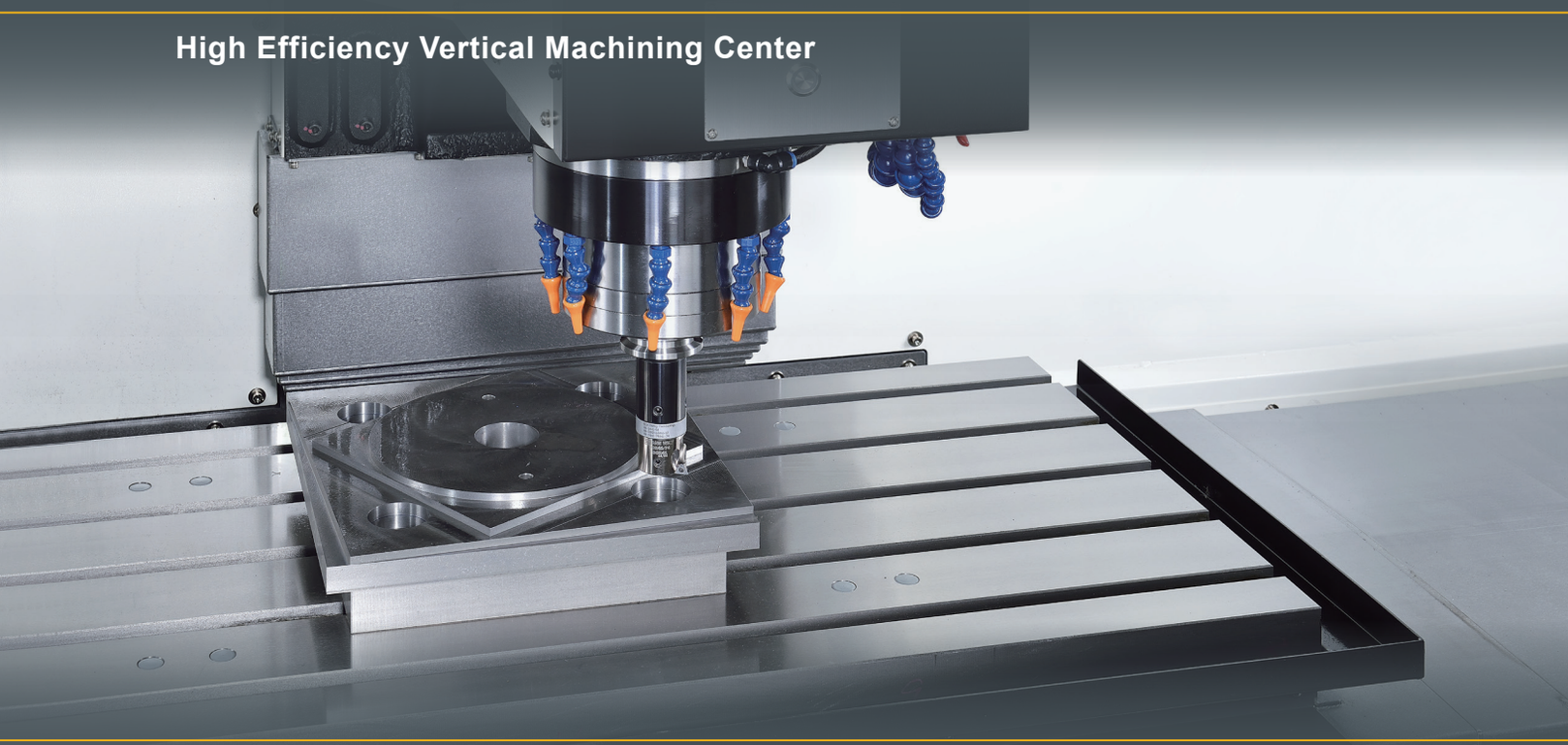
E5

High Efficiency Vertical Machining Center



JM PRECISION PRODUCTS, INC.

