TCV Series

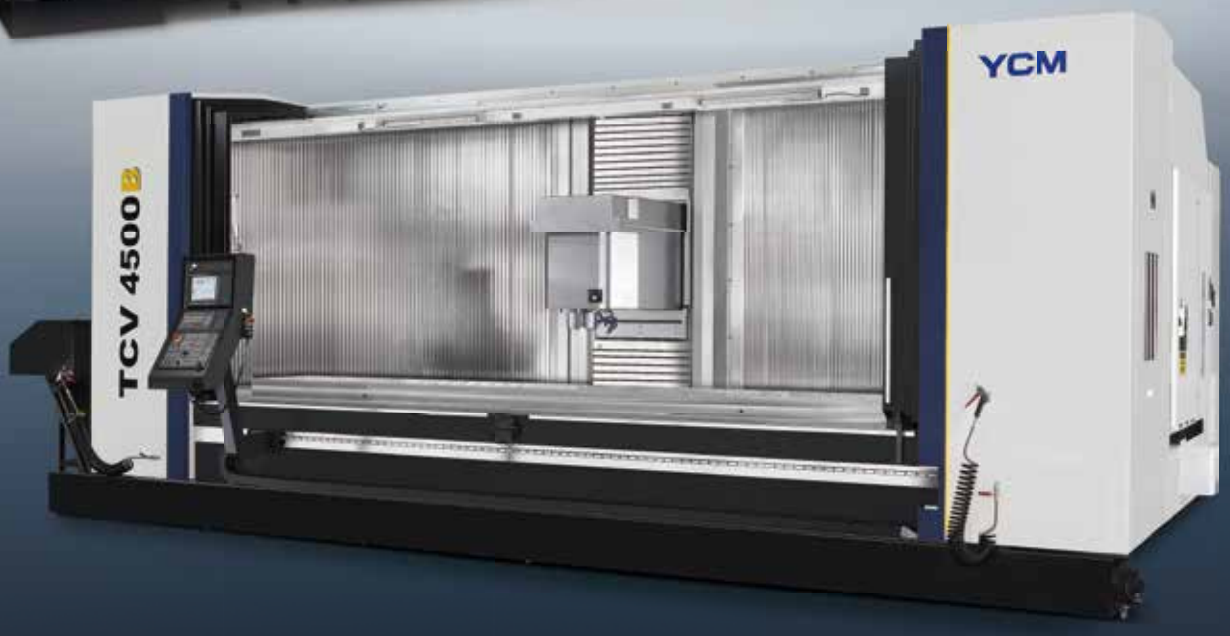
High Performance Traveling Column Vertical Machining Center

YCM®

TCV Series

High Performance Traveling Column Vertical Machining Center

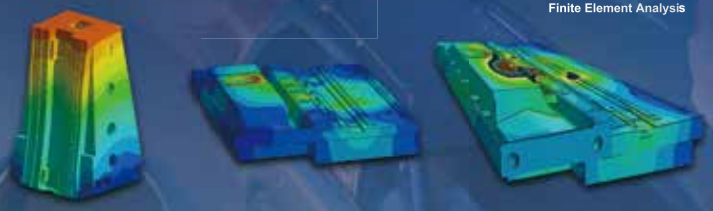
With the installation of dividing wall in the working area, the TCV series can implement machining and set up workpiece simultaneously. It is specially engineered for long workpiece and with its ultra high feedrate and efficiency, it is suitable for aerospace, automotive and job shop applications.



Reinforced Body Structure

- High efficiency traveling column design.
- Large delta machine column and base ensure highest stability.
- With FEM analysis.

FEM
Finite Element Analysis



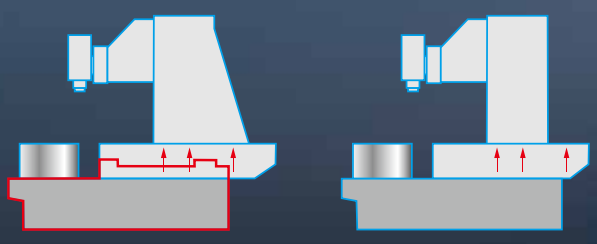
High Performance

- Large working area is ideal for large and long workpieces machining.
- With the installation of dividing wall in the working area, both long and complex parts can be manufactured in the same machine.

TCV3000A-5AF

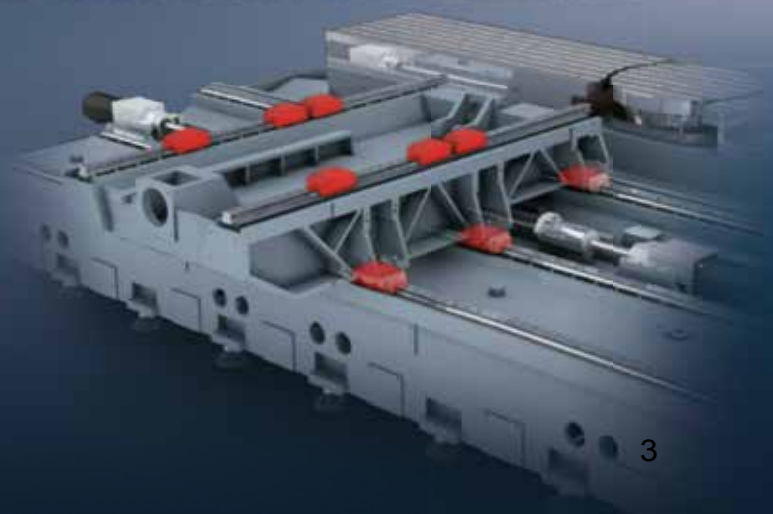
High Efficiency

- Capable of reaching up to 40 m/min. rapid feedrate. (TCV 4500B X-axis capable of reaching up to 30 m/min.)
- With step guideways and 6 slider blocks on X-axis ensure the ultra reliable axial movement.
- No counter weight design on Z-axis that lowers vibration while machining and greatly improves surface roughness.
- Wide span design of machine structure.



✓ TCV series

✗ other brand

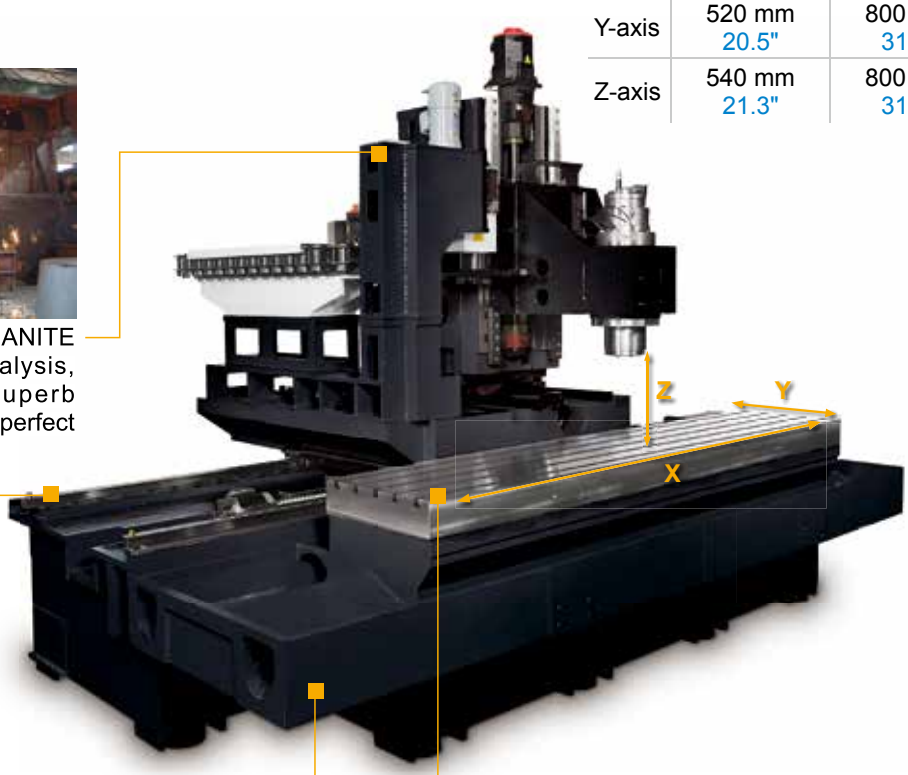


TCV 2000A / 3000A

With traveling column and fixed table design, TCV 2000A provides a wide machining area with minimum tool interface.

