

NXV Series

High Performance Vertical Machining Center



NXV Series

NEW

High Speed, High Accuracy, High Performance

The NXV series is integrated with brand new exterior designs, demonstrating highest stability along with great configuration. The YCM NXV series offers high performance, high precision and high speed at an economical price.



Rapid Feedrate

NXV600A → 48/48/48 m/min.
NXV1020A → 48/48/32 m/min.



Auto Tool Change Time

NXV → 1.8 Sec.
NXV1680B → 4.2 sec.



Max. Spindle Power

NXV1380A / NXV1680A → 30 kW



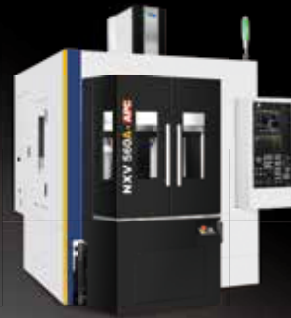
Acceleration Enhancement

NXV600A → 1g/1g/0.8g
NXV1020A → 1g/0.8g/1g



Tool Magazine Capacity

NXV1020A/AM → Max. 40T
NXV1270A / NXV1380A
NXV1680A → Max. 60T (opt.)



■ YCM In-house IDD Spindle

- Tool unclamping cushion extends spindle bearing life by protecting spindle bearing from tool unclamping force.
- Spindle cooling system (opt.) removes heat efficiently and minimizes thermal deformation.
- Ceramic bearings features low inertia mass, low centrifugal force, high rigidity and low coefficient of thermal deformation.
- High precision helical springs features high dynamic balance and low vibration.
- Grease lubrication for 12,000 rpm spindle ; Oil-air lubrication for 15,000 rpm spindle.

■ High Rigidity Design

- The rigid body construction makes for uncompromising precision and rigidity.
- FEM analysis is adopted to ensure the best mass arrangement and rib construction of the machine for constant stability under the intensive load of heavy-duty cutting.

■ 3 Axes Direct Drive Design

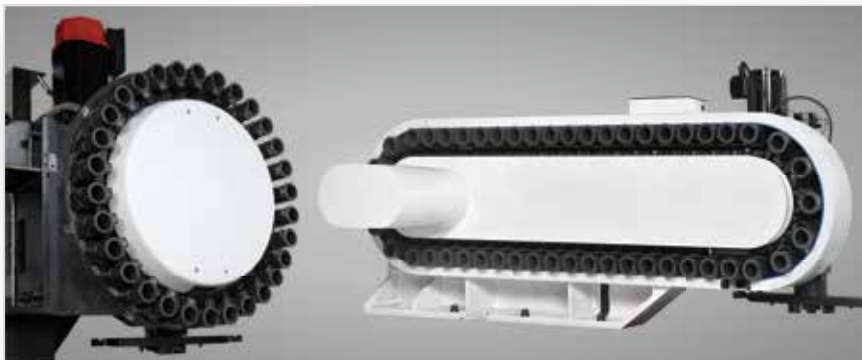
- Direct drive provides backlash free, best accuracy, reliability and stability.
- All axial AC servo motors equipped with Absolute Positioning Encoders, no zero return needed.



■ IDD PLUS Spindle 12,000rpm(15,000 rpm opt.)
< NXV1020A/AM · NXV1380A · NXV1680A >



■ Absolute Encoder ATC System
< NXV1680B is exclusive >



■ 24T < NXV600A / NXV560A-APC >
■ 24T(30T/40T)(opt.) < NXV1020A/AM >
■ 24T(30T / 48T / 60T)(opt.)
< NXV1270A / 1380A / 1680A >
■ 32T(40T)(opt.) < NXV1680B >



■ Auto Tool Change (T-T) 1.8 sec. NXV Series
■ Auto Tool Change (T-T) 4.2 sec. < NXV1680B >

■ High Stability Tool Magazine

- Absolute encoder ATC system provides high stability and speed.
- Inverter controlled, prevents tool change speed from changing under different power supply frequency.
- Tool change speed is programmable for heavy tools, prob.

■ Automatic Tool Magazine Door Design

- Driven by pneumatic cylinder.
- Prevent coolant and chips from entering tool magazine.

■ Brand New Exterior Design

- Full enclosure exterior (including top cover).
- Convertible side window for convenient chip removal.
- Aesthetic rear cover design.
- Smooth chip removal.



