JV SERIES

VERTICAL MACHINING CENTERS

JV 30 NEO

JV 40

JV 55

JV KRAFT

JV 80

JV 100

JV 130

JV 200

JV 55 TWIN

Twin Spindle

JVM 60

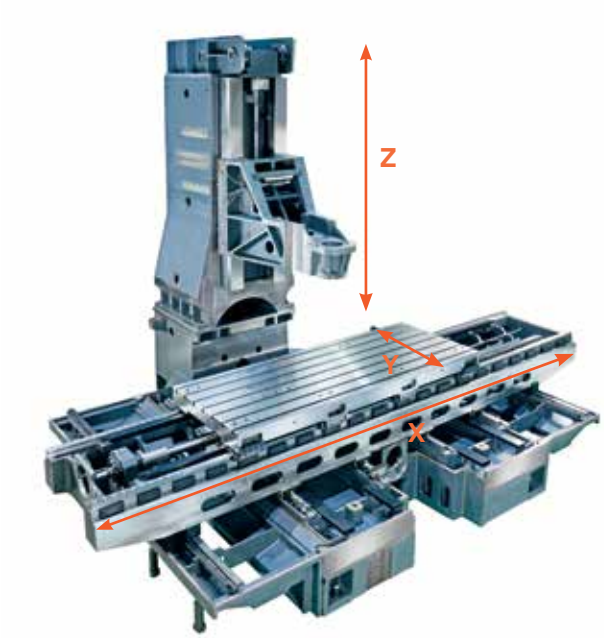
Moving Column with Rotary Pallet Changer

JV 65 RAPC

JV 105 RAPC

MACHINE STRUCTURE

- Higher cutting capabilities with large diameter spindle bearing.
- Shorter tool length with projected spindle for better component approach and accuracy.
- Effective Power Transmission, to improve depth of cut & higher threading size
- The stiffness built in to the feed mechanism supplements the structural rigidity for higher precision machining.
- Enhanced rapid traverse rate reduces the non cut time.
- Available with swift automatic tool changer.
- Front double door design for operator friendliness and improved aesthetics.
- Through the Finite Elements Analysis (FEA), optimized FG 300 cast iron structure stable material removal and vibration free machining is possible.
- Simple to use, easy to maintain - the JV Series will truly add value to your overall manufacturing efficiency.

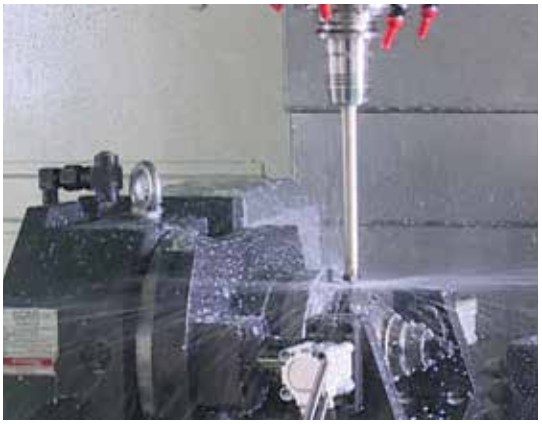


SPINDLE HEAD

- Every Spindle Cartridge is assembled in a temperature controlled environment.
- The bearings are pre-loaded to the optimum level, so that the built-in accuracies are retained over a long period of use.

COOLANT THROUGH SPINDLE

Provides supply of coolant through tool right upto the cutting edge to achieve excellent surface finish. A coolant filtration system is also recommended to avoid chip & dirt getting into the coolant passage of the spindle, for better finish, tool life and chip management. You have choice of duplex bag hydrocyclone filtration system & compact inline filtration system for both ferrous and non-ferrous materials.



HIGH PRECISION FEED MECHANISM

The new JV series employs high precision linear motion guideways & large diameter, pre-tensioned ball screw for axis traverse. The locating & fixing surface for the linear motion guideways are precision machined to close tolerance in all axes for perfect seating.

BOX GUIDEWAYS

JV 105 and JV 200 are provided with hardened and ground Box Guideways in the Z-Axis with sufficient wide torsion-free box type construction for better cutting performance.

SUPERIOR LOAD CAPACITY

Y-Axis of JV 105 and JV 130 is provided with 3 rows JV 200 with 4 rows of Roller LM arranged at a contact angle of 45°, has equal load carrying rating.

TOTALLY PROTECTED SLIDE WAYS

- The slide ways and ball screw remain completely protected, preventing entry of chips & coolant.
- This adds to ease of maintenence & retention of the built in accuracies over a long period of continous use.

ROTARY APC

The hydraulic Automatic Pallet Changer removes the loading/unloading time and allows continuous running of the machine without stopping for component loading/unloading.

The pallet changer is compatible for 4th axis interface, hydraulic ports and supports hydraulic fixturing. The hydraulic system, provided for functioning of APC is designed to be compatible with most of the hydraulic fixtures at the user end. The APC system has minimum number of mechanical parts which allows ease of maintenance.

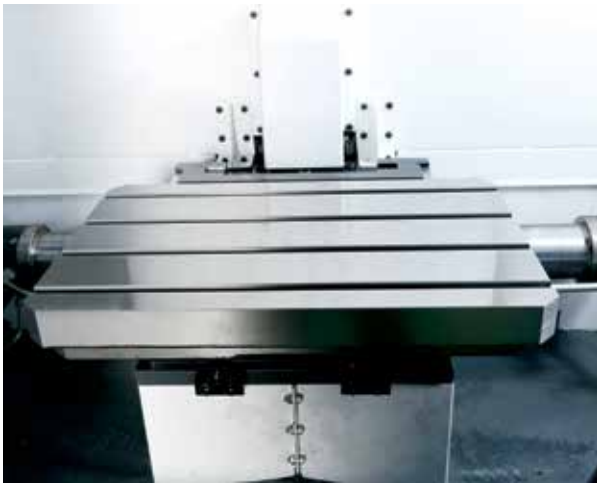
ROLLER GUIDEWAYS

New JV series is provided with 3 rows of LM roller guideways in JV 130 & 4 rows of LM roller guideways in JV 200 in y axis for higher rigidity & precision machining.

Rigidity: Overall rigidity of a roller-type guideways is greater because of higher rigidity of Rolling elements.

Vibration Damping is better because of roller-type guideways. Less vibration improves cutting capacity and part surface finish, and results in longer tool life.

Low rolling friction: Low friction roller guideways stabilize dimensional accuracy in surface grinding; improve the taper accuracy in internal grinding; increase contouring accuracy in the circular milling operations of machining centers.



EASE OF CHIP & COOLANT MANAGEMENT

- The JV series comes with a high pressure coolant pump.
- Coolant flow through nozzles at different locations carry the chips away.
- All chips are carried to the rear of the machine into a free standing chip box.
- The systems allows easy clearing & maintenance.
- Direct integration with a central chip management system of a machining line is also possible.

EASY OPERATING SCREEN
(LMW-EOS)

MAIN SCREEN

This dashboard helps to perform / reach desired screens by quick navigation.

QUICK MAGAZINE VIEW

This Screen displays magazine oveview like pot location, current spindle tool and waiting tool status also helps for trouble shooting.