	TCV 2000A	TCV 3000A
X-axis	2,000 mm 78.7"	3,000 mm 118.1"
Y-axis	520 mm 20.5"	800 mm 31.5"
Z-axis	540 mm 21.3"	800 mm 31.5"

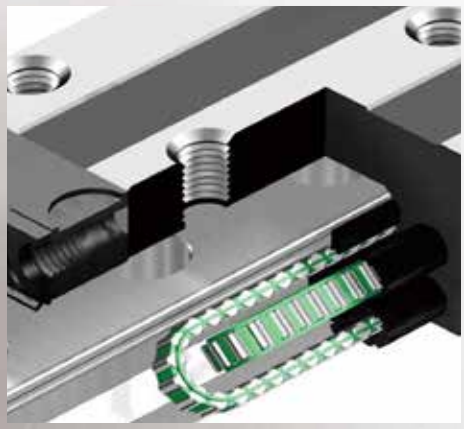
With the reinforced MEEHANITE casting through FEM analysis, TCV 2000A provides superb damping performance and perfect cutting rigidity.



XYZ linear guide

One-piece designed base

Fixed working table ensures the best possibility of dynamic leveling, eliminating parts movement on the axes and greatly improving precision as well.



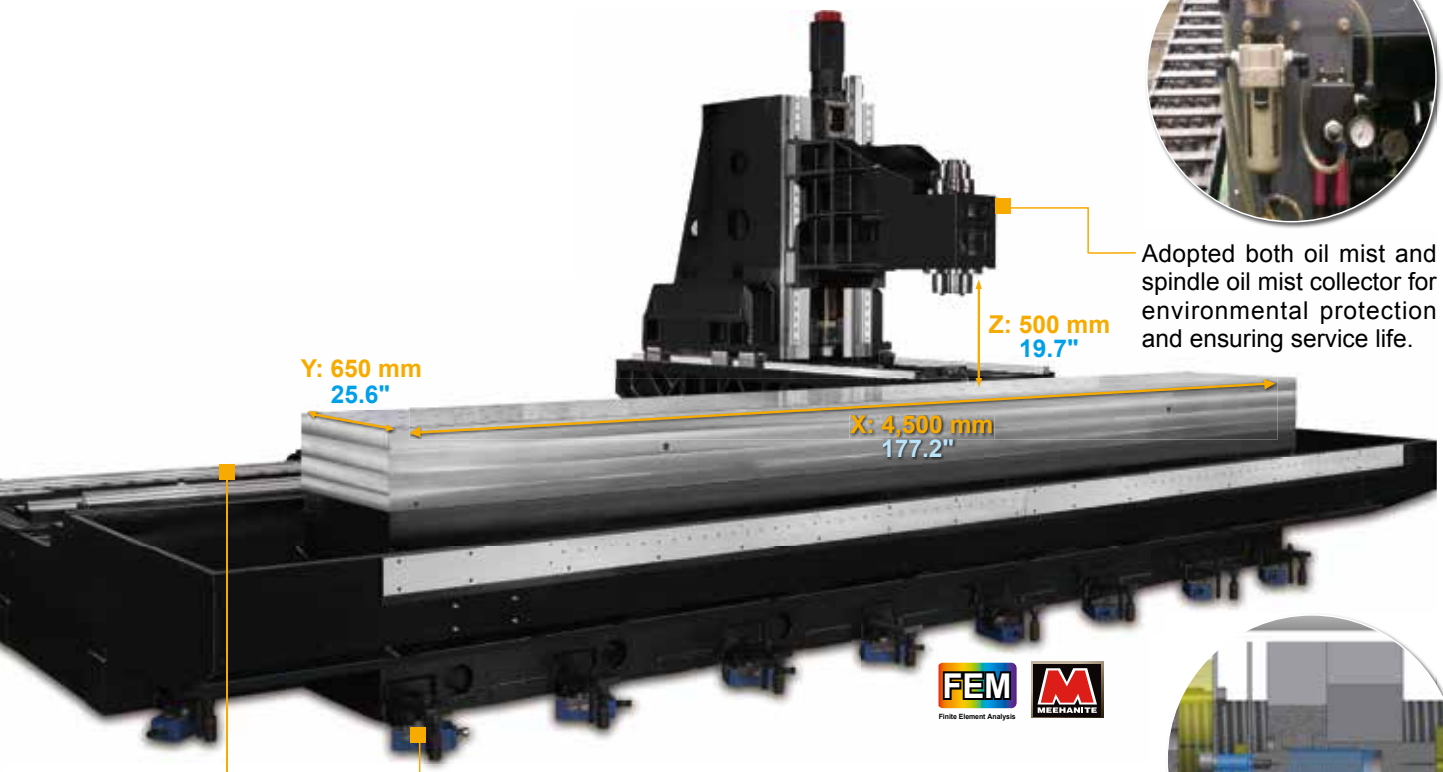
- All 3 axes are equipped with high rigidity roller type guideways.
- Capable of reaching up to 40 m/min.

- Circulated cooling system design on X-axis ensures stable temperature and optimal accuracy.

- Extra guideway blocks support ATC magazine to ensure smooth and stable movement.<TCV 2000A>

TCV 4500B

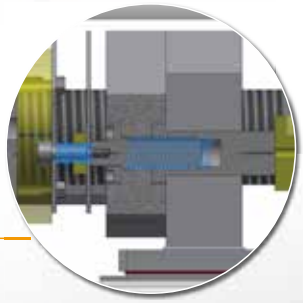
Equipped with # 50 spindle taper, TCV 4500B is designed for high efficiency machining requirements, widely used in aerospace and various challenging works.



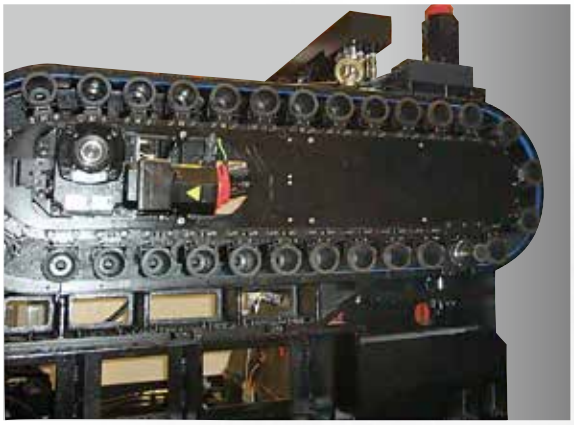
Adopted both oil mist and spindle oil mist collector for environmental protection and ensuring service life.

There are 27 pads on the wide base that can effectively support machine dynamic movement.

XYZ-axis roller linear guideway



Screw support structure

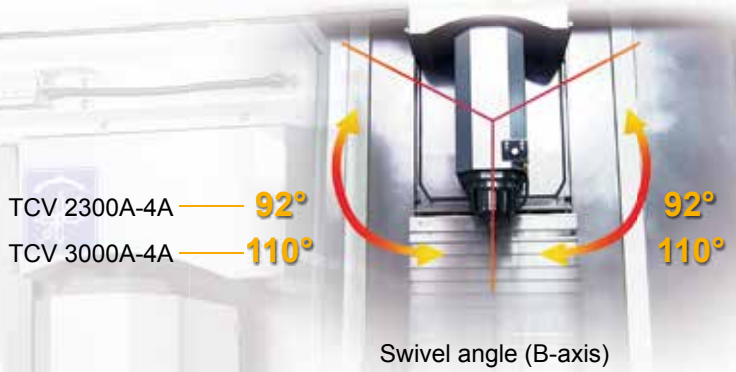


- The guide blocks support tool magazine to ensure smooth and stable movement.

