

# 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-code Status    ■ Feedrate    ■ 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.)

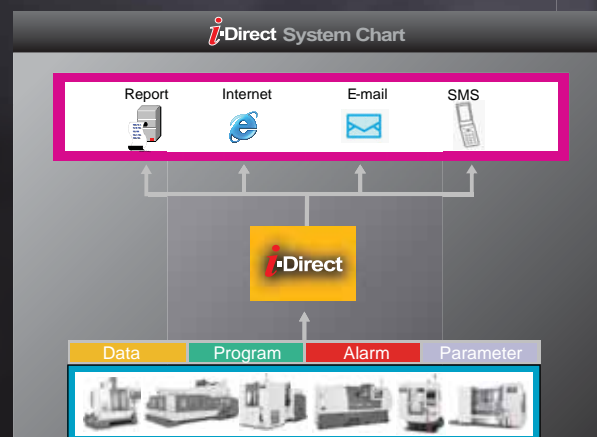
Integrating GSM communication and CNC technology, YCM developed the WMN system for wireless notification of machine and work status report.



# i-Direct

A remote monitoring system

i-Direct, the latest YCM software enhancement innovation is designed for remote monitoring of factory production line. Its powerful features include reporting back complete machine operation status, record, history and data analysis. As soon as the system gets an alarm signal, instant messages will be sent thru e-mail or SMS (can input 3 sets of cell phone numbers).



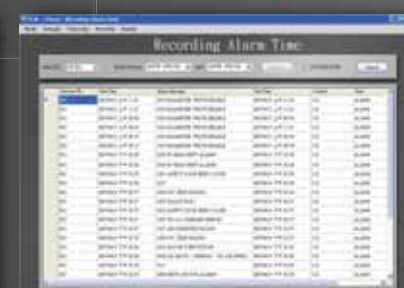
User account administration



Individual machine status display



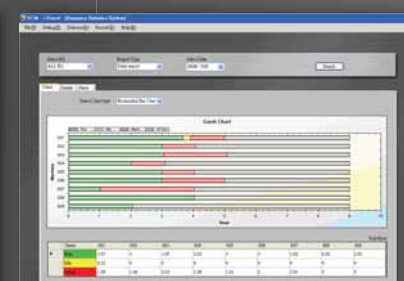
Machine model, number, e-mail, SMS and IP setup



Complete production, standby and down time record



Overall machines status display



Production data graphical analysis

## SPECIFICATIONS

### SPINDLE

	WV108A	WV108B
Spindle Speed (opt.)	60~12,000rpm (15,000rpm)	60~10,000rpm (6,000rpm)
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 on Table	1,200kg 2,645.5 lb

### FEEDRATE

Rapid Feedrate (X/Y/Z)	24/24/18 m/min. 945/945/709ipm
Cutting Feedrate	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 Tool)	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)	34kVA (40kVA)	53kVA (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.

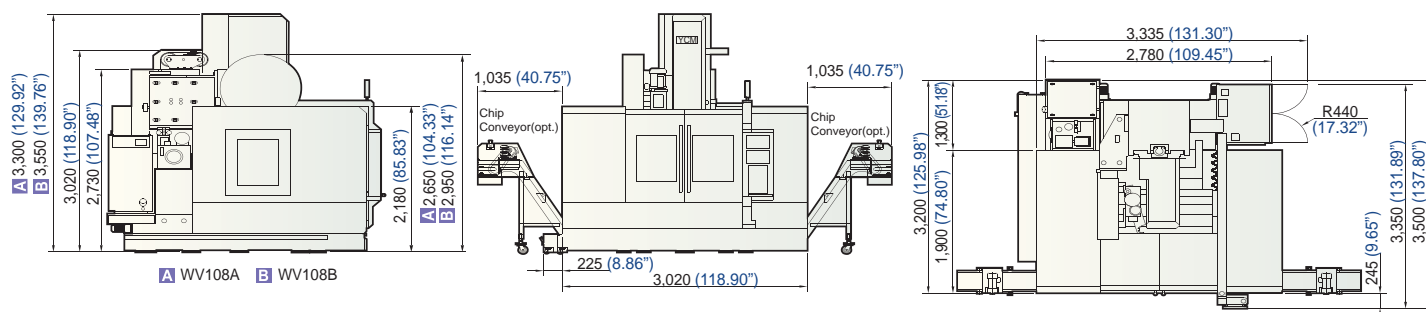
## STANDARD ACCESSORIES

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  
Full Chip Enclosure  
Dual Chip Augers (On Both Sides of Y-axis)  
Cutting Air Blast  
Air Gun  
Coolant Gun  
Heat Exchanger for Electrical Cabinet  
Rigid Tapping  
Mechanical, Electrical & Operating Manuals  
YCM MXP-200i Control by FANUC

