WV Series

WV108A▪B

Ultra Wide High Rigidity Vertical Machining Center

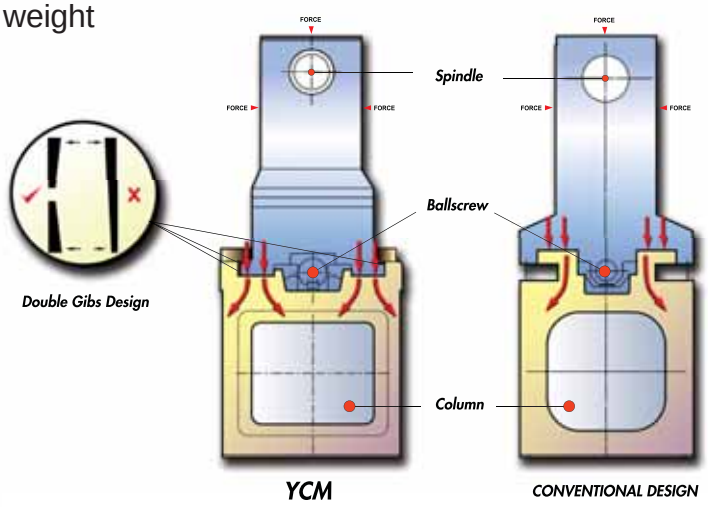
YCM®

WV

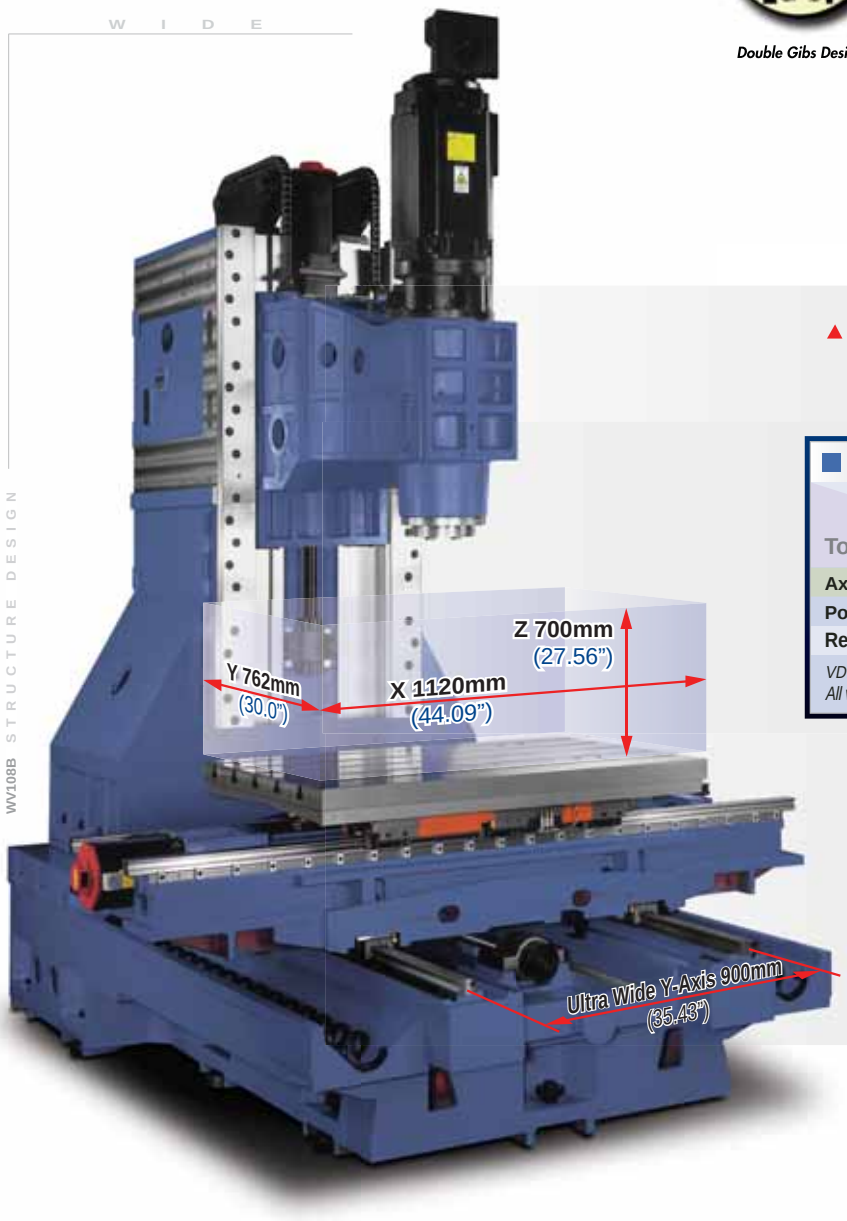
WV108A / B

HIGH RIGIDITY VERTICAL MACHINING CENTER

- WV-108A/B is structurally designed for the heaviest and roughest machining requirements with **Ultra Wide Machine Base and Column**.
- The **Extended 762mm Travel in Y-axis** is ideal for die mould application and heavy machining of oversized parts.
- The modular headstock design offers both **IDD spindle** design ideal for high speed machining and **2 Speed Gearhead** for heavy machining requirements. (WV108B)
- The **Extended Headstock** is supported by female type hardened and ground ways that distributes the weight evenly, which **Maximizes Z-axis Rigidity**, allows smoother motion and improves longevity of guideways.



WIDE STRUCTURE DESIGN



▲ The female type boxed way design with **Double Gib** provides optimal support for the extended headstock.

WV108A / B ACCURACY

Standard / Tolerances	ISO 10791-4 (JIS B 6336-4)	JIS B 6338 (1985)
Axial Travel	Full Length	300mm
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.

