WIA Machine Tools

Heavy Duty Cutting Vertical Machining Center

KF-B II Series

KF5700B II | KF6700B II | KF7700B II

WIA MACHINE TOOLS



Technical Leader

Best-in-class heavy duty cutting capability, state-of-the-art Vertical Machining Center

The Vertical Machining Center KF-B II Series, designed by WIA machine tools with years of expertise and the latest technology, maximizes productivity while maintaining rigidity and accuracy.

ITEM	Direct Sp.		Gear Sp.	Tool Shank		Y-axis Stroke		
	8,000	12,000	6,000	BBT40	BBT50	570 mm (19.7″)	670 mm (26.4″)	760 mm (29.9″)
KF5700B II	●	○		●		●		
KF5700B/50 II	●		○		●	●		
KF6700B II	●	○		●			●	
KF6700B/50 II	●		○		●		●	
KF7700B II	●	○		●				●
KF7700B/50 II	●		○		●			●

● : Standard ○ : Option

KF-B II Series

Vertical Machining Center for Heavy Duty Cutting

- High power/torque main spindle for superb heavy duty cutting
- Box guideways for exceptional traveling during heavy duty cutting
- Enhanced chip processing capabilities by applying the upper-type conveyor
- Various motors and columns provided for customized machining
- Improved user convenience by applying the latest controller of FANUC



01 BASIC **STRUCTURE**

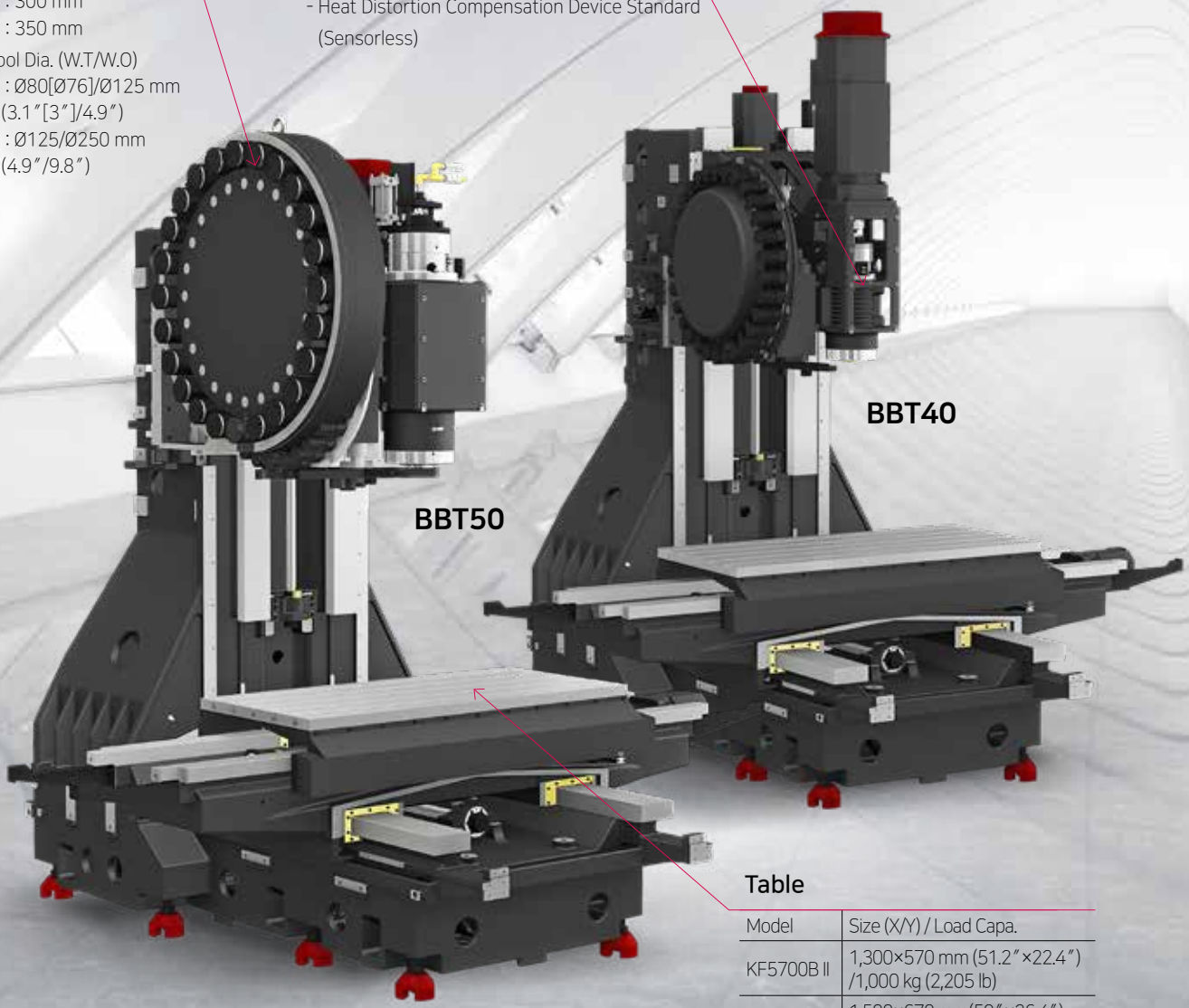
Excellent Heavy Duty Cutting Capability & Productivity Vertical Machining Center

ATC & Magazine

- No. of Tools : 24~40EA
- Max. Tool Length
  BBT40 : 300 mm
  BBT50 : 350 mm
- Max. Tool Dia. (W.T/W.O)
  BBT40 : Ø80[Ø76]/Ø125 mm
  (3.1″[3″]/4.9″)
  BBT50 : Ø125/Ø250 mm
  (4.9″/9.8″)

High Precision Spindle

- Direct Driven Spindle : 8,000 /12,000 rpm
- Gear Driven Spindle : 6,000 rpm
- Heat Distortion Compensation Device Standard
  (Sensorless)



Table

Model	Size (X/Y) / Load Capa.
KF5700B II	1,300×570 mm (51.2″×22.4″) /1,000 kg (2,205 lb)
KF6700B II	1,500×670 mm(59″×26.4″) / 1,300 kg (2,866 lb)
KF7700B II	1,650×760 mm (65″x30″) / 1,500 kg (3,307 lb)

HIGH-PRECISION, SPEED & LARGE WORKING AREA

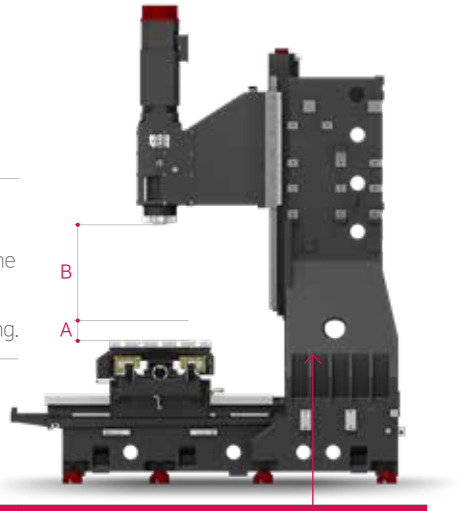
HIGH-PRECISION STRUCTURE

Optimal Structural Analysis

KF-B II Series is designed to have optimal structure through WIA machine tools'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 Structure

One piece high column is provided as an option up to z-axis hegiht.
This option helps to process bigger products such as rack housing.



Incomparably Strong Rigidity Compared to the Block-type High Column

Model	Travel of Z-Axis	Std. A~B	High Column A~B
KF5700B II	520 mm (20.5″)	150~670 mm (5.9″~26.4″)	450~970 mm (17.7″~38.2″)
KF5700B/50 II	520 mm (20.5″)	200~720 mm (7.9″~28.3″)	500~1,020 mm (19.7″~40.2″)
KF6700B II	635 mm (25″)	150~785 mm (5.9″~30.9″)	450~1,085 mm (17.7″~42.7″)
KF6700B/50 II	635 mm (25″)	200~835 mm (7.9″~32.9″)	500~1,135 mm (19.7″~44.7″)
KF7700B II	635 mm (25″)	150~785 mm (5.9″~30.9″)	Non Applicable
KF7700B/50 II	635 mm (25″)	200~835 mm (7.9″~32.9″)	Non Applicable

※ High Column : Option

HIGH-RIGIDITY DESIGN FOR COLUMN & BED

The stable design of column assembly surface on bed top enables securing the fundamental rigidity of the structure.



