KF-B Series

HYUNDAI WIA Vertical Machining Center

HYUNDAI WIA

KF-B SERIES

The Fastest, the Most Versatile High end Linear Machining Center

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

ITEM	Spindle						Y Axis Stroke		
	Driect 8,000	Driect 12,000	Gear 8,000	Built-in 12,000	BT40	BT50	570 mm (22.4″)	670 mm (26.4″)	760 mm (30″)
KF5700B	●	○			●		●		
KF5700B/50	●		○			●	●		
KF6700B	●	○			●			●	
KF6700B/50	●		○			●		●	
KF7700B	●	○			●				●
KF7700B/50	●		○			●			●
KF760BM				●		●			●

●: Standard ○: Option

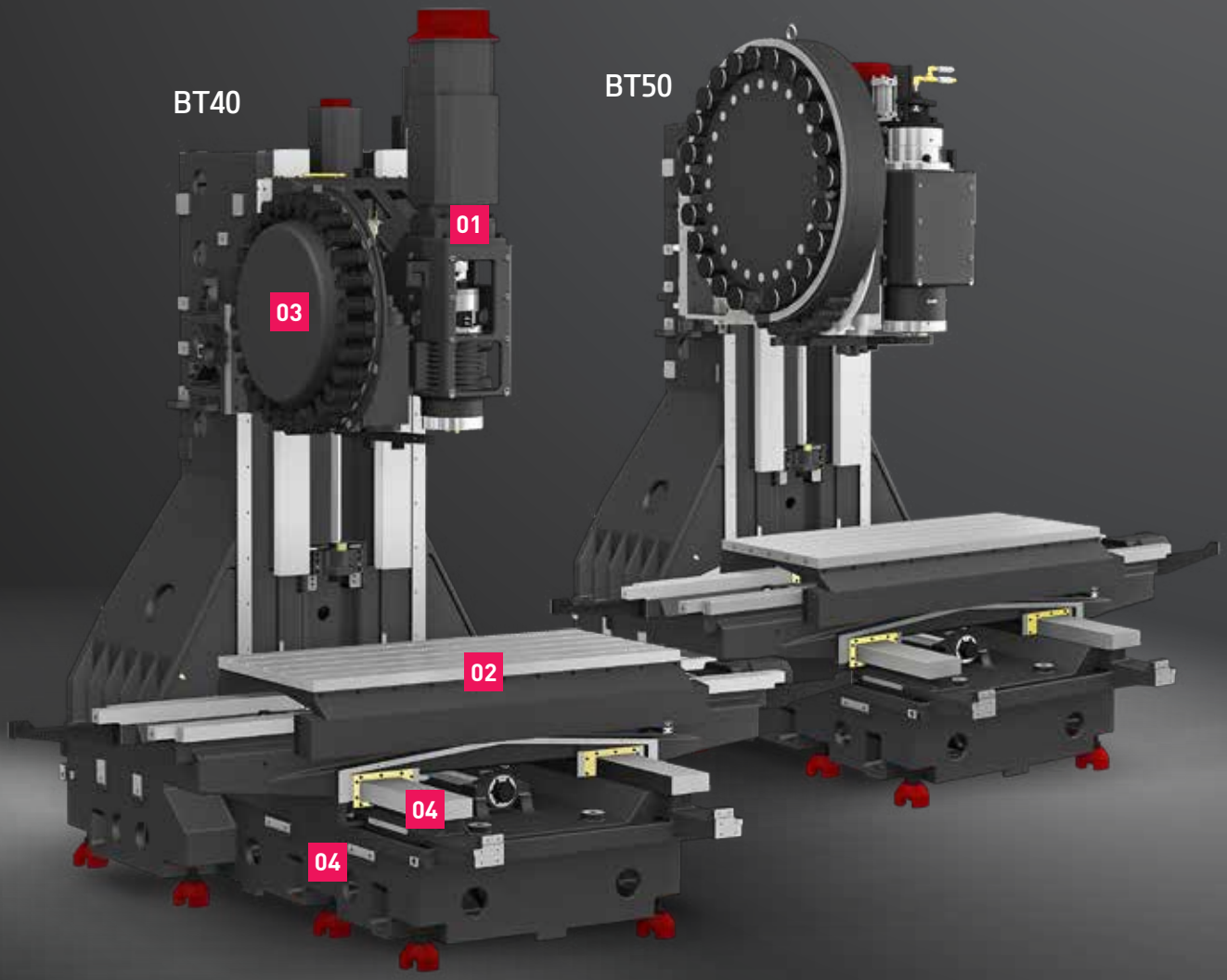

WIA KF 7608M
WIA KF 7700B/50

01

KF-B Series

KF5700B/6700B/7700B

Excellent Heavy Duty Cutting Capability & Productivity
Vertical Machining Center



KF5700B Travel

1,100/570/520 mm (43.3″/22.4″/20.5″) Travel (X/Y/Z)

KF6700B Travel

1,300/670/635 mm (51.1″/26.4″/25″) Travel (X/Y/Z)

KF7700B Travel

1,500/760/635 mm (59″/30″/25″) Travel (X/Y/Z)

KF5700/6700/7700B Rapid Traverse Rate

30/30/24 m/min (1,181/1,181/945 ipm) Rapid Traverse Rate (X/Y/Z)

Basic Features

01

Direct Driven Spindle

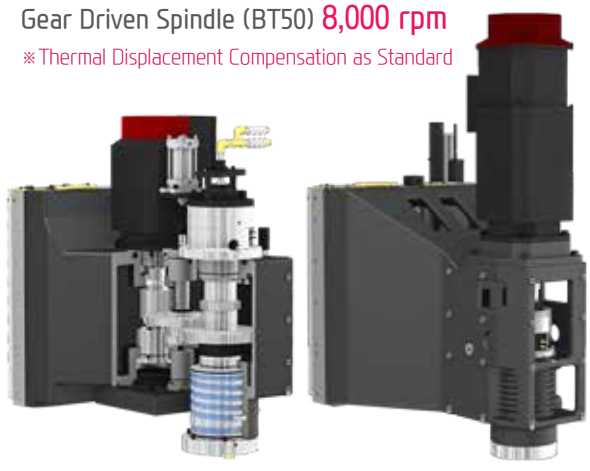
The motors and spindles are directly connected, thus shortening the spindle's acc./deceleration time. To achieve higher speed of the spindle, the design involves super-precision, hi-speed angular ball bearings, enabling an increased machining capability.

Gear Driven Spindle OPTION

The KF-B Series can be fitted with a gear-type spindle shift as an optional feature so ensure a shift to stable rotation at high speed from strong torque at low speed, thus offering a wider range of machining.

Direct Driven Spindle (BT40, BT50)
8,000 /12,000 rpm

Gear Driven Spindle (BT50) 8,000 rpm
※Thermal Displacement Compensation as Standard



<Gear Driven> <Direct Driven>

02

Table

Compared to competitive machines, the KF-B series has a large working capacity to make setup easier and provide convenience to the operator.

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

03

ATC & Magazine

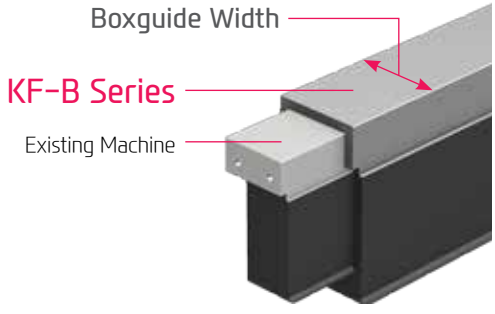
The tool magazine holds 30 tools as standard and 40 tools(BT50 : Std. 24EA, Opt. 30EA) as an option. Due to the wider selection of tools and the random tool selection method, tool change time has improved.