RAPID FEED RATE

X	24 m/min	945 ipm
Y	24 m/min	945 ipm
Z	18 m/min	708 ipm

◀ The **Ultra Wide Machine Base** structure provides most stable construction rigidity which assures the overall machine performance and accuracy.

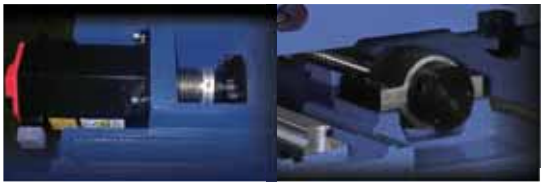
Unique IDD Spindle

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 hardmilling conditions.

The oversized ceramic angular contact bearing generates very little heat and provides excellent radial and axial rigidity for roughing and drilling operations.

High powered dual wound spindle motor provides high torque at low spindle speed and maximized horsepower output at high speed operations.

Torque
36 kgf-m
260 lb-ft
WV108B Max. Torque @ Low Speed



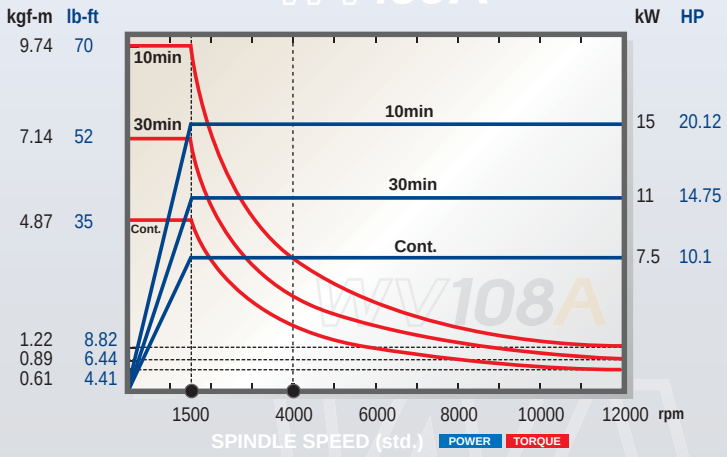
Axial Feed Configurations

High responsive servomotors are directly coupled with precision hardened and ground ball-screws to provide backlash free, fine accuracy, and responsive movements to satisfy high speed 3-D machining requirements.
High stiffness and High load capacity roller bearing linear motion guides are installed to meet the high speed and heavy machining requirements in axial movement.