02 HIGH RIGIDITY **SLIDEWAY**

High Quality & Speed Vertical Machining Center



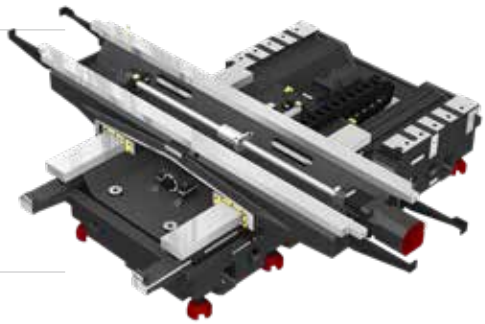
Travel (X/Y/Z)	**Rapid Traverse Rate** (X/Y/Z)
KF5700B II	KF5700B II
1,100/570/520 mm (43.3″/22.4″/20.5″)	30/30/24 m/min (1,181/1,181/945 ipm)
KF6700B II	KF6700B II
1,300/670/635 mm (51.1″/26.4″/25″)	30/30/24 m/min (1,181/1,181/945 ipm)
KF7700B II	KF7700B II
1,500/760/635 mm (59″/30″/25″)	30/30/24 m/min (1,181/1,181/945 ipm)

HIGH-RIGIDITY & STABLE DESIGN

GUIDE WAY

All Axis Box Guideway

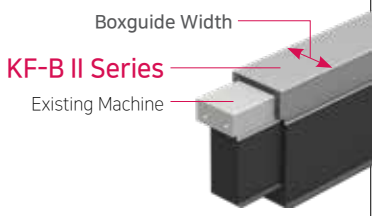
The KF-B II Series are equipped with box guideways to enable distributing its feeding force evenly to each slideway.
It boasts excellent rigidity, a stable feed structure, and an increased box guide slideway, thus providing an excellent heavy-duty cutting performance.



Large Box Guideway

Capability of heavy-duty cutting and vibration absorption is enhanced drastically due to expanded box guide.

Division	X-Axis Width	Y-Axis Width	Z-Axis Width
Existing Machine	100mm (3.9″)	100mm (3.9″)	100mm (3.9″)
KF6700B II	100mm (3.9″)	160mm (6.3″)	125mm (4.9″)

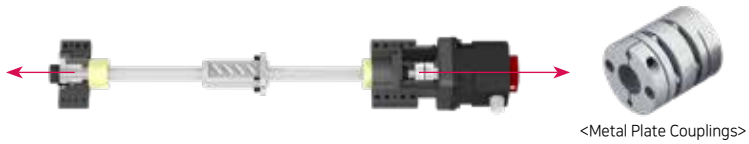


Double Anchored Ball Screw

The pretensioned ball screw minimizes the expansion and contraction according to the heat and further reinforces the rigidity by the double anchor support method.

In addition, the coupling of the ballscrews and the highly reliable digital servo motors are connected by **metal plate couplings**, to reduce coupling breakage and backlash.

3 Row bearing + Oil Lubricated
Rigidity 147% Increase
compared to previous model

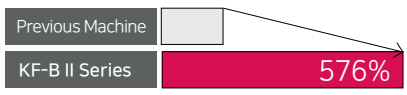


<Metal Plate Couplings>

Increase in Durability of Z-axis ball screw

Lifetime of the bearing has been greatly increased by optimizing the spindle structure and lubrication method.

※ Customer Actual Data



<Bearing life>
Increase

03 HIGH PRECISION **SPINDLE**

Long Lasting High Accuracy & Excellent Performance



Spindle Specifications

[ ] : Option

ITEM	Speed r/min	Motor (Max./Cont.)	Torque (Max./Cont.)	Tool Shank
Direct Type	**8,000** ø×Ø	**15**/**11** kW (20/15 HP)	**286**/**143** N·m (210.9/105.5 lbf·ft)	**BBT40 [BBT50]**
	[**12,000** rpm]	[**18.5**/**11** kW (25/15 HP)]	[**118**/**52.5** N·m (87/38.7 lbf·ft)]	**BBT40**
Gear Type	[**6,000** rpm]	[**18.5**/**15** kW (25/20 HP)]	[**586.3**/**475.4** N·m (432.2/350.6 lbf·ft)]	**BBT50**



HIGH-PERFORMANCE, HIGH-PRECISION SPINDLE

SPINDLE

Direct Driven Spindle

The directly coupled spindle at a maximum revolution of 12,000rpm, allows high-speed processing. Additionally, the large diameter and the thickness of the spindle add to the stability of the machine.

Gear Driven Spindle

It provides stable machining capability by doubling the heavy cutting capacity with the maximum torque of the same class. It guarantees stable torque at high speed at low speed and stable rotation at high speed to realize wide machining.

Spindle Cooling (Over 10,000 rpm / BT50 Std.)

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

Improved cooling capability with chilling through head frame

Through Spindle Coolant (20/30/70 bar) OPTION

Through Spindle Coolant is exceedingly useful when drilling deep holes. It helps increase the lifetime of the tool, while decreasing cycle time.
The improved quality of rotary joint prevents oil leakage.

<※ Thermal Displacement Compensation as Standard (Sensorless)>



Direct Driven Spindle

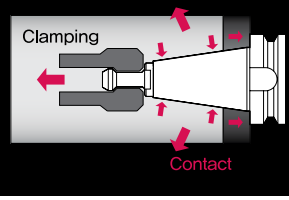


Gear Driven Spindle

DUAL CONTACT SPINDLE

OPTION

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



04 ATC & TABLE



No. of Tools

BBT40 - 30 [40] EA BBT50 - 24 [KF6700B/50 II : 30, KF7700B/50 II : 40] EA

Max. Tool Length

BBT40 - 300 mm (11.8″) BBT50 - 350 mm (11.8″)

Max. Tool Weight

BBT40 - 8 kg (18 lb) BBT50 - 15 kg (33 lb)

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

BBT40 - Ø80[Ø76]/Ø125mm (Ø3.1″ [Ø3″]/Ø4.9″) BBT50 - Ø125/Ø250mm (Ø4.9″/Ø9.8″)

[ ] : Option

HIGH RIGIDITY, TOOL CHANGE SYSTEM

ATC

High Speed ATC

Position control through twin arm ATC on servo motors has been improved drastically. In addition, tool exchanging has become easier, reducing specific cutting time tremendously.

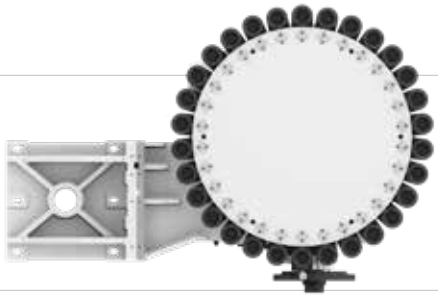
Position control on the Twin Arm ATC has improved drastically. The twin arm ATC enables faster tool change and increased productivity.



MAGAZINE

Magazine

A magazine that can attach various tools between 24~40 EA was adopted to increase the range of selection for machining tools, and the overall size of the magazine was reduced to reduce vibration during magazine rotation to improve surface finishing.