- Tool Change Time (C-C) : 3.5 sec

04 All Axis Large Boxgide way

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

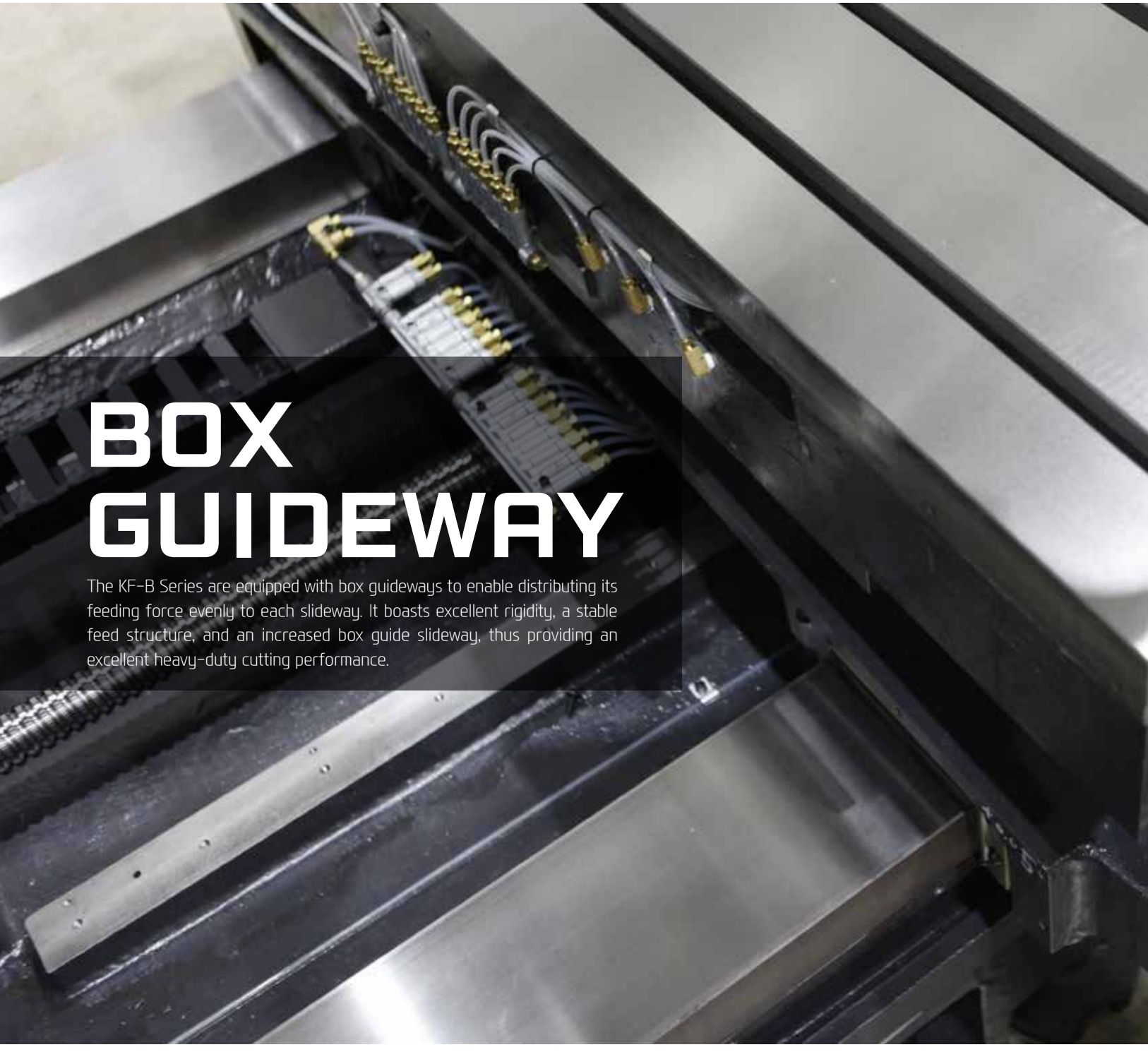
Division	X Axis Width	Y Axis Width	Z Axis Width
KF6700B	100mm (3.9″)	160mm (6.3″)	125mm (4.9″)
Existing Machine	100mm (3.9″)	100mm (3.9″)	100mm (3.9″)



02
KF-B Series

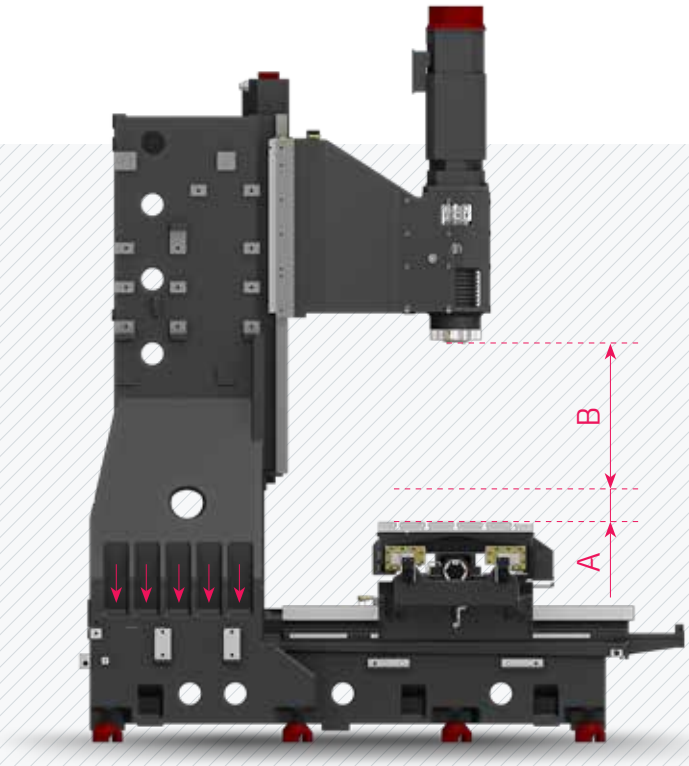
Slideway

Heavy Duty Cutting by High-Rigid & Accurate Mechanism



BOX GUIDEWAY

The KF-B 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.



KF5700B (A~B)

150~670 mm (5.9″~26.4″)
Distance from Table Top to SP. Nose

KF5700B/50 (A~B)

200~720 mm (7.9″~28.3″)
Distance from Table Top to SP. Nose

KF6700B | KF7700B (A~B)

150~785 mm (5.9″~30.9″)
Distance from Table Top to SP. Nose

KF6700B/50 | KF7700B/50 (A~B)

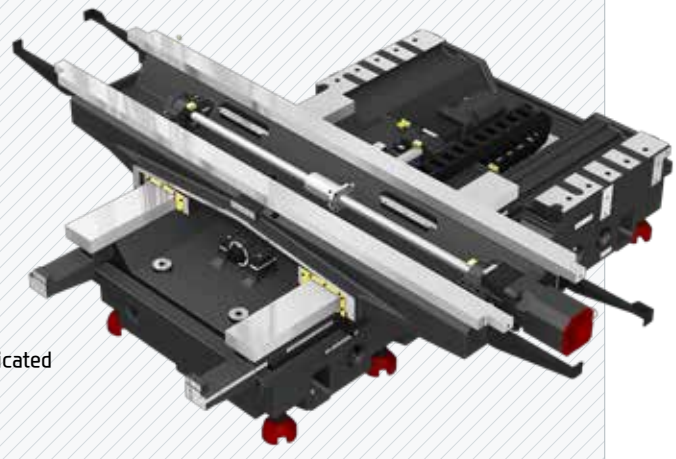
200~835 mm (7.9″~32.9″)
Distance from Table Top to SP. Nose

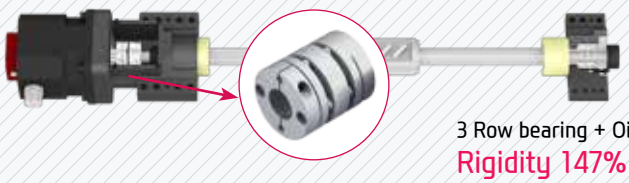
One Piece High Column Structure

Additional 300mm(11.8″) extension can be applied on the KF-B Series as an 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.
(Full scrapping of assembly area : 10 fixing bolts)





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

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.

03

KF-B Series

Direct Driven Spindle

Long Lasting High Accuracy & Excellent Performance

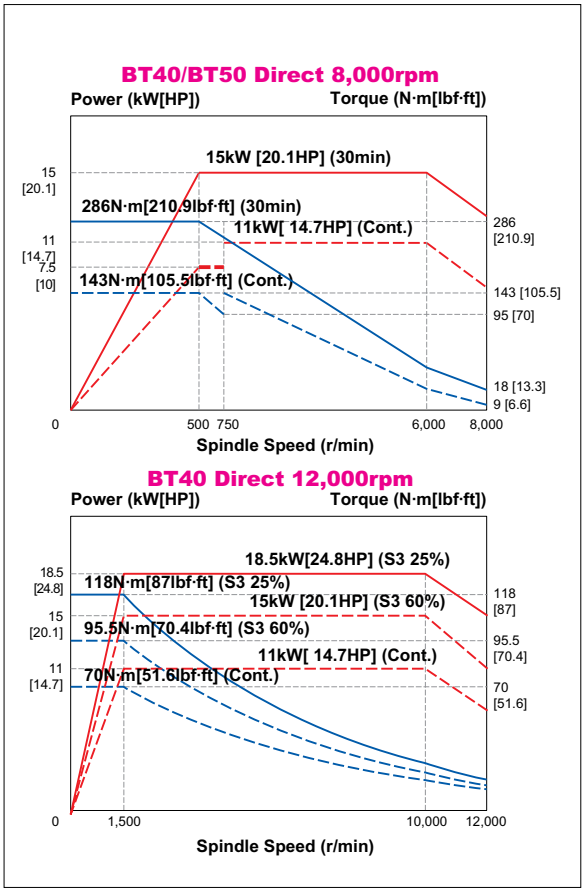
High-Performance, Direct Driven Spindle

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.