"Providing Profits Through Technology"

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(317)-823-9900

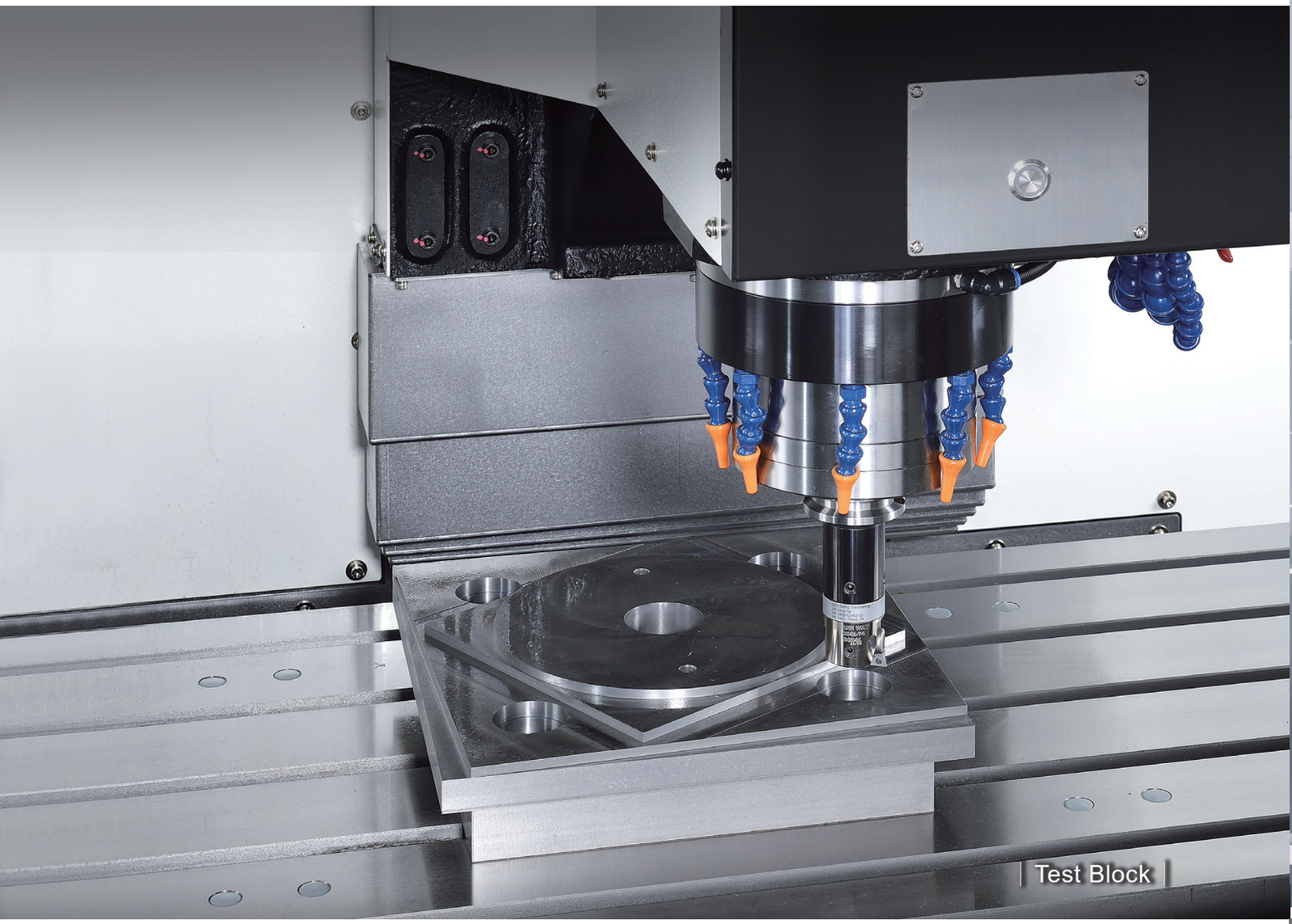
sales@jmppi.com

www.jmppi.com

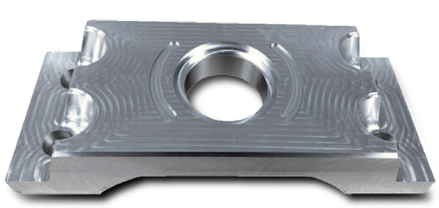
YCM®

Stable, Reliable and More Affordable Than Ever

E5, a high efficiency vertical machining center, with high productivity for various production needs, particularly in job shops.



Test Block

