



HEAVY DUTY DOUBLE COLUMN MACHINING CENTER

DCM-14 / 17 / 19 / 21A Series

CNC-TAKANG

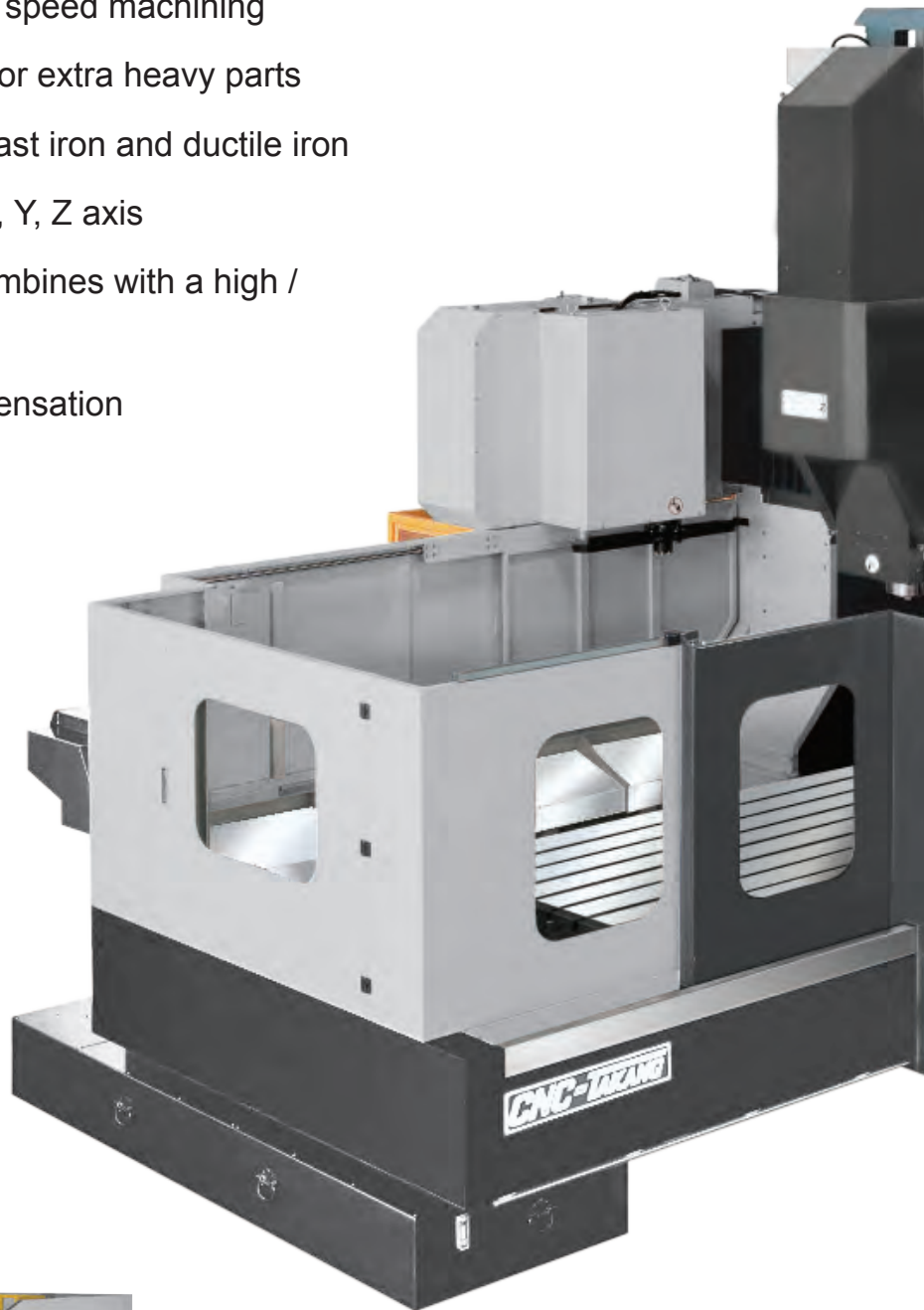
CNC-TAKANG CO., LTD.
MANUFACTURER & EXPORTER

