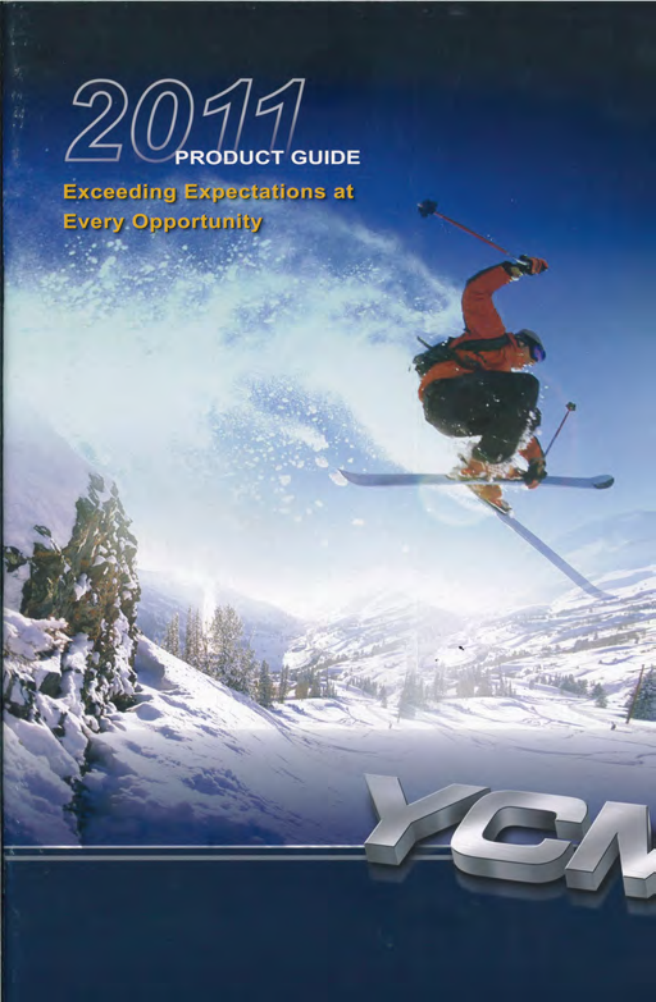
2011 PRODUCT GUIDE

Exceeding Expectations at Every Opportunity



Exceeding Expectations at Every Oppor

Since 1954, YCM machine tools have been recognized worldwide for superi

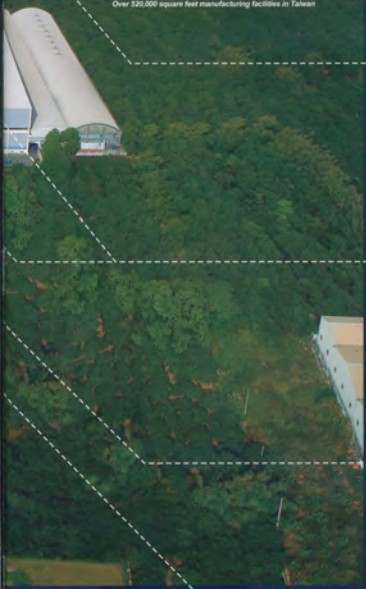
GPS 24°17'12.3" 120°38'32.1"

Over 520,000 square feet manufacturing facilities in Taiwan

Internationa

Serving th

since 195

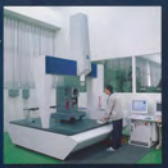


■ YCM in-house foundry

■ Compreh
process

■ Assembly factory

■ Flexible
system



■ Quality control

■ Indoor ter
controlled

High Performance Traveling Column Multi-face Vertical Machining Center

TCV3000A-5A

The all-new TCV3000A-5AF, multi-face traveling column vertical mac center is specially engineered for long workpieces. With its ultra hig feedrate and efficiency, TCV3000A-5AF achieves all of your challengi job requirements.

Max. Spindle Power	22kW 30HP
Spindle Speed (opt.)	12,000rpm (15,000rpm)
X-axis Travel	3,000mm 118.1"
X-axis Travel Working in 2 Areas	2 x 1,150mm 2 x 45.3"
Y-axis Travel	800mm 31.5"

Rapid Feedrate	40/40/40 m/min. 1
Cutting Feedrate	1~10,000mm/min.
Spindle Taper	BBT40
Tool Magazine Capacity (opt.)	40T (80T)
Max. Tool Dimensions (W/O Adjacent Tools)	ø76 x 300mm ø3 (ø125 x 300mm ø

Built-in Motorized Spindle

Step X-axis Guideways Design with Ultra High Rigidity

Dual Working Areas

Integrated Rotary Table (C-axis)

Table Size

ø800mm ø31.5"

Max. Load on Table

1,200kg 2,646 lb

High Rigidity High Speed X/Y/Z Axial Movement

- Equipped with roller type guideways for flawless cutting rigidity and damping capacity.
- Utilizing large diameter ball screws with pre-tentioned and direct drive motors designs, the TCV3000A-5AF achieves much higher torque without backlash problem.
- Dual motor design on X-axis for powerful thrust force.
- X-axis is designed with step guideways and 6 slider blocks to ensure the ultra reliable axial movement.
- No counter weight design on Z-axis reduces vibration problem and achieves perfect surface roughness.