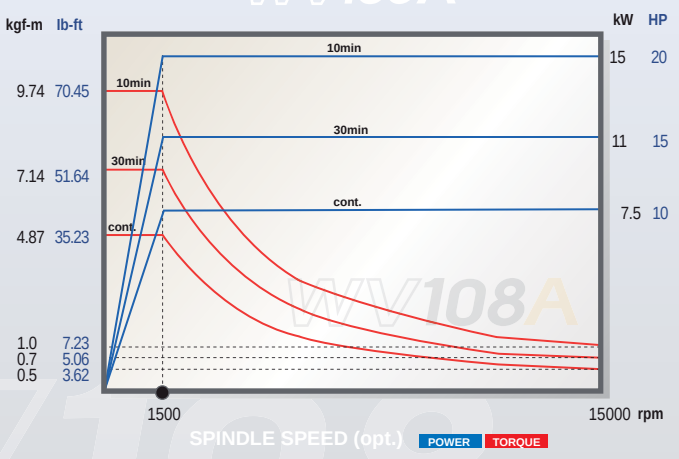
Roller Bearings Linear Motion Guides

- Low friction running smoothness
- Large carrying load capacity
- High stiffness to withstand shock load

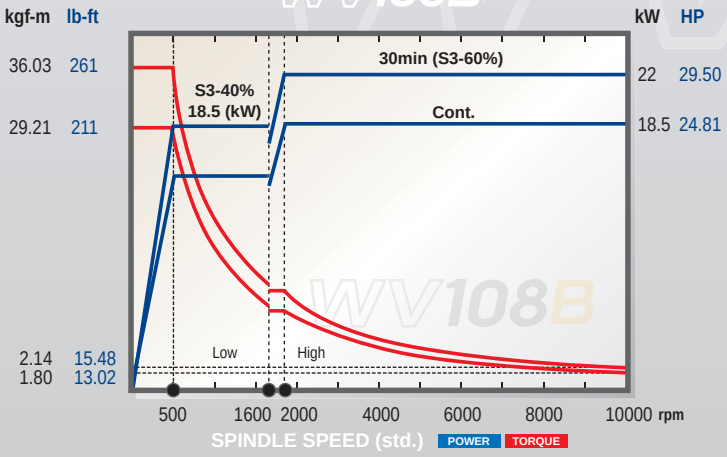
WV108A



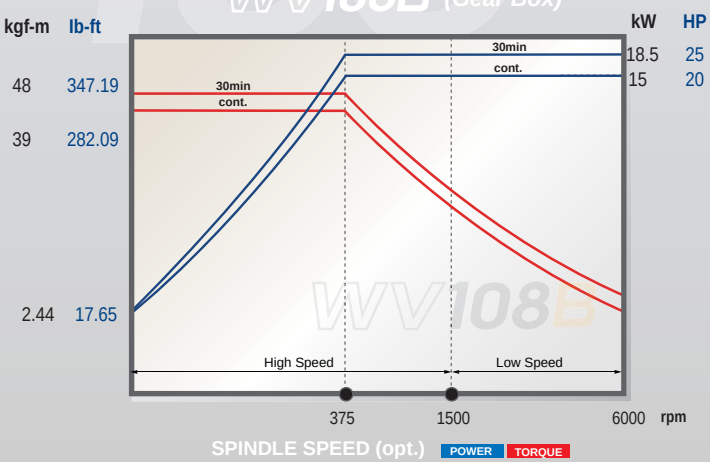
WV108A



WV108B

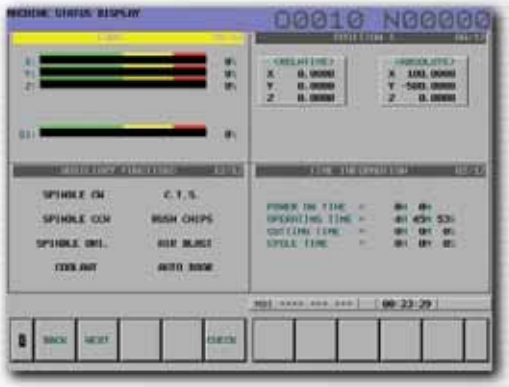


WV108B (Gear Box)