TOOL DATA MANAGEMENT

The screen displays tool data overview like Tool name & number / Pot number, Tool type (Big tool / Fixed tool), Spindle tool status, Load setting for each tool.

SPINDLE LOAD MONITORING

Monitors the spindle load current for each tool. If the spindle current exceeds a preset load value, it issues an alarm to shut down the machine.

SPINDLE POWER CALCULATOR

Programmer can calculate spindle power, spindle load as exactly as on screen.

MAINTENANCE DISPLAY

Maintenance schedules as on the screen.

SPECIFICATIONS

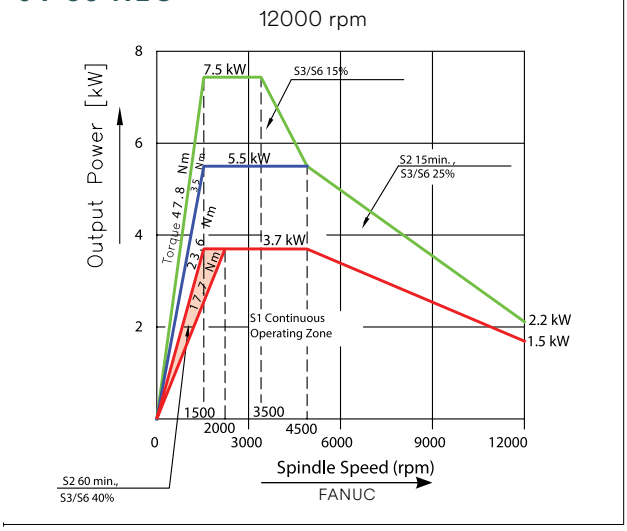
Title	Description	Unit	JV 30 NEO	JV 40	JV 55	JV Kraft	JV 80	JV 100	JV 130
Travel / Stroke	X Axis	mm	500	500	575	800	820	1050	1300
	Y Axis	mm	400	400	410	440	540	540	700
	Z Axis	mm	320	450	460	490	600	600	650
	Distance from spindle nose to table top	mm	150 -470	200 - 650	140 - 600	134 - 624	125 - 725	125 - 725	100 - 750
Table	Table Size	mm	600 X 400	600 X 350	900 X430	1050 X 450	1000 X 560	1200 X 560	1350 X 660
	Table Loading Capacity	kg	300	250	400	500	800	800	1500
	T Slot Size X Pitch	nosx mmxmm	3 × 14 x125	3 × 14×125	4 × 18 × 100	4 × 18 × 100	5 × 18 x100	5 × 18 x100	5 × 18 × 100
Spindle	Max. Spindle Speed	rpm	12000	8000	6000	6000	5000	5000	8000
	Spindle Bore Taper	Type	BT 30	BT 40	BT 40	BT 40	BT 40	BT 40	BT 40
	Motor Power (cont / intermittent)	kW	3.7/ 5.5 /7.5	5.5 /7.5	7.5 /11	7.5 /11	11/15	11/15	11/16.5
	Max Spindle torque (cont / intermittent)	Nm	17.7/35/47.8	32.3 / 58.7	48/93	48 /93	78 /143	78 /143	105/157.5
Automatic Tool Changer	No .of tools/ Tool Selection	nos	21	20	20	20	20	20	20
	Tool Shank	mm	BT 30	BT 40	BT 40	BT 40	BT 40	BT 40	BT 40
	Max tool dia with adjacent tools	mm	80	80	80	80	80	80	80
	Max tool dia without adjacent tools	mm	60	125	125	125	150	125	125
	Max. tool length	mm	200	250	250	250	350	250	250
	Max. tool weight on each pot	kg	3	8	7	7	7	8	8
	Tool change time tool to tool	sec	1.7	2.5	2.5	2.5	3.5	3.5	3.5
Feed System	Rapid Traverse rate (X/Y/Z)	m/min	48/48/48	48/ 48 /48	36 / 36/ 24	36 / 36/ 24	36 / 36/ 24	36 / 36/ 24	36 / 36/ 24
	Cutting feed rate / Jog feed rate	m/min	10	10	10	10	20	20	10
Machine Size	Machine Size (LxBxH)	mm	1672×2330x 2328	1850×2350x 2780	2550×3260x 2740	2550×3112x 2830	2620×2860x 3165	3100×2820x 3165	3400 X4060 X2800
	Machine weight	kg	2500	2500	4300	4500	5000	5500	10000
Accuracy	Positioning Accuracy (X/Y/Z Axes)	mm	0.010	0.010	0.010	0.010	0.010	0.010	0.010
	Repeat ability	mm	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003
CNC System	Controller	type	Fanuc	Fanuc / Siemens	Fanuc / Siemens / Mitsubishi	Fanuc / Siemens / Mitsubishi			

Title	Description	Unit	JV 200	JV 55 Twin	JVM 60	JV 65 RAPC	JV 105 RAPC
Travel / Stroke	X Axis	mm	2000	800	640	680	1020
	Y Axis	mm	900	450	460	400	660
	Z Axis	mm	800	600	600	500	600
	Distance from spindle nose to table top	mm	150 - 950	150 - 750	200 - 800	150 - 65	150 - 750
Table / Rotary Pallet	Table Size	mm	2100 X 800	1050 X 450	700 X 500	Table : 900 X 400 Pallet Size : 610 X 400	Table : 1200 X 650 Pallet Size : 850 X 500
	Table Loading Capacity	kg	2500	500	850 pallet	Load : 250 / Pallet	500 / Pallet
	T Slot Size X Pitch	nosx mmxmm	7 X 18 X 115	4 × 18 × 100	2 x18 × 100	4 X 14 X100	5 X 18 X 100
	Pallet Indexing time	sec	-	-	8	12	14
Spindle	Max. Spindle Speed	rpm	5333	10000	6500	8000	8000
	Spindle Bore Taper	Type	BT 50	BT 40	BT 40	BT 40	BT 40
	Motor Power (cont / intermittent)	kW	15 / 18.5	5.5 / 7.5	7.5 /11	7.5 /11	11 /15
	Max Spindle torque (cont / intermittent)	Nm	107.4 / 177	26.3 / 47	54 /105	35.8 / 70	52.5 / 95.5
Automatic Tool Changer	No .of tools/ Tool Selection	nos	20	20	20	20	20
	Tool Shank	mm	BT 50	BT 40	BT 40	BT 40	BT 40
	Max tool dia with adjacent tools	mm	130	80	80	80	80
	Max tool dia without adjacent tools	mm	200	125	150	125	125
	Max. tool length	mm	400	350	300	250	250
	Max. tool weight on each pot	kg	20	8	7	7	8
	Tool change time tool to tool	sec	4	3.5	3	2.5	3.5
Feed System	Rapid Traverse rate (X/Y/Z)	M/min	20 /20/15	36/36/24	30/30/30	36/36/24	36/36/24
	Cutting feed rate / Jog feed rate	M/min	10	10	10	10	10
Machine Size	Machine Size (LxBxH)	mm	5420 X4700 X3500	2550×3030x 2795	2300×3300x 3050	2750 X3700X 2099	3400X4060X 2800
	Machine weight	kg	17000	5500	6500	9000	10000
Accuracy	Positioning Accuracy (X/Y/Z Axes)	mm	0.010	0.010	0.010	0.005	0.010
	Repeat ability	mm	±0.005	±0.003	±0.003	±0.003	±0.003
CNC System	Controller	type	Fanuc / Siemens / Mitsubishi	Fanuc		Fanuc / Siemens / Mitsubishi	

