

# Mill Tap Center

Vertical Machining Centers



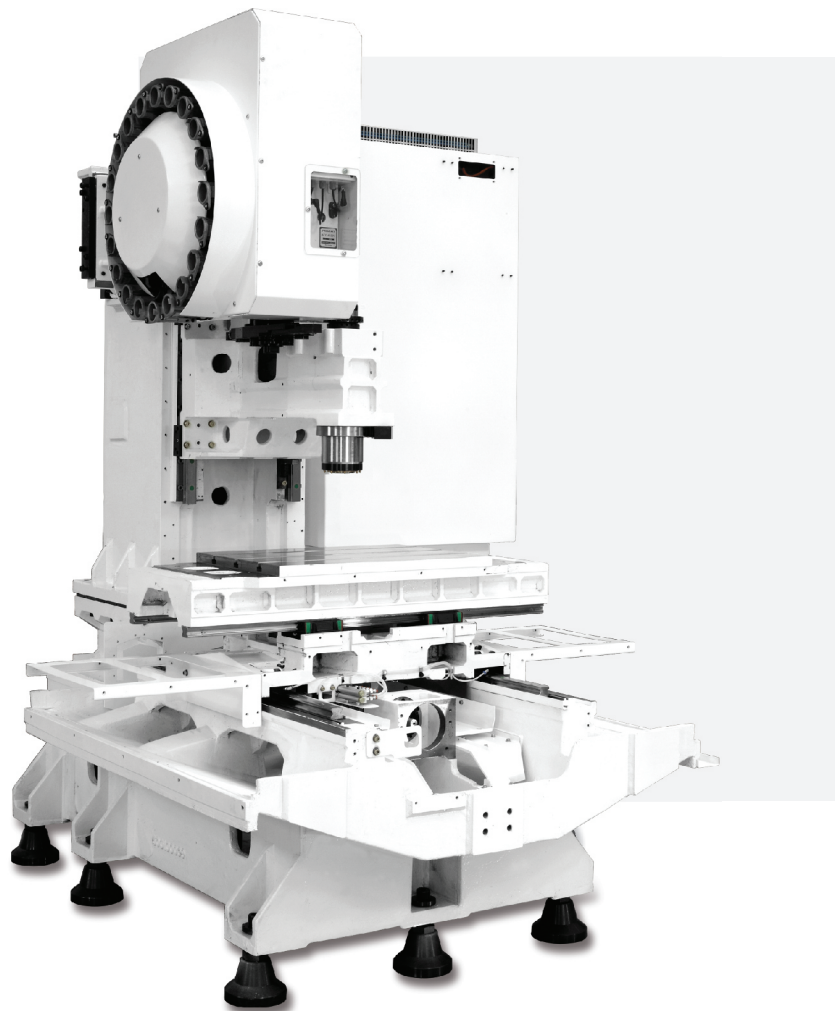
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## OVERVIEW

Mill Tap Centers have been designed and developed with the capability to deliver high speed, high performance and high productivity requirement of industries seeking performance for multiple tapping holes. Better acceleration and deceleration rates in axis and spindle drive along with faster tool change and efficient chip removal system marginally saving non-cutting time places the machine efficiently in 3 & 4 axis machine segment. Entire structure has been designed and tested by stringent FEM analysis for optimum performance under practical working conditions.



## 3-POINT LEVELING

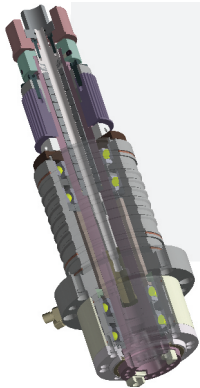


A unique system that allows machine to be installed or relocated quickly and easily and also avoids twisting effect for longer machine life.



## HIGH PRODUCTIVITY

Non-cutting time is marginally reduced by enabling various enhanced functions in axis, spindle, ATC apart from other special features added to this series. Mill Tap Centers are capable to work continuously at the rapid traverse rate of 40 m/min on all 3-Axis with better acceleration rates during moments between various position of holes with higher accuracy. This series is capable to work with 4th axis rotary table with production system and hydraulic fixtures for continuous multi-face machining, which drastically reducing non-cutting time.



