

# MCV850 / 1100

VERTICAL  
MACHINING  
CENTER

LONG CHANG MACHINERY CO., LTD.

- MEEHANITE cast iron for all major machine parts.
- Expert and precision scraping.
- 3-Axis ball screws preload.
- Automatic central lubrication system.
- Rigid 8000 rpm spindle unit.
- High efficiency.
- Excellent and stable accuracy.
- Fully enclosed splashguard for elegant outlook



# NEW MACHINING FOCUS

VERTICAL MACHINING CENTER

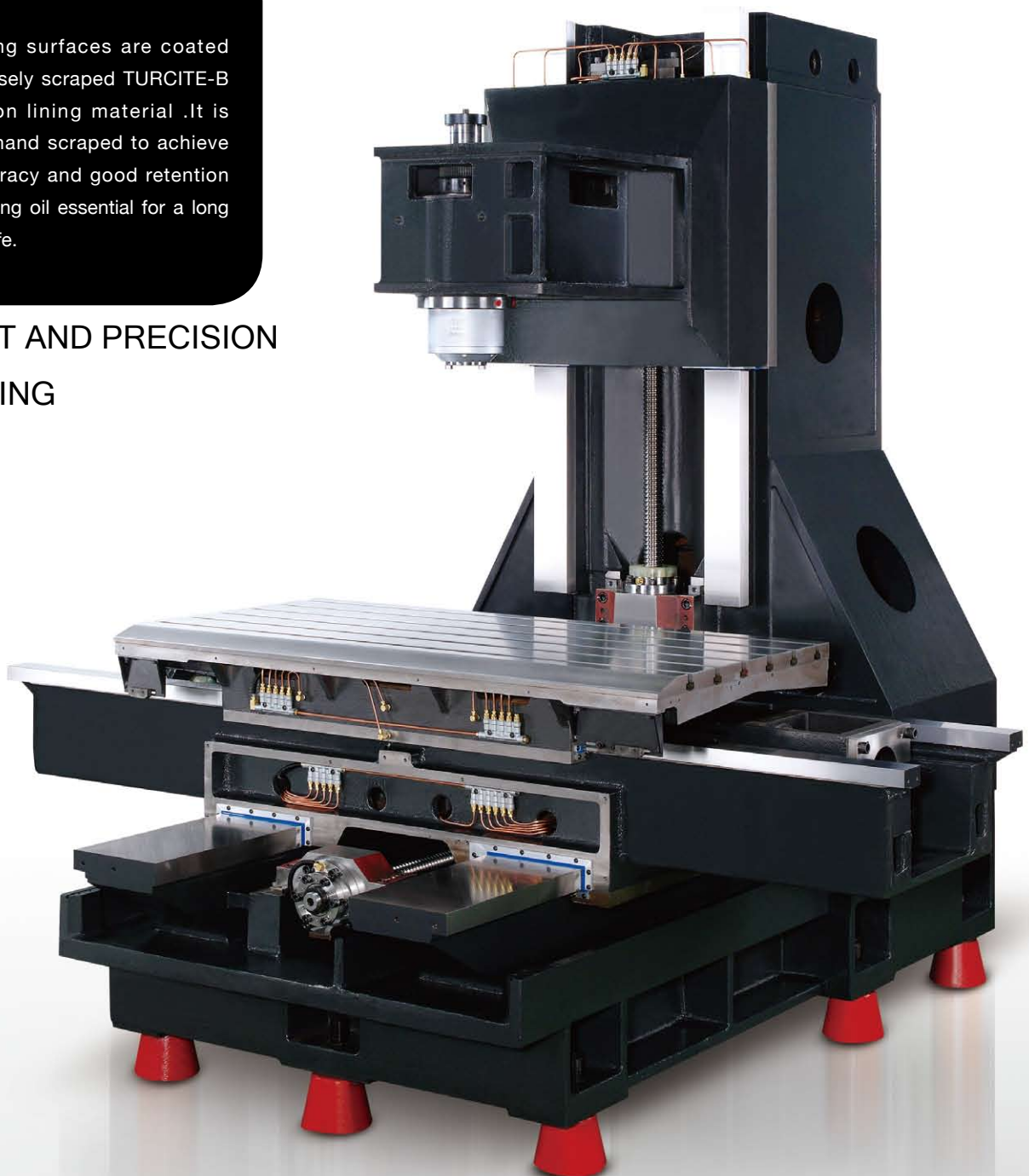


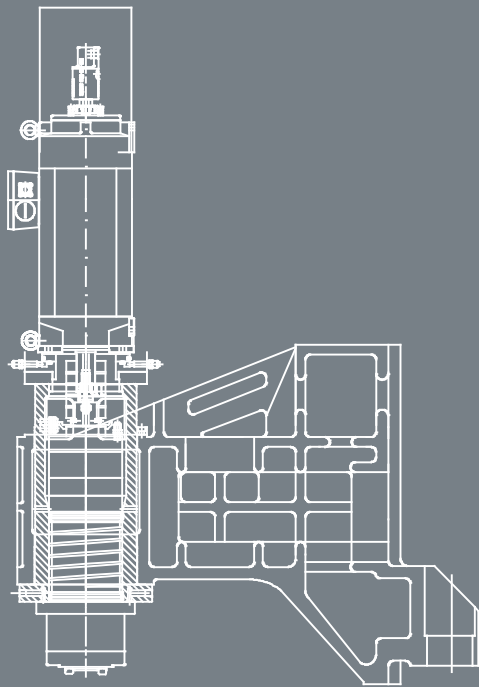
## HIGH RIGIDITY CONSTRUCTION

The sliding surfaces are coated with precisely scraped TURCITE-B antifriction lining material. It is carefully hand scraped to achieve high accuracy and good retention of lubricating oil essential for a long accurate life.