<40T : Servo Motor, 30T : Geared Motor (Option : Servo Motor)**>**

TABLE

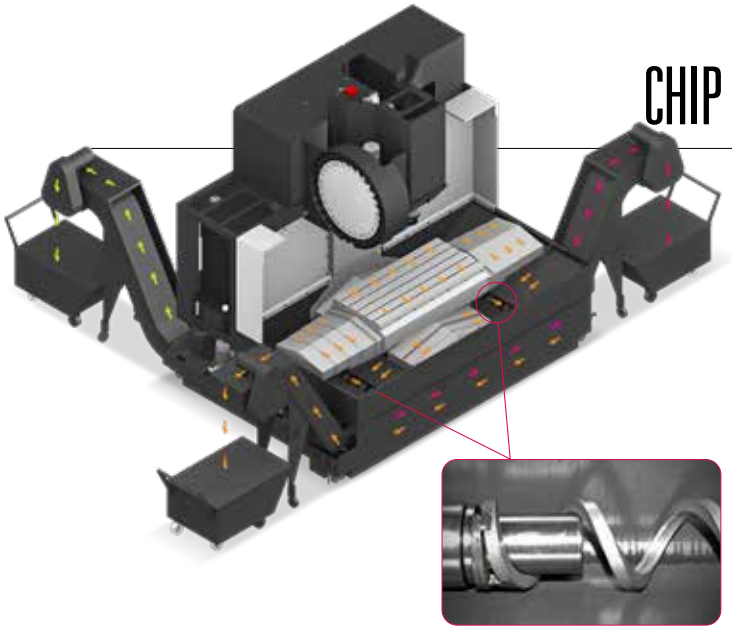
Compared to competitive machines, the KF-B II series has a largeworking capacity to make setup easier and provide convenienceto the operator.



Model	Size	Load Capacity
KF5700B II	**1,300×570** mm (51.2″×22.4″)	**1,000** kg (2,205 lb)
KF6700B II	**1,500×670** mm (59″×26.4″)	**1,300** kg (2,866 lb)
KF7700B II	**1,650×760** mm (65″x30″)	**1,500** kg (3,307 lb)

05 USER CONVENIENCE

Various Devices for User Friendly



CHIP DISPOSAL SOLUTION & COOLANT UNIT



Cutting Air Blow (Opt.)



Bed Flushing Coolant (Opt.)



Gun Coolant (Opt.)



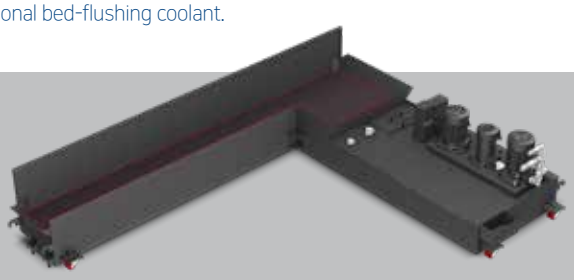
Air Gun (Opt.)

Interior Screw Chip Conveyor (Forward / Backward Rotation Function)

Dual screw type chip conveyors are located at each side of the bed which makes it convenient to remove chips. The interior screw and the chip conveyor operate at the same time and can be controlled separately at the time of prior consultation.
(Three screws for rear-type conveyor: 2 sides + 1 front)
Furthermore, chip disposal capability significantly has been improved due to optional bed-flushing coolant.

Upper-type Conveyor (Std.)

The upper type chip conveyor is applied as a standard to efficiently remove chips generated during machining. In addition, the large coolant tank provides a seamless machining environment even with large amounts of coolant.



Hinge	Chip Type : Roughing Chip, Long Chip, Chip complex	Material : SS41, 45C, Cast Steel	Side/Rear Direction
	Highly efficient when disposing a lot of chips. Capable of handling stringy chips..		
Scraper	Chip Type : Finely broken chip blown out	Material : cast Iron, Nonferrous	
	Convenient for shortly cut chips.		
※ Screw	Chip Type : The lower portion of micro-chips	Material : Steel, Casting	
	Compresses and ejects chips to reduce chip Trouble.		
※ Drum Filter	Chip Type : Powder, Micro Chip	Material : AL	
	Advantageous in precision, as the chips do not flow in to the coolant nozzle.		

※ When ordering a screw or drum filter chip conveyor, prior consult with hyudai wia's sales person.

PRECISION SYSTEM



Linear Scale

Linear scales increase positioning accuracy and reduce distortion caused by thermal growth, thus ensuring a more accurate finished part



Touch Sensor

Workpiece coordinate values can be set automatically using the optional spindle probe.



TLM (Laser & Touch)

Tool lengths and diameters can be set automatically using the optional tool setter. This can also be used to monitor attrition and detect broken tools.

ECO SYSTEM



Oil-skimmer

Separated oil-skimmer and coolant tank to keep coolant free of tramp oils.



Mist Collector

Mist Collectors reduce the amount of smoke and mist in the air creating a more comfortable and safer work environment



MQL (Minimal Quantity Lubrication)

The goal of this system is to spray only the amount of lubricant required to prevent heat and chip build up at the cutting tool or work piece face.



NC ROTRY TABLE & HYDRAULIC SUPPLY UNIT

Various shapes of products can be processed when using NC Rotary Table. In addition, 100 bar of high pressure hydraulic unit for the fixture increases the tightening power of the teeth.

06 FANUC - SMART PLUS

The Compatible All-round Control



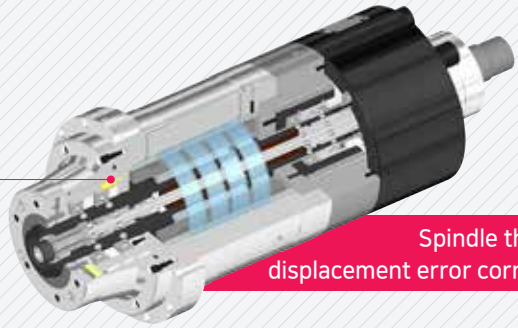
15″ Touch-type Monitor as a standard

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

8Ch. Thermal displacement compensation OPTION



Thermal Sensor

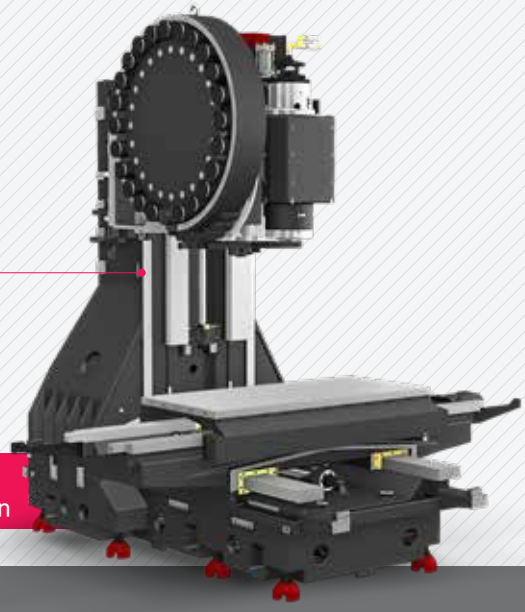


Spindle thermal displacement error correction



Control Software

Thermal Sensor

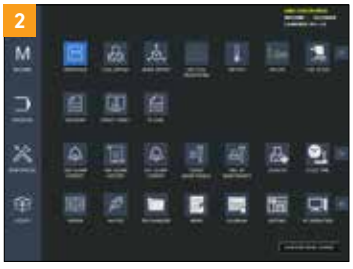


Structure thermal displacement error correction

Machine tools generate thermal displacement due to heat during machining.
WIA machine tools detect thermal changes through thermal sensors installed on the main thermal sources of the machine.
In addition, a thermal displacement compensation device that predicts the amount of thermal displacement according to the amount of thermal change and provides a command to the motor with a compensated value to maintain consistent precision is provided as an option.