Low Backlash Swivel Milling Head (B-axis)

- Driven by worm-gear system for optimum rigidity and precision.
- Rotary joint design prevents the damage on the hydraulic tubes caused during rotation.
- Less than 10sec. of positioning accuracy.
- Easy spindle unit replacement which will reduce maintenance time.

Integrated Rotary Table (C-axis)

- Large diameter of ø800mm ø31.5".
- Driven by torque motor for high speed and no backlash (0.001").
- Less than 10sec. of positioning accuracy.
- Disc brakes design.
- Easy dismantling capabilities.

High Efficiency Traveling Column Design

- Due to the traveling column design, the table is fixed for dynamic leveling and precision.
- Dual working areas for easy setup and machine flexibili

High Efficiency Chip Removal System

- Dual chip augers and chip conveyor for high chip remov
- The spindle is designed with 6-nozzle coolant supply de

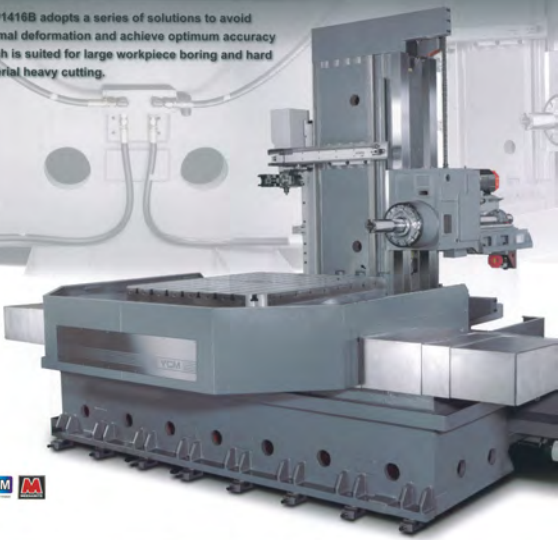
Fast and Reliable ATC System

- The standard tool magazine is equipped with 40T. For h demands, the tool magazine can be expanded into 60T.
- The tool magazine simultaneously moves with the saddl tool change time.
- Servo motor driven design ensures high speed and high

High Accuracy Heavy Duty Boring Machine

BMP1416B

BMP1416B adopts a series of solutions to avoid thermal deformation and achieve optimum accuracy which is suited for large workpiece boring and hard material heavy cutting.



Spindle Speed	5~2,500rpm
Max. Spindle Power	22kW 30HP
Spindle Taper	BBT50
Table Size	1,400 x 1,600mm 55" x 63"
Table Index	45° (0.001°)

Max. Tool Dimensions	ø125 x 500mm 4.92"
No. T-slots x Size x Pitch	9 x 22mm x 160mm
Max. Load on Table	7,000kg 15,432 lb
Max Workpiece Diameter	ø2,400mm ø94.5"

High Rigidity Headstock

- YCM in-house 3-speed gearbox spindle provides max. 256kgf-m 1,852 lb-ft high torque, 22kW 30HP.
- The 130mm 5.12" spindle diameter with 500mm 19.7" W-axis travel is suitable for deep hole machining.
- NN roller type bearing, angular contact bearings and oil-air lubrication system efficiently reduce heat.
- Air-packing design on the headstock avoids the slant problem generated from heavy loading condition.
- The spindle is mounted on the ultra fine surface to ensure the best accuracy.
- The spindle is made of alloy steel reinforced through nitrogen treatment.

High Accuracy High Rigidity Axial Designs

- X-axis box guideway with large-width design ensures the highest structural rigidity. Air-packing design strongly supports the work table and reduce the motor loading.
- Y-axis is also designed with large-width box guideway to achieve perfect rigidity. SKC3 pad achieves excellent damping capacity.
- Z-axis adopts low waving linear guideway with long guideway block to provide low friction.
- Direct drive motor design on X/Y/Z-axis achieves 12m/min. 473ipm rapid feedrate.

Patent Air Pocket Rotary Table Design

- The rotary table allows 360° positioning. Every 45° the best accuracy. The positioning can be reached
- Even the table is under 7,000kg 15,432lb, the mac motor loading can be greatly reduced.
- The hand-made scraper work skill ensures the bes high reliability.

