

WV Series

WV108A-B

ULTRA WIDE HIGH RIGIDITY VERTICAL MACHINING CENTER



WV 108A / B

ULTRA WIDE HIGH PERFORMANCE VERTICAL MACHINING CENTER

- WV108A/B is structurally designed for the heavy-duty machining requirement with ultra wide machine base and column.
- The extended 762mm (30") travel in Y-axis is ideal for die mold application and oversized work-piece machining.
- The inner-rail embraced structure with double gibs provides optimal support for the extended headstock.
- The modular headstock design offers both IDD spindle is ideal for high speed machining and 2-step gearhead transmission spindle is ideal for heavy-duty machining requirements. (WV108B)

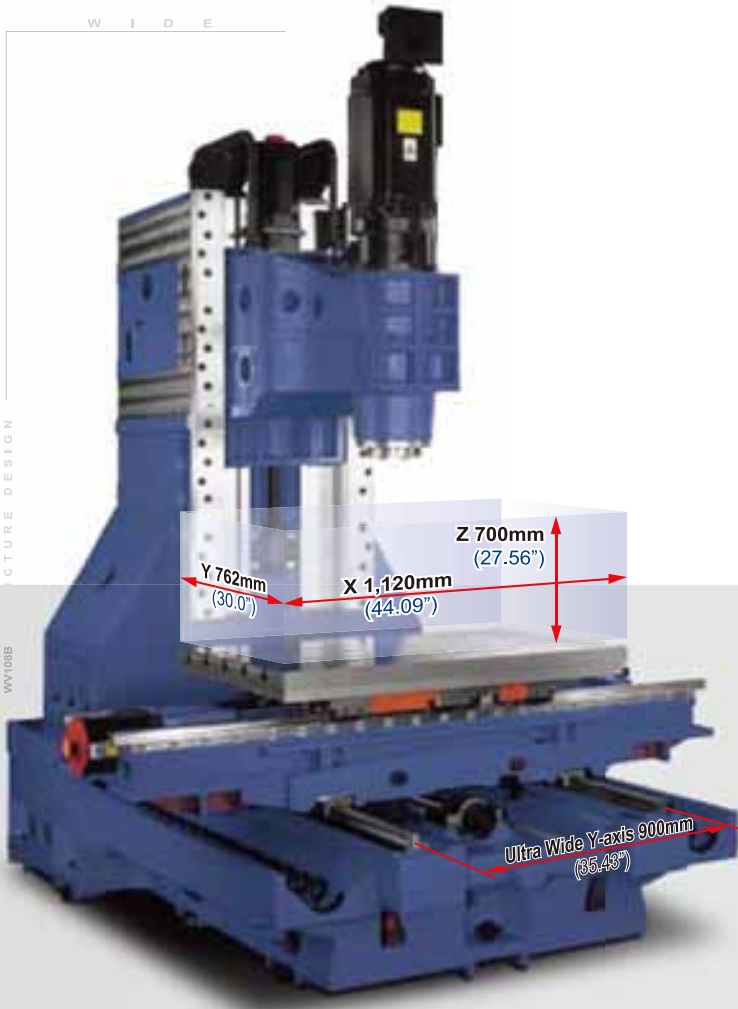
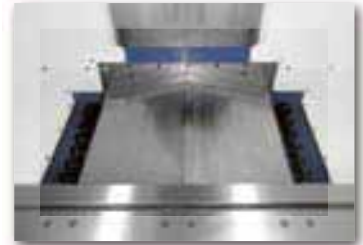
Axial Feed Configurations

- High responsive servo motors are directly coupled with precise ballscrews to provide backlash-free, fine accuracy, and high responsive movements to satisfy high speed and high rigidity machining requirements.
- WV108A and WV108B (X/Y axes) are equipped with oversized roller type linear motion guides to reinforce loading capacity and cutting rigidity.



