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	35 in x 22 in
Table load capacity	1760 lbs
Spindle nose-to-table surface distance	4 in - 26 in
Spindle center-to-stand distance	20 in
Number of T-slots	5 positions
T-slot (width x spacing)	0.71 in x 3.15 in

TRAVELS

Travel X-axis	31.5 in
Travel Y-axis	20 in
Travel Z-axis	22 in

HEADSTOCK

Spindle speed	10000 rpm
Spindle mount	SK 40 ISO 7388-1 (DIN 69871)
Torque, constant	33 ft.lb.

RAPID FEED

Rapid feed X-, Y-, Z- axis	1417 in/min

FEED

Work feed X / Y / Z axis	33 fpm x 33 fpm

TOOL HEAD

Number of tool stations	20 positions
Tool Ø	100 (130) in
Tool weight max.	18 lbs
Tool-change time tool/tool	10 sec

ACCURACIES

Positioning accuracies	± 0.0002" in
Repeatabilities	± 0.00012" in

DRIVE CAPACITY

Motor rating main drive	12.1 Hp
Motor rating X-axis	3.1 Hp
Motor rating Y-axis	3.1 Hp
Motor rating Z-axis	4.43 Hp
Total power consumption	15 kVA - 20 kVA

CONTROL

Control	Siemens

MEASURES AND WEIGHTS

Overall dimensions (length x width x height)	98 in x 87 in x 100 in
Weight	9680 lbs

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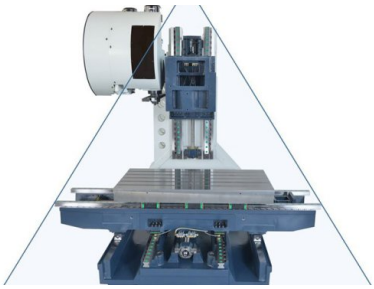
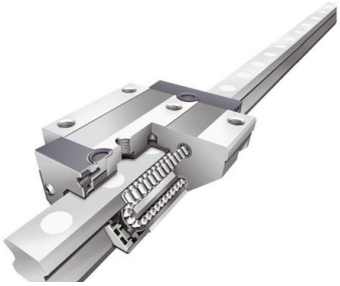
Solid machine table with 5 slots

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 preloaded 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
USB port
Rigid tapping
Heat exchanger for electric control cabinet
Work lamp
Automatic central lubrication
Coolant system
Manual coolant spray gun
Prepared for Renishaw TS 27
Autom. Power-Off
Electronic hand-wheel

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

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
- Coolant flow through spindle, 30 bar, with 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: Simulataneous Recording, SKU : 253380
- Oil skimmer, SKU : 253383
- Chip flush-out system, SKU : 253384
- Renishaw TS27R tool measuring system, SKU : 253386
- Dual-arm gripper with 24 tool stations, BT40, SKU : 253436
- Siemens 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 without CTS, SKU : 253610
- Upgrade ATC from 24 to 30 tools (BT40) for X.Mill T, SKU : 253611
- Upgrade: from worm-gear chip conveyor to chain-drive chip conveyor, SKU : 253612
- Prepared for Renishaw OMP40, SKU : 253613
- Manual tailstock ST-125T for rotary table, SKU : 253617
- Manual tailstock ST-170T for rotary table, SKU : 253618
- Manual tailstock ST-255T for rotary table, SKU : 253620
- Manual chuck, 5'', for rotary table, SKU : 253621
- Manual chuck, 6'', for rotary table, SKU : 253622
- Manual chuck, 9'', for rotary table, SKU : 253624
- Preparatioon for CTS Setup, SKU : 253626
- Coolant flow through spindle, 290 psi, with filter system, SKU : 253627
- Upgrade from 10.4" to 15" Touchscreen (Si) for Vector, 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
- Spindle upgrade from ST40 to BBT40 for X.Mill/Vector 650-1000, SKU : 253951

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