A Complete Solution for Thermal Deform

- The motor seats and numerous parts of the machi chip guarding to isolate heat.
- Casting cooling circuit control ensures the machin reliability even in an unstable environment.
- The motor seats, bearings and ballscrew nuts are circular cooling system. Moreover, a heat pipe is e ballscrew to make the cooling process more effici
- The patent air pocket design on X-axis & the rotar counter weight design on Y-axis and linear guidew greatly reduce the motor loading.
- YCM self-developed ITC (Intelligent Thermal Compe achieves automatic thermal deformation controlled ab

High Efficiency T-base Vertical Machine Center

NTV158A

Unique One-piece T-base Structural Design

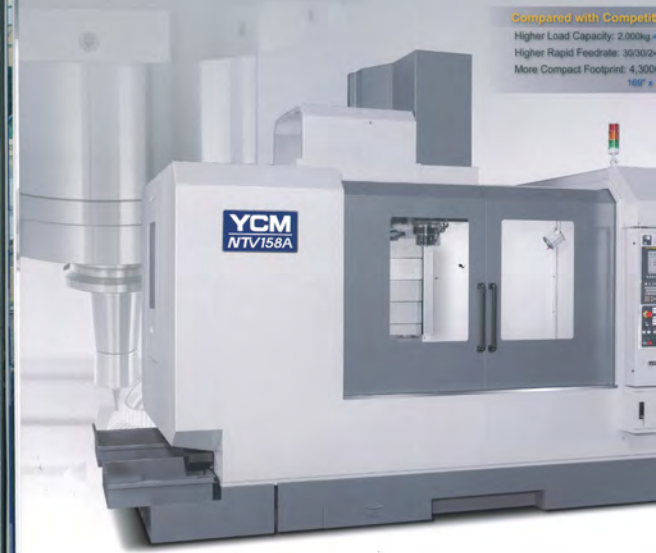
Compared with Competit

Higher Load Capacity: 2,000kg

Higher Rapid Feedrate: 30/30/24

More Compact Footprint: 4,300

169" x



Spindle Power (opt.)	5.5/7.5/11/15 kW (7.5/11/15/18.5/22 kW) 7/10/15/20HP (10/15/20/25/30HP)
Spindle Speed (opt.)	10,000rpm (12,000rpm/15,000rpm)

Cutting Feedrate	1~10,000mm/min.
Spindle Taper	BBT40
Max. Tool Weight	6kg13.2 lb

Overhang-free Table Movement

NTV158A offers a higher rapid feedrate with large Y-axis which provides mold maker and job shop an excellent machine selection.

YCM In-house High Speed IDD Sp

Unique One-piece T-base Structural Design

- Unique T-base structural design is the innovative technology designed by YCM.
- With the unique T-base structure, the machine footprint can be reduced to save the plant cost.
- Its overhang-free table movement is supported by high-rigidity base to ensure the best dynamic accuracy.
- Dual screw type chip augers efficiently elevate chip removal rate.

YCM In-house High Speed IDD Spindle

- Equipped with YCM in-house IDD spindle, the standard speed can reach up to 10,000rpm.
- Unique IDD spindle design results in excellent surface finish while maximizing both spindle and tool life under hard milling conditions.
- The cooling system for spindle motor seat and spindle makes a quicker control of spindle temperature. (opt.)
- 12,000 & 15,000rpm spinle adopts oil-air lubrication system to enable the spindle to work for a long period of time. (opt.)

High Speed and High Reliability Axial Movement

- All axes are equipped with roller type linear guideways to ensrue higher dynamic accuracy, durability and rigidity.
- Adopts large and high precision ball screws with direct driven feeding system applying by high performance servo motors.
- X-axis with 6 guideway blocks fully supports the saddle and efficiently releases the force flow from the table.
- Y-axis is designed with 3 guideways offering the table the best support.
- No more counter weight design on Z-axis provides lower friction which elevates the surface roughness of the workpiece.

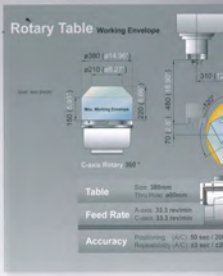
Eco-friendly Design

- Through FEM analysis, the machine weight is reduc affecting its rigidity.
- Linear guideways provides low friction which can re
- 10,000rpm IDD spindle doesn't need gearbox and o wasting oil.
- 10,000rpm IDD spindle is lubricated by grease to red
- No lead block counter weight on Z-axis.
- Withoug oil hydraulic system, no oil is needed.
- LED work lamp with low power consumption and lor

High Performance 5-axis Vertical Machining Center

FX380A

FX380A offers 5-axis simu
control for more machinin
flexibility which is widely
aerospace, automotive, jo
and electronics industries



Max. Spindle Power	22.5kW 30HP
Spindle Speed (opt.)	12,000rpm (15,000rpm)
X/Y/Z axes Travel	700mm/520mm/480mm 27.6"/20.5"/18.9"

Max. Tool Weight	6kg 13.2 lb
Max. Tool Dimensions	ø76x280mm ø3.0"x11.0"
Tool Magazine Capacity (opt.)	30T(40/60T)

40T Servo-driven Tool

High Rigidity Body Structural Design

- Extra wide column and base design ensures the best support and cutting rigidity.
- High quality and rugged MEEHANITE® castings maintain flawless accuracy.