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
(**290** psi / **435** psi / **1,015** psi)



Dual Contact Spindle

The Big Plus spindle system provides dual contact between the spindle face and the flange face of the tool holder. This greatly increases tool rigidity, reduces run out and adds significant productivity to machining applications.

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.

<External cooling via head frame enhances chilling ability>

8,000rpm

15/11 kW (20.1/14.7 HP)
Spindle Output

286/143 N·m (210.9/105.5 lbf·ft)
Spindle Torque

12,000rpm

18.5/11 kW (24.8/14.7 HP)
Spindle Output

118/70 N·m (87/51.6 lbf·ft)
Spindle Torque

04

KF-B Series

Gear Driven Spindle

Long Lasting High Accuracy & Excellent Performance

Heavy-Duty Cutting

High-Power 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

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

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
(290 psi / 435 psi / 1,015 psi)

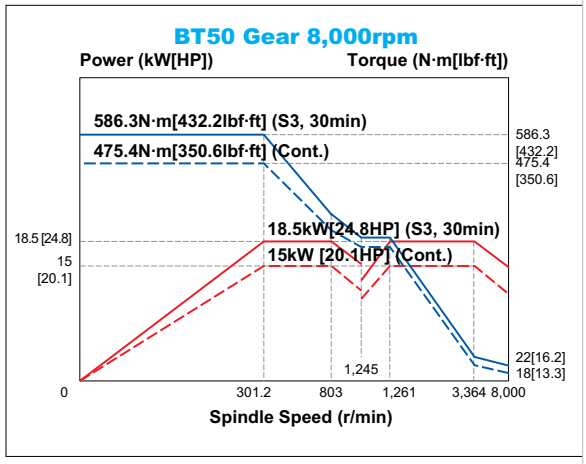
Dual Contact Spindle

The Big Plus spindle system provides dual contact between the spindle face and the flange face of the tool holder. This greatly increases tool rigidity, reduces run out and adds significant productivity to machining applications.

8,000rpm

18.5/15 kW (24.8/20.1 HP)
Spindle Output

586.3/475.4 N·m (432.2/350.6 lbf·ft)
Spindle Torque

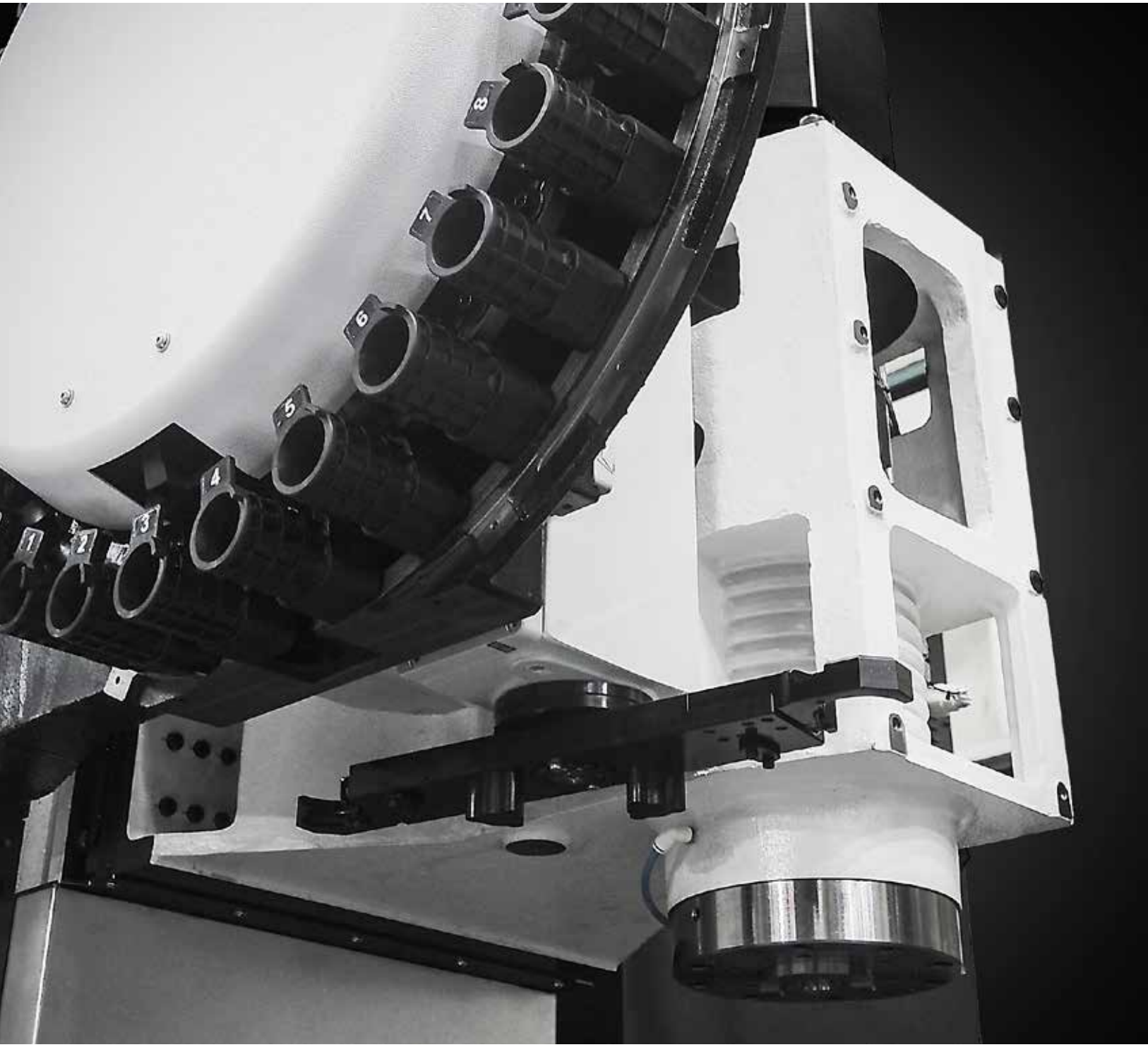


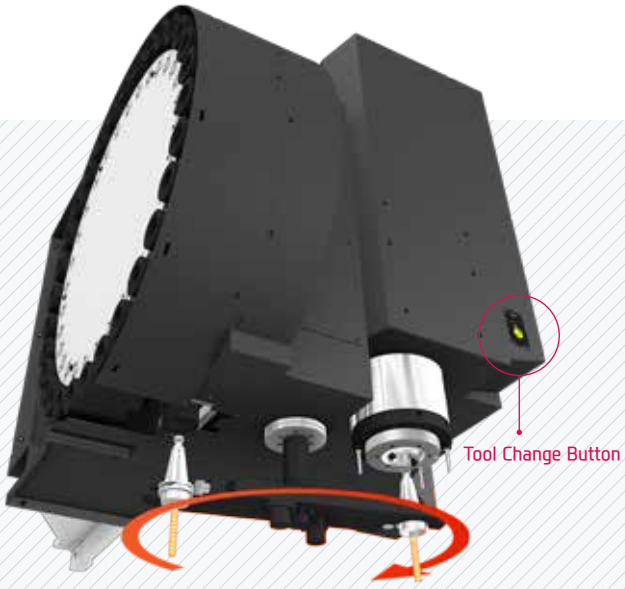
05

KF-B Series

ATC & Magazine

High Productivity Achieved with High Rigidity, Accuracy Machining





High Speed ATC

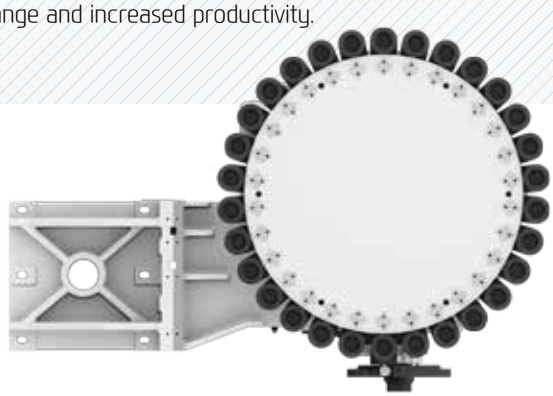
Position control through twin arm ATC on servo motors has been improved drastically.
In addition, tool exchanging has become easier, reducing specific cutting time tremendously.

