



JD Series



COMPACT VERTICAL MACHINING CENTRE

JD SERIES

BASIC INFORMATION

SPECIFICATIONS

DIAGRAMS

APPLICATIONS & SOLUTIONS

JD 1



JD 2



JD 3



JD 4



JD SERIES

- Rigid structure with Compact Foot Print
- Precision Linear Motion Guideways on X Y & Z axes
- Rapid traverse rate 48/48/48(m/min)
- BBT30/BT30 & BT40 Spindle configurations are available
- Faster tool change time
- Compatibility for 4th & 5th axis
- Quick Acceleration and deceleration
- Ergonomically designed for easy loading / unloading operations
- Better chip & Coolant management

BASIC STRUCTURE

- The JD series is dynamically stable and rigid in structure which is capable of high vibration damping and bed structures are made up with FG 300 casting.
- The entire structure passes through FEA analysis for an elaborate check to avoid possible distortions during heavy machining.

FEED MECHANISM

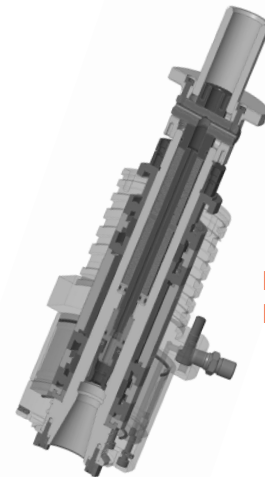
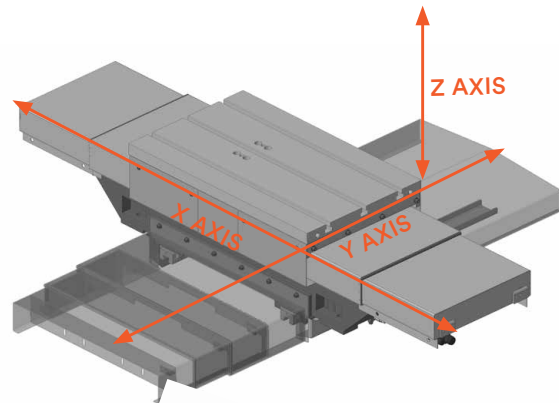
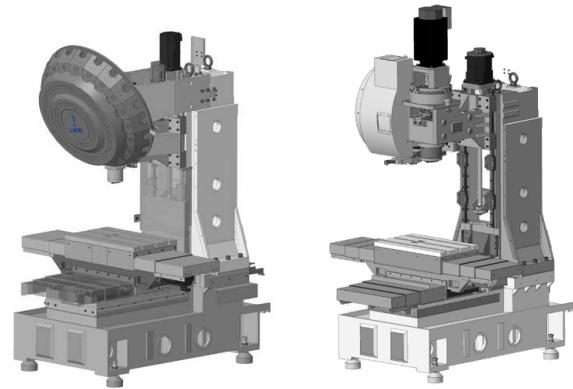
- JD series employs high precision linear motion guideways & large diameter, pre-tensioned ball screws, high resolution feedback system in all axes.
- All three axes are equipped with direct drive motors and precision ball screws for optimum accuracy and rigidity.

SPINDLE

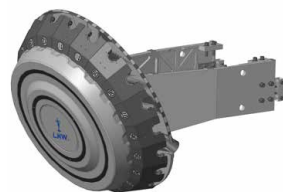
- Direct coupled spindle upto 24000RPM
- High speed and high power spindle capable of cutting heavy load based on user requirements.
- Balanced spindle reduces vibration
- Faster acceleration and deacceleration which reduces non cutting time

AUTOMATIC TOOL CHANGER

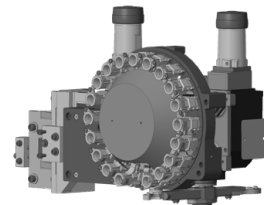
- JD Series features both pocket tilting and twin arm type ATC configurations
- Maximum capacity of up to 21 tools
- Rapid tool change time of less than 1.2 seconds.