## OPTIONAL ACCESSORIES

Safety Door  
Optical Scale  
Foundation Bolts  
Chip Conveyor  
Chip Flush Coolant System  
Oil-mist Coolant System  
Oil-mist Collector  
Oil Hole Holder Function  
Oil Skimmer  
A/C. Cooler for Electrical Cabinet  
Workpiece Measurement System  
Auto Tool Length Measurement System  
Coolant Through Spindle System  
4th Axis Rotary Table  
Heavy Duty Coolant Pump  
Gearhead Spindle (WV108B)  
Automatic Power Off Device  
HEIDENHAIN iTNC-530 Control

## DIMENSIONS UNIT: mm (in)



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# WV Series

WV108A-B

ULTRA WIDE HIGH RIGIDITY VERTICAL MACHINING CENTER





# WV 108A / B

## ULTRA WIDE HIGH RIGIDITY VERTICAL MACHINING CENTER

- WV108A/B is structurally designed for the heavy-duty machining requirements with ultra wide machine base and column.
- The extended 762mm (30") travel on Y-axis is ideal for die mold applications and oversize workpiece machining.
- Double gibs structure provides optimal support for the extended headstock.

### Axial Feed Configurations

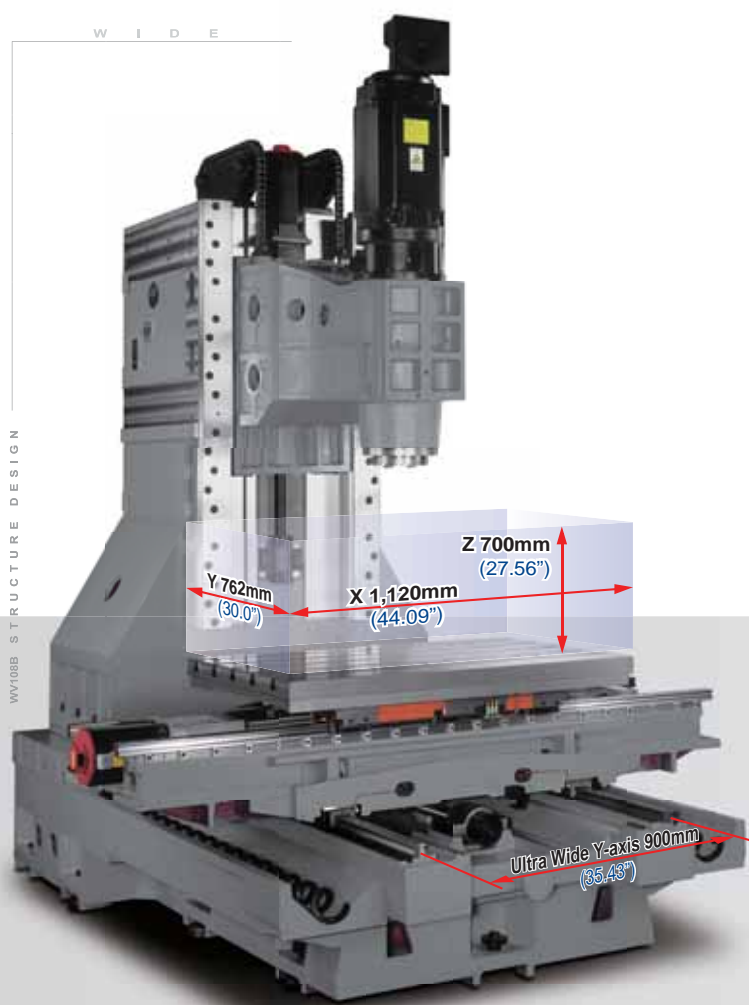
- High responsive servo motors are directly coupled with precise ballscrews to provide free backlash, fine accuracy, and high responsive movements to meet high speed and high rigidity machining requirements.



- WV108A (X/Y/Z axis) and WV108B (X/Y axis) are equipped with oversize roller type guideways to reinforce loading capacity and cutting rigidity.

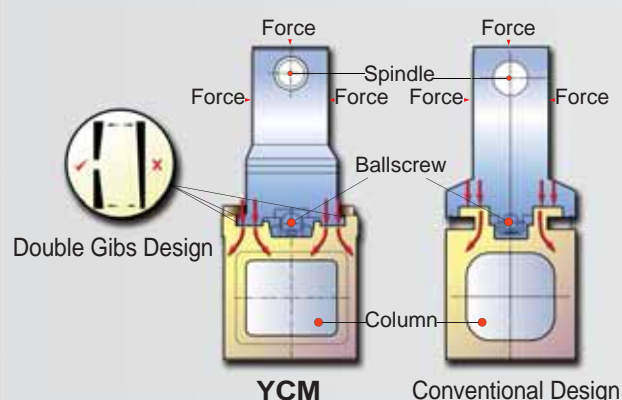
### Chip Disposal System

- The standard dual chip augers can be equipped with chip conveyor (opt.) and chip flush coolant system (opt.) which can remove the cutting chips more 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 the machine in good air-conditioned environments.