⊙ Servo ATC

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

Magazine

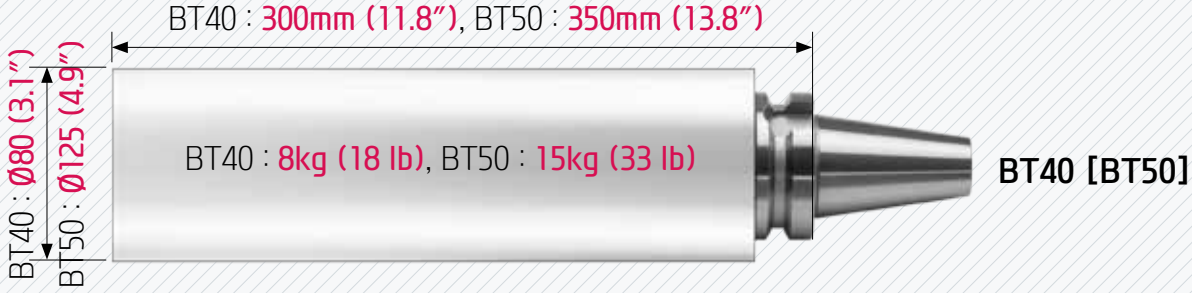
The tool magazine holds 30 tools as standard and 40 tools (BT50 : Std. 24EA, Opt. 30EA) as an option. Due to the wider selection of tools and the random tool selection method, tool change time has improved.



Magazine Drive Motor

- 40T : Servo Motor
- 30T : Geared Motor (Opt. Servo Motor)

⊙ No. of Tools : **BT40** 30 [40] EA, **BT50** 24 [**KF6700B/50** : 30] [**KF7700B/50** : 40] EA [ ] : Option



⊙ Max. Tool Weight : **BT40** 8 kg (18 lb) [**BT50** 15 kg (33 lb)]

⊙ Max. Tool Length : **BT40** 300 mm (11.8″) [**BT50** 350 mm (13.8″)]

⊙ Max. Tool Dia. (W.T / W.O) : **BT40** Ø80[Ø76]/Ø125 (3.1″[3″]/4.9″),
BT50 Ø125/Ø220 (4.9″/8.7″)

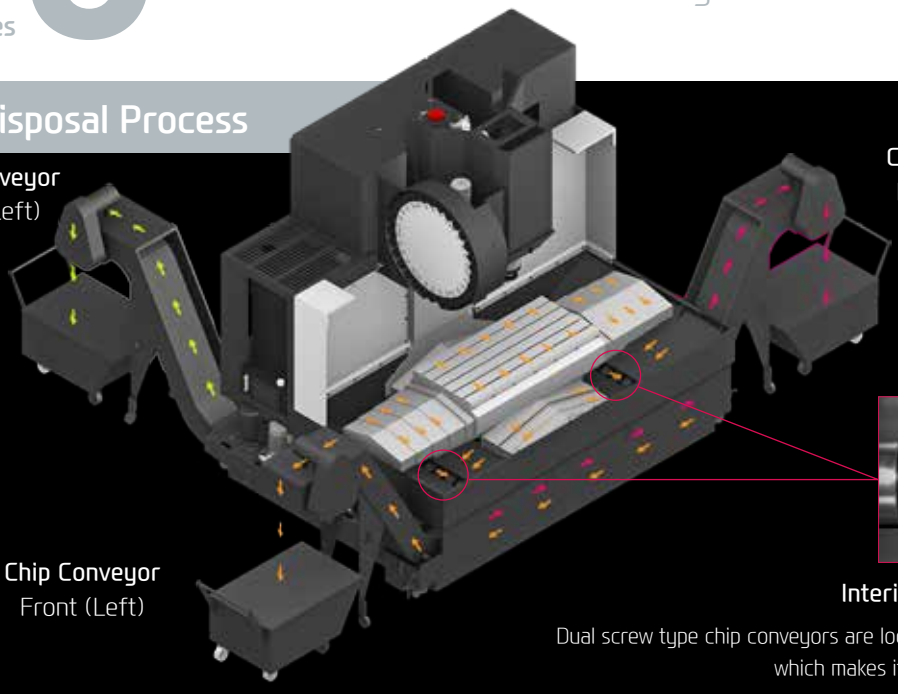
06

KF-B Series

User Convenience

Various Devices for User Friendly

Chip Disposal Process



Interior Screw Chip Conveyor

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.

Coolant Unit & Chip Conveyor

Timely and effective disposal of chips will enhance productivity as well as the working environment.

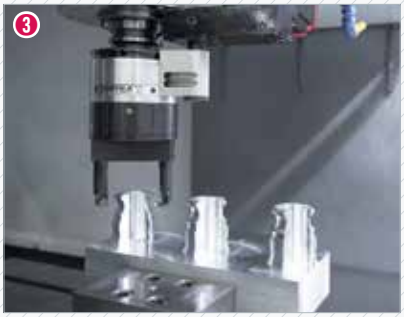
Chip Conveyor	Chip Type	Coolant Tank Type	Chip Exhaust Direction
Hinge	Chip Type : Roughing Chip, Long Chip, Chip complex Material : SS41, 45C, Cast Steel	Flood Type	Left, Right, Rear
	Chip Type : Micro Chip Material : AL	Upper Type	Left, Right
Scraper	Chip Type : Finely broken chip blown out Material : cast Iron, Nonferrous	Flood Type	Left, Right, Rear
❖ Screw	Chip Type : The lower portion of micro-chips Material : Steel, Casting	-	Left, Right
❖ Drum Filter	Chip Type : Powder, Micro Chip Material : AL	-	Left, Right, Rear

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

Flood Type

Upper Type

Optional



❶ Linear Scale OPTION

Linear scales can be applied when highly accurate positioning is required.

❷ NC Rotary Table OPTION

Additional axis machining is possible with the installation of NCRT.

❸ U-Center OPTION

The U-Center makes external and internal diameter turning possible, allowing for a wide range of variety in products.

❹ Hydraulic Supply Unit OPTION

Instead of the standard hydraulic supply unit, an optional fixture unit can bring the pressure up to 100 bar(1,450 bar) maximizing the clamping force on the fixture.

❺ Spindle Cooling Unit (More than 12K standard) OPTION

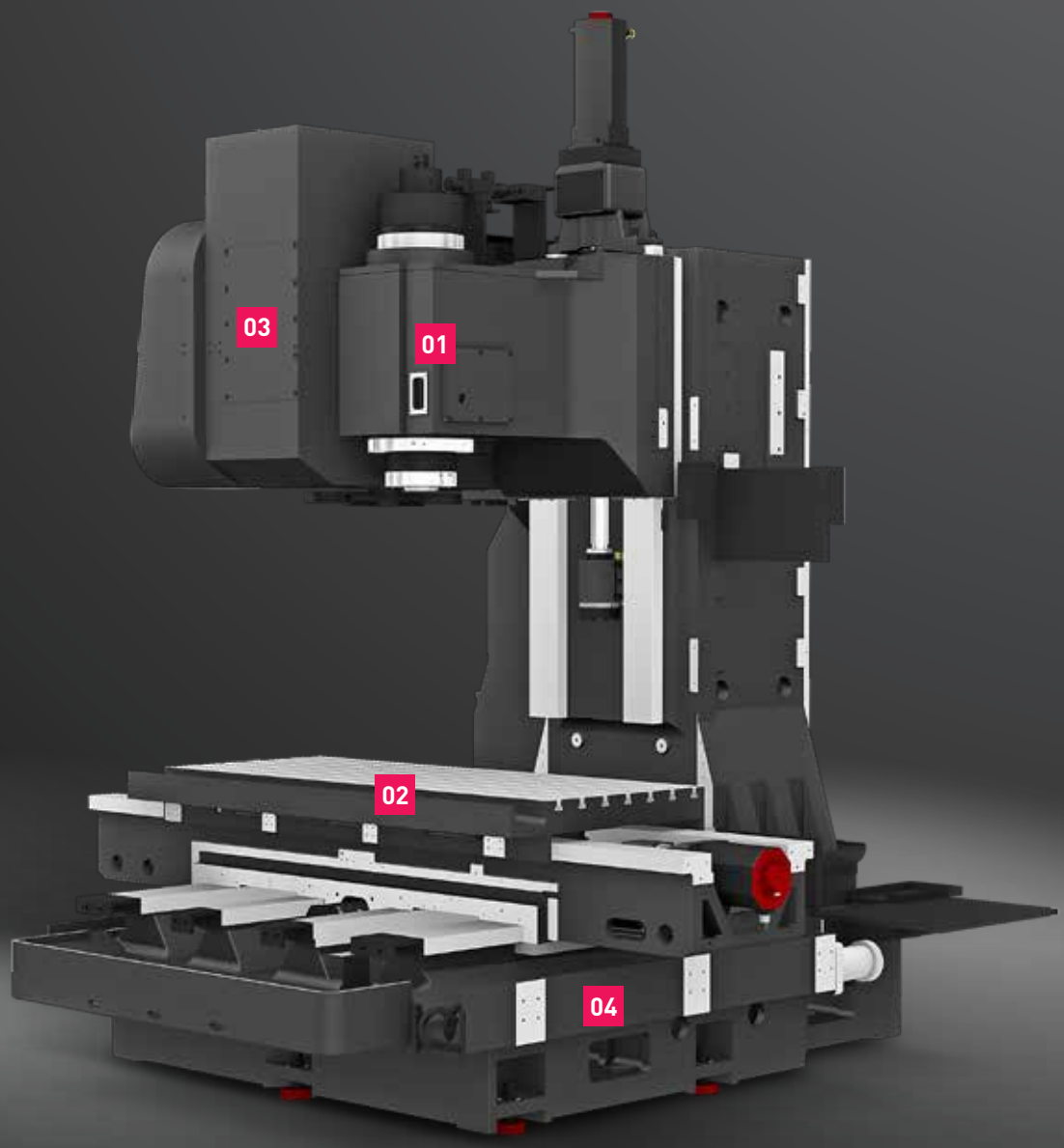
The cooling unit is installed within the side of the machine to minimize the installation area.