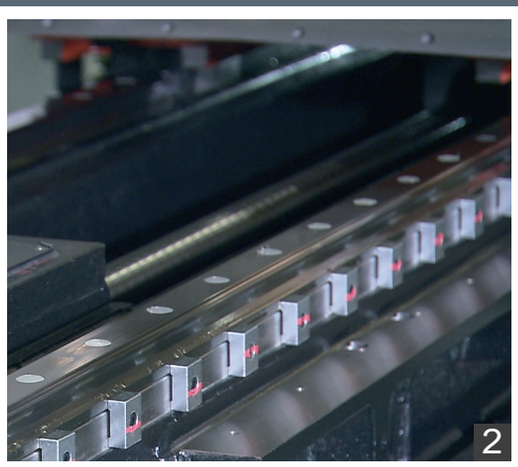


Job Shop

Job Shop

Job Shop


1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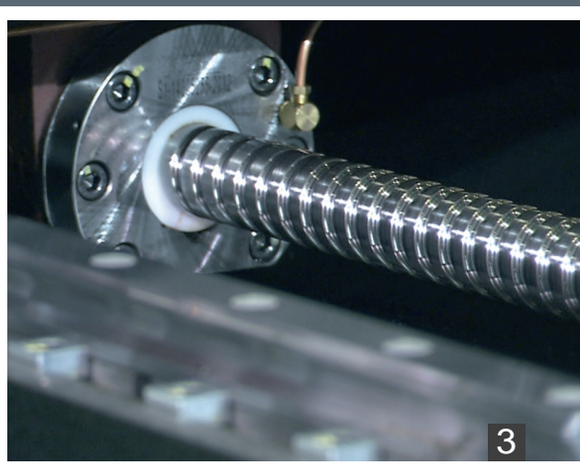

3

| 1. 10,000 rpm spindle with ceramic bearings design | 2. High rigidity ball type guideways on X/Y/Z axes |
| 3. High precision ball screws adopted on X/Y/Z axes |

Z 540 mm
21.26"

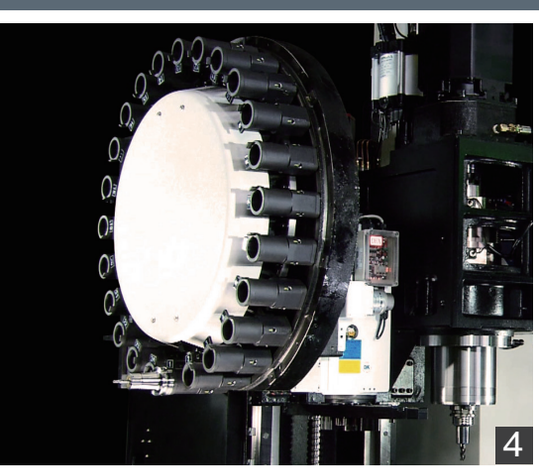
500kg
Max table load

X 1,020 mm
40.16"

Y 520 mm
20.47"