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		KF5700B II	KF6700B II	KF7700B II
8,000rpm (15kW [20.1HP])	DIRECT	●	●	●
12,000rpm (18.5kW [24.8HP])	DIRECT	○	○	○
Spindle Cooling System	8,000rpm	○	○	○
	12,000rpm	●	●	●
ATC				
ATC Extension	30	●	●	●
	40	○	○	○
Tool Shank Type	BBT40	●	●	●
	HSK-A63	○	○	○
	CAT40/BCV40	○	○	○
U-Center	D'andrea	○	○	○
Pull Stud	45°	●	●	●
	75°	○	○	○
Table & Column				
APC		-	-	-
Tap Type Table		-	-	-
T-Slot Table		●	●	●
NCRotary Table		☆	☆	☆
High Column	200mm (7.9″)	-	-	-
	300mm (11.8″)	○	○	-
Coolant System				
Std. Coolant (Main Spindle Nozzle)		●	●	●
*Through Spindle Coolant	20bar	○	○	○
	30bar, 20 ℓ (5.3 gal)	○	○	○
	70bar, 15 ℓ (4 gal)	○	○	○
	70bar, 30 ℓ (7.9 gal)	○	○	○
Top Cover		●	●	●
Shower Coolant		○	○	○
Gun Coolant		○	○	○
Bed Flushing 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		●	●	●
Interior Screw Chip Conveyor		●	●	●
Upper Chip Conveyor (Hinge)	Side	○	○	○
	Rear	○	○	○
Upper Chip Conveyor (Scraper)	Side	○	○	○
	Rear	○	○	○
Screw Type Chip Conveyor	Left	☆	☆	☆
	Right	☆	☆	☆
Drum Filter Type Chip Conveyor	Left	☆	☆	☆
	Right	☆	☆	☆
	Rear	☆	☆	☆
Chip Wagon	Standard (180 ℓ [47.5 gal])	○	○	○
	Swing (200 ℓ [52.8 gal])	○	○	○
	Large Swing (290 ℓ [76.6 gal])	○	○	○
	Large Size (330 ℓ [87.2 gal])	○	○	○
	Customized	☆	☆	☆
ETC				
Tool Box		●	●	●
Customized Color	Need for Munsel No.	☆	☆	☆
CAD&CAM Software		☆	☆	☆
Thermal displacement compensation		○	○	○

Electric Device		KF5700B II	KF6700B II	KF7700B II
Call Light	1 Color : ■	●	●	●
Call Light & Buzzer	3 Color : ■■■B	○	○	○
Electric Cabinet Light		○	○	○
Remote MPG		●	●	●
3 Axis MPG		○	○	○
Work Counter	Digital	○	○	○
Total Counter	Digital	○	○	○
Tool Counter	Digital	○	○	○
Multi Tool Counter	Digital	☆	☆	☆
Electric Circuit Breaker		○	○	○
AVR (Auto Voltage Regulator)		☆	☆	☆
Transformer	30kVA	○	-	-
	35kVA	-	○	-
	40kVA	-	-	○
Auto Power Off		○	○	○
Back up Module for Black out		○	○	○
Measuring Device				
Air Zero	TACO	○	○	○
	SMC	○	○	○
Work Measuring Device		○	○	○
TLM (Marposs/Renishaw/Blum)	Touch	○	○	○
	Laser	○	○	○
Tool Broken Detective Device		☆	☆	☆
Linear Scale	X/Y/Z Axis	○	○	○
Coolant Level Sensor (Only for Chip Conveyor, Bladder Type)		☆	☆	☆
Environment				
Air Conditioner		○	○	○
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 I/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	45bar	-	-	-
	70bar	○	○	○
	100bar	○	○	○
	Customized	☆	☆	☆
S/W				
Dialogue Program (HW-DPRO)		○	○	○
DNC software (HW-eDNC)		○	○	○
Smart Guide-i : FANUC		●	●	●
Smart S/W		☆	☆	☆

*Through Spindle Coolant : Please check the filter types with sales representative.

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Standard & Optional

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

Spindle		KF5700B/50 II	KF6700B/50 II	KF7700B/50 II
8,000rpm (15kW [20.1HP])	DIRECT	●	●	●
6,000rpm (18.5kW [24.8HP])	GEAR	○	○	○
Spindle Cooling System		●	●	●
ATC				
ATC Extension	24	●	●	●
	30	-	○	-
	40	-	-	○
Tool Shank Type	BBT50	●	●	●
	HSK-A100	○	○	○
	CAT50/BCV50	○	○	○
U-Center	D'andrea	○	○	○
Pull Stud	45°	●	●	●
	75°	-	-	-
Table & Column				
APC		-	-	-
Tap Type Table		-	-	-
T-Slot Table		●	●	●
NCRotary Table		☆	☆	☆
High Column	200mm (7.9″)	-	-	-
	300mm (11.8″)	○	○	-
Coolant System				
Std. Coolant (Main Spindle Nozzle)		●	●	●
*Through Spindle Coolant	20bar	○	○	○
	30bar, 20 ℓ (5.3 gal)	○	○	○
	70bar, 15 ℓ (4 gal)	○	○	○
	70bar, 30 ℓ (7.9 gal)	○	○	○
Top Cover		●	●	●
Shower Coolant		○	○	○
Gun Coolant		○	○	○
Bed Flushing 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		●	●	●
Interior Screw Chip Conveyor		●	●	●
Flood Chip Conveyor (Hinge/Scraper)	Left	○	○	○
	Right	○	○	○
	Rear	○	○	○
Upper Chip Conveyor (Hinge)	Left	○	○	○
	Right	○	○	○
Screw Type Chip Conveyor	Left	☆	☆	☆
	Right	☆	☆	☆
Drum Filter Type Chip Conveyor	Left	☆	☆	☆
	Right	☆	☆	☆
	Rear	☆	☆	☆
Chip Wagon	Standard (180 ℓ [47.5 gal])	○	○	○
	Swing (200 ℓ [52.8 gal])	○	○	○
	Large Swing (290 ℓ [76.6 gal])	○	○	○
	Large Size (330 ℓ [87.2 gal])	○	○	○
	Customized	☆	☆	☆
ETC				
Tool Box		●	●	●
Customized Color	Need for Munsel No.	☆	☆	☆
CAD&CAM Software		☆	☆	☆
Thermal displacement compensation		○	○	○

Electric Device		KF5700B/50 II	KF6700B/50 II	KF7700B/50 II
Call Light	1 Color : ■	●	●	●
Call Light & Buzzer	3 Color : ■■■B	○	○	○
Electric Cabinet Light		○	○	○
Remote MPG		●	●	●
3 Axis MPG		○	○	○
Work Counter	Digital	○	○	○
Total Counter	Digital	○	○	○
Tool Counter	Digital	○	○	○
Multi Tool Counter	Digital	☆	☆	☆
Electric Circuit Breaker		○	○	○
AVR (Auto Voltage Regulator)		☆	☆	☆
Transformer	35kVA	○	-	-
	40kVA	-	○	○
Auto Power Off		○	○	○
Back up Module for Black out		○	○	○
Measuring Device				
Air Zero	TACO	○	○	○
	SMC	○	○	○
Work Measuring Device		○	○	○
TLM	Touch	○	○	○
(Marposs/Renishaw/Blum)	Laser	○	○	○
Tool Broken Detective Device		☆	☆	☆
Linear Scale	X/Y/Z Axis	○	○	○
Coolant Level Sensor (Only for Chip Conveyor, Bladder Type)		☆	☆	☆
Environment				
Air Conditioner		○	○	○
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 I/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	45bar	-	-	-
	70bar	○	○	○
	100bar	○	○	○
	Customized	☆	☆	☆
S/W				
Dialogue Program (HW-DPRO)		○	○	○
DNC software (HW-eDNC)		○	○	○
Smart Guide-i : FANUC		●	●	●
Smart S/W		☆	☆	☆

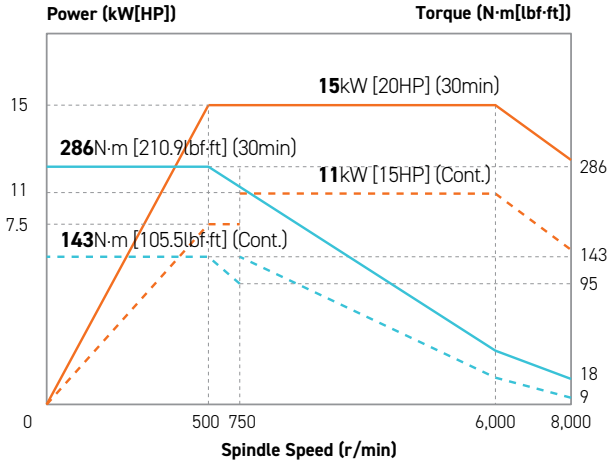
*Through Spindle Coolant : Please check the filter types with sales representative.

