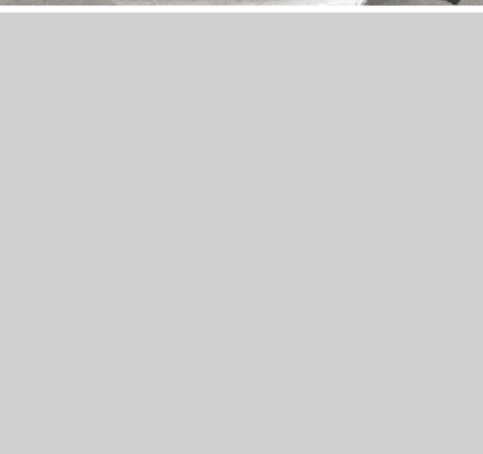
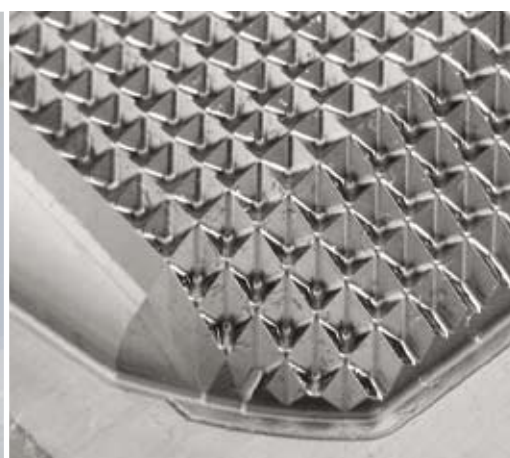


NDV Series

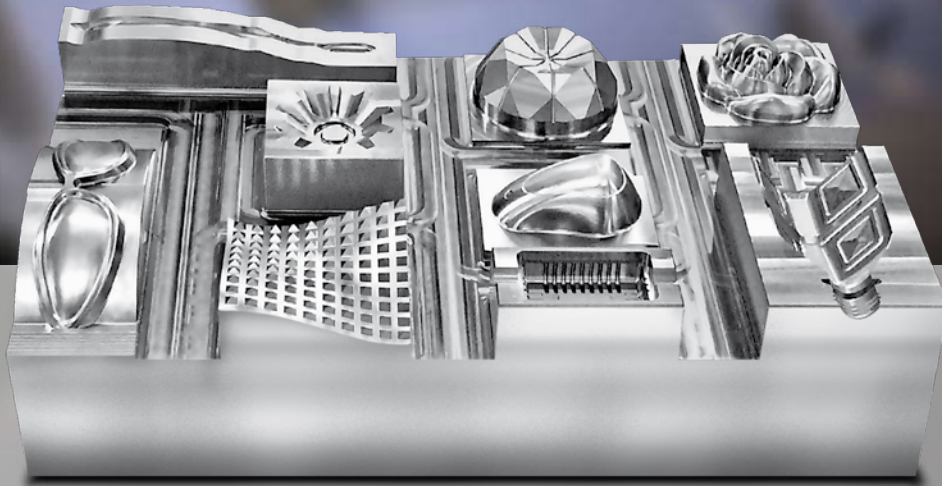
66A · 85A · 102A

High Precision Die & Mold Vertical Machining Center

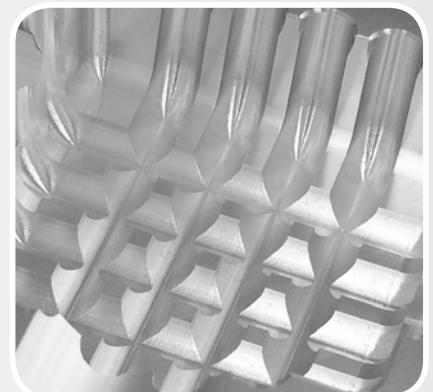
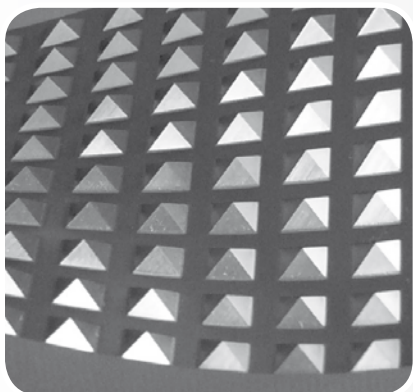


NDV Series

High Precision Die & Mold Vertical Machining Center



The brand new NDV series is especially developed for ultra precise and high efficient die & mold machining center.