DIRECT DRIVE SPINDLE



POCKET TILTING



TWIN ARM

JD SERIES

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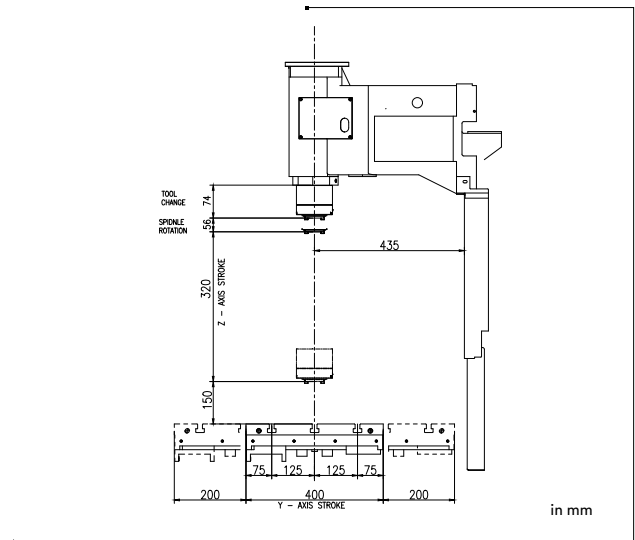
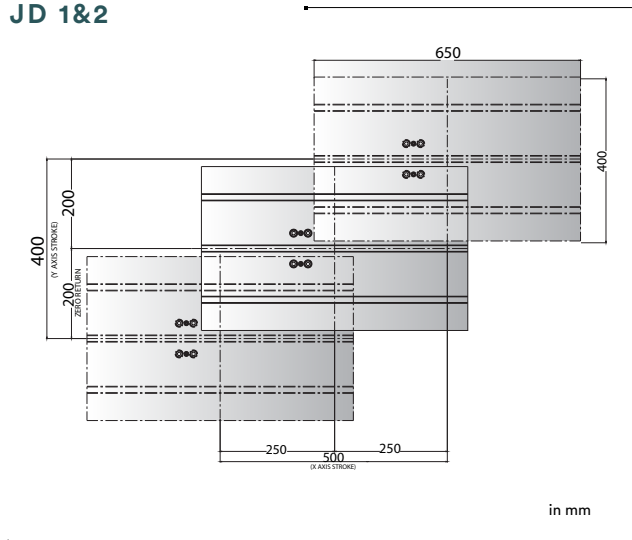
APPLICATION & SOLUTIONS

SPECIFICATIONS

Title	Description	Unit	JD 1	JD 2	JD 3	JD 4
Travel	X axis	mm	500			
	Y axis	mm	400			
	Z axis	mm	320		450	
	Distance between Spindle nose & Table top	mm	150-470		150-600	
Table	Table size	mm	650x400			
	Table Loading Capacity	Kgs	250			
	T-slot size x pitch	Nos. x mm x mm	3x14x125			
Spindle	Spindle power (Cont./ S2/S3) - Fanuc	kW	4.5 / 11 / 26	3.7 / 5.5 / 7.5		5.5/7.5/11
	Max. Spindle Torque	Nm	5.4 / 17.5 / 35.5	17.7 / 35 / 47.8		26.3/47.7/70
	Spindle power (Cont./ S2/S3) - mitsubishi	kW	3.7/5.5	3.7/5.5/7.5		5.5/11.5/11
	Max. Spindle Torque	Nm	12.6/18.8/21.9	17.7/35/47.8		35/47.7/70
	Spindle power (S1/S6 40%/S6 25%/S6 10%/15%/Pmax1) - Siemens	kW	4.8/6.7/8.2/10.1/26	3.7/4.8/5.5/7.4		5.5/7.1/8.2/11
	Max. Spindle Torque	Nm	5.1/7.1/8.7/10.7/27.6	24/30.5/35/47.1		35/45.5/52.5/70
	Spindle bore taper	type	BBT30	BT 30		BT 40
	Spindle speed	rpm	24000	12000		8000
Feed System	Cutting feed rate	m/min.	10			
	Rapid traverse rate – X / Z / Y	m/min.	48 / 48 / 48			
Automatic Tool Changer	No. of Tools	nos.	21		20	
	Tool shank configuration	type	MAS BT30 / 45°			MAS BT40/45°
	Max. tool diameter with adjacent tool	mm	Ø60		Ø63	Ø80
	Max. tool length	mm	200			250
	Max Tool weight on each pot	kgs	3		5	8
	Tool change time (tool to tool)	sec.	1.2	1.5	1.9	2.4
	Accuracy	Positioning Accuracy (X/Y/Z) - Axis	mm	0.01		
Repeatability		mm	0.008			
General	Length x Breadth x Height	mm	1660 x 2677 x 2600		1625x2700x2555	1720x2700x2555
	Weight	kgs	2700		3000	
	Coolant Tank capacity	ltr	250			
CNC System	Controller	Type	Fanuc, Mitsubishi, Siemens			
Power Supply	Power Requirement	kVA	20	15		17