DCM-SERIES

DCM-14 / 17 / 19 / 21A Series

■ FEATURES:

- Capable of heavy cutting and high speed machining
- Excellent for precision machining for extra heavy parts
- Built with high quality Meehanite cast iron and ductile iron
- Roller type linear guide ways on X, Y, Z axis
- Direct-drive high speed spindle combines with a high / low speed gearbox
- Accumulator type automatic compensation balancing system on head stock



Full Splash Safety Guard (Option)

■ ROLLER TYPE LINEAR WAYS ON THREE AXES

All major structural parts are manufactured from high quality cast iron with tempering treated to relieve stress, ensuring maximum material stability without deformation.

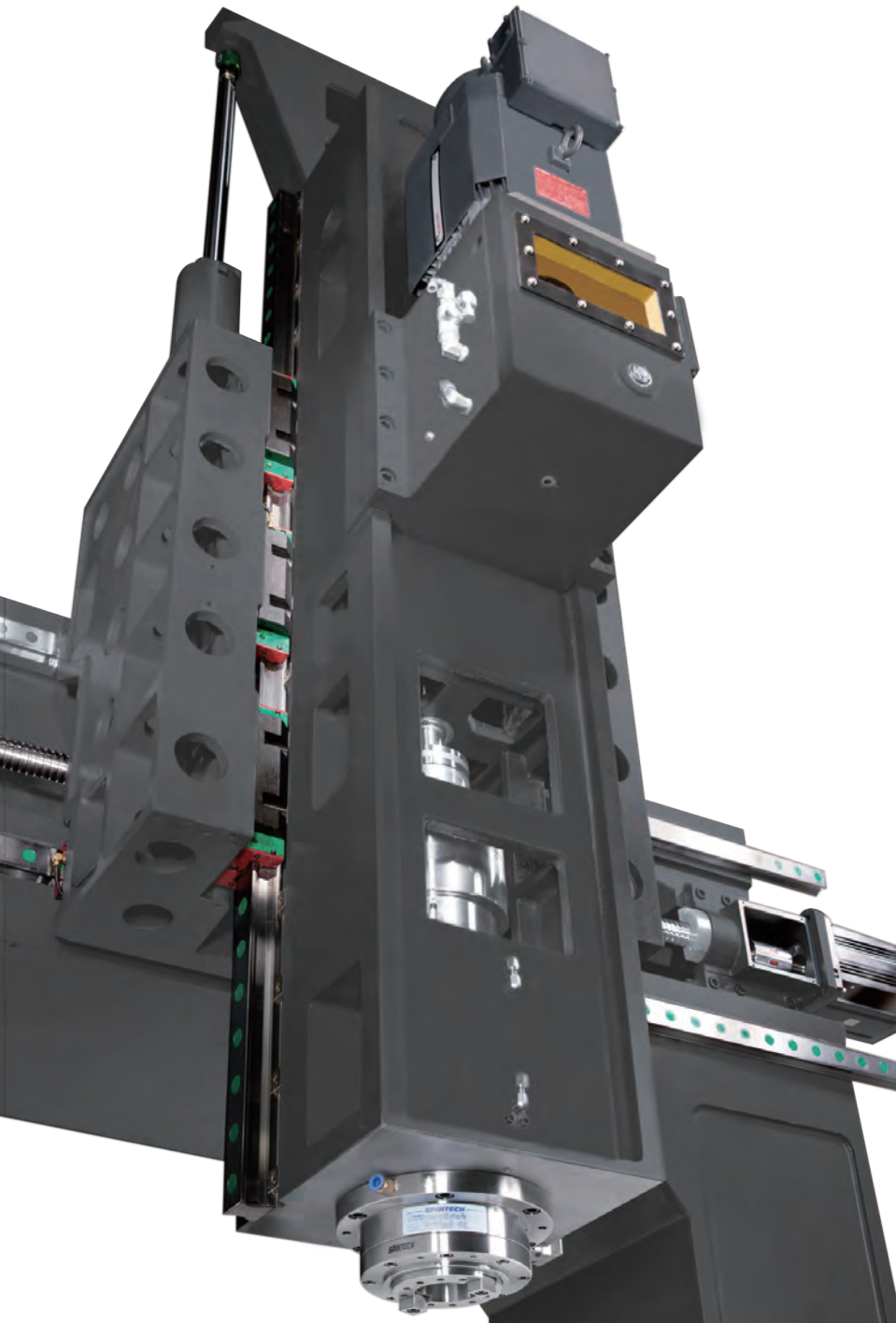
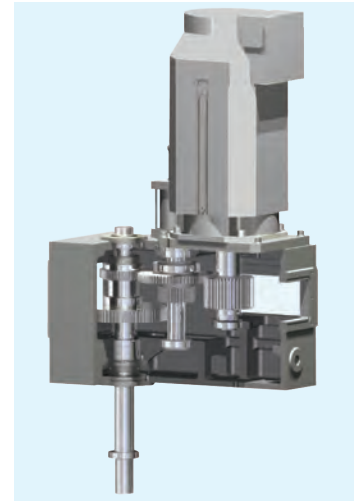
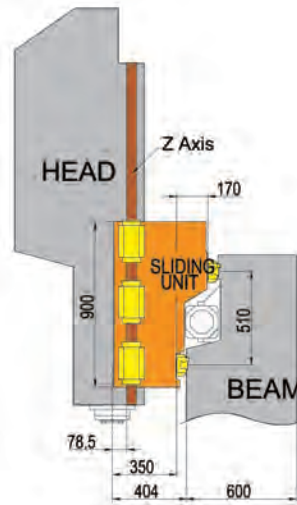
Extra heavy base complete support of table and resists heavy load without deformation.