## EXPERT AND PRECISION SCRAPING

- MEEHANITE cast iron for all major machine parts.
- The major structural parts are scientifically rib reinforced and annealed to relieve stress for outstanding stability of material.
- Box type slideways with long lasting accuracy even under heavy cutting and high-speed machinery operation.
- Extra heavy design on column and base.
- The enhanced ribs in major construction parts provide the super rigidity and precise spindle for high-speed cutting.
- Top open front door design. Operator can get closer to table, which makes setup easier.





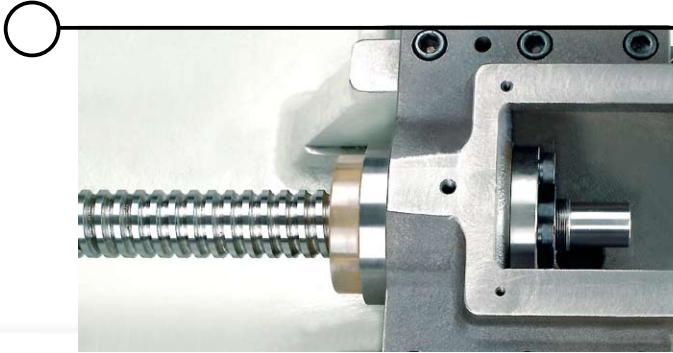
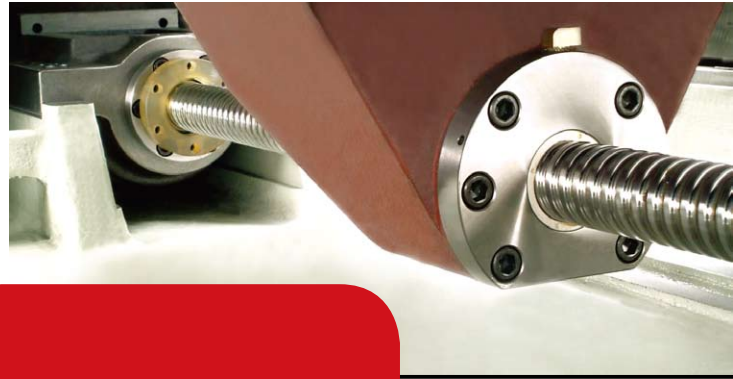
## OPTIONAL 10000 RPM DIRECT DRIVE SPINDLE