NDV 66A · 85A · 102A

*High Precision
Die & Mold*



NDV

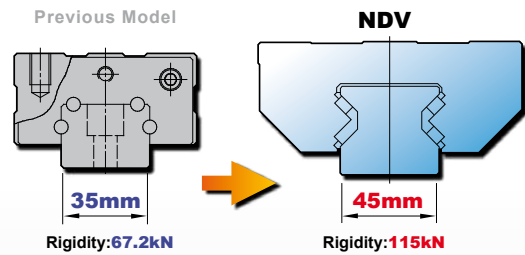
66A ■ 85A ■ 102A

High Precision Die & Mold Vertical Machining Center

Strong mechanical structures made by MEEHANITE® casting provide the best rigidity and stability. Three axes are equipped with oversized roller type linear guideways, high precision extra-large ballscrews, direct-driven by servo motors, to minimize the vibration during machining.

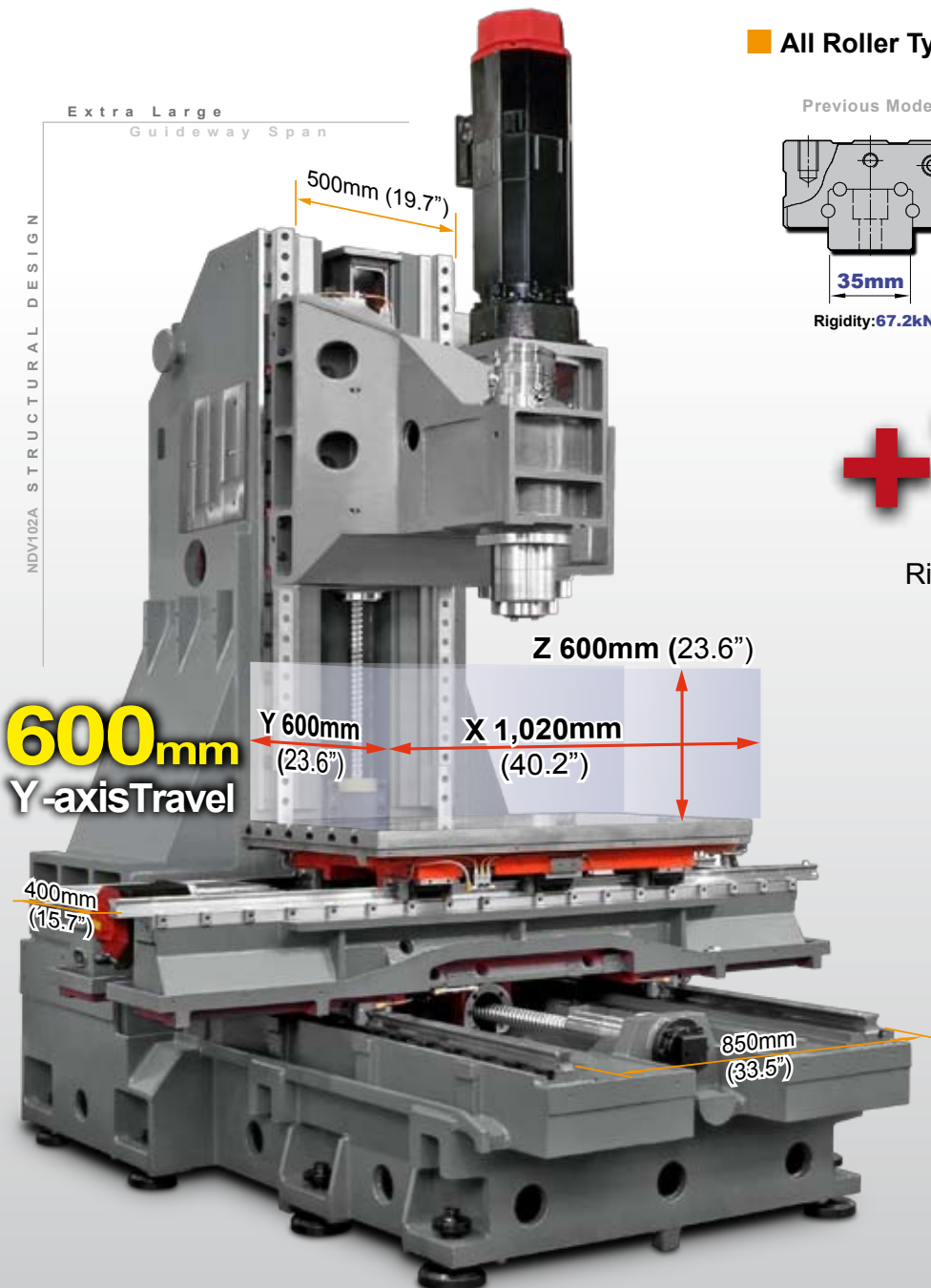
The NDV series provides superb cutting accuracy through optimal structural design with high dampening effect. The exclusive high performance machining mode enables the fastest machining efficiency and optimal accuracy. Definitely, the NDV is the best choice for die & mold industries.