X, Y, Z axes are mounted with roller type linear ways combined with extra wide between ways for assured stability.



■ RIGID SPINDLE HEAD

- The spindle head is a box-type construction that increases stability when performing heavy loading.
- The linear ways on Z axis are specially designed with side layout to upgrade rigidity of the spindle head.



■ GEAR BOX

- The spindle running is transmitted through a gear box, making the machine excellent for heavy cutting applications.
- Wide spindle speed range from 10 to 6,000 rpm permit the machine to perform heavy cutting and fine finishing.
- All gears and bearings in the gear box are oil-bath lubrication.

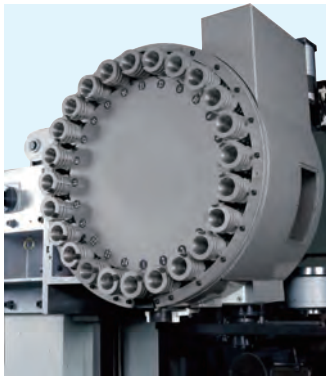
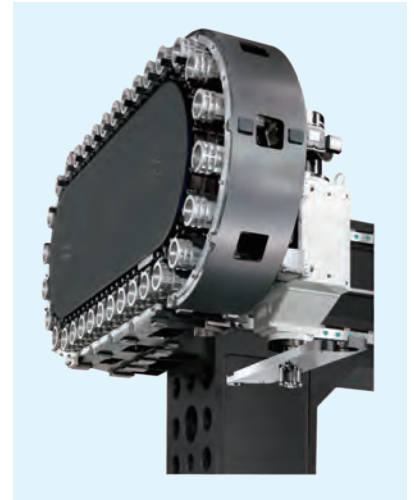
■ 32 TOOLS CHAIN TYPE MAGAZINE (STANDARD)

The magazine is driven by a precision cam, featuring fast and accurate tool positioning.

Tool selection is bi-directional and random for fast tool change.

The magazine accepts ISO 50 tool shank.

The magazine is separately mounted from the cutting area combined with a protection door to prevent tools contamination from chips or coolant.

