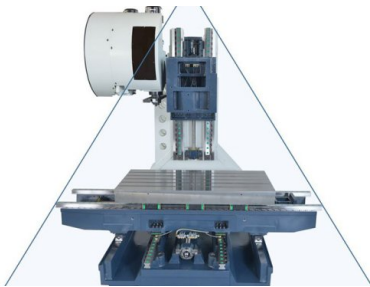
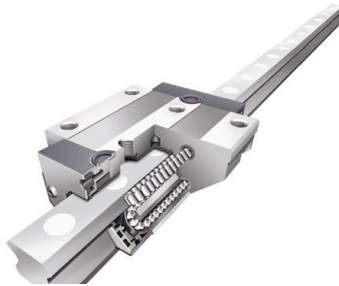|	
Overall dimensions (length x width x height)	2.47 m x 2.2 m x 2.52 m
Weight	4400 kg

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

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
USB port
Ridgid tapping
Heat Exchanger for electric control cabinet
Work lamp
Automatic central lubrication
Coolant system
Manual coolant spray gun
Preparation for Renishaw TS 27 R
Autom. power off
Electronic hand-wheel

Screw-type chip conveyor with bucket
Spindle air system
Fully enclosed work space (without top cover)
3-color signal lamp
Operating tools
Leveling bolts and blocks

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 10.000 to 12.000 rpm (belt type), SKU : 253609
- 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
- Upgrade from screw type to chain type chip conveyor, SKU : 253612
- 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 : 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
- Air through spindle for Vector, SKU : 253782
- Upgrade from 828D PPU260 to 840DSL IPC447E 10.4" for Vector, SKU : 253835
- Upgrade Spindle Taper from SK40 to BBT 40, SKU : 253951