FEM
Finite Element Analysis

MEEHANITE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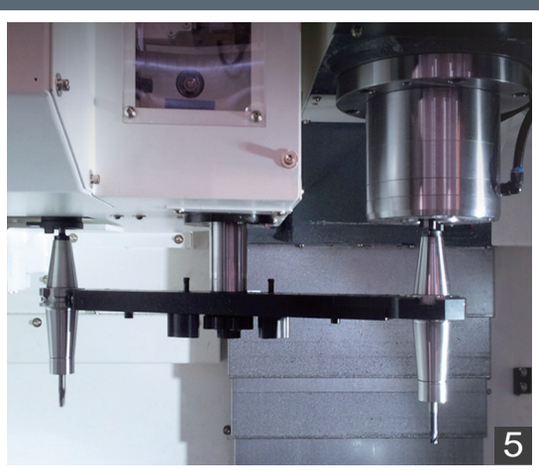
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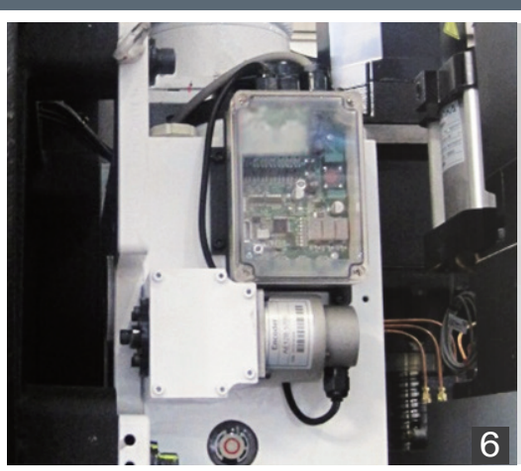
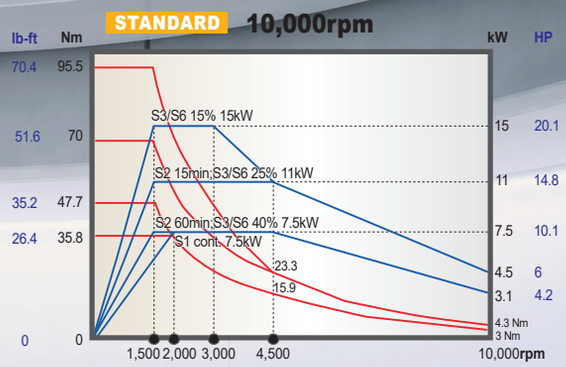

6

| 4. 24T for disk type tool magazine | 5. Auto tool change time (T-T): 1.8 sec. | 6. Absolute encoder ATC system |

Power Chart

POWER TORQUE



Cutting Capacity

BBT40 10,000rpm Fanuc System

FACE MILL S45C Steel

Material Removal Rate

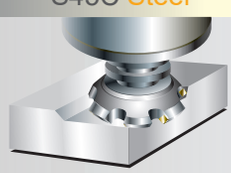
459 cc/min

Tool	ø63 mm x 5T
Spindle Speed	1,500 rpm
Feedrate	4,500 mm/min
Width of Cut	60 mm
Depth of Cut	1.7 mm