High Accuracy Axial Movement

- Adopts linear guideways for ultra fast, smooth axial movement.
- Pre-tensioned ball screws with direct drive motors deliver high torque and reduce backlash and vibration problems.

YCM In-house IDD Spindle

- Equipped with YCM in-house IDD spindle which offers max. speed at 12,000rpm.
- Cooling system design on spindle motor seat, quill, and bearing ensures the most reliable machining capability and reduces thermal deformatoin.

Reliable ATC System

- 30T storage capacity is standard. 40/60T is optional for variable application needs.
- 40/60T tool magazine is servo-driven which can shorten the tool selecting time.

YCM In-house 4th/5th Rotary Table

- Rotary table surface is at the same level as the 5th axis center to ensure the machining accuracy and easy programming.
- Rotary table surface is at the same level as the 5th axis center to ensure the machining accuracy and easy programming.
- ø380mm ø14.96" table size with ø80mm ø3.15" through table hole design.
- 150°(+30°/ -120°) A-axis tilting angle increases the ability of machining.
- Hydraulic and pneumatic cable preparation inside of the rotary table for fixture usage.

Compact Footprint

- FX380A owns a very compact footprint with 2,510mm 98.8" wide, 2,685mm 105.7" long, and 3,060mm 120.5" high.
- FX380A can be loaded within standard HQ container, saving the cost of ocean freight and raising its global

High Performance HEIDENHAIN

- 5-axis simultaneous control capability.
- Tool Center Point Management (TCPM cutting surface quality.
- DCM function reduces the danger of collisio

Automation Advantages

- FX380A can work with EROWA robot s factory automation.
- EROWA robot system efficiently reduce increases productivity. Meanwhile, it en reliability of products.
- Machine utility rate can be increased fro

High Performance Multi-axis Mill/Turn Center

NT-2000SY

Swing Over Bed	ø1,000mm (39.4"	
	(ø700mm (27.56" Interference with Cover)	
Swing Over Carriage	ø870mm (34.3"	
	(ø700mm (27.56" Interference with Cover)	
Max. Turing Diameter	ø350mm (13.8"	
Max. Turning Length	519mm (20.4"	
Headstock	Main	Sub
Chuck Diameter	8"	6"

Hole Through Spindle	ø77mm (3"
Hole Through Draw Tube	ø52mm (2.1"
C-axis Indexing	0.001°
X/Z axes Travel	260mm/580mm (10.2
Y/B axes Travel	100mm (3.9" ±50mm
Turret Capacity	12T with BMT65
Shank Height for Square Tool	□25mm (1"
Standard Tool	

Utmost performance CNC lathe with more flexibility in milling and turing capacity specialized for complex workpiece application requirements.

Main Spindle | Hand Over | Sub Spindle | BMT Turret

Superb Body Structure

- High quality and rugged MEEHANITE® castings provide excellent damping capacity.
- Massive slanted bed construction and unique enhanced rigidity bridge base design through FEM analysis.
- Box guideway design reinforced through induction hardening process and precision ground provides optimum heavy duty milling & turning capability.

YCM In-house Built-in Motorized Main and Sub Spindle

- Built-in motorized design provides good rigidity, low vibration,and high accuracy.
- Both spindles adopt Inverter Spindle cooling system to ensure a good temperature control and avoid thermal deformation.
- Utilize a hybrid spindle design that combines high quality angular contact bearings and highly rigid roller type bearings.

Y-axis Capability Fulfills Various Complex Challenging Requirements

- Y-axis provides true milling capabilities that cannot be achieved through the traditional turning centers. The NT-2000SY allows ±50mm (±2") travel that is sufficient for most mill/turn applications.
- Y-axis, C-axis (main/sub spindle) and motorized turret provide axial and radial slot milling, face milling and angle cutting applications.