■ ATC Tool Door-Open

■ ATC Tool Door-Close



■ Coolant Shower for Efficient Chip Removal < NXV Series std. >

POWER CHART

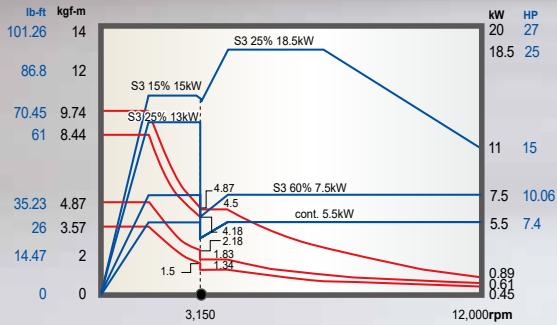
POWER

TORQUE

- FANUC System 12,000rpm

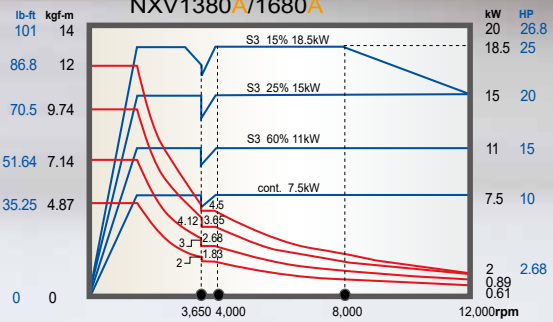
STANDARD

▼ NXV600A



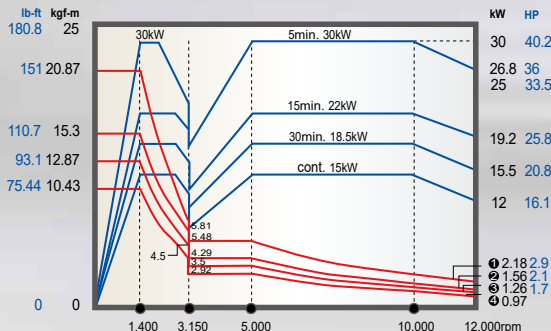
STANDARD

▼ NXV1020A/AM · NXV1270A
NXV1380A/1680A



OPTIONAL 30kW

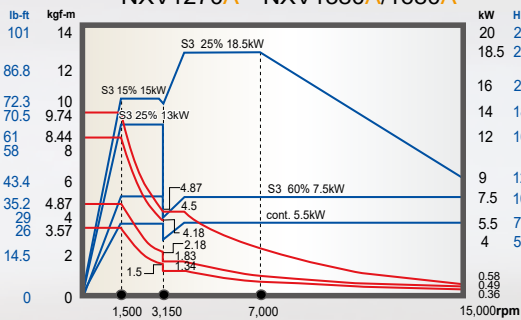
▼ NXV1380A/1680A



- FANUC System 15,000rpm

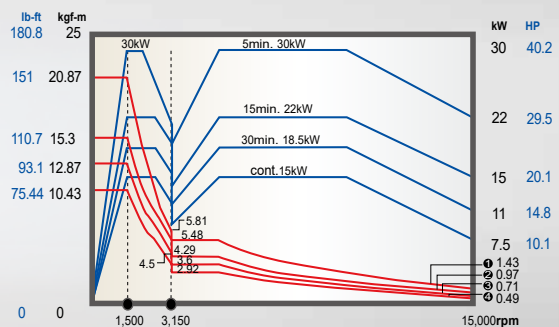
OPTIONAL

▼ NXV600A · NXV1020A/AM
NXV1270A · NXV1380A/1680A



OPTIONAL 30kW

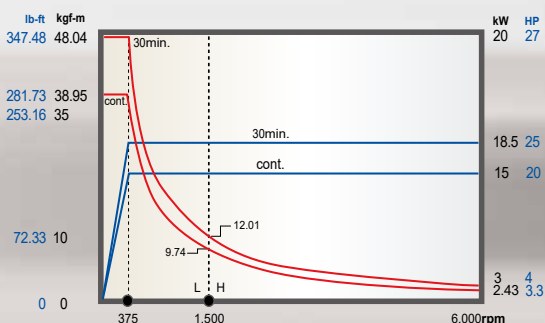
▼ NXV1380A/1680A



- FANUC System 6,000rpm

STANDARD

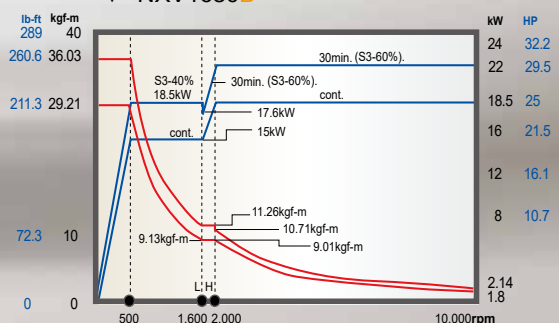
▼ NXV1680B



- FANUC System 10,000rpm

OPTIONAL

▼ NXV1680B



POWER CHART

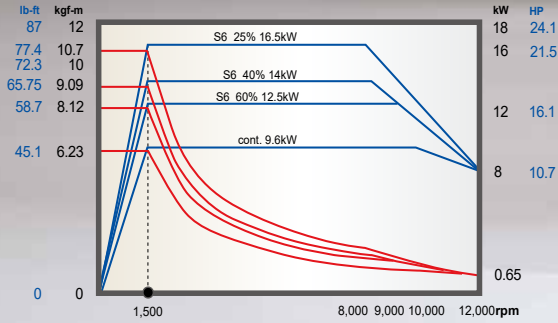
POWER

TORQUE

HEIDENHAIN System 12,000rpm

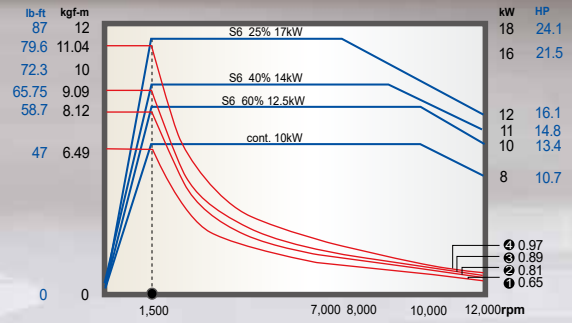
STANDARD

▼ NXV600A



STANDARD

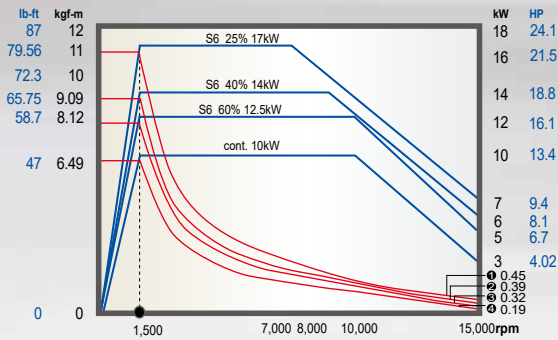
▼ NXV1020A/AM · NXV1380A/1680A



HEIDENHAIN System 15,000rpm

OPTIONAL

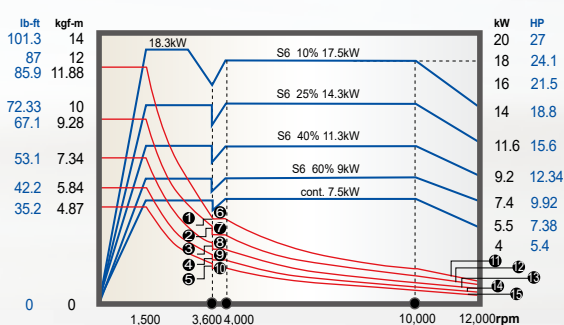
▼ NXV1020A/AM · NXV1380A/1680A



SIEMENS System 12,000/15,000rpm

STANDARD

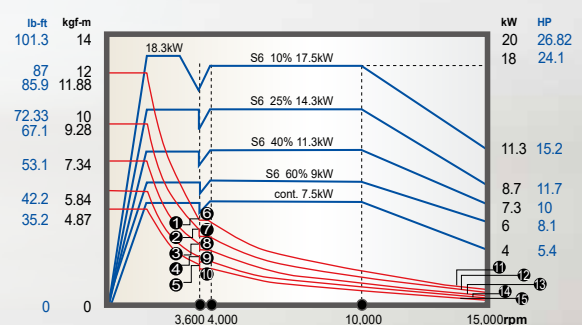
▼ NXV1020A/AM · NXV1380A/1680A



1 4.34	6 4.26	11 1.15
2 3.88	7 3.48	12 0.94
3 3.07	8 2.75	13 0.75
4 2.44	9 2.19	14 0.6
5 2.03	10 1.83	15 0.45

OPTIONAL

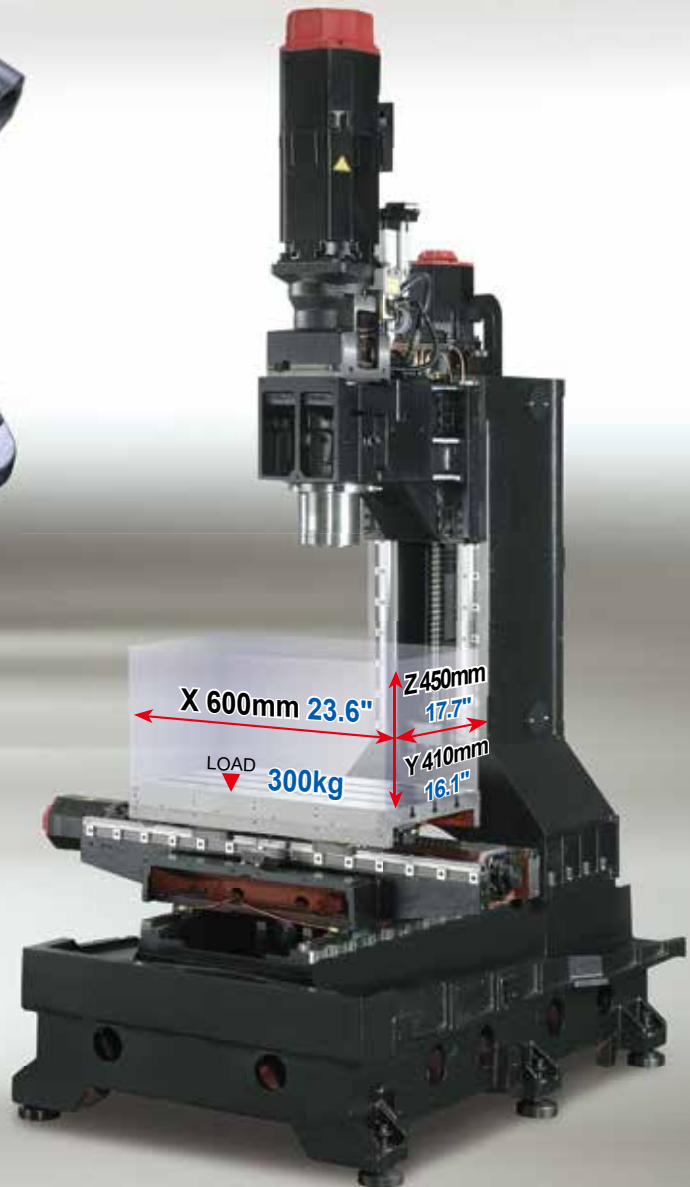
▼ NXV1020A/AM · NXV1380A/1680A



1 4.34	6 4.26	11 0.73
2 3.88	7 3.48	12 0.56
3 3.07	8 2.75	13 0.47
4 2.44	9 2.19	14 0.39
5 2.03	10 1.83	15 0.26

NXV 600A / 560A - APC

The NXV 600A high speed high power vertical machining center is specially designed for precision manufacturing and high productivity machining industries such as auto parts, high precision aerospace and electronic industries.



NXV 600A / NXV 560A - APC

Rapid Feedrate

X	48 m/min	1,890 ipm
Y	48 m/min	1,890 ipm
Z	48 m/min	1,890 ipm

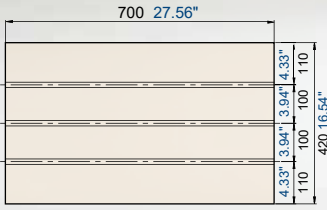
DIMENSIONS

Unit: mm inch

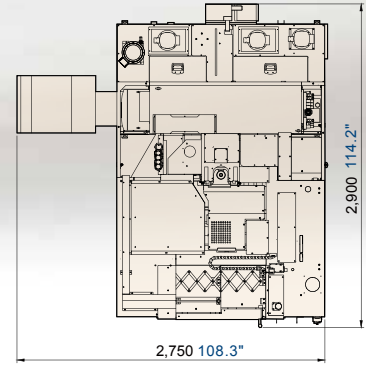
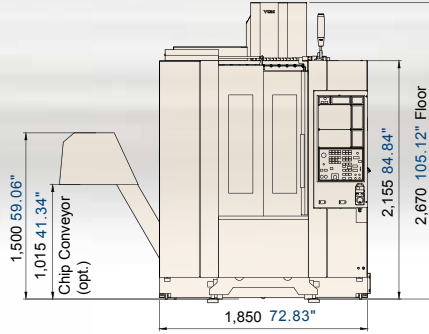
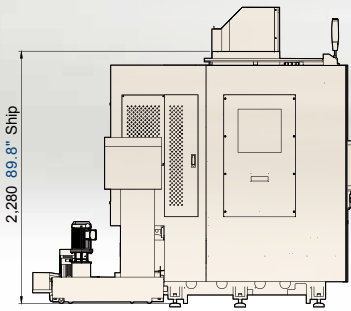
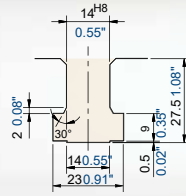
NXV 600A

NXV 600A

TABLE SIZE

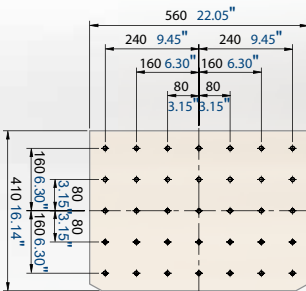


T-SLOTS

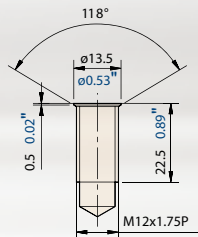


NXV 560A-APC

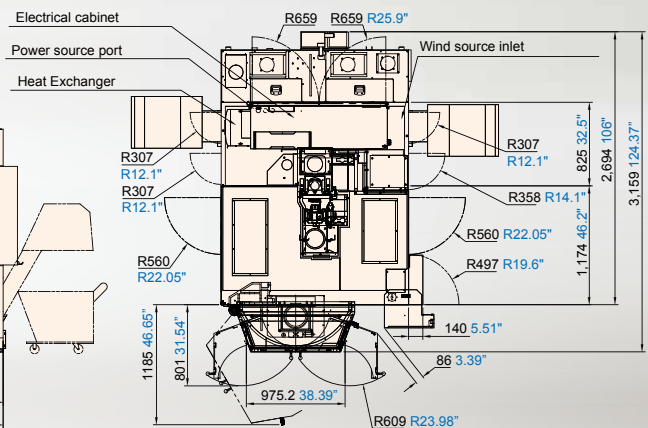
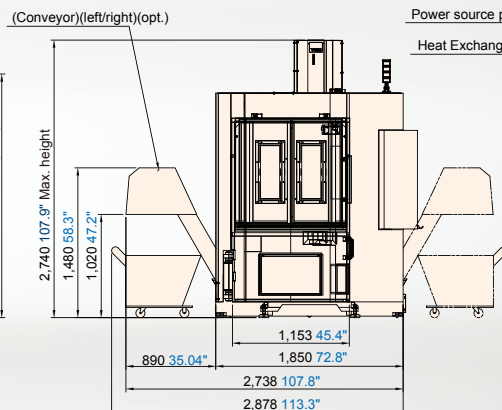
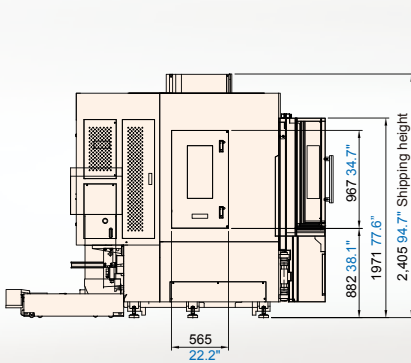
APC TABLE SIZE



