

VBVF SERIES



VISION WIDE TECH CO., LTD.

No. 1126-2, Bishan Rd., Caotun Township, Nantou 542, Taiwan
Tel: +886-49-2338888
Fax: +886-49-2330083

VISION WIDE (AH) TECH CO., LTD.

No. 1049, Dongcheng Road, Bowang District, Ma'anshan City,
Anhui Province 243131, China
Tel : +86-05552908886

E-mail: info@visionwide.com.tw
www.visionwide-tech.com



VB/VF-E-202306

VBVF SERIES

Heavy Duty Double Column Machining Center



Heavy Duty Double Column Machining Center

With Vision Wide tradition in making high rigid structure,

VB series provides not only high accuracy but also heavy cutting ability.

VB series is designed for being the most proper devices in mold and precision machining industry.

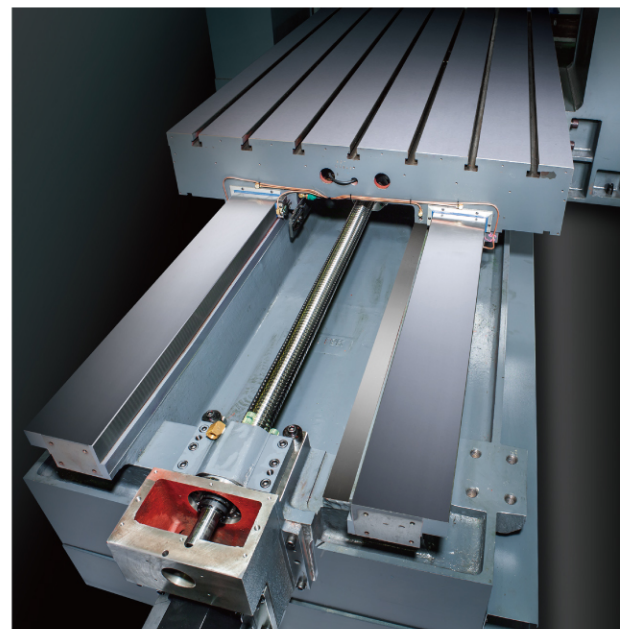
- ▶ Rapid traverse: 15 m/min
- ▶ Cutting feed rate: 7 m/min
- ▶ High torque gear type spindle: 4,000 / 6,000 rpm
- ▶ X-axis travel: 2,000 / 2,500 / 3,100 / 4,100 mm
- ▶ Y-axis travel: 1,600 / 2,000 mm
- ▶ Z-axis travel: 800 / 1,020 mm
- ▶ Box way for XYZ-axis



Photo: VB-2016 model with enclosed sheet metal guard with roof.(Opt.)

High Rigid Structure Design

With Vision Wide tradition, the optimized structure design offers heavy cutting rigidity in heavy cutting.



- ▶ X-axis feeding system is fully supported by box guide ways, improving high rigidity and reliability.
- ▶ High rigid box way, enhancing loading capability and keeping high dynamic level accuracy.
- ▶ 2-way support design on the bed with optimal span design, ensuring straightness within 0.01mm/2m at X-axis motion.

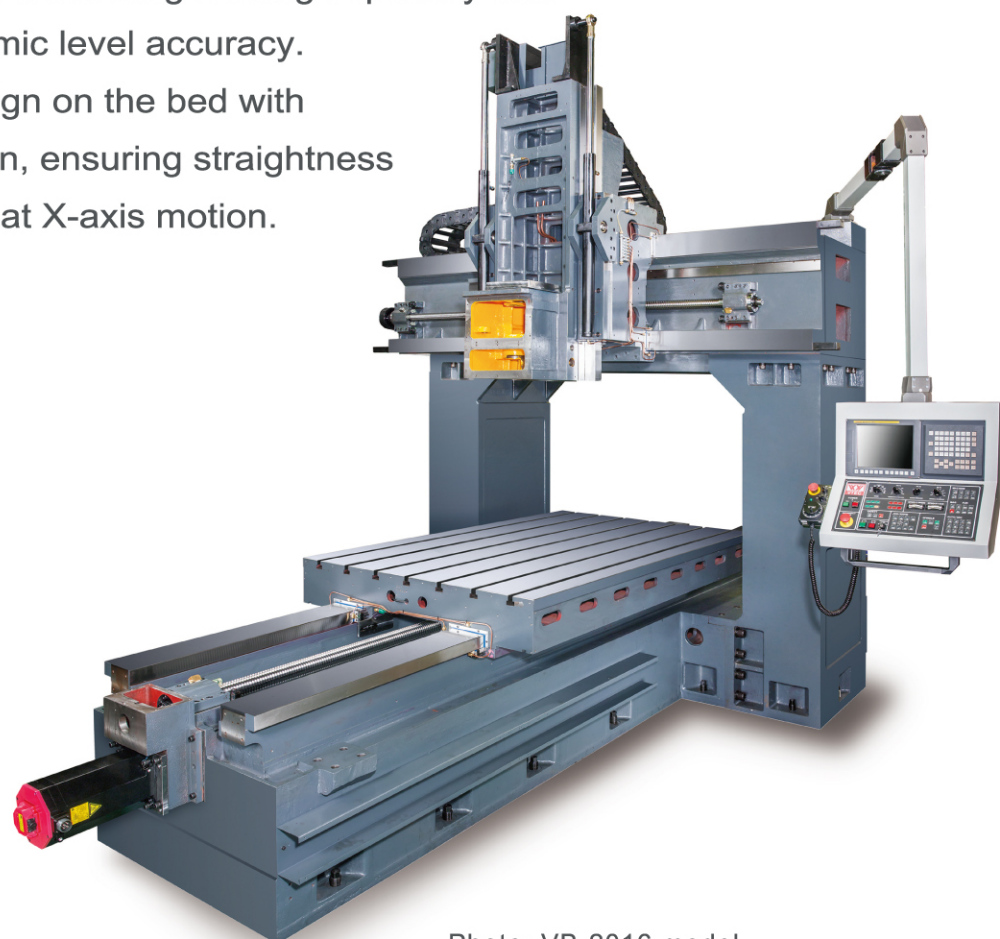
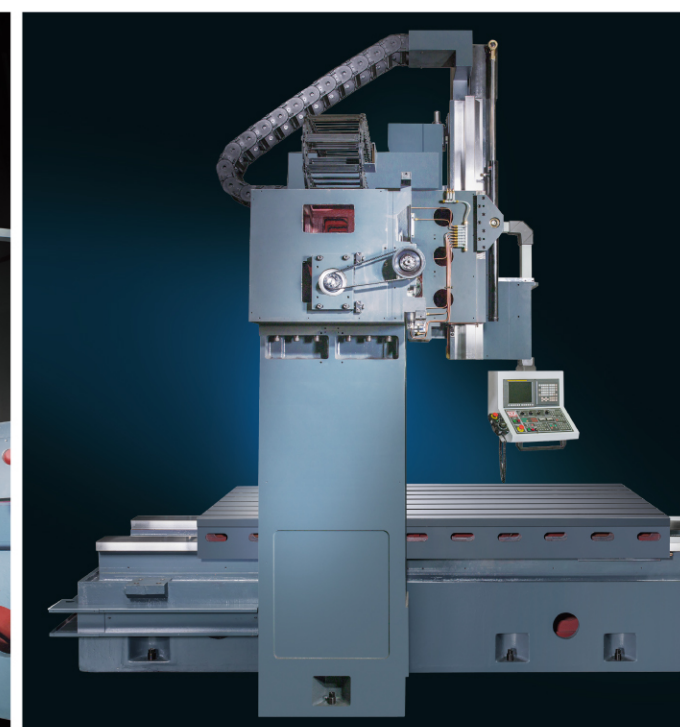


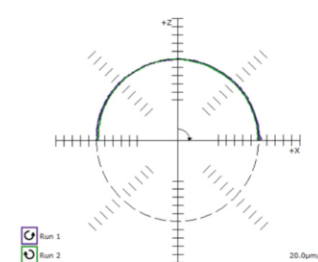
Photo: VB-2016 model

Large Size Column Provides the Beam the Strongest Support



High precision mechanism features

Large special span in Y-axis for rigidity, with stepped design reduces movement friction, and improve positioning accuracy.



Z-axis 15m/min rapid traverse, 0.5G high acceleration / deceleration performance achieve the requirements from contour accuracy of high speed mold machining.