Specifications are subject to change without notice for improvement.

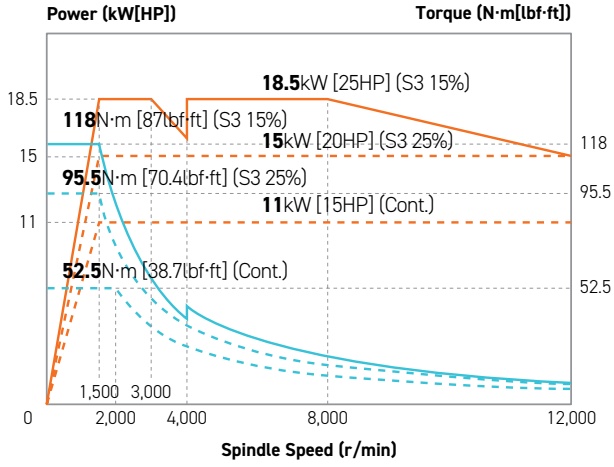
SPECIFICATIONS

Spindle Output/Torque Diagram

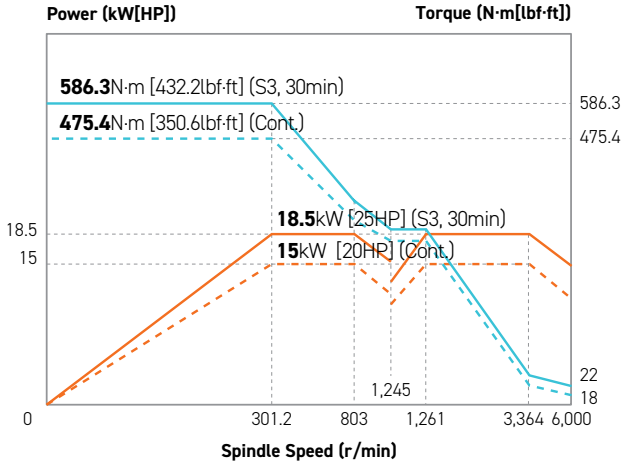
BT40/BT50 Direct 8,000rpm



BT40 Direct 12,000rpm

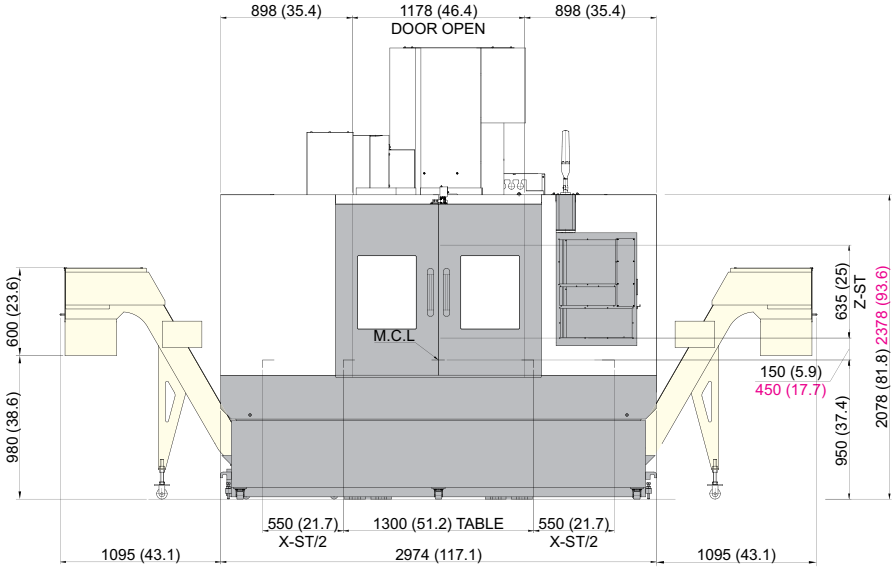


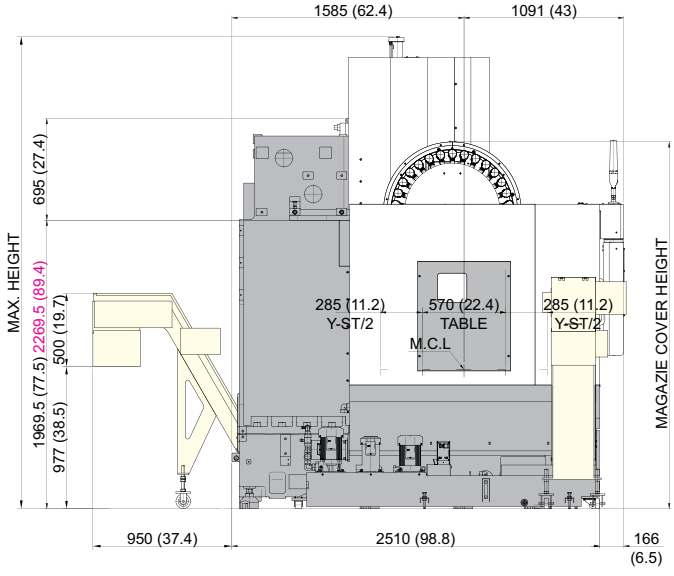
BT50 Gear 6,000rpm



External Dimensions (KF5700B II _ High Column : Option)

unit : mm(in)





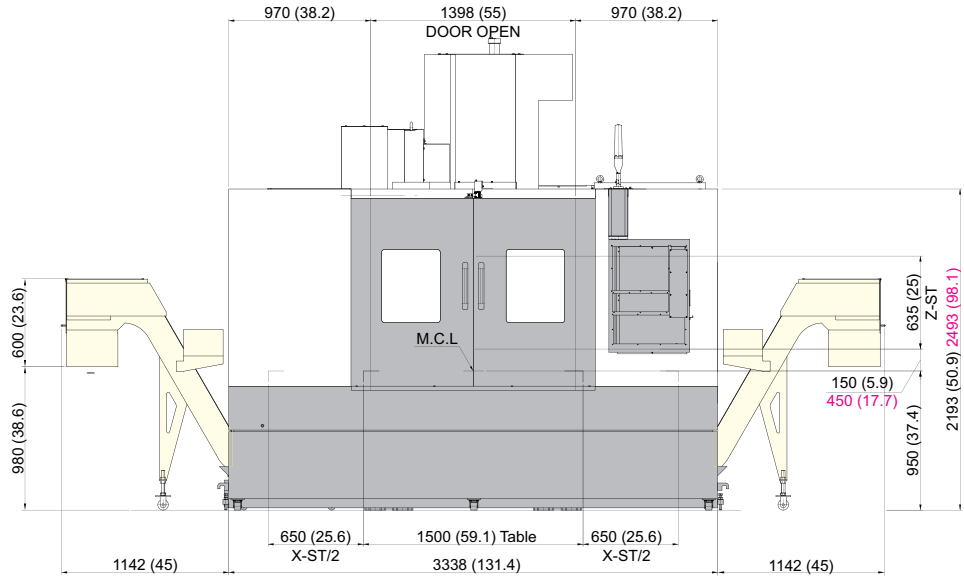
High Column : 300 mm (11.8″)