SCREW HOLE DIMENSIONS



Model	NXV 560A-APC
Pallet Size	560 x 410 mm 22.05" x 16.14"
Table Load Capacity	120 kg 265 lb
Distance Between Spindle Nose and Table Top	25 ~ 475 mm 0.98"~18.7"
Hole Pattern	M12 x 80 mm x 80 mm M12 x 3.15" x 3.15"
Power Consumption (Transformer)	32 kVA (40 kVA)
Machine Weight	3,850 kg 8,488 lb



MODEL

NXV600A / NXV560A - APC

ACCURACY

ISO 10791-4

YCM*

Axial Travel

Full Length

Positioning (X/Y/Z) A

0.025/0.022/0.022 mm
0.00098"/0.0009"/0.0009"

0.01/0.01/0.01 mm
0.0004"/0.0004"/0.0004"

Repeatability (X/Y/Z) R

0.015/0.012/0.012
0.00059"/0.0005"/0.0005"

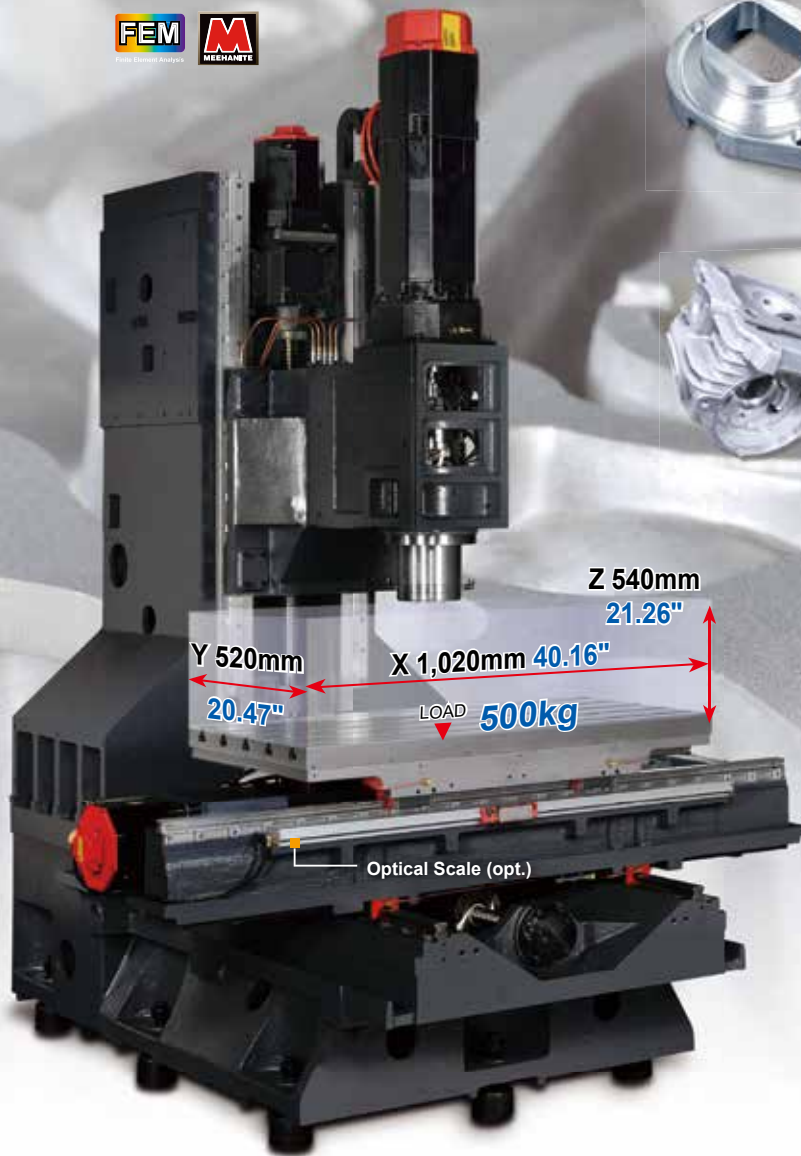
0.007/0.007/0.007
0.0003"/0.0003"/0.0003"

*All values shown above are measured for the machine in good air-conditioned environments.

NXV 1020A/AM

High Performance Vertical Machining Center

The brand new NXV series offers excellent cost performance with high precision and economical price. NXV1020A incorporates the features of high speed and high rigidity Satisfying diverse machining requirements of automotive job shops and electronics industries. The high precision NXV1020AM meets your demands for die & mold machining of automotive, mechanic and electronic industries.



NXV 1020A Rapid Feedrate

X	48 m/min	1,890 ipm
Y	48 m/min	1,890 ipm
Z	32 m/min	1,260 ipm

NXV 1020AM Rapid Feedrate

X	24 m/min	945 ipm
Y	24 m/min	945 ipm
Z	16 m/min	630 ipm

NXV 1020A/AM		
ACCURACY	ISO 10791-4	YCM*
Axial Travel	Full Length	
Positioning (X/Y/Z) A	0.032/0.025/0.025 mm 0.00126"/0.001"/0.001"	0.01/0.01/0.01 mm 0.0004"/0.0004"/0.0004"
Repeatability (X/Y/Z) R	0.018/0.015/0.015 mm 0.0007"/0.0006"/0.0006"	0.007/0.007/0.007 mm 0.0003"/0.0003"/0.0003"

*All values shown above are measured for the machine in good air-conditioned environments.

FACE MILL S45C Steel

Depth of Cut

6.5
mm



Tool $\varnothing 80\text{mm} \times 5\text{T}$
Spindle Speed 600rpm
Feedrate 450mm/min.
Width of Cut 60mm

FACE MILL S45C Steel

Material Removal Rate

648
cc/min.



Tool $\varnothing 63\text{mm} \times 6\text{T}$
Spindle Speed 1,500rpm
Feedrate 2,700mm/min.
Width of Cut 60mm
Depth of Cut 4mm

U-DRILL S45C Steel

Cutter Diameter

$\varnothing 44$
mm



Tool $\varnothing 44\text{mm} \times 1\text{T}$
Spindle Speed 1,500rpm
Feedrate 150mm/min.
Depth of Cut 44mm

TAP S45C Steel

Tapping

M24



Tool M24 x 3P
Spindle Speed 80rpm
Feedrate 240mm/min.
Depth of Cut 24mm

RIGID TAP A6061 Aluminum

Tapping

M1.2



Tool M1.2 x 0.25P
Spindle Speed 1,200rpm
Feedrate 300mm/min.

Note:Cutting test data for reference only. All cutting tests are designed to demonstrate maximum machining capabilities without preserving tool life.

	NXV 1020A	NXV 1020AM
Product position	Parts machining	Die & Mold machining
Spindle lubrication System	Std.:12,000rpm (Grease Lubrication) Opt.:15,000rpm (Oil-air Lubrication)	Std.:12,000rpm (Oil-air Lubrication) Opt.:15,000rpm (Oil-air Lubrication)
Spindle Cooling System	Optional	Standard
Feedrate System	Standard resolution	High resolution
Applied Industries	Automotive, job shops and electronic industries.	Automotive mold, machine mold and electronic mold industries.

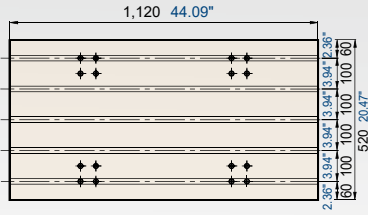
DIMENSIONS

Unit: mm inch

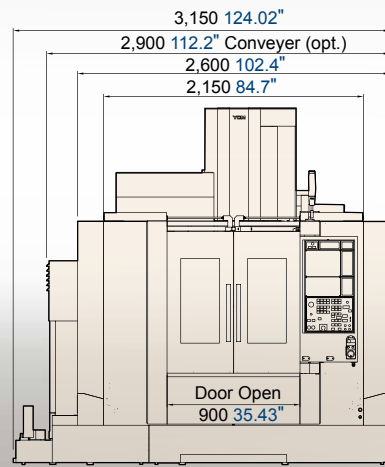
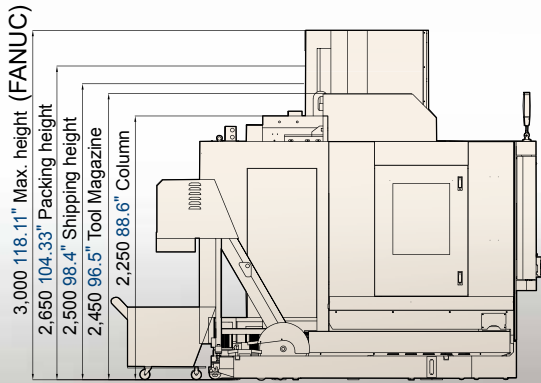
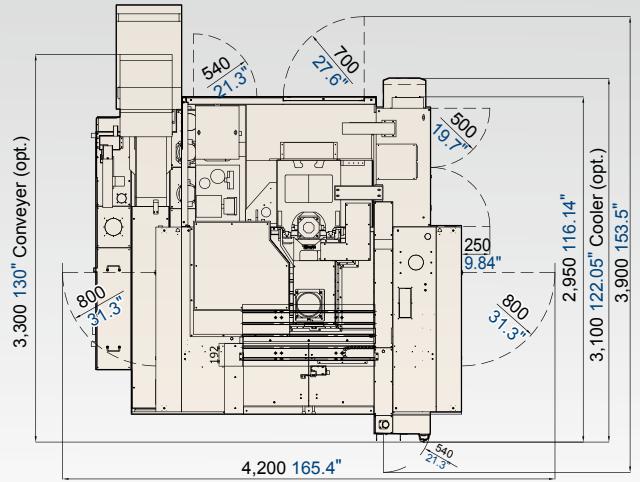
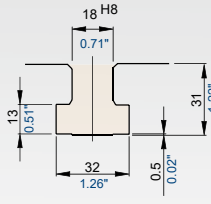
NXV 1020A/AM