The application of the inverter type, ± 0.1 °, enables rapid and effective control of the spindle thermal displacement.

07
KF-B Series

KF760BM

Excellent Cutting Capability & Productivity
for Mold Machining



KF760BM

1,550/760/720	mm (61″/30″/28.3″) Travel (X/Y/Z)
16/16/12	m/min (630/630/472 ipm) Rapid Traverse Rate (X/Y/Z)

Basic Features

01

Built-in Spindle

Designed with a built-in motor structure, the spindle achieves maximum acceleration and deceleration by suppressing vibration and heat that can occur during high-speed rotation, and maintains stable accuracy even under high-speed heavy duty cutting.

※Thermal Displacement Compensation as Standard

⊙ Enhanced Rigidity by Weight Reduction

Especially, over-hang problem is decreased due to weight reduction(10%) of main spindle compare to the previous model to achieve high-quality mold machining.

02

Table

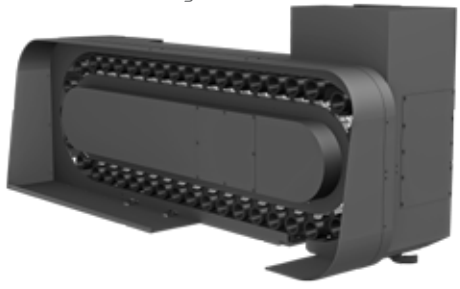
Compared to competitive machines, the KF760BM has a large working capacity to make setup easier and provide convenience to the operator.

Model	KF760BM
Size	1,800×700 mm (70.9"x27.6")
Load Capacity	2,000 kg (4,409 lb)

03

Magazine

Magazine of KF760BM is separated from the main column to aviod magazine vibration which can affect precise mold machining.



04 Optimal Structural Analysis

KF760BM is designed to have optimal structure through Hyundai WIA's unique structural analysis.
In particular, enhancement of bed and column's rigidity makes excellent performance even in heavy duty cutting.

⊙ Increased Rigidity through Structural Analysis

Compared to the previous model X Axis : **115% UP** Y Axis : **164% UP** Z Axis : **162% UP**

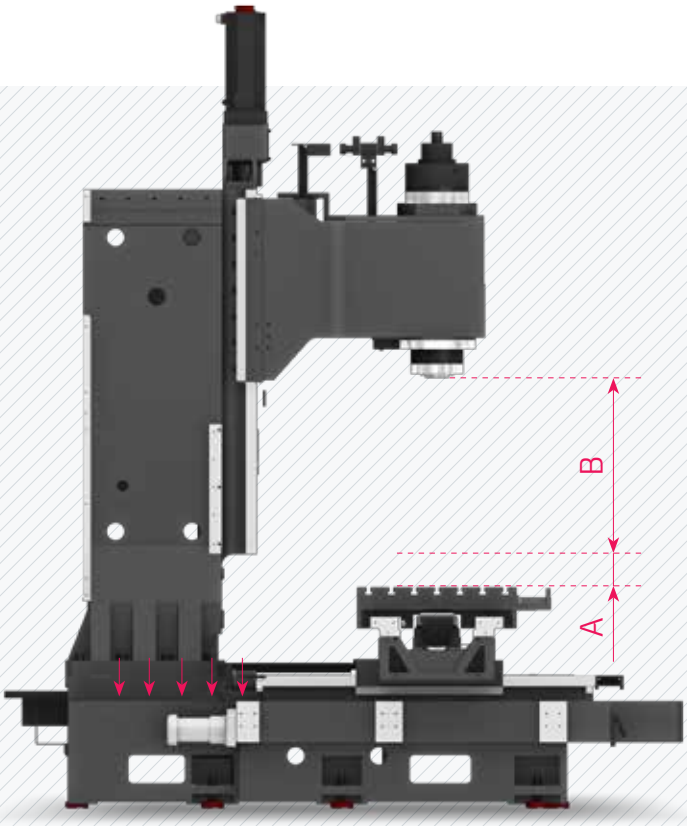
08
KF-B Series

Slideway

Heavy Duty Cutting by High-Rigid & Accurate Mechanism

Y-AXIS 4WAY STRUCTURE

KF760BM designed with 4-slide way of wide Y-axis to minimize the displacement by the over-hang, and it is possible to perform high-precision heavy-duty cutting. In addition, the box guideways are used to distribute the travel force evenly to each guide surface. This excellent rigidity and stable travel capability make outstanding performance in haevy-duty cutting.



One Piece High Column Structure

Additional 250mm(9.8″) extension can be applied on the KF760BM as an option.

KF760BM (A~B)

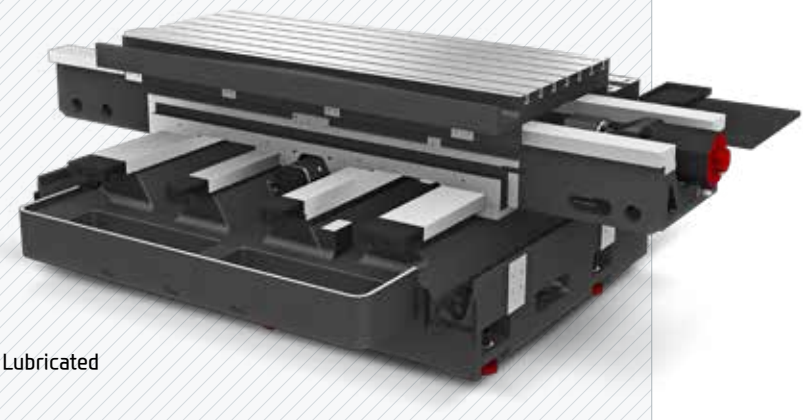
200~920 mm (7.9″~36.2″)
Distance from Table Top to SP. Nose

KF760BM High Column (A~B) OPTION

450~1,170 mm (17.7″~46″)
Distance from Table Top to SP. Nose

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.



3 Row bearing + Oil Lubricated

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.

09

KF-B Series

Built-in Spindle

Long Lasting High Accuracy & Excellent Performance

High-precision Built-in Spindle

By using ultra precision angular ball bearings, fast acceleration and deceleration of the main spindle is achieved. The spindle head is designed to minimize the heat displacement of main spindle, and with the use of hydraulic tool lock system, the machining stability has increased.

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.

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
(**290** psi / **435** psi / **1,015** psi)

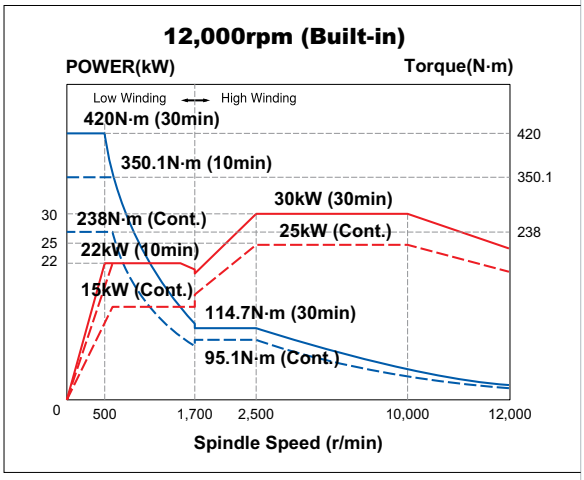
Dual Contact Spindle

The Big Plus spindle system provides dual contact between the spindle face and the flange face of the tool holder. This greatly increases tool rigidity, reduces run out and adds significant productivity to machining applications.

