



Vertical Machining Centers





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.



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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.





RIGID STRUCTURE

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 of components.

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 to help reduce the cycle time and better positioning accuracy.



INTEGRATED HOUSING (FRONT AND END BRACKET)



CUTTING CAPABILITIES

	Face Milling	Drilling	Tapping		
Siemens 15.8 / 10.5 kW Motor Power					
Material	(Cutter Dia, Dept of Cut X MRR)	(Dia X Feed)	(Size X Pitch)		
Steel	Ø63 mm , 3.0 mm X 92 cu.cm∖min	Ø36 mm X 0.10 mm/rev	M16 X 2.0 mm		
Cast Iron	Ø63 mm , 4.0 mm X 137 cu.cm\min	Ø40 mm X 0.10 mm/rev	M24 X 3.0 mm		
Aluminium	Ø63 mm , 5.5 mm X 587 cu.cm\min	Ø42 mm X 0.20 mm/rev	M30 X 3.5 mm		
Fanuc 11 / 7.5 kW Motor Power					
Material	(Cutter Dia, Dept of Cut X MRR)	(Dia X Feed)	(Size X Pitch)		
Steel	Ø63 mm , 2.0 mm X 62 cu.cm∖min	Ø30 mm X 0.10 mm/rev	M14 X 2.0 mm		
Cast Iron	Ø63 mm , 3.0 mm X 100 cu.cm\min	Ø36 mm X 0.10 mm/rev	M22 X 2.5 mm		
Aluminium	Ø63 mm , 4.0 mm X 427 cu.cm\min	Ø36 mm X 0.20 mm/rev	M27 X 3.0 mm		

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ERGONOMIC DESIGN

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



EFFICIENT CHIP REMOVAL

Easy chip flow 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 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, cycle time and process capabilities.

POWER TORQUE DIAGRAM





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
- 3 MB User Memory
- 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



11 / 7.5 kW, 8000 rpm (Fanuc)





TECHNICAL SPECIFICATION

Table		RDX 10	RDX 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
Capacity			
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 (Min Max.)	mm	150 - 660	150 - 660
Feed			
Rapid Traverse (X, Y & Z Axis)	m/min	30	30
Cutting Feed	m/min	10	10
Main Spindle			
Spindle Speed Range	rpm	8000	8000
Spindle Motor Power - Siemens	kW	15.8 / 10.5	15.8 / 10.5
Spindle Motor Power - Fanuc / Mitsubishi	kW	11 / 7.5	11 / 7.5
Front Bearing Bore	mm	70	70
Spindle Nose	mm	BT - 40	BT - 40
Automatic Tool Changer			
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
Accuracy (as per VDI/DGQ 3441)			
Positioning Uncertainty (P)	mm	0.010	0.010
Repeatability (Ps Medium)	mm	0.005	0.005
Other Data			
Machine Weight (Approx)	kg	5374	5488
Machine Dimension (Approx) : Length	mm	2625	2625
Width	mm	2100	2100
Height	mm	2/51	2/51

STANDARD FEATURES

- The CNC System offered Siemens 828D or Fanuc 0i MF or Mitsubishi
- AC Servo Spindle Drive
- AC Servo Axis Drive
- L.M. Guideways
- Work Light
- Auto & Manual Coolant SystemCentralized & 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
- 24 & 40 Tool ATC
- 4th & 5th Axis Rotary Table
- Coolant Gun
- Air/Oil Mist Spray
- SK-40 Taper in lieu BT-40
- Coolant Through Spindle
- Flush Coolant
- Tool Tip Air Nozzle (For Dry Cutting)
- Fully Tooled up Solutions to Meet the Customer Needs
- Tool Probe & Job Probe
- Auto Door
- Oil Skimmer
- Machine Tower Light
- Spin Window
- Easy SMS System (Siemens)

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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.

