

VB

SERIES

Heavy Duty Double Column Machining Center



Box Way Design
Rigidity Cutting Machine

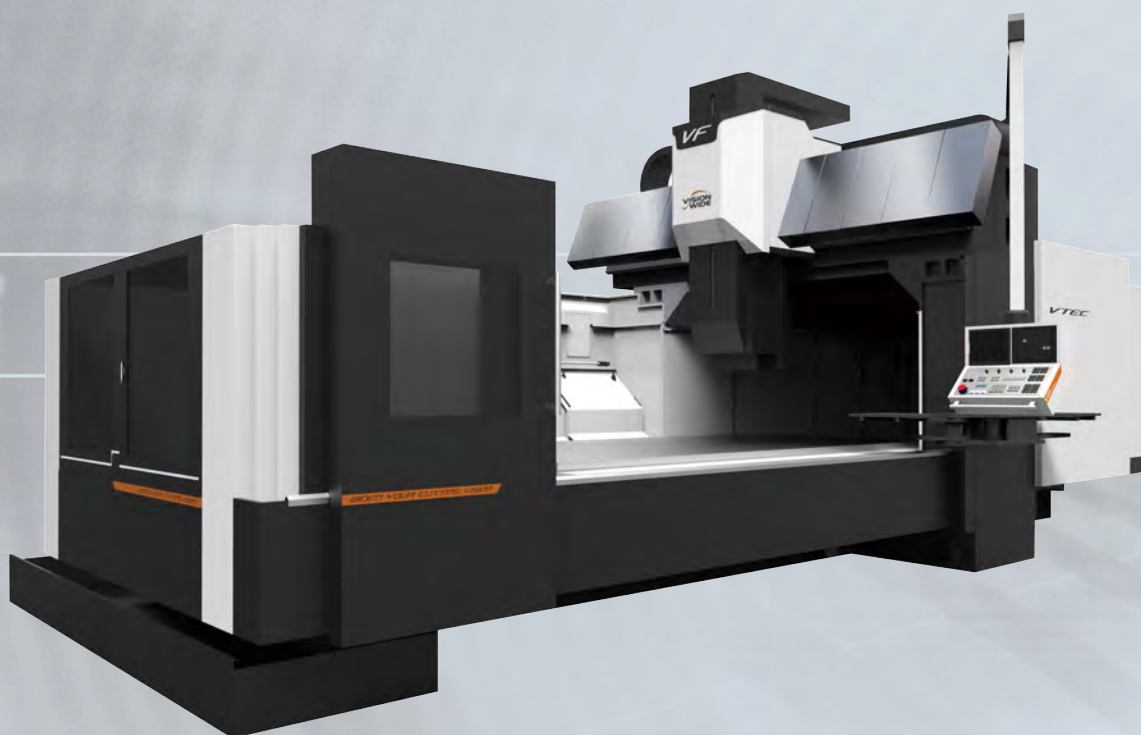
- Casting Structure
- 3 axis Box Way
- Step Square beam
- Z stroke of 800/1,020mm

Multi-Angel
Machining

VF

SERIES

Heavy Duty Double Column Machining Center



Heavy Cutting
Precision Cutting

- Casting Structure
- 3-axis Box Way / Slant Support Design on Cross Beam
- 3 Guide Ways Support on Y Axis
- 920/1,020mm Z stroke

Multi-Angel
Machining

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	Box way		mm	800/ 1,020(opt.)			800/ 1,020(opt.)			
Distance from spindle nose to table	Box way (2-step gear/ Belt-driven)	Z axis=800	mm	150-950			150-950			
		Z axis=1,020	mm	130-1,150 (column+200mm)			130-1,150 (column+200mm)			
Distance from spindle center to column			mm	430			430			
Distance between columns (port width)			mm	1,700			2,100			
TABLE										
Dimension			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 Pitch)			mm	22x7x180			22x9x180			
Max. table load			kg	8,000	9,000	10,000	9,000	10,000	11,000	12,000
SPINDLE										
Spindle motor(cont./30 min. rated)			kW	18.5/ 22 (22/ 26 opt.) (30/ 37 opt.)			18.5/ 22 (22/ 26 opt.) (30/ 37 opt.)			
Spindle speed	Box way	2-step gear	rpm	4,000/ 6,000 (opt.)			4,000/ 6,000 (opt.)			
Spindle taper			-	ISO NO.50			ISO NO.50			
FEED										
Cutting feed rate			mm/min	1-7,000			1-7,000			
Rapid traverse			m/min	X/ YZ:15		X/ Y:12, Z:15	X/ YZ:15		X/ Y:12, Z:15	
ACCURY(X,Y,Z)(Measured by laser instrument)										
Positioning accuracy	Refer to ISO 230		mm	±0.005/300, ±0.010 Full travel			±0.005/300, ±0.010 Full travel			
	Refer to VDI 3441		mm	P0.022			P0.022			
Repeatability	Refer to ISO 230		mm	±0.003			±0.003			
	Refer to VDI 3441		mm	Ps0.016			Ps0.016			
ATC										
ATC capacity			pcs	32/ 40(opt.)			32/ 40(opt.)			
Max. tool weight			kg	18			18			
Tool size (DxL) (Full tools)			mm	Φ 125x380L			Φ 125x380L			
Max. tool size (DxL) (next pocket empty)			mm	Φ 180x380L			Φ 180x380L			
Tool shank			-	BT 50/ CAT 50			BT 50/ CAT 50			
Pull stud			-	P50T-1			P50T-1			
OTHERS										
Power requirement			kVA	55			55			
Pneumatic requirement			kg	21,500	24,500	27,500	23,500	26,500	29,500	32,500
Machine net weight			kg	25,000	28,000	32,000	27,000	30,000	34,000	35,000
Machine gross weight			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

* For details, please refer to Machine Specification.