12,000rpm

30/25 kW (40.2/33.5 HP)
Spindle Output

420/238 N·m (309.8/175.5 lbf·ft)
Spindle Torque

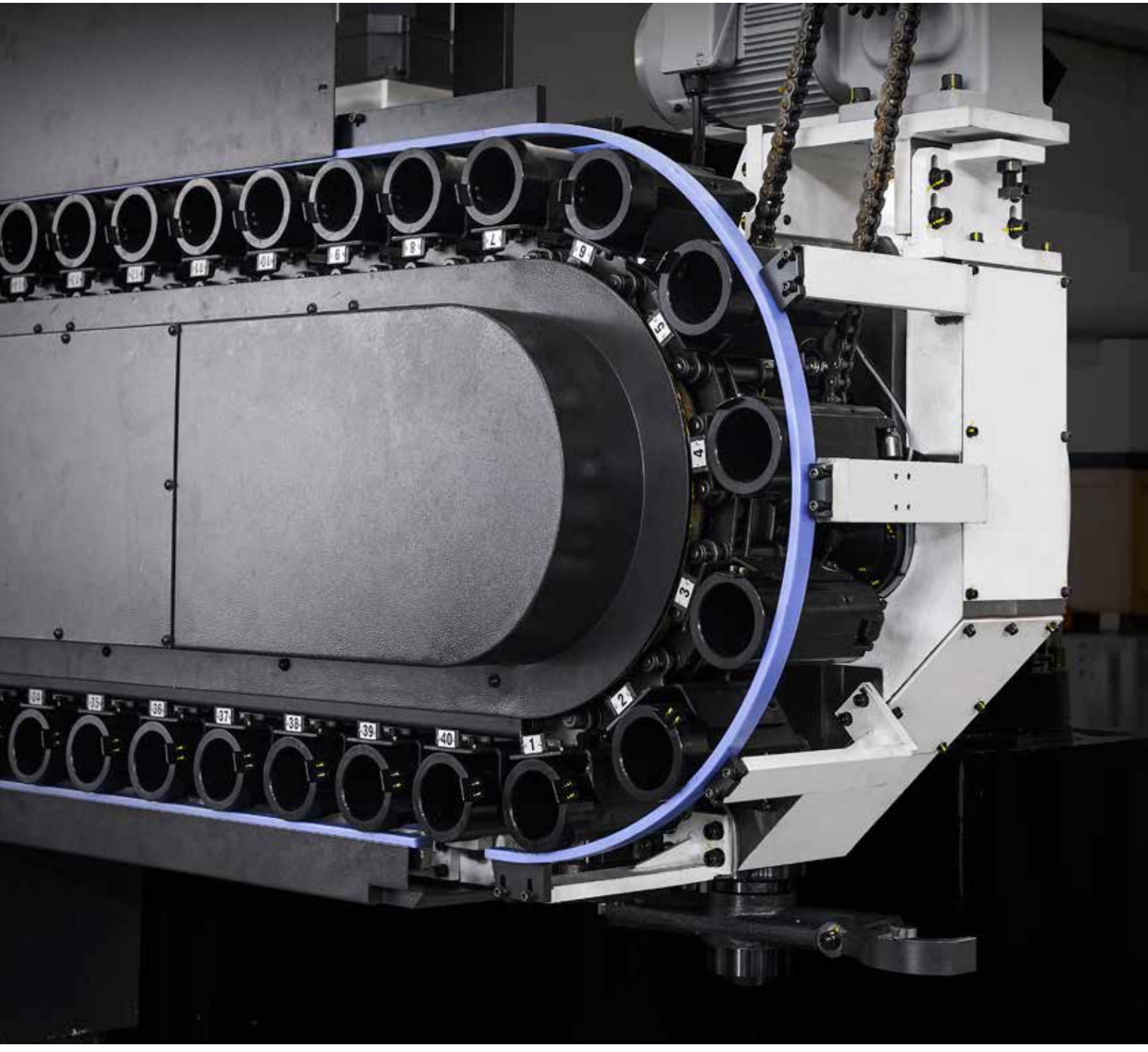


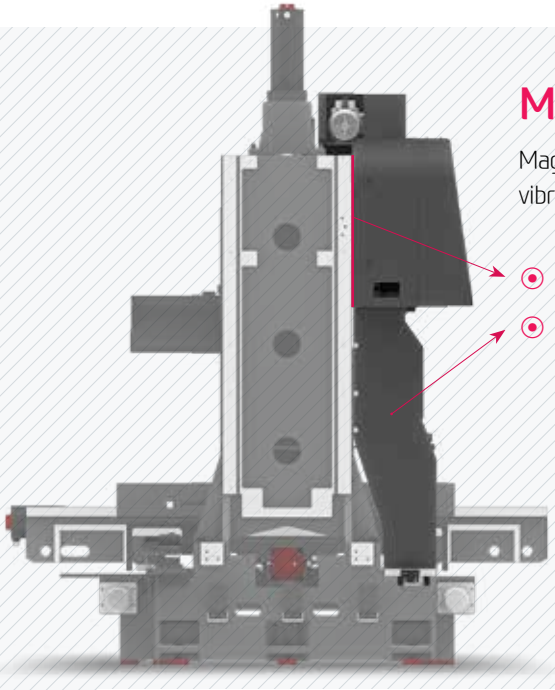
10

KF-B Series

ATC & Magazine

High Productivity Achieved with High Rigidity, Accuracy Machining

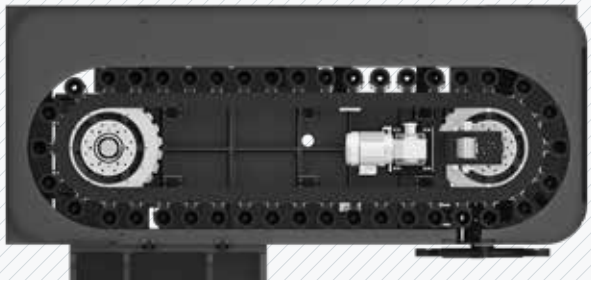




Magazine Separated Brackets

Magazine of KF760BM is separated from the main column to aviod magazine vibration which can affect precise mold machining.

- 10mm (0.4″) separation design between column and magazine
- Magazine Separated Brackets



‹ 30 Tool Magazine ›

Magazine

KF760BM provides a tool magazine of 30 tools as standard. 40 tools are provided as an option.
Also, ATC with high precision CAM provides fast and accurate tool change, reducing non-cutting time.

- No. of Tools : 30 [40] EA
- Max. Tool Weight : 25 kg (55 lb)
- Max. Tool Length :300 mm (11.8″)
- Max. Tool Dia. (W.T / W.O) : Ø125/Ø240 (4.9″/9.4″)

11

KF-B Series

Mold Package (KF760BM) OPTION

Powerful Mold Package, HYUNDAI-WIA Mold All in One

HWM ALL-IN-ONE

To enhance mold mahcining, the "HWM ALL-IN-ONE" is provided as a standard feature for KF760BM.

This ensures accurate and high quality surface finishing and contouring.

Mold Package Option (KF760BM)

HWM ALL IN ONE		1 Package	2 Package	3 Package	4 Package
AICC II Package	200 block	●	●		
	600 block			●	
	1,000 block				●
S/W : HW-MCS, HW-AFC		●	●	●	●
Auto Power Off		●	●	●	●
Spindle Heat Distortion Compensation Device (8 Channels)		●	●	●	●
Cutting Air Blow		●	●	●	●
Auto Tool Measuring Device		●	●	●	●
Data Server 1GB			●	●	●

❖ KF5700B/6700B/7700B not available with mold package option

CONTROLLER

- **High Speed Contouring Control (AICC II)**
  Recognizes NC Data prior to the current processing phase
- **Optimal S/W (FANUC 31i-B Model)**
  HW-MCS (Selectable Process Conditions)
  HW-AFC (Adapive Feed Control)
- **Automatic Power Off**

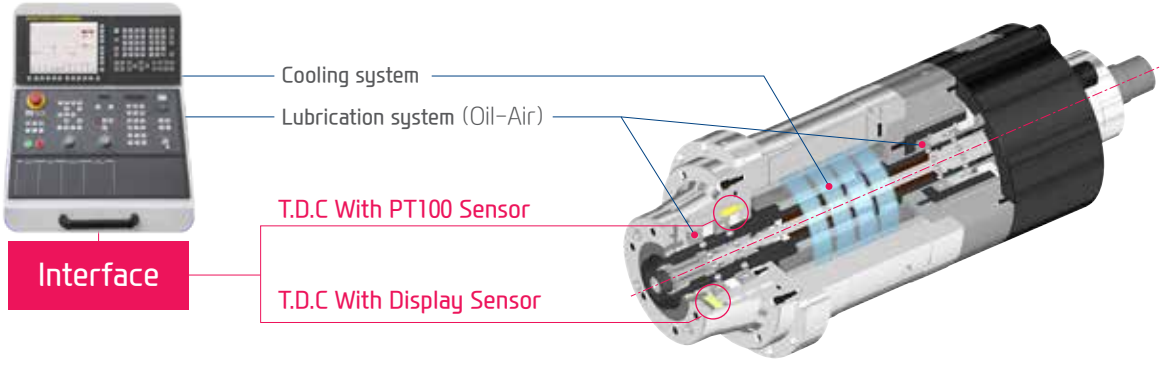
- **Main Spindle Cooling Device (8-channel)**
  Maintains temperature on the main spindle from thermal displacement. (heat sensor)

- **Cutting Air Blow**
  Cutting air blow is provided for mold machining.