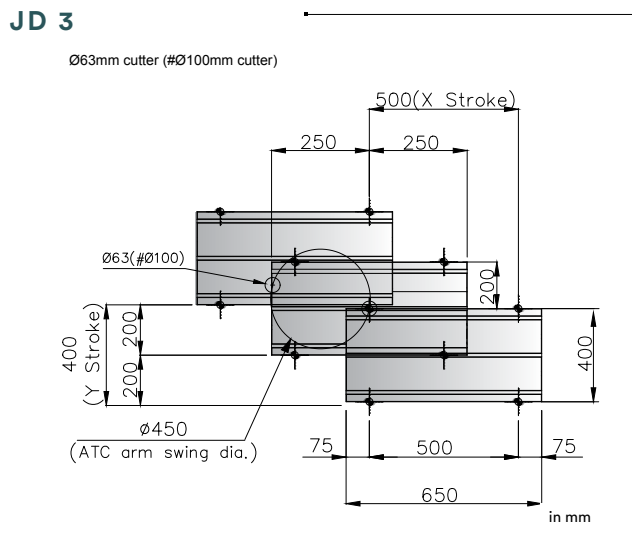
Note: Specifications are subject to change without prior notice & may vary depending upon optional accessories

MOVING RANGE & INTERFERENCE DIAGRAM JD 1&2

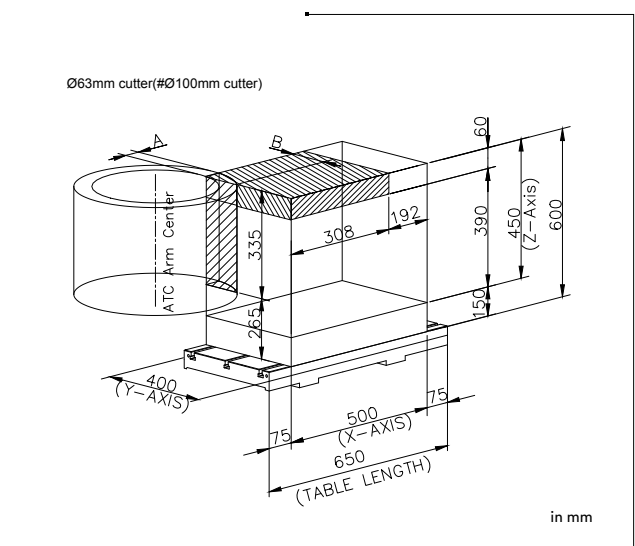


JD 3

Ø63mm cutter (#Ø100mm cutter)

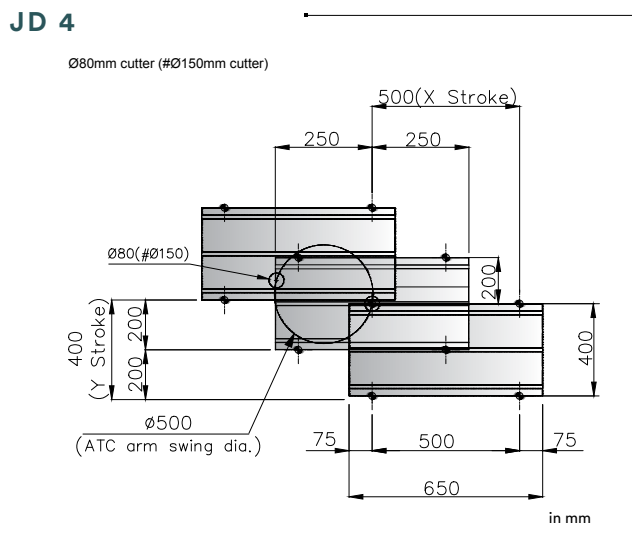


Ø63mm cutter(#Ø100mm cutter)

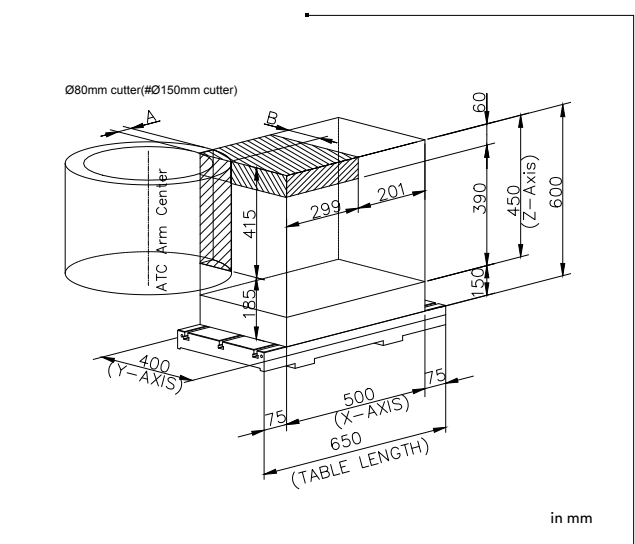


JD 4

Ø80mm cutter (#Ø150mm cutter)