* The manufacture reserves the right to modify the design, specifications mechanisms, etc.

Standard & Optional Accessories

Standard Accessory

- 1 FANUC 0iMF controller
- 2 4,000rpm 2-step gear type spindle
- 3 Spindle oil cooler
- 4 Twin hydraulic cylinders with pressured air assistance balancing system
- 5 X-axis ball screw supporter (4m & above)
- 6 Centralized auto lubrication system
- 7 Independent lubrication oil collector
- 8 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 splash guard (without roof)
- 14 Swiveling arm type operation panel
- 15 Spring conveyor on table sides
- 16 Caterpillar type chip conveyor
- 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 XYZ-axis absolute pulse coder feedback
- 24 XYZ-axis travel hard limits protection
- 25 Spindle cutting load software protection
- 26 Remote monitoring software-Standard
(Not available for Siemens controller)
- 27 Auto power off
- 28 Vision Wide VW-FX 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 6,000rpm 2-step gear type spindle
- 2 Z-axis travel 1,020mm
- 3 200/ 300/ 400/ 500mm higher column
- 4 Interface preparation for coolant through spindle system
- 5 Coolant through spindle system 20/70 bar (Vertical spindle)
- 6 Coolant through tool holder interface
- 7 Coolant through tool holder 5/20 bar cutting fluid interface
- 8 Oil skimmer
- 9 Oil mist cooling device
- 10 Spindle ring cutting coolant device (for no head attachment)
- 11 60 tools magazine with arm type ATC
- 12 Enclosed splash guard with roof
- 13 Helical blade screw conveyor on table sides
- 14 Chip cart
- 15 Air conditioning for electrical cabinet
- 16 XYZ-axis linear scale feedback
- 17 3 axis independent manual pulse generator
- 18 Sub working table
- 19 Rotary table
- 20 Interface preparation for fourth axis
- 21 Z-axis retract function at power failure
- 22 Anti-collision and machining simulation software
- 23 Remote monitoring software-Professional
(Not available for Siemens controller)
- 24 Auto tool length measurement
- 25 Auto workpiece measurement
- 26 Transformer
- 27 Auto warm up

Optional accessory for auto head attachment

- 1 Auto AC90 degree angular head/ AC 2-axis head/ AC extended head
- 2 Auto AC milling head/ small head/ customized head attachment
- 3 Manual 90 degree 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, one cover)
- 6 AC90 degree angular head and AC 2-axis head coolant through spindle system

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	Box way		mm	900/ 1,020 (opt.)			920/ 1,020 (opt.)		
Distance from spindle nose to table	Box way (2-step gear/ Belt-driven)	Z axis=800	mm	150-1,070			150-1,070		
		Z axis=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									
Dimension			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 Pitch)			mm	28x11x180			28x11x180		
Max. table load			kg	11,000	13,000	15,000	11,000	13,000	15,000
SPINDLE									
Spindle motor(cont./30 min. rated)			kW	18.5/ 22 (22/ 26 opt.) (30/ 37 opt.)			18.5/ 22 (22/ 26 opt.) (30/ 37 opt.)		
Spindle speed	Box way	2-step gear	rpm	4,000/ 6,000 (opt.)			4,000/ 6,000 (opt.)		
Spindle taper			-	ISO NO.50			ISO NO.50		
FEED									
Cutting feed rate			mm/min	1-7,000			1-7,000		
Rapid traverse			m/min	X/ Y/ Z:12	X: 10 Y/ Z:12		X/ Y/ Z:12	X: 10 Y/ Z:12	
ACCURY(X,Y,Z)(Measured by laser instrument)									
Positioning accuracy	Refer to ISO 230		mm	±0.005/300, ±0.015 Full travel			±0.005/300, ±0.015 Full travel		
	Refer to VDI 3441		mm	P0.028		P0.038	P0.028		P0.038
Repeatability	Refer to ISO 230		mm	±0.003			±0.003		
	Refer to VDI 3441		mm	Ps0.025			Ps0.025		
ATC									
ATC capacity			pcs	40/ 60 (opt.)			40/ 60 (opt.)		
Max. tool weight			kg	18			18		
Tool size (DxL) (Full tools)			mm	Φ 125 x 450L			Φ 125 x 450L		
Max. tool size (DxL) (next pocket empty)			mm	Φ 215 x 450L			Φ 215 x 450L		
Tool shank			-	BT 50/ CAT 50			BT 50/ CAT 50		
Pull stud			-	P50T-1			P50T-1		
OTHERS									
Power requirement			kVA	60			60		
Pneumatic requirement			kg	33,400	38,400	43,400	36,400	41,400	46,400
Machine net weight			kg	37,100	43,400	48,400	40,100	46,400	51,400
Machine gross weight			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

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