



# RDX Series

Vertical Machining Centers



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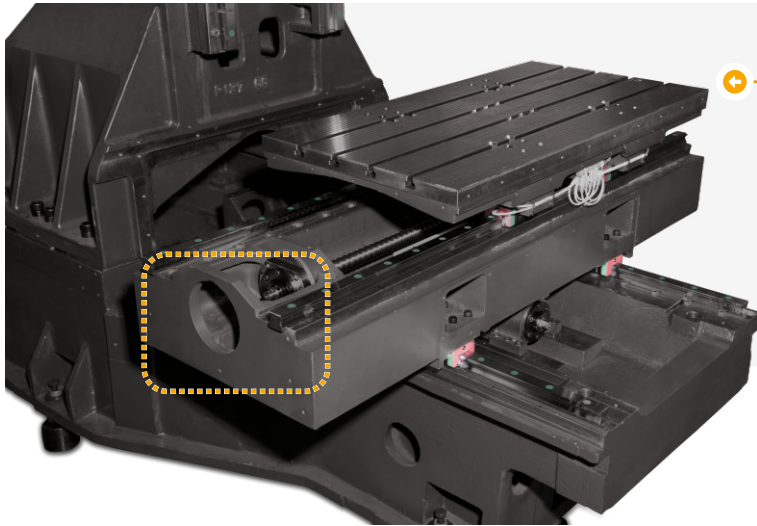
Vertical Machining Center

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## OVERVIEW

Jyoti has specially developed RDX Series for die and moulds application with greater accuracy. Structure with broad rigid base is made out of graded casting dampens the effect of vibration and giving better thermal stability for continuous working condition to keep the pace with growing die-mould market applications.





### TABLE

Table of the machine is made out of modular casting with the addition of special alloys for consistent accuracy over a long period of time.

### BROAD BED & RIGID SADDLE

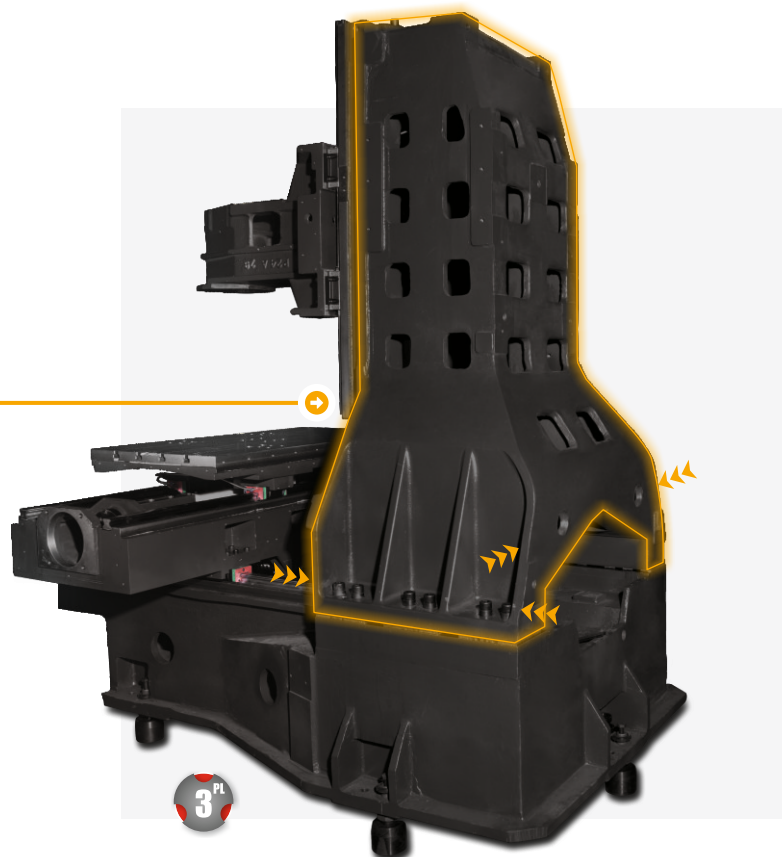
Broad rigid single piece bed with heavy cross ribbing. High precision linear motion guideways with **30 m/min** rapid. Rigid saddle provides excellent stability during high cutting condition for heavy weight components.

### INTEGRATED HOUSING

Integrated nut & bearing housing for better rigidity of axis movement with directly coupled recirculating precision class ball screw & axis motor with high acceleration/deceleration rates helps to reduce cycle time and better positioning accuracy.

### BROADER COLUMN

Heavy extra broad construction of column help for better stability & balancing the whole machine while taking heavy cutting load.