i OPERATION Plus

Software Enhancement Exclusively from YCM



Multi-function Display

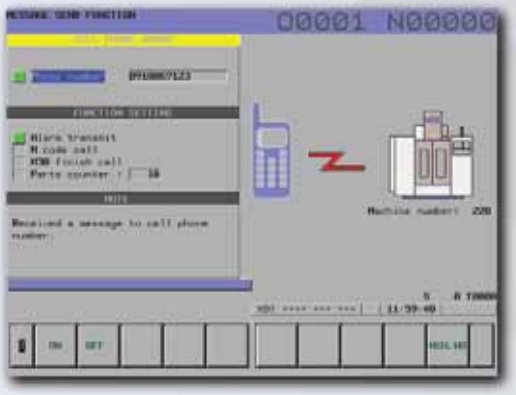
Easily select multiple windows from the following list of display for your monitoring needs.

- G-Modal Status
- Tool Data
- Date and Time
- M-Code Status
- Work Coordination
- Controller Running Hours
- Spindle Status
- Parts Count
- Spindle Load
- Feed Rate
- Machining Hours
- 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 die mold machining to achieve the fastest cycle time with best machining results. Machining efficiency improved by 25+% without sacrificing machining accuracy.

Efficiency Increased by: **+25%**



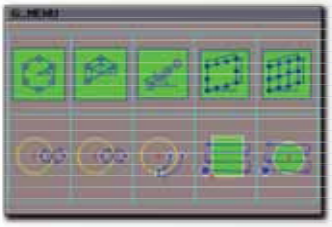
Wireless Message Notification (Optional)

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

MXP-200i

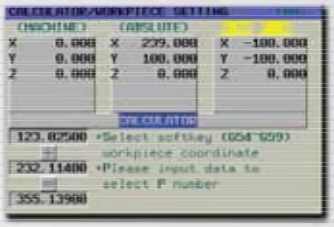
YCMCONTROL
by FANUC

- *High Performance AC Digital Servo & Spindle Drives*
- *High Responsive Vector Drives Technology for High Precision Machining*
- *Powerful Servo Motors with Super Precision Absolute Positioning Encoders*
- *High-Resolution 10.4" LCD Color Monitor 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.

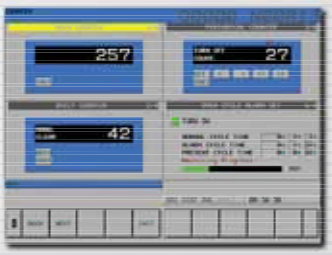


Calculator Function

Convenient calculator function provides fast calculation and setting of workpiece 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 that allows operators to conveniently monitor and efficiently manage 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

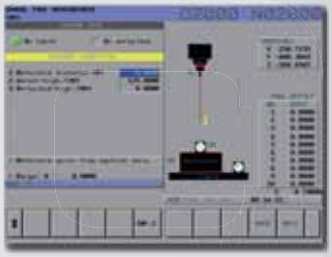
Detailed troubleshooting procedures are automatically displayed when machine alarm occurs that allows users to quickly restore machine status to minimize downtime.

Intelligent Maintenance Reminder

Pre-set maintenance schedules are programmed to remind operators to periodically inspect and maintain 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.