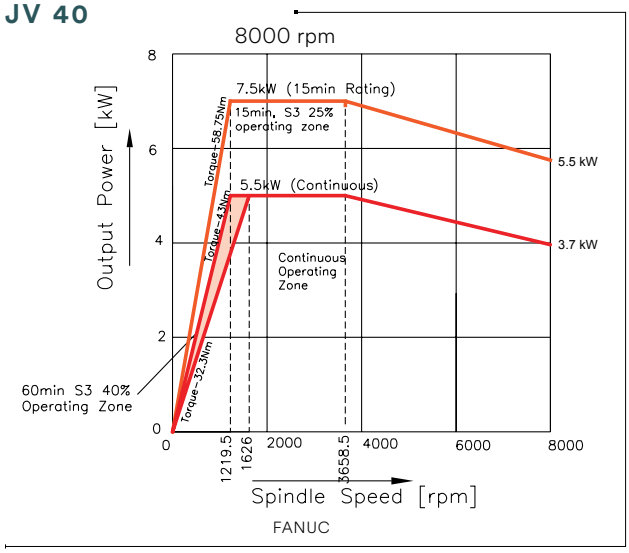
*May vary depending upon make and model.

SPEED POWER CURVE

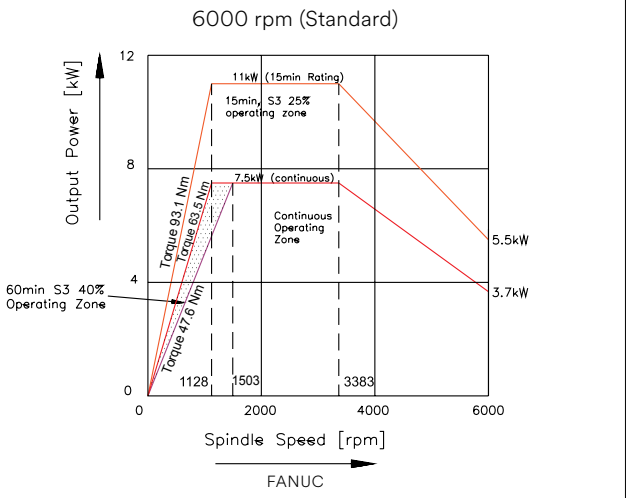
JV 30 NEO

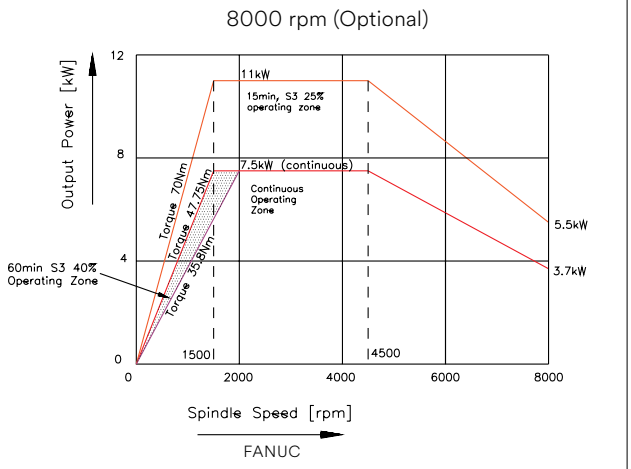


JV 40

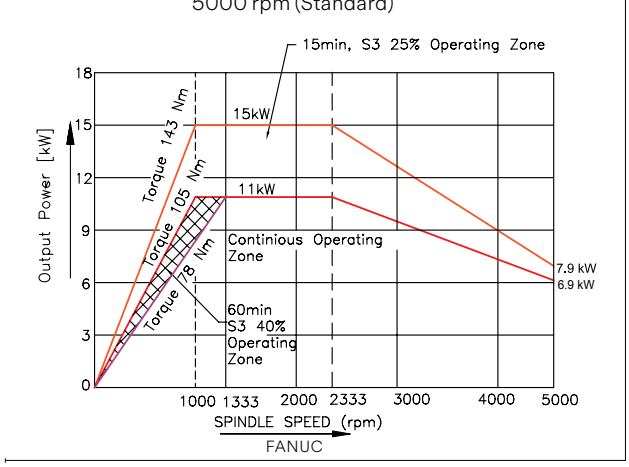


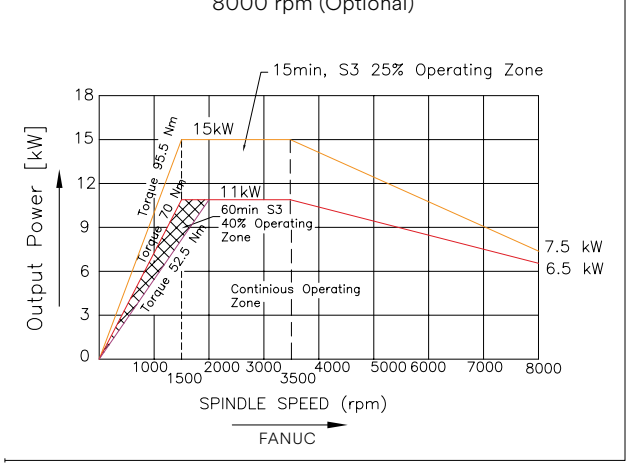
JV 55 / JV Kraft



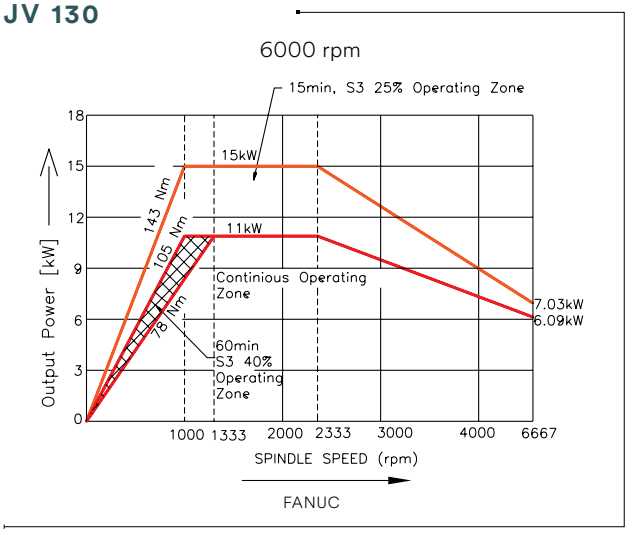


JV 80 / JV 100