FACE MILL S45C Steel

Depth of Cut

5 mm

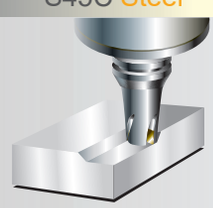


Tool	ø80 mm x 5T
Spindle Speed	600 rpm
Feedrate	450 mm/min
Width of Cut	60 mm

END MILL S45C Steel

Depth of Cut

6 mm

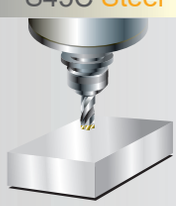


Tool	ø32 mm x 3T
Spindle Speed	500 rpm
Feedrate	225 mm/min
Width of Cut	32 mm

U-DRILL S45C Steel

Cutter Diameter

ø38 mm

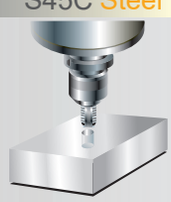


Tool	ø38 mm x 1T
Spindle Speed	1,500 rpm
Feedrate	150 mm/min
Depth of Cut	38 mm

TAP S45C Steel

Tapping

M20

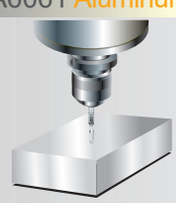


Tool	M20 x 2.5P
Spindle Speed	90 rpm
Feedrate	225 mm/min
Depth of Cut	20 mm

RIGID TAP A6061 Aluminum

Tapping

M1.2

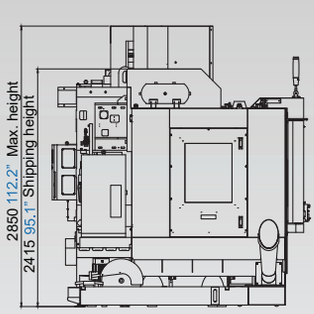


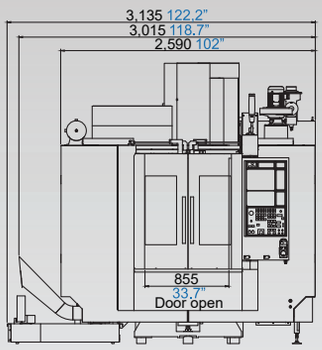
Tool	M1.2 x 0.25P
Spindle Speed	1,200 rpm
Feedrate	300 mm/min

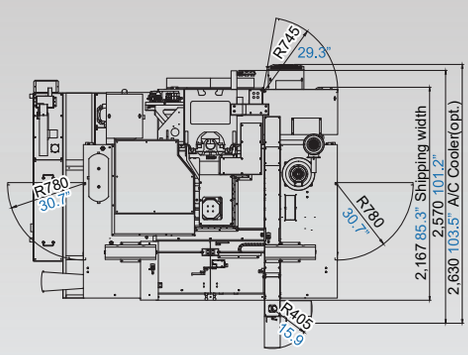
Note: Above cutting test was performed by E5 with 10,000 rpm spindle. Cutting test data for reference only.
All cutting tests are designed to demonstrate maximum machining capabilities without preserving tool life.

Dimensions

Unit: mm inch







MXP-200FA+

by FANUC

Communication Interface

RJ45 Ethernet
RS-232C
USB
CompactFlash Card

Excellent Vision Quality

10.4" LCD screen

Fine Surface Technology

1. AICC II+, high precision and high accuracy AI contour control
2. Smooth tolerance control+
3. Machining quality level adjustment function

Fast Cycle Time Technology

1. Maximum 200 blocks of look-ahead for pre-calculating the machining program
2. Block processing time 2ms for achieving high-speed machining requirement
3. Smart rigid tapping function combined with spindle capability for high-speed machining (*Note)

Program Dynamic Simulation

Manual Guide i features dynamic simulation of machining programs with full-screen display

Upgraded Memory and File Organization

1. 2 MB program storage size
2. Built-in memory card for easy program editing
3. Directory filing structure with organized file management
4. 400 pairs of tool offset, 1,000 registrable programs, 48 pairs of workpiece coordinate system, 256 pairs of tool life management

*Note: Applicable to vertical machining centers with IDD spindle and built-in motorized spindle.

YCM

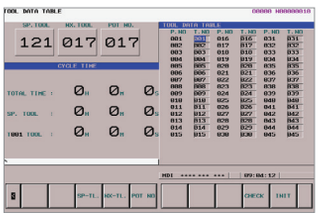
i-OPERATION

Exclusive Software from YCM

Plus II

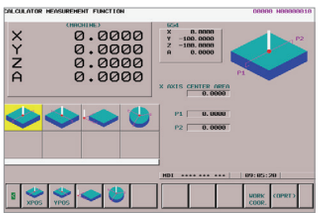
i Operation plus II

Pre-Machining



Intelligent Tool Data Management

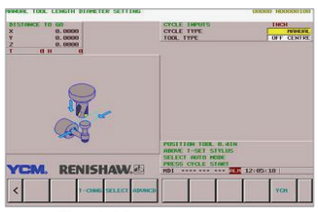
Comprehensive tool data management function allows operators to monitor and manage all positions in tool magazine



