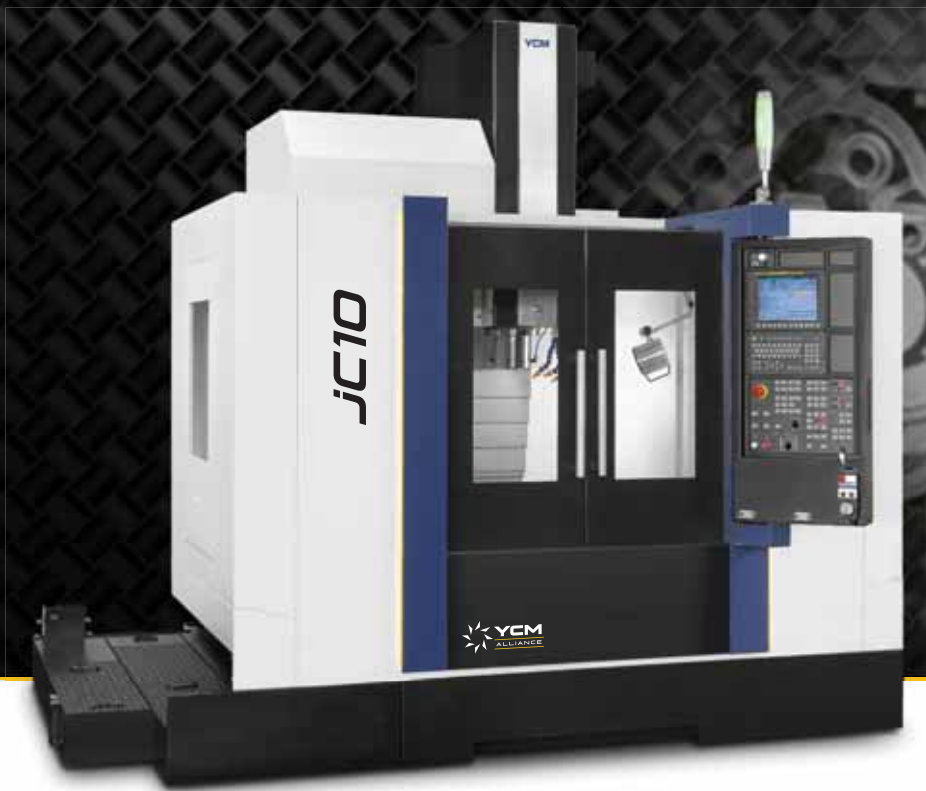


JC Series



High Performance Vertical Machining Centers





World Class CNC Machine Tool Manufacturer

A YCM Alliance Partner

Founded in 1954, the YCM company specializes in the manufacturing of High Speed Vertical Machining Centers and is recognized worldwide for technological advancements, manufacturing capabilities and superior product design. With over 66 years of experience, YCM machines are relied upon by quality conscious customers who have become accustomed to their uncompromising performance and renowned reliability. YCM products are unique and represent a differentiated approach to machine design.



Make it Better, Together

Quality, Precision, Speed, and Reliability

The jC series high-performance vertical machining centers deliver top-end quality and excellent value. Every machine tool is precision built and hand crafted for rigidity, thermal stability, and repeatability. The jC series produces consistent high-quality results from the first part to the last.

Rigid Design

During the design process, Finite Element Analysis (FEM) is used to ensure the best placement of mass and rib structures to provide constant stability under the intensive load of heavy-duty cutting. Direct drive servo motors deliver fast, accurate, and repeatable cutting. Each axial AC servo motor is equipped with absolute positioning encoders, this combined with rigid body construction provides uncompromising precision and rigidity.

Spindle by YCM

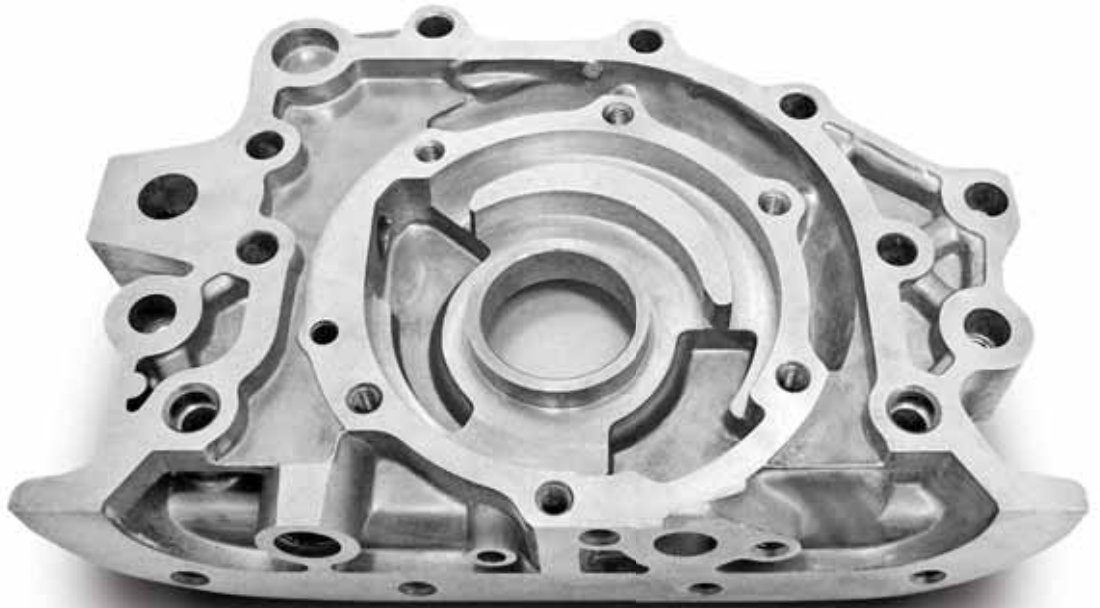
The spindle is the critical union between the machine, cutting tool, and workpiece. At YCM, we take this very seriously designing, manufacturing, and testing every spindle to perfection to ensure optimum performance and longevity. YCM spindles have a proven history and are known as legendary for their reliability.