## STANDARD SPINDLE

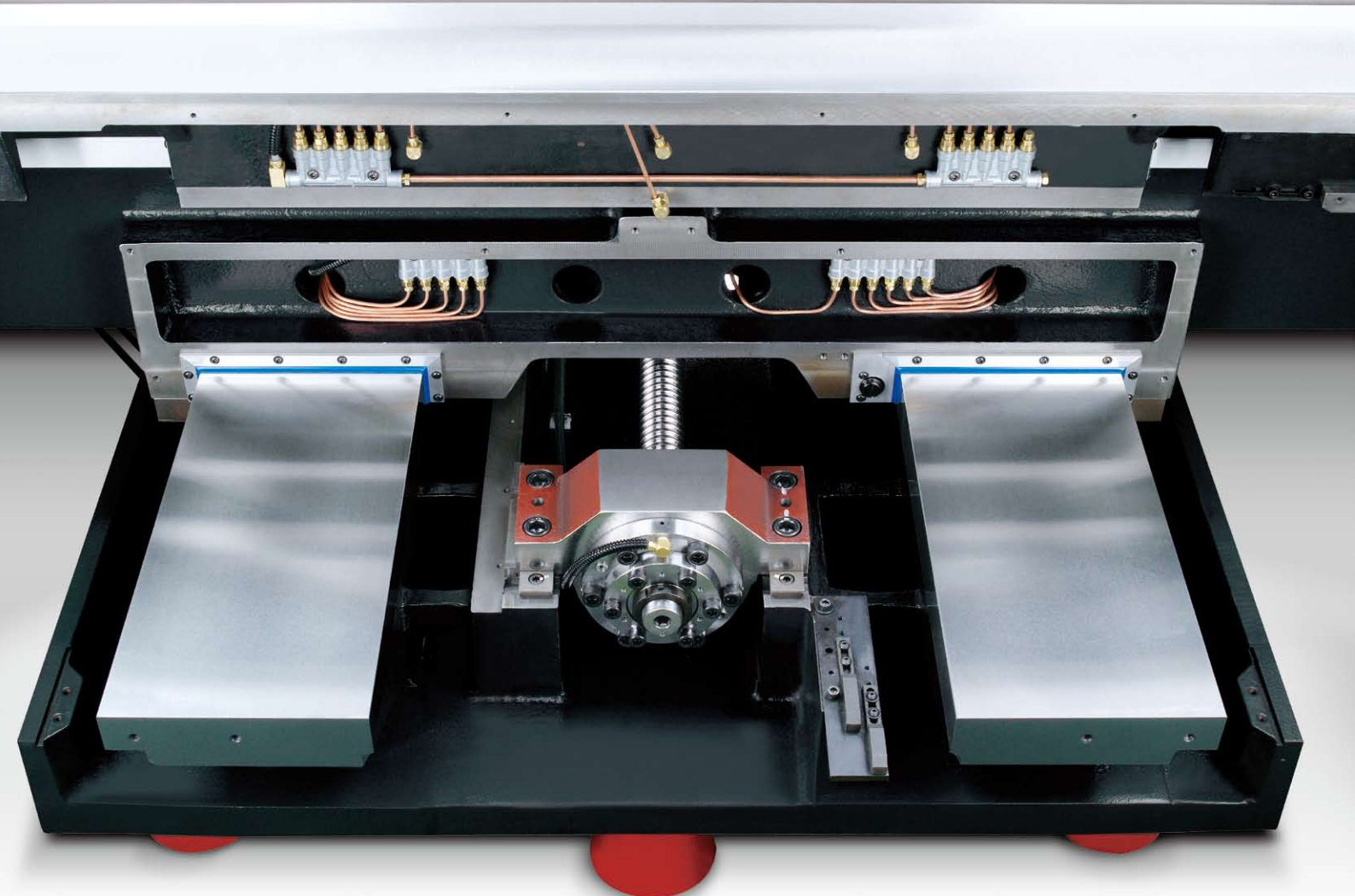
- Rigid 8000 rpm spindle unit
- Easy for after service
- High accuracy
- Cool jet around spindle
- Bearing size : 7014



- The ball screws are preload and directly driven with servo motors to absolutely eliminate backlash between bearings and ball screws exhibiting excellent feeding accuracy.
- All axes are with high precision C3 grade ball screws.
- Ball screws diameter X: 40 mm Y: Z : 45 mm.