SPECIFICATIONS

	WV108A	WV108B
SPINDLE		
Spindle Speed [optional] rpm	60~12,000 [15,000]	60~10,000 [6,000]
Spindle Power [optional]	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	1120mm (44.09")	
Y Axis Travel	762mm (30.00")	
Z Axis Travel	700mm (27.56")	
Distance Between Spindle Nose & Table Top	150~850mm (5.91"~3.46")	200~900mm (7.87"~35.43")
TABLE		
Table Size	1300x820mm (51.18"x32.28")	
No. T-Slots x Size x Pitch	5x22mmx150mm (5x0.87"x5.91")	
Max. Load on Table	1,200kg (2,645.5lb)	
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	1056 / 1056 / 1442kgf (2328 / 2328 / 3179lb)	
Max. Axial Thrust Force X/Y/Z	2592 / 2592 / 5184kgf (5714 / 5714 / 11,429lb)	
ATC		
Tool Magazine Capacity [optional]	24T	24T [32T]
Max. Tool Weight [optional]	6kg (13.2lb)	15kg (33.1lb) [20kg 44.1lb]
Max. Tool Dimensions [optional]	ø90x300mm (ø3.54x11.81")	ø110x350mm (ø4.33x13.78") [ø120x350mm ø4.72x13.78"]
Max. Tool Diameter (w/out adjacent tools) [opt.]	ø125mm (ø4.92")	ø190mm (ø7.48") [ø240mm ø9.45"]
Tool Changer Method	Arm Type	
Tool Selection Method	Random	
GENERAL		
Pneumatic Supplier	5.5kg/cm² (78.2psi)	
Power Consumption / Transformer	33 / 40kVA	53 / 65kVA
Machine Weight	11,000kg (24,251lb)	13,000kg (28,660lb)

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.

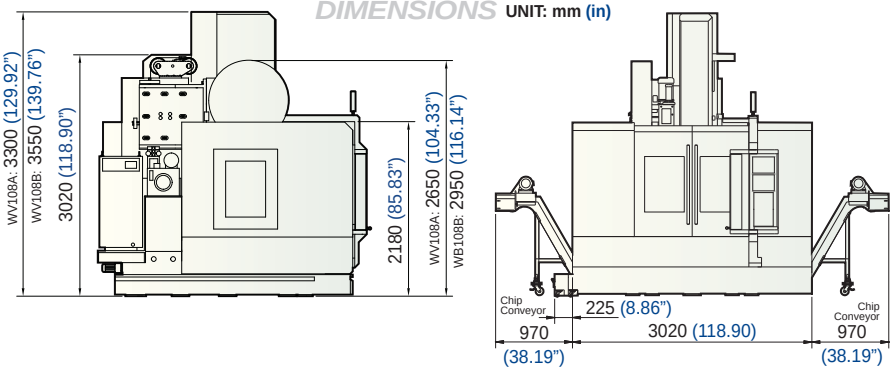
STANDARD ACCESSORIES

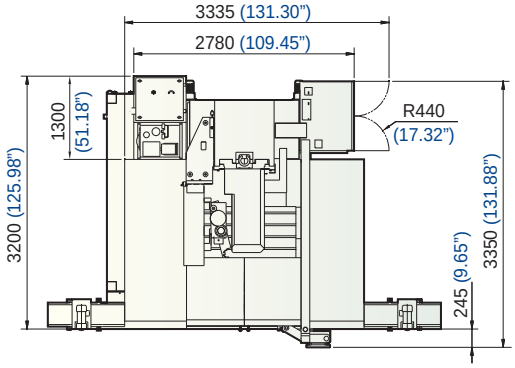
- Tool Kit
- Work Lamp
- Pilot Lamp
- Coolant Equipment System
- Hydraulic System (WV108B)
- Spindle Air Blast
- Spindle Air Seal
- Guideway Cover on X,Y,Z
- Central Lubrication System
- Spindle Cooling System
- Leveling Blocks
- Chip Enclosure
- Dual Chip Auger (two sides of Y-axis)
- Cutting Air Blast
- 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
- Chips Flush Coolant Device
- Oil-Mist Coolant System
- Oil Hole Holder
- Oil Skimmer
- A/C Cooler for Electrical Cabinet
- Work Piece Measurement System (RENISHAW OMP-60)
- Auto Tool Length Measurement System (METROL-T24E-04-08,RENISHAW-TS27R)
- Coolant Through Spindle System (Form A)
- 4th Axis Rotary Table
- Heavy Duty Coolant Pump (MTH 2-40)
- Spindle Gear Box (WV108B)
- Heidenhain iTNC-530 Control

DIMENSIONS UNIT: mm (in)





YCM®

ISO14001 CERTIFIED MANUFACTURE

Agent

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