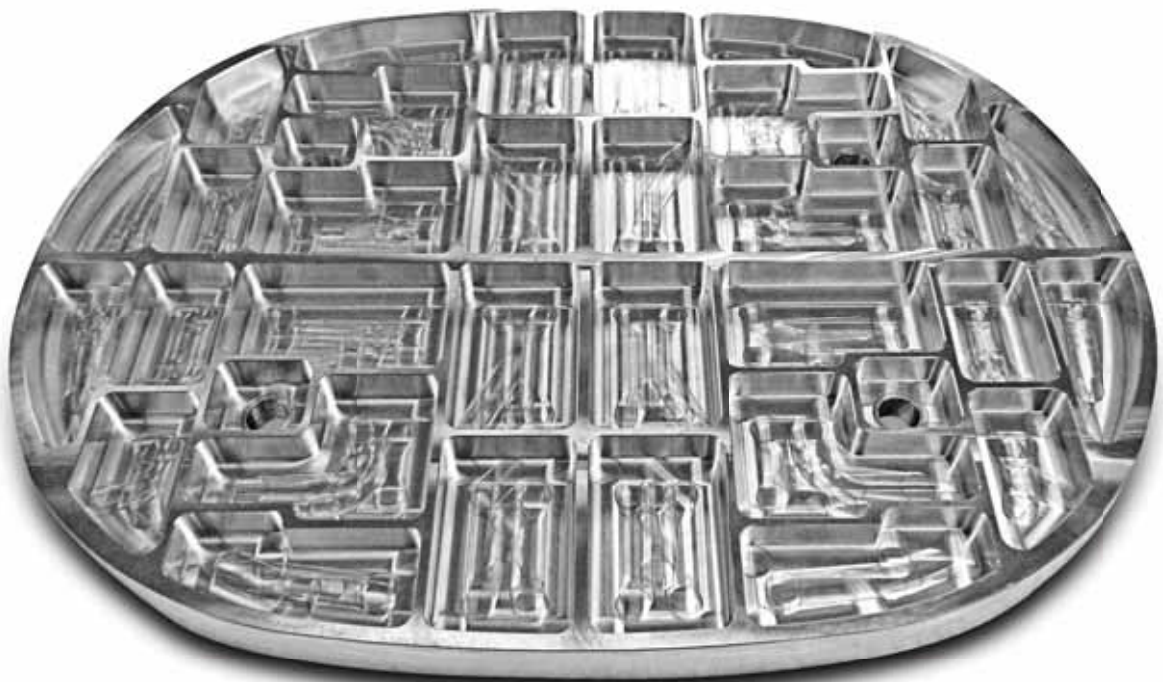
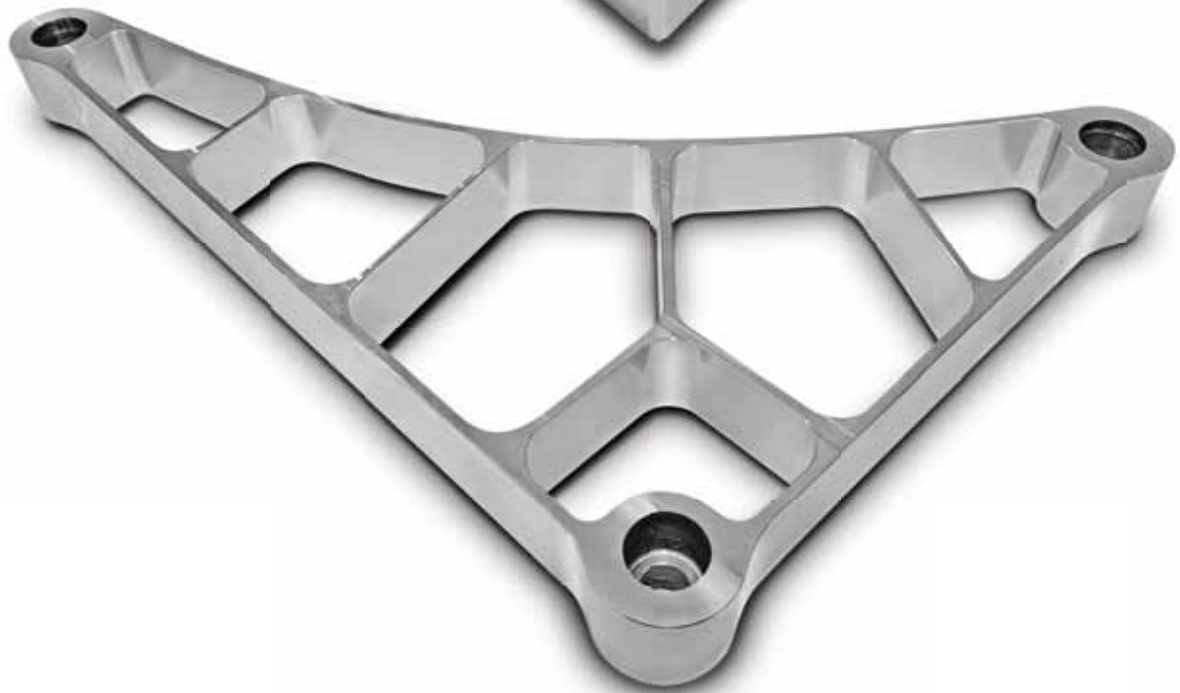
Designed for Versatility

The jC Series is designed with versatility in mind. This platform is ideal for the demands of shops performing general parts machining across a large spectrum of industries, including aerospace, automotive, medical, energy, and more.



Make it Better, Together





State of the art Foundry

YCM machine tools are built from the ground up

Unlike many machine tool manufacturers that purchase components and merely assemble them, YCM is a true machine tool builder. This commitment to quality begins at the YCM foundry where the heart of every machine - the base, is perfectly cast resulting in a rigid Meehanite® casting. All mating surfaces are then hand scraped by expert craftsmen. This establishes a quality base which is precise, rigid, and very stable. This build process is inherent with every YCM machine tool produced.

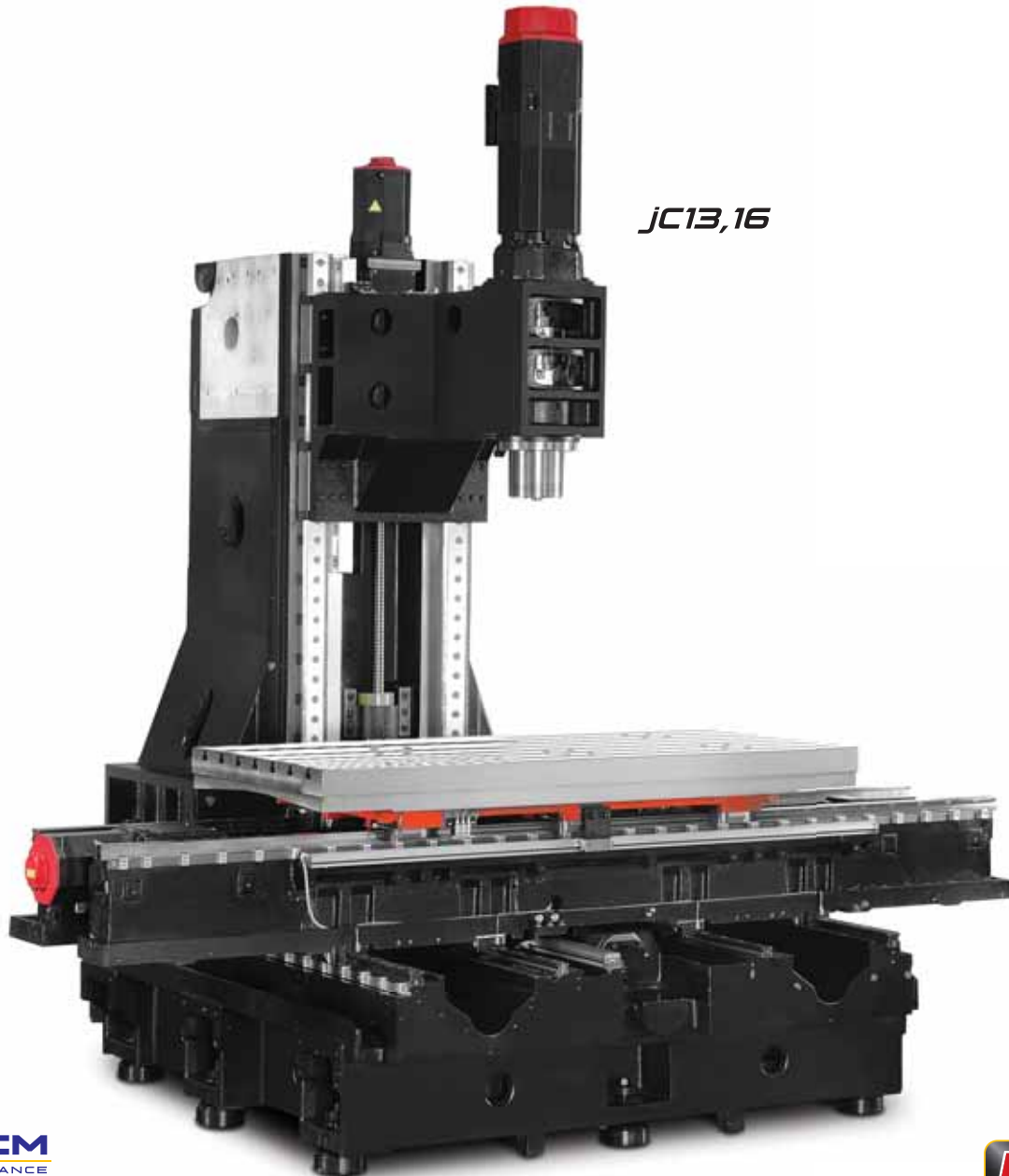
- Castings are poured and formed
- Advanced Karl Fischer moisture and pH metering
- Spectrum analysis to ensure consistent quality
- Annealing and aging process to relieve casting stress
- Handcrafted scraping of all mating surfaces