3-AXIS BALL  
SCREWS  
PRELOAD



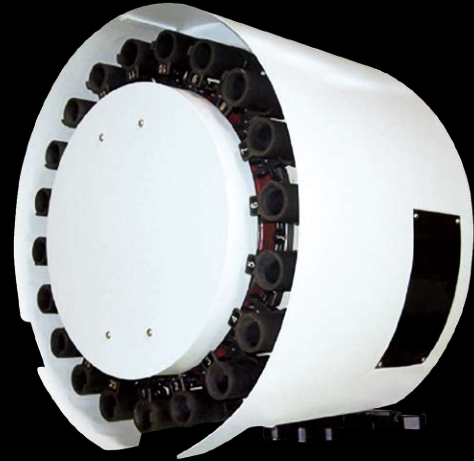
## EXCELLENT AND STABLE ACCURACY

- Double nut C3 class precise ball screws are used on all 3 axes along with pre-tensioned and supports to minimize backlash and to compensate for error caused by temperature differences in order to maintain positioning accuracy.
- For inspection of machine accuracy, we use HP laser and Ballbar system to ensure the quality before shipment.



## 24 TOOLS MAGAZINE (OPTION)

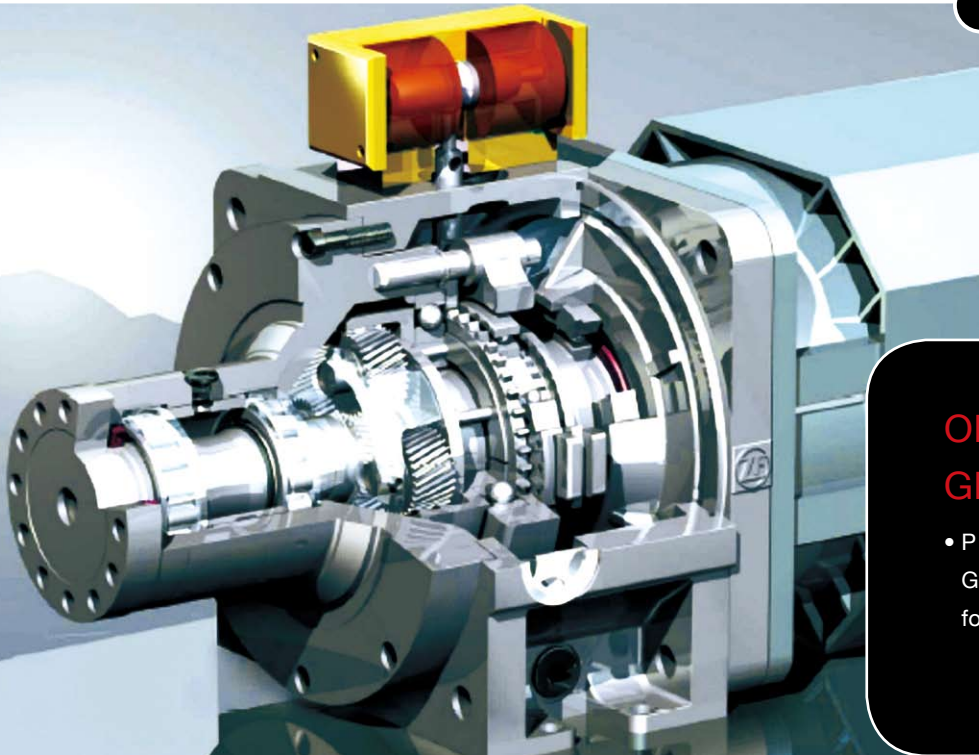
- Random tool selection, strongly provides stable quality and precision.



## AUTOMATIC TOOL CHANGE SYSTEM



- Armless type 20 tools ATC is operated by pneumatic system.



## OPTIONAL ZF GEAR BOX

- Precision and powerful German ZF brand gear box for heavy cutting solution.