- X-axis ball screw incorporates with cooling system (std.) and linear encoder (std.) to ensure long-term machining accuracy.
- The X-axis axial system adopts a long shaft screw to support module + ZF gearbox that can enhance rapid feedrate of up to 30m/min.

TCV 2300A-4A / 3000A-4A

With traveling column and fixed table design, TCV 2300A-4A / 3000A-4A provides a wide machining area with minimum tool interface.



Swivel angle (B-axis)

TCV 2300A-4A / 3000A-4A
50 / 33.3 rpm
Max. speed (B-axis)

< 10 sec.
Positioning accuracy (B-axis)

XYZ linear guide

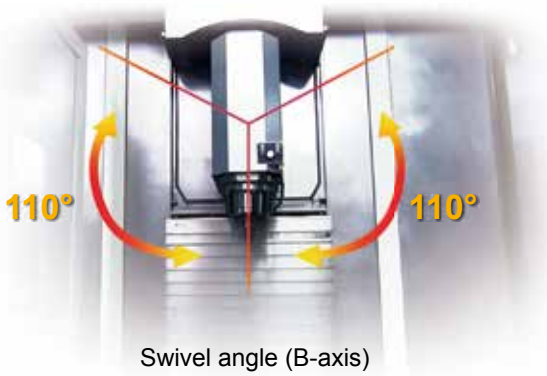
FEM Finite Element Analysis

MEEHANITE

	TCV 2300A-4A	TCV 3000A-4A
X-axis	2,300 mm 90.6"	3,000 mm 118.1"
Y-axis	520 mm 20.5"	800 mm 31.5"
Z-axis	645 mm 25.4"	800 mm 31.5"

TCV 3000A-5AF / 5AX

Design with low backlash swivel head and rotary table, TCV 3000A-5AF/5AX achieves all of your challenging job requirements.



Swivel angle (B-axis)


Resdution of rotary table: 0.001˚


■ Big torque spindle 50kW, Swivel angle 120˚, Rotation speed 33.3 rpm <TCV 3000A-5AX>(opt.)

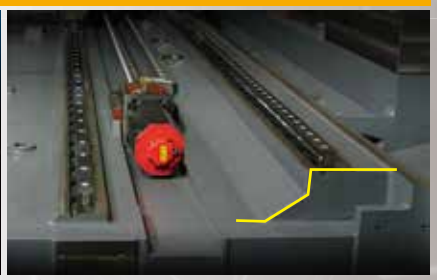
33.3 rpm
Max. speed (B-axis)

50 rpm (FANUC) / 90 rpm (HEIDENHAIN)
Max. speed (C-axis)

< 10 sec.
Positioning accuracy (B/C-axis)


■ Reliable ATC system: Tool magazine 80T. (opt.) <TCV 3000A-5AF / 5AX>


■ Centroid driven on X-axis to reduce vibration during movement, ensuring axial accuracy.<TCV 3000A-5AF / 5AX>

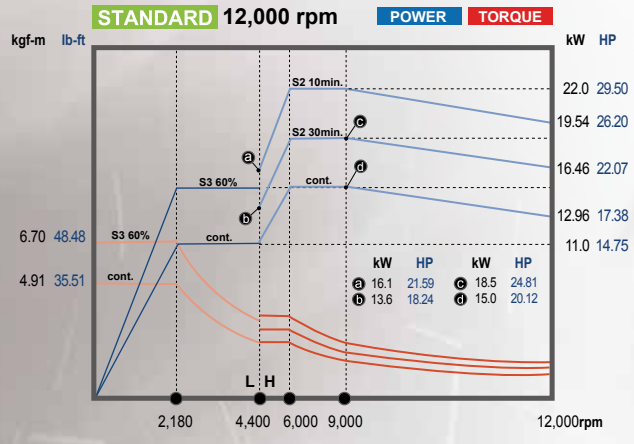

■ Stepped design on X-axis ensures stability during saddle movement. <TCV 3000A-5AF / 5AX>

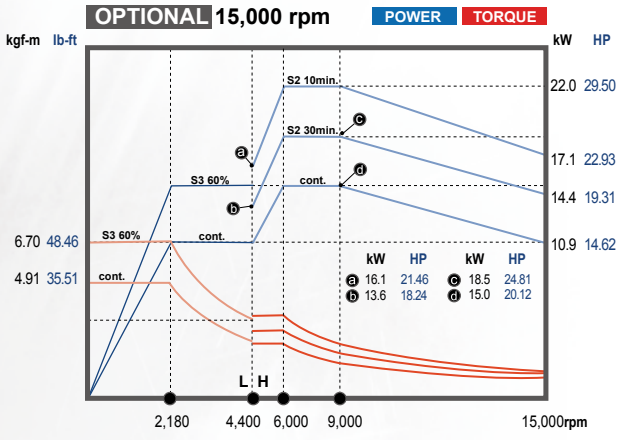
YCM In-House Built-in Spindle

- The YCM in-house built-in spindle of 12,000 / 15,000 rpm effectively lowers vibration, providing the best surface performance. Meanwhile, it prolongs lifespan of spindle and tools during heavy cutting.
- BBT40 double contact spindle taper greatly enhances machining accuracy.

TCV 2000A / 2300A / 3000A

Spindle Taper #40
Spind Speed：12,000 / 15,000 rpm

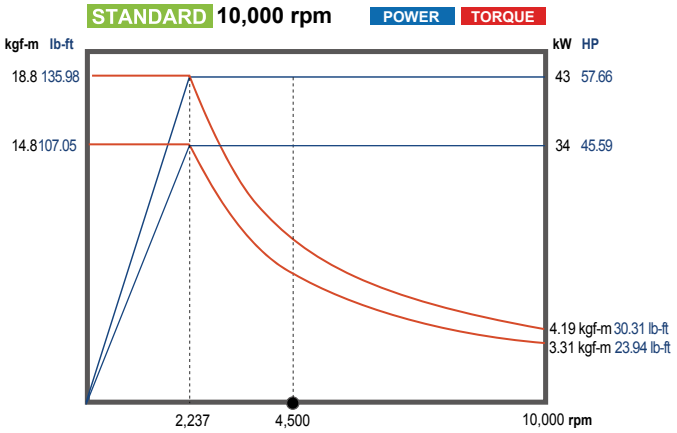




TCV 4500B

Spindle Taper #50
Spind Speed：10,000 rpm

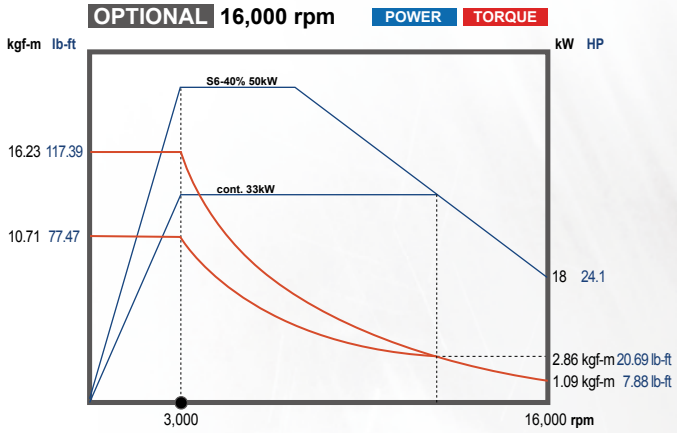
- Spindle bearings adopts oil mist lubrication system
- Front bearings adopts ceramic bevel ball bearings



TCV 3000A-5AX

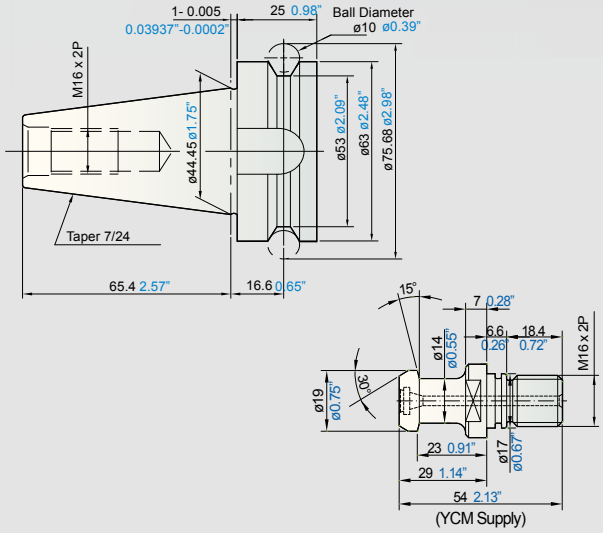
Spindle Taper #40
Spind Speed：16,000 rpm
Big Torque Spindle (opt.)

