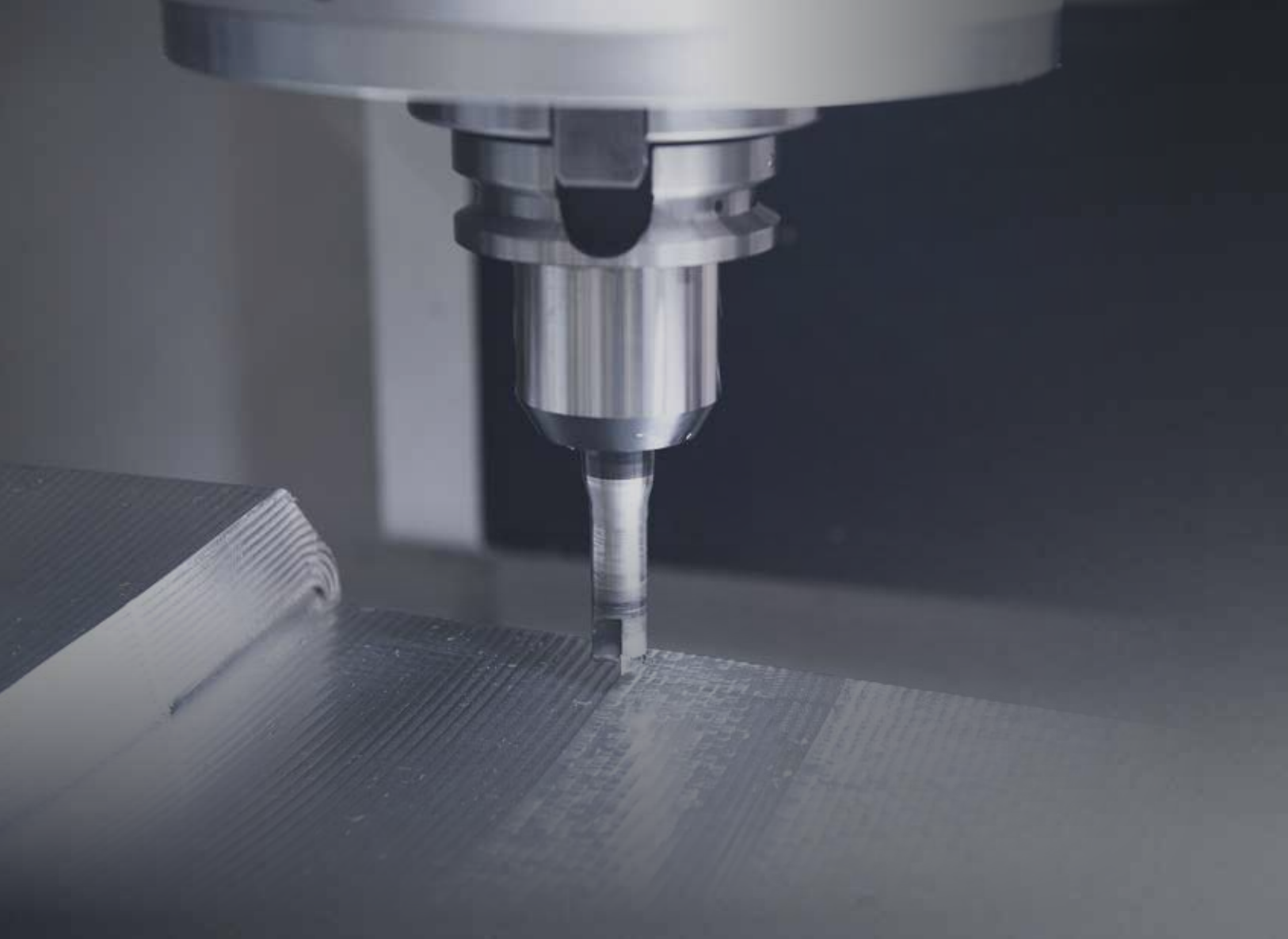


KV960B

The Machining Center for Large Work Spaces and Heavy Duty Cutting

SG WIA Vertical Machining Center



Technical Leader

The Vertical Machining Center KV960B, designed by SG WIA with years of expertise and the latest technology, is a heavy duty cutting machine with high precision and productivity.

KV960B

Table Size (L×W)	mm(in)	2,700×950 (106.3"×37.4")
Max. Load Capacity	kg(lb)	4,500 (9,921)
Spindle Taper	-	BBT50
Spindle Speed	r/min	8,000 [12,000]
Sp. Power (Max.)	kW(HP)	22 (30) [30 (40)]
No. of Tools	EA	20 [30, 40]
Travel (X/Y/Z)	mm(in)	2,450/960/850 (96.5"/37.8"/33.5")
Rapid Traverse Rate (X/Y/Z)	m/min	16/16/20

[] : Option

- Main spindle with ultra precision cylindrical roller bearings
- Rigid geared spindle enables powerful, heavy duty cutting
- Box guideways on all axis for superb heavy duty cutting
- 4 Guideways employ 10-face contact design
- Air Semi-Rising slideway to decrease feed load



01 BASIC STRUCTURE

Excellent Heavy Duty Cutting Capability & Productivity Vertical Machining Center

ATC & Magazine

- No. of Tools : 20 [30, 40] EA
- Tool Shank : BBT50

High Precision Spindle

- Gear Driven Spindle : 8,000 rpm
- Built-in Spindle : 12,000 rpm (Opt.)