Triple-Chip Auger

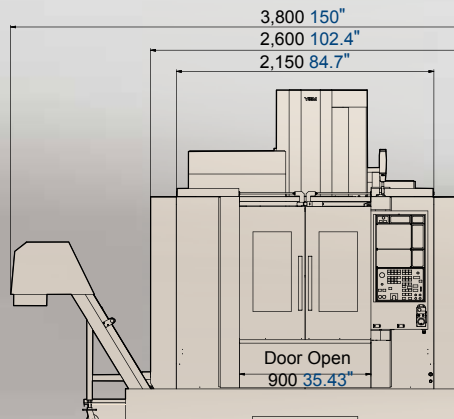
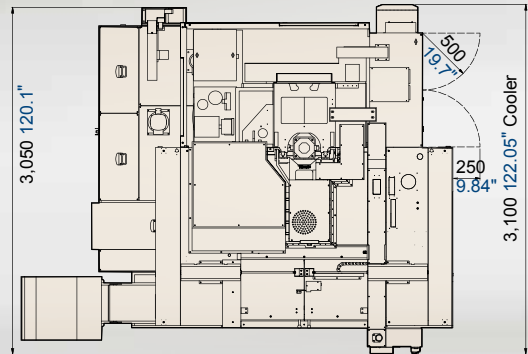
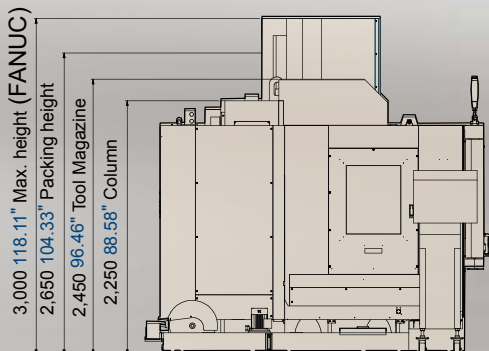
TABLE SIZE



T-SLOTS



Dual-Chip Auger

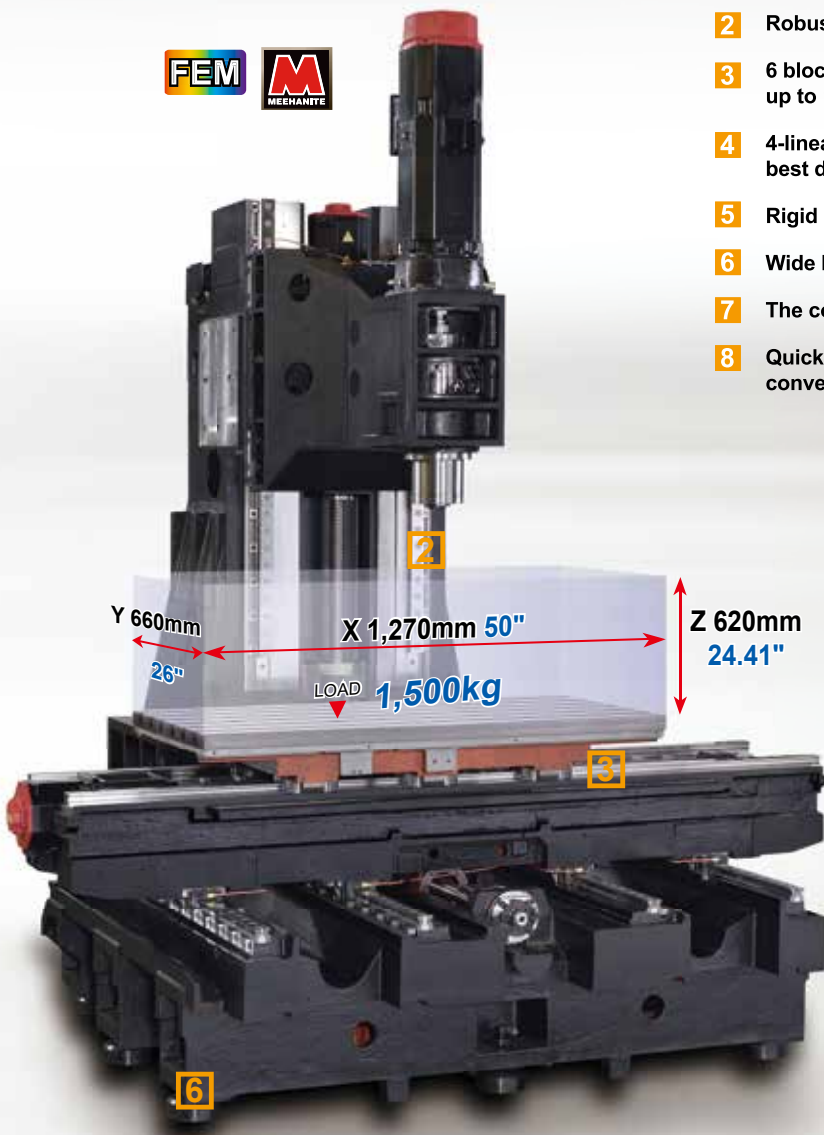




NXV 1270A

NXV1270A with extra-long Y-axis travel opens up new possibilities, applicable for automotive, aerospace, mechanical, electronics and various materials of sheet industries. Its optimized design has a compact footprint while still offering the largest work envelope in its class.

- 1 High Performance YCM In-house Designed IDD Spindle.
- 2 Robust roller linear guideways applied on 3 axes.
- 3 6 blocks design on X-axis can easily support workpieces weighing up to 1,500 kg.
- 4 4-linear guideways on Y-axis with superior large span ensures the best dynamic balance.
- 5 Rigid dual-wall castings on saddle
- 6 Wide base structure with 10 leveling pads.
- 7 The compact structure enables excellent floor space utilization
- 8 Quick and smooth chip discharge with quad-chip auger and chip conveyor provided as a standard



NXV 1270A Rapid Feedrate

X	36 m/min	1417 ipm
Y	36 m/min	1417 ipm
Z	30 m/min	1181 ipm

NXV 1270A		
ACCURACY	ISO 10791-4	YCM*
Axial Travel	Full Length	
Positioning (X/Y/Z) A	0.042/0.025/0.025 mm 0.00165"/0.001"/0.001"	0.014/0.01/0.01 mm 0.0006"/0.0004"/0.0004"
Repeatability (X/Y/Z) R	0.02/0.015/0.015 mm 0.0008"/0.0006"/0.0006"	0.01/0.007/0.007 mm 0.0004"/0.0003"/0.0003"

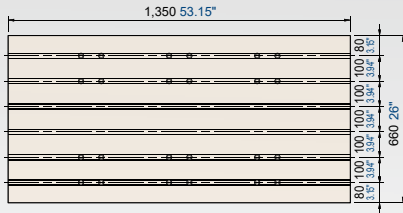
*All values shown above are measured for the machine in good air-conditioned environments.

DIMENSIONS

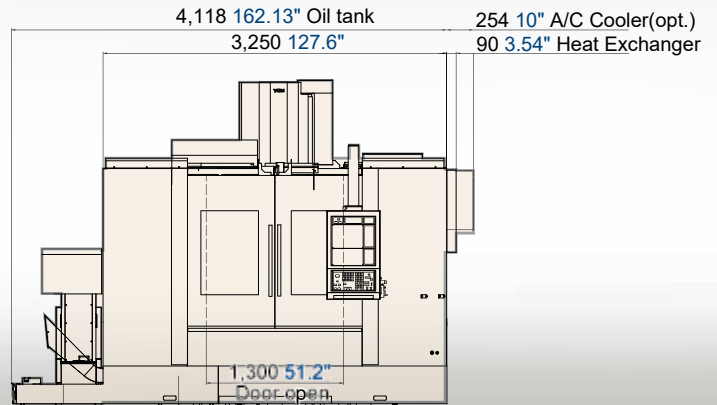
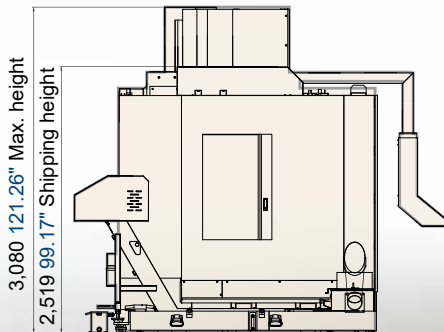
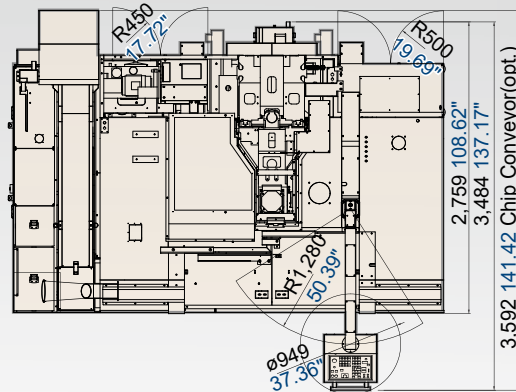
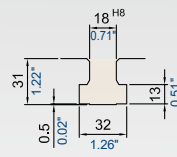
Unit: mm inch

NXV 1270A

TABLE SIZE



T-SLOTS



CUTTING CAPACITY NXV 1270A

BBT40

12,000rpm Fanuc System

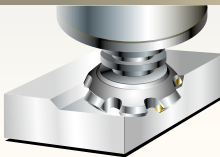
FACE MILL

S45C Steel

Material Removal Rate

648

cc/min.