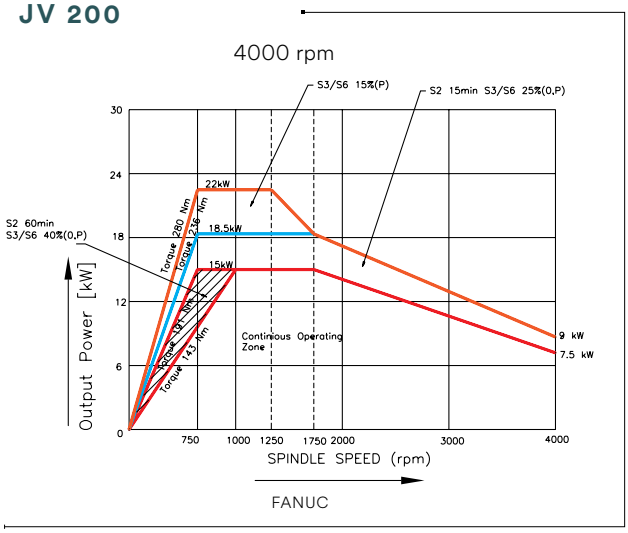




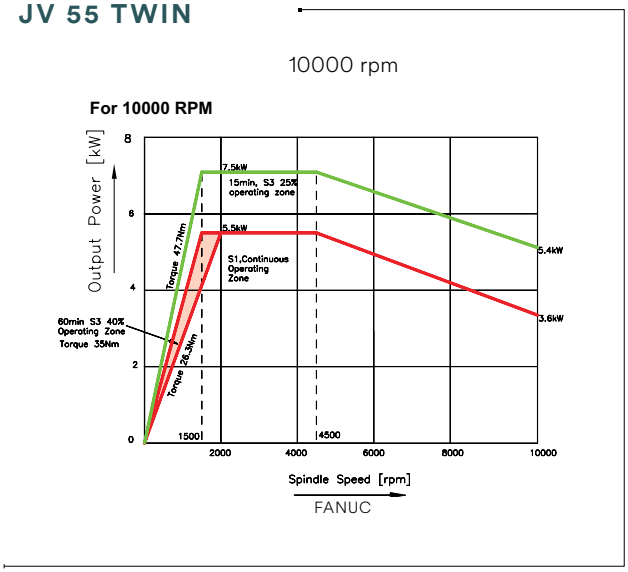
JV 130



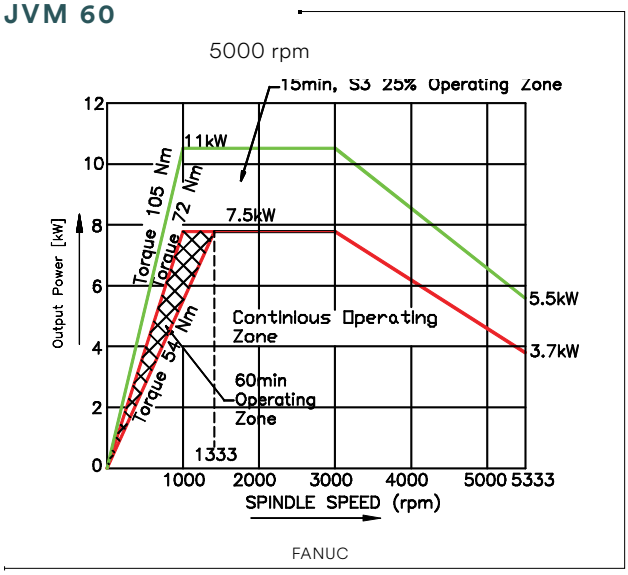
JV 200



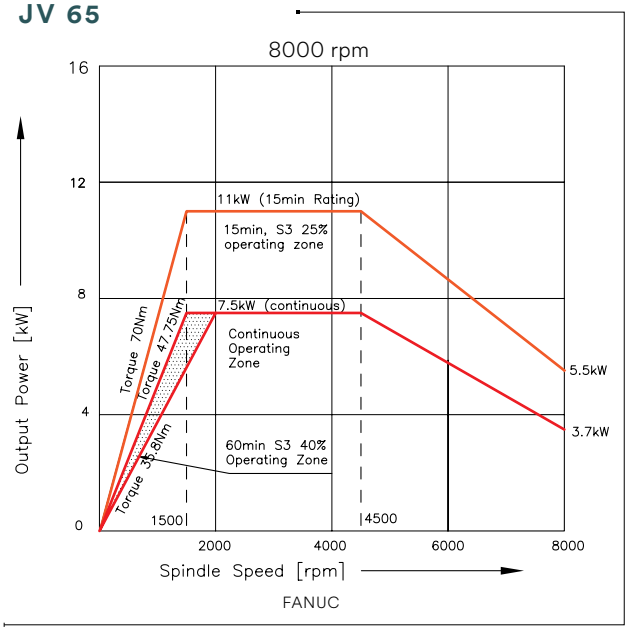
JV 55 TWIN



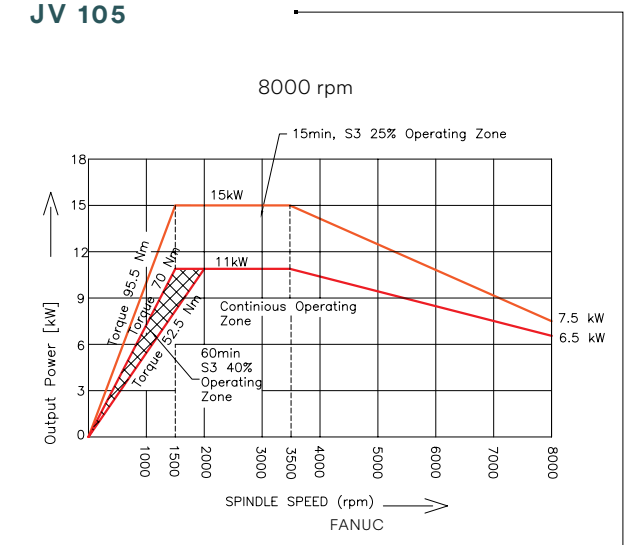
JVM 60



JV 65

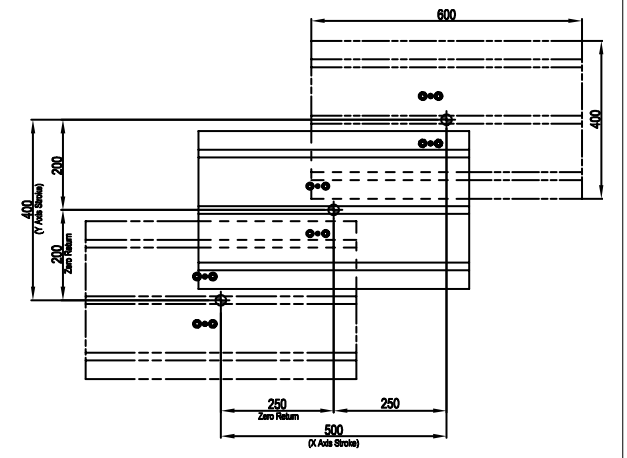


JV 105

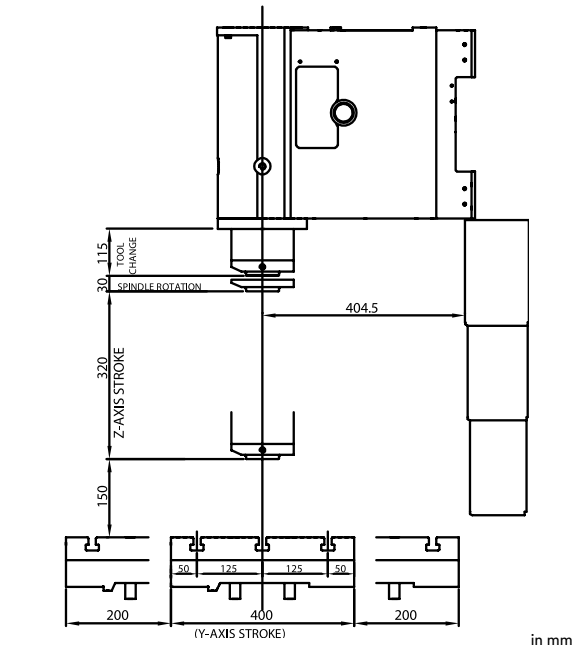