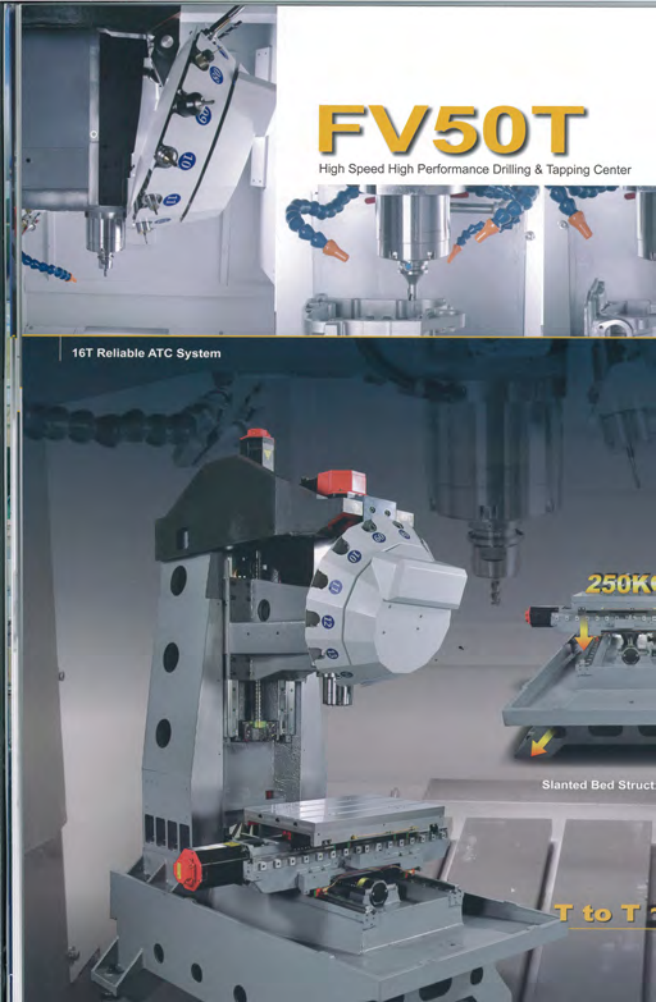
Fast & Reliable Radial Motorized Turret

- The radial type turret offers larger turning and milling capacity with less tool interference.

- Servo-driven design achieves the fastest tool chan
- Utilize a large diameter coupling for high positionin repeatability.
- Two types of tooling system are offered to the cust BMT65 and VDI40.

Specialized Temperature Control Designs

- In addition to the Inverter Spindle cooling system, t combined with numerous specialized temperature to keep the machine in the best condition during lo working.
- Heat removal design on chip guarding efficiently be cylinder out of the machine.
- High efficiency eco-friendly inverter hydraulic unit.
- A special design of the coolant tank prevents the cl back into the machine.


FV50T
High Speed High Performance Drilling & Tapping Center
16T Reliable ATC System
250K
Slanted Bed Struct
T to T

Flexible Working Area with a Compact Footprint

Extra Wide Coolant Tank

Versatile Applications to Meet Various Working Requirements

PC Based XP 30

High Rigidity Body Structure

- Delta structure efficiently absorbs the force and elevates machine rigidity and accuracy.
- Extra wide base strongly supports the headstock and reduces overhang problem to achieve flawless dynamic accuracy.

Unique YCM In-house IDD Spindle

- YCM in-house IDD spindle delivers up to 10,000rpm spindle speed.
- High precision steel ball bearings with low centrifugal force, low vibration and very little heat for optimal cutting performance under high speed machining.
- Reliable helical disc spring design prolongs the spindle life.

Direct Drive Design on 3 Axes

- Direct drive motors and positioning encoders provide a backlash free, optimal accuracy, and high efficient axial movement.
- Rapid feedrate on 3 axes is up to 48m/min. 1,890ipm.
- 1g acceleration can be achieved to increase working efficiency and productivity.

Flexible Working Area with a Compact Footprint

- Extra large working area, capable of fitting a 4th axis rotary table or fixture to satisfy different job requirements.
- FV50T owns a small footprint - 1,600mm 63" wide and 2,235mm 87" long. (including the coolant tank)
- With a compact footprint and height, FV50T can be placed within a 3-meter 9.84-ft high floor which is very suited for factory with numerous floors.

User-friendly Designs

- Quill spindle design achieves easy maintenance which equals optimum efficiency.
- The tool magazine is designed with an easy-to-dismantle feature.
- Equipped with a control panel with a big screen and easy-to-use keyboard.

Efficient Chips Removal Design

- The slanted bed structure is designed with an extra w
prevent chips from accumulating inside of the machin
- Chips flush coolant system can be offered as an optio
higher efficient chips removal rate.

Eco-friendly Designs

- The spindle and axial movement are lubricated by gr
the waste oil problem.
- LED work lamp with low power consumption and longer life.