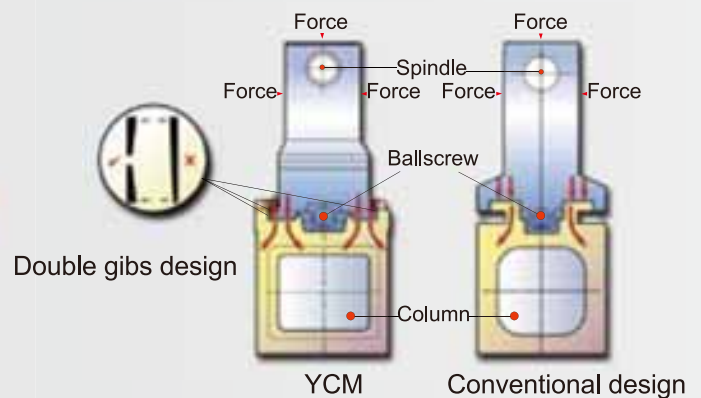
Chip Disposal System

- The standard dual chip augers equipped with chip conveyor (opt.) and chip flush coolant system (opt.) dispose cutting chips effectively.



WV108A/B ACCURACY			
	Standard	ISO 10791-4 (JIS B 6336-4)	JIS B 6338 (1985)
Tolerances			
Axial Travel		Full Length	300mm 11.81"
Positioning A		0.014mm 0.00055"	0.004mm 0.00016"
Repeatability R		0.010mm 0.00039"	0.002mm 0.00008"

VDI/DGQ3441 is equivalent to A of ISO10791-4, and PS is equivalent to R.
All values shown above are measured for machine in good air conditioned environments.



Ultra Wide Base Design

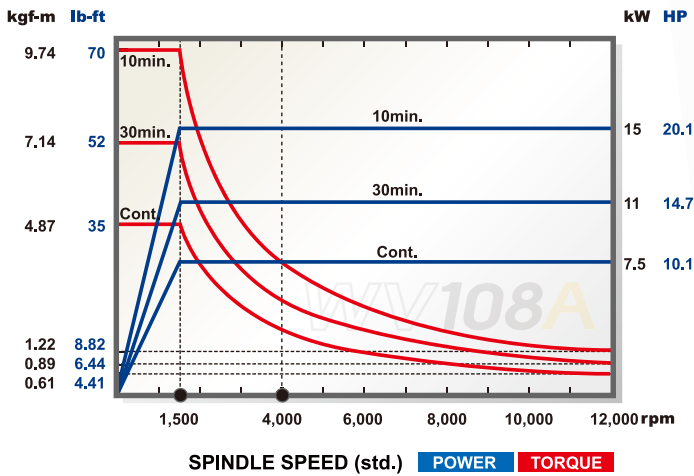
- The ultra wide machine base structure via FEM analysis provides most stable construction rigidity which assures the overall machine performance and accuracy.

Rapid feed-rate	X	24m/min	945ipm
	Y	24m/min	945ipm
	Z	18m/min	709ipm

WV108A

Unique IDD Spindle

- The unique IDD spindle design offers low spindle vibration and optimal heat isolation that results in excellent surface finish while maximizing both spindle and tool life under hard machining conditions.
- The oversized angular contact ceramic ball bearing generates very little heat and provides excellent radial and axial rigidity for heavy-duty machining operation.
- Powerful dual winding AC digital spindle motor provides high torque at low spindle speed and maximized horsepower output at high speed operation.



15 kW 20 HP

WV108B

High Torsion Gearhead Transmission Spindle (opt.)

- The optional 6,000rpm spindle design incorporates 2-step gearhead transmission with powerful AC digital spindle motor and oversized angular contact ceramic ball bearing which delivers max. 18.5kW (25HP) power and 48kgf-m (347 lb-ft) torque output.