Table

- Size (X/Y) : 2,700×950 mm (106.3"×37.4")
- Max. Load Capa. : 4,500 kg (9,921 lb)



HEAVY DUTY CUTTING & LARGE WORKING AREA

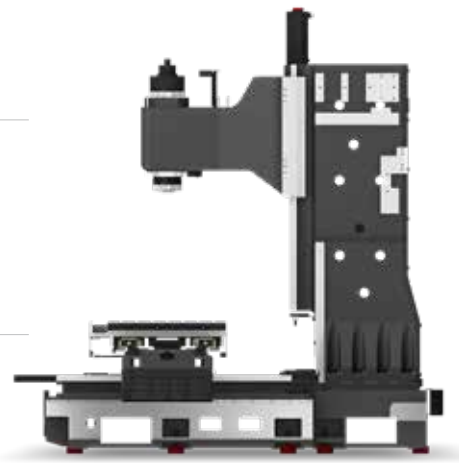
HIGH-PRECISION STRUCTURE

Optimal Structural Analysis

KV960B is designed to have optimal structure through SG WIA's unique structural analysis. In particular, enhancement of bed and column's rigidity makes excellent performance even in heavy duty cutting.

One Piece High Column

By applying an optional one piece high column, the Z-axis machining height can be increased by 200mm (7.9") compared to the standard.



KV960B
Vertical Machining Center

04
+
05

GUIDE WAY

All Axis Box Guideway

Box guideways effectively offset vibration enabling the machining of high precision products. The travel load is spread evenly on the surface of guideways. This enhances stability and rigidity allowing high performance heavy duty cutting.

Air Semi-Rising Slideway

By applying the air semi-rising slideways, the load on the X/Z-axis slideway is decreased. Therefore, positioning and repeatability accuracy can be maintained for a long time.

10-face Contact Y-axis Slideway

The table is supported at all times by 10-face contact box guideways. This allows for a maximum table load of 4,500 kg (9,921 lb) without any distortion in the table.



CREATING VALUE
IN SEAMLESS MOBILITY

Travel (X/Y/Z)

2,450/960/850 mm (96.5"/37.8"/33.5")

Rapid Traverse Rate (X/Y/Z)

16/16/20 m/min (630/630/787 ipm)

KV960B

02 HIGH PRECISION SPINDLE

Excellent machining performance with high-precision spindle

Spindle Specifications

[] : Option

Speed r/min	Motor (Max./Cont.)	Torque (Max./Cont.)	Type
8,000 rpm	22/18.5 kW (30/25 HP)	776/657 N·m ((572.3/484.6 lbf·ft)	2 Step Gear
[12,000 rpm]	[30/25 kW (40/33.5 HP)]	[420/238 N·m (309.8/175.5 lbf·ft)]	Built-in

HIGH-PERFORMANCE, HIGH-PRECISION SPINDLE

SPINDLE

2 Step Gear Type Spindle

The spindle is designed with cylindrical roller bearings, a thicker spindle nose and an enlarged flange diameter. Also, improved powerful clamping force allows enhanced machining ability.

2 Step Gear Type Spindle provides powerful torque at low speed and stable rotation at high speed, enabling a wide range of machining.



2 Step Gear

Built-in Spindle **OPTION**

The 12,000rpm built-in spindle can minimize vibration transmitted to the spindle. It allows excellent machining performance in mold and high-precision products.



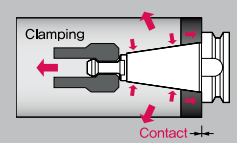
Built-in

Spindle Cooling

The spindle cooling system minimizes thermal displacement which can happen during lengthy machining operations, and offers continued accuracy based on the thermal stability.

Dual Contact Spindle

The Big Plus spindle system (BBT50) provides dual contact between the spindle face and the flange face of the tool holder.



- ❖ The increase in standard diameter improves rigidity and ATC repeatability, and Z-axis displacement prevention further extends tool life.

THROUGH SPINDLE COOLANT **OPTION**

Through Spindle Coolant is exceedingly useful when drilling deep holes. It helps increase the lifetime of the tool, while decreasing cycle time.



20 bar / 30 bar / 70 bar

KV960B

03 ATC & TABLE

High Productivity Achieved with High Rigidity, Accuracy Machining

No. of Tools

20 [30, 40] _{EA}

Max. Tool Length

300 _{mm (11.8")}

Max. Tool Dia. (W.T/W.O)

Ø125/Ø240 _{mm (Ø4.9"/Ø9.4")}

Max. Tool Weight

20 _{kg (44.1 lb)}

Tool Shank

BBT50

[] : Option

HIGH RIGIDITY, TOOL CHANGE SYSTEM

ATC & MAGAZINE

The tool magazine holds 20 tools as standard with 40 tools as option. Due to the wider selection of tools and the random tool selection method, tool change time has been improved.

The Double Arm ATC provides faster and reliable tool changing to help reduce machining cycle time.



20 Tool Magazine

30 Tool Magazine



KV960B
Vertical Machining Center

08
+
09

CREATING VALUE
IN SEAMLESS MOBILITY

TABLE

Compared to competitive machines, the KV960B has a large working capacity to make setup easier and provide convenience to the operator.

Size	Load Capacity
2,700×950 mm (106.3"×37.4")	4,500 kg (9,921 lb)

NC Rotary Table **OPTION**

The NCRT makes it possible to machine up to 5-axis. Various types of products can be machined.

❖ When ordering a NC Rotary Table, prior consult with hyundai wia's sales person.