INTERFERENCE DIAGRAM

JV 30 NEO



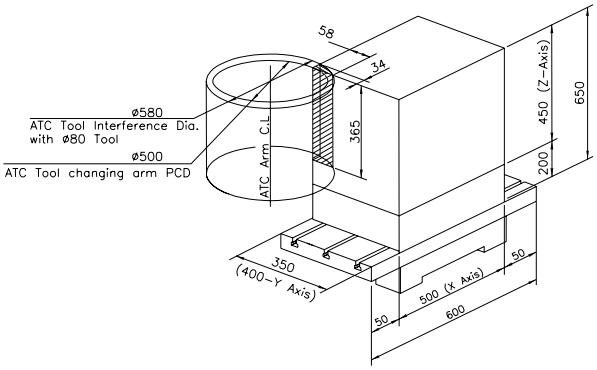
in mm



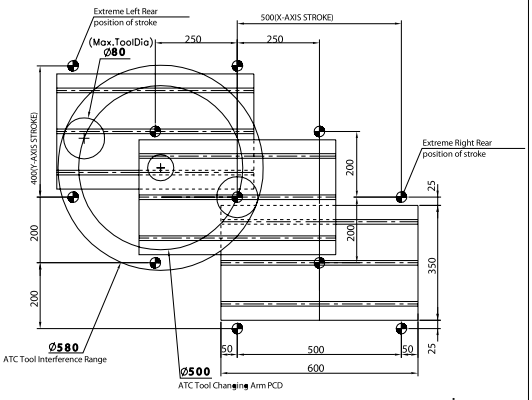
in mm

JV 40

Ø 80 mm Cutter Tool



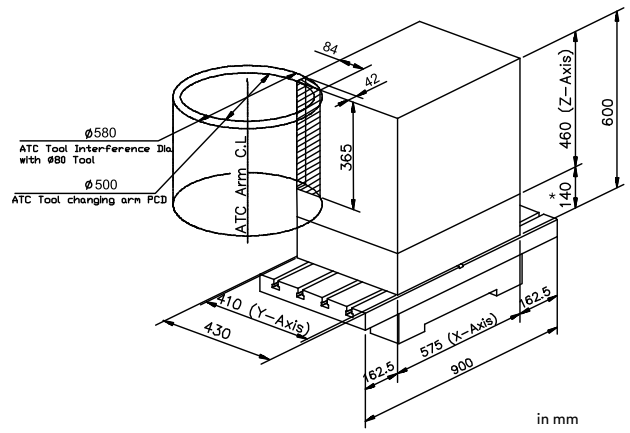
in mm



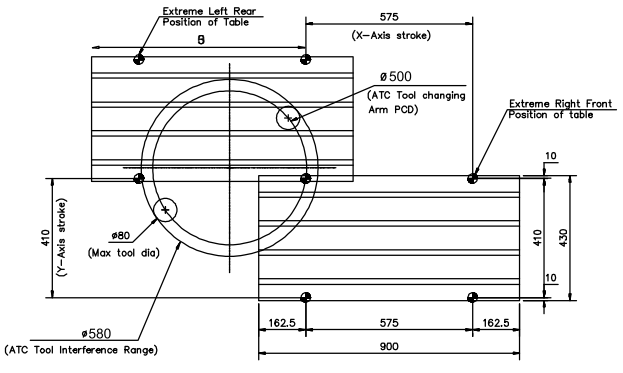
in mm

JV 55

Ø 80 mm Cutter Tool



in mm

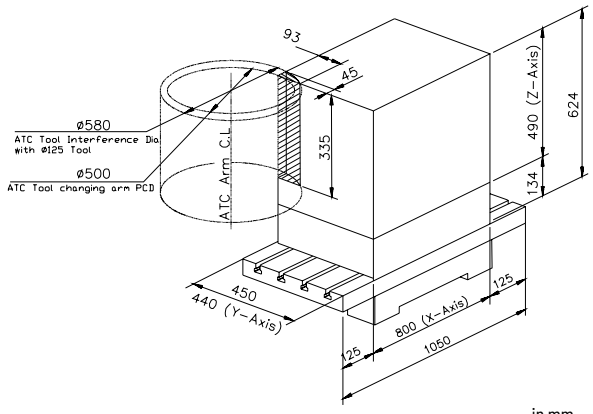


* - 240 (100mm column)