- Up to 16,000 rpm spindle and 50 kW 67 HP outputs, best for heavy cutting.
- Tool shank: HSK A63

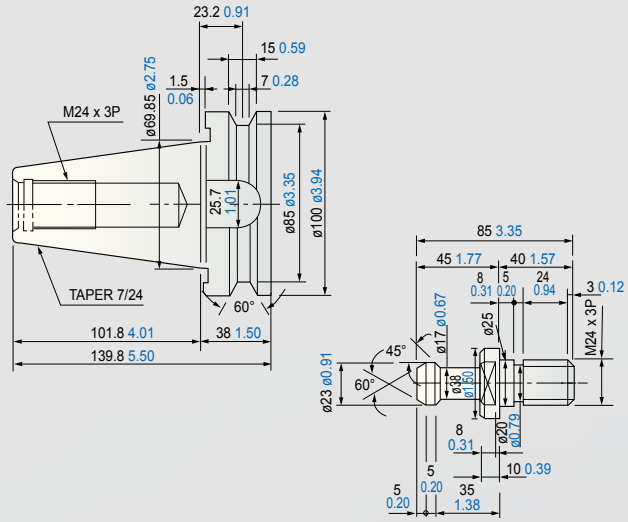


Pull Stud & Shank

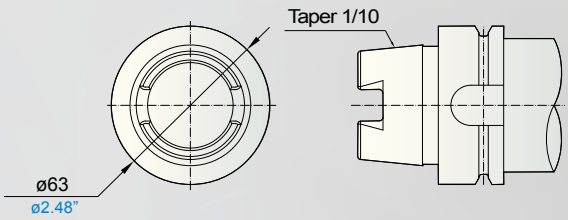
BBT40



BBT50



HSK-A63

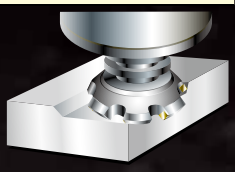


Cutting Capacity

TCV 3000A BBT40 12,000 rpm (std.)

FACE MILL S45C Steel

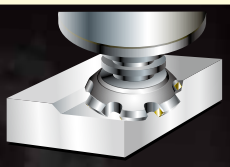
Material Removal Rate
706 cc/min.



Tool	ø63 mm x 5T
Spindle Speed	2,180 rpm
Feedrate	6,540 mm/min.
Width of Cut	60 mm
Depth of Cut	1.8 mm

FACE MILL S45C Steel

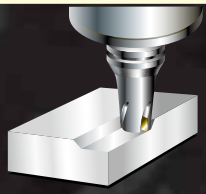
Depth of Cut
4 mm



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

END MILL S45C Steel

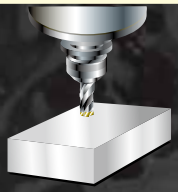
Depth of Cut
10 mm



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

U-DRILL S45C Steel

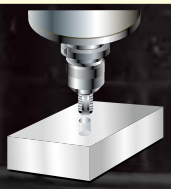
Cutter Diameter
ø44 mm



Tool	ø44 mm x 1T
Spindle Speed	2,180 rpm
Feedrate	218 mm/min.
Depth of Cut	30 mm

TAP S45C Steel

Tapping
M24

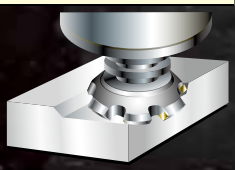


Tool	M24 x 3P
Spindle Speed	60 rpm
Feedrate	180 mm/min.
Depth of Cut	24 mm

TCV 3000A-5AX HSK-A63 16,000 rpm (opt.)

FACE MILL S45C Steel

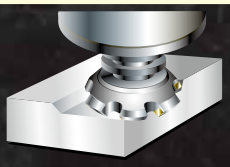
Material Removal Rate
675 cc/min.



Tool	ø63 mm x 5T
Spindle Speed	1,500 rpm
Feedrate	4,500 mm/min.
Width of Cut	60 mm
Depth of Cut	2.5 mm

FACE MILL S45C Steel

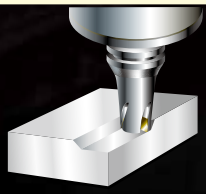
Depth of Cut
6 mm



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

END MILL S45C Steel

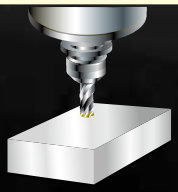
Depth of Cut
6 mm



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

U-DRILL S45C Steel

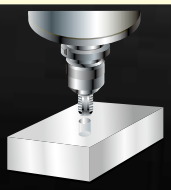
Cutter Diameter
ø49 mm



Tool	ø49 mm x 1T
Spindle Speed	1,500 rpm
Feedrate	150 mm/min.
Depth of Cut	20 mm

TAP S45C Steel

Tapping
M36



Tool	M36 x 3P
Spindle Speed	44 rpm
Feedrate	132 mm/min.
Depth of Cut	30 mm

Note: Internal cutting test data are just for reference. This is tested for the max. machining capability of the machine, but not for the optimum tool life conditions.

Accuracy

	TCV 2000A / 2300A-4A	
ACCURACY	**ISO 10791-4**	**YCM***
Axial Travel	Full Length	
Positioning (X/Y/Z) A	0.042 / 0.025 / 0.025 mm 0.0017" / 0.0010" / 0.0010"	0.014 / 0.010 / 0.010 mm 0.00055" / 0.00039" / 0.00039"
Repeatability (X/Y/Z) R	0.020 / 0.015 / 0.015 mm 0.00079" / 0.00059" / 0.00059"	0.010 / 0.007 / 0.007 mm 0.00039"/ 0.00028" / 0.00028"

	TCV 3000A / 3000A-4A / 3000A-5AF / 3000A-5AX	
ACCURACY	**ISO 10791-4**	**YCM***
Axial Travel	Full Length	
Positioning (X/Y/Z) A	0.048 / 0.025 / 0.025 mm 0.00189" / 0.00098" / 0.00098"	0.020 / 0.010 / 0.010 mm 0.00079" / 0.00039" / 0.00039"
Repeatability (X/Y/Z) R	0.024 / 0.015 / 0.015 mm 0.00094" / 0.00059" / 0.00059"	0.015 / 0.007 / 0.007 mm 0.00059" / 0.00028" / 0.00028"

	TCV 4500B	
ACCURACY	**ISO 10791-4**	**YCM***
Axial Travel	Full Length	
Positioning (X/Y/Z) A	0.054 / 0.025 / 0.025 mm 0.00213" / 0.00098" / 0.00098"	0.020 / 0.010 / 0.010 mm 0.00079" / 0.00039" / 0.00039"
Repeatability (X/Y/Z) R	0.028 / 0.015 / 0.015 mm 0.00110" / 0.00059" / 0.00059"	0.015 / 0.007 / 0.007 mm 0.00059" / 0.00028" / 0.00028"