High speed balancing system including economical twin hydraulic cylinders with pressured air assistance achieves:

- ▶ Smoother Z-axis movement
- ▶ Z-axis retract function at power failure
- ▶ Excellent performance for power saving



Heavy Duty Double Column Machining Center

With bevel support design on cross beam,

VF series is the most suitable machine to meet requirements from high efficiency and heavy cutting.

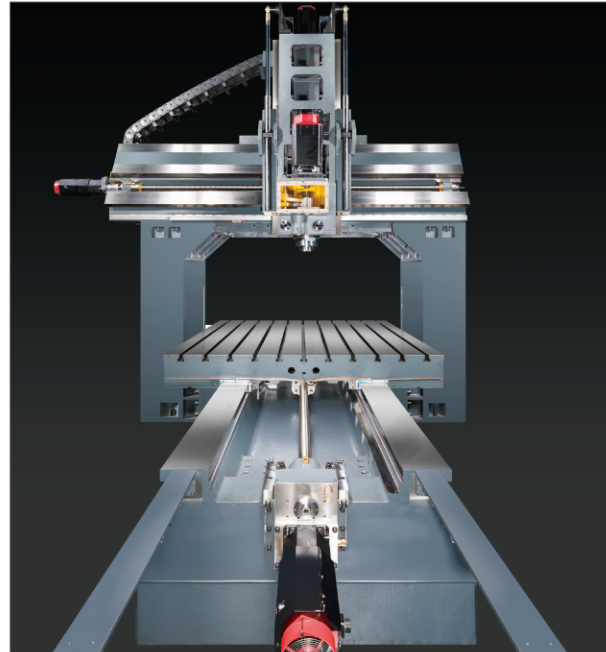
(per kW of spindle power offers 40Nm, 15% more than before in heavy cutting)

- ▶ Rapid traverse: 12 m/min
- ▶ Cutting feed rate: 7 m/min
- ▶ High torque gear type spindle: 4,000 / 6,000 rpm
- ▶ X-axis travel: 3,200 / 4,200 / 5,200 mm
- ▶ Y-axis travel: 2,300 / 2,600 mm
- ▶ Z-axis travel: 920 / 1,020 mm
- ▶ Box way for XYZ-axis



Photo: VF-3000 model with enclosed sheet metal guard without roof.

High Rigid Structure Design



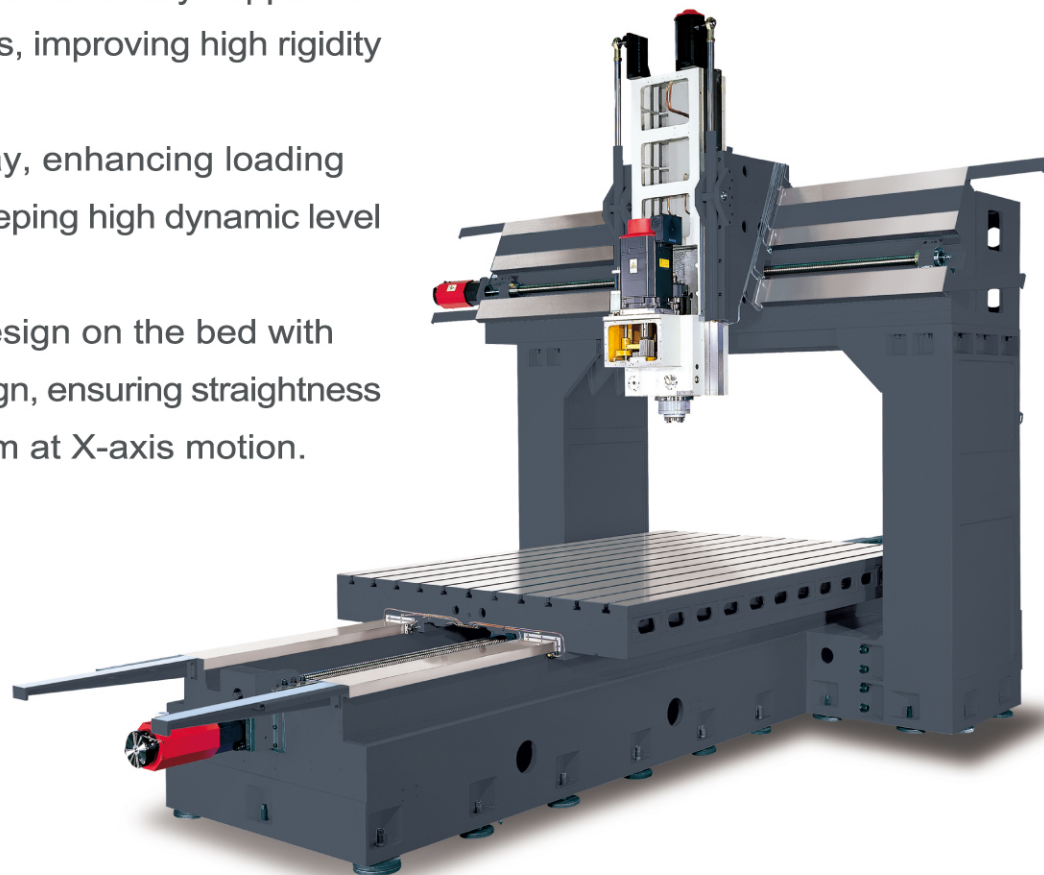
Following Vision Wide tradition, the optimized structure design offers the best rigidity in heavy cutting.

The large size on column cross section dimension

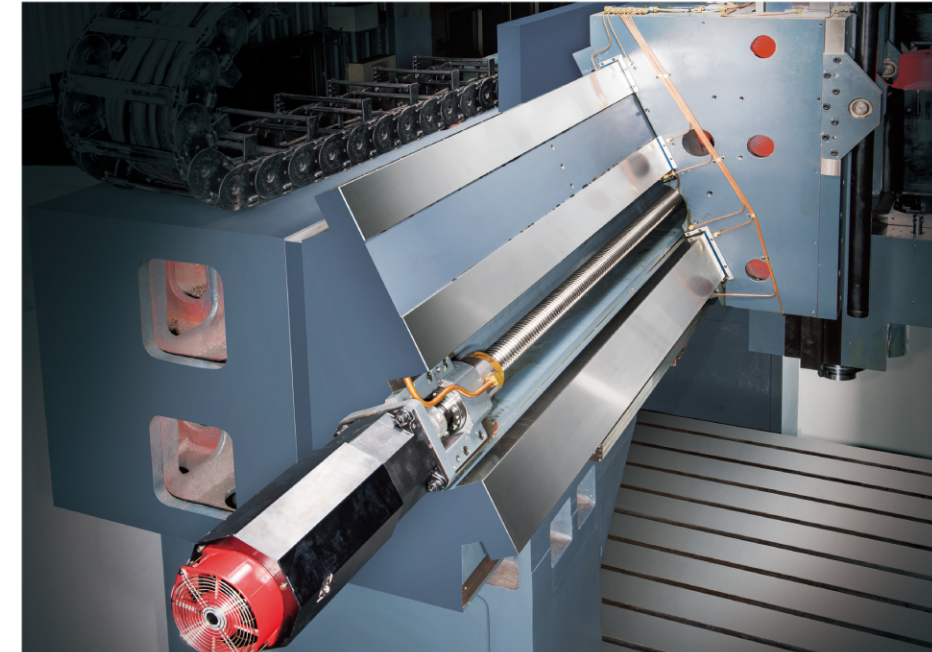
425x1,000mm

gives the beam the strongest support

- ▶ X-axis feeding system is fully supported by box guide ways, improving high rigidity and reliability.
- ▶ High rigid box way, enhancing loading capability and keeping high dynamic level accuracy.
- ▶ 2-way support design on the bed with optimal span design, ensuring straightness within 0.01mm/2m at X-axis motion.



High Precision Mechanism Features



- ▶ Large special span in Y-axis for rigidity, with bevel beam design reduces movement friction, and improve positioning accuracy.
- ▶ Z-axis center closing to beam achieves exclusively excellent dynamic performance.
- ▶ Beam contact width (805mm) offering larger dimension and giving the best support on Z-axis.
- ▶ Beam rigidity and cutting capability increase significantly with 3 box ways support design.
- ▶ Y-axis motion in best straightness and cutting rigidity.