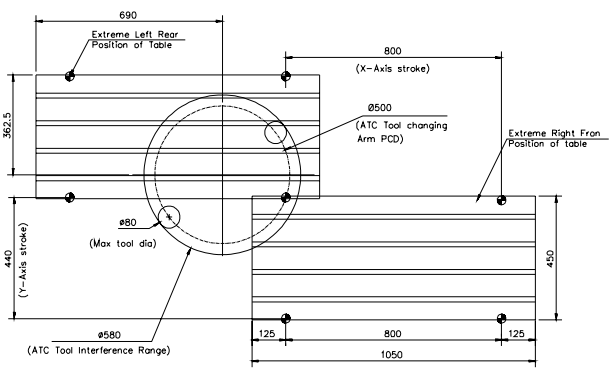
in mm

JV Kraft

Ø 80 mm Cutter Tool



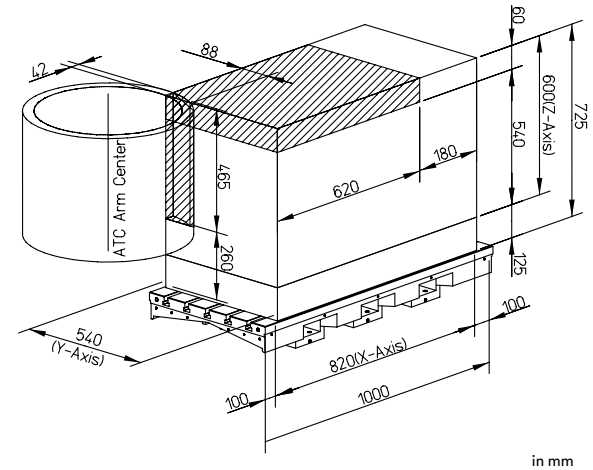
in mm



in mm

JV 80

Ø 80 mm Cutter Tool



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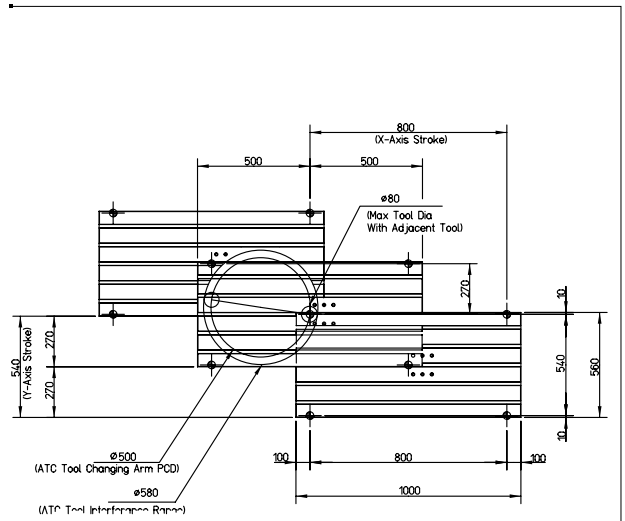
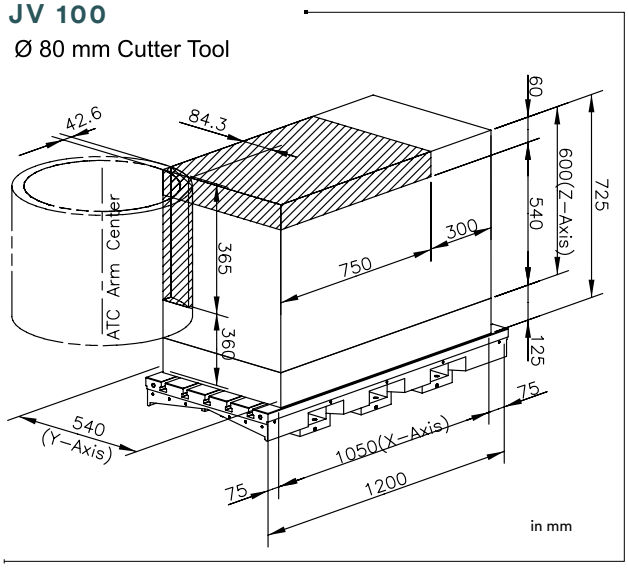


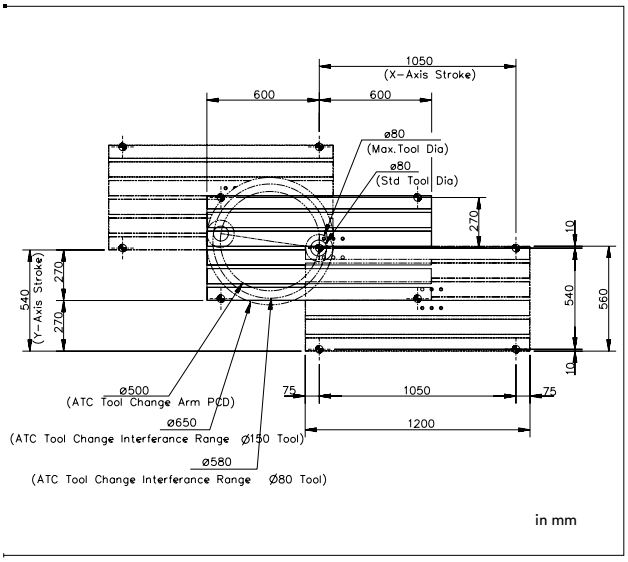
in mm

JV 100

Ø 80 mm Cutter Tool



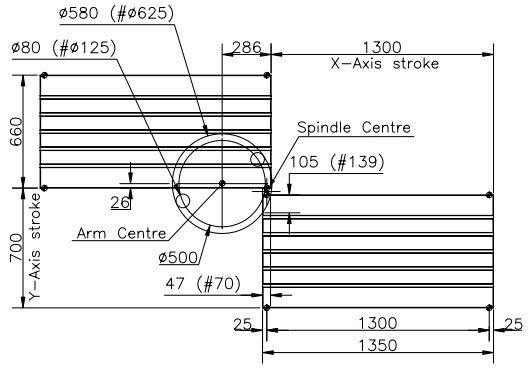
in mm



in mm

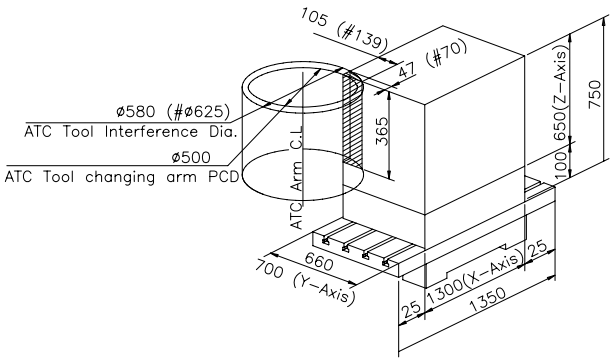
JV 130

Ø80mm (#Ø125mm) cutter



in mm

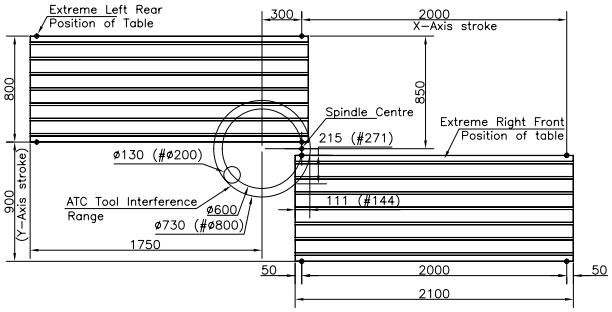
Ø80mm (#Ø125mm) cutter



in mm

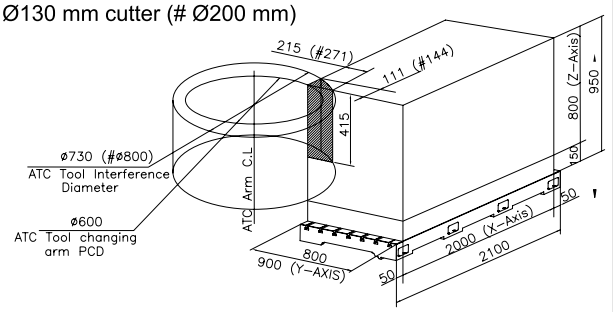
JV 200

Ø130mm cutter (#Ø200mm)



in mm

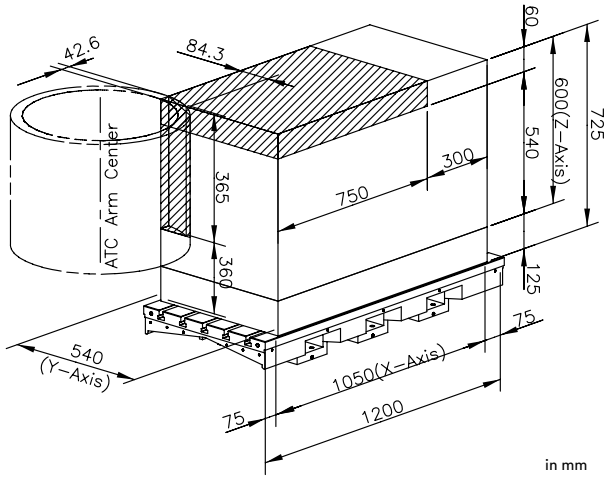
Ø130 mm cutter (# Ø200 mm)