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

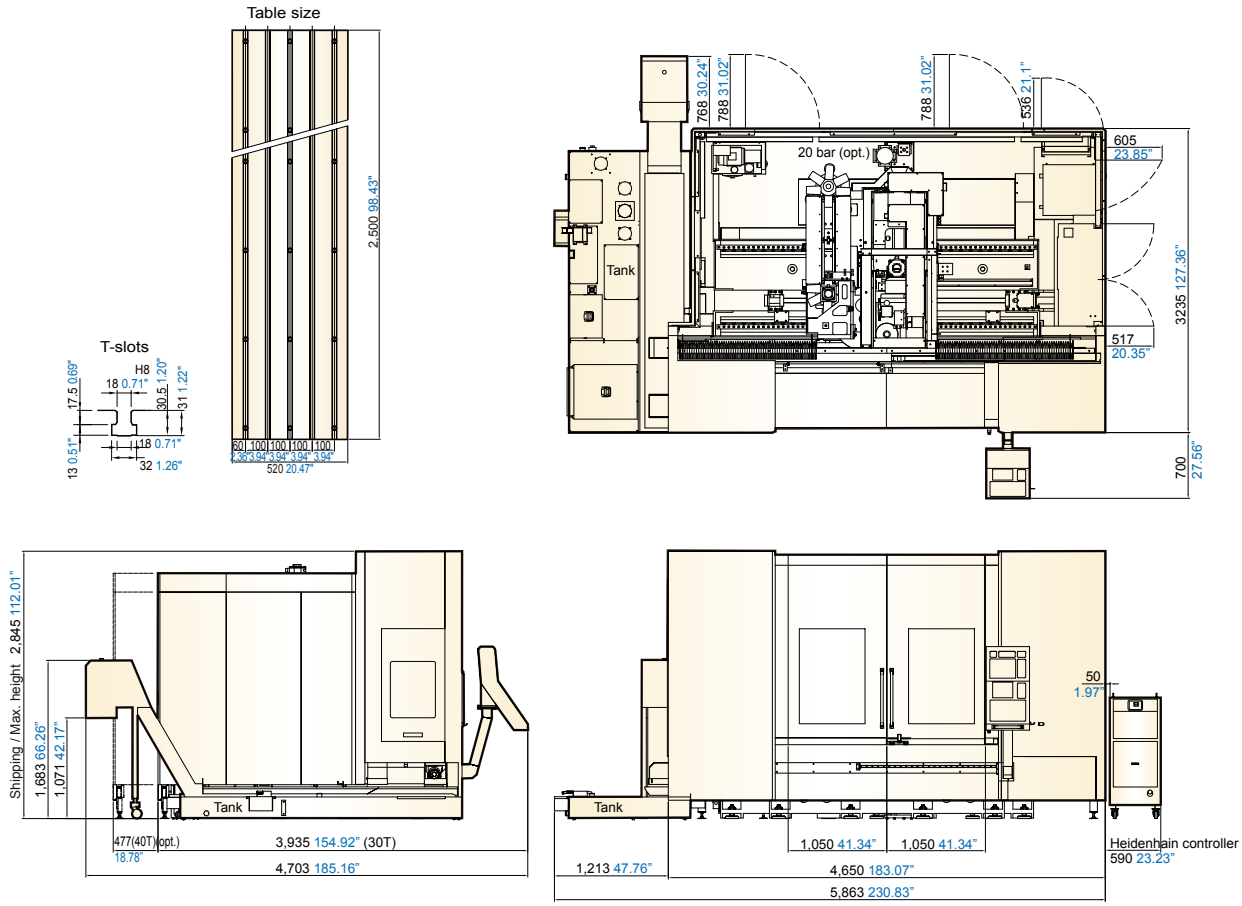
Efficient Chip Disposal System

- The spindle is designed with 6-nozzle coolant supply device (opt.). (TCV3000A-5AF / 5AX)
- Dual chip augers and chip conveyor (opt.) for high chip removal rate.