■ All Roller Type Linear Guideways



+70%

Rigidity Increased by

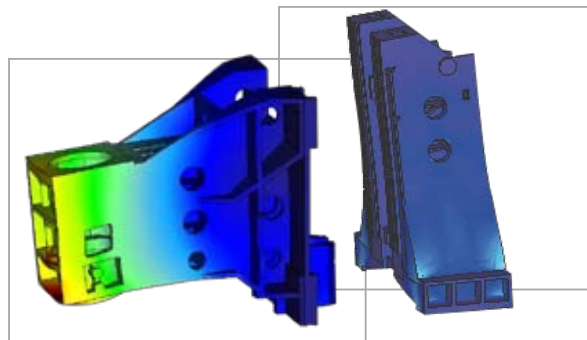


NDV Series Rapid Feedrate

X	24m/min.	945ipm
Y	24m/min.	945ipm
Z	24m/min.	945ipm

Advanced Structure Engineering

Advanced design with reinforced body structure through FEM analysis, the NDV series offers superb cutting rigidity and low vibration to meet die & mold machining demand.



HIGH RESOLUTION

By combining the exceptional high performance hardware and our exclusive sophisticated software, YCM has lifted up the level of precision and craftsmanship for various die & mold applications.



HRM
High Resolution Module

HRM HIGH RESOLUTION MODULE

Ultra fine and smooth movement for the high precision cutting performance.



M 300

HIGH PERFORMANCE MACHINING MODE

High performance mode with 5 settings that allows user to select for the best machining results.



STC PLUS

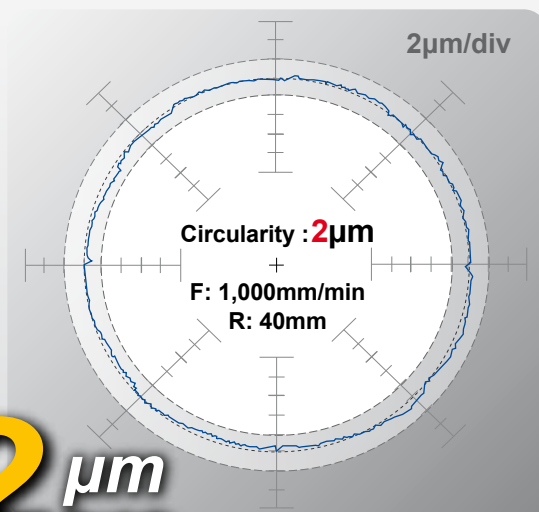
SPINDLE THERMAL COMPENSATION

Compensation through artificial intelligence maintains spindle growth within only 20µm.

20 less than
µm
Guarantee



- Ballscrew with Double Nuts
- Roller Type Linear Guideways Heavy Frame.



- A well-thought-out plan of design, assembly procedures and strict quality control ensures top notch cutting precision and performance under the most demanding job condition.

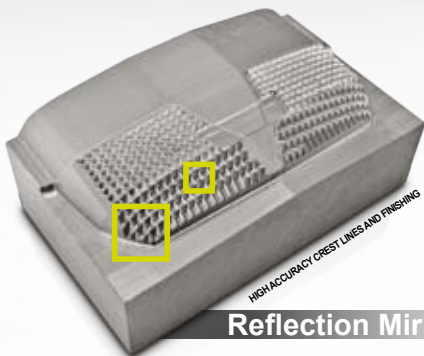
NDV Series		ACCURACY	
Standard		ISO 10791-4	JIS B 6338
Tolerances			
Axial Travel		Full Length	300mm
Positioning	A	0.010mm (0.00039")	0.003mm (0.00012")
Repeatability	R	0.007mm (0.00027")	±0.002mm (±0.00008")

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

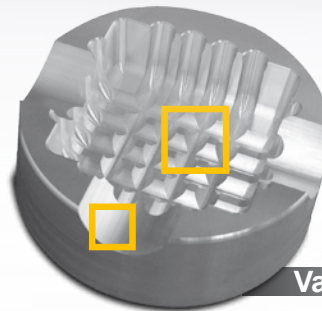
Unique IDD Spindle

The unique IDD design offers low vibration and optimal heat isolation that results in excellent surface finish while maximizing both spindle and tool life under hard milling conditions.

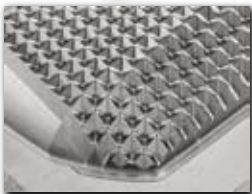
The oversized angular ceramic contact bearings generate very little heat. With the efficient oil-air lubrication, it provides excellent radial and axial rigidity for strict roughing, drilling, and tapping operations.