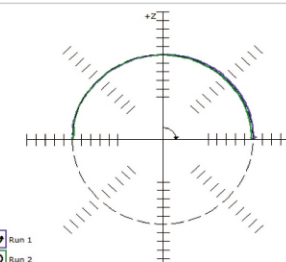
ASME B5.54-1992 Non Roundness
B1-0436 ZX [AI] 20130528-201152
Operator: gl
Date: 2013-May-28 20:11:52

Dynamic ASME B5.54

Non roundness
Maximum 11.2um
Deviation 6.4um 88.4°
Minimum -4.8um 88.7°
Deviation

Test parameters
Radius 150.0000mm
Sample rate 52.832Hz
Feedrate 2000.0mm/min
Run sequence CW CCW
Plane under test ZX
Test position
Start angle 270°
End angle 90°
Overhead angle 5°

Centre offset Z 11.0um
Centre offset X 3.5um
Calculated feedrate 1981.5mm/min



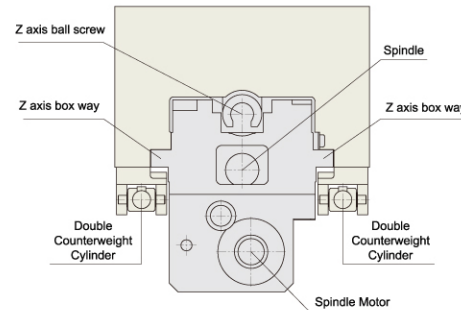
12m/min rapid traverse and 0.5G high acceleration/deceleration on Z-axis performance achieve the requirements from contour accuracy of the speed mold machining.

High speed balancing system including economical twin hydraulic cylinders with pressured air assistance achieves.

- ▶ Smoother Z-axis movement
- ▶ Z-axis retract function at power failure
- ▶ Excellent performance for power saving

Optimal Central Symmetric Spindle System Design. Strong, Stable, Durable and Scalability

- Minimum distance between spindle center and Z-axis roller way not only shortens cutting lever arm but also significantly improves rigidity.
- Symmetric spindle gravity configuration, Z-axis ball screw, spindle center and spindle motor configure at gravity point of Z-axis box structure centerline provide the best feed precision and thermal balance.
- Gear spindles made of Japan-made JIS-0 grade.
- 2-step gear type spindle provides high torque and high speed characteristics to ensure heavy cutting ability on surface finish.
- High speed spindle can be chose 4,000/6,000/8,000/10,000 rpm



Cutting Ability



Face milling:
Tool dia.:125mm
Cutting feed:1,000mm/min
Cutting width:100mm
Cutting depth:6mm
Removal rate:600cc/min



High feed machining:
Tool dia.:40mmx4inserts
Cutting speed:2,400rpm
Cutting feed:10m/min
Cutting depth:1mm
Cutting width:32mm
Removal rate:320cc/min

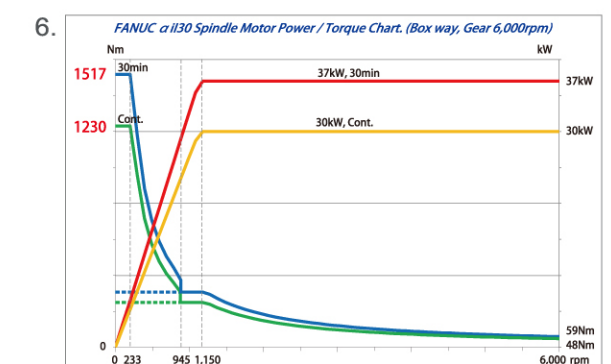
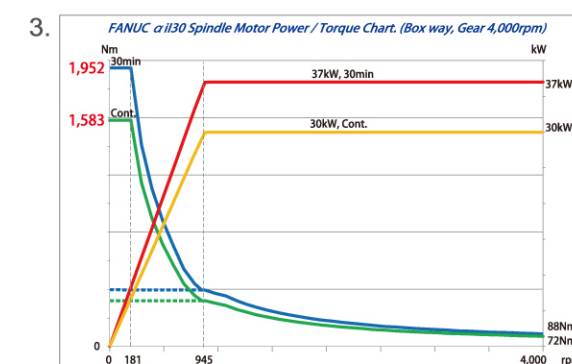
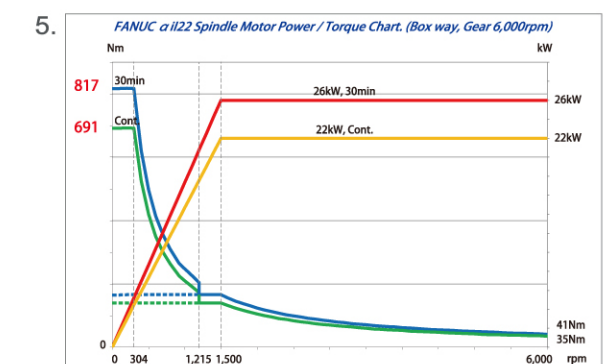
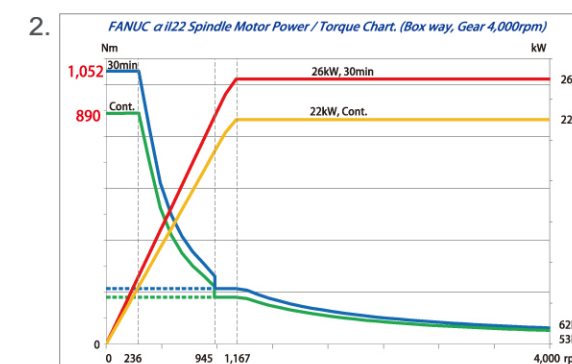
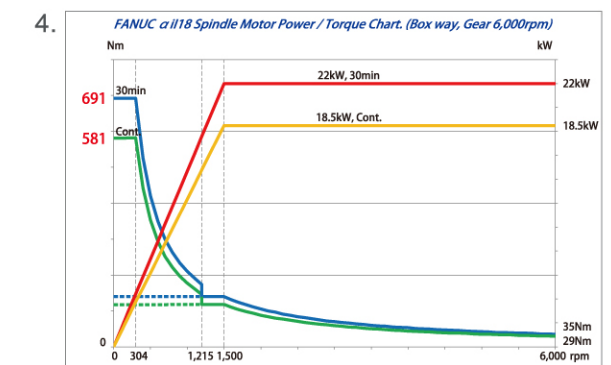
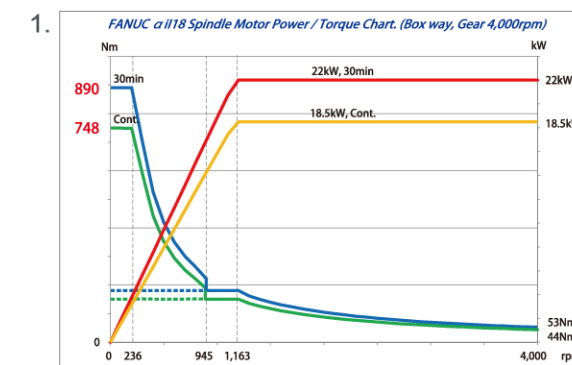


Indexable insert drilling:
Tool dia.:32mm
Cutting speed:1,500rpm
Cutting feed:500mm/min
Cutting depth:30mm
Removal rate:400cc/min
Coolant through spindle

spindle power=22/26kW, speed=4500rpm, material=S45C(mid carbon steel)
position = 1/2x(z travel)

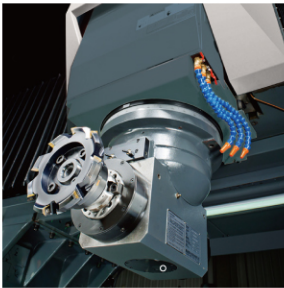
Spindle Power and Torque Charts (FANUC)

Drive type		Gear Spindle					
Pic. No.		1	2	3	4	5	6
Motor type	-	FANUC αil 18	FANUC αil 22	FANUC αil 30	FANUC αil 18	FANUC αil 22	FANUC αil 30
Speed	rpm	4,000	4,000	4,000	6,000	6,000	6,000
Power(Cont./30min.)	KW	18.5/ 22	22/ 26	30/ 37	18.5/ 22	22/ 26	30/ 37
Torque (Cont./30min.)	Nm	748.7/ 890	890/ 1052	1583/ 1952	581/ 691	691/ 817	1230/ 1517
Tool type	-	BBT50	BBT50	BBT50	BBT50	BBT50	BBT50