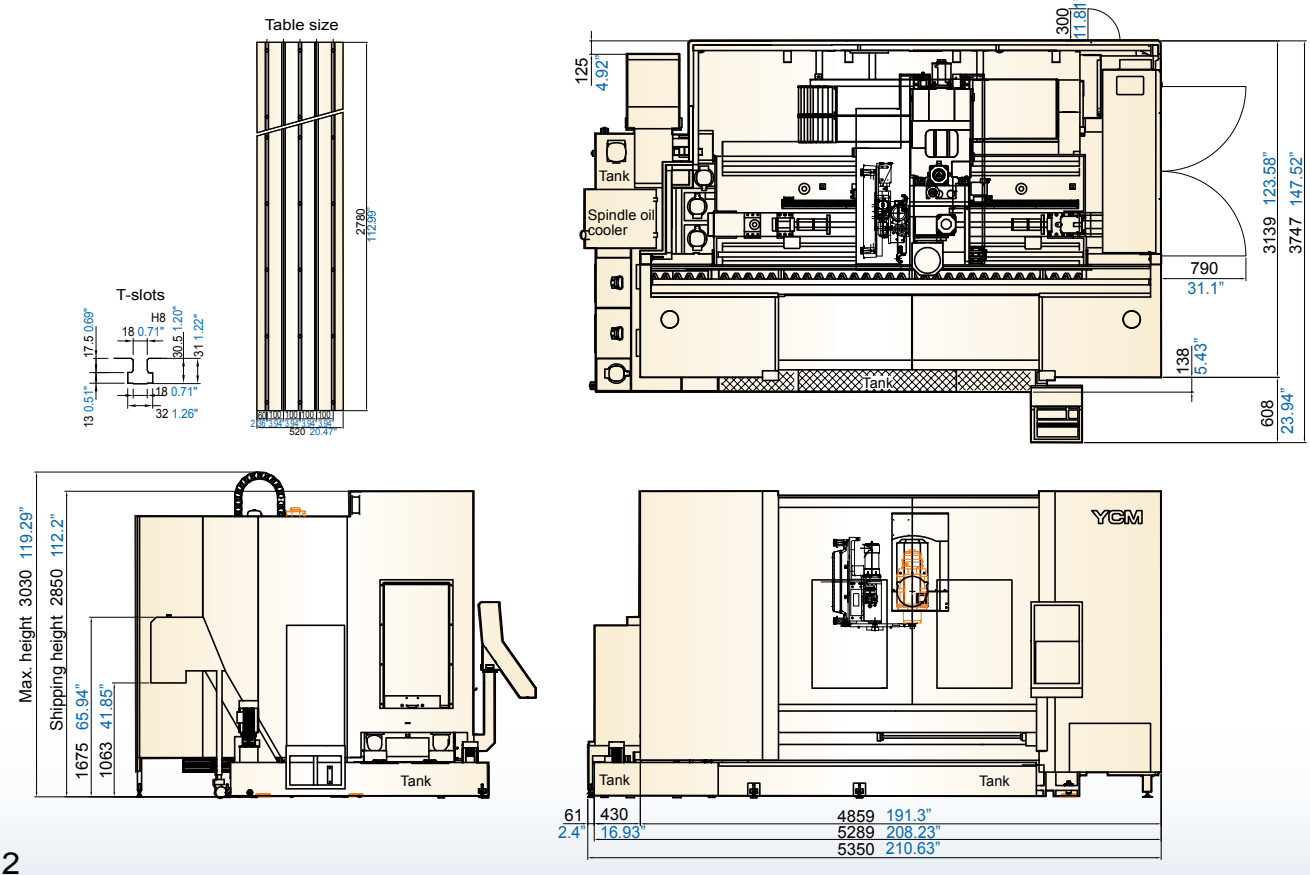
Dimensions

Unit : mm inch

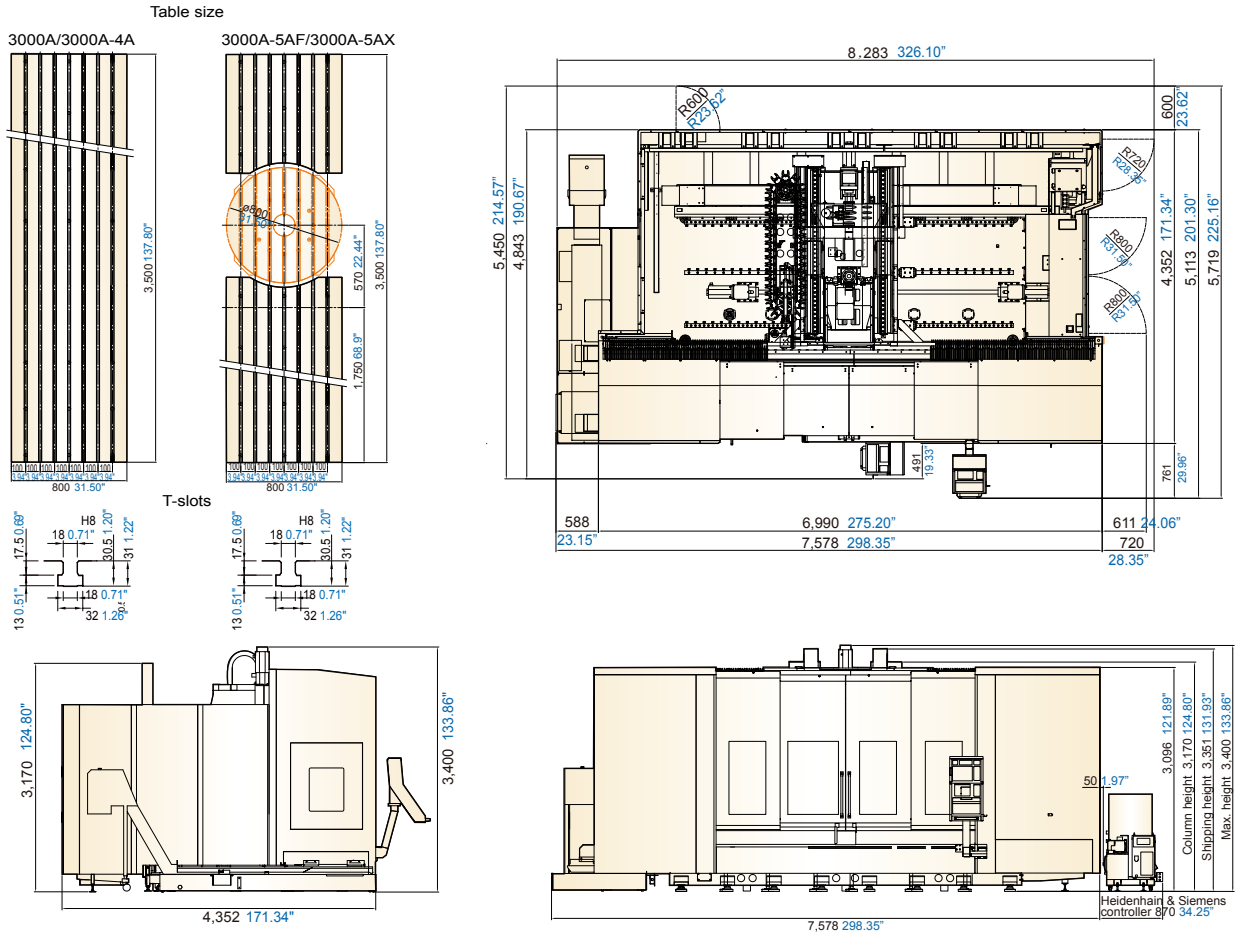
TCV 2000A



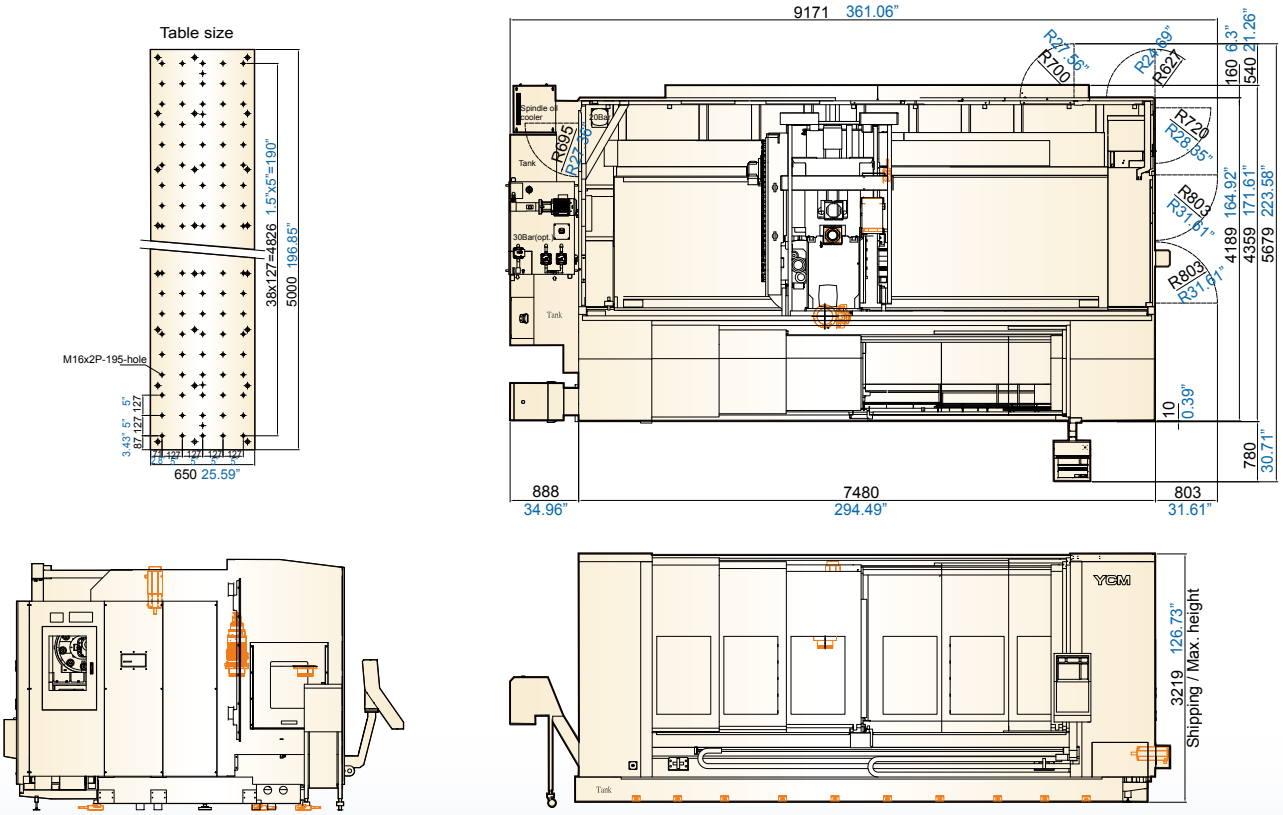
TCV 2300A-4A



TCV 3000A / 3000A-4A / 3000A-5AF / 3000A-5AX



TCV 4500B



SPECIFICATIONS

	TCV		
	2000A	3000A	4500B
SPINDLE			
Spindle Speed / Power (std.)	12,000 rpm 15 / 18.5 / 22 kW 20 / 25 / 29.5 HP (cont./30min./10min.)		10,000 rpm 34 / 43 kW 46 / 58 HP (cont./S6 60%)
Spindle Speed / Power (opt.)	15,000 rpm 15 / 18.5 / 22 kW 20 / 25 / 29.5 HP (cont./30min./10min.)		-
Spindle Taper	BBT40		BBT50
Big Torque Spindle (opt.)	-		-
TRAVEL			
X-axis Travel	2,000 mm 78.7"	3,000 mm 118.1"	4,500 mm 177.2"
X-axis Travel Working in 2 Areas	2 x 650 mm 2 x 25.6"	2 x 1,100 mm 2 x 43.3"	2 x 1,850 mm 2 x 72.8"
Y-axis Travel	520 mm 20.5"	800 mm 31.5"	650 mm 25.6"
Z-axis Travel	540 mm 21.3"	800 mm 31.5"	500 mm 19.7"
Distance between Spindle Nose & Table Top (V)	180 ~ 720 mm 7.09"~28.35"	50 ~ 850 mm 1.97"~33.46"	150~650 mm 5.9"~25.6"
Distance between Spindle Center & Table Top (H)	-	-	-
TABLE			
Table Size	2,500 x 520 mm 98.4" x 20.5"	3,500 x 800 mm 137.8" x 31.5"	5,000 x 650 mm 196.9" x 25.6"
No. T-Slots x Size x Pitch	5 x 18 mm x 100 mm 5 x 0.7" x 3.9"	7 x 18 mm x 100 mm 7 x 0.7" x 3.9"	-
Max. Load on Table	2,000 kg 4,409 lb	3,000 kg 6,614 lb	3,000 kg 6,614 lb
B-axis			
Swivel Head Degree	-	-	-
Resolution of Swivel Head	-	-	-
C-axis			
Rotary Table Size	-	-	-
Max. Rotary Table Load	-	-	-
Max. Workpiece Size	-	-	-
Resolution of Rotary Table	-	-	-
FEEDRATE			
Rapid Feedrate	40 / 40 / 40 m/min. 1,575 / 1,575 / 1,575 ipm		30 / 40 / 40 m/min. 1,181 / 1,575 / 1,575 ipm
Cutting Feedrate	1~10,000 mm/min. 0.04~394 ipm		1~15,000 mm/min. 0.04~590.55 ipm
ATC			
Tool Magazine Capacity (opt.)	30T (40T)	40T (80T)	30T
Max. Tool Weight (Per Piece)	6 kg 13.2 lb		15 kg 33.1 lb
Max. Tool Dimensions (W/O Adjacent Tools)	ø76 x 300 mm ø3" x 11.8" (ø110 x 300 mm) (ø4.3" x 11.8")	ø76 x 300 mm ø3" x 11.8" (ø125 x 300 mm) (ø4.9" x 11.8")	ø105 x 350 mm ø4.1" x 13.8" (ø210 x 350 mm ø8.3" x 13.8")
GENERAL			
Power Consumption (Transformer)	58 kVA (65 kVA)	67 kVA (80 kVA)	99.25 kVA (120 kVA)
Machine Weight	13,000 kg 29,321 lb	24,000 kg 52,910 lb	28,000 kg 61,729 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 catalog is performed under specific test procedures and environmental conditions.

	TCV		
	2300A-4A	3000A - 4A	3000A - 5AF / 5AX
SPINDLE			
Spindle Speed / Power (std.)	12,000 rpm 15 / 18.5 / 22 kW 20 / 25 / 29.5 HP (cont./30min./10min.)		
Spindle Speed / Power (opt.)	15,000 rpm 15 / 18.5 / 22 kW 20 / 25 / 29.5 HP (cont./30min./10min.)		
Spindle Taper	BBT40		
Big Torque Spindle (opt.)	-	-	16,000 rpm 50 kW 67.1 HP (cont./S6-40%) (HSK A63) < only TCV 3000A-5AX >
TRAVEL			
X-axis Travel	2,300 mm 90.6"	3,000 mm 118.1"	
X-axis Travel Working in 2 Areas	2 x 800 mm 2 x 31.6"	2 x 1,100 mm 2 x 43.31"	
Y-axis Travel	520 mm 20.5"	800 mm 31.5"	
Z-axis Travel	645 mm 25.4"	800 mm 31.5"	
Distance between Spindle Nose & Table Top (V)	0~645 mm 0~25.4"	0~800 mm 0~31.5"	
Distance between Spindle Center & Table Top (H)	300~945 mm 11.8"~37.2"	300 ~ 1,100 mm 11.81"~43.31"	300 ~ 1,100 mm 11.81"~43.31" Big Torque Spindle： 336 ~ 1,136 mm 13.23"~44.72"