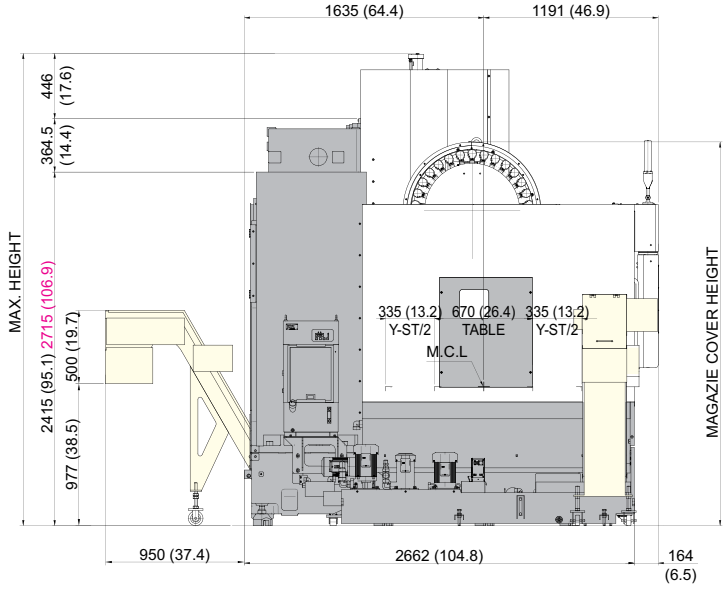
Model	Height Item	Max. Height	Height to Magazie Cover			Shipping Height	Spindle Motor Height
			24 tool	30 tool	40 tool		
KF5700B II	Std. Column	3,225 (127″)	-	2,505 (98.6″)	2,695 (106.1″)	2,665 (104.9″)	3,225 (127″)
	High Column	3,525 (138.8″)	-	2,805 (110.4″)	2,995 (117.9″)	2,965 (116.7″)	3,525 (138.8″)
KF5700B/50 II	Std. Column	3,275 (128.9″)	2,930 (115.4″)	-	-	2,715 (106.9″)	3,275 (128.9″)
	High Column	3,575 (140.7″)	3,230 (127.2″)	-	-	3,015 (118.7″)	3,575 (140.7″)

SPECIFICATIONS

External Dimensions (KF6700B II _ High Column : Option)

unit : mm(in)



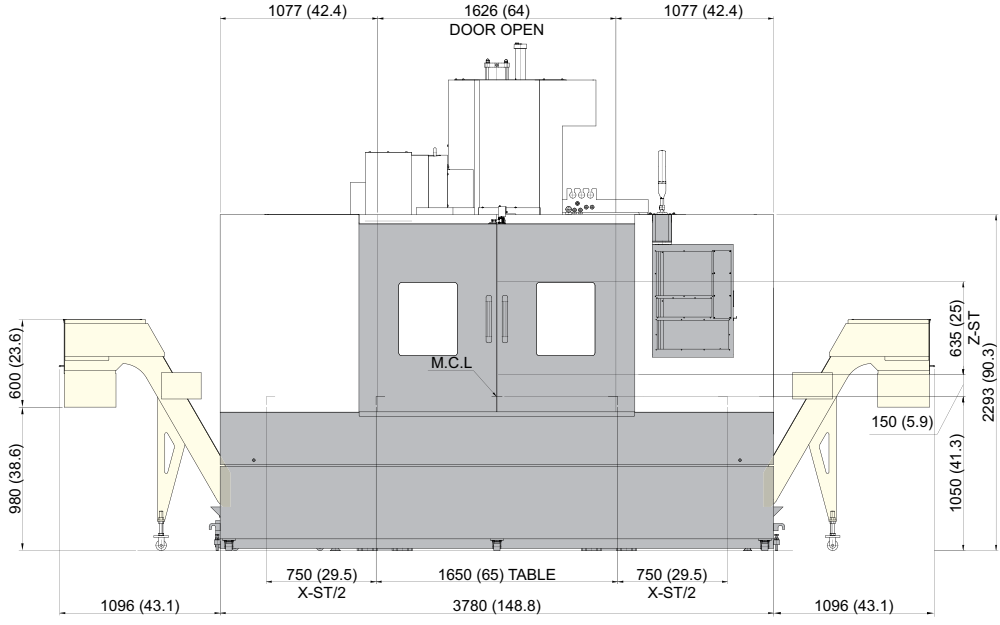


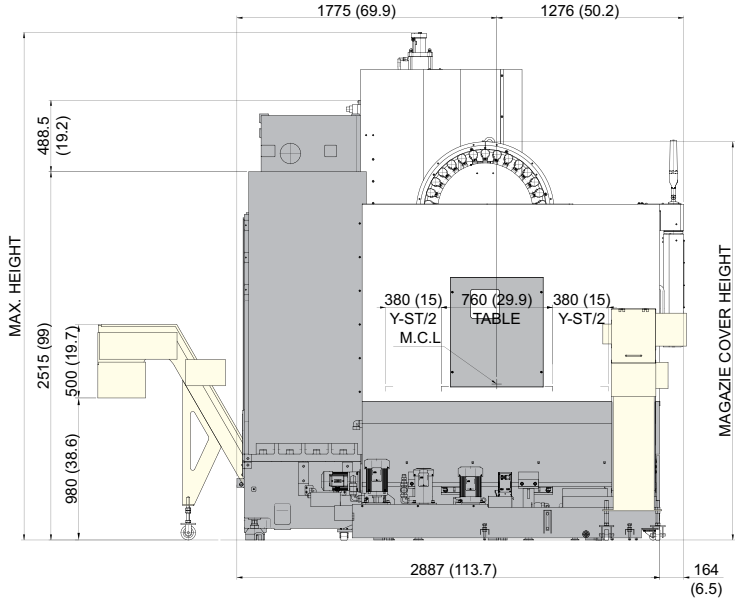
High Column : 300 mm (11.8″)

Model	Height Item	Max. Height	Height to Magazie Cover			Shipping Height	Spindle Motor Height
			24 tool	30 tool	40 tool		
KF6700B II	Std. Column	3,226 (127″)	-	2,620 (103.1″)	2,810 (110.6″)	2,780 (109.4″)	3,226 (127″)
	High Column	3,526 (138.8″)	-	2,920 (115″)	3,110 (122.4″)	3,080 (121.3″)	3,526 (138.8″)
KF6700B/50 II	Std. Column	3,276 (129″)	3,000 (118.1″)	2,720 (107.1″)	-	2,830 (111.4″)	3,276 (129″)
	High Column	3,576 (140.8″)	3,300 (129.9″)	3,020 (118.9″)	-	3,130 (123.2″)	3,576 (140.8″)

External Dimensions (KF7700B II)

unit : mm(in)





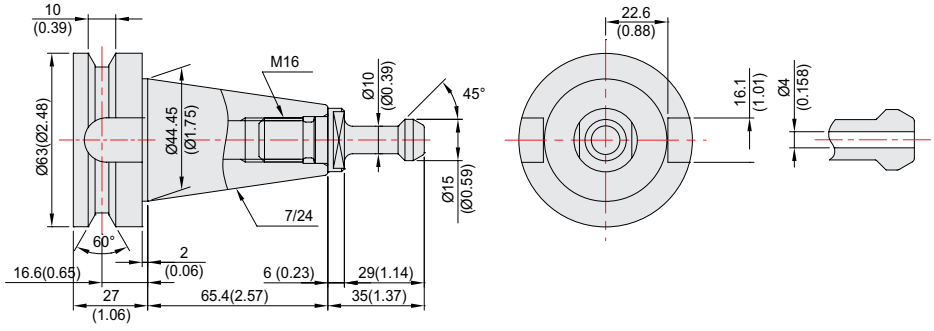
Model	Height Item	Max. Height	Height to Magazie Cover			Shipping Height	Spindle Motor Height
			24 tool	30 tool	40 tool		
KF7700B II	Std. Column	3,416 (134.5″)	-	2,720 (107.1″)	2,910 (114.6″)	3,003 (118.2″)	3,416 (134.5″)
KF7700B/50 II	Std. Column	3,466 (136.5″)	3,145 (123.8″)	-	2,820 (111″)	3,053 (120.2″)	3,466 (136.5″)

SPECIFICATIONS

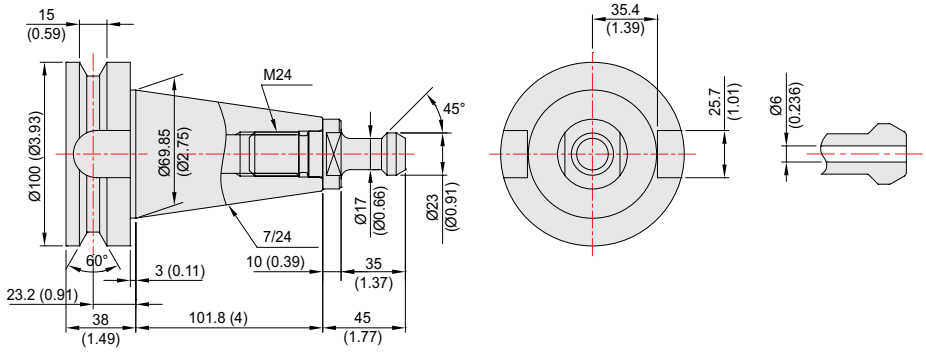
Tool Shank

unit : mm(in)