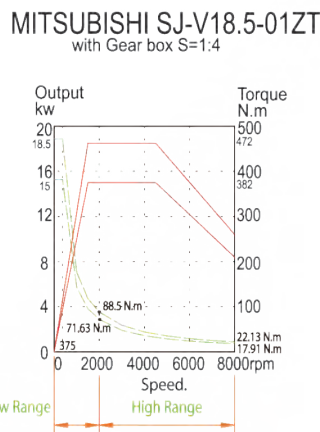
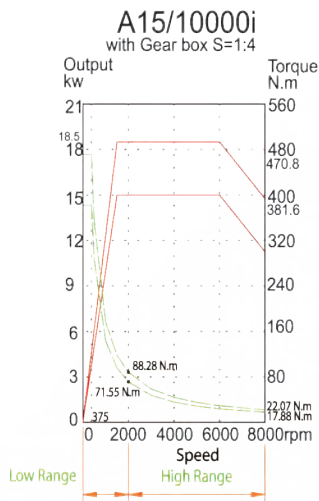


■ 24 TOOLS ARM TYPE MAGAZINE (OPTIONS)

The magazine is driven by a precision cam, featuring fast and accurate tool positioning.

Tool selection is bi-directional and random for fast tool change.

The magazine accepts ISO 50 tool shank.

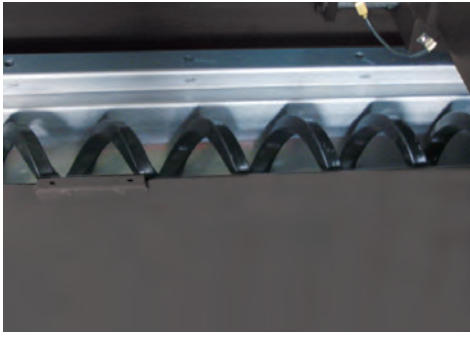


Spindle

■ CHOICE OF VARIOUS MILLING HEADS These Milling Heads are Optional



DCM-14 / 17 / 19 / 21A Series



**Screw Type Conveyor
(Standard)**



**Chain Type Conveyor
(Optional)**



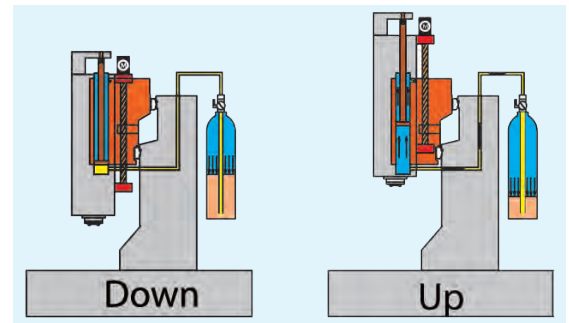
Nitrogen Canister

■ TWO SCREW TYPE CHIP CONVEYOR ON BASE

There are two screw type chip conveyor provided at right and left side of the base. During cutting, the chips are delivered through these chip augers to a chip conveyor for exhausting chips outside the machine.

■ PNEUMATIC BALANCE ON Z-AXIS

The Z-axis movement is counter-balanced through a pneumatic counter-balance system. An accumulator is equipped in the air circuit, ensuring fast and stable movement of Z-axis.



Laser Inspection



Right Angle Test on X And Y Axes

■ ACCURACY

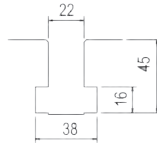
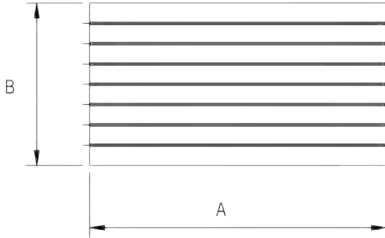
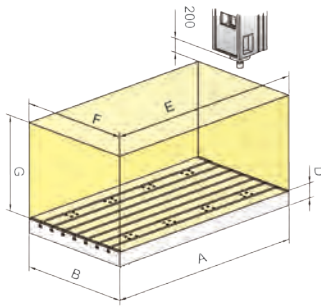
Machine accuracy meets ISO 10791, VDI 3441, ISO 230, JIS B6388 and ASMEB5 standards.