TABLE			
Table Size	2,780 x 520 mm 109.5" x 20.5"	3,500 x 800 mm 137.8" x 31.5"	
No. T-Slots x Size x Pitch	5 x 18 mm x 100 mm 5 x 0.7" x 3.9"	7 x 18 mm x 100 mm 7 x 0.7" x 3.9"	
Max. Load on Table	2,000 kg 4,409 lb	3,000 kg 6,614 lb	
B-axis			
Swivel Head Degree	±92°	±110°	±110° / ±120° (Big Torque Spindle)
Resolution of Swivel Head	0.001°	0.001°	0.001°
C-axis			
Rotary Table Size	-	-	ø800 mm ø31.5"
Max. Rotary Table Load	-	-	FANUC: 500 kg 1,102 lb HEIDENHAIN: 1,000 kg 2,205 lb
Max. Workpiece Size	-	-	ø800 mm ø31.5"
Resolution of Rotary Table	-	-	0.001°
FEEDRATE			
Rapid Feedrate	40 / 40 / 40 m/min. 1,575 / 1,575 / 1,575 ipm		
Cutting Feedrate	1~15,000 mm/min. 0.04~590.55 ipm	1~10,000 mm/min. 0.04~394 ipm	
ATC			
Tool Magazine Capacity (opt.)	30T (48T)	40T(80T)	40T (80T)
Max. Tool Weight (Per Piece)	6 kg 13.2 lb	6 kg 13.2 lb	6 kg 13.2 lb
Max. Tool Dimensions (W/O Adjacent Tools)	ø76 x 300 mm ø3" x 11.8" (ø125 x 300 mm ø4.92" x 11.8")		
GENERAL			
Power Consumption (Transformer)	58.7 kVA (65 kVA)	72 kVA (80 kVA)	
Machine Weight	13,000 kg 28,659 lb	24,000 kg 52,910 lb	24,700 kg 54,454 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 catalog is performed under specific test procedures and environmental conditions.

ACCESSORIES

● : Standard ○ : Optional — : None

		TCV					
		2000A	3000A	4500B	2300A-4A	3000A -4A / -5AF	3000A -5AX
Spindle Cooling System		●	●	●	●	●	●
CTS (Coolant through Spindle)		○	○	○	○	○	○
Tool Shank & Pull Stud	BBT	●(15°)	●(15°)	●(45°) ○(60°, 90°)	●(15°)	●(15°)	●(15°)
	HSK A63	-	-	-	-	-	○ (HEIDENHAIN-LCM)
Coolant Pump	General	●	-	-	-	-	-
	Heavy Duty	○	●	●	●	●	●
Spindle Air Blast		●	●	●	●	●	●
Spindle Air Seal		●	●	●	●	●	●
Circular Coolant Nozzle		○	○	●	●	●	●
Oil-mist Cutting System		○	○	○	○	○	○
Oil-mist Collector		○	○	○	○	○	○
Cutting Air Blast		●	●	●	●	●	●
Automatic Power Off		●	●	●	●	●	●
Automatic Lubrication		●	●	●	●	●	●
Screw Type Chip Conveyor	Dual-Chip Auger	●	●	-	●	●	●
Chip Conveyor	Scraper Type	○	○	○	○	○	○
	Chain Type	○	○	●	○	○	○
Chip Removal Direction	Rear Side	○	○	-	○	○	○
	Left Side	-	-	●	-	-	-
Chips Flush Coolant		○	○	●	●	○	○(FANUC) ●(HEIDENHAIN)
Shower Coolant		○	-	-	○	-	-
Air Gun		●	●	●	●	●	●
Coolant Gun		●	●	●	●	●	●
Coolant Wash for C-Axis		-	-	-	-	●	●
Automatic Workpiece Measurement System	RENISHAW	○	○	○	○	○	○
	BLUM	○	○	○	○	○	○
Linear Encoder	X-Axis	-	●	●	-	●	●
	Y/Z-Axis	-	○	○	-	○	○
	X/Y-Axis	-	-	-	○	-	-
	X/Y/Z-Axis	○	-	-	○	-	-
	B-Axis	-	-	-	●	●	●
	C-Axis	-	-	-	-	●	●
Oil Skimmer		●	●	●	●	●	●
Work Light	2 Units	○	-	-	●	-	-
	4 Units	-	●	●	-	●	●
Pilot Lamp		●	●	●	●	●	●
A/C Cooler for Electrical Cabinet		○	○	○	○	○	○(FANUC) ●(HEIDENHAIN)
Heat Exchanger for Electrical Cabinet		●	●	●	●	●	-
Safety Door		●	●	●	●	●	●
Automatic Door		○	-	-	○	○	○
ATC Door		●	●	●	●	●	●
Chip Enclosure		-	-	-	-	-	-
Full Chip Enclosure with Top		●	●	●	●	●	●
Central Partition		-	-	-	-	●	●
Leveling Blocks & Screws		●	●	●	●	●	●
Foundation Bolts		○	●	●	○	●	●
Mechanical, Electrical & Operation Manuals		●	●	●	●	●	●
Tool Kit		●	●	●	●	●	●
CNC Control	FANUC MXP-200FB+	●	●	●	-	-	-
	FANUC MXP-200FC	-	○	-	●	●	-
	FANUC 31iMB5	-	-	-	-	-	○
	HEIDENHAIN TNC640	-	-	-	-	-	●