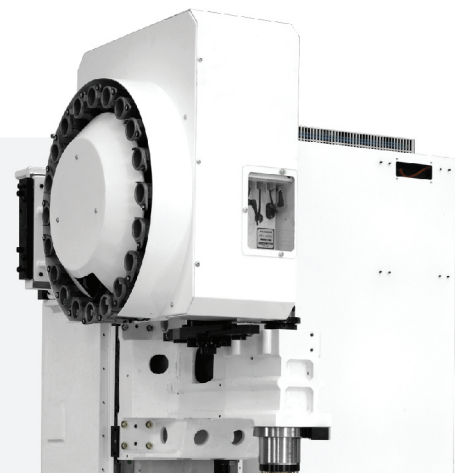
### HIGH SPEED SPINDLE

The BT 30 spindle of the machine is designed and manufactured in-house by JYOTI. For high speed and stability during heavy cutting loads, angular contact bearings are used with life lubrication. These spindles are manufactured in our dedicated temperature controlled facility and then finally balanced and extensively tested for performance.

High pressure coolant through spindle (CTS) can also be opted for components with deep hole drills for better tool life.

### AUTOMATIC TOOL CHANGER

Mill Tap Center machines have side mounted Twin-arm ATC. Such tool changer has better characteristic in terms of interference to working area with a fast tool change time, which are designed for these machine series to achieve tool change time of 1.6 seconds and reduce non-cutting time.



### EASY CHIP EVACUATION

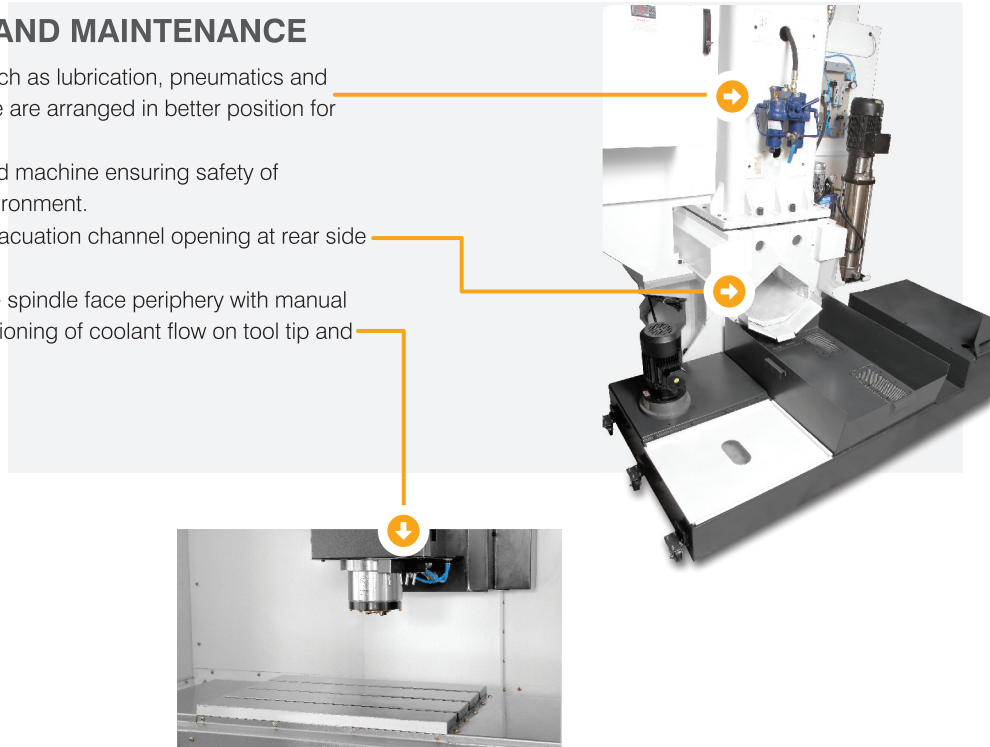
Efficient rear side chip disposal system due to peculiar design of center trough base structure enables better operator friendliness by eliminating chip cleanup time.

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## EASY OPERATING AND MAINTENANCE

- Necessary check points such as lubrication, pneumatics and other for other maintenance are arranged in better position for ease of operator.
- Complete safeguard around machine ensuring safety of machine, operator and environment.
- Easy Chip Removal with evacuation channel opening at rear side with chip collector system.
- Coolant nozzles around the spindle face periphery with manual adjustment for proper positioning of coolant flow on tool tip and job during machining.