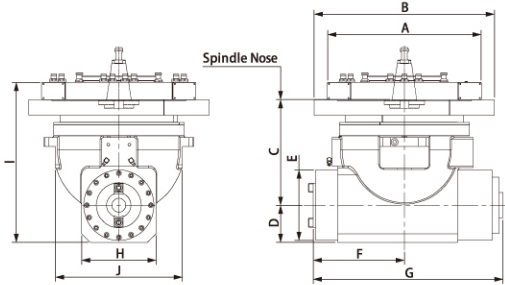
Auto Multi-Angle Head Attachment

AC 90° angular head

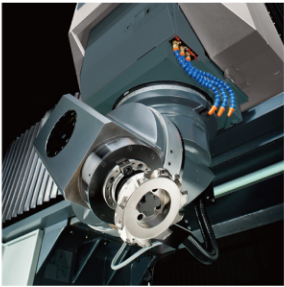


Item	AC 90° angular head
	G2
Max. speed	3,000rpm
Max. power	26kW
Tool clamping	Manual hydraulic clamping
Head clamping	Auto hydraulic clamping
C-axis indexing	Auto 1°/5°
Machining coolant	External nozzle
Coolant Through Spindle(opt.)	20 bar. / 70 bar.
A	Ø436
B	Ø436
C	300
D	100
E	Ø200
F	259
G	515.7
H	212
I	486
J	Ø352

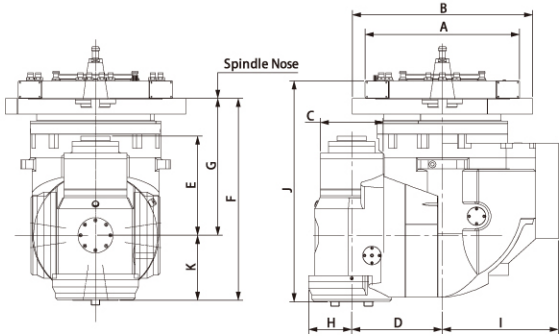
* Not support automatic tool change



AC 2-axis head



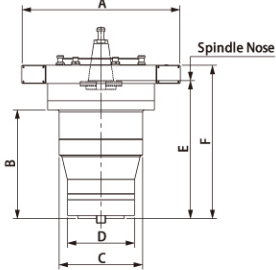
Item	AC 2-axis head
	G2
Max. speed	3,000rpm
Max. power	26kW
Tool clamping	Auto hydraulic clamping
Head clamping	Auto hydraulic clamping
C-axis indexing	Auto 1°/5°
B-axis indexing	Auto 5°
Machining coolant	External nozzle
Coolant Through Spindle(opt.)	20 bar. / 70 bar.
A	Ø436
B	Ø436
C	Ø200
D	350
E	300
F	573.5
G	388.5
H	122.5
I	329.5
J	627.3
K	259



AC extended head



Item	AC extended head 300mm	AC extended head 420mm
	G2	G2
Max. speed	4,000rpm	4,000rpm
Max. power	26kW	
Tool clamping	Auto hydraulic clamping	
Head clamping	Auto hydraulic clamping	
C-axis indexing	Auto 1°/5°	
Machining coolant	External nozzle	External nozzle
A	Ø436	Ø436
B	300	427
C	Ø230	Ø230
D	Ø185	Ø185
E	374	501
F	423	570



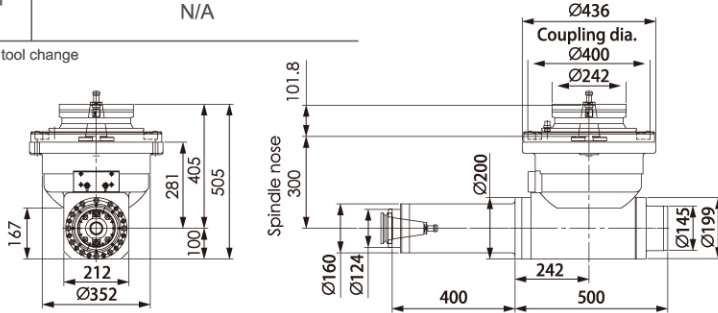
Powerful and Precision Boring Head Attachment

400mm AC 90° spindle extension head



Item	400mm AC 90° spindle extension head
Max. speed	2000 rpm
Max. power	26 kW
Tool clamping	Manual hydraulic clamping
Head clamping	Auto hydraulic clamping
C-axis indexing	(1°) / 5°
Machining coolant	External nozzle
Coolant Through Spindle(opt.)	N/A

* Not support automatic tool change

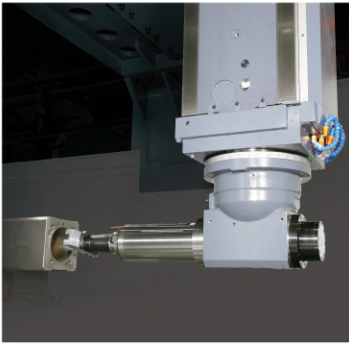
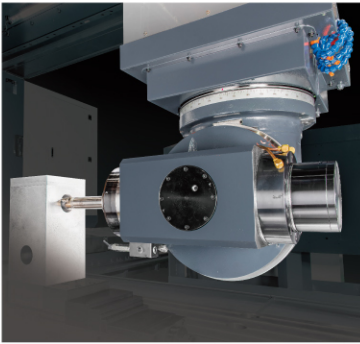
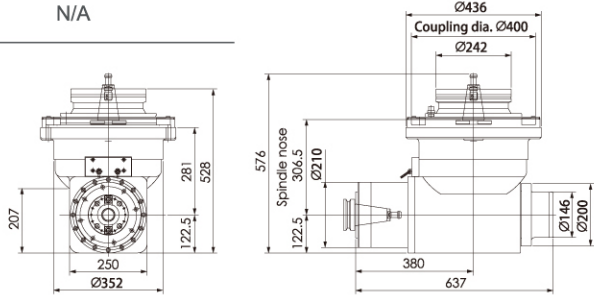


AC 90° angular head (Strong)



Item	AC 90° angular head (Strong)
Max. speed	3,000 rpm
Max. power	37 kW
Tool clamping	Manual hydraulic clamping
Head clamping	Manual /Auto hydraulic clamping
C-axis indexing	5°
Machining coolant	External nozzle
Coolant Through Spindle(opt.)	N/A

* Not support automatic tool change



Intelligent Multi-Face Machining

5-axis Level Tool Point Center Management TCPM

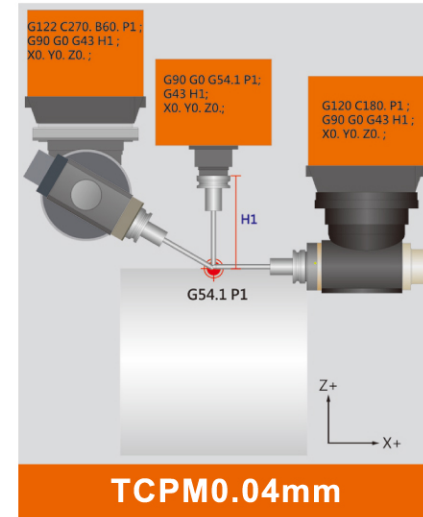
Each type of head attachment with tool center point management, takes vertical workpiece as origin benchmark, and converts the workpiece coordinates to any new specified plane of workpiece coordinates automatically.

Auto Coordinates Tool axis 3D Conversion

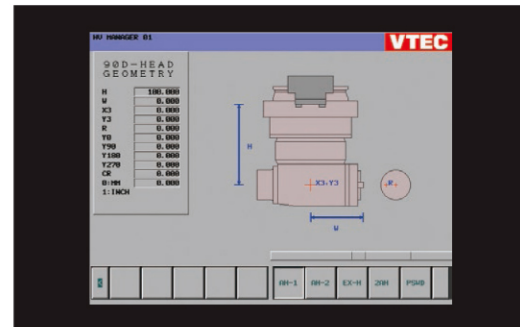
3-axis mechanical coordinates system can be automatically converted to machining coordinates system, easily achieving face milling, end milling, drilling and rigid tapping machining operations in different directions.

Head Attachment Dimensions Correction

Intelligent compensation on each type of head attachments. The compensation including rotation center, tool size, workpiece coordinates system correction management. It greatly simplifies the complexity of programming and operation to achieve perfect auto multi-angle machining.