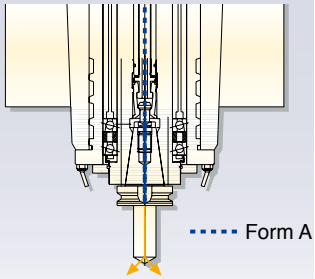
Note: Above specifications may vary depending on the machine and the surrounding environment.
The manufacturer reserves the right to modify the design, specifications, mechanisms, etc., to improve the performance of the machine without notice. The test data provided in this catalog is performed under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

Linear Encoder

- HEIDENHAIN Linear Scales are available on axes.
- With the absolute measuring method, the position value is available from the encoder immediately upon switch-on. The absolute position information is read from the scale graduation, which is formed from a serial absolute code structure.

Coolant Through Spindle*1

- Form A
- 20 bar / 30 bar / 70 bar



Laser Measuring System

- BLUM non-contact precise tool setting and breakage control.
- The integrated electronic system checks each individual cutting edge at full speed.

Chip Conveyor

- Hinge type
- Scraper type

Tool Length & Radius Measurement

- BLUM Z-3D tool length & radius measurement.
- Universal and economic solution for fast tool setting and breakage control.

Chip Flush Coolant

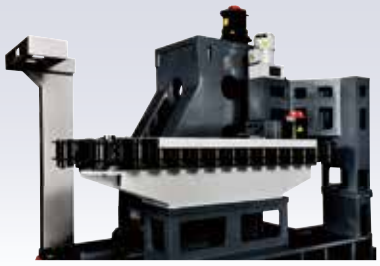
- Groundfos pump, max flow rate at 120L/min.
- Efficient chip disposal system

Workpiece Measurement System

- BLUM TC60 multidirectional touch probe
- Allows fast, precise, and automatic calculation of workpiece position and dimensions.

Tool Magazine

- 30T servo driven tool magazine (TCV 2000A/4500B)
- 40T servo driven tool magazine (TCV 3000A series)
- 80T servo driven tool magazine (opt.) (TCV 3000A series)



*1: Above are the max. pressure generated when the flow rate is at the lowest. As shown in the figure, the tool blade pressure may vary according to the channel size of high-pressure coolant system. The smaller the channel size, the higher pressure will be. For the correct pressure change value, please contact YCM for flow chart.

YCM®

MXP-200FB+

by FANUC

Communication Interface	Excellent Vision Quality	User-Friendly Design
RJ45 Ethernet RS-232C USB CompactFlash Card	10.4" LCD display	Detachable keyboard (QWERTY)

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 400 blocks of look-ahead for pre-calculating the machining program
2. Block processing time 1ms 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

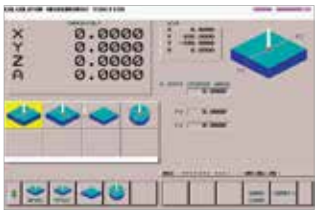
Exclusive Software from YCM

Plus II

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)

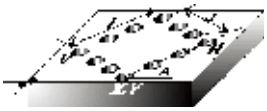
Tool Measurement & Measurement Calibration

Workpiece Measurement

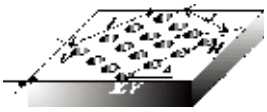
(applicable to certain models)

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

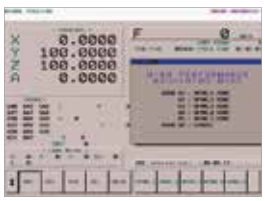
Instant tool load monitoring with alarm function

Multi-Display Function

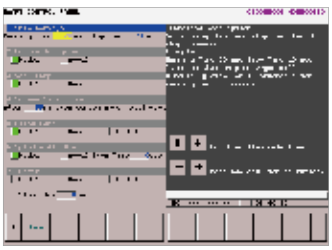
Displaying 4 statuses simultaneously with configurable status display

Tool Life Management

Indicating tool status of each group with tool life alarm



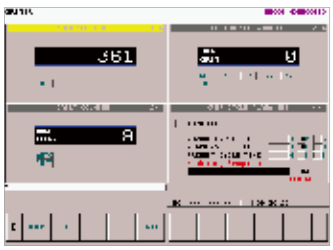
Smart Control Panel



iPANEL

Easy to set up and operate important functions

Intelligent Counter



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

YCM® PRODUCT LINES

VMC — Vertical Machining Center


FP Series — *High Precision High Performance Die Mold Vertical Machining Center*
FP66A, FP100A, NFP66A

NXV Series — *High Performance Vertical Machining Center*
NXV600A, NXV560A-APC, NXV1020A/AM, NXV1270A, NXV1380A, NXV1680A/B


TV Series — *Heavy Duty Vertical Machining Center*
TV116B, TV146B, TV158B, TV188B, TV2110B, TV2610B

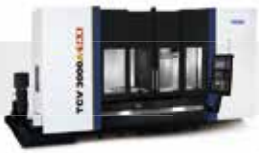
NTV Series — *High Efficiency T-base Vertical Machining Center*
NTV158A/B

NMV Series — *High Performance High Rigidity Vertical Machining Center*
NMV76A, NMV106A


WV Series — *Ultra Wide High Performance Vertical Machining Center*
WV108A/B

NFX Series — *High Performance 5-axis Vertical Machining Center*
NFX400A

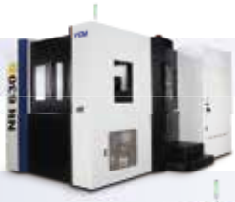
NSV Series — *Ultra High Performance Vertical Machining Center*
NSV66A, NSV106A/AM/AS/AMS, NSV156A/AM



TCV Series — *High Performance Traveling Column Vertical Machining Center*
TCV2000A, TCV3000A, TCV4500B, TCV2300A-4A, TCV3000A-4A/5AF/5AX

DCV Series — *Advanced Double Column Vertical Machining Center*
DCV2012A/B, DCV3016B~6035B, DCV2018A~4018A-5AX, DCV4030B~6030B-5AX, DCV4030B-5AF

NDC Series — *High Performance Double Column Vertical Machining Center*
NDC2016B~4016B, NDC3022B~6027B, NDC2018B~4018B-AHC, NDC3022B~6027B-AHC



HMC — Horizontal Machining Center

NH Series — *High Speed High Precision Horizontal Machining Center*
NH500A, NH630B, NH800B

CNC LATHES — CNC Turning Center


NT Series — *High Performance Mill/Turn Center*
NT-2500SY

GT Series — *High Performance Geo Turning Center*
GT-200B/MA, GT-250B/MA, GT-300B/MA/LMB

TC Series — *High Performance High Precision CNC Lathe*
TC-16LA/LB, TC-26, TC-36, TC-46 1000/1650/2300/3200, TC-46M 3200


NTC Series — *High Efficiency CNC Turning Center*
NTC-2000LY/LSY

INTEGRATION AND SOLUTIONS

iOPERATION plus — Software Enhancement Exclusively from YCM
Integrated Operation Control System

i-Direct — Intelligent Production Management
Intelligent Production Management

Automation Solutions

YCM®

YEONG CHIN MACHINERY INDUSTRIES CO., LTD.
No. 888, Sec. 1, Homu Road, Shengang District, Taichung 42953, Taiwan
Tel : +886-4-2562-3211 ■ Fax: +886-4-2562-6479
Web Page: www.YCMCNC.com ■ Email: sales@YCMCNC.com

201707-E06-2000