04 FANUC – SMART PLUS

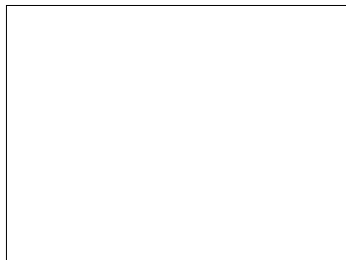
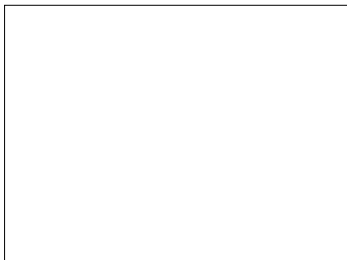
The Compatible All-round Control



15" Touch-type Monitor as a standard

Smart Machine Control	Fast Cycle Time Technology
Conversational Program	Fine Surface Technology
i-HMI	Smart Guide-i
AI Contour Control	Machining-aid Function
Smooth Tolerance Control	AICC-2 (200 blocks)
JERK Control	0.1 μ m command and specify tolerance
Machining Condition Selection	Diminished vibration by controlling acceleration speed
Machining Quality Control Function	Designated machining level based on speed & quality
Part Program Storage	Smooth Tolerance+ integrated support
No. of Registerable Programs	5120M (2MB)
	1000 EA

MMS (Machine Monitoring System)



MMS Cloud

A cloud server-based equipment monitoring system for collecting and analyzing facility operation data.

Manufacturing big data solution with design, manufacturing, and intelligence technology of SG-WIA
(Big data collection/Analysis/Visualization)

SMART CNC (FANUC Smart Plus)



1. Dialogue Program (Smart Guide-i)

This software offers the maximum user convenience through dialogue manipulation from setup to processing. This includes writing processing programs and simulation checks.

2. LAUNCHER

This software offers shortcuts for quick access to specialized features and frequently used features.

SPECIFICATIONS

Standard & Optional

● : Standard ○ : Option ☆ : Prior Consultation - : Non Applicable

Spindle		KV960B
8,000rpm (22kW [29.5HP])	FANUC (Gear)	●
12,000rpm (30kW [40HP])	FANUC (Built-in)	○
Spindle Cooling System		●
ATC		
ATC Extension	20	●
	30	○
	40	○
Tool Shank Type	BBT50	●
	BCV50	○
U-Center	D'andrea	○
	45°	●
Pull Stud	60°	○
	90°	○
		○
Table & Column		
T-Slot Table		●
NC Rotary Table		☆
High Column	200mm(7.8")	○
Coolant System		
Std. Coolant (Nozzle)		●
Bed Flushing Coolant		●
Through spindle coolant*1)	20bar	○
	30bar	○
	70bar	○
Top Cover (Thru coolant applied when necessary)		○
Shower Coolant		-
Gun Coolant		○
Side Oil Hole Coolant		○
Air Gun		○
Cutting Air Blow		○
Tool Measuring Air Blow (Only for TLM)		○
Air Blow for Automation		☆
Thru MQL Device (Without MQL)		☆
Coolant Chiller		☆
Power Coolant System (For Automation)		☆
Chip Disposal		
Coolant Tank	690 ℓ	●
Interior Screw Chip Conveyor		●
Exterior Screw Chip Conveyor		-
Chip Conveyor (Hinge/Scraper)	Rear(Right)	-
	Left(Rear)	-
	Front(Left)	○
Chip Conveyor (Hinge)	Front(Right)	○
Special Chip Conveyor (Drum Filter)		☆
Chip Wagon	Standard (180 ℓ)	○
	Swing (200 ℓ)	☆
	Large Swing (290 ℓ)	☆
	Large Size (330 ℓ)	☆
	Customized	☆
ETC		
Tool Box		●
Customized Color	Need for Munsel No.	☆
CAD&CAM Software		☆
Electric Device		
Call Light	1 Color : ●	●
Call Light & Buzzer	3 Color : ●●● B	○
Work Light		●
Electric Cabinet Light		○
Remote MPG		●
3 Axis MPG		○
Work Counter	Digital	○
Total Counter	Digital	○
Tool Counter	Digital	○
Multi Tool Counter	6 EA	☆
	9 EA	☆

Electric Device		KV960B
Electric Circuit Breaker		○
AVR (Auto Voltage Regulator)		☆
Transformer	45KVA	○
Auto Power Off *2)		○
Back up Module for Black out		○
Measuring Device		
Air Zero	TACO	○
	SMC	○
Work Measuring Device		○
TLM (Marposs/Renishaw/Blum)	Touch	○
	Laser	○
Tool Broken Detecting Device		☆
Linear Scale	X/Y/Z Axis	○
Coolant Level Sensor (Only for Chip Conveyor, Bladder Type)		☆
Environment		
Air Conditioner		○
Dehumidifier		○
Oil Mist Collector		☆
Oil Skimmer (Only for Chip Conveyor)		○
MQL (Minimal Quantity Lubrication)		☆
Fixture & Automation		
Auto Door	Std.	○
	High Speed	☆
Auto Shutter (Only for Automatic System)		-
Sub O/P		☆
NC Rotary Table/F	Single	○
	Channel	☆
Control of Additional Axis	1Axis	○
	2Axis	☆
External M Code 4ea		○
Automation Interface		☆
I/O Extension (In & Out)	16 Contact	☆
	32 Contact	☆
Hyd. Device		
Std. Hyd. Unit	70bar/13 ℓ (3.4 gal)	-
	45bar	☆
Fixture Hyd. Unit	70bar	☆
	100bar	☆
	Customized	☆
S/W		
Dialogue Program (HW-DPRO)		○
DNC software (HW-eDNC)		○
Machine Monitoring System (HW-MMS Cloud)		☆
Smart Guide-i : FANUC		● (F31i-B : ☆)
Smart S/W		☆

*1 : Please check the filter types with sales representative. / *2 : 12,000RPM Mold Package Standard

Specifications are subject to change without notice for improvement. / Please refer to the S/W catalog (iRIS) for details by S/W product.