Tool $\phi 63$ mm x 5T
Spindle Speed 1,500 rpm
Feedrate 4,500 mm/min.
Depth of Cut 60 mm

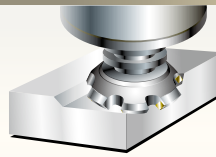
FACE MILL

S45C Steel

Depth of Cut

6.5

mm



Tool $\phi 80$ mm x 5T
Spindle Speed 600 rpm
Feedrate 450 mm/min.
Width of Cut 60 mm

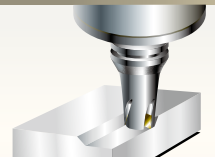
END MILL

S45C Steel

Depth of Cut

10

mm



Tool $\phi 32$ mm x 3T
Spindle Speed 500 rpm
Feedrate 225 mm/min.
Width of Cut 32 mm

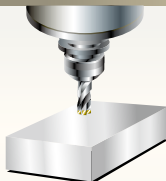
U-DRILL

S45C Steel

Cutter Diameter

$\phi 49$

mm



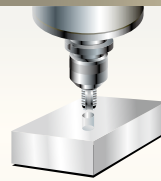
Tool $\phi 49$ mm x 1T
Spindle Speed 1,500 rpm
Feedrate 150 mm/min.
Depth of Cut 25 mm

TAP

S45C Steel

Tapping

M24



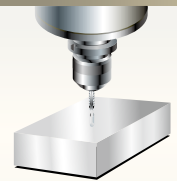
Tool M24 x 3P
Spindle Speed 80 rpm
Feedrate 240 mm/min.
Depth of Cut 24 mm

RIGID TAP

A6061 Aluminum

Tapping

M1.2



Tool M1.2 x 0.25P
Spindle Speed 1,200 rpm
Feedrate 300 mm/min.

Note: Cutting test data for reference only. All cutting tests are designed to demonstrate maximum machining capabilities without preserving tool life.



NXV 1380A / 1680A

The NXV 1380A / 1680A high rigidity vertical machining center offers extended travels at an affordable price. It is most suitable for automotive applications. The NXV 1380A / 1680A provides high speed high precision and extreme rigidity with excellent cost performance.



- 1 6 slide blocks on X-axis supporting 1,500 maximum load on table.
- 2 4 linear guideways on Y-axis providing best dynamic balance.
- 3 Dual wall structure saddle providing high rigidity.
- 4 High rigidity and high loading roller type linear guideways applied on the three axes.
- 5 Penta chip augers (4 Y-axial +1 X-axial) ensure fluent chip removal prevent chips from piling up.
- 6 Pretension ballscrews applied on the three axes increase axial rigidity providing less thermal deformation.
- 7 Wide base structure with 10 leveling pads.



NXV 1380A/1680A Rapid Feedrate

X	30 m/min	1,181 ipm
Y	30 m/min	1,181 ipm
Z	24 m/min	945 ipm

NXV 1380A / NXV 1680A

ACCURACY	ISO 10791-4	YCM*
Axial Travel	Full Length	
Positioning (X/Y/Z) A	0.042/0.025/0.025 mm 0.00165"/0.001"/0.001"	0.014/0.01/0.01 mm 0.0006"/0.0004"/0.0004"
Repeatability (X/Y/Z) R	0.02/0.015/0.015 mm 0.0008"/0.0006"/0.0006"	0.01/0.007/0.007 mm 0.0004"/0.0003"/0.0003"

*All values shown above are measured for the machine in good air-conditioned environments.

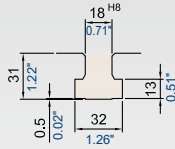
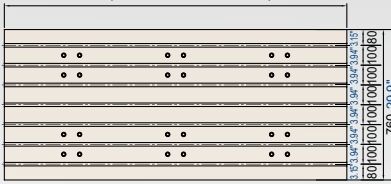
DIMENSIONS

Unit: mm inch

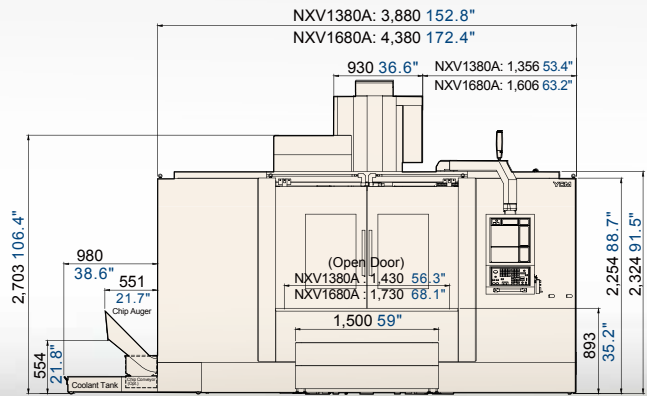
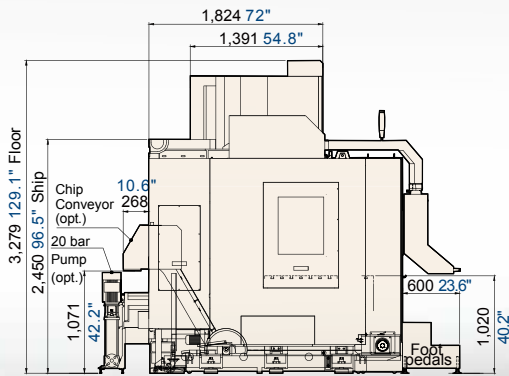
NXV 1380A / NXV 1680A

TABLE SIZE

NXV1380A : 1,430 56.3" NXV1680A : 1,730 68.11"



T-SLOTS

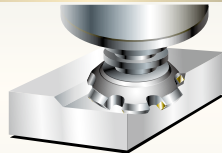


CUTTING CAPACITY NXV 1680A BBT40 12,000rpm/30kW (opt.) Fanuc System

FACE MILL S45C Steel

Depth of Cut

9
mm

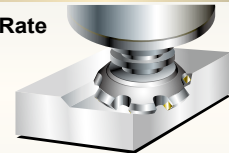


Tool ø80mm x 5T
Spindle Speed 600rpm
Feedrate 450mm/min.
Width of Cut 60mm

FACE MILL S45C Steel

Material Removal Rate

907
cc/min.

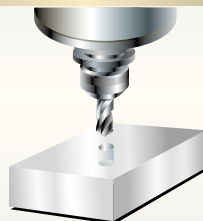


Tool ø63mm x 5T
Spindle Speed 1,400rpm
Feedrate 4,200mm/min.
Width of Cut 60mm
Depth of Cut 3.6mm