jC6P

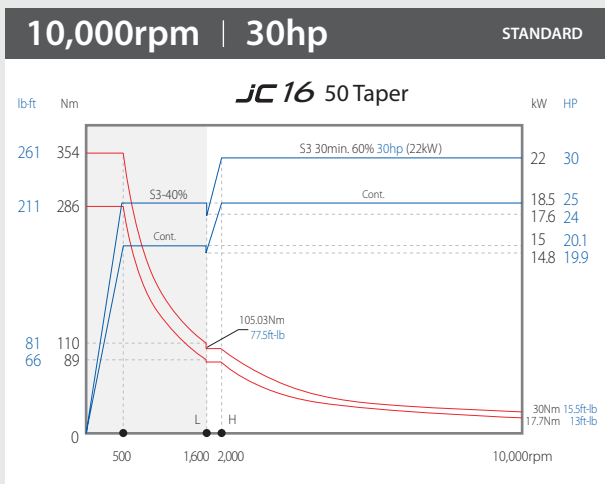
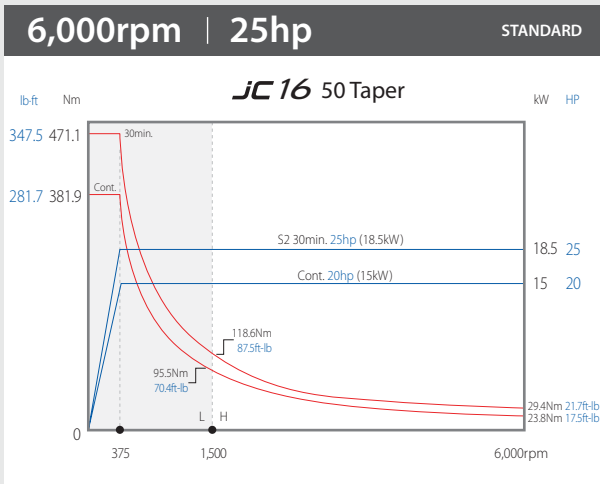
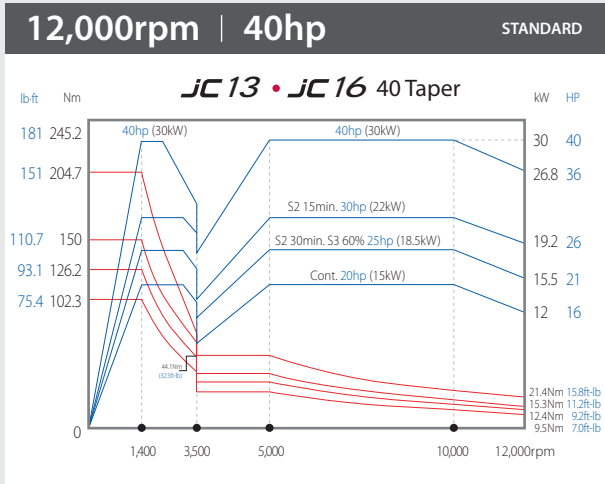
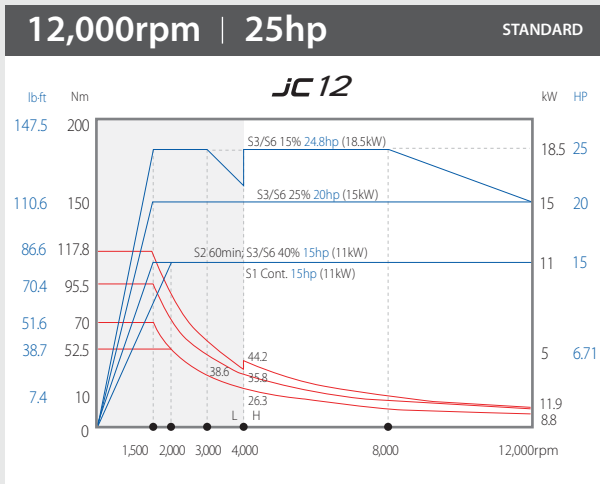
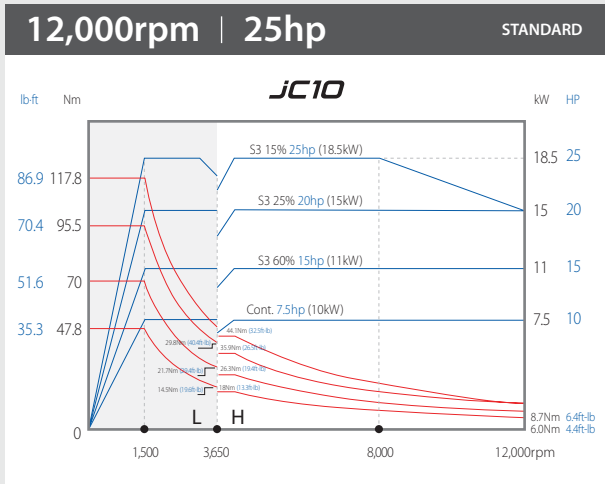
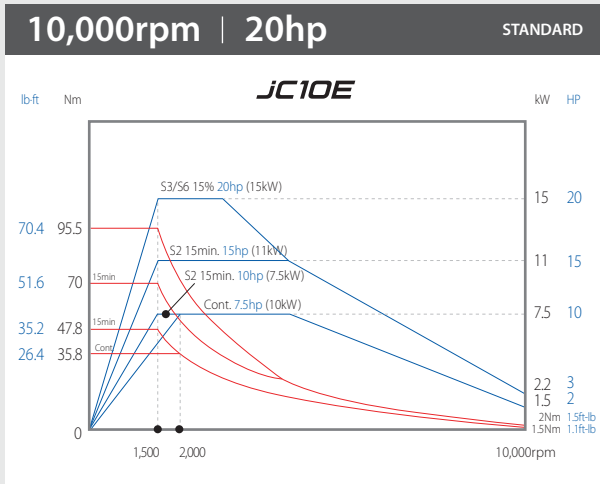
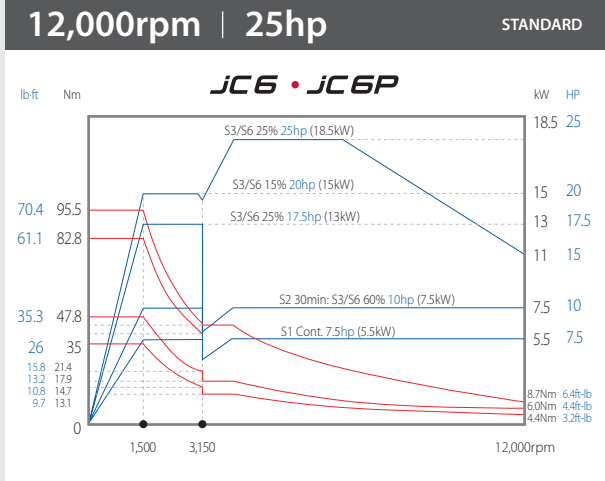