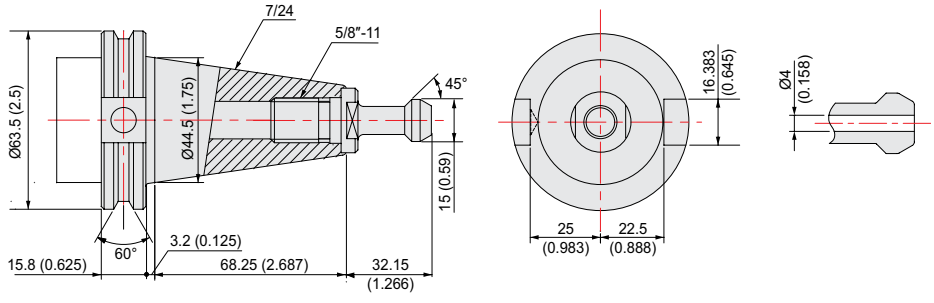
BT40



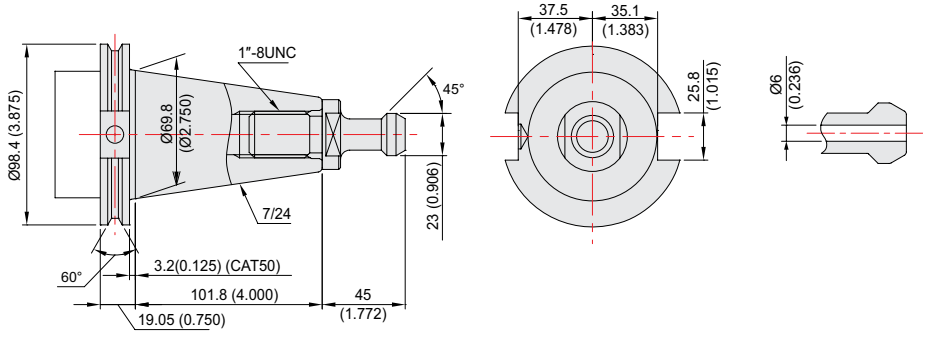
BT50



CAT40



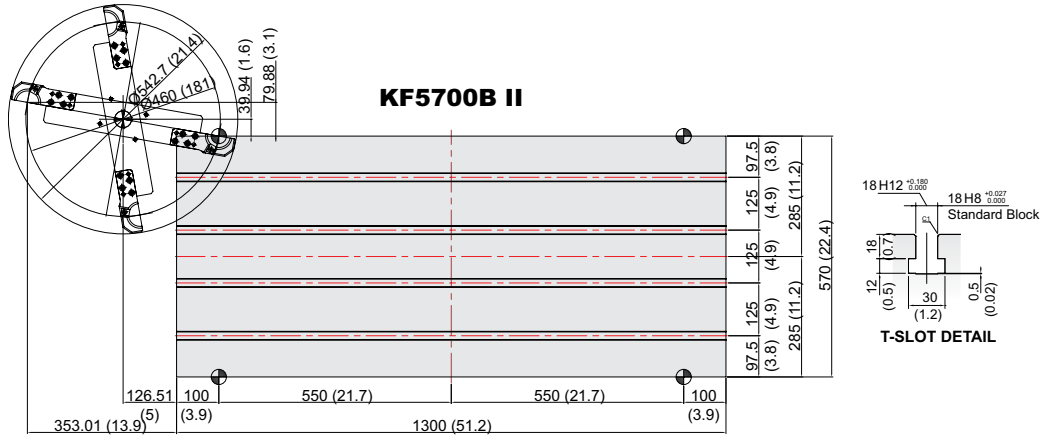
CAT50

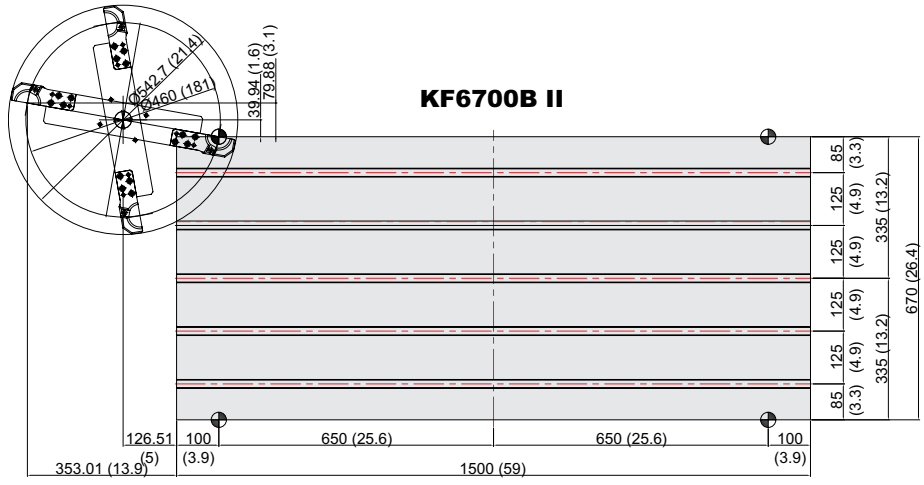


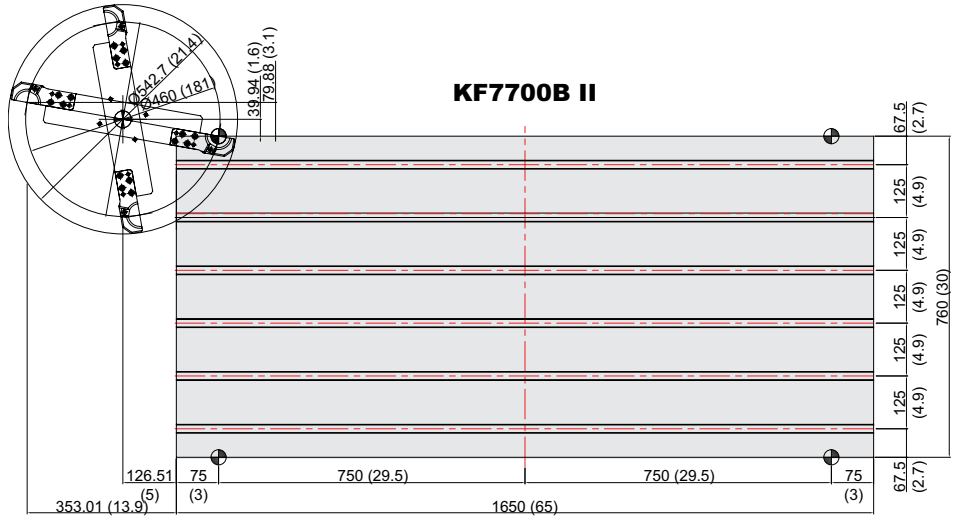
SPECIFICATIONS

Table Dimensions

unit : mm(in)







