

# RX Series

Vertical Machining Centers



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## OVERVIEW

To match the demand of greater accuracy and total reliability at higher speed, JYOTI has developed special RX Series Vertical Machining Centers. These rigid machines are broad based C-type structure machines, with a moving table for easy access. The high dynamic structure supports rapid of axis take-offs with an higher acceleration.



## STRUCTURE

The machine is designed such that it is capable for providing high speed drilling and tapping as well as full milling capabilities in a versatile package for high volume production with the help of High Rapid Traverse. Broad rigid base with heavy cross ribbings dampens the effect of vibrations. The heavy column structure helps in balancing the whole machine while taking high cutting load. Table of the machine is made of modular casting with the addition of special alloys for consistent accuracy over a long period of time. The complete structure is FEA (Finite Element Analysis) proven with stringent analysis done by JYOTI.

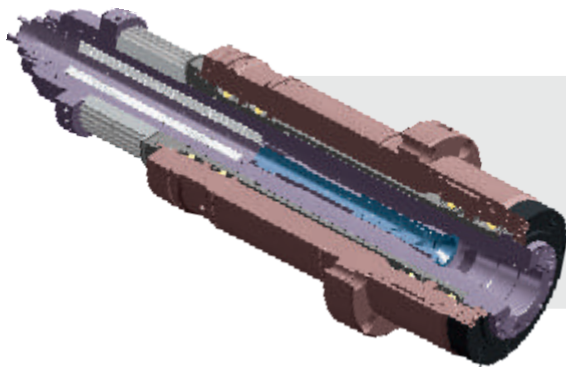
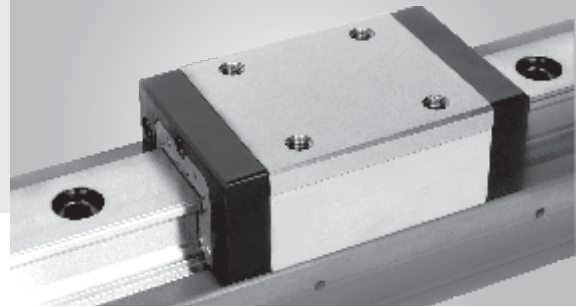
## 3 - POINT LEVELING

With the 3 point support system, the machines can be installed quickly. These machines can also be moved easily and do not require any kind of leveling maintenance.



## LINEAR AXIS

Structure of RX Series is equipped with heavy casting construction and high precision P class linear motion guideways with exceptional static and dynamic stiffness for Efficient Rapid Motion of all axis with high acceleration/deceleration for achieving higher productivity. Non-cutting time can be marginally reduced, thanks to higher rapid traverse rate of **40 m/min**



## HIGH PRECISION SPINDLE

The high precision belt driven spindle are designed and manufactured in-house for continuous production work. Angular contact ball bearing provide higher axial load capacity for vibration-free cutting and optimum surface quality.

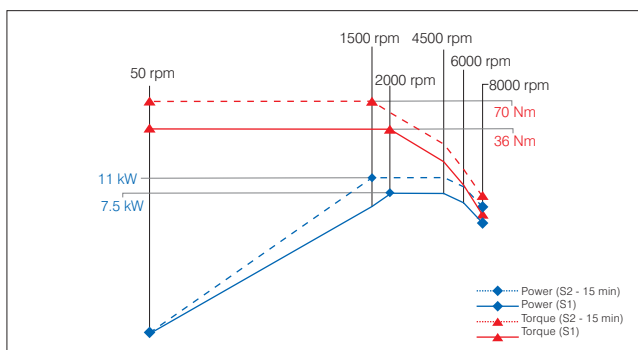
## AUTO TOOL CHANGER

The auto tool changer is a Twin Arm with Disc Type tool magazine capable of storing 20 Tools at a time. The Tool change time is just 2.4 seconds. An option of 24 and 40 tool magazines are also available.

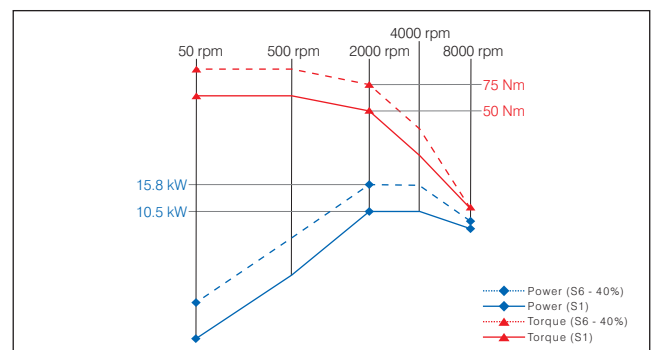


## POWER TORQUE DIAGRAM

11 / 7.5 kW, 8000 rpm (Fanuc)



15.8 / 10.5 kW, 8000 rpm (Siemens)



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## ERGONOMIC DESIGN

A 90° tilting operating panel helps the operator to view the machining area while operating.