jC10



JC13,16

Power & Torque Driven by **FANUC**



High Speed Precision IDD Spindle

Designed and Built by YCM

The YCM IDD spindle is a proven design offering legendary reliability at all ranges of speed. The spindle's ceramic bearings do more than boost spindle speed, they also provide high axial and radial rigidity, which helps maintain tolerance during heavy cutting, drilling, and tapping applications. To further maximize repeatability and precision, the spindle cooling system minimizes thermal deformation. An 'Unclamping Cushion' protects the spindle from excessive wear associated with forces exerted during tool changing. The IDD spindle uses high precision helical springs to achieve dynamic balancing and low vibration.



Make it Better, Together

YCM[®] MXP-200FB+

FANUC OiMF+ Platform



Communication Interface

- RJ45 Ethernet
- USB
- Compact Flash Card

Excellent Vision Quality

10.4" LCD Display

User-Friendly Design

Detachable keyboard (QWERTY)

Fine Surface Finish Technology

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

Fast Cycle Time Technology

- Maximum 400 blocks of look-ahead for pre-calculating the machining program.
- Block processing time 1ms for achieving high-speed machining requirement.
- Smart rigid tapping function combined with spindle capability for high-speed machining.*

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

Program Dynamic Simulation

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

Upgraded Memory and File Organization

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

i-OPERATION *Plus* II

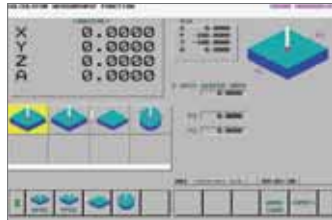
Exclusive Software from **YCM**.

Pre-Machining



Intelligent Tool Data Management

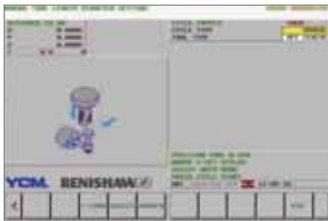
Comprehensive tool data management function allows operators to monitor & manage all positions in tool magazine.



Workpiece Coordinate Calculation

Conversational window provides convenient and fast setup of workpiece coordinates.

RENISHAW GUI System (Conversational Graphic Operating Interface)



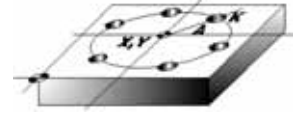
Tool Measurement & Measurement Calibration

This function may vary on TCV and NH/H series machine. For more details, please contact YCM sales representatives.

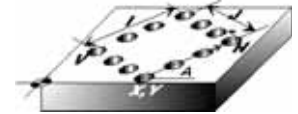


Workpiece Measurement (Applicable to certain models)

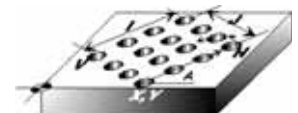
Program Editing



Circular Hole Pattern
(G120 P1) Function



Rectangular Hole Pattern
(G120 P4) Function

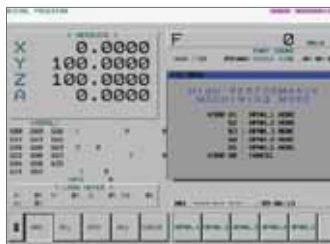


Grid Hole Pattern
(G120 P5) Function

i-PATTERN

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

Machining



M300 High Performance Machining Mode

With 5 sets of parameter settings, it's easy to optimize a suitable range of machining.



Tool Load Management

Instant tool load monitoring with alarm function.

This function may vary on TCV and NH/H series machine. For more details, please contact YCM sales representatives.



Tool Life Management

Indicating tool status of each group with tool life alarm.

This function may vary on TCV and NH/H series machine. For more details, please contact YCM sales representatives.



Multi-Display Function

Four simultaneous status display that can be configured.

Smart Control Panel



i-PANEL

Easy to set up and operate important functions.

This function may vary on TCV and NH/H series machine. For more details, please contact YCM sales representatives.

Intelligent Counter



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

SPINDLE**JC6****JC6P**

Speed	12,000rpm / 15,000rpm (optional)	12,000rpm / 15,000rpm (optional)
Power	25hp (18.5kW)	25hp (18.5kW)
Taper	Dual Contact CAT-40 / BBT-40	Dual Contact CAT-40 / BBT-40

TRAVEL

X-Axis	23.6" (600mm)	23.6" (600mm)
Y-Axis	16.1" (410mm)	16.1" (410mm)
Z-Axis	17.7" (450mm)	17.7" (450mm)
Distance between spindle nose & table top	4.3" - 22" (110 - 560mm)	0.98" - 18.7" (25 - 475mm)

TABLE

Table Size	27.6" x 16.5" (700 x 420mm)	22.1" x 16.2" (560 x 410mm)
No. T-slots x Size x Pitch	3 x 0.55" x 3.9" (3 x 14 x 100mm)	-
Max. Load on Table	660lbs (300kg)	256lbs (120kg)

FEEDRATE

Rapid Feedrate X / Y / Z	1,890 / 1,890 / 1,890ipm (48 / 48 / 48 m/mm)	1,890 / 1,890 / 1,890ipm (48 / 48 / 48 m/mm)
Cutting Feedrate	0.04 - 787ipm (1-20 m/min)	0.04 - 787ipm (1-20 m/min)

ACCURACY YCM (Temperature Controlled Environment)

Positioning (X/Y/Z) A	0.00039" / 0.00039" / 0.00039" (0.010mm / 0.010mm / 0.010mm)	0.00039" / 0.00039" / 0.00039" (0.010mm / 0.010mm / 0.010mm)
Repeatability (X/Y/Z) R	0.00027" / 0.00027" / 0.00027" (0.007mm / 0.007mm / 0.007mm)	0.00027" / 0.00027" / 0.00027" (0.007mm / 0.007mm / 0.007mm)

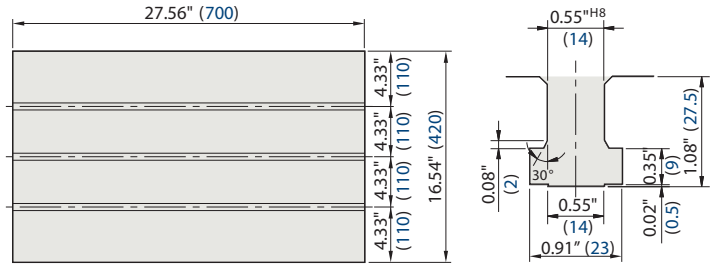
ATC

Tool Magazine Capacity	24T	24T
Max. Tool Weight	13.2lbs (6kg)	13.2lbs (6kg)
Max. Tool Dimensions	ø3" x 9.8" (ø76 x 250mm)	ø3" x 9.8" (ø76 x 250mm)
	w/o adjacent tools ø4.9" x 9.8" (ø125 x 250mm)	w/o adjacent tools ø4.9" x 9.8" (ø125 x 250mm)