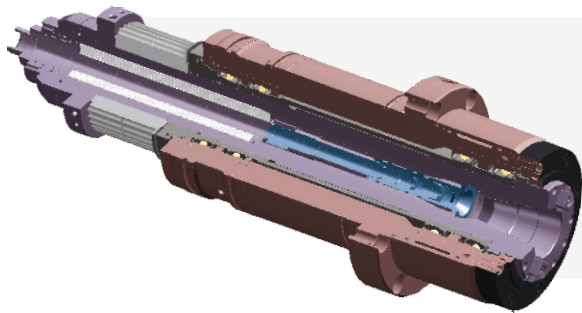


### 3 POINT LEVELING

With the 3 points support, machine can be installed quickly and eliminate twisting effect of bed.

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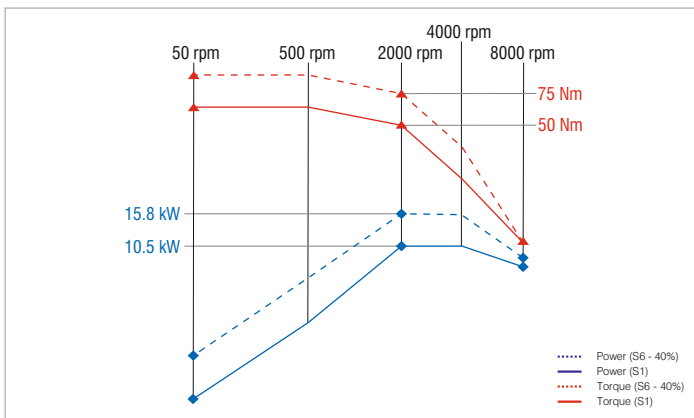


## HIGH PRECISION SPINDLE

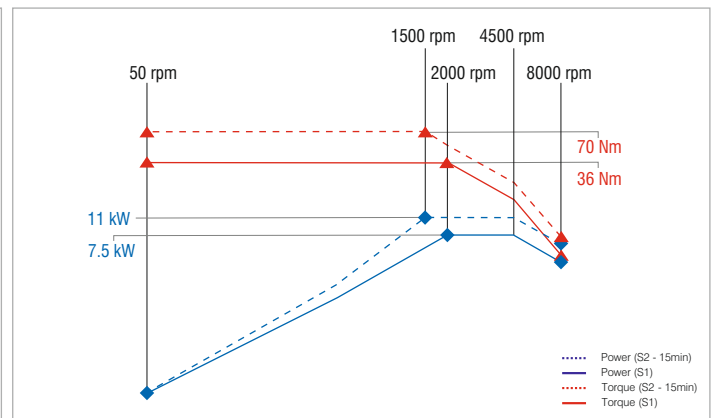
The high precision belt driven spindle are designed and manufactured in-house for continuous die mould operation at higher rpm. Angular contact ball bearing provide higher axial load capacity for vibration free cutting and optimum surface quality.

## POWER TORQUE DIAGRAM

15.8 / 10.5 kW, 8000 rpm (Siemens)



11 / 7.5 kW, 8000 rpm (Mitsubishi/Fanuc)



## 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 sec. An option of 24 and 40 tool magazines are also available.







## ERGONOMIC DESIGN

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



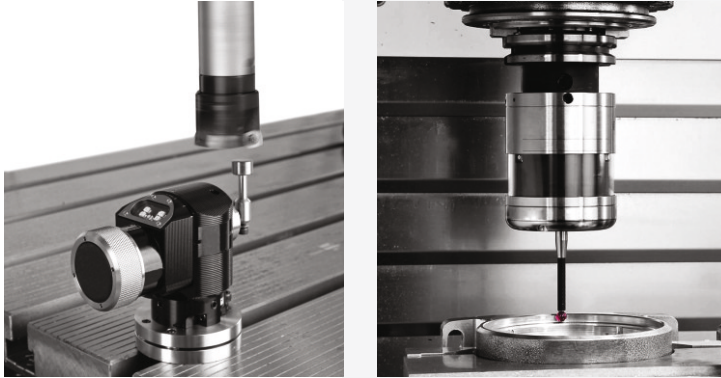
## EFFICIENT CHIP REMOVAL

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



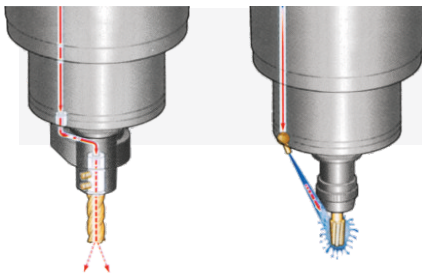
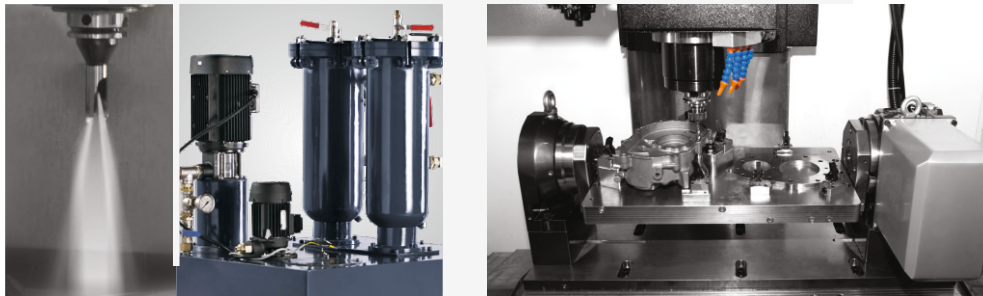
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## PRODUCTIVITY IMPROVING OPTIONS