- **Auto Tool Measuring Device (RENISHAW TS27R or LTS)**
  Detects and sets tool length, and attrition (Graphic User Interface included)

Thermal Displacement Compensation Device

Thermal displacement of the spindle is minimized by the use of cooling techniques.
This provides high accuracy when machining at high speed.



12 Smart System

KF-B Series

Software for Smart Operating and Machining

Faster processing and enhanced accuracy in are possible through the **HYUNDAI WIA Smart System**. The user friendly software and equipment monitoring of the Smart System maximizes productivity.

Interface Port

Convenience is increased when inputting and outputting program.
Because it is now capable of using USB port in addition to current way like CF memory card or LAN

Energy Saving Function(ECO) & SMART Machining

You can use energy saving function (ECO) and machining optimization function (SMART) with MCP button.

Mold-related Software (KF760BM Mold Package Standard)

HW-AFC

OPTION

HYUNDAI WIA
Adaptive Feed Control

Software that controls the feed automatically to maintain a certain working load to extend tool life as well as productivity.

HW-MCS

OPTION

HYUNDAI WIA
Machining Condition Selection

Software that automatically sets cutting and feeding parameters according to the machining types (speed, degree, quality)

Smart Factory HW-MMS (HYUNDAI WIA-Machine Monitoring System) OPTION

A brand new manufacturing machine by HYUNDAI WIA, HW-MMS is a unique software capable of monitoring the operation status of manufacturing machines in factories, a smart solution to improve manufacturing conditions of customers.

01 Real-time monitoring of machine operation status (Cloud)
02 History and statistics of machine operation (Cloud)
03 History and statistics of alarm occurrence (Cloud)
04 History and statistics of work count (Cloud)
05 Remote diagnosis (Remote)

HW-MCG

HYUNDAI WIA
Machine Guidance

Software that offers operation, maintenance, management monitoring and various user friendly features.

HW-TDC OPTION

HYUNDAI WIA Thermal
Displacement Compensation

Software that measures the changes in the external environment as well as heat emission during processing to help reduce thermal displacement.

HW-WARMUP

HYUNDAI WIA
WARMing Up

Warm-up software that measures main spindle halt and offers system warm-up time automatically.

HW-ESS

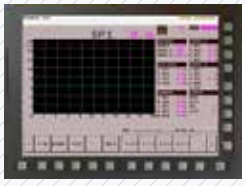
HYUNDAI WIA
Energy Saving System

An environmental friendly software that reduces the unnecessarily wasted standby power waiting for an operation.

HW-TOM OPTION

HYUNDAI WIA
Tool Offset Measurement

User friendly GUI software that indicates tool length, diameter, and damage (H/W excluded)



HW-TM OPTION

HYUNDAI WIA
Tool Monitoring

A tool monitoring software which analyzes the load of the spindle motor to determine and monitor possible damage of tools.

SPECIFICATIONS

Standard & Optional

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

Spindle		KF5700B	KF6700B	KF7700B
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	BT40	●	●	●
	CAT40	○	○	○
U-Center	D'andrea	○	○	○
Pull Stud	45°	●	●	●
	60°	–	–	–
	90°	–	–	–
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 (290 psi)	○	○	○
	30bar (435 psi), 20 ℓ (5.3 gal)	○	○	○
	70bar (1,015 psi), 15 ℓ (4 gal)	○	○	○
	70bar (1,015 psi), 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	☆	☆	☆

S/W		KF5700B	KF6700B	KF7700B
Machine Guidance (HW-MCG)		●	●	●
Tool Monitoring (HW-TM)		○	○	○
DNC Software (HW-eDNC)		○	○	○
Spindle Heat Distortion Compensation (HW-TDC)		○	○	○
Spindle Warm up Function (HW-WARMUP)		●	●	●
Energy Saving System (HW-ESS)		●	●	●
Machine Monitoring System (HW-MMS)		○	○	○
Tool Offset Measurement (HW-TOM)		☆	☆	☆
Machining Condition Selection (HW-MCS)		☆	☆	☆
Adaptive Feed Control (HW-AFC)		☆	☆	☆
Conversational Program (HW-DPRO)		○	○	○
Electric Device				
Call Light	1 Color : ■	●	●	●
Call Light	2 Color : ■ ■	○	○	○
Call Light	3 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	25kVA	○	○	○
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 (653 psi)	–	–	–
	70bar (1,015 psi)	○	○	○
	100bar (1,450 psi)	○	○	○
	Customized	☆	☆	☆
ETC				
Tool Box		●	●	●
Customized Color	Need for Munsel No.	☆	☆	☆
CAD&CAM Software		☆	☆	☆

SPECIFICATIONS

Standard & Optional

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

Spindle		KF5700B/50	KF6700B/50	KF7700B/50
8,000rpm (15kW [20.1HP])	DIRECT	●	●	●
8,000rpm (18.5kW [24.8HP])	GEAR	○	○	○
Spindle Cooling System		●	●	●
ATC				
ATC Extension	20	●	●	●
	30	–	○	–
	40	–	–	○
Tool Shank Type	BT50	●	●	●
	CAT50	○	○	○
U-Center	D'andrea	○	○	○
Pull Stud	45°	●	●	●
	60°	–	–	–
	90°	–	–	–
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 (290 psi)	○	○	○
	30bar (435 psi), 20 ℓ (5.3 gal)	○	○	○
	70bar (1,015 psi), 15 ℓ (4 gal)	○	○	○
	70bar (1,015 psi), 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	☆	☆	☆

S/W		KF5700B/50	KF6700B/50	KF7700B/50
Machine Guidance (HW-MCG)		●	●	●
Tool Monitoring (HW-TM)		○	○	○
DNC Software (HW-eDNC)		○	○	○
Spindle Heat Distortion Compensation (HW-TDC)		○	○	○
Spindle Warm up Function (HW-WARMUP)		●	●	●
Energy Saving System (HW-ESS)		●	●	●
Machine Monitoring System (HW-MMS)		○	○	○
Tool Offset Measurement (HW-TOM)		☆	☆	☆
Machining Condition Selection (HW-MCS)		☆	☆	☆
Adaptive Feed Control (HW-AFC)		☆	☆	☆
Conversational Program (HW-DPRO)		○	○	○
Electric Device				
Call Light	1 Color : ■	●	●	●
Call Light	2 Color : ■ ■	○	○	○
Call Light	3 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	25kVA	○	○	○
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 TableI/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 (653 psi)	–	–	–
	70bar (1,015 psi)	○	○	○
	100bar (1,450 psi)	○	○	○
	Customized	☆	☆	☆
ETC				
Tool Box		●	●	●
Customized Color	Need for Munsel No.	☆	☆	☆
CAD&CAM Software		☆	☆	☆

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Standard & Optional

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

Spindle		KF760BM
12,000rpm Built-in (30/25kW[40.2/33.5HP])	FANUC	●
Spindle Cooling System		●
ATC		
ATC Extension	20	●
	30	○
Tool Shank Type	BBT50	●
	BT50	–
	CAT50	○
U-Center	D'andrea	○
Pull Stud	45°	●
	60°	○
	90°	○
Table & Column		
APC	Rorary Turn	–
Tap Type Pallet		–
T-Slot Pallet		●
NC Rotary Table		☆
High Column	250mm(9.8")	○
	300mm(11.8")	–
Coolant System		
Std. Coolant (Nozzle)		●
Bed Flushing Coolant		●
Through spindle coolant*1)	20bar (290 psi)	○
	30bar (435 psi), 20 ℓ (5.3 gal)	○
	70bar (1,015 psi), 15 ℓ (4 gal)	○
	70bar (1,015 psi), 30 ℓ (7.9 gal)	○
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	400 ℓ (105.7 gal)	●
	690 ℓ (182.3 gal)	–
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 [47.5 gal])	○
	Swing (200 ℓ [52.8 gal])	☆
	Large Swing (290 ℓ [76.6 gal])	☆
	Large Size (330 ℓ [87.2 gal])	☆
	Customized	☆
S/W		
Machine guidance (HW-MCG)		●
Tool Monitoring (HW-TM)		○
DNC Software (HW-eDNC)		○
Spindle Heat Distortion Compensation (HW-TDC)		○ (Mold Package ●)
Spindle Warm up Function (HW-WARMUP)		●
Energy Saving System (HW-ESS)		●