GENERAL

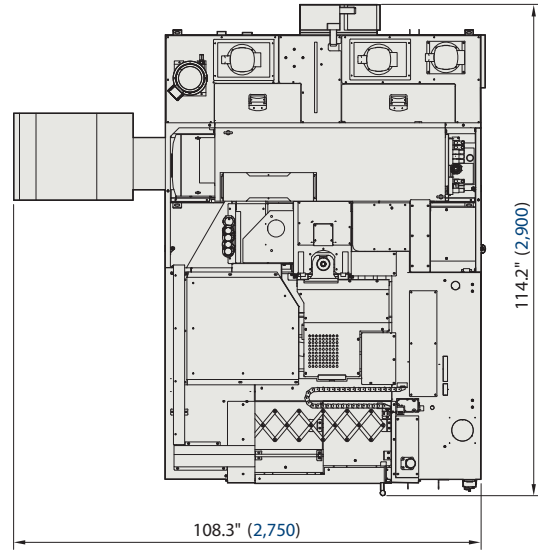
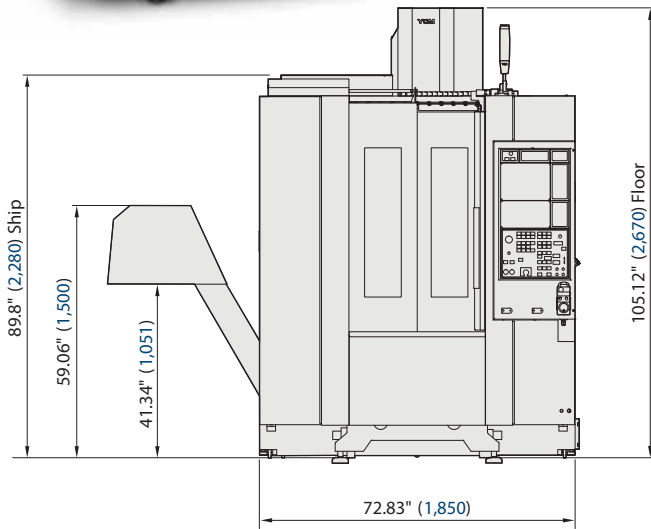
Pneumatic Supplier	78.2psi (5.5 kg/cm ²)	78.2psi (5.5 kg/cm ²)
Power Consumption	220V, 77amps	220V, 77amps
Machine Weight	6,600 lbs (3,000kg)	8,426 lbs (3,830kg)

Note: The manufacturer reserves the right to modify the design, specifications, mechanisms, etc. to improve the performance of the machine without notice. All the specifications shown above are just for reference.

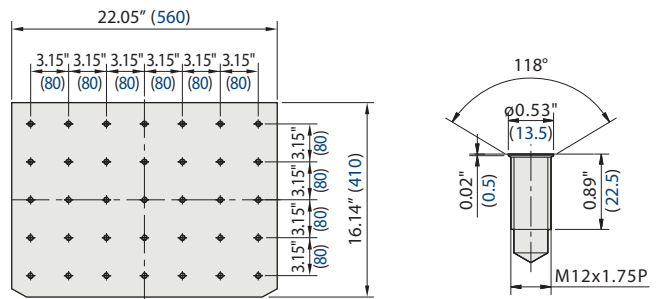


■ Table Size

■ T-slots

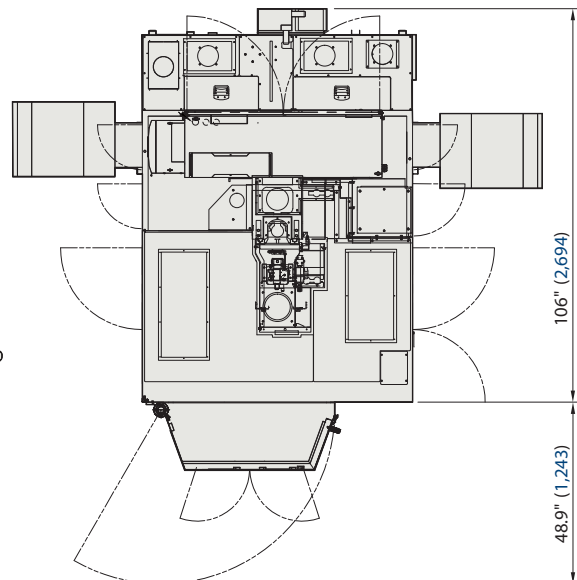
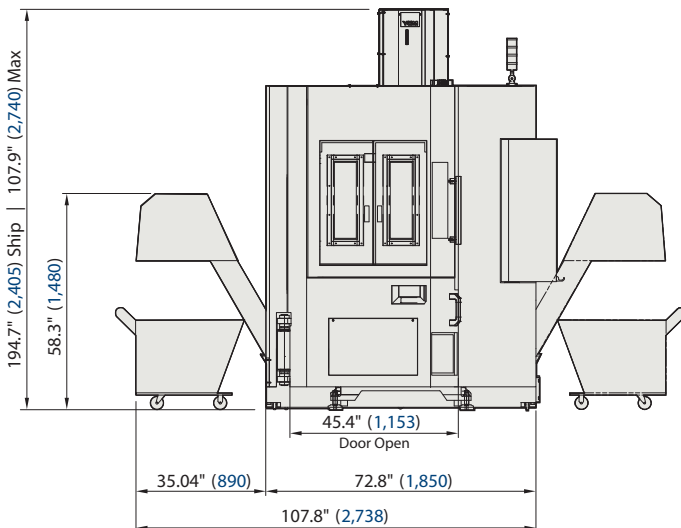


Unit: Inch (mm)



■ APC Table Size

■ Screw Hole



SPINDLE**JC10E****JC10**

Speed	10,000rpm	12,000rpm / 15,000rpm (optional)
Power	20hp (15kW)	25hp (18.5kW)
Taper	Dual Contact CAT-40 / BBT-40	Dual Contact CAT-40 / BBT-40

TRAVEL

X-Axis	40.1" (1,020mm)	40.1" (1,020mm)
Y-Axis	20.4" (520mm)	20.4" (520mm)
Z-Axis	21.2" (540mm)	21.2" (540mm)
Distance between spindle nose & table top	5.51" - 26.7" (140 - 680mm)	5.51" - 26.7" (140 - 680mm)

TABLE

Table Size	44.0" x 20.4" (1,120 x 520mm)	44.0" x 20.4" (1,120 x 520mm)
No. T-slots x Size x Pitch	5 x 0.70" x 3.9" (5 x 18 x 100mm)	5 x 0.70" x 3.9" (5 x 18 x 100mm)
Max. Load on Table	1,100lbs (500kg)	1,100lbs (500kg)

FEEDRATE

Rapid Feedrate X / Y / Z	1,417 / 1,417 / 1,260ipm (36 / 36 / 32 m/mm)	1,890 / 1,890 / 1,260ipm (48 / 48 / 32 m/mm)
Cutting Feedrate	0.04 - 787ipm (1-20 m/min)	0.04 - 787ipm (1-20 m/min)

ACCURACY YCM (Temperature Controlled Environment)