Standard	ISO 10791-4		CNC-TAKANG
	Axis Travel > 1250mm < 2000mm		
Tolerances			
Bi-directional Positioning	A	0.042	0.008mm
Bi-directional Repeatability	B	0.020	0.008mm

JIS B6336-4 shows the same value as ISO Standard:
P value of VDI / DGQ3441 is equivalent to A of ISO 10791-4, and PS is equivalent to R All values shown above are measured for machine in good air conditioned environments.



Ball Bar Inspection



WORK RANGE / TABLE SIZE

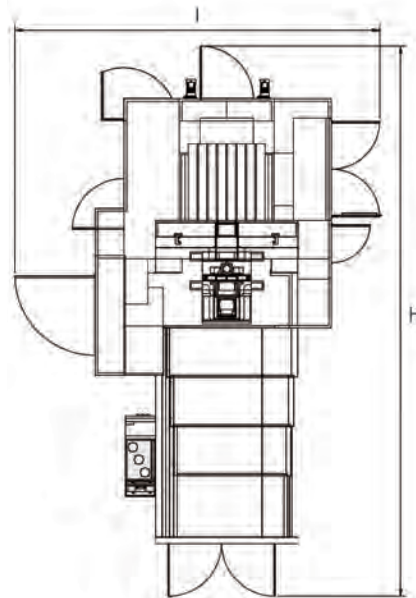
	A	B	C	D	E	F	G
DCM-1417	1700	1200	150	150	1700	1200	900
DCM-1422	2200	1200	150	150	2200	1200	900
DCM-1432	3200	1200	150	150	3200	1200	900
DCM-1442	4200	1200	150	150	4200	1200	900

DCM-1722	2200	1500	150	150	2200	1500	900
DCM-1732	3200	1500	150	150	3200	1500	900
DCM-1742	4200	1500	150	150	4200	1500	900

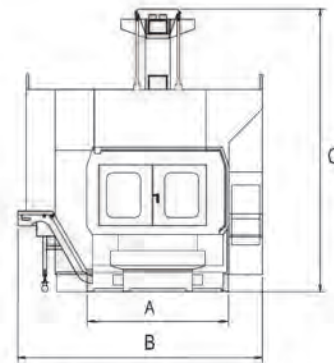
DCM-1922	2200	1700	150	150	2200	1700	900
DCM-1932	3200	1700	150	150	3200	1700	900
DCM-1942	4200	1700	150	150	4200	1700	900

DCM-2132A	3200	1700	150	150	3200	1700	900
DCM-2142A	4200	1700	150	150	4200	1700	900

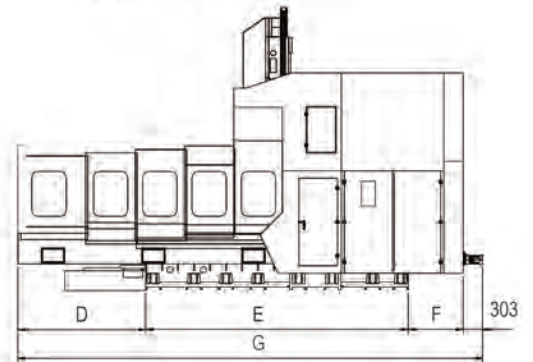
FLOOR SPACE



TOP VIEW



FRONT VIEW



SIDE VIEW

	A	B	C	D	E	F	G	H	I
DCM-1417	2150	3720	4420	710	4100	660	5800	7025	4150
DCM-1422	2150	3720	4420	860	4100	735	6025	7250	4150
DCM-1432	2150	3720	4420	860	6100	840	8130	9355	4150
DCM-1442	2150	3720	4420	950	8100	930	10310	11535	4150

DCM-1722	2225	5150	4420	840	4100	820	6090	7260	5310
DCM-1732	2225	5150	4420	860	6100	840	8130	9300	5310
DCM-1742	2225	5150	4420	950	8100	930	10310	11480	5310

DCM-1922	2225	5150	4420	840	4100	820	6090	7260	5310
DCM-1932	2225	5150	4420	860	6100	840	8130	9300	5310
DCM-1942	2225	5150	4420	950	8100	930	10310	11480	5310