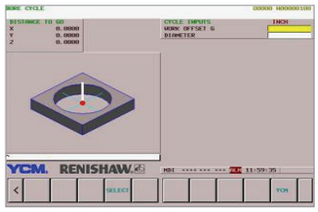
Workpiece Coordinate Calculation

Conversational window provides convenient and fast setup of workpiece coordinates

RENISHAW GUI System (Conversational Graphic Operating Interface)



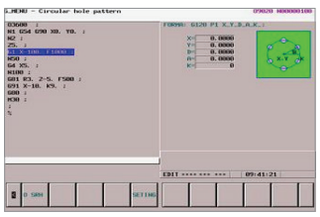
Tool Measurement & Measurement Calibration

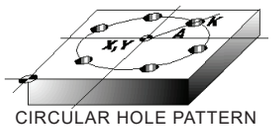


Workpiece Measurement

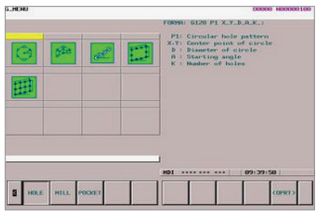
(applicable to certain models)

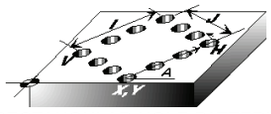
Program Editing



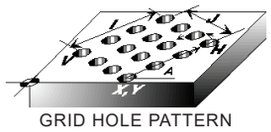


CIRCULAR HOLE PATTERN
(G120 P1) Function





RECTANGULAR HOLE PATTERN
(G120 P4) Function



GRID HOLE PATTERN
(G120 P5) Function

i_PATTERN

(1) 15 sets of machining cycle program
(2) Saving programming time and memory time
(3) Graphic interface & conversational command input

Machining

High Performance Machining Mode M300

With 5 sets of parameter settings, it's easy to find suitable and optimized machining.

High Speed Machining Mode M400

Reducing machining time for drilling and tapping process.

Tool Load Management

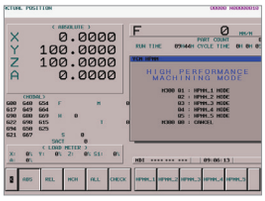
Instant tool load monitoring with alarm function

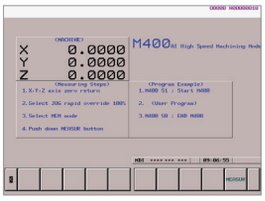
Multi-Display Function

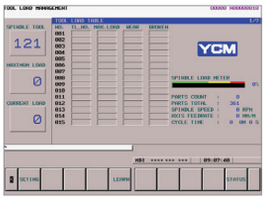
Displaying 4 statuses simultaneously with configurable status display

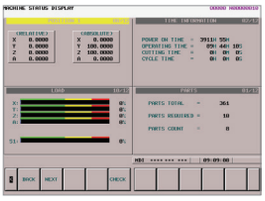
Tool Life Management

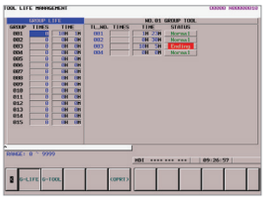
Indicating tool status of each group with tool life alarm



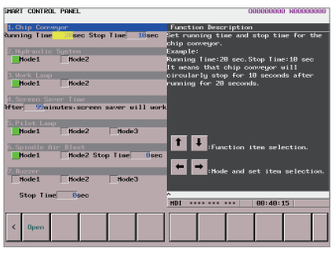








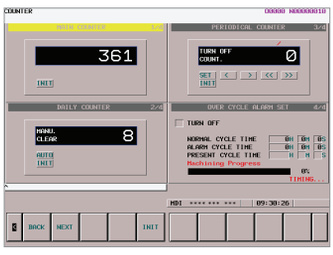
Smart Control Panel



iPANEL

Easy to set up and operate important functions

Intelligent Counter



Instantly providing users with periodic maintenance notifications and work-pieces counter management