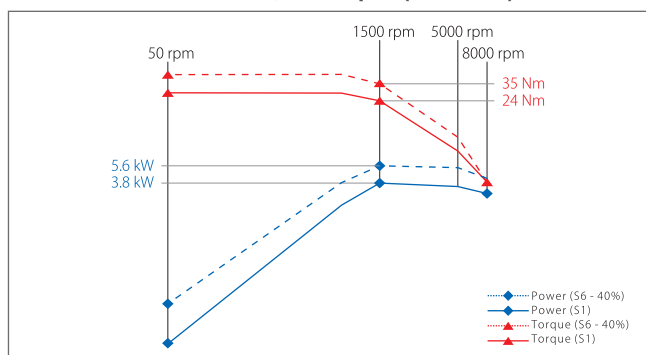


## PRODUCTIVITY IMPROVING OPTIONS

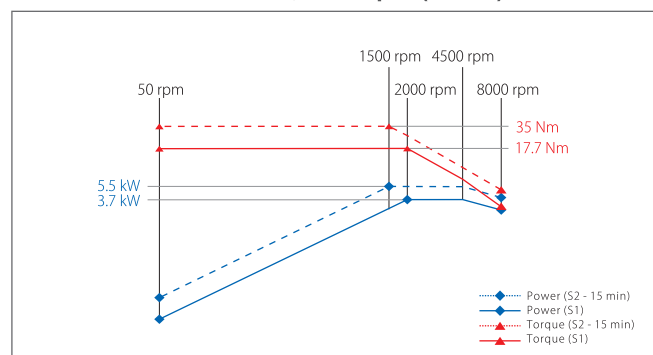
These series can be efficiently interfaced with variety of productivity improvement options such as rotary table with production system, hydraulic fixture, coolant through spindle, tool probe, job probe, linear glass scale and other options to achieve better surface finishing, reduced cycle time and improved process capabilities.

## POWER TORQUE DIAGRAM

5.6 / 3.8 kW, 8000 rpm (Siemens)



5.5 / 3.7 kW, 8000 rpm (Fanuc)





## TECHNICAL SPECIFICATION

		Mill Tap 10	Mill Tap 20
<b>Table</b>			
Table Size	mm	660 X 360	660 X 460
T-Slot-Dimension	mm	3 X 14 X 125	3 X 14 X 125
Dist. From Floor to Table	mm	1020	1020
Max. Load on Table	Kgf	250	250
<b>Capacity</b>			
X-Axis Travel	mm	510	510
Y-Axis Travel	mm	410	510
Z-Axis Travel	mm	510	510
Dist. From Spindle Face to Table (Min.-Max.)	mm	100 - 610	100 - 610
<b>Feed</b>			
Rapid Traverse ( X, Y & Z Axis)	m/min	40	40
Cutting Feed	m/min	10	10
<b>Main Spindle</b>			
Spindle Motor Speed	rpm	8000	8000
Spindle Motor Power - Fanuc	kW	5.5 / 3.7	5.5 / 3.7
Spindle Motor Power - Siemens	kW	5.6 / 3.8	5.6 / 3.8
Front Bearing Bore	mm	50	50
Spindle Nose		BT 30	BT 30
<b>Automatic Tool Changer</b>			
No. of Tools		20	20
Max. Tool Dia. Pockets (All/Adj. Empty)	mm	63 / 80	63 / 80
Max. Tool Length	mm	200	200
Max. Tool Weight	Kg	3	3
<b>Accuracy (as per VDI/DGQ 3441)</b>			
Positioning Uncertainty (P)	mm	0.010	0.010
Repeatability (Ps Medium)	mm	0.005	0.005
<b>Other Data</b>			
Machine Weight (Approx.)	Kg	3350	3400
Machine Dimension (Approx.) :			
Length	mm	2800	2800
Width	mm	2125	2125
Height	mm	2800	2800

## CONTROL SYSTEM

The CNC System FANUC Oi MF and SIEMENS 828D Basic M offered with Mill Tap Center.

## STANDARD FEATURE

- AC Servo Spindle Drive
- AC Servo Axis Drive
- L.M. Guideways
- Work Light
- Auto & Manual Coolant System
- Centralized & Programmable Lubrication
- Laser Calibrated Axis for High Precise Positioning Accuracy
- Electricals with Quality Devices & Panel A.C.

## PRODUCTIVITY IMPROVING OPTIONS

- Chip Conveyor
- Auto Door
- 4<sup>th</sup> Axis Rotary Table
- Coolant Gun
- Flush Coolant System
- Extra Daylight Area (100 mm)
- SK Spindle Taper in lieu of BT Taper
- Coolant Through Spindle
- Tool Tip Air Nozzle (For Dry Cutting)
- Tool Probe & Job Probe
- Air/Oil Mist Spray
- Linear Glass Scale
- Oil Skimmer
- Machine Tower Light
- Visiport Window
- Fully Toolled up Solutions to Meet Customer Needs
- Manual Guide I (Fanuc)
- Easy SMS System (Siemens)

Note : • All above information is subject to change arising out of continuous product improvement without notice.  
 • The description 'standard accessories / feature' conforms to its list; not the photo of machine shown in the catalogue.

**JYOTI CNC AUTOMATION LTD.**

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ISO 9001 : 2008