SPECIFICATIONS

Specifications

[ ] : Option

ITEM				KF5700B II	KF5700B/50 II
TABLE	Table Size (L×W)		mm(in)	1,300×570 (51.2″×22.4″)	
	Maximum Load Capacity		kg(lb)	1,000 (2,205)	
SPINDLE	Spindle Taper		-	NT40	NT50
	Spindle RPM		r/min	8,000 [12,000]	8,000 [6,000]
	Spindle Driving Method		-	DIRECT [DIRECT]	DIRECT [GEAR]
	Spindle Power Output (Max./Cont.)		kW(HP)	15/11 (20/15) [18.5/11 (25/15)]	15/11 (20/15) [18.5/15 (25/20)]
	Spindle Torque (Max.)		N·m(lbf·ft)	286/143 (210.9/105.5) [118/52.5 (87/38.7)]	286/143 (210.9/105.5) [586.3/475.4 (432.2/350.6)]
FEED	Travel (X/Y/Z)		mm(in)	1,100/570/520 (43.3″/22.4″/20.5″)	
	Rapid Traverse Rate (X/Y/Z)		m/min	30/30/24 (1,181/1,181/945)	
	Distance from Table Top to SP. Nose		mm(in)	150 (5.9″) ~ 670 (26.4″)	200 (7.9″) ~ 720 (28.3″)
	Distance from Column to SP. center		mm(in)	680	
	Slide Type		-	BOX GUIDE	
ATC	Number of Tools		ea	30[40]	24
	Tool Shank		-	BBT40	BBT50
	Max. Tool Dia. (W.T / W.O)		mm(in)	Ø80/Ø125 (3.1″/4.9″) [Ø76/Ø125 (3″/4.9″)]	Ø125/Ø250 (4.9″/9.8″)
	Max. Tool Length		mm(in)	300 (11.8″)	350 (13.8″)
	Max. Tool Weight		kg(lb)	8 (17.6)	15 (33)
	Tool Selection Method		-	RANDOM	
	Tool Change Time	C-C	sec	3.7	5.5
TANK CAPACITY	Coolant Tank		ℓ (gal)	340 (89.8)	
	Lubricating Tank		ℓ (gal)	4 (1)	
	Hydraulic Tank		ℓ (gal)	- (BOOSTER CYLINDER : DIRECT) / 3.9 (GEAR)	
POWER SUPPLY	Air Consumption (0.5MPa)		ℓ /min(gal)	110 (29)	
	Electric Power Supply		KVA	27 [24]	27 [29]
	Thickness of Power Cable		mm^2	Over 25	
	Voltage		V/Hz	220/60 (200/50)	
MACHINE	Floor Space (L×W)		mm(in)	2,974×2,510 (117.1″×98.8″)	
	Height		mm(in)	3,225 (127 ″) [High Column : 3,525 (138.8 ″)]	3,275 (128.9 ″) [High Column : 3,575 (140.7 ″)]
	Weight		kg(lb)	7,800 (17,196)	
NC	Controller		-	FANUC i Series - Smart Plus	

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Specifications

[ ] : Option

ITEM				KF6700B II	KF6700B/50 II
TABLE	Table Size (L×W)		mm(in)	1,500×670 (59″×26.4″)	
	Maximum Load Capacity		kg(lb)	1,300 (2,866)	
SPINDLE	Spindle Taper		-	NT40	NT50
	Spindle RPM		r/min	8,000 [12,000]	8,000 [6,000]
	Spindle Driving Method		-	DIRECT [DIRECT]	DIRECT [GEAR]
	Spindle Power Output (Max./Cont.)		kW(HP)	15/11 (20/15) [18.5/11 (25/15)]	15/11 (20/15) [18.5/15 (25/20)]
	Spindle Torque (Max.)		N·m(lbf·ft)	286/143 (210.9/105.5) [118/52.5 (87/38.7)]	286/143 (210.9/105.5) [586.3/475.4 (432.2/350.6)]
FEED	Travel (X/Y/Z)		mm(in)	1,300/670/635 (51.1″/26.4″/25″)	
	Rapid Traverse Rate (X/Y/Z)		m/min	30/30/24 (1,181/1,181/945)	
	Distance from Table Top to SP. Nose		mm(in)	150 (5.9″) ~ 785 (30.9″)	200 (7.9″) ~ 835 (32.9″)
	Distance from Column to SP. center		mm(in)	730 (28.7″)	
	Slide Type		-	BOX GUIDE	
ATC	Number of Tools		ea	30 [40]	24 [30]
	Tool Shank		-	BBT40	BBT50
	Max. Tool Dia. (W.T / W.O)		mm(in)	Ø80/Ø125 (3.1″/4.9″) [Ø76/Ø125 (3″/4.9″)]	Ø125/Ø250 (4.9″/9.8″)
	Max. Tool Length		mm(in)	300 (11.8″)	350 (13.8″)
	Max. Tool Weight		kg(lb)	8 (17.6)	15 (33)
	Tool Selection Method		-	RANDOM	
	Tool Change Time	C-C	sec	3.7	5.5
TANK CAPACITY	Coolant Tank		ℓ (gal)	390 (103)	
	Lubricating Tank		ℓ (gal)	4 (1)	
	Hydraulic Tank		ℓ (gal)	- (BOOSTER CYLINDER : DIRECT) / 3.9 (GEAR)	
POWER SUPPLY	Air Consumption (0.5MPa)		ℓ /min(gal)	110 (29)	
	Electric Power Supply		KVA	29 [26]	29 [32]
	Thickness of Power Cable		mm^2	Over 25	
	Voltage		V/Hz	220/60 (200/50)	
MACHINE	Floor Space (L×W)		mm(in)	3,338×2,662 (131.4″×104.8″)	
	Height		mm(in)	3,226 (127″) [High Column : 3,526 (138.8″)]	3,276 (129″) [High Column : 3,576 (140.8″)]
	Weight		kg(lb)	9,000 (19,842)	
NC	Controller		-	FANUC i Series - Smart Plus	

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Specifications

[ ] : Option

ITEM				KF7700B II	KF7700B/50 II
TABLE	Table Size (L×W)		mm(in)	1,650×760 (65″x30″)	
	Maximum Load Capacity		kg(lb)	1,500 (3,307)	
SPINDLE	Spindle Taper		-	NT40	NT50
	Spindle RPM		r/min	8,000 [12,000]	8,000 [6,000]
	Spindle Driving Method		-	DIRECT [DIRECT]	DIRECT [GEAR]
	Spindle Power Output (Max./Cont.)		kW(HP)	15/11 (20/15) [18.5/11 (25/15)]	15/11 (20/15) [18.5/15 (25/20)]
	Spindle Torque (Max.)		N·m(lbf·ft)	286/143 (210.9/105.5) [118/52.5 (87/38.7)]	286/143 (210.9/105.5) [586.3/475.4 (432.2/350.6)]
FEED	Travel (X/Y/Z)		mm(in)	1,500/760/635 (59″/30″/25″)	
	Rapid Traverse Rate (X/Y/Z)		m/min	30/30/24 (1,181/1,181/945)	
	Distance from Table Top to SP. Nose		mm(in)	150 (5.9″) ~ 785 (30.9″)	200 (7.9″) ~ 835 (32.9″)
	Distance from Column to SP. center		mm(in)	820 (32.3″)	
	Slide Type		-	BOX	
ATC	Number of Tools		ea	30 [40]	24 [40]
	Tool Shank		-	BBT40	BBT50
	Max. Tool Dia. (W.T / W.O)		mm(in)	Ø80/Ø125 (3.1″/4.9″) [Ø76/Ø125 (3″/4.9″)]	Ø125/Ø250 (4.9″/9.8″)
	Max. Tool Length		mm(in)	300 (11.8″)	350 (13.8″)
	Max. Tool Weight		kg(lb)	8 (17.6)	15 (33)
	Tool Selection Method		-	RANDOM	
	Tool Change Time	C-C	sec	3.7	5.5
TANK CAPACITY	Coolant Tank		ℓ (gal)	400 (105.7)	
	Lubricating Tank		ℓ (gal)	4 (1)	
	Hydraulic Tank		ℓ (gal)	- (BOOSTER CYLINDER : DIRECT) / 3.9 (GEAR)	
POWER SUPPLY	Air Consumption (0.5MPa)		ℓ /min(gal)	110 (29)	
	Electric Power Supply		KVA	29 [26]	29 [32]
	Thickness of Power Cable		mm^2	Over 25	
	Voltage		V/Hz	220/60 (200/50)	
MACHINE	Floor Space (L×W)		mm(in)	3,780×2,887 (148.8″×113.7″)	
	Height		mm(in)	3,416 (134.5″)	3,466 (136.5″)
	Weight		kg(lb)	12,200 (26,896)	
NC	Controller		-	FANUC i Series - Smart Plus	

Specifications are subject to change without notice for improvement.

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 axe 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 axe 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
Addition of custom macro	#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.

WIA MACHINE TOOLS

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