Reflection Mirror



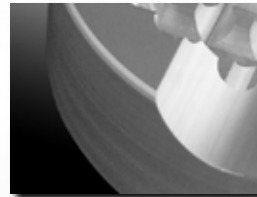
Vacuum Mold



Material NAK-80 (HRC-40°)
Pre-hardened mold steel

Size W : 92mm
D : 56mm
H : 26mm

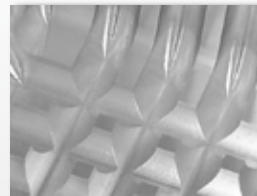
Tooling Speed R0.5-BEN
15,000rpm
Feed 1,500mm/min.
Time 112min.



Material P20

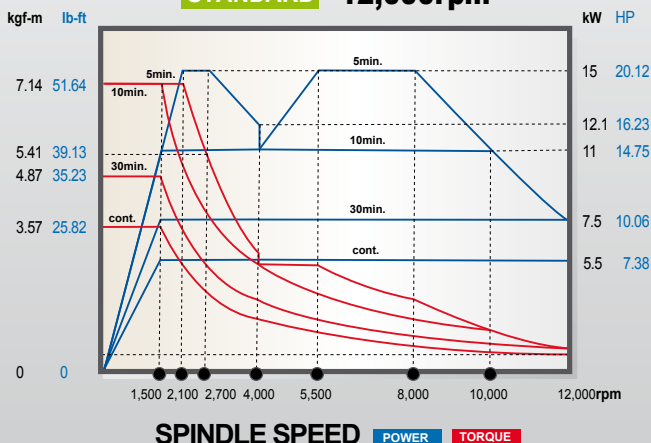
Size ø100 x 35mm

Tooling Speed R1.5-BEN
20,000rpm
Cycle 1,200mm/min.
Time 240min.



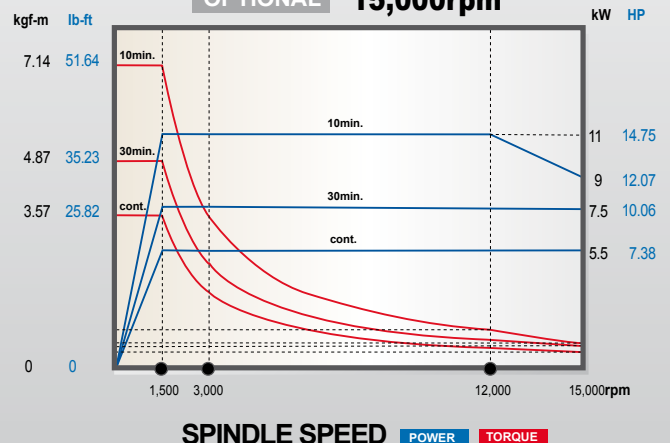
IDD Spindle

STANDARD 12,000rpm



IDD Spindle

OPTIONAL 15,000rpm



Low Winding

HIGH SPEED HIGH PRECISION SPINDLES

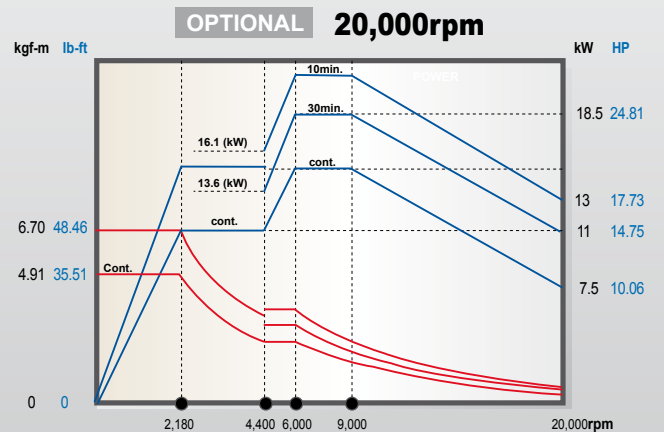
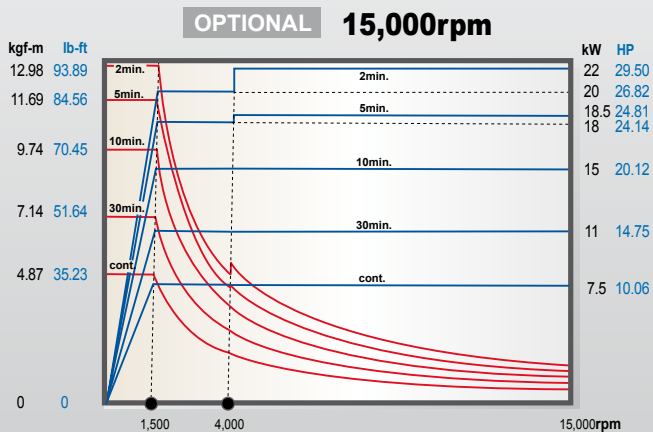
Built-In Spindle