Accurate Kinematic Compensation



Auto Compensating Attachment Heads:

Auto compensating horizontal head center and spindle center.
Auto compensating mechanism mass center and revolution center.

3D Coordinates Management:

- 1.V/H tool length and diameter compensation.
- 2.V/H working coordinate affine transformation.
- 3.V/H manual interrupting.
- 4.V/H 3D rigid tapping.

Heavy Cutting Ability

Through Cutting Depth Test to Show Excellent Heavy Cutting Rigidity

Test SPEC.: 22/26kW, 4,000rpm spindle with G2 Series

Head attachment	Extended head	90 degree angular head	2-axis head
Tool type	BT-50 face milling tool-diameter $\phi 125/5$ edge		
Cutting material	S45C	S45C	
Spindle speed(rpm)	600	600	
Feed rate(mm/min)	1000	1000	
Machining width(mm)	100	100	
Machining depth	4	5	
Removal rate(cc/min)	400	500	

Attachment Head Magazine

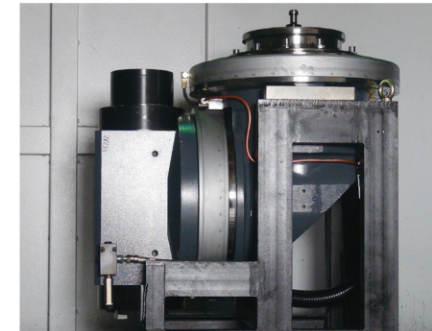
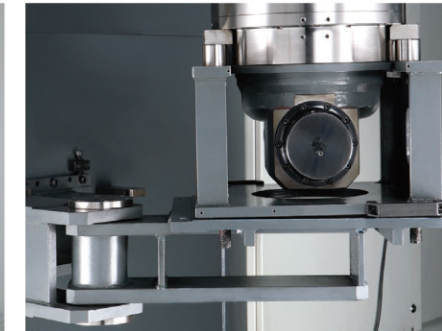
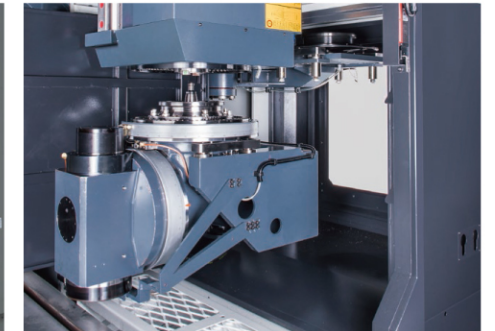


Table type head bracket

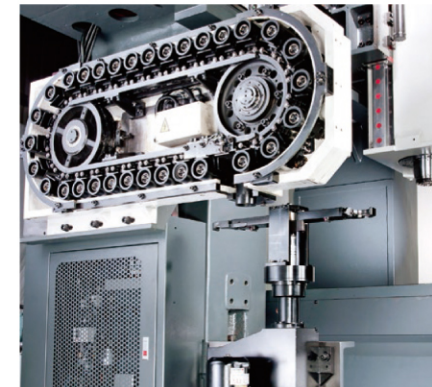


Manual swiveling arm type head bracket(on operation side)



Auto swiveling arm type head bracket (on operation side)

Auto Tool Magazine



Vertical type tool magazine to save floor space, 40 tools magazine(60 tools opt.)



Extended head exchange on vertical type(opt.)



Auto tool exchange, tool to tool 3 sec. in vertical type

Automatic Tool Length Measurement



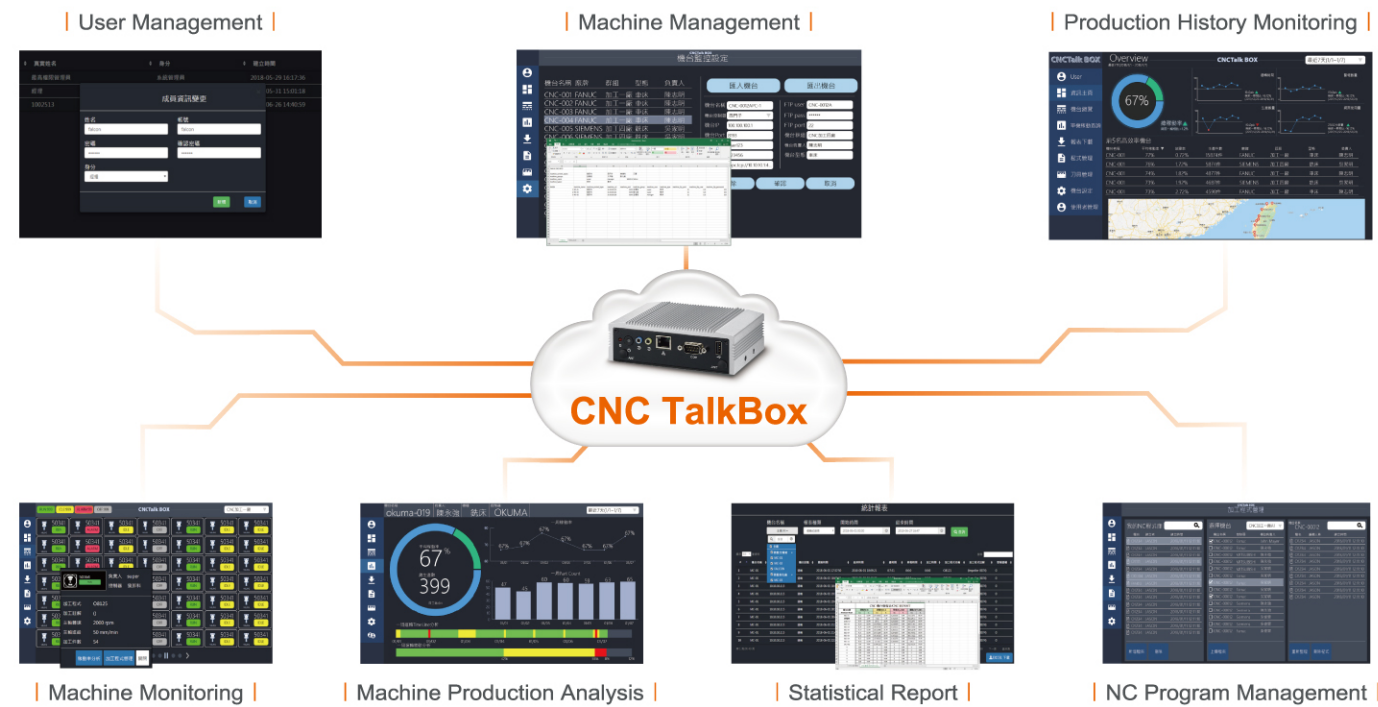
Non-contact automatic tool length measurement



Contact automatic tool length measurement

CNC TalkBox

Monitoring Software for Supporting Multiple Controllers
Make Production Management Clear at A Glance



Intelligent Factory Management Can Be in Everywhere

CNC TalkBox possesses computing, storage and industrial Internet functions. After computing, the production information can be uploaded to the cloud database or mobile devices to achieve the less hardware managements and the optimal mobile data exchanging capacity.

Economic

Small hardware devices for rapid introduction of industrial Internet of Things (IoT).

Stable

Timely record of production log is a benefit to analyze process and increase production capacity.

Expandable

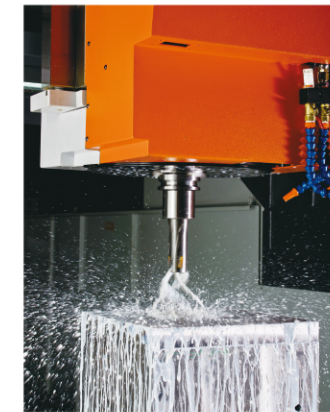
Complete data collection can make better decisions for process, dispatch, tool and material management.