Units which require regular checking like Pneumatics, Lubrication etc. are conveniently located for easy maintenance at the rear of the machine well within the reach of operator.



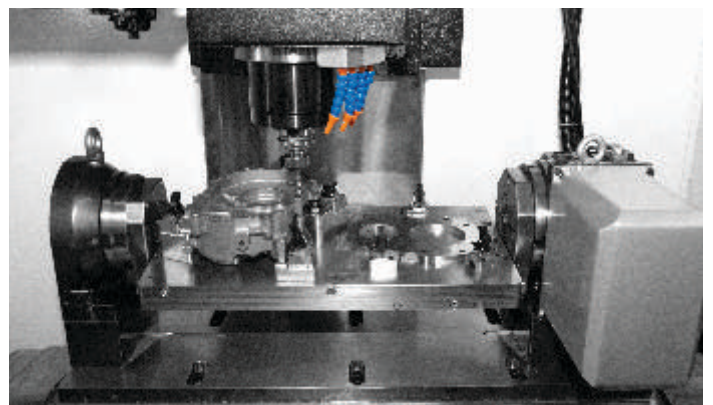
## EFFICIENT CHIP REMOVAL

Easy chip removal from the front side of the machine without disturbing production. Chip will directly fall down into the chip tray/conveyor.



## PRODUCTIVITY IMPROVING OPTIONS

These series can efficiently interface with following productivity improving 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 finish, cycle time and process capabilities.





## TECHNICAL SPECIFICATION

Table		RX 10	RX 20
Table Size	mm	800 X 500	1000 X 530
T-Slot Dimension	mm	4 X 14 X 100	4 X 14 X 100
Distance from Floor to Table	mm	965	965
Max. Load on Table	kgf	400	400
<b>Capacity</b>			
X - Axis Travel	mm	600	820
Y - Axis Travel	mm	450	510
Z - Axis Travel	mm	510	510
Dis. From Spindle Face to Table Top	mm	150 - 660	150 - 660
<b>Feed</b>			
Rapid Traverse (X, Y & Z Axis)	m/min	40	40
Cutting Feed	m/min	10	10
<b>Main Spindle</b>			
Spindle Speed	rpm	8000	8000
Spindle Motor Power - Siemens	kW	15.8 / 10.5	15.8 / 10.5
Spindle Motor Power - Fanuc	kW	11 / 7.5	11 / 7.5
Front Bearing Bore	mm	70	70
Spindle Nose		BT - 40	BT - 40
<b>Automatic Tool Changer</b>			
Number of Tool		20	20
Max. Tool Dia. Pockets (All/Adj. Empty)	mm	80 / 125	80 / 125
Max. Tool Weight	kg	7	7
Max. Tool Length	mm	250	250
<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	5350	5450
Machine Dimension (Approx) : Length	mm	2625	2625
Width	mm	2100	2100
Height	mm	2750	2750

### STANDARD FEATURES

- The CNC System offered FANUC 0i MF or SIEMENS 828D Basic M.
- 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.
- 8000 rpm, BT-40 Spindle

### PRODUCTIVITY IMPROVING OPTIONS

- Chip Conveyor
- 24 & 40 Tool ATC
- 4<sup>th</sup> Axis Rotary Table & Production System
- Coolant Gun
- Air Gun
- Extra Daylight Area (200 mm)
- SK-40 Taper in lieu BT-40
- Coolant Through Spindle
- Tool Probe & Job Probe
- Linear Glass Scale
- Auto Door
- Oil Skimmer
- Machine Tower Light
- Spin Window
- Shopmill (Siemens)
- Manual Guide I (Fanuc)
- Easy SMS System (Siemens)
- Fully Toolled up Solutions to Meet the Customer Needs

**JYOTI CNC AUTOMATION LTD.**

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App



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Note: Specified information are 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 show in the catalogue. Other controller will have different configuration. Machine images are shown with option.



ISO 9001 : 2008