SPECIFICATIONS

Spindle Output/Torque Diagram

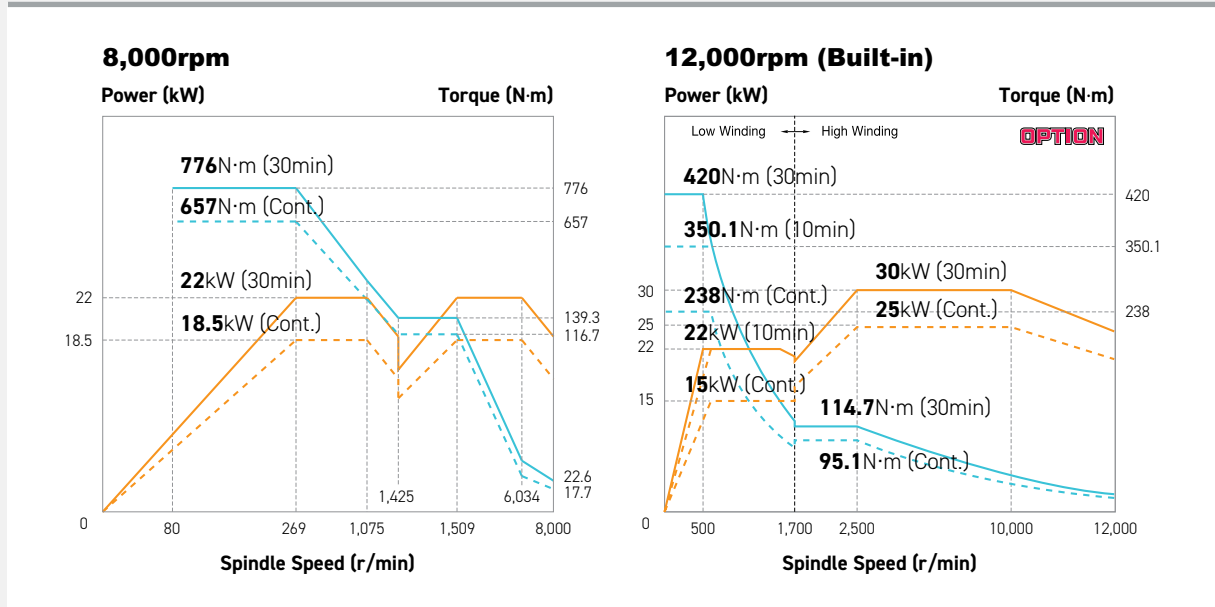
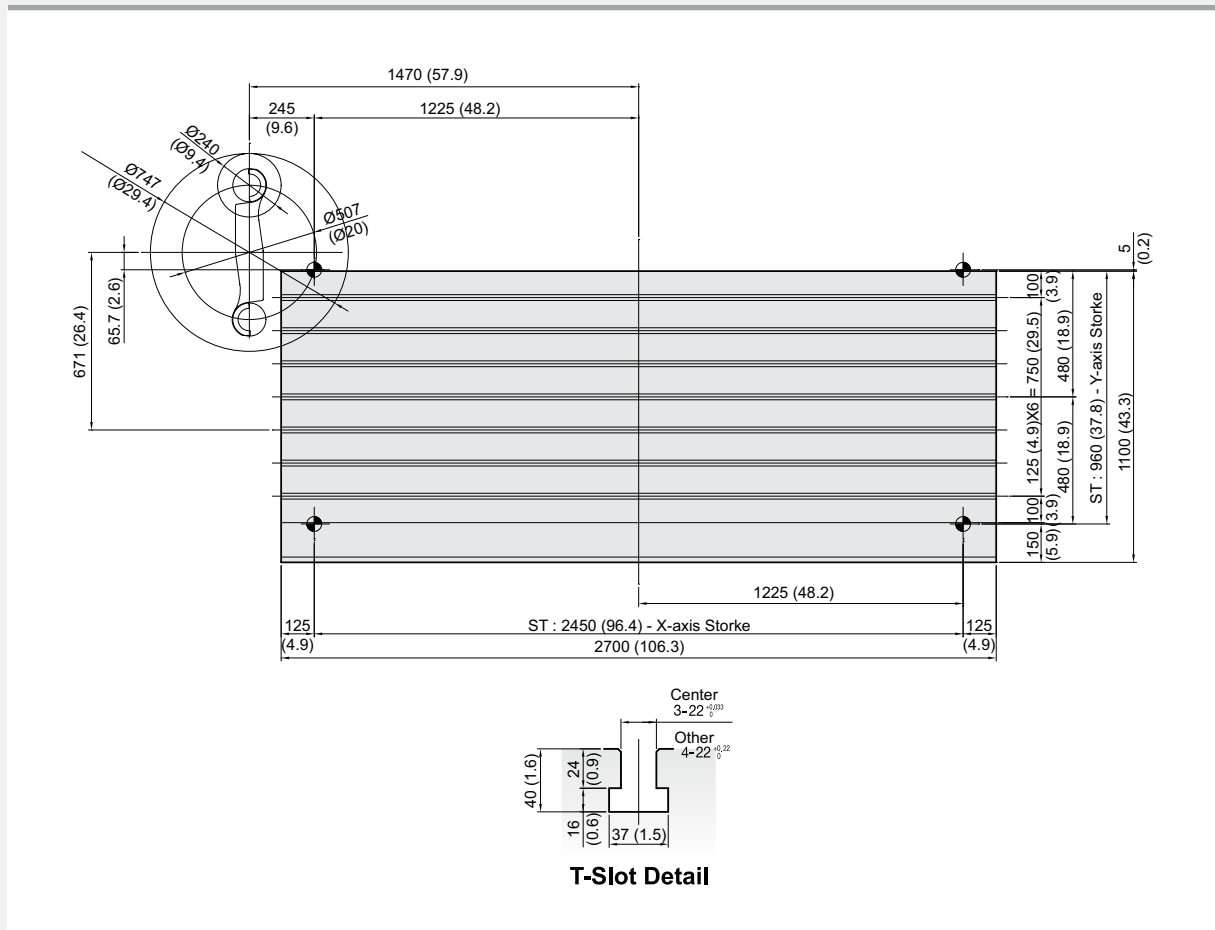