U-DRILL S45C Steel

Cutter Diameter

ø59
mm

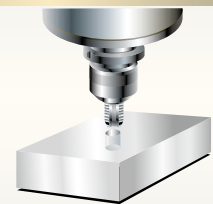


Tool ø59mm
Spindle Speed 1,160rpm
Feedrate 116mm/min.
Depth of Cut 50mm

TAP S45C Steel

Tapping

M36

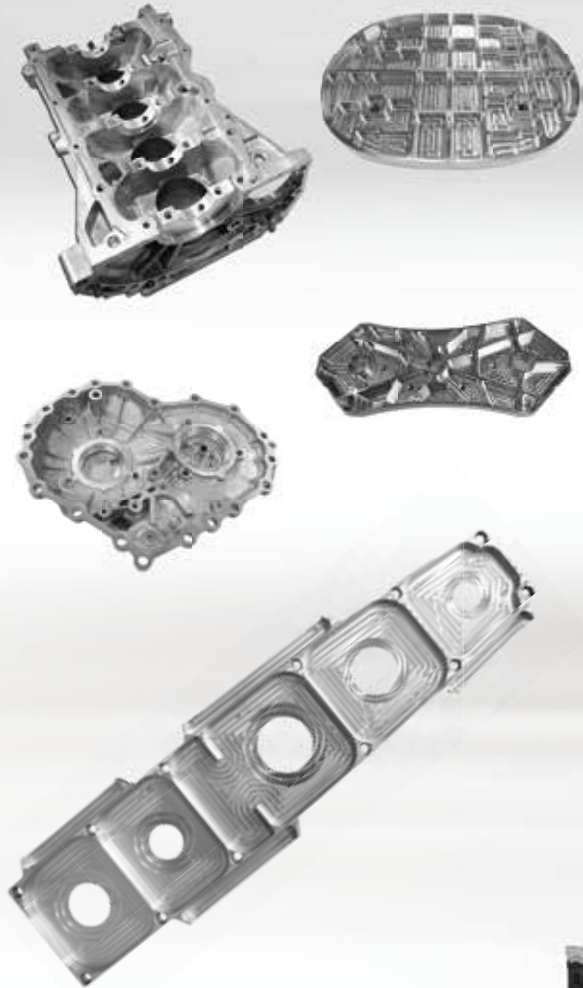


Tool M36 x 4P
Spindle Speed 44rpm
Feedrate 176mm/min.
Depth of Cut 25mm

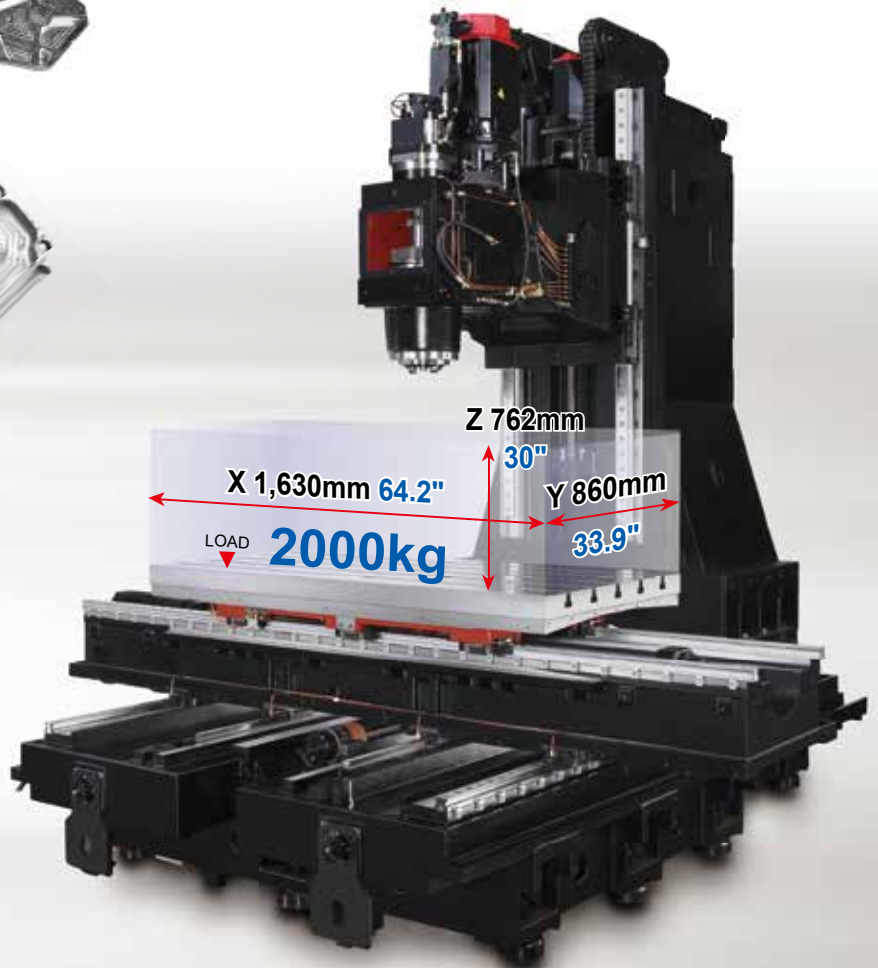
Note: Cutting test data for reference only. All cutting tests are designed to demonstrate maximum machining capabilities without preserving tool life.

NXV 1680B

The NXV 1680B high rigidity vertical machining center offers extended travels at an affordable price. It is most suitable for automotive and aerospace applications.



■ Quad-Chip auger system ensure fluent chip removal prevent chips from piling up.



NXV 1680B Rapid Feedrate

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



NXV 1680B		
ACCURACY	ISO 10791-4	YCM*
Axial Travel	Full Length	
Positioning (X/Y/Z) A	0.042/0.025/0.025 mm 0.00165"/0.001"/0.001"	0.014/0.01/0.01 mm 0.0006"/0.0004"/0.0004"
Repeatability (X/Y/Z) R	0.02/0.015/0.015 mm 0.0008"/0.0006"/0.0006"	0.01/0.007/0.007 mm 0.0004"/0.0003"/0.0003"

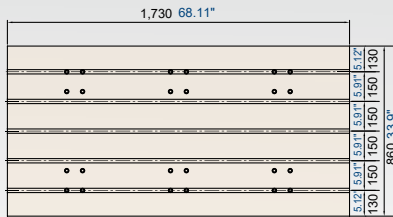
*All values shown above are measured for the machine in good air-conditioned environments.

DIMENSIONS

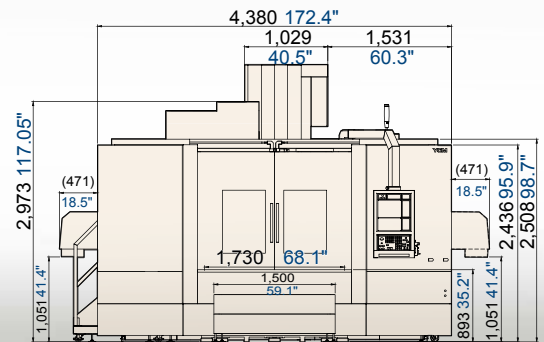
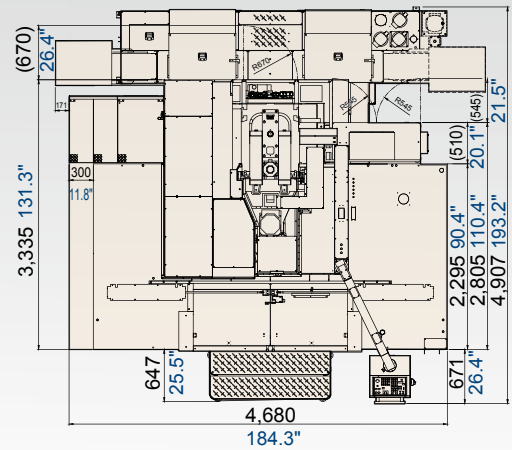
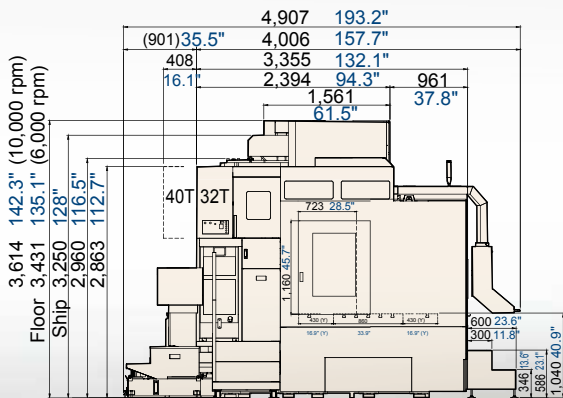
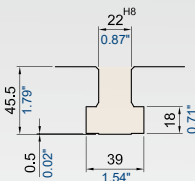
Unit: mm inch

NXV 1680B

TABLE SIZE



T-SLOTS



CUTTING CAPACITY NXV 1680B

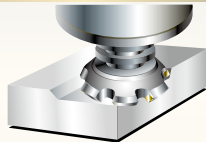
BT50

6,000rpm Fanuc System

FACE MILL S45C Steel

Depth of Cut

9
mm

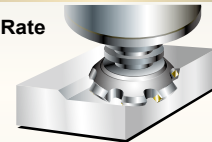


Tool $\phi 160\text{mm} \times 10\text{T}$
Spindle Speed 375rpm
Feedrate 375mm/min.
Width of Cut 125mm

FACE MILL S45C Steel

Material Removal Rate

756
cc/min.

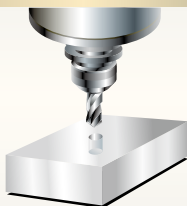


Tool $\phi 125\text{mm} \times 8\text{T}$
Spindle Speed 375rpm
Feedrate 1,800mm/min.
Width of Cut 120mm
Depth of Cut 3.5mm

U-DRILL S45C Steel

Cutter Diameter

$\phi 65$
mm



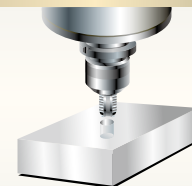
Tool $\phi 65\text{mm}$
Spindle Speed 500rpm
Feedrate 100mm/min.
Depth of Cut 50mm

TAP

S45C Steel

Tapping

M48

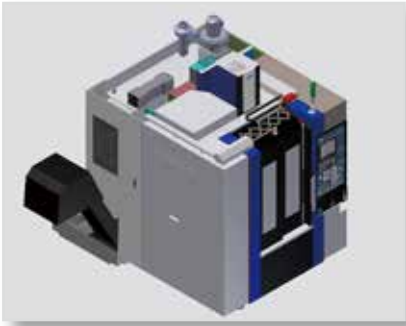


Tool M48 x 5P
Spindle Speed 34rpm
Feedrate 170mm/min.
Depth of Cut 40mm

Note: Cutting test data for reference only. All cutting tests are designed to demonstrate maximum machining capabilities without preserving tool life.

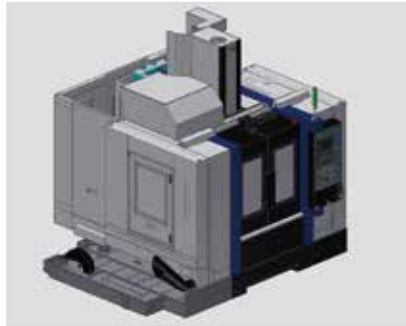
■ CHIP REMOVAL SYSTEM

■ NXV 600A



■ Chip Conveyor (opt.)

■ NXV 1020A / AM

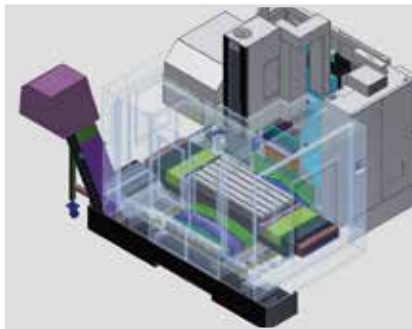


■ Triple Chip Auger with 45° Pipe

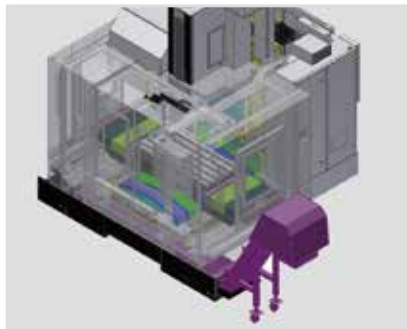


■ Rear Side Chip Conveyor (opt.)

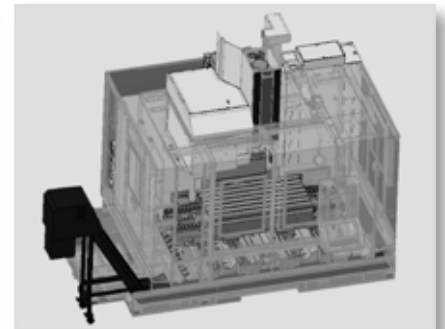
■ NXV 1270A



■ Dual-Chip Auger System with Left Hand Side (opt.)

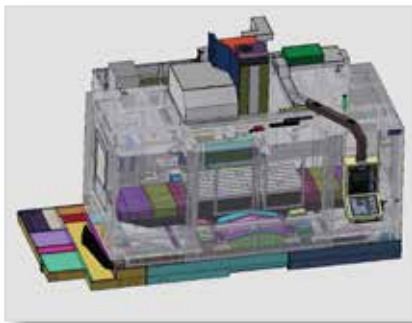


■ Dual-Chip Auger System with Right Hand Side (opt.)