Positioning (X/Y/Z) A	0.00039" / 0.00039" / 0.00039" (0.010mm / 0.010mm / 0.010mm)	0.00039" / 0.00039" / 0.00039" (0.010mm / 0.010mm / 0.010mm)
Repeatability (X/Y/Z) R	0.00027" / 0.00027" / 0.00027" (0.007mm / 0.007mm / 0.007mm)	0.00027" / 0.00027" / 0.00027" (0.007mm / 0.007mm / 0.007mm)

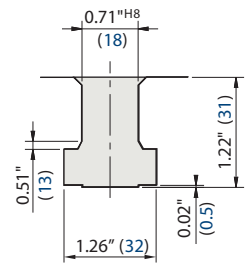
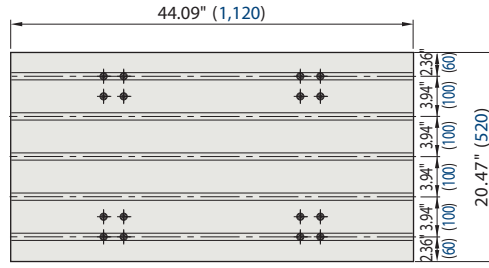
ATC

Tool Magazine Capacity	24T	30T / 40T (optional)
Max. Tool Weight	13.2lbs (6kg)	13.2lbs (6kg)
Max. Tool Dimensions	ø3.5" x 11.8" (ø90 x 300mm)	ø3.5" x 11.8" (ø90 x 300mm)
	<small>w/o adjacent tools</small> ø5.5" x 11.8" (ø140 x 300mm)	<small>w/o adjacent tools</small> ø5.5" x 11.8" (ø140 x 300mm)

GENERAL

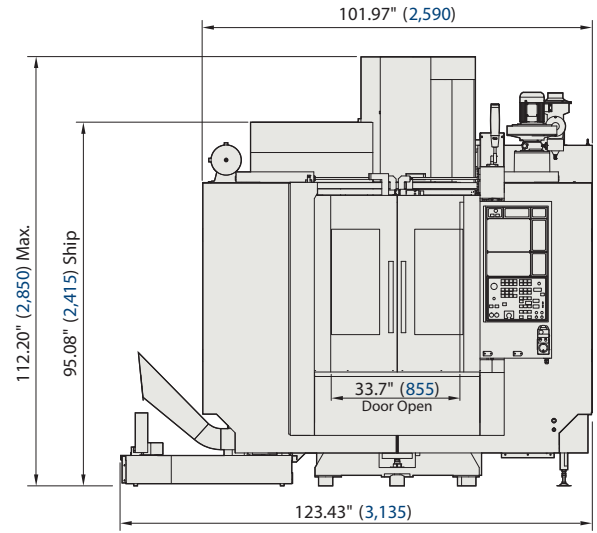
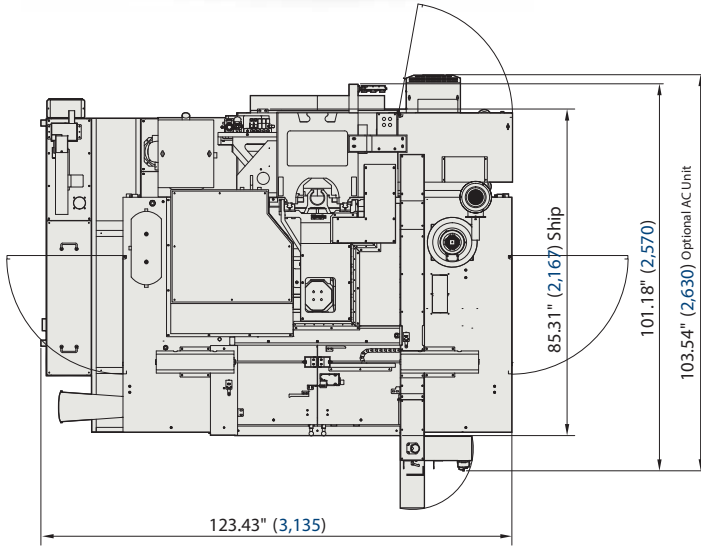
Pneumatic Supplier	78.2psi (5.5 kg/cm ²)	78.2psi (5.5 kg/cm ²)
Power Consumption	220V, 77amps	220V, 86amps
Machine Weight	11,770lbs (5,350kg)	11,770lbs (5,350kg)

Note: The manufacturer reserves the right to modify the design, specifications, mechanisms, etc. to improve the performance of the machine without notice. All the specifications shown above are just for reference.

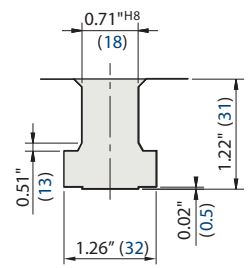
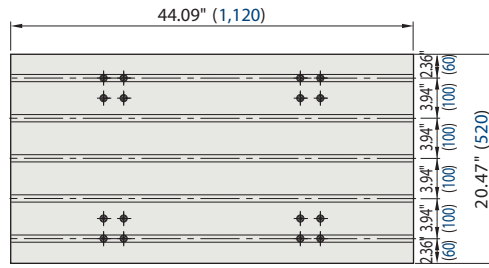


■ Table Size

■ T-slots

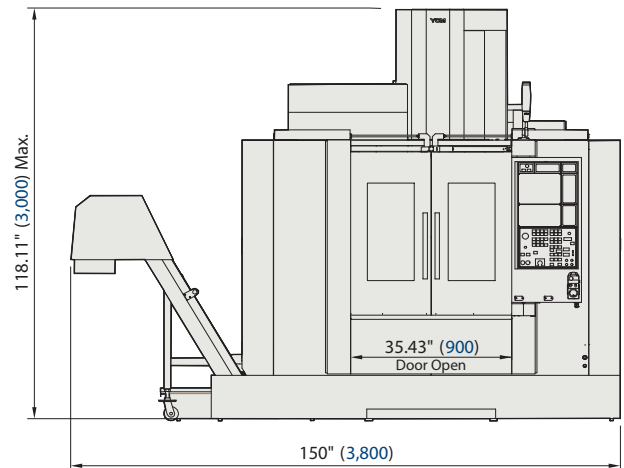
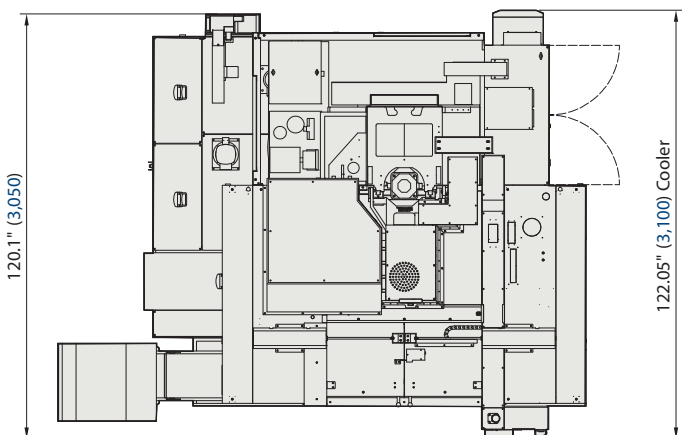


Unit: Inch (mm)



■ Table Size

■ T-slots



SPINDLE**JC12****JC13**

Speed	12,000rpm / 15,000rpm (optional)	12,000rpm / 15,000rpm (optional)
Power	25hp (18.5kW)	40hp (29.8kW)
Taper	Dual Contact CAT-40 / BBT-40	Dual Contact CAT-40 / BBT-40