Table Dimensions

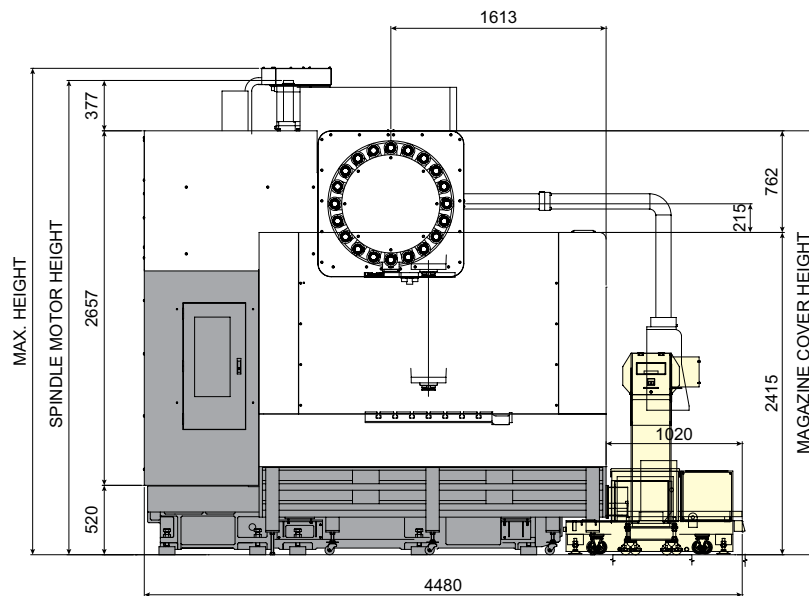
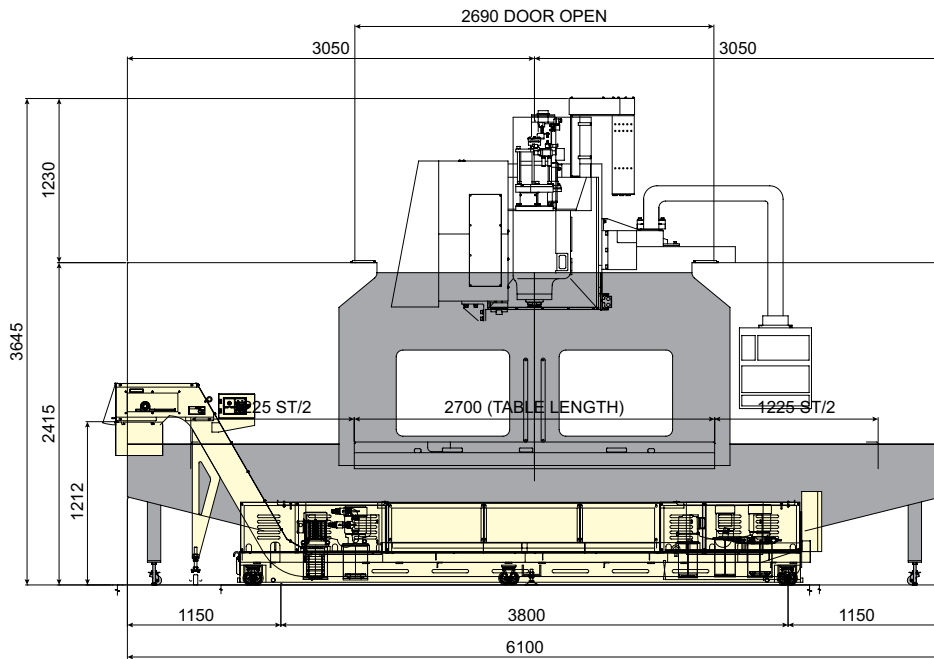
unit : mm(in)



SPECIFICATIONS

External Dimensions

unit : mm(in)



High Column : 200 mm (7.9")