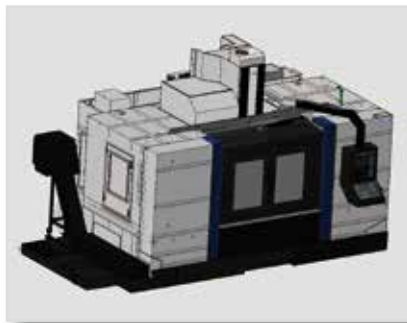


■ Quad-Chip Auger with Left-hand Side Chip Conveyor (opt.)

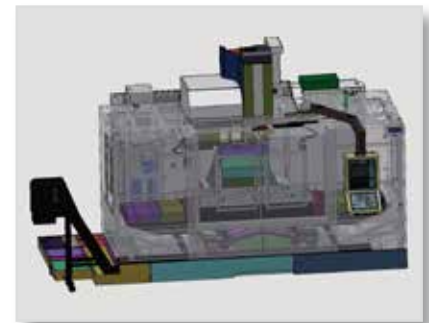
■ NXV 1380A / 1680A



■ Penta-Chip Auger with 45° Pipe

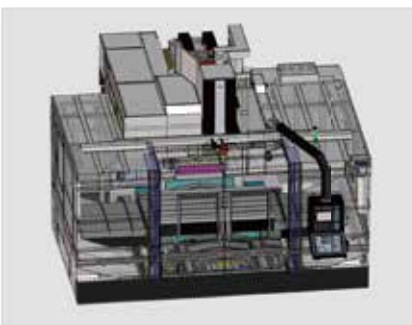


■ Penta-Chip Auger with Rear Side Chip Conveyor (opt.)

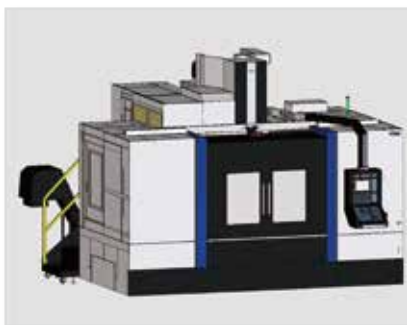


■ Quad-Chip Auger with Left/Right-hand Side Chip Conveyor (opt.)

■ NXV 1680B



■ Quad-Chip Auger System



■ Quad-Chip Auger with Rear Side Chip Conveyor (opt.)

YCM[®]

MXP-200FB+



by **FANUC**

Communication Interface

RJ45 Ethernet
RS-232C
USB
CompactFlash Card

Excellent Vision Quality

10.4" LCD display

User-Friendly Design

Detachable keyboard
(QWERTY)

Fine Surface Technology

1. AICC II+, high precision and high accuracy AI contour control
2. Smooth tolerance control+
3. Machining quality level adjustment function

Fast Cycle Time Technology

1. Maximum 400 blocks of look-ahead for pre-calculating the machining program
2. Block processing time 1ms for achieving high-speed machining requirement
3. Smart rigid tapping function combined with spindle capability for high-speed machining (*Note)

Program Dynamic Simulation

Manual Guide i features dynamic simulation of machining programs with full-screen display

Upgraded Memory and File Organization

1. 2 MB program storage size
2. Built-in memory card for easy program editing
3. Directory filing structure with organized file management
4. 400 pairs of tool offset, 1,000 registrable programs, 48 pairs of workpiece coordinate system, 256 pairs of tool life management

*Note: Applicable to vertical machining centers with IDD spindle and built-in motorized spindle.

YCM[®]

i-OPERATION

Exclusive Software from **YCM**

Plus II

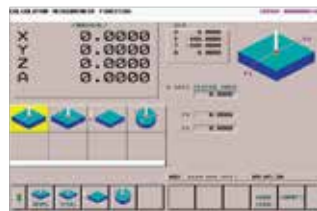


Pre-Machining



Intelligent Tool Data Management

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



Workpiece Coordinate Calculation

Conversational window provides convenient and fast setup of workpiece coordinates

RENISHAW GUI System (Conversational Graphic Operating Interface)



Tool Measurement & Measurement Calibration



Workpiece Measurement (applicable to certain models)

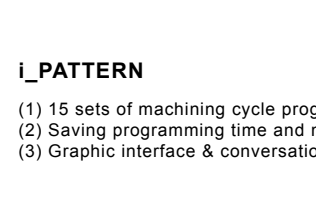
Program Editing



CIRCULAR HOLE PATTERN
(G120 P1) Function



RECTANGULAR HOLE PATTERN
(G120 P4) Function



GRID HOLE PATTERN
(G120 P5) Function

i_PATTERN

- (1) 15 sets of machining cycle program
- (2) Saving programming time and memory time
- (3) Graphic interface & conversational command input

Machining

High Performance Machining Mode M300

With 5 sets of parameter settings, it's easy to find suitable and optimized machining.

High Speed Machining Mode M400

Reducing machining time for drilling and tapping process

Tool Load Management

Instant tool load monitoring with alarm function

Multi-Display Function

Displaying 4 statuses simultaneously with configurable status display

Tool Life Management

Indicating tool status of each group with tool life alarm



Smart Control Panel



iPANEL

Easy to set up and operate important functions

Intelligent Counter



Instantly providing users with periodic maintenance notifications and work-pieces counter management

SIEMENS SINUMERIK 828D

The new CNC-controller for the compact class.

The performance of the SINUMERIK 828D is in a class of its own. Even in the compact frame size, the familiar SINUMERIK state-of-the-art technology ensures the highest possible levels of precision and productivity.



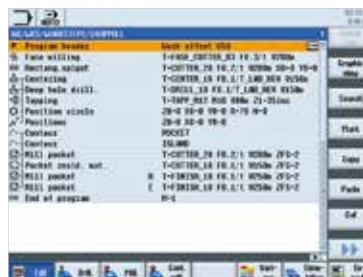
Programming the way you want it

SINUMERIK offers unique programming methods for every application. These include: **Workstep programming for ShopMill/ShopTurn and SINUMERIK high-level language with programGUIDE.** ISO-Code programming is also supported.

• ShopMill/ShopTurn

workstep programming

- Extremely short programming times
- For production of individual parts and small batches



• SINUMERIK high-level language with programGUIDE

- Maximum flexibility and very short processing times
- For production of medium and large batch sizes



1. Communicative

- Front interfaces (IP65)
- RJ45 Ethernet
- USB 2.0
- Compact Flash (CF) card

2. Heavy-duty

Panel front made of die-cast magnesium

3. Optimum readability

10.4" TFT color display

4. Outstanding performance

- Two versions with different performance capabilities
- PPU 260/261
- PPU 280/281

5. User-friendly

- Fully fledged QWERTY keyboard
- Hard keys with protective foil
- Degree of protection IP65

6. Clever

3/8" thread for add-on components

7. Maintenance-free

- No battery (permanent data buffering thanks to NV-RAM technology!)
- No fan
- No hard disk

8. Optimum connection

- Rear interfaces
- USB 2.0
- PLC I/O interface
- RJ45 Ethernet
- RS232 C
- DRIVE-CLIQ
- NC inputs/outputs

■ SPECIFICATIONS

	NXV600A	NXV560A-APC	NXV1020A	NXV1020AM
SPINDLE				
Spindle Speed (opt.)	12,000 rpm (15,000 rpm)			
Spindle Power (opt.)	18.5 kW (18.5 kW) 25 HP (25 HP)			
Spindle Taper	BBT40			
TRAVEL				
X-axis Travel	600 mm 23.6"		1,020 mm 40.16"	
Y-axis Travel	410 mm 16.1"		520 mm 20.47"	
Z-axis Travel	450 mm 17.7"		540 mm 21.26"	
Distance Between Spindle Nose & Table Top	110~560 mm 4.3~22"	25~475 mm 0.98~18.7"	140~680 mm 5.51~26.77"	
TABLE				
Table Size	700 x 420 mm 27.6" x 16.5"	560 X 410 mm 22.05"~16.14"	1,120 x 520 mm 44" x 20.47"	
No. T-slots x Size x Pitch	3 x 14 mm x 100 mm 3 x 0.55" x 3.9"	-	5 x 18 mm x 100 mm 5 x 0.71" x 3.94"	
Max. Load on Table	300kg 660 lb	120 kg 265 lb	500kg 1,102 lb	
FEEDRATE				
X/Y/Z Rapid Feedrate	48 / 48 / 48 m/min. 1,890 / 1,890 / 1,890 ipm		48 / 48 / 32 m/min. 1,890 / 1,890 / 1,260 ipm	24 / 24 / 16 m/min. 945 / 945 / 630 ipm
Cutting Feedrate	1~20,000 mm/min. 0.04~787 ipm		1~20,000 mm/min. 0.04~787 ipm	20,000/20,000/16,000 mm/min. 787 / 787 / 630 ipm
ATC				
Tool Magazine Capacity (opt.)	24T		24T (30T / 40T)	
Max. Tool Weight (per piece)	6kg 13.2 lb			
Max.Tool Dimensions (opt.) (W/O Adjacent Tools)	ø76 x 250 mm (ø125 x 250 mm) ø3" x 9.84" (ø4.92" x 9.84")		24T : ø90 x 300 mm (ø140 x 300 mm) 30T/40T : ø76 x 300 mm (ø125 x 300 mm) 24T : ø3.54" x 11.81" (ø5.51" x 11.81") 30T/40T : ø3" x 11.81" (ø4.92" x 11.81")	
Tool Changer Method	Arm Type			
Tool Selection Method	Random			
GENERAL				
Pneumatic Supplier	5.5 kg/cm ² 78.2psi			
Machine Weight	3,000 kg 6,614 lb	3,830 kg 8,444 lb	5,350 kg 11,795 lb	

Note: Above specifications may vary depending on the machine and the surrounding environment. The manufacturer reserves the right to modify the design, specifications, mechanisms, etc., to improve the performance of the machine without notice. The test data provided in this catalog is performed under specific test procedures and environmental conditions.