These series can be efficiently interfaced with productivity improving options such as coolant through spindle, tool probe, job probe, linear glass scale, rotary table and other options to achieve better surface finish, reduced cycle time and improved process capabilities.



## OIL MIST SPRAY

Air / Oil Mist Spray available through spindle and also available by external nozzle for dry cutting applications.

## CONTROLLER FEATURES (SIEMENS 828D)

- M Dynamics Feed Forward Control
- High Resolution 10.4" Color Screen with Dynamic Graphic Display
- Integrated QWERTY keyboard & Multi Functional Display
- High Speed Rigid Tapping
- 5 MB User Memory
- 300 Block Look Ahead
- Linear, Circle, Helical & Universal NURBS Interpolation
- Powerful Servo Axis Motors with Super Precision Absolute Encoder
- Advanced Surface Finishing
- Inch/Metric Conversion
- Technology Cycles for Drilling/Milling Operations
- Tool Management for Monitoring of Tool life
- Tool Display Unit
- MPG Unit for Operator Easiness
- High Speed Fast Ethernet for Data Communication
- Communication & Data Management Via USB, CF Card & RS 232C
- User Friendly Built-in Calculator





## TECHNICAL SPECIFICATION

Table		RDX 10	RDX 20	RDX 30
Table Size	mm	800 X 500	1000 X 530	1200 X 550
T-Slot Dimension	mm	4 X 14 X 100	4 X 14 X 100	5 X 18 X 100
Distance from Floor to Table	mm	965	965	1025
Max. Load on Table	kgf	400	400	900
<b>Capacity</b>				
X - Axis Travel	mm	600	820	1020
Y - Axis Travel	mm	450	510	600
Z - Axis Travel	mm	510	510	610
Dis. From Spindle Face to Table Top (Min. - Max.)	mm	150 - 660	150 - 660	125 - 735
<b>Feed</b>				
Rapid Traverse (X, Y & Z Axis)	m/min	30	30	30
Cutting Feed	m/min	10	10	10
<b>Main Spindle</b>				
Spindle Speed Range	rpm	8000	8000	8000
Spindle Motor Power - Siemens	kW	15.8 / 10.5	15.8 / 10.5	15.8 / 10.5
Spindle Motor Power - Mitsubishi	kW	11 / 7.5	11 / 7.5	11 / 7.5
Front Bearing Bore	mm	70	70	70
Spindle Nose		BT - 40	BT - 40	BT - 40
<b>Automatic Tool Changer</b>				
Number of Tool		20	20	20
Max. Tool Dia. Pockets (All/Adj. Empty)	mm	80 / 125	80 / 125	80 / 125
Max. Tool Weight	kg	7	7	7
Max. Tool Length	mm	250	250	250
Positioning Uncertainty (P)	mm	0.010	0.010	0.010
Repeatability (Ps Medium)	mm	0.005	0.005	0.005
<b>Other Data</b>				
Machine Weight (Approx)#	kg	5374	5488	6000
Machine Dimension (Approx)#: Length	mm	2625	2625	2900
Width	mm	2100	2100	2550
Height	mm	2751	2751	2900

# Refer Machine Detailed Layout for overall machine dimensions & space requirements.

### STANDARD FEATURES

- The CNC System offered SIEMENS 828D or FANUC Oi MF or MITSUBISHI M80
- 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, Belt Driven BT-40 Spindle

### PRODUCTIVITY IMPROVING OPTIONS

- Chip Conveyor
- 10,000 rpm Spindle with Ceramic Bearing
- 24 & 40 Tool ATC
- 4<sup>th</sup> & 5<sup>th</sup> Axis Rotary Table
- Coolant Gun
- Air Gun
- Air/Oil Mist Spray
- SK-40 Taper in lieu BT-40
- Coolant Through Spindle
- Flush Coolant
- Tool Tip Air Nozzle (For Dry Cutting)
- Oil Skimmer
- Tool Probe & Job Probe
- Auto Door
- Machine Tower Light
- Spin Window
- Easy SMS System (Siemens)
- Fully Toolled up Solutions to Meet the Customer Needs

**JYOTI CNC AUTOMATION LTD.**

[jyoti.co.in](http://jyoti.co.in)

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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