Safe, Friendly and Reliable Operation Device

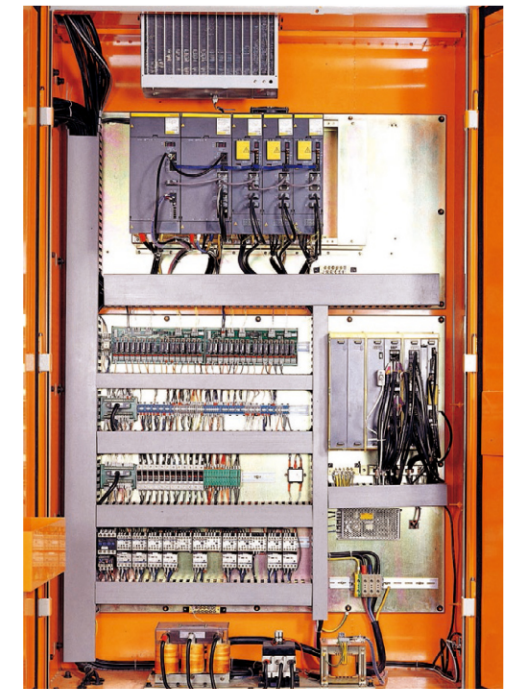
- Safe and reliable electrical circuit design
- CE compliant safety circuit design
- CE compliant EU regulation electrical parts for whole machine
- Anti-interference design on motor power cables
- Heat exchanger for electrical cabinet
- Hardware overtravel limit protection
- Motor overload and voltage phase failure protection
- Main power protecting device
- Ethernet and RJ45 interface
- USB port



- Fluid nozzle for spindle provides best spray angle.
(not available for head attachment)



- Coolant through spindle



- Centralized auto lubrication system



- Modularized machine design for oil cooling device and hydraulic unit



- Multi-segment sliding door at operation side and external door in front and back side. Swiveling arm type operation panel is standard and overhead pendulum type operation panel is option.

VB Machine Dimension

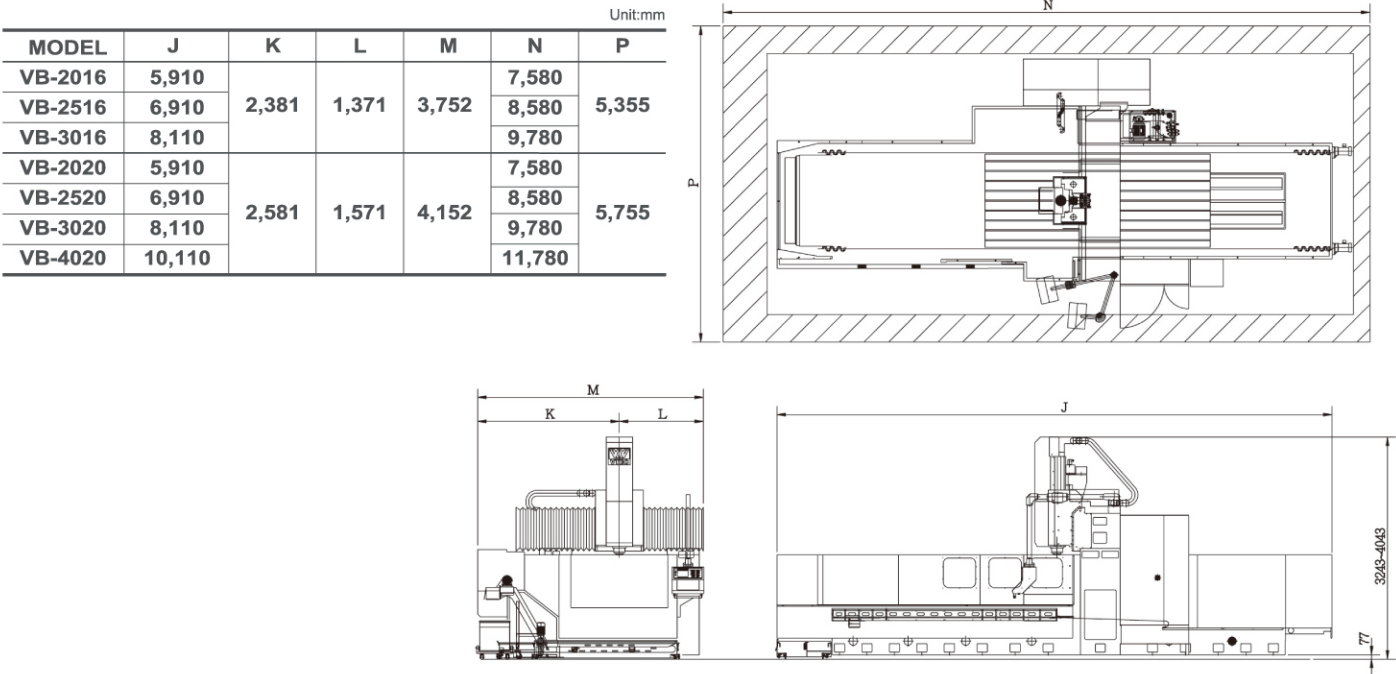
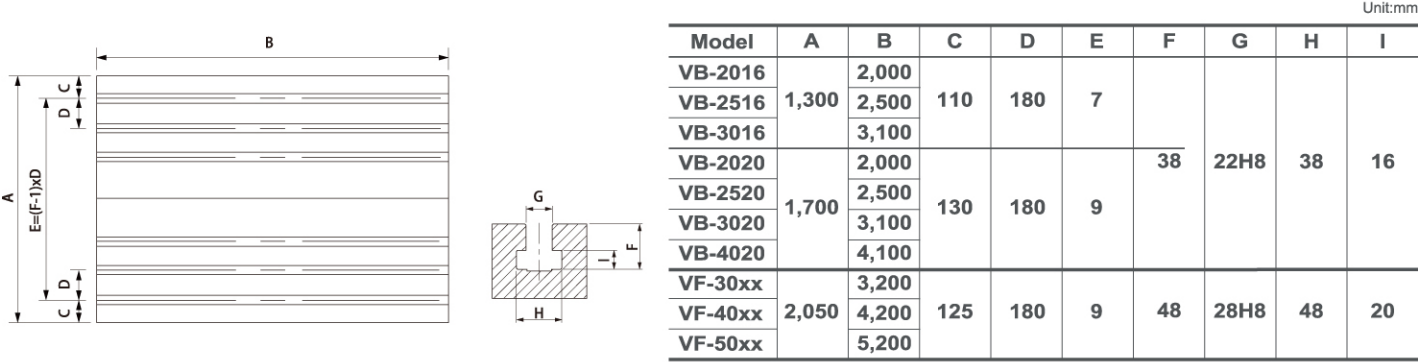
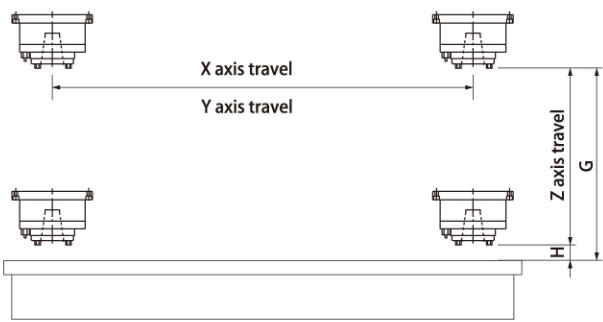