- Special spindle collet system protects bearings from distortion and prolongs bearings lives.
- Micro-oil lubrication system minimizes thermal variation and keeps high speed running.
- The double-faced dynamic balance provides the best cutting quality.
- BBT design for tool taper fitting ensures perfect spindle rigidity.
- Rear-bearings floating design offers low thermal variation at high speed.



IDD Spindle

Built-In Spindle



SPINDLE SPEED POWER TORQUE

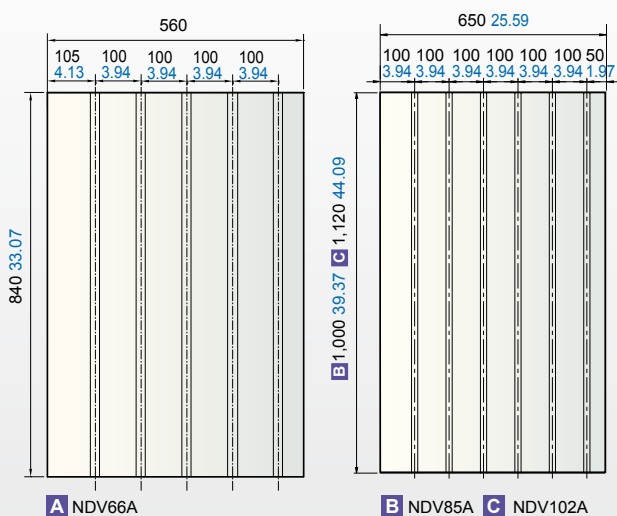
SPINDLE SPEED POWER TORQUE

High Winding

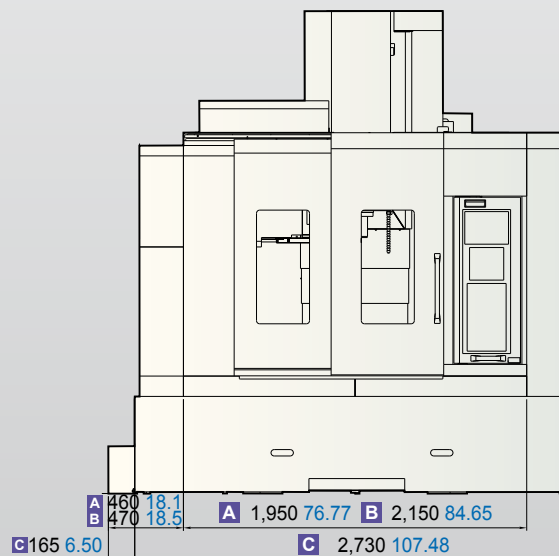
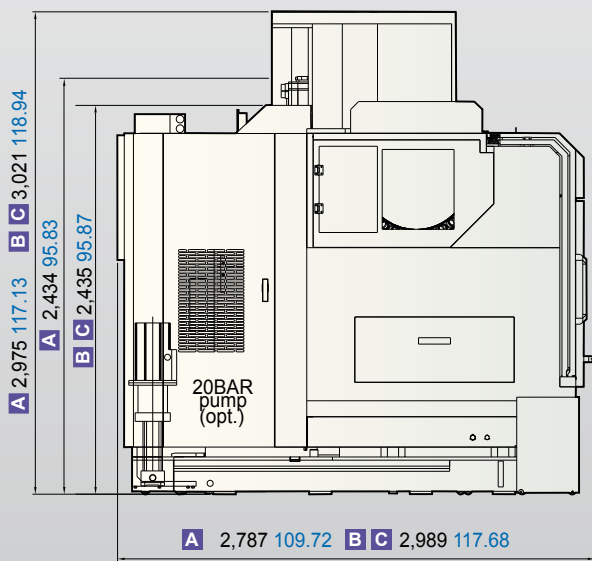
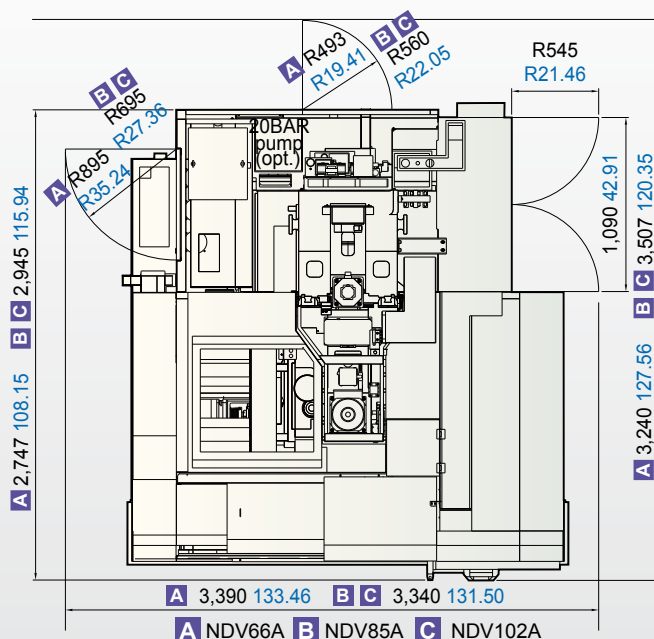
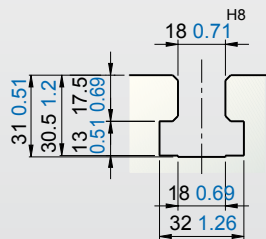
DIMENSIONS & TABLE SIZE