TRAVEL

X-Axis	49.9" (1,270mm)	52.3" (1,330mm)
Y-Axis	25.9" (660mm)	29.9" (762mm)
Z-Axis	24.4" (620mm)	27.5" (700mm)
Distance between spindle nose & table top	2.7" - 27.2" (70 - 690mm)	3.9" - 31.4" (100 - 800mm)

TABLE

Table Size	53.1" x 25.9" (1,350 x 660mm)	56.2" x 29.9" (1,430 x 760mm)
No. T-slots x Size x Pitch	6 x 0.70" x 3.9" (6 x 18 x 100mm)	7 x 0.70" x 3.9" (7 x 18 x 100mm)
Max. Load on Table	3,300lbs (1,500kg)	3,300lbs (1,500kg)

FEEDRATE

Rapid Feedrate X / Y / Z	1,417 / 1,417 / 1,181ipm (36 / 36 / 30 m/mm)	1,181 / 1,181 / 945ipm (30 / 30 / 24 m/mm)
Cutting Feedrate	0.03 - 787ipm (1-20 m/min)	0.03 - 787ipm (1-20 m/min)

ACCURACY YCM (Temperature Controlled Environment)

Positioning (X/Y/Z) A	0.00039" / 0.00039" / 0.00039" (0.010mm / 0.010mm / 0.010mm)	0.00055" / 0.00039" / 0.00039" (0.014mm / 0.010mm / 0.010mm)
Repeatability (X/Y/Z) R	0.00027" / 0.00027" / 0.00027" (0.007mm / 0.007mm / 0.007mm)	0.00039" / 0.00027" / 0.00027" (0.010mm / 0.007mm / 0.007mm)

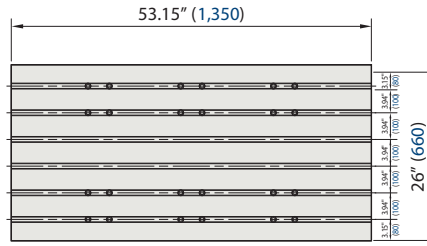
ATC

Tool Magazine Capacity	30T / 48T, 60T (optional)	30T / 48T, 60T (optional)
Max. Tool Weight	13.2lbs (6kg)	13.2lbs (6kg)
Max. Tool Dimensions	ø2.9" x 11.8" (ø76 x 300mm)	ø2.9" x 11.8" (ø76 x 300mm)
	<small>w/o adjacent tools</small> ø4.9" x 11.8" (ø125 x 300mm)	<small>w/o adjacent tools</small> ø4.9" x 11.8" (ø125 x 300mm)

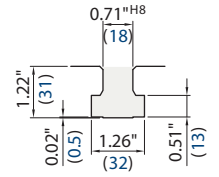
GENERAL

Pneumatic Supplier	78.2psi (5.5 kg/cm ²)	78.2psi (5.5 kg/cm ²)
Power Consumption	220V, 98amps	220V, 109amps
Machine Weight	18,920 lbs (8,600kg)	23,100 lbs (10,500kg)

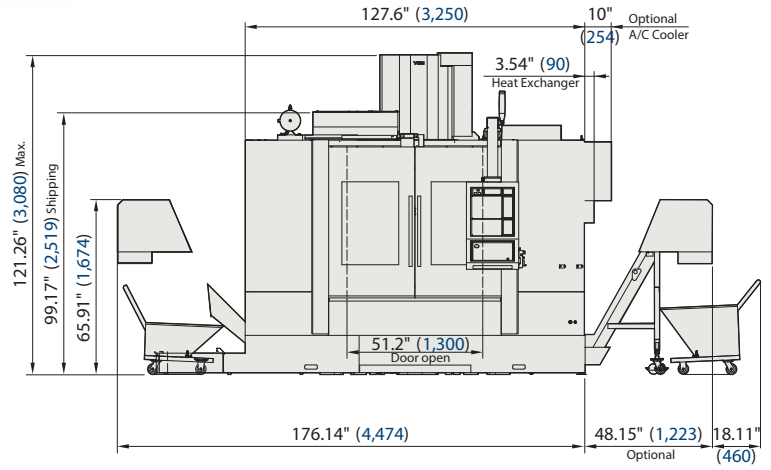
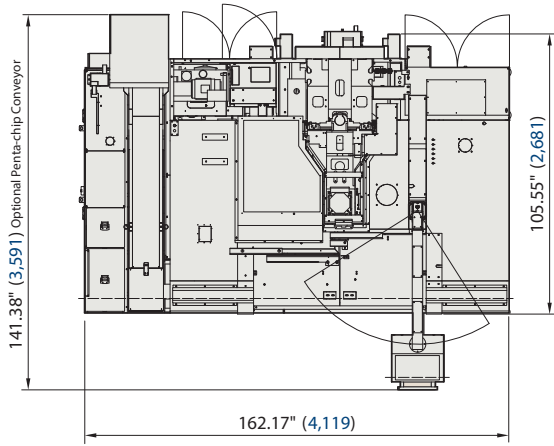
Note: The manufacturer reserves the right to modify the design, specifications, mechanisms, etc. to improve the performance of the machine without notice. All the specifications shown above are just for reference.



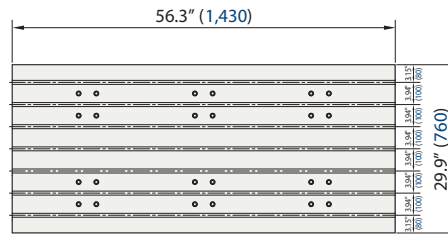
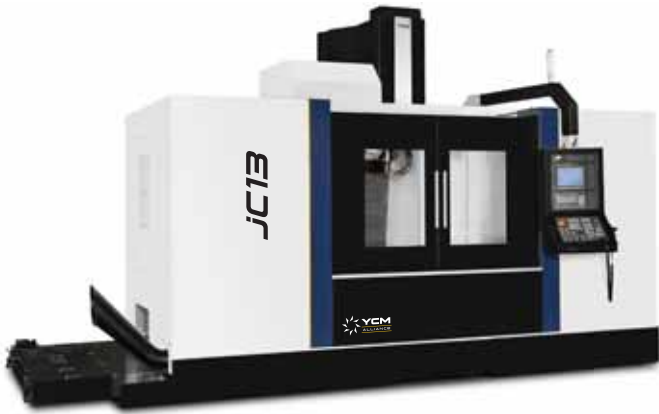
■ Table Size



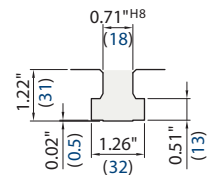
■ T-slots



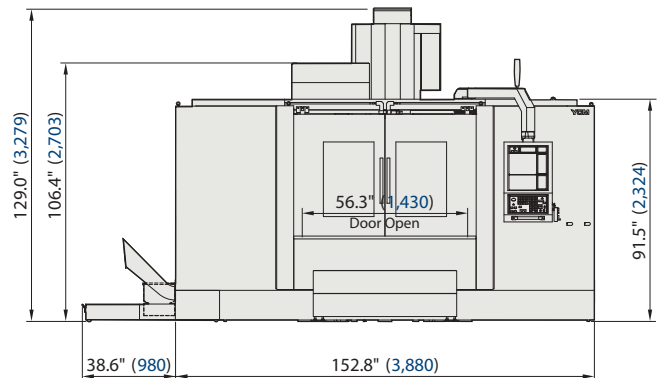
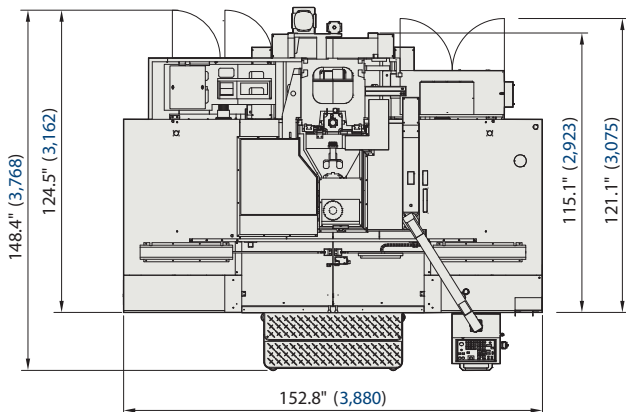
Unit: Inch (mm)