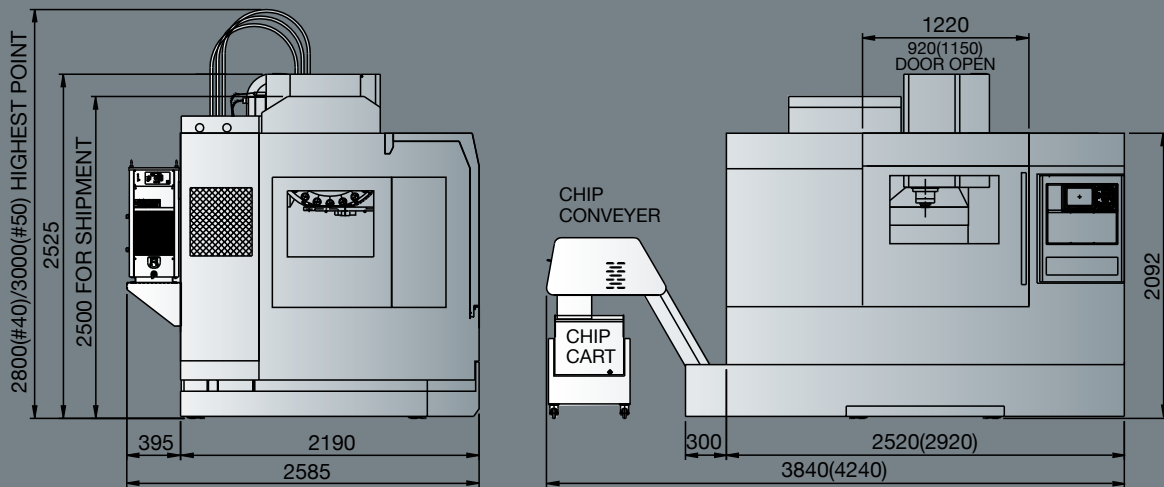


## IN-HOUSE MODERN MANUFACTURING FACILITIES

We have OKUMA 5-face machining center TOYODA ,TOSHIBA ,MITSUI SEIKI Horizontal machining centers with pallet changers,OKUMA CNC lathes,Wanner ,OKUMA and TOYODA CNC grinders for building the best machines ,whole critical and precision parts are done in house.

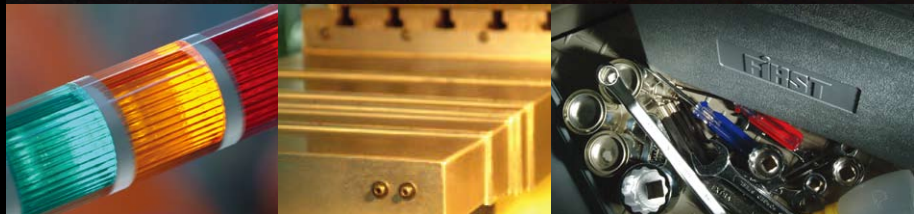


## MACHINE DIMENSION



## STANDARD ACCESSORIES

- Armless type ATC (20 Tools) (ISO 40)
- Arm type ATC (24 tools) (ISO 50)
- Fully enclosed splash guard
- Chip flush system
- Coolant system
- Coolant tank & chip collector
- Automatic lubrication system
- Telescopic covers
- Portable electronic handwheel (FANUC)
- Working light
- Alarm light
- Tool box
- Operator's manual and parts list
- Leveling bolts, pads and nuts



## OPTIONAL ACCESSORIES



- Arm type ATC (24 or 32 or 40 tools) (ISO 40)
- Arm type ATC (30 tools) (ISO 50)
- High-speed spindle 10000 rpm (ISO 40)
- Bigger spindle motor 11/15kW, 15/18kW (ISO 40)
- Spindle chiller
- Coolant through spindle system
- Air blow system for dry cutting
- Flat type chip conveyor
- 4th or 4+5th axis rotary table
- High precision linear scale
- Working piece measurement system
- Tool length measurement system
- Heat exchanger on electrical cabinet
- Power transformer
- CE (Safety door interlock)