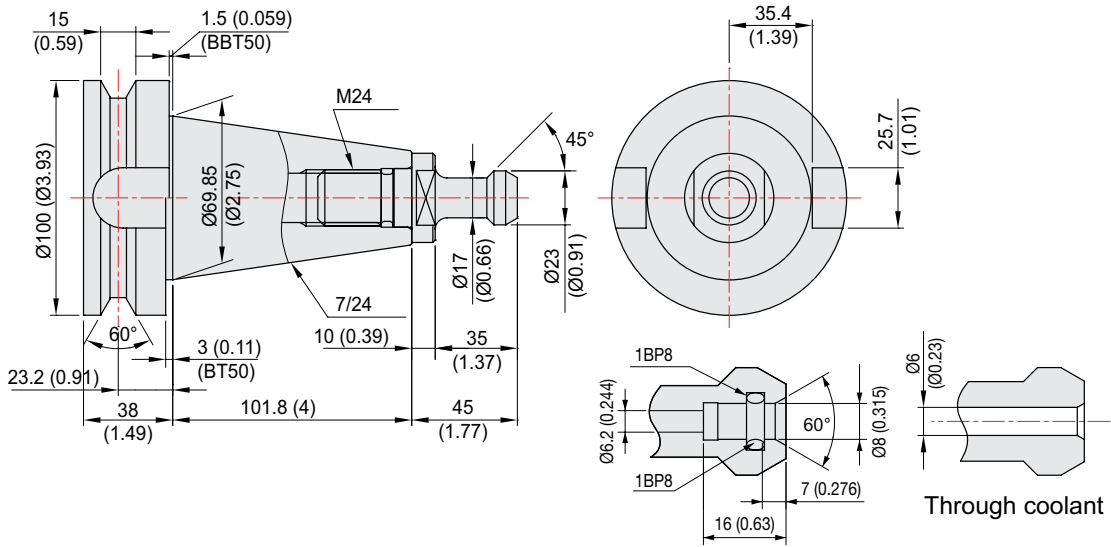
Height Item	Max. Height	Height to Magazine Cover			Shipping Height	Spindle Motor Height
		20 tool	30 tool	40 tool		
Std. Column	3,647 (143.6)	3,177 (125.1)	3,256 (128.2)	3,256 (128.2)	3,554 (139.9)	3,647 (143.6)
High Column	3,847 (151.5)	3,377 (133)	3,456 (136.1)	3,456 (136.1)	3,754 (147.8)	3,847 (151.5)

SPECIFICATIONS

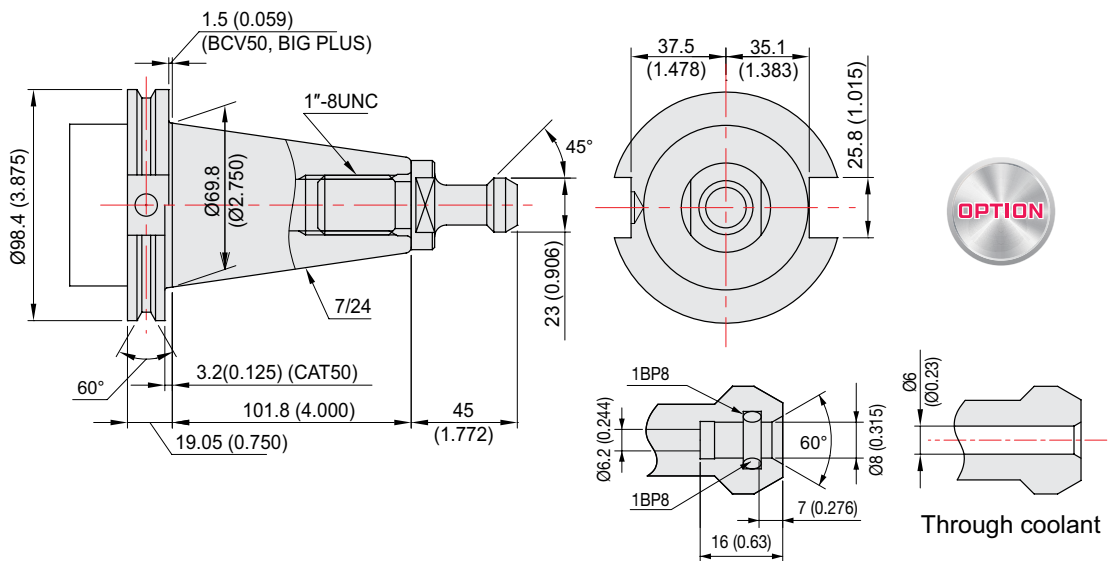
Tool Shank

unit : mm(in)

BT50/BBT50, BIG PLUS



CAT-50/BCV50



SPECIFICATIONS

Specifications

[] : Option

ITEM			KV960B
TABLE	Table Size	mm(in)	2,700×950 (106.3"×37.4")
	Maximum Load Capacity	kg(lb)	4,500 (9,921)
SPINDLE	Spindle Taper	-	BBT50 [BCV50]
	Spindle RPM	r/min	8,000 [12,000]
	Spindle Power Output (Max./Cont.)	kW(HP)	22/18.5 (30/25) [30/25 (40/33.5)]
	Spindle Torque (Max./Cont.)	N·m(lbf·ft)	776/657 (572.3/484.6) [420/238 (309.8/175.5)]
	Spindle Driving Method	-	GEAR [BUILT-IN] [GEAR]
FEED	Travel (X/Y/Z)	mm(in)	2,450/960/850 (96.5"/37.8"/33.5")
	Distance from Table Top to SP. Nose	mm(in)	200 ~ 1,050 (7.9" ~ 41.3") [400~1,250 (15.7"~49.2")]
	Distance from Column to SP. center	mm(in)	1,000 (39.3")
	Rapid Traverse Rate (X/Y/Z)	m/min	16/16/20
	Slide Type	-	BOX GUIDE
ATC	Number of Tools	EA	20 [30, 40]
	Tool Shank	-	BBT50 [BCV50]
	Max. Tool Dia. (W.T / W.O)	mm(in)	Ø125/Ø240 (Ø4.9"/Ø9.4")
	Max. Tool Length	mm(in)	300 (11.8")
	Max. Tool Weight	kg(lb)	20 (44.1)
	Tool Selection Method	-	RANDOM
	Tool Change Time	T-T	sec
C-C		sec	8.5
TANK CAPACITY	Coolant Tank	ℓ (gal)	690 (182.3)
	Lubricating Tank	ℓ (gal)	4.4 (1.1)
POWER SUPPLY	Air Consumption (0.5MPa)	ℓ /min(gal)	250 (66)
	Electric Power Supply	kVA	40
	Thickness of Power Cable	mm ²	Over 50
	Voltage	V/Hz	220/60 (200/50*)
MACHINE	Floor Space (L×W)	mm(in)	6,100×4,425 (240.2"×174.2")
	Height	mm(in)	3,647 (143.6")
	Weight	kg(lb)	23,500 (51,809)
PC	Controller	-	FANUC 31i-B [FANUC i Series-Smart Plus]

*) Using 50Hz voltage instead of 60Hz may lower the output of motors. (excluding servo motors and inverter motors)
Specifications are subject to change without notice for improvement.