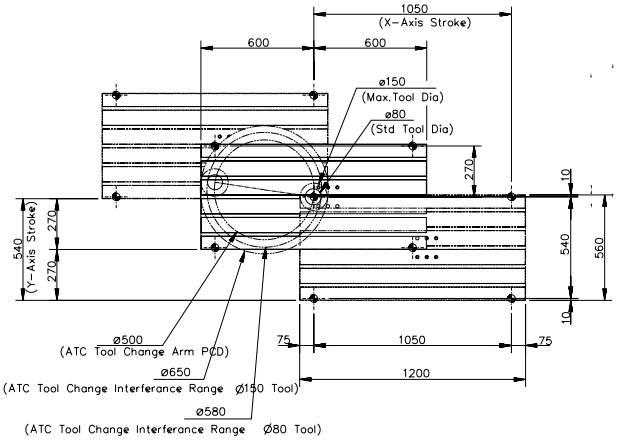
in mm

JV 55 Twin

Ø 80 mm Cutter Tool



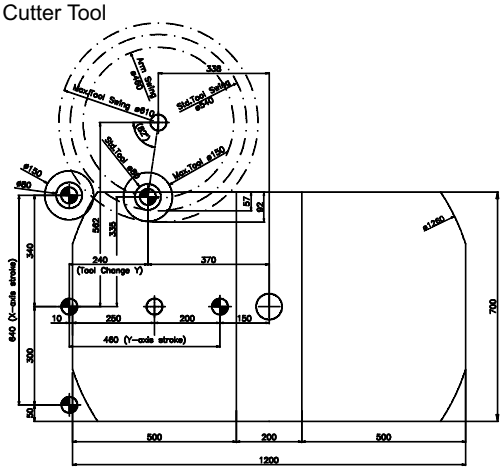
in mm



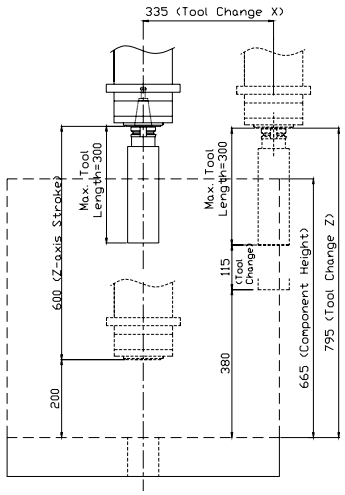
in mm

JVM 60

Ø 80 mm Cutter Tool



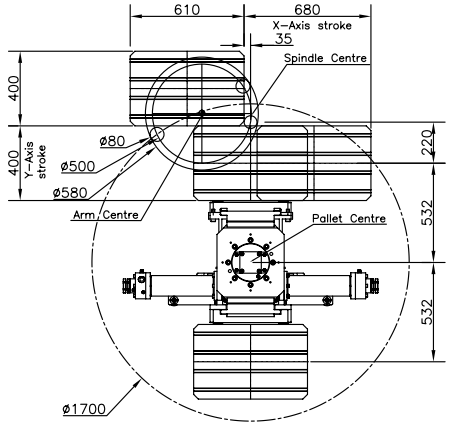
in mm



in mm

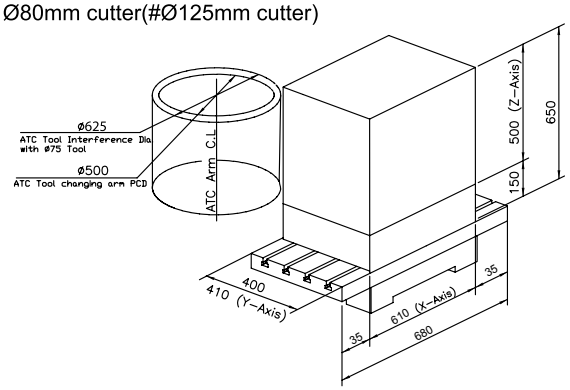
JV 65

Ø80mm cutter(#Ø125mm cutter)



in mm

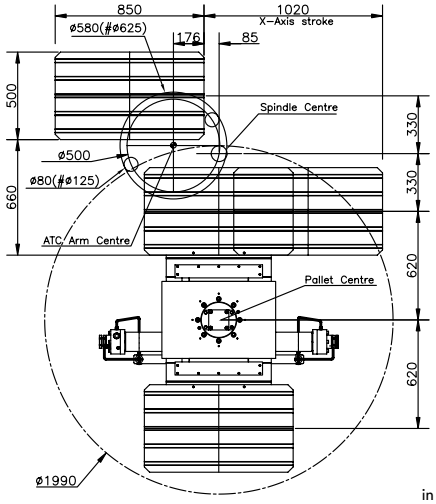
Ø80mm cutter(#Ø125mm cutter)



in mm

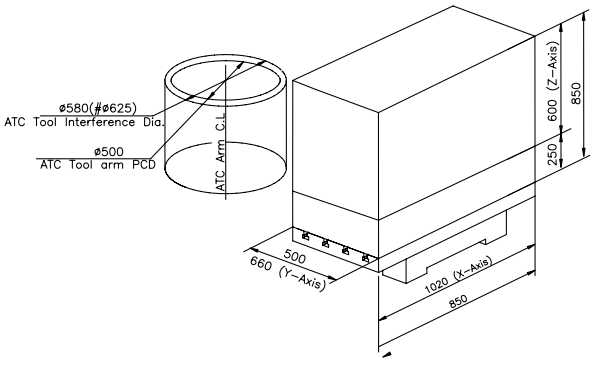
JV 105

Ø80mm cutter(#Ø125mm cutter)



in mm

Ø80mm cutter(#Ø125mm cutter)