Unique IDD Spindle

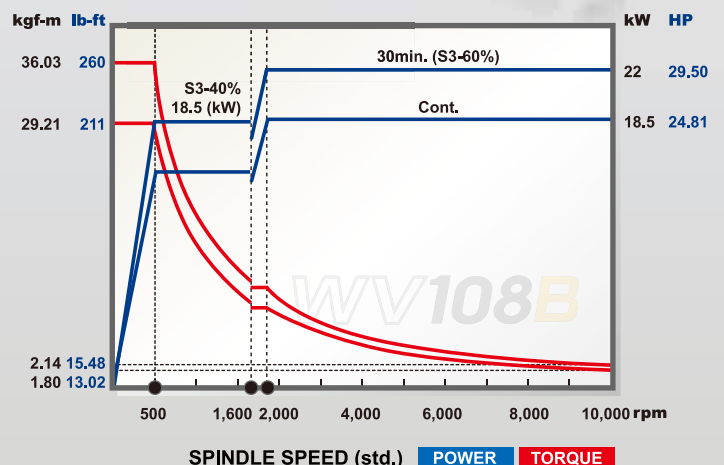
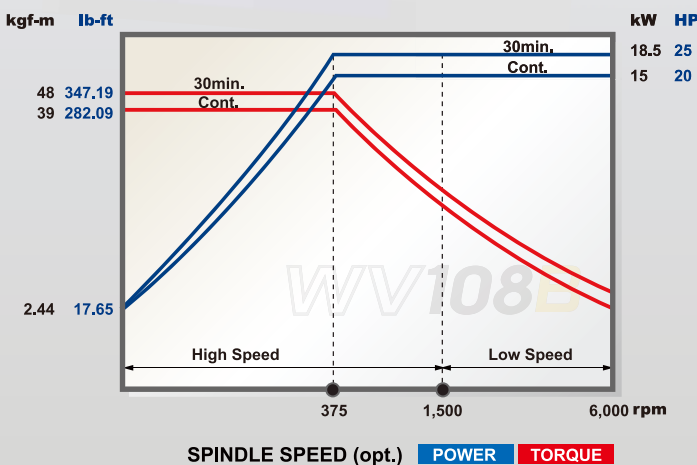
- Driven by powerful dual winding AC digital spindle motor is capable of reaching max. 22kW (29.5HP) power and 36kgf-m (260 lb-ft) torque output.
- With IDD spindle design, the spindle motor is directly coupled to the spindle to remove vibration caused by belt or gear driven transmission and isolate the heat generated from spindle motor.



48 Max. torque
kgf-m
347 lb-ft



36 Max. torque
kgf-m
260 lb-ft



MXP-200i

YCM CONTROL
by FANUC

- High Performance AC Digital Servo & Spindle Drives
- High Responsive Vector Drives Technology for High Precision Machining
- Powerful Servomotors with Super Precision Absolute Positioning Encoders
- High-resolution 10.4" TFT Color Display with Dynamic Graphic Display
- Manual Guide *i* Conversational Function Greatly Reduces Programming and Setup Time
- Built-in AI NANO Contour Control and High-Speed JERK Function
- High Speed Rigid Tapping, Helical Interpolation, Custom Macro B, and Tool Path Graphics
- Large Program Capacity with 1,280 Meters of Memory
- Full Alphanumeric Keyboard Allows Easy Program Editing
- PCMCIA Slot for Easy File Transfer and Memory Expansion
- RS-232C Interface Ready for Fast Program Transfer
- Combined Uses of Many High Performance Microprocessors, High Speed Memory and the Adoption of Multi-CPU System for Super High Speed Control Processing
- The Most Reliable CNC Control in The World, with Failure Rate of Under 0.01 Per Unit Per Month



- **G-menu Function**
User-friendly G-menu function provides multiple machining cycles that greatly simplifies programming steps.



- **Calculator Function**
Convenient calculator function provides fast calculation and setting of work-piece offsets.



- **Easy Shop-floor Programming Manual Guide *i***
Easy to use conversational software offers convenience of part programming right on the shop-floor with 3-D graphical display and full simulation function.



- **Counter Function**
Allows user to easily keep track on number of work pieces with:
 - Main Counter
 - Periodical Counter
 - Daily Counter
 - Over Cycle Alarm



- **Intelligent Tool Data Management**
Comprehensive tool data management function allows operators to conveniently monitor and efficiently manages all position in tool magazine.



- **High Performance Machining Mode: M300**
High performance mode with 5 settings that allows user to select for the best machining results.