■ Table Size



■ T-slots



SPINDLE**JC16 40 TAPER****JC16 50 TAPER**

Speed	12,000rpm / 15,000rpm (optional)	6,000rpm / 10,000rpm (optional)
Power	40hp (29.8kW)	25hp (18.5kW)
Taper	Dual Contact CAT-40 / BBT-40	Dual Contact CAT-50 / BBT-50

TRAVEL

X-Axis	64.1" (1,630mm)	64.1" (1,630mm)
Y-Axis	29.9" (762mm)	33.8" (860mm)
Z-Axis	27.5" (700mm)	29.9" (762mm)
Distance between spindle nose & table top	3.9" - 31.4" (100 - 800mm)	7.8" - 37.8" (200 - 962mm)

TABLE

Table Size	68.1" x 29.9" (1,730 x 760mm)	68.1" x 33.8" (1,730 x 860mm)
No. T-slots x Size x Pitch	7 x 0.70" x 3.9" (7 x 18 x 100mm)	5 x 0.8" x 5.9" (5 x 22 x 150mm)
Max. Load on Table	3,300 lbs (1,500kg)	4,400 lbs (2,000kg)

FEEDRATE

Rapid Feedrate X / Y / Z	1,181 / 1,181 / 945ipm (30 / 30 / 24 m/mm)	945 / 945 / 945ipm (24 / 24 / 24 m/mm)
Cutting Feedrate	0.04 - 787ipm (1-20 m/min)	0.04 - 394ipm (1-10 m/min)

ACCURACY YCM (Temperature Controlled Environment)

Positioning (X/Y/Z) A	0.00055" / 0.00039" / 0.00039" (0.014mm / 0.010mm / 0.010mm)	0.00055" / 0.00039" / 0.00039" (0.014mm / 0.010mm / 0.010mm)
Repeatability (X/Y/Z) R	0.00039" / 0.00027" / 0.00027" (0.010mm / 0.007mm / 0.007mm)	0.00039" / 0.00027" / 0.00027" (0.010mm / 0.007mm / 0.007mm)

ATC

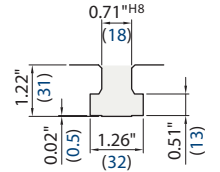
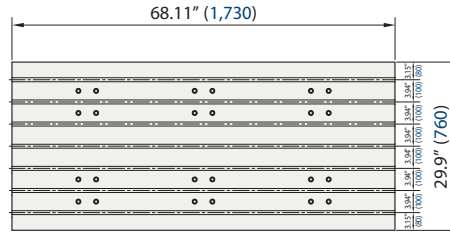
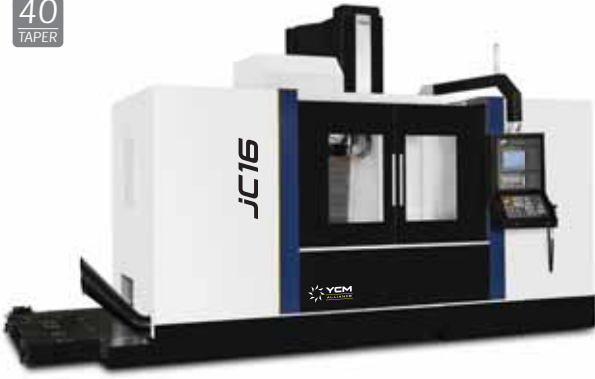
Tool Magazine Capacity	30T / 48T, 60T (optional)	32T / 40T (optional)
Max. Tool Weight	13.2lbs (6kg)	44lbs (20kg)
Max. Tool Dimensions	ø2.9" x 11.8" (ø76 x 300mm)	ø4.7" x 13.7" (ø120 x 350mm)
	w/o adjacent tools ø4.9" x 11.8" (ø125 x 300mm)	w/o adjacent tools ø9.2" x 13.7" (ø235 x 350mm)

GENERAL

Pneumatic Supplier	78.2psi (5.5 kg/cm ²)	78.2psi (5.5 kg/cm ²)
Power Consumption	220V, 109amps	220V, 129amps
Machine Weight	24,200 lbs (11,000kg)	34,100 lbs (15,500kg)

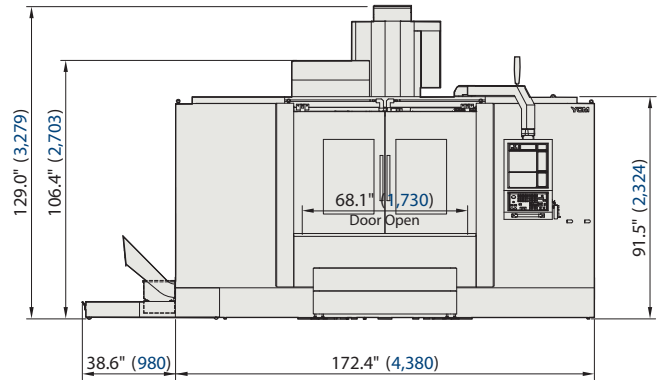
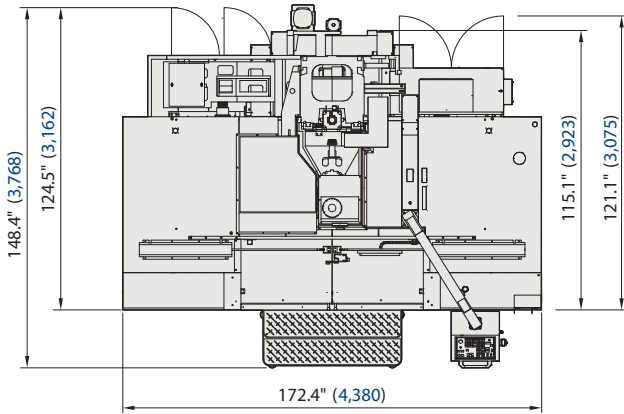
Note: The manufacturer reserves the right to modify the design, specifications, mechanisms, etc. to improve the performance of the machine without notice. All the specifications shown above are just for reference.

40
TAPER



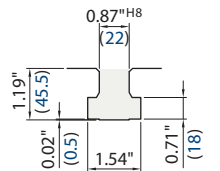
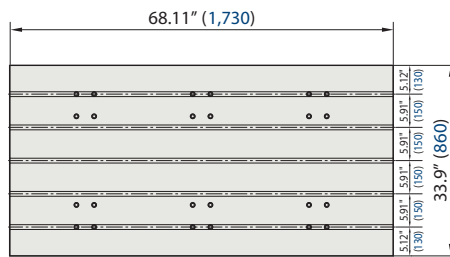
■ Table Size

■ T-slots



Unit: Inch (mm)

50
TAPER



■ Table Size

■ T-slots