Ø80mm cutter(#Ø150mm cutter)



JD SERIES

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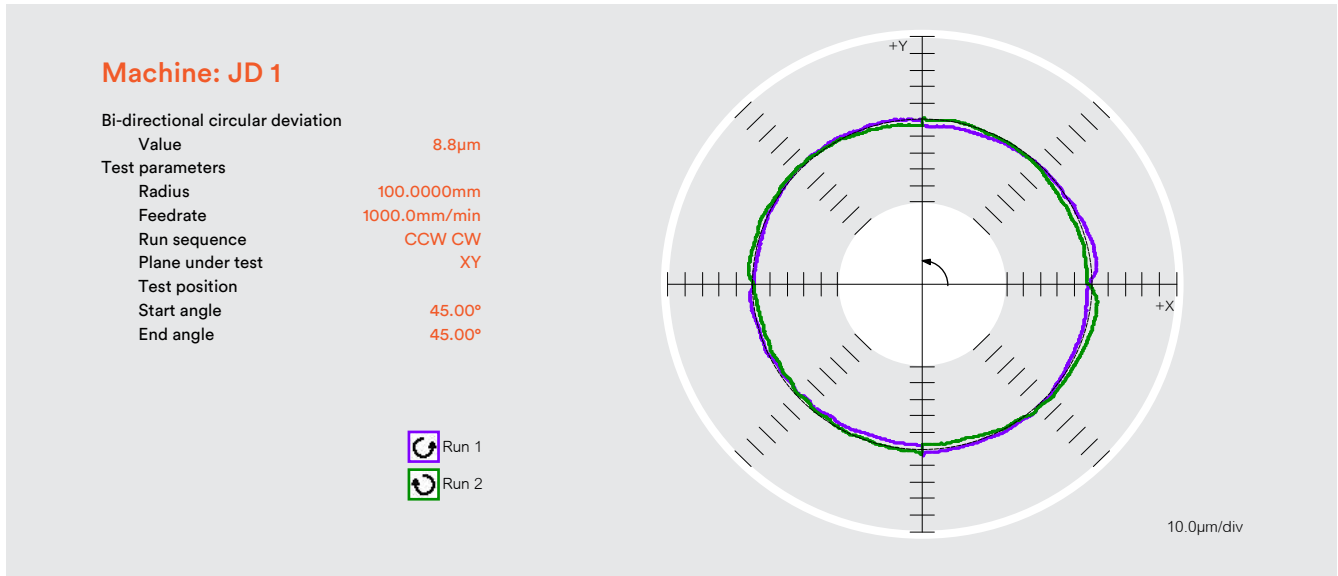
SPECIFICATIONS

DIAGRAMS

APPLICATION & SOLUTIONS

MACHINING PERFORMANCE:

CIRCULARITY

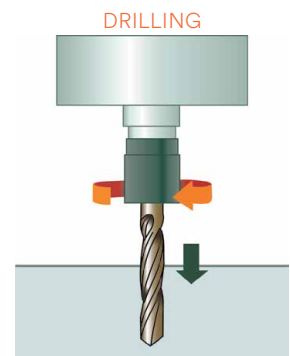
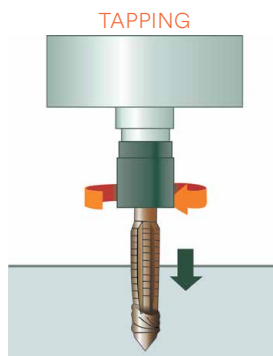
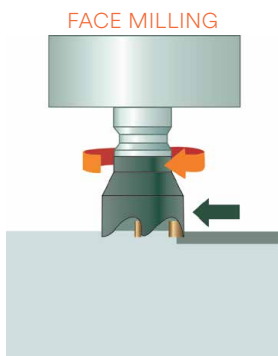


Note : Values shown are in test conditions, may vary depending on tools, materials and cutting parameters / conditions

MATERIAL REMOVAL RATE (MRR)

ALUMINIUM

MACHINE: JD1



FACE MILLING

Parameter	Unit	JD Series
Cutter Size	mm	63x5z
Spindle Speed	Rpm	1500
Feed	mm/min	1000
Depth of cut	mm	2
Width of cut	mm	48
Capacity	cc/min	96