### Ultra Wide Base Design

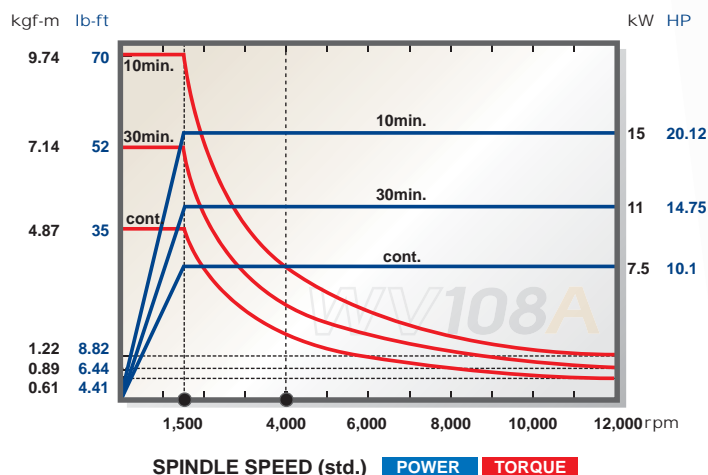
- The ultra wide machine base structure via FEM analysis provides the most stable construction rigidity to assure the overall machine performance and accuracy.

Rapid Feedrate	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 result in excellent surface finish while maximizing both spindle and tool life under hard machining conditions.
- The oversize angular contact ceramic ball bearings generate very little heat and provide excellent radial and axial rigidity for heavy-duty machining operations.
- Powerful dual winding AC digital spindle motor provides high torque at low spindle speed and maximizes horsepower output at high speed operation.



**15 kW 20 HP**

# WV108B

## High Torsion Gearhead Transmission Spindle (opt.)

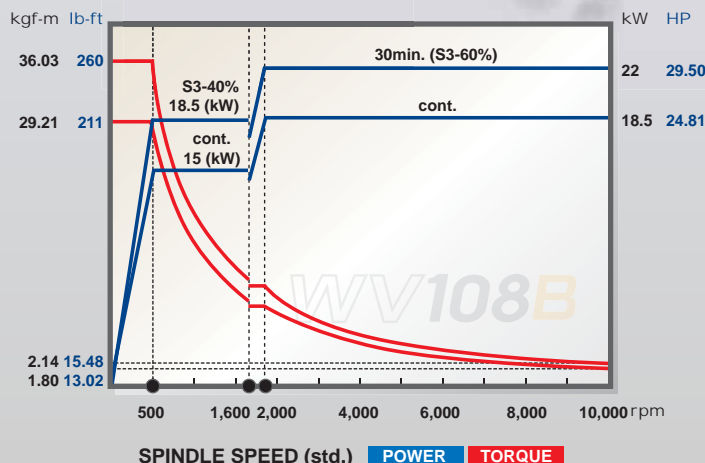
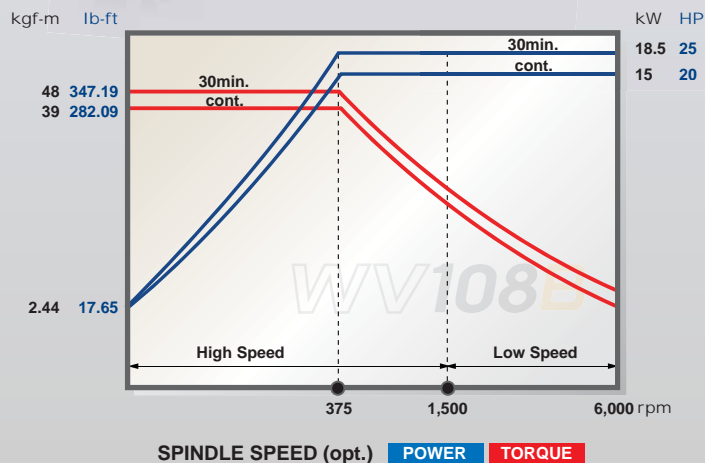
- 6,000rpm spindle is available for diverse requirements. The design of 2-step gearhead transmission is complimented with a powerful AC digital spindle motor and oversize angular contact ceramic ball bearings delivering max. 18.5kW (25HP) power and 48kgf-m (347 lb-ft) torque output.



## Unique IDD Spindle

- Driven by powerful dual winding AC digital spindle motor reaching max. 22kW (29.5HP) power and 36kgf-m (260 lb-ft) torque output.

- 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 the spindle motor.





# MXP-200i

YCM CONTROL  
by FANUC

- High performance AC digital servo & spindle drives
- High responsive vector drives technology for high accuracy machining
- Powerful servo motors with super precision absolute positioning encoders
- High resolution 10.4" color LCD display with dynamic graphic display
- Manual guide i conversational function greatly reduces programming and setup time
- Built-in AI NANO CC 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, with the failure rate of under 0.01 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 3D graphical display and full simulation function



## ■ Counter Function

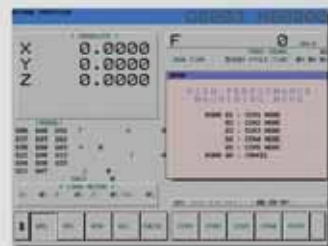
Allows user to easily keep track on number of workpieces with:

- 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