Max. Spindle Power (opt.)	5.5kW (3.7kW) 7.4HP (5HP)
Spindle Speed (opt.)	10,000rpm (15,000rpm)
X/Y/Z Axis Travel	500/400/300mm 19.7"/15.8"/11.8"

Max. Tool Dimensions	ø80 x 250mm ø3.2" x 9.8"
Tool Magazine Capacity (opt.)	16T (21T)
ACCURACY	ISO 10791-4 JIS B

5-axis Advanced Double Column Vertical Machining Center

DCV4035B-5A

The DCV4035B-5AX machine is equipped with ROBOI, the reliable performance universal milling head. DCV4035B-5AX is specialized for applications demanding complex machining such as aerospace, automotive, medical and energy industries.

10,000rp
46kW,24

Symmetrical Fork Type Structure Design

- The main structure is made of superior nodular graphite cast iron.
- High rigidity fork type structure minimizes the deformation during various cutting applications.

Universal Milling Head Achieves Perfect 3D Contouring Operations

- High dynamic universal milling head, built-in motorized spindle.
- HSK-A100 taper offers max. spindle speed at 10,000rpm.
- Coolant through spindle system: 20 bar.
- Superb spindle coolant system efficiently removes the heat generated from the spindle to reduce thermal deformation.

High Performance B/C Axis

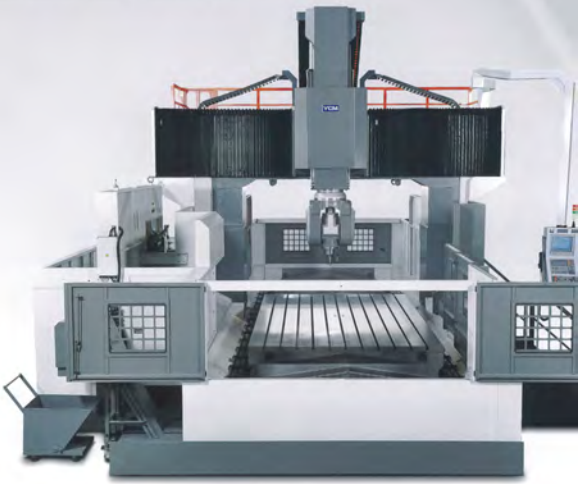
- Direct drive motor design on B/C axis delivers high torque and has perfect clamping capacity.
- Equipped with HEIDENHAIN encoder for the most accurate positioning.
- Disc type hydraulic clamping device.
- Double direction roller bearings elevates cutting rigidity.

High Rigidity Body Structure

- Direct drive gearbox design on three axes offers smo response, high torque, and low backlash.
- Equipped with roller type guideways and numerous s great load capacity and cutting rigidity.
- Extra wide column base with boots design.
- Massive MEEHANITE® casting through FEM analysi exceptional damping capacity.

HEIDENHAIN Control

- 5-axis simultaneous control by HEIDENHAIN iTNC52 efficiency, tool life, and cutting accuracy.
- Program memory hard disk with 26GB.
- Other outstanding functions such as smarT.NC, Tool Management [TCPM], Dynamic Collision, Monitoring and DFX Converter (opt.).



Max. Spindle Power	46kW 61.7HP
Spindle Speed	10,000rpm
X/Y/Z Axis Travel	4,065/3,500/1,016mm 160"/137.8"/40"
Swivel Angle	±110°
Rotary Angle	±360°
Table Size	4,100 x 2,400mm 161.4" x 94.49"

Spindle Taper	HSK-A100
Max. Tool Weight	13kg 28.7 lb
Max. Tool Dimensions	ø125 x 350mm (ø240 x 350m 4.9" x 13.8" (9.45"x13.8")
Tool Magazine Capacity	40T (60/120T)
Accuracy	ISO 10791-4

ISOLATED DIRECT DRIVE SPINDLE

IDD PLUS

Foatures

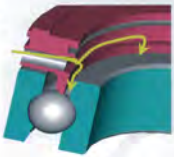
- **Automatic Spindle Cooling System**
  Effectively dissipates heat generated from long runtime through efficient oil cooled circulation.
- **Micro Oil-air Lubrication System**
  Consistently injects micro amount of lubricant to spindle bearings for maximizing spindle life.
- **Highly Reliable Helical Disc Spring Design**
  Ensures optimal spindle balance.
- **Floating Cylinder Design of Tool Clamp/Unclamp System**
  Eliminates unnecessary force on spindle bearings.
- **Perpetual Pre-load Design**
  Reduces the effect of spindle thermal growth under long spindle runtime.

YCM Spindle Features

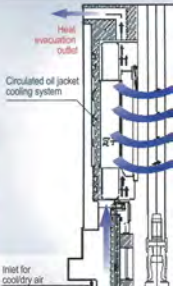
- **Micro Oil-air Lubrication System with Hi-lub Technology**
  Directly injects micro amount of lubricant to each spindle bearing. Consistent lubrication prolongs spindle life.