NDV66A/85A/102A

TABLE SIZE

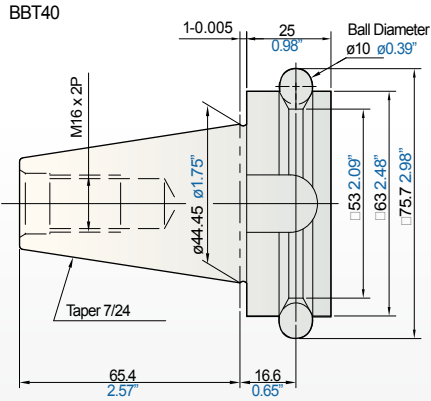


T-SLOTS

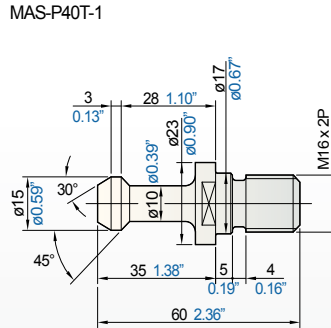


PULL STUD & SHANK

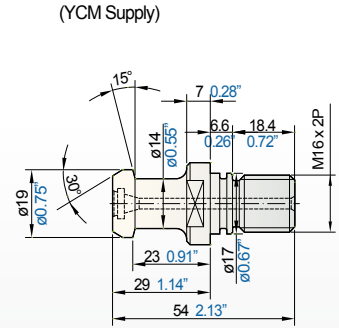
PULL STUD AND SHANK



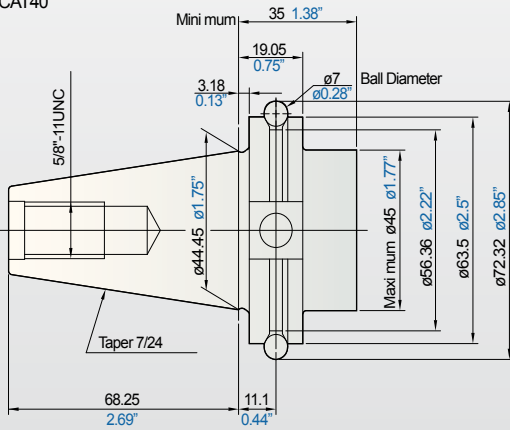
IDD SPINDLE (12,000/15,000rpm)



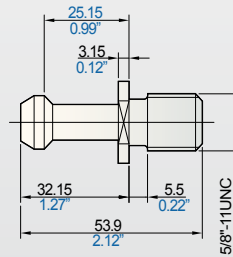
BUILT-IN SPINDLE (20,000rpm)



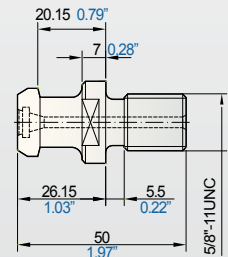
CAT40



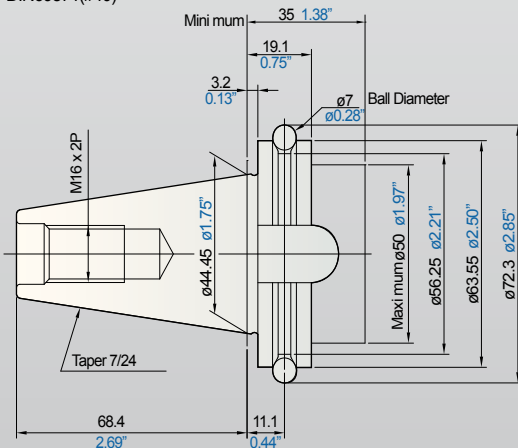
(Special Order)