Table & T-slot

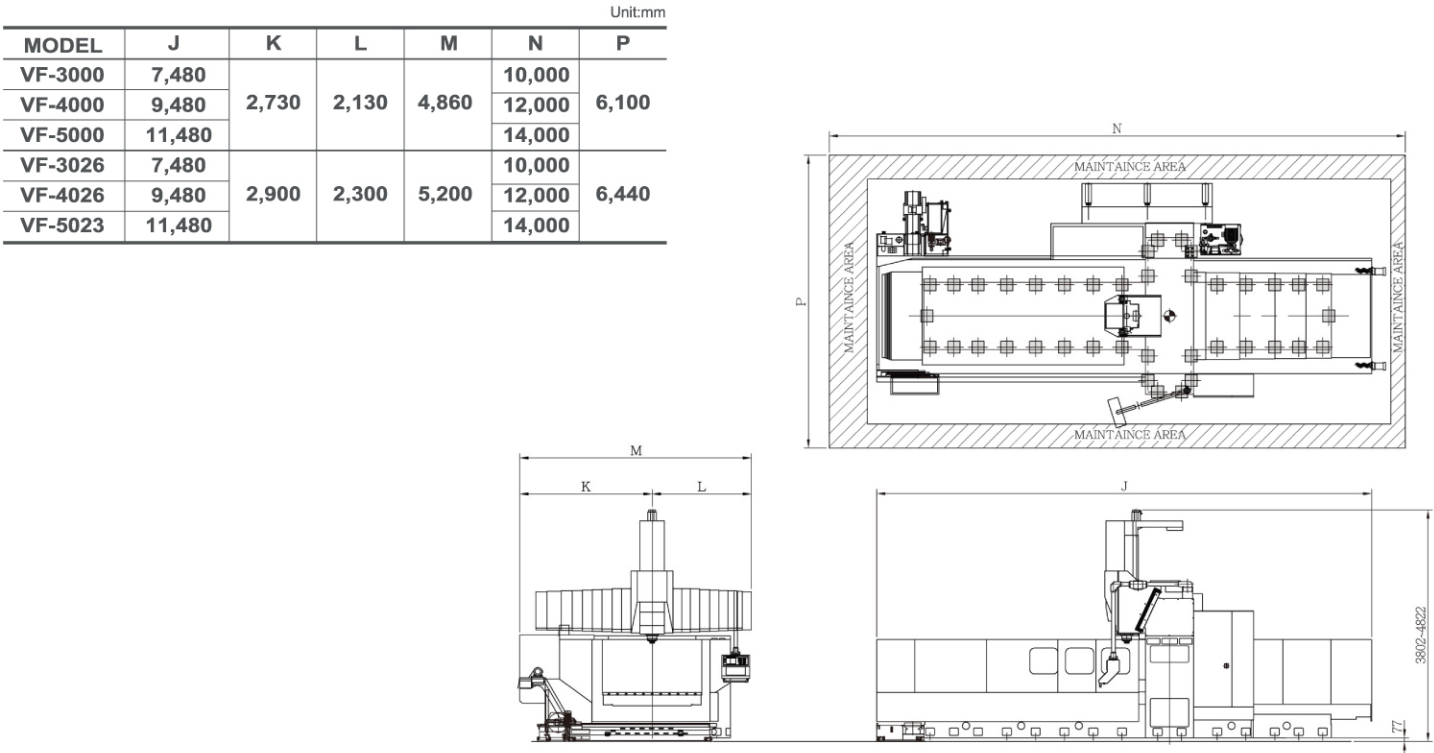


Working Range

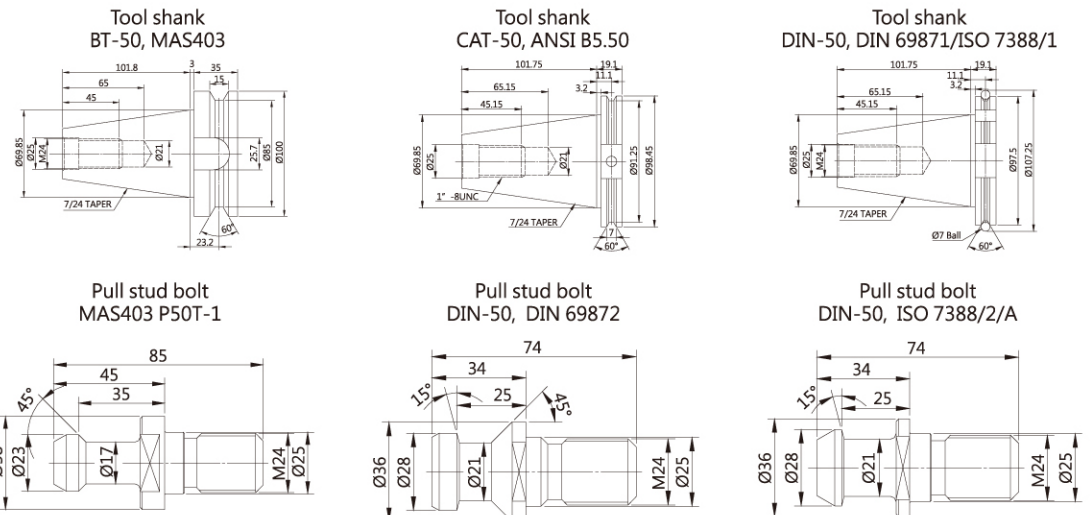


MODEL	X	Y	Z	H	G
VB-2016	2,000	1,600	800/ 1,020	150/ 130	950/ 1,150
VB-2516	2,500				
VB-3016	3,100				
VB-2020	2,000	2,000	800/ 1,020	150/ 130	950/ 1,150
VB-2520	2,500				
VB-3020	3,100				
VB-4020	4,100				

VF Machine Dimension



Tool Shank & Pull Stud



VB Specification

Model		Unit	VB-2016	VB-2516	VB-3016	VB-2020	VB-2520	VB-3020	VB-4020
Travel									
X axis		mm	2,000	2,500	3,100	2,000	2,500	3,100	4,100
Y axis		mm	1,600			2,000			
Z axis		mm	800 / 1,020 (Opt.)			800/ 1,020 (Opt.)			
Distance from spindle nose to table	Z axis travel=800	mm	150~950			150-950			
	Z axis travel=1,020	mm	130~1,150(column heightened 200 mm)			130~1,150(column heightened 200 mm)			
Distance from spindle center to column		mm	430			430			
Distance between columns (port width)		mm	1,700			2,100			
Table									
Table size (X direction x Y direction)		mm	2,000x1,300	2,500x1,300	3,100x1,300	2,000x1,700	2,500x1,700	3,100x1,700	4,100x1,700
T-slot (width x number x pitc)		mm	22x7x180			22x9x180			
Max. table load		kg	8,000	9,000	10,000	9,000	10,000	11,000	12,000
Spindle									
Spindle speed	2-step gear	rpm	4,000 / 6,000 (Opt.)			4,000 / 6,000 (Opt.)			
Spindle power (cont. / 30 min.)		kW	18.5 / 22 (22 / 26 Opt.) (30 / 37 Opt.)			18.5 / 22 (22 / 26 Opt.) (30 / 37 Opt.)			
Spindle torque (cont. / 30 min.)		Nm	748 / 890			748 / 890			
Spindle taper		-	BBT-50			BBT-50			
Feed									
Cutting feed rate		mm/min	1~7,000			1~7,000			
Rapid traverse (X/Y/Z)		m/min	15 / 15 / 15		12 / 12 / 15	15 / 15 / 15		12 / 12 / 15	
3 axes motor power (FANUC) (X/Y/Z)		kW	7 / 4 / 4			7 / 4 / 4			9 / 4 / 4
ATC									
Tool magazine capacity		pcs	32 / 40 (Opt.)			32 / 40 (Opt.)			
Max. tool diameter (full / next pockets empty)		mm	Ø125 / Ø180			Ø125 / Ø180			
Max. tool length		mm	380			380			
Max. tool weight		kg	20			20			
Tool shank		-	BT50 / CAT50			BT50 / CAT50			
Pull stud		-	P50T-1			P50T-1			
Accuracy									
Positioning accuracy (JIS B6333)		mm	±0.005 / 300, ±0.010 / Full travel			±0.005 / 300, ±0.010 / Full travel			
Positioning accuracy (VDI 3441)		mm	P0.022			P0.022			
Repeatability (JIS B6333)		mm	±0.003			±0.003			
Repeatability (VDI 3441)		mm	Ps0.016			Ps0.016			
General									
Power requirement		kVA	55			55			
Pneumatic requirement		kg/cm²	6			6			
Machine net weight		kg	21,500	24,500	27,500	23,500	26,500	29,500	32,500
Floor space (L x W x H)		m	7.58x5.36x4.33	8.58x5.36x4.33	9.78x5.36x4.33	7.58x5.76x4.33	8.58x5.76x4.33	9.78x5.76x4.33	11.78x5.76x4.33

Standard & Optional Accessories

Standard Accessory

- 1 FANUC 0iMF Plus Controller
- 2 4,000 rpm two-step gear spindle
- 3 Spindle cooling system
- 4 Twin hydraulic cylinders with pressured nitrogen counterbalance system for Z axis
- 5 X axis ball screw supporting device (X axis travel≥4 m)
- 6 Centralized auto lubrication system
- 7 Independent lubrication oil collector for 3 axes
- 8 X/Y/Z axis ball screw cooling system
- 9 Air blast through spindle
- 10 Wash gun and pneumatic interface
- 11 Cutting fluid cooling system
- 12 40 tools magazine with arm type ATC
- 13 Enclosed sheet metal guard (without roof)
- 14 Swiveling arm type operation panel
- 15 Screw type chip conveyor on table sides
- 16 Steel belt chip conveyor / water tank
- 17 Heat exchanger for electrical cabinet
- 18 Working lamp
- 19 Operation cycle finish and alarm light
- 20 Movable manual pulse generator
- 21 Footswitch for tool clamping
- 22 RJ45 interface
- 23 X/Y/Z axis absolute pulse coder feedback
- 24 X/Y/Z axis travel hard limits protection
- 25 Spindle cutting load software protection
- 26 Remote monitoring software (standard)
- 27 Auto power off function
- 28 Vision Wide FX graphical user interface
- 29 Foundation pads and bolts kits
- 30 Adjustment tool and tool kits
- 31 Technical manuals
(operation, maintenance manual and circuit diagram)