Normal Lube: 0.03~0.1cc/5~8min.

The hi-lub technology is 2.5 times more effective than normal lubrication system.



Enhanced **2.5 times**



BUILT-IN MOTORIZED SPINDLE

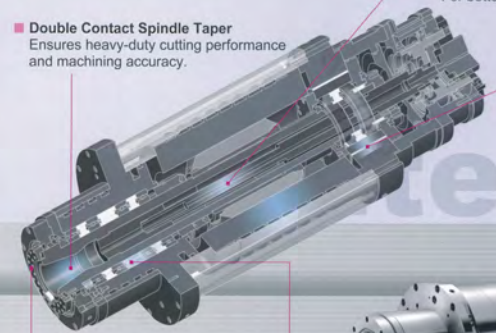
Integral Spindle Motor

Features

■ **Highly Reliable Helical Disc**
For better spindle balance an

■ **Double Contact Spindle Taper**
Ensures heavy-duty cutting performance and machining accuracy.

■ **Rear Bearing Fl**
Decreases therm
at high speed.



■ **Design for Dynamic Balance of Spindle**
Provides ultimate cutting rigidity.

■ **Micro Oil-air Lubrication System**
Minimizes thermal deformation and prolongs spindle life.

▲ **Integral Spin**
40 Taper: 20
30 Taper: 30

■ YCM integral spindle motor design reduces centrifugal force effect and results in low spindle vibration.
The spindle vibration is consistently controlled under 0.4G (ISO 1940), 5 times better than normal belt type spindle design.

■ Perpetual pre-load design reduces thermal deforma
under long runtime.

■ Floating cylinder design of tool clamp/unclamp syste

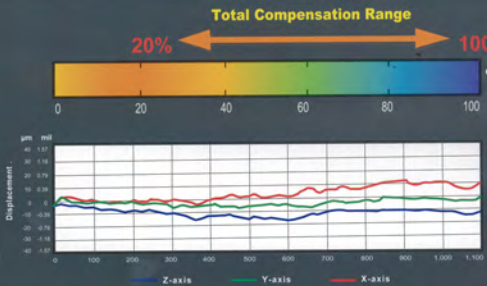
YCM SPINDLE THERMAL COMPENS

THE NEXT GENERATION STC EXCLUSIVELY

STC *PLUS*

- Maintains Spindle Growth Below 20μm (0.79mil)
- Improved Resolution to 0.1μm (0.004mil)
- Save Machine Warm-up Time
- Workable in Non-air Conditioning Environment

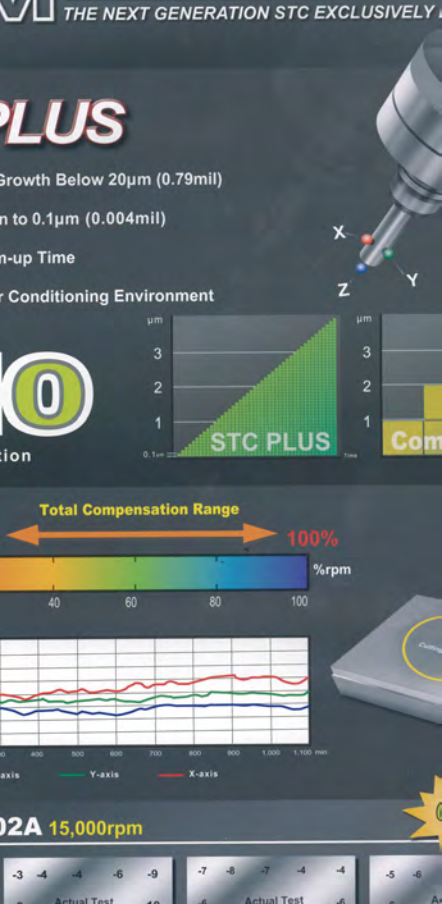
x10
High Resolution



Model: NDV102A 15,000rpm

Material: Aluminum

Size: 150 x 150mm



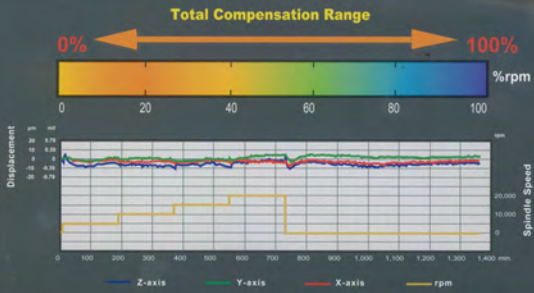
YCM
With STC

Com

STC SUPER

We have developed the 3rd generation of spindle thermal compensation.