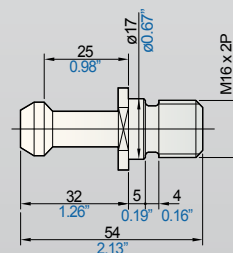
(YCM Supply)



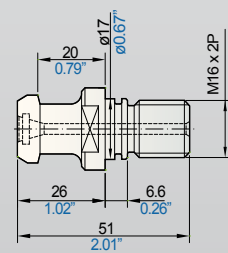
DIN69871(#40)



(Special Order)



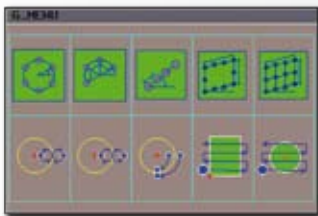
(YCM Supply)





MXP-200 FB / FC YCM CONTROL by **FANUC**

- High performance AC digital servo & spindle drives
- High resolution 10.4" color LCD monitor with dynamic graphic display
- Manual guide i conversational function greatly reduces programming and setup time
- Built-in AICC II and high speed JERK function
- Auto switching on/off high speed high accuracy machining control function
- High speed rigid tapping, helical interpolation, custom macro B, and tool path graphics
- Combined uses of many high performance microprocessors, high speed memory and the adoption of Multi-CPU system for super high speed control processing
- Large program capacity with 1,280 meters of memory
- Program management by program folders and file names
- Power failure module
- Full alphanumeric keyboard allows easy program editing
- PCMCIA slot for easy file transfer and memory expansion
- Dynamic display language switching function
- RS-232C interface ready for fast program transfer
- Powerful servo motors with super precision absolute positioning encoders (opt.)
- Editing and operation of a memory card and data server (opt.)
- FANUC program transfer tool (opt.)
- Tool management functions (opt.)
- Servo guide mate (opt.)
- Learning control for parts cutting and rigid tapping (opt.)



■ 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

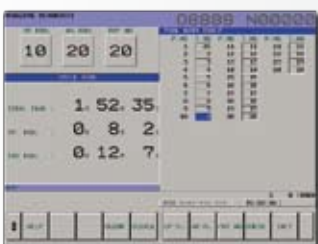


■ Easy Shop-floor Programming Manual Guide i
Easy to use conversational software offers convenience of part programming right on the shop-floor with 3D graphical display and full simulation function

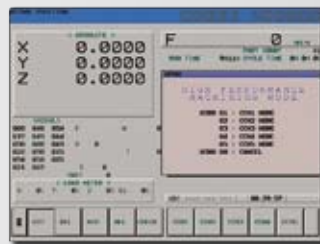


■ Counter Function
Allows user to easily keep track on number of workpieces with:

- 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

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.)

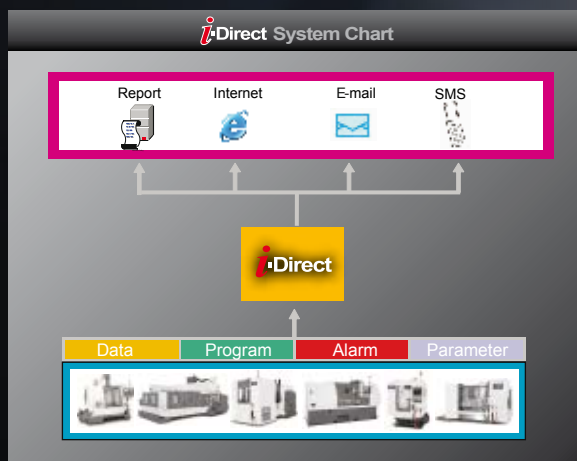
Integrating GSM communication and CNC technology, YCM developed the WMN system for wireless notification of machine and work status report.



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).