DCM-2132A	2875	5150	4420	860	6100	840	8130	9700	5310
DCM-2142A	2875	5150	4420	950	8100	930	10310	11880	5310

DCM-14 / 17 / 19 / 21A Series

SPECIFICATIONS

MODEL	DESCRIPTION	DCM 14 Series			
		1417	1422	1432	1442
TABLE	Table size	1700 x 1200 mm	2200 x 1200 mm	3200 x 1200 mm	4200 x 1200 mm
	T-Slot (W x D x N)	22 x 150 x 7 mm			
	Max. Table Load	5000 kgs			8000 kgs
TRAVEL	Travel ranges (X x Y x Z)	1700 x 1400 x 900 mm	2200 x 1400 x 900 mm	3200 x 1400 x 900 mm	4200 x 1400 x 900 mm
	Spindle nose to table surface	160 ~ 1060 mm (OPT. Z = 1100, 260 - 1360)			
	Spindle center to column	404 mm			
	Distance between columns	1400 mm			
SPINDLE	Tool shank & pull stud	ISO 50			
	Spindle inner diameter	100 mm			
	Spindle speed gear	8000 rpm			
	Draw bar force	1800 con / 30 min kw			
	Main motor	15 / 18.5 con / 30 min kw			
FEED	Rapid Feed Rate (X / Y / Z)	20 / 20 / 20 m / min	16 / 20 / 20 m / min	16 / 20 / 20 m / min	12 / 20 / 20 m / min
	Feed rate (X / Y / Z)	10000 mm / min			
	MITSUBISHI	HF703 7.0 kw			
	FANUC	α 30 / 3000i 7.0 kw			
	SIEMENS	1FK7 103 7.0 kw			
	FAGOR	FXM75.20 7.0 kw			
	HEIDENHAIN	QSY190D 9.6 kw			
ATC	ATC type	Disk / Chain			
	CAM type	ARM			
	Tool selection (Bi-direction)	Random			
	Tool storage capacity	24 / 32			
	Max. tool diameter	115 mm / 127 mm (160 mm / 250 mm)			
	Max. tool length	350 mm			
	Max. tool weight	20 kgs			
MISCELLANEOUS	Air requirement	6 kg / cm ²			
	Hydraulic requirement	60, 40 kg / cm ² , L			
	Voltage	220			
	Power requirement	50 KVA			
	Coolant tank capacity	900 L			
	Machine weight	15500 kgs	16000 kgs	17000 kgs	18000 kgs
	Machine height	4500 mm			
	Floor space (L x W)	5800 x 4150 mm	6090 x 4150mm	8130 x 4150 mm	10310 x 4150 mm

※THE SPECIFICATIONS ARE SUBJECT TO CHANG WITHOUT PRIOR NOTICE.

■ STANDARD ACCESSORIES

1. Air blast through spindle
2. Air blast work piece (nose)
3. Coolant flushing system
4. Automatic lubrication system
5. Work light
6. Operation status light
7. Screw type chip conveyor & Chain type conveyor
8. Chain type 32-tool ATC
9. Gear head
10. Cooling system
11. Z axis pneumatic balance system
12. Air gun/water gun
13. MPG hand wheel
14. Heat exchanger
15. RS-232 interface
16. Rigid tapping
17. Spindle oil cooler
18. Adjusting tools and box
19. Leveling bolts and pads
20. Operation and programming manual
21. Semi-full splash safety guard

■ OPTIONS

1. Transformer
2. Full splash guard
3. Coolant through spindle
4. Linear scales
5. Auto tool length measurement
6. Auto work piece measurement
7. Manual universal head (90 degree)
8. Auto universal head (90 degree)
9. Rotary table