Optional Accessory & Function

- 1 6,000 rpm 2-step gear spindle
- 2 Z axis travel 1,020mm
- 3 Column heightened 200 / 300 / 400 / 500 mm
- 4 The interface of coolant through spindle
- 5 Coolant through spindle system 20 / 70 bar
- 6 Coolant through tool holder system 5 / 18 bar
- 7 Coolant through tool holder interface
- 8 Oil skimmer
- 9 Oil mist cooling device (MQL)
- 10 Spindle ring cutting coolant device
(vertical spindle / for no head attachment)
- 11 60 tools magazine with arm type ATC
- 12 Enclosed sheet metal guard (with roof)
- 13 Helical blade screw conveyor on table sides
- 14 Chip cart
- 15 Air conditioner for electrical cabinet
- 16 X/Y/Z axis linear scale
- 17 X/Y/Z axis independent manual pulse generator (only for FANUC)
- 18 Sub table
- 19 Rotary table
- 20 Interface reserved for fourth axis
(hydraulic device and electrical interface)
- 21 Tool axis retract function at power failure
- 22 Anti-collision and machining simulation software
- 23 Remote monitoring software (professional)
- 24 Auto workpiece measurement
- 25 Auto tool measurement
- 26 Transformer
- 27 Auto warm up

Optional Accessory for
Auto Head Attachment

- 1 Auto AC 90° angular head / AC extended head
- 2 Auto AC milling head / small head / customized head attachment
- 3 Manual AC 90° angular head /universal head / extended head
- 4 Manual swiveling arm type head bracket on operation side (one head attachment)
- 5 Auto swiveling arm type head bracket on operation side (one head attachment and one cover)
- 6 AC 90° angular head offered coolant through spindle system 20 / 70 bar
- For the specification of each model, please contact our sales representatives.

VF Specification

Model		Unit	VF-3000	VF-4000	VF-5000	VF-3026	VF-4026	VF-5026
Travel								
X axis		mm	3,200	4,200	5,200	3,200	4,200	5,200
Y axis		mm	2,300			2,600		
Z axis		mm	920 / 1,020 (Opt.)			920 / 1,020 (Opt.)		
Distance from spindle nose to table	Z axis travel=920	mm	150~1,070			150~1,070		
	Z axis travel=1,020	mm	50~1,070			50~1,070		
Distance from spindle center to column		mm	390			390		
Distance between columns (port width)		mm	2,400			2,700		
Table								
Table size (X direction x Y direction)		mm	3,200x2,050	4,200x2,050	5,200x2,050	3,200x2,050	4,200x2,050	5,200x2,050
T-slot (width x number x pitc)		mm	28x11x180			28x11x180		
Max. table load		kg	11,000	13,000	15,000	11,000	13,000	15,000
Spindle								
Spindle speed	2-step gear	rpm	4,000 / 6,000 (Opt.)			4,000/ 6,000 (Opt.)		
Spindle power (cont. / 30 min.)		kW	18.5 / 22 (22 / 26 Opt.) (30 / 37 Opt.)			18.5 / 22 (22 / 26 Opt.) (30 / 37 Opt.)		
Spindle torque (cont. / 30 min.)		Nm	748 / 890			748 / 890		
Spindle taper		-	BBT-50			BBT-50		
Feed								
Cutting feed rate		mm/min	1~7,000			1~7,000		
Rapid traverse (X/Y/Z)		m/min	12 / 12 / 12	10 / 12 / 12	10 / 12 / 12	12 / 12 / 12	10 / 12 / 12	10 / 12 / 12
ATC								
Tool magazine capacity		pcs	40 / 60 (Opt.)			40 / 60 (Opt.)		
Max. tool diameter (full / next pockets empty)		mm	Ø125 / Ø215			Ø125 / Ø215		
Max. tool length		mm	450			450		
Max. tool weight		kg	20			20		
Tool shank		-	BT50 / CAT50			BT50 / CAT50		
Pull stud		-	P50T-1			P50T-1		
Accuracy								
Positioning accuracy (JIS B6333)		mm	±0.005 / 300, ±0.015 / Full travel			±0.005 / 300, ±0.015 / Full travel		
Positioning accuracy (VDI 3441)		mm	P0.028			P0.028		
Repeatability (JIS B6333)		mm	±0.003			±0.003		
Repeatability (VDI 3441)		mm	Ps0.025			Ps0.025		
General								
Power requirement		kVA	60			60		
Pneumatic requirement		kg/cm ²	6			6		
Machine net weight		kg	33,400	38,400	43,400	36,400	41,400	46,400
Floor space (L x W x H)		m	10.0x6.1x4.7	12.0x6.1x4.7	14.0x6.1x4.7	10.0x6.5x4.7	12.0x6.5x4.7	14.0x6.5x4.7

Standard & Optional Accessories

Standard Accessory

- 1

FANUC 0iMF Plus Controller
- 2

4,000 rpm two-step gear spindle
- 3

Spindle cooling system
- 4

Twin hydraulic cylinders with pressured nitrogen counterbalance system for Z axis
- 5

X axis ball screw supporting device (X axis travel ≧ 4 m)
- 6

Centralized auto lubrication system
- 7

Independent lubrication oil collector for 3 axes
- 8

X/Y/Z axis ball screw cooling system
- 9

Air blast through spindle
- 10

Wash gun and pneumatic interface
- 11

Cutting fluid cooling system
- 12

40 tools magazine with arm type ATC
- 13

Enclosed sheet metal guard (without roof)
- 14

Swiveling arm type operation panel
- 15

Screw type chip conveyor on table sides
- 16

Steel belt chip conveyor / water tank
- 17

Heat exchanger for electrical cabinet
- 18

Working lamp
- 19

Operation cycle finish and alarm light
- 20

Movable manual pulse generator
- 21

Footswitch for tool clamping
- 22

RJ45 interface
- 23

X/Y/Z axis absolute pulse coder feedback
- 24

X/Y/Z axis travel hard limits protection
- 25

Spindle cutting load software protection
- 26

Remote monitoring software (standard)
- 27

Auto power off function
- 28

Vision Wide FX graphical user interface
- 29

Foundation pads and bolts kits
- 30

Adjustment tool and tool kits
- 31

Technical manuals
(operation, maintenance manual and circuit diagram)

Optional Accessory & Function

- 1

6,000 rpm 2-step gear spindle
- 2

Z axis travel 1,020mm
- 3

Column heightened 200 / 300 / 400 / 500 mm
- 4

The interface of coolant through spindle
- 5

Coolant through spindle system 20 / 70 bar
- 6

Coolant through tool holder system 5 / 18 bar
- 7

Coolant through tool holder interface
- 8

Oil skimmer
- 9

Oil mist cooling device (MQL)
- 10

Spindle ring cutting coolant device
(vertical spindle / for no head attachment)
- 11

60 tools magazine with arm type ATC
- 12

Enclosed sheet metal guard (with roof)
- 13

Helical blade screw conveyor on table sides
- 14

Chip cart
- 15

Air conditioner for electrical cabinet
- 16

X/Y/Z axis linear scale
- 17

X/Y/Z axis independent manual pulse generator (only for FANUC)
- 18

Sub table
- 19

Rotary table
- 20

Interface reserved for fourth axis
(hydraulic device and electrical interface)
- 21

Tool axis retract function at power failure
- 22

Anti-collision and machining simulation software
- 23

Remote monitoring software (professional)
- 24

Auto workpiece measurement
- 25

Auto tool measurement
- 26

Transformer
- 27

Auto warm up

Optional Accessory for
Auto Head Attachment

- 1

Auto AC 90° angular head / AC 2-axis head / AC extended head
- 2

Auto AC milling head / small head / customized head attachment
- 3

Manual AC 90° angular head /universal head / extended head
- 4

Manual swiveling arm type head bracket on operation side (one head attachment)
- 5

Auto swiveling arm type head bracket on operation side (one head attachment and one cover)
- 6

AC 90° angular head and AC 2-axis head offered coolant through spindle system 20 / 70 bar
- For the specification of each model, please contact our sales representatives.