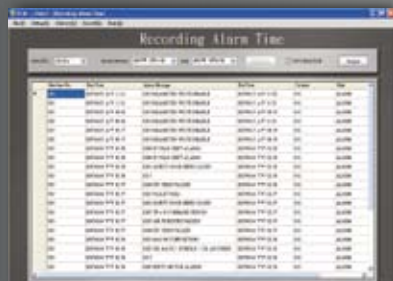
User account administration



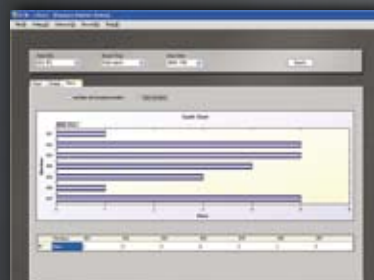
Overall machines status display



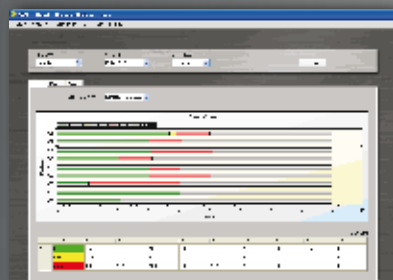
Machine model, number, e-mail, SMS and IP setup



Complete production, standby and down time record



Statistics of part quantity



Production data graphical analysis

SPECIFICATIONS

	NDV66A	NDV85A	NDV102A
SPINDLE			
Spindle Speed	12,000rpm (15,000/20,000rpm)		
Spindle Power	15kW (11/22kW) 20HP(15/30HP)		
Spindle Taper	BBT40		
TRAVEL			
X-axis Travel	660mm 25.98"	850mm 33.46"	1,020mm 40.16"
Y-axis Travel	510mm 20.08"	600mm 23.62"	
Z-axis Travel	560mm 22.05"	600mm 23.62"	
Distance Between Spindle Nose & Table Top	100~660mm 3.94~25.98"	100~700mm 3.94~27.56"	
TABLE			
Table Size	840 x 560mm 33.07 x 22.05"	1,000 x 650mm 39.37 x 25.59"	1,120 x 650mm 44.09 x 25.59"
No. T-Slots x Size x Pitch	5 x 18mm x 100mm 5 x 0.71" x 3.94"	6 x 18mm x 100mm 6 x 0.71" x 3.94"	
Max. Load on Table	500kg 1,102.3 lb	1,000kg 2,204.6 lb	
FEEDRATE			
Rapid Feedrate X/Y/Z	24/24/24 m/min. 945ipm		
Cutting Feedrate	1~10,000mm/min. 0.04~393.7ipm		
ACCURACY			
	ISO 10791-4		JIS B 6338
Positioning A	0.010mm 0.00039"	0.003mm 0.00012"/300mm	
Repeatability R	0.007mm 0.00027"	±0.002mm ±0.00008"	
ATC			
Tool Magazine Capacity	30T		
Max. Tool Weight (Per Piece)	6kg 13.2 lb		
Max. Tool Dimensions	ø76 x 300mm ø2.99 x 11.81"		
Max. Tool Dimensions (W/O Adjacent Tools)	ø125mm x 300mm ø4.92 x 11.81"		
Tool Change Time (Tool to Tool)	2.5 Sec.		
Tool Changer Method	Arm Type		
Tool Selection Method	Random		
GENERAL			
Pneumatic Supplier	5.5kg/cm ² 78.2psi		
Power Consumption	30kVA (40kVA)		
Machine Weight	6,500kg 14,330 lb	6,800kg 14,991 lb	7,000kg 15,432 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.

ACCESSORIES

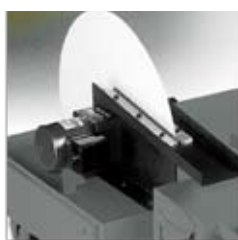
■ Standard ■ Optional



■ Air Gun & Coolant Gun



■ M.P.G. Handwheel



■ Oil Skimmer



■ Workpiece Measurement System



■ Auto Tool Length Measurement System

STANDARD ACCESSORIES

- Tool Kit
- Work Lamp
- Pilot Lamp
- Coolant Gun
- Guideway Cover (X,Y,Z)
- Coolant Equipment System
- Screw Type Chip Conveyor (Both Sides of Y-axis)
- Spindle Air Seal
- Spindle Air Blast
- Cutting Air Blast
- Spindle Cooling System
- Full Chip Enclosure
- Leveling Blocks and Foundation Bolts
- Central Lubrication System
- Rigid Tapping
- Air Gun
- Heat Exchanger for Electrical Cabinet
- Mechanical, Electrical & Operating Manuals
- STC Plus

OPTIONAL ACCESSORIES

- Safty Door
- Optical Scale
- Foundation Bolts
- Chip Conveyor
- Chips Flush Coolant System
- Oil-Mist Coolant System
- Oil-Mist Collector
- Oil Hole Holder Function
- Oil Skimmer
- A/C. Cooler for Electrical Cabinet
- Coolant Through Spindle System
- 4th Axis Rotary Table
- Heavy Duty Coolant Pump
- Workpiece Measurement System
- Auto Tool Length Measurement System
- Circular Coolant Nozzle
- Heidenhain iTNC-530 Control
- FANUC 18i-MB Control



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