■ SPECIFICATIONS

	NXV1270A	NXV1380A	NXV1680A	NXV1680B
SPINDLE				
Spindle Speed (opt.)	12,000 rpm (15,000 rpm)	12,000 rpm (12,000 rpm / 15,000 rpm)		6,000 rpm (10,000 rpm)
Spindle Power (opt.)	18.5 kW 25 HP (18.5 kW) (25 HP)	12,000 rpm : 18.5 kW 25 HP (15,000 rpm : 18.5 kW) (25 HP) (12,000 / 15,000 rpm : 30 kW) (40 HP)		18.5 kW (22 kW) 25 HP (30 HP)
Spindle Taper	BBT40			BT50 (BBT50)
TRAVEL				
X-axis Travel	1,270 mm 50"	1,330 mm 52.4"	1,630 mm 64.2"	1,630 mm 64.2"
Y-axis Travel	660 mm 26"	762 mm 30"		860 mm 33.9"
Z-axis Travel	620 mm 24.41"	700 mm 27.6"		762 mm 30"
Distance Between Spindle Nose & Table Top	70~690 mm 2.76"~27.2"	100~800 mm 3.94"~31.5"		200~962 mm 7.9"~37.9"
TABLE				
Table Size	1,350 x 660 mm 23.15" x 26"	1,430 x 760 mm 56.3" x 29.9"	1,730 x 760 mm 68.1" x 29.9"	1,730 x 860 mm 68.1" x 33.9"
No. T-slots x Size x Pitch	6 x 18 mm x 100 mm 6 x 0.71" x 3.94"	7 x 18 mm x 100 mm 7 x 0.71" x 3.94"		5 x 22 mm x 150 mm 5 x 0.87" x 5.91"
Max. Load on Table	1,500kg 3,307 lb			2,000kg 4,409 lb
FEEDRATE				
X/Y/Z Rapid Feedrate	36 / 36 / 30 m/min. 1,417 / 1,417 / 1,181 ipm	30 / 30 / 24 m/min. 1,181 / 1,181 / 945 ipm		24 / 24 / 24 m/min. 945 / 945 / 945 ipm
Cutting Feedrate	1~20,000 mm/min. 0.04~787 ipm			1~10,000 mm/min. 0.04~394 ipm
ATC				
Tool Magazine Capacity (opt.)	24T (30T / 48T / 60T)			32T (40T)
Max. Tool Weight (per piece)	6kg 13.2 lb			20kg 44 lb
Max.Tool Dimensions (opt.) (W/O Adjacent Tools)	24T : $\varnothing 90 \times 300$ mm ($\varnothing 140 \times 300$ mm) 30T/48T/60T : $\varnothing 76 \times 300$ mm ($\varnothing 125 \times 300$ mm) 24T : $\varnothing 3.54" \times 11.81"$ ($\varnothing 5.51" \times 11.81"$) 30T/48T/60T : $\varnothing 3" \times 11.81"$ ($\varnothing 4.92" \times 11.81"$)			32T / 40T: $\varnothing 120 \times 350$ mm ($\varnothing 240 \times 350$ mm) 32T / 40T : $\varnothing 4.72" \times 13.78"$ ($\varnothing 9.45" \times 13.78"$)
Tool Changer Method	Arm Type			
Tool Selection Method	Random			
GENERAL				
Pneumatic Supplier	5.5 kg/cm ² 78.2psi			
Machine Weight	9,000 kg 19,841 lb	10,500 kg 23,149 lb	11,000 kg 24,251 lb	16,500 kg 36,376 lb

Note: Above specifications may vary depending on the machine and the surrounding environment. The manufacturer reserves the right to modify the design, specifications, mechanisms, etc., to improve the performance of the machine without notice. The test data provided in this catalog is performed under specific test procedures and environmental conditions.

■ ACCESSORIES

	600A	560A- APC	1020A	1020AM	1270A	1380A	1680A	1680B
Tool Kit	●	●	●	●	●	●	●	●
Work Lamp, Pilot Lamp	●	●	●	●	●	●	●	●
Oil Skimmer	●	●	●	●	●	●	●	●
Coolant Equipment System	●	●	●	●	●	●	●	●
Full Chip Enclosure	●	●	●	●	●	●	●	●
Coolant Gun	●	●	●	●	●	●	●	●
Spindle Air Blast	●	●	●	●	●	●	●	●
Cutting Air Blast	●	●	●	●	●	●	●	●
Spindle Air Seal	●	●	●	●	●	●	●	●
Central Lubrication System	●	●	●	●	●	●	●	●
Guideway Cover (X/Y/Z)	●	●	●	●	●	●	●	●
Leveling Blocks and Bolts	●	●	●	●	●	●	●	●
Mechanical, Electrical and Operating Manuals	●	●	●	●	●	●	●	●
Heat Exchanger for Electrical Cabinet	●	●	●	●	●	●	●	●
Triple-Chip Augers	-	-	●	●	-	-	-	-
Dual-Chip Augers (With Chip Conveyor)	-	-	○	○	-	-	-	-
Penta-Chip Augers	-	-	-	-	●	●	●	-
Quad-Chip Augers	-	-	-	-	○	○	○	●
45° Outlet Pipe (Triple-Chip Augers)	-	-	●	●	-	-	-	-
Straight Pipe (Triple-Chip Auger with Rear Side Chip Conveyor)	-	-	○	○	-	-	-	-
45° Outlet Pipe (Penta-Chip Augers)	-	-	-	-	●	●	●	-
Straight Pipe (Penta-Chip Auger with Rear Side Chip Conveyor)	-	-	-	-	○	○	○	-
Safety Door	●	●	●	●	●	●	●	●
Air Gun	●	●	●	●	●	●	●	●
Circular Coolant Nozzle	●	●	●	●	●	●	●	●
CE	○	○	○	○	○	○	○	○
Automatic Door	○	-	○	○	○	○	○	○
Optical Scale	○	○	○	○	○	○	○	○
Foundation Bolts	○	○	○	○	○	○	○	●
Coolant Shower	●	●	●	●	●	●	●	●
Spindle Cooling System	○	○	○	●	○	○	○	●
Oil-mist Coolant System	○	○	○	○	○	○	○	○
Oil Hole Holder Function	○	○	○	○	○	○	○	○
Coolant Through Spindle System (Form A/20/30/70bar)	○	○	○	○	○	○	○	○
Chip Conveyor	○	○	○	○	○	○	○	○
4th Axis Rotary Table	○	○	○	○	○	○	○	○
A/C. Cooler for Electrical Cabinet	○	○	○	○	○	○	○	○
Automatic Power Off	●	●	●	●	●	●	●	●
Auto Tool Length Measurement System (METROL_T24E-04-47)	○	○	○	○	○	○	○	○
Workpiece Measurement System (RENISHAW_OMP60)	○	○	○	○	○	○	○	○
Oil-mist Collector	○	-	○	○	○	○	○	○
Heavy Duty Coolant Pump	●	●	●	●	●	●	●	●
Extended 250mm Column	-	-	○	○	○	○	○	○
CNC Control: FANUC MXP-200FB*	●	●	●	●	●	●	●	●
CNC Control: FANUC MXP-200FC	-	-	-	-	-	-	-	○
CNC Control: HEIDENHAIN TNC620	○	-	○	○	-	○	○	-
CNC Control: HEIDENHAIN TNC640	○	-	○	○	-	○	○	-
CNC Control: SIEMENS 828D(PPU280)	○	-	○	○	-	○	○	-

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.

VMC

Vertical Machining Center

FP Series High Precision High Performance Die Mold Vertical Machining Center
FP66A, FP100A, NFP66A



NXV Series High Performance Vertical Machining Center
NXV600A, NXV560A-APC, NXV1020A/AM, NXV1270A, NXV1380A, NXV1680A/B



TV Series Heavy Duty Vertical Machining Center
TV116B, TV146B, TV158B, TV188B, TV2110B, TV2610B

NTV Series High Efficiency T-base Vertical Machining Center
NTV158A/B

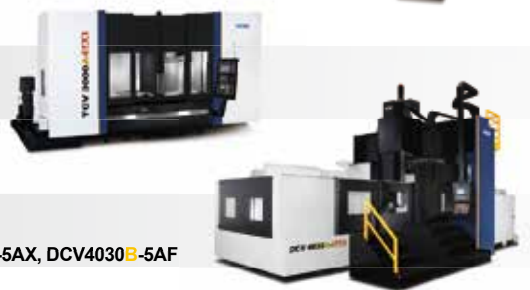
NMV Series High Performance High Rigidity Vertical Machining Center
NMV76A, NMV106A



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

NFX Series High Performance 5-axis Vertical Machining Center
NFX400A

NSV Series Ultra High Performance Vertical Machining Center
NSV66A, NSV106A/AM/AS/AMS, NSV156A/AM



TCV Series High Performance Traveling Column Vertical Machining Center
TCV2000A, TCV3000A, TCV4500B, TCV2300A-4A, TCV3000A-4A/5AF/5AX

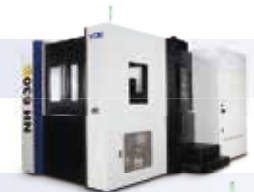
DCV Series Advanced Double Column Vertical Machining Center
DCV2012A/B, DCV3016B-6035B, DCV2018A-4018A-5AX, DCV4030B-6030B-5AX, DCV4030B-5AF

NDC Series High Performance Double Column Vertical Machining Center
NDC2016B-4016B, NDC3022B-6027B, NDC2018B-4018B-AHC, NDC3022B-6027B-AHC

HMC

Horizontal Machining Center

NH Series High Speed High Precision Horizontal Machining Center
NH500A, NH630B, NH800B



CNC LATHES

CNC Turning Center

NT Series High Performance Mill/Turn Center
NT-2500SY



GT Series High Performance Geo Turning Center
GT-200B/MA, GT-250B/MA, GT-300B/MA/LMB

TC Series High Performance High Precision CNC Lathe
TC-16LA/LB, TC-26, TC-36, TC-46 1000/1650/2300/3200, TC-46M 3200



NTC Series High Efficiency CNC Turning Center
NTC-2000LY/LSY

INTEGRATION AND SOLUTIONS



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