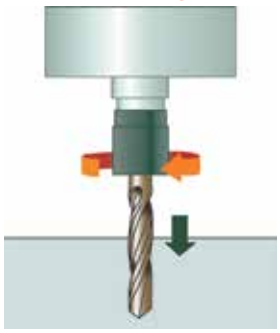
in mm

MATERIAL REMOVAL RATE

FACE MILLING

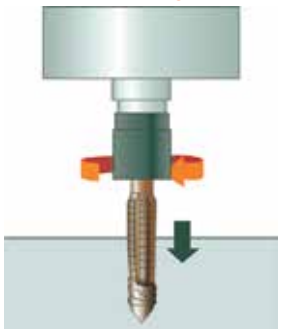
Material : Steel

DRILLING



Material : Steel

TAPPING



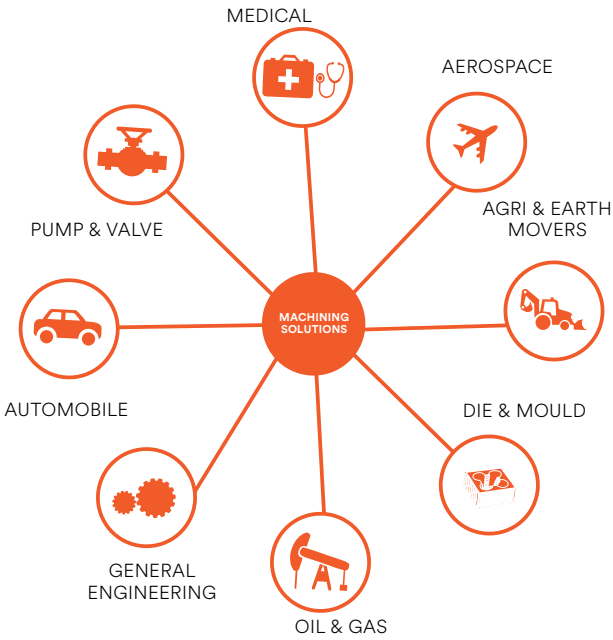
Material : Steel

Material Removal rate on steel S45

	Model	Unit	JV 30 NEO	JV 40	JV 55/ JV Kraft	JV 80	JV 100	JV 130	JV 200	JVM 60	JV 65 RAPC	JV 105 RAPC
Milling	Spindle Power	kW	3.7 / 5.5	5.5 / 7.5	7.5 / 11	11 / 15	11 / 15	11/16.5	18.5/22	7.5 / 11	7.5 / 11	11/15
	Cutter Size	(mm)	Ø63 x 5z	Ø80 x 6z	Ø80 x 6z	Ø80 x 6z	Ø80 x 6z	Ø80 x 6z	Ø100 x 10z	Ø80 x 6z	Ø80 x 6z	Ø80 x 6z
	Speed	(rpm)	1500	1200	1000	1300	1000	1200	800	1000	1000	1000
	Feed	(mm/ min)	1000	1000	1000	1000	1000	1200	1500	1000	1000	1000
	Width of cut	(mm)	48	60	60	60	60	60	80	60	60	60
	Depth of cut	(mm)	1.75	2.5	3	6	6	3.8	5	3	3.5	4
	Capacity	(cc/ min)	84	150	180	360	360	274	600	180	210	240
	Spindle Load	(%)	115	116	114	90	82	97	110	163	161	110
Drilling	Drill Size	(mm)	Ø25 x 2z	Ø25 x 2z	Ø50 x 2z	Ø50 x 2z	Ø50 x 2z	Ø50 x 2z	Ø74 x 2z	Ø40 x 2z	Ø50 x 2z	Ø50 x 2z
	Speed	(rpm)	1500	1200	1000	1200	1000	1000	650	1200	1000	1000
	Feed	(mm/ min)	225	180	100	150	150	120	100	120	100	120
	Spindle Load	(%)	114	103	121	47	69	82	101	106	174	110
Tapping	Tap Size	(mm)	M16 X 2	M 20 X 2.5	M27 X 3	M30 X3.5	M30 X3.5	M27 x 3	M42 x 4.5	M 24 X 3	M20 x 2.5	M27 x 3
	Speed	(rpm)	300	320	180	160	160	176	150	200	320	235
	Feed	(mm/ min)	600	800	540	560	560	528	675	600	800	705
	Spindle Load	(%)	61	106	99	80	76	88	85	85	86	88

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

We Cater to ALL INDUSTRY Segments



AUTOMOBILE 2 WHEELER


Connecting Rod


Brake Disc


Axle Stub


Greeve Piston


Intermediate Shaft


CAM Shaft

4 WHEELER


Differential Case


Flywheel


Axle arm


Planet Carrier


Brake Drum


Impeller

DIE MOLD


Bottle Mold


Top Finisher


Tetron Hose


Shoe mold


Copper Electrode


Forging Die

PUMP & VALVE


Valve


Compressor Valve Plate


Water Pump Housing


Valve Body


Collar


Mounting Flange

ACCESSORIES AND SPECIAL FEATURES

Built in Motor Spindle

12000 RPM

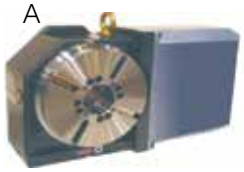
15000 RPM

20000 RPM

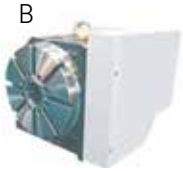
Major Specifications			
RPM	12000	15000	20000
Mounting direction	Vertical	Vertical	Vertical
Tool Shank	BBT 40	BBT 40	BBT 40
Motor Power	17 kW	17 kW	24.8 kW
Front bearing dia	70 mm	70 mm	70 mm
Lubrication method	Oil - Air	Grease	Grease

ROTARY TABLE

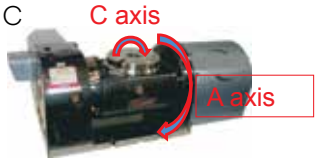
A



B



C



CHIP CONVEYOR / OIL SKIMMER

PROBE

(Tool measurement and component measurement probe)

AUTO DOOR

- Pneumatic type Auto door
- Operated through Program or two way switch

COOLANT FILTERATION SYSTEM

- Inline filtration system
- Duplex bag filter including hydrocyclone system
- Built-in filtration system (with high pressure coolant pump – imported)

Pictures shown are only for reference and may vary on case to case basis

HIGHLY BUILD QUALITY - ENHANCED PERFORMANCE

JV Series Spindle Natural Frequency Measurements

- To measure natural frequency of spindle system
- To measure spindle bearing and assembly condition

Tool Clamping Force for JV Series Spindle

- To measue and control variance in tool clamping force in spindle to which ensures withstanding force generated by cutting resistance

BALL BAR TEST

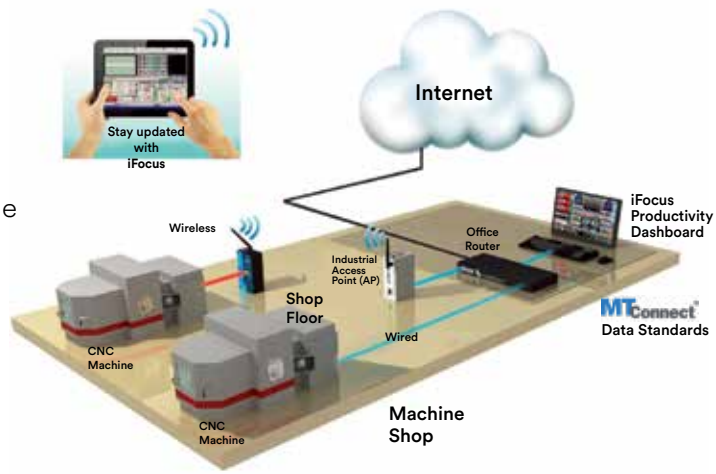
LASER CALIBRATION

NAS CUTTING TEST

i FOCUS
Gateway to IOT

INTERNET OF THINGS (IOT)

i-Focus monitoring provides realtime dashboards that display data the way we want to see it. Customized by roll, machine type and process visibility into asset (Machines) performance and shopfloor process. Monitors data from any machine regardless of manufactures, age and CNC.



BENEFITS

- Increased utilization and efficiency
- Optimize down time
- Transparency and go digital

Note : Specifications and colours are subject to change without prior notice. Accessories shown may not be part of standard equipment.

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