- **Pop-up Alarm Display**
Detailed troubleshooting procedures are automatically displayed when machine alarm occurs that allows users to quickly restore machine status to minimize downtime.



- **Intelligent Maintenance Reminder**
Pre-set maintenance schedules are programmed to remind operators to inspect periodically and to prolong machine life.



- **Automatic Tool Length Measurement**
Pre-set macros and graphical procedure are provided for operation of automatic tool length measurement function.



- **Manual Tool Length Measurement**
Easy setup of tool length measurement provides convenient setting of tool offsets data from one tool to the other.

i OPERATION *Plus*

Software enhancement exclusively from YCM

Multi-function Display

Easily select multiple windows from the following list of display for your monitoring needs.

- G-modal Status
- Feed Rate
- Parts Count
- Controller Running Hours
- M-code Status
- Tool Data
- Machining Hours
- Spindle Load
- Spindle Status
- Work Coordination
- Date and Time
- Function Display

High Speed Machining Mode: M400

Artificially intelligent machining function that is developed from accumulation of all YCM knowledge and experience on high speed to achieve the fastest cycle time with best machining results. Machining efficiency improved by +25% without sacrificing machining accuracy.

+25%

Efficiency increased by:



Wireless Message Notification (opt.)

Integrating GSM communication and CNC technology, YCM developed the WMN system for wireless notification of machine and work status report.



i-Direct

a remote monitoring system

i-Direct, the latest YCM software enhancement innovation for remote factory production line monitoring system.

Its powerful features include complete machine operation status, record, history, and data analysis. During alarm generated events, instant messages can be sent thru email or short message to 3 sets of cellphones. All these are done remotely thru internet with our user friendly interface, truly making unman factory management at your finger tips.



User account administration



Individual machine status display



Machine model, number, email, sms and ip setup



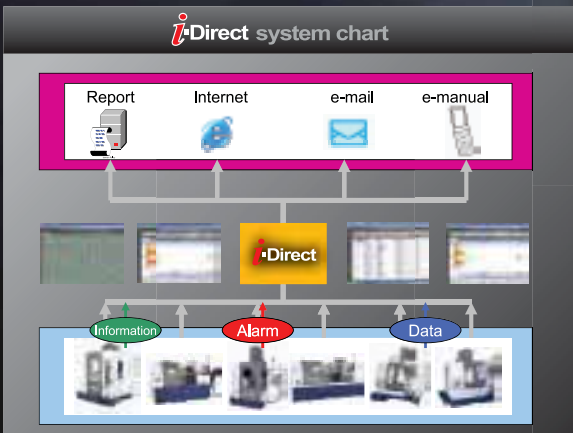
Complete production, standby, and down time record



Over all machine status display



Production data graphical analysis



SPECIFICATIONS

	WV108A	WV108B
SPINDLE		
Spindle Speed [opt.]	60~12,000rpm [15,000]	60~10,000rpm [6,000]
Spindle Power [opt.]	7.5/11/15kW 10/15/20HP	15/18.5/22kW 20/25/30HP [15/18.5kW 20/25HP]
Spindle Taper	BBT40	BT50
TRAVEL		
X Axis Travel	1,120mm 44.09"	
Y Axis Travel	762mm 30.00"	
Z Axis Travel	700mm 27.56"	
Distance Between Spindle Nose & Table Top	150~850mm 5.91"~33.46"	200~900mm 7.87"~35.43"
TABLE		
Table Size	1,300 x 820mm 51.18" x 32.28"	
No. T-slots x Size x Pitch	5 x 22mm x 150mm 5 x 0.87" x 5.91"	
Max. Load Capacity	1,200kg 2,645.5 lb	
FEED		
Rapid Feed-rate X/Y/Z	24/24/18m/min 945/945/709ipm	
Cutting Feed-rate	1~10,000mm/min 0.04~394ipm	
Rated Axial Thrust Force X/Y/Z	1,056/1,056/1,442kgf 2,328/2,328/3,179 lb	
Max. Axial Thrust Force X/Y/Z	2,592/2,592/5,184kgf 5,714/5,714/11,429 lb	
ATC		
Tool Magazine Capacity [opt.]	24T [30T]	24T [32T]
Max. Tool Weight [opt.]	6kg 13.2 lb	15kg 33.1 lb [20kg 44.1 lb]
Max. Tool Dimensions [opt.]	ø90 x 300mm ø3.54 x 11.81" [ø76 x 300mm ø3 x 11.81"]	ø110 x 350mm ø4.33 x 13.78" [ø120 x 350mm ø4.72 x 13.78"]
Max. Tool Diameter [opt.] (w/o Adjacent Tools)	ø125mm ø4.92"	ø190mm ø7.48" [ø240mm ø9.45"]
Tool Changing Method	Arm Type	
Tool Selection Method	Random	
GENERAL		
Pneumatic Supplier	5.5kg/cm ² 78.2psi	
Power Consumption/Transformer	33/40kVA	53/65kVA
Machine Weight	11,000kg 24,251 lb	13,000kg 28,660 lb