CONTROLLER

FANUC 31i-B

[] : Option ☆ Needed technical consultation

Controlled axis / Display / Accuracy Compensation	
Control axis	3 axis (X, Y, Z) [4 axis (X, Y, Z, A)] [5 axis (X, Y, Z, A, C)]
Simultaneously controlled axis	3 axis [Max. 4 axis]
Least setting Unit	X, Y, Z axis : 0.001 mm (0.0001 inch) B axis : 1 deg [0.001] deg
Least input increment	X, Y, Z axis : 0.001 mm (0.0001 inch) B axis : 1 deg [0.001] deg
Inch / Metric conversion	G20 / G21
High response vector control	
Interlock	All axis / Each axis
Machine lock	All axis
Backlash compensation	± 0 ~ 9999 pulses (Rapid traverse / Cutting feed)
Position switch	
LCD / MDI	10.4 inch color LCD
Feedback	Absolute motor feedback
Stored stroke check 1	Over travel
Stored pitch error compensation	
Operation	
Automatic operation (Memory)	
MDI operation	
DNC operation	Needed DNC software / CF card
Program restart	
Wrong operation prevention	
Program check function	Dry run, Program check Z axis Machine lock, Stroke check before move
Single block	
Search function	Program Number / Sequence Number
Interpolation functions	
Nano interpolation	
Positioning	G00
Linear interpolation	G01
Cylindrical interpolation	G02, G03
Exact stop mode	Single : G09, Continuous : G61
Dwell	G04, 0 ~ 9999.9999 sec
Skip	G31
Reference position return	1st reference, G28 2nd reference, G27 Ref. position check, G30
Thread synchronous cutting	G33
Helical interpolation	Circular + Linear interpolation 2 axis(max.)
Feed function / Acc. & Dec. control	
Manual feed	Rapid traverse Jog : 0~5,000mm/min (197 ipm) Manual handle : x1, x10, x100 pulses Reference position return
Cutting Feed command	Direct input F code
Feedrate override	0 ~ 200% (10% Unit)
Rapid traverse override	F0% (F1%), F25%, F50%, F100%
Override cancel	
Feed per minute	G94
Feed per revolution	G95
Look-ahead block	40 Block 200 Block (Mold)
Program input	
Tape Code	EIA / ISO
Optional block skip	1 ea
Absolute / Incremental program	G90 / G91
Program stop / end	M00, M01 / M02, M30
Maximum command unit	± 999,999,999 mm (± 99,999,999 inch)
Plane selection	X-Y, G17 / Z-X, G18 / Y-Z, G19
Workpiece coordinate system	G52, G53, 6 pairs (G54 ~ G59)
Manual absolute	Fixed ON
Programmable data input	G10
Sub program call	10 folds nested
Custom macro	#100 ~ #149, #500 ~ #549
G code system	A
Programmable mirror image	G51.1, G50.1
G code preventing buffering	G4.1
Including Chamfering / Corner R	
Canned cycle	G73, G74, G76, G80 ~ G89
Coordinate rotation	G68, G69

Auxiliary function / Spindle speed function	
Auxiliary function	M 4 digit
Level-up M Code	Multi / Bypass M code
Spindle speed command	S 5 digit , Binary output
Spindle override	0% ~ 150% (10% Unit)
Spindle orientation	M19
FSSB high speed rigid tapping	
Tool function / Tool compensation	
Tool function	Max. T 8 digit
Tool life management	256 pairs ☆
Tool offset pairs	64 pairs
Tool nose radius compensation	G40, G41, G42
Tool nose length compensation	G43, G44, G49
Tool offset memory C	Tool length, diameter, abrasion(length, diameter)
Tool length measurement	Z axis Input C
Editing function	
Part program storage size	640m (256KB)
No. of registerable programs	500 ea
Program protect	
Background editing	
Extended part program editing	Copy, move and change of P/C program
Memory card program edit	
Data input / output & Interface	
I/O interface	CF card, USB memory Embedded Ethernet interface
Screen hard copy	
External message	
External key input	
External workpiece number search	
Automatic data backup	
Setting, display and diagnosis	
Self-diagnosis function	
History display	Alarm & Operator message & Operation
Run hour / Parts count display	
Maintenance information	
Actual cutting feedrate display	
Display of spindle speed / T code	
Graphic display	
Operating monitor screen	Spindle / Servo load etc.
Power consumption monitoring	Spindle & Servo
Spindle / Servo setting screen	
Multi language display	Support 20 languages
Display language switching	Selection of 5 optional Languages
LCD Screen Saver	Screen saver
Processing select	Speed/ridigity setting
Option	
Additional optional block skip	9 ea ☆
Fast ethernet	Needed option board
Data server	Needed option board
Protection of data at 8 levels	
Sub Spindle control	
Polar coordinate command	G15, G16
Polar coordinate interpolation	G12.1, G13.1
Cylindrical interpolation	G07.1
One-way positioning	G60
Stored stroke check 2, 3	
Inverse-time feed	G93
Scaling	G50, G51
Manual guide i	Conversational auto program
Handle interrupt	
Manual handle feed	2/3 units
Additional custom macro variables	#100~#199, #500~#999 #100~#199, #500~#999, #98000~#98499
Retraction for rigid tapping	
Tool offset number	Max. 2000 pair ☆
Program storage capacity	512KB ~ 8MB ☆
Program registration number	Max. 4000 ea ☆
Additional work coordinate	48 pair (G54.1 P1 ~ P48)
AICC II	200 block 400 / 600 / 1000 block ☆

Figures in inch are converted from metric values.
The FANUC controller specifications are subject to change based on the policy of company CNC supplying.

