

## X.mill 5X 1000

5-axis machining brings competitive advantages



- Available with Siemens, Fanuc, or Heidenhain control
- Main motor rating up to 15 HP (Fanuc)
- Rotary swivel table with 7.9" table diameter
- BT 40 Spindle with up to 10,000 rpm

- The new X.mill series with rotary swivel table is the perfect tool for streamlined and cost-effective multi-axis machining
- A 4th and 5th machining axis brings additional competitive advantages due to shorter cycle times, better surface grades and dimensional stability
- The entire series is available with either a Siemens Fanuc or Heidenhain control, so users can select the optimum control for their needs.

### Machine Design

- The X.mill series machine frame was developed using the most advanced FEM analysis software on the market.
- All axes move on premium linear guideways and precision ball screws with rigid covers to protect them from chips and coolant splashes

### Rotary Swivel Table

- A 4th and 5th machining axis complete the assembled rotary swivel table that features 200 mm diameter and a large swivel range
- The expansion by one rotary and swivel axis saves the operator steps and opens new possibilities for the cost-effective production of complex parts
- 3+2 axis milling brings the advantage that the application of CAM software and the possible cutting strategies conform to those of 3-axis programming, resulting in simplified programming and significantly reduced training requirements
- The compact design and high rigidity of the moving axes ensure long tool life and excellent surface quality

## Spindle

- The advanced design of our spindles ensure low heat accumulation under load
- Large preloaded bearings ensure radial stability during heavy-duty machining operations

## Tool changer

- The quick tool changer with dual-arm gripper and 24 stations provides plenty of capacity for every-day production operations

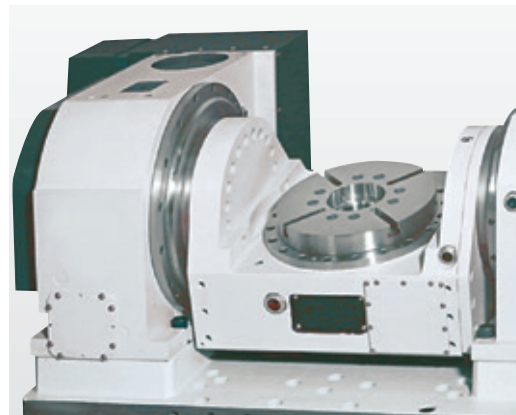
## Specifications

### X.mill 5X 1000 SI

Working Area		
Table dimensions	in	43x22
Table load capacity	lbs	1,760
Center height, vertical	in	10
Spindle axis-to-table surface distance	in	5.91 - 27.56
Spindle axis-to-table surface distance with rotating swivel table	in	1.57 - 25.2
Spindle center-to-stand distance	in	20
Number of T-slots	positions	5
T-slot (width x spacing)	in	0.71x3.94
Travels		
Travel X-axis	in	39.4
Travel X-axis with rotating swivel table	in	8.3
Travel Y-axis	in	22
Travel Y-axis with rotating swivel table	in	21.7
Travel Z-axis	in	31
Travel Z-axis with rotating swivel table	in	23.6
Headstock		
Spindle speed	rpm	10,000
Spindle mount		BT 40
Torque, constant	ft.lb.	33
Rapid Feed		
Rapid feed X-, Y-, Z- axis	in/min	1,417
Feed		
Work feed X / Y / Z axis	fpm	33x33x33
Tool Head		
Number of tool stations	positions	24
Tool Ø	in	100 (130)
Tool weight max.	lbs	18
Tool-changing time chip/chip	sec	3.9
Tool-change time tool/tool	sec	1.8
Rotary Swivel Table		
Table diameter	in	8
Overall height	in	14.76
Bore	in	1.38
Increment min.	deg	0.001
Swivel range	deg	-15 - 115
Workpiece weight -15 to 30 degrees	lbs	220
Workpiece weight 31 to 115 degrees	lbs	110
Drive Capacity		
Motor rating main drive	Hp	12.1
Motor rating X-axis	Hp	3.1
Motor rating for Y-axis drive	Hp	3.1
Motor rating Z-axis	Hp	3.08
Measures and Weights		
Overall dimensions (length x width x height)	in	104x87x107
Weight	lbs	10,120
Part No.		181405

## Equipment

- The totally enclosed workspace features a large door and side doors for easy access, safety and cleanliness
- 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
- An electronic hand-wheel simplifies machine set-up
- The automatic central lubrication system ensures proper lubrication of all lube points



Rotary swivel table with a table diameter of 8 inches

## Standard Equipment

**Siemens 828D control**, BT40 24-station tool changer with dual-arm gripper, screw-type chip conveyor with bucket, rigid tapping, remote service for Siemens, 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, RS-232 and RJ45 card interface, USB port, automatic central lubrication, work lamp, 3-color signal lamp, tool box including tools, alignment bolts and alignment plates, 4th and 5th axis Ø7.9" rotary table

Options	Part No.
• Upgrade Spindle Taper from BT40 to SK40	257404
• Upgrade: from BT40 spindle to HSK63 spindle	253372
• Spindle speed upgrade 10,000 to 12,000 rpm (belt type)	253609

For additional options for this machine, visit our website.

**For complete information on the X.mill 5X 1000 with FANUC Oi MF (5) and Heidenhain TNC 620 controls, please visit:**  
[www.knuth-usa.com](http://www.knuth-usa.com)