Machine Specification	MCV850		MCV1100	
<b>Travel</b>				
X-Axis	850 mm (33.5")		1,100 mm (43.3")	
Y-Axis	600 mm (23.6")			
Z-Axis	560 mm (22.0")			
Spindle nose to table	100~660mm (3.9~25.9")			
<b>Table</b>				
Table size	1,050 x 600 mm (41.3 x 23.6")		1300 x 600 mm (51.1 x 23.6")	
Floor to table	855 mm (33.6")			
Max. table loading capacity	1,000 kgs (2,200Lbs)			
T-slot (number x width x pitch)	6 x 18 mm x 100 mm (6 x 0.7" x 3.9")			
Spindle center to column	652 mm (25.6")			
<b>Feed system</b>				
Rapid traverse speed	X / Y : 20 M/min (787.4"/min) , Z : 15 M/min (590.6/min)			
Feed motor (FANUC)	X : 1.8 kW (12 Nm) , Y : 3.0 kW (22 Nm) , Z : 4.2 kW (30 Nm)			
Ball screw diameter & pitch	X : 40 mm, Y/Z : 45 mm / 10 mm (0.39")			
Cutting feed rate	1~10,000 mm/min (0.04 ~ 393.7"/min)			
Type of transmission	Direct Drive			
<b>Spindle</b>				
Type of tool shank	ISO40 (BT / CAT / DIN 69871A)	ISO50 (BT / CAT / DIN 69871A)	ISO40 (BT / CAT / DIN 69871A)	ISO50 (BT / CAT / DIN 69871A)
Max. spindle speed	8,000 rpm / 10,000 rpm (Op)	6,000 rpm / 8,000 rpm (Op)	8,000 rpm / 10,000 rpm (Op)	6,000 rpm / 8,000 rpm (Op)
Spindle motor	7.5/11 kW / 11/15 kW (Op)	15/18.5 kW / 22 /26 kW (Op)	7.5/11 kW / 11/15 kW (Op)	15/18.5 kW / 22/26 kW (Op)
Type of transmission	Belt			
<b>ATC</b>				
Tool storage capacity	20T / 24 or 32 or 40T (Op)	24T / 30T / 40T (Op)	20T / 24 or 32 or 40T (Op)	24T / 30T / 40T (Op)
ATC type	Armless / Arm type (Op)	Arm type	Armless / Arm type (Op)	Arm type
Max. tool diameter	100 / 95 / 76 / 76mm ( 3.9 / 3.7 / 3 / 3" )	110 / 127 mm (4.3 / 5")	100 / 95 / 76 / 76mm ( 3.9 / 3.7 / 3 / 3" )	110 / 127 mm (4.3 / 5")
Without adjacent tool	180 / 160 / 127 / 127 mm ( 7.1 / 6.3 / 5 / 5" )	180 / 228 mm ( 7 / 9" )	180 / 160 / 127 / 127 mm ( 7.1 / 6.3 / 5 / 5" )	180 / 228 mm ( 7 / 9" )
Max. tool length	300 mm (11.8")	350 mm(13.8" )	300 mm (11.8")	350 mm(13.8" )
Max. tool weight	7 kg (15 Lbs)	15 kgs (33 Lbs)	7 kg (15 Lbs)	15 kgs (33 Lbs)
Tool changing time (Tool to Tool)	1.7 / 1.5 / 1.5 / 1.5 sec	2.5 sec	1.7 / 1.5 / 1.5 / 1.5 sec	2.5 sec
Tool changing time (Chip to Chip)	11 sec / 5.5 sec	7 sec	11 sec / 5.5 sec	7 sec
Method of tool selection	Armless type: By address code / Arm type : Random selection bi-directional magazine rotation			
Tool display	Yes			
Special tool management	Yes			
<b>Coolant system</b>				
Coolant tank size	486 L			
Coolant capacity	105 L / min			
Chip Flush capacity	105 L / min			
<b>Machine size</b>				
Machine height	2,600 mm (102.3")	2,900 mm (114.7")	2,600 mm (102.3")	2,900 mm (114.7")
Floor space	2,540 x 2,190 mm (100 x 86.2")		2,920 x 2,190 mm (115 x 86.2")	
weight	7,200 kgs (15840 Lbs)	7,500 kgs (16500 Lbs)	7,400 kgs (16280 Lbs)	7,700 kgs (16940 Lbs)
<b>Power source</b>				
Electrical power supply	25 KVA / 3 PH · 220V 50 / 60HZ			
Compressed air supply	6.0 kgf/cm <sup>2</sup> (85 psi) (0.6 MPa)			
<b>Controller</b>				
	FANUC / HEIDENHAIN / SIEMENS/ MITSUBISHI			

\* Specifications may different according to option accessories and are subject to change without notice.

Edition / A01



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