DRILLING

Parameter	Unit	Max	Min
Cutter Size	mm	25x2z	0.5
Spindle Speed	rpm	1500	18000
Feed	mm/min	180	100
Depth of cut	mm	40	3
Spindle Load	%	289	9

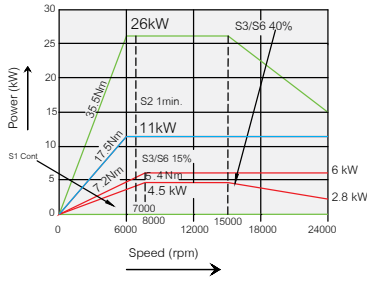
TAPPING

Parameter	Unit	Max	Min
Cutter Size	mm	M20x2.5	M1x0.25
Spindle Speed	rpm	240	3100
Feed	mm/min	600	775
Depth of cut	mm	30	1.5

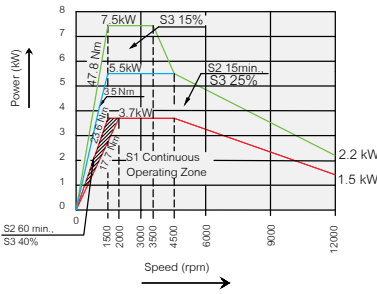
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SPINDLE SPEED POWER DIAGRAM FANUC

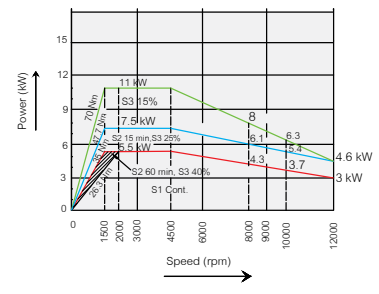
JD1



JD2 & 3

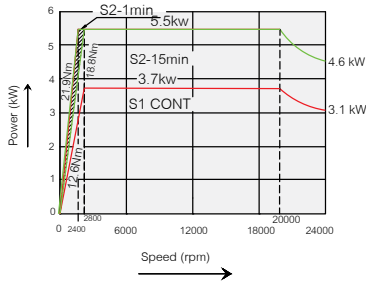


JD4

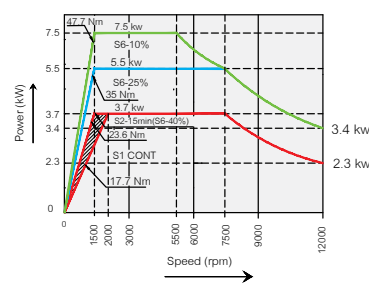


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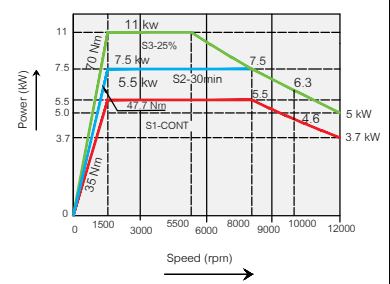
JD1



JD2 & 3

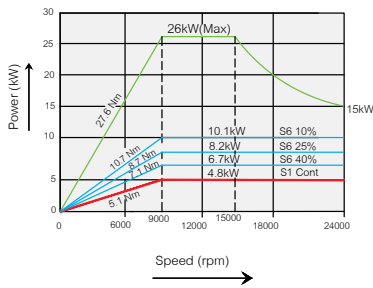


JD4

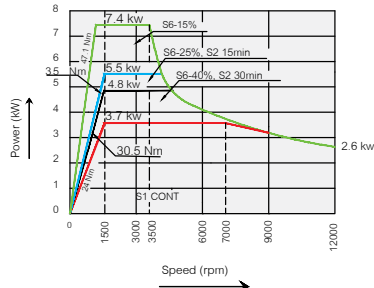


SIEMENS

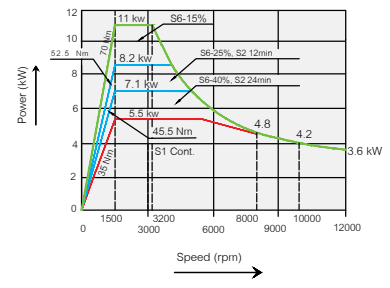
JD1



JD2 & 3



JD4



MACHINING SOLUTIONS



Aluminium Extusion



Cam Clutch



Brake shoe



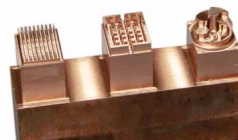
Clutch cover



Phone back cover



Cylinder Head



Copper Electrode



Connector

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