- Has STC PLUS Advantages and Provides New Functions
- Provides Total Compensation from 0 to 100% rpm
- Continuously Works in Downtime
- Maintains the Precision Below 20μm (0.79mil)



Model: NDV85A 20,000rpm

Material: Aluminum

Size: 80 x 80 x 25mm

OPTIMUM	STC SUPER	O

MXP-200 FB / FC

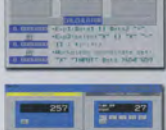
YCM CO

by FA

- 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
- 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 gr
- Combined uses of many high performance microprocessors, high speed memor 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

Convenien function pr calculation of workpie

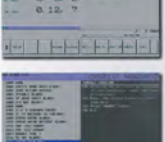
Easy Shop-floor Programming Manual Guide i

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

Counter Fu

Allows use track on nu workpieces

- Main Coun
- Periodical
- Daily Coun
- Over Cycle

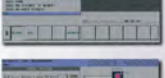


Intelligent Tool Data Management

Comprehensive tool data management function allows operators to monitor and manage all positions in tool magazine

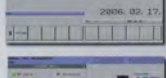
High Perf Mode: M3

High perfo 5 settings t select for t results



Pop-up Alarm Display

Detailed troubleshooting procedures will be automatically displayed when machine alarm occurs that allows users to restore machine status and minimize down time



Intelligent Reminder

Pre-set ma schedules to remind o inspect pe prolonging

Automatic Tool Length

Manual To

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.

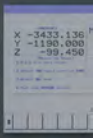
- G-code Status
- Feedrate
- Parts Count
- Controller Running Hours
- M-code Status
- Tool Data
- Machining Hours
- Spindle Load
- Spindle Status
- Work Coordination
- Date and Time
- Function Display

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.)

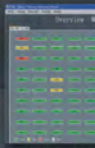
Integrating GSM communication and CNC technology, YCM developed the WMN system for wireless notification of machine and work status report.

i-Direct

A remote monitoring system

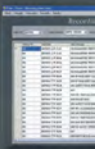
i-Direct, the latest YCM software enhancement innovation is designed for remote monitoring of factory production line. Its powerful features include reporting back complete machine operation status, record, history and data analysis. As soon as the system gets an alarm signal, instant messages will be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

User account administration

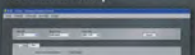


Overall machin

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



Complete prod and down time



PRODUCT LINES

VMC — Vertical Machining Center

FP Series — High Precision High Performance Die Mold Vertical Machining Center
FP55A, FP66A, FP100A

FV Series — High Speed High Performance Vertical Machining Center / High Speed High Performance Drilling & Tapping Center
FV56, FV56A, FV85A, FV102A, FV125A / FV50T

XV Series — High Performance Vertical Machining Center
XV560A, XV1020A, XV1250A

EV Series — High Efficiency Vertical Machining Center
EV1020A

TV Series — Heavy Duty Vertical Machining Center
TV116B, TV146A/B, TV158B, TV188B, TV2110B, TV2610B

NTV Series — High Efficiency T-base Vertical Machine Center
NTV158A

MV Series — High Performance High Rigidity Vertical Machining Center
MV66A, MV76A, MV86A, MV106A

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

FX Series — High Performance 5-axis Vertical Machining Center
FX380A

NSV Series — Ultra High Performance Vertical Machining Center
NSV66A, NSV85A, NSV102A, NSV156A

NDV Series — High Precision Die Mold Vertical Machining Center
NDV66A, NDV85A, NDV102A

TCV Series — High Performance Traveling Column Vertical Machining Center
TCV2000A, TCV3000A, TCV3000A-5AF

DCV Series — Advanced Double Column Vertical Machining Center
DCV2012A/B, DCV3016B, DCV4016B, DCV3021B, DCV4021B, DCV3025B, DCV4025B, DCV4035B, DCV4035B-5AX

HMC — Horizontal Machining Center

H Series — High Production Horizontal Machining Center
H500A/B, H630B, H800B, H2612B

HBM — Horizontal Boring Milling Machining Center

BMP Series — High Accuracy Heavy Duty Boring Machine
BMP1416B

CNC LATHES — CNC Turning Center

NT Series — High Performance Mill-axis Mill/Turn Center
NT-2000Y/SY, NT-2500Y/SY

GT Series — High Performance Geo Turning Center
GT-200N/M/MA, GT-250N/M/MA, GT-300A/B/MA/LB, GT-380A/B/LA/LB

TC Series — High Performance High Precision CNC Lathe
TC-16A/B/LA/LB, TC-26, TC-26L, TC-36, TC-36W, TC-46

INTEGRATION AND SOLUTIONS

Integrated Operation Control System iOPERATION

Spindle Thermal Compensation System STC PLUS

Remote Monitoring System iDirect

Automation Solutions