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.

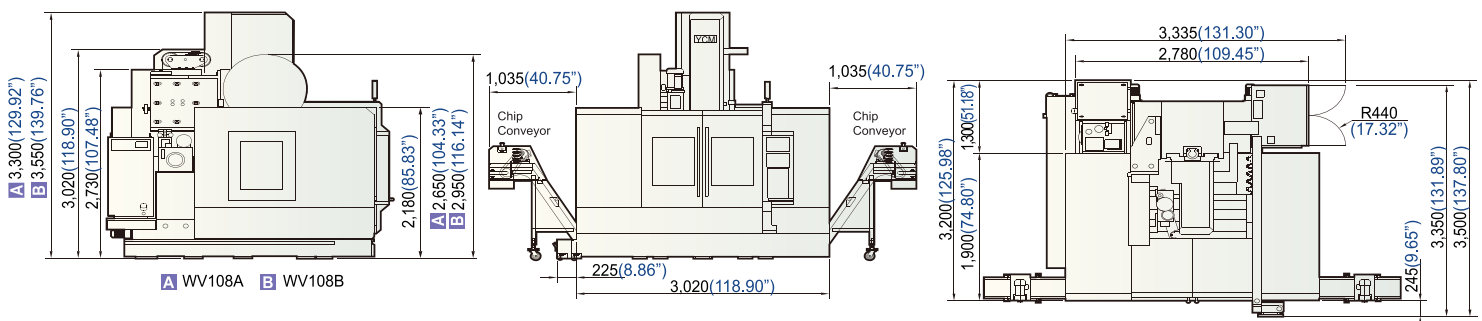
STANDARD ACCESSORIES

- Tool Kit
- Work Lamp
- Pilot Lamp
- Coolant Equipment System
- Hydraulic System (WV108B)
- Spindle Air Blast
- Spindle Air Seal
- Guideway Cover on X/Y/Z
- Central Lubrication System
- Spindle Cooling System
- Leveling Blocks
- Chip Enclosure
- Dual Chip Augers (two sides of Y-axis)
- Cutting Air Blast
- Air Gun
- Coolant Gun
- Heat Exchanger for Electrical Cabinet
- Rigid Tapping
- Mechanical, Electrical & Operation Manuals
- YCM MXP-200i Control by FANUC

OPTIONAL ACCESSORIES

- Safety Door
- Optical Scale
- Foundation Bolt
- Chip Conveyor
- Chip Flush Coolant System
- Oil-mist Coolant System
- Oil-hole Holder Function
- Oil Skimmer
- A/C Cooler for Electrical Cabinet
- Work-piece Measurement System (BLUM/RENISHAW)
- Auto Tool Length Measurement System (BLUM/METROL)
- Coolant through Spindle System (Form A)
- 4th Axis Rotary Table
- Heavy Duty Coolant Pump (MTH 2-40)
- Gearhead Spindle (WV108B)
- HEIDENHAIN iTNC-530 Control

DIMENSIONS UNIT: mm (in)



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