Specifications

	E5	
SPINDLE		
Spindle Speed (opt.)	10,000 rpm	
Spindle Power (opt.)	15 kW 20 HP	
Spindle Taper	BBT40	
TRAVEL		
X / Y / Z -axis Travel	1,020 mm / 520 mm / 540 mm 40.16" / 20.47" / 21.26"	
Distance Between Spindle Nose & Table Top	140~680 mm 5.51"~26.77"	
TABLE		
Table Size	1,120 x 520 mm 44" x 20.47"	
No. T-slots x Size x Pitch	5 x 18 mm x 100 mm 5 x 0.71" x 3.94"	
Max. Load on Table	500 kg 1,102 lb	
FEEDRATE		
Rapid Feedrate (X/Y/Z)	36 / 36 / 32 m/min 1,417 / 1,417 / 1,260 ipm	
Cutting Feedrate	1~20,000 mm/min 0.04 ~787 ipm	
ACCURACY	ISO 10791-4	YCM*
Axial Travel	Full Length	
Positioning (X / Y / Z) A	0.032 / 0.025 / 0.025 mm 0.00126" / 0.00098" / 0.00098"	0.01 / 0.01 / 0.01 mm 0.00039" / 0.00039" / 0.00039"
Repeatability (X / Y / Z) R	0.018 / 0.015 / 0.015 mm 0.0007" / 0.00059" / 0.00059"	0.007 / 0.007 / 0.007 mm 0.00028" / 0.00028" / 0.00028"

*All values shown above are measured for the machine in good air-conditioned environments.

ATC	
Tool Magazine Capacity	24T
Max. Tool Weight (per piece)	6kg 13.2 lb
Max.Tool Dimensions (W/O Adjacent Tools)	ø90 x 300 mm (ø140 x 300 mm) ø3.54" x 11.81" (ø5.51" x 11.81")
Tool Change Method	Arm Type
Tool Selection Method	Random
GENERAL	
Pneumatic Supplier	5.5 kg/cm^2 78.2 psi
Machine Weight	5,350 kg 11,795 lb

Note: Above specifications may vary depending on the machine and the surrounding environment.
The manufacturer reserves the right to modify the design, specifications, mechanisms, etc., to improve the performance of the machine without notice.
The test data provided in this catalogue is performed under specific test procedures and environmental conditions.

Accessories

●: Standard ○: Option

	E5
Spindle Cooling System	○
Guideway Cover (X/Y/Z)	●
Spindle Air Blast	●
Spindle Air Seal	●
Circular Coolant Nozzle	○
Oil-mist Cutting System	○
Oil-mist Collector	○
Cutting Air Blast	●
Automatic Lubrication	●
Single-Chip Augers	●
45º Outlet Pipe (Single-Chip Augers)	●
Straight Pipe	○
Chip Conveyor	○
Shower Coolant	●
Air Gun	●
Coolant Gun	●
Oil Hole Holder Function	○
Automatic Tool Length Measurement System	○
Automatic Workpiece Measurement System	○
Oil Skimmer	○
Work Lamp, Pilot Lamp	●
A/C. Cooler for Electrical Cabinet	○
Heat Exchanger for Electrical Cabinet	●
Safety Door	●
Automatic Door	○
Chip Enclosure	●
Leveling Blocks & Screws	●
Foundation Bolts	○
Mechanical, Electrical and Operating Manuals	●
Tool Kit	●
CNC Control: FANUC MXP-200FA*	●

Note: Above specifications may vary depending on the machine and the surrounding environment.
The manufacturer reserves the right to modify the design, specifications, mechanisms, etc., to improve the performance of the machine without notice.

YCM®

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