SPECIFICATIONS

MODEL	DESCRIPTION	DCM 17 Series			DCM 19 Series			DCM 21 Series		
		1722	1732	1742	1922	1932	1942	2122A	2132A	2142A
TABLE	Table size	2200 x 1500 mm	3200 x 1500 mm	4200 x 1500 mm	2200 x 1700 mm	3200 x 1700 mm	4200 x 1700 mm	2200 x 1700 mm	3200 x 1700 mm	4200 x 1700 mm
	T-Slot (W x D x N)	22 x 150 x 9 mm			22 x 150 x 11 mm			22 x 150 x 11 mm		
	Max. Table Load	8000 kgs	10000 kgs	12000 kgs	8000 kgs	10000 kgs	12000 kgs	8000 kgs	10000 kgs	12000 kgs
TRAVEL	Travel ranges (X x Y x Z)	2200 x 1700 x 900mm	3200 x 1700 x 900mm	4200 x 1700 x 900mm	2200 x 1900 x 900 mm	3200 x 1900 x 900 mm	4200 x 1900 x 900mm	2200 x 2100 x 900 mm	3200 x 2100 x 900 mm	4200 x 2100 x 900 mm
	Spindle nose to table	160~1060 mm (OPT. Z = 1100, 260~1360)			160~1060 mm (OPT. Z = 1100, 260~1360)			160~1060 mm		
	Spindle center to column	404 mm			404 mm			404 mm		
	Distance between columns	1900 mm			1900 mm			2100 mm		
SPINDLE	Tool shank and pull stud	ISO 50			ISO 50			ISO 50		
	Spindle inner diameter	100 mm			100 mm			100 mm		
	Spindle speed gear	8000 rpm			8000 rpm			8000 rpm		
	Draw bar force	1800 kgf			1800 kgf			2000 kgf		
	Main motor	15 / 18.5 con / 30 min kw			15 / 18.5 con / 30 min kw			15 / 18.5 / 30 min kw		
FEED	Rapid feed rate (X / Y / Z)	16 / 16 / 20 m / min	16 / 16 / 20 m / min	12 / 16 / 20 m / min	20 / 16 / 20 m / min	12 / 16 / 20 m / min	10 / 16 / 20 m / min	12 / 16 / 20 m / min	12 / 16 / 20 m / min	10 / 16 / 20 m / min
	Feed rate (X / Y / Z)	10000 mm / min			10000 mm / min			10000 mm / min		
	MITSUBISHI	HF703 7.0 kw			HF703 7.0 kw			HF703 7.0 kw		
	FANUC	α30 / 3000i 7.0 kw			α30 / 3000i 7.0 kw			α30 / 3000i 7.0 kw		
	SIEMENS	1FK7 103 7.0 kw			1FK7 103 5.37 kw			1FK7 103 7.0 kw		
	FAGOR	FXM75.20 7.0 kw			FXM75.20 7.0 kw			FXM75.20 7.0 kw		
	HEIDENHAIN	QSY190D 9.6 kw			QSY190D 9.6 kw			QSY190D 9.6 kw		
ATC	ATC type	Disk / Chain			Disk / Chain			Disk / Chain		
	CAM type	ARM			ARM			ARM		
	Tool selection (Bi-direction)	Random			Random			Random		
	Tool storage capacity	24 / 32			24 / 32			24 / 32		
	Max. tool diameter	115 mm / 127 mm (160 mm / 250 mm)			115 mm / 127mm (160 mm / 250 mm)			115 mm / 127 mm (160 mm / 250 mm)		
	Max. tool length	350 mm			350 mm			350 mm		
	Max. tool weight	20 kgs			20 kgs			20 kgs		
MISCELLANEOUS	Air requirement	6 kg / cm ²			6 kg / cm ²			6 kg / cm ²		
	Hydraulic requirement	60 kg / cm ² , 40L			60 kg / cm ² , 40L			60 kg / cm ² , 40L		
	Voltage	220			220			220		
	Power requirement	50 KVA			50 KVA			50 KVA		
	Coolant tank capacity	900 L			900 L			900 L		
	Machine weight	21000 kgs	22500 kgs	24000 kgs	22000 kgs	23500 kgs	25000 kgs	23500 kgs	24000 kgs	25500 kgs
	Machine height	4500 mm			4500 mm			4500 mm		
	Floor space (L x W)	6090 x 5300 mm	8130 x 5300 mm	10310 x 5300 mm	6090 x 5300 mm	8130 x 5300 mm	10310 x 5300 mm	6090 x 5300 mm	8130 x 5300 mm	10310 x 5300 mm

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