CONTROLLER

FANUC i Series – SMART PLUS

[] : Option ☆ Needed technical consultation

Controlled axis / Display / Accuracy Compensation	
Control axis	3 axis (X, Y, Z) [4 axis (X, Y, Z, A)] [5 axis (X, Y, Z, A, C)]
Simultaneously controlled axis	3 axis [Max. 4 axis]
Least setting Unit	X, Y, Z axis : 0.001 mm (0.0001 inch) B axis : 1 deg [0.001] deg
Least input increment	X, Y, Z axis : 0.001 mm (0.0001 inch) B axis : 1 deg [0.001] deg
Inch / Metric conversion	
High response vector control	
Interlock	All axis / Each axis
Machine lock	All axis
Backlash compensation	± 0 ~ 9999 pulses (Rapid traverse / Cutting feed)
Position switch	
LCD / MDI	15 inch LCD unit (with Touch Panel)
Feedback	Absolute motor feedback
Stored stroke check 1	Over travel
Stored stroke check 2, 3	
Stored pitch error compensation	
Operation	
Automatic operation (Memory)	
MDI operation	
DNC operation	Needed DNC software / CF card
Program restart	
Wrong operation prevention	
Program check function	Dry run, Program check, Z axis Machine lock Stored limit check before move
Single block	
Search function	Program Number / Sequence Number
Handle interruption	
Interpolation functions	
Nano interpolation	
Positioning	G00
Linear interpolation	G01
Circular interpolation	G02, G03
Exact stop mode	Single : G09, Continuous : G61
Dwell	G04, 0 ~ 9999.9999 sec
Skip	G31
Reference position return	1st reference, G28 / 2nd reference, G30 Ref. position check, G27
Single direction positioning	G60
Thread synchronous cutting	G33
Helical interpolation	Circular + Linear 2 axis (Max.)
Feed function / Acc. & Dec. control	
Manual feed	Rapid traverse Jog : 0~2,000mm/min (79 ipm) Manual handle : x1, x10, x100 pulses Reference position return
Cutting Feed command	Direct input F code
Feedrate override	0 ~ 200% (10% Unit)
Rapid traverse override	1%, 25%, 50%, 100%
Override cancel	
Feed per minute	G94
Feed per revolution	G95
Cylindrical interpolation	G07.1
Inverse time feed	G93
Look-ahead block	200 blocks (AI APC)
Program input	
Tape Code	EIA / ISO
Optional block skip	9 ea
Absolute / Incremental program	G90 / G91
Program stop / end	M00, M01 / M02, M30
Maximum command unit	± 999,999,999 mm (± 99,999,9999 inch)
Plane selection	X-Y, G17 / Z-X, G18 / Y-Z, G19
Workpiece coordinate system	G52, G53, 48 pairs (G54.1 P1 ~ 48)
Manual absolute	Fixed ON
Programmable data input	G10
Sub program call	10 folds nested
Custom macro	#100 ~ #199, #500 ~ #999
Programmable mirror image	G51.1, G50.1
G code preventing buffering	G4.1
Optional chamfering corner R	

Program input	
Polar coordinate command	G15, G16
Canned cycle	G73, G74, G76, G80 ~ G89
Scaling	G50, G51
Coordinate system rotation	G68, G69
Conversational Program	Smart Guide-i
Auxiliary function / Spindle speed function	
Level-up M Code	Multi / Bypass M code
Spindle speed function	S & 5 digit , Binary output
Spindle override	0% ~ 150% (10% Unit)
Spindle orientation	M19
Retraction for rigid tapping	
FSSB high speed rigid tapping	
Tool function / Tool compensation	
Tool function	Max. T8 digit
Tool life management	
Tool offset pairs	400 pairs
Tool nose / radius compensation	G40, G41, G42
Tool length offset	G43, G44, G49
Tool offset memory C	Tool geometry and wear (Cutter and tool length)
Tool length measurement	Z axis Input C
Editing function	
Part program storage size	5,120m (2MB)
No. of registerable programs	1,000 ea
Program protect	
Background editing	
Extended part program editing	Copy, move and change of NC program
Memory card program edit	
Data input / output & Interface	
I/O interface	CF card, USB memory Embedded Ethernet interface
Screen hard copy	
External message	
External key input	
External workpiece number search	
Automatic data backup	
Setting, display and diagnosis	
Self-diagnosis function	
History display & Operation	Alarm & Operator message & Operation
Run hour / Parts count display	
Maintenance information	
Actual cutting feedrate display	
Display of spindle speed / T code	
Graphic display	
Operating monitor screen	Spindle / Servo load etc.
Power consumption monitoring	Spindle & Servo
Spindle / Servo setting screen	
Multi language display	Support 24 languages
Display language switching	Selection of 5 optional Languages
LCD Screen Saver	Screen saver
Option	
Fast ethernet	Needed option board
Data server	Needed option board
Protection of data at 8 levels	
Additional Axis	
Manual handle feed	2/3 units #100 ~ #199, #500 ~ #999, #98000 ~ #98499
Add. Workpiece	Max. 300 pairs (G54.1 P1 ~ P300)
AICC II	400 blocks ☆

Figures in inch are converted from metric values.

The FANUC controller specifications are subject to change based on the policy of company CNC supplying.