S/W		KF760BM
Machine Monitoring System (HW-MMS)		○
Tool Offset Measurement (HW-TOM)		☆ (Mold Package ●)
Machining Condition Selection (HW-MCS)		☆ (Mold Package ●)
Adaptive Feed Control (HW-AFC)		☆ (Mold Package ●)
Conversational Program (HW-DPRO)		○
Electric Device		
Call Light	1 Color : ■	●
Call Light	2 Color : ■ ■	○
Call Light	3 Color : ■ ■ ■	○
Call Light & Buzzer	3 Color : ■ ■ ■ B	○
Work Light		●
Electric Cabinet Light		○
Remote MPG		●
3 Axis MPG	FANUC	○
	SIEMENS	–
Work Counter	Digital	○
Total Counter	Digital	○
Tool Counter	Digital	○
Multi Tool Counter	6 EA	○
	9 EA	○
Electric Circuit Breaker		○
AVR (Auto Voltage Regulator)		☆
Transformer	40kVA	○
	45kVA	–
Auto Power Off		○ (Mold Package ●)
Back up Module for Black out		○
Measuring Device		
Air Zero	TACO	○
	SMC	○
Work Measuring Device		○
TLM (Marposs/Renishaw/Blum)	Touch	○ (Mold Package ●)
	Laser	○
Tool Broken Detective Device		☆
Linear Scale	X/Y/Z Axis	○
Coolant Level Sensor (Only for Chip Conveyor, Bladder Type)		☆
Enviornment		
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 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	70bar (1,015 psi) / 13 ℓ (3.4 gal)	–
Fixture Hyd. Unit	45bar (652.7 psi)	○
	70bar (1,015 psi)	○
	100bar (1,450 psi)	☆
	Customized	☆
ETC		
Tool Box		●
Customized Color	Need for Munsel No.	☆
CAD&CAM Software		☆

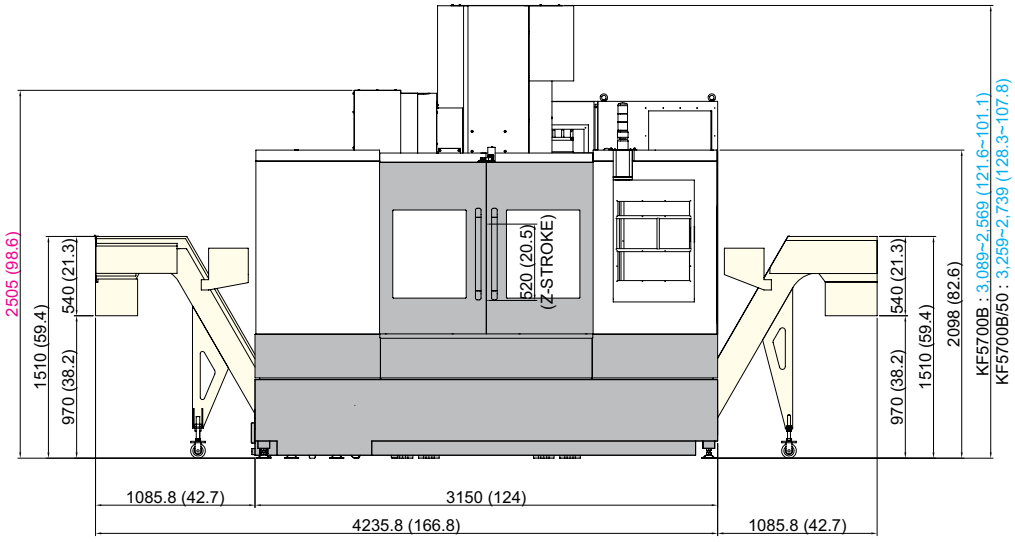
*1 : Please check the filter types with sales representative.

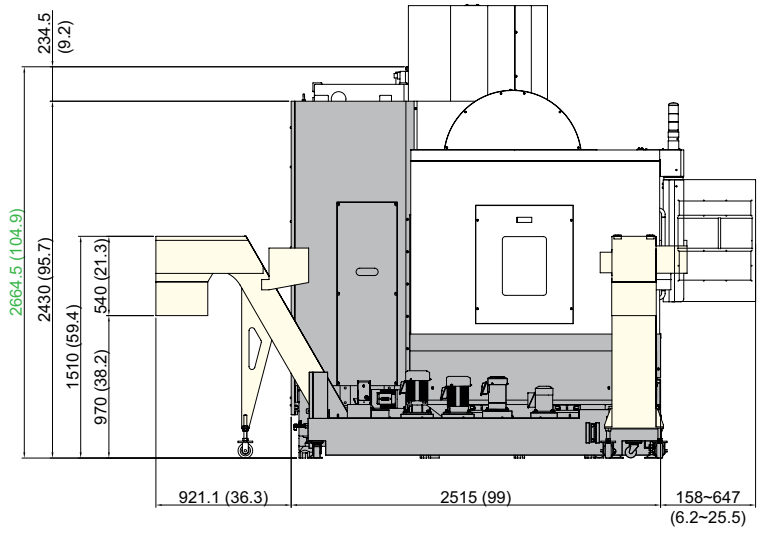
Specifications are subject to change without notice for improvement.

External Dimensions

unit : mm

KF5700B





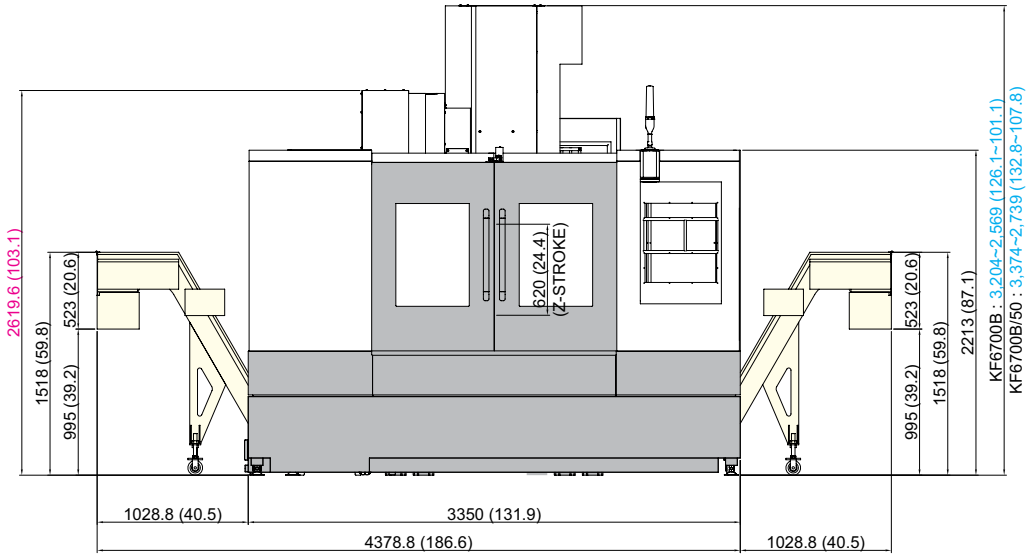
■ : Max. height | ■ : Height to ATC cover | ■ : Height to Z-axis motor

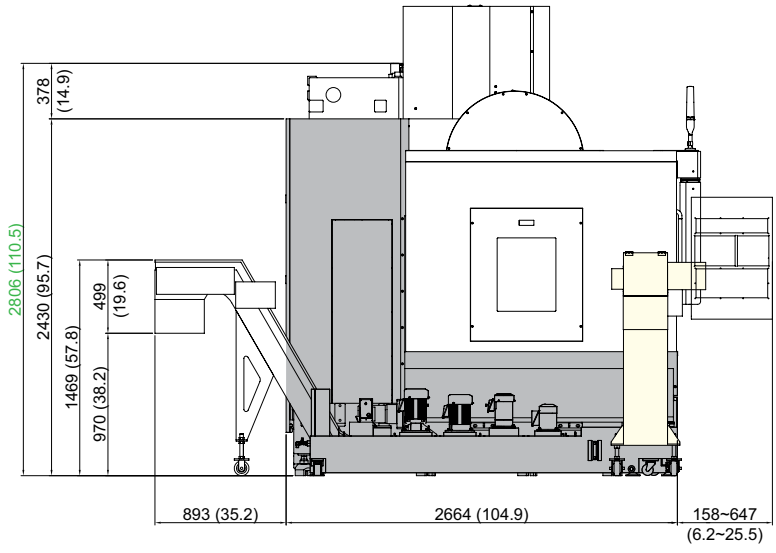
SPECIFICATIONS

External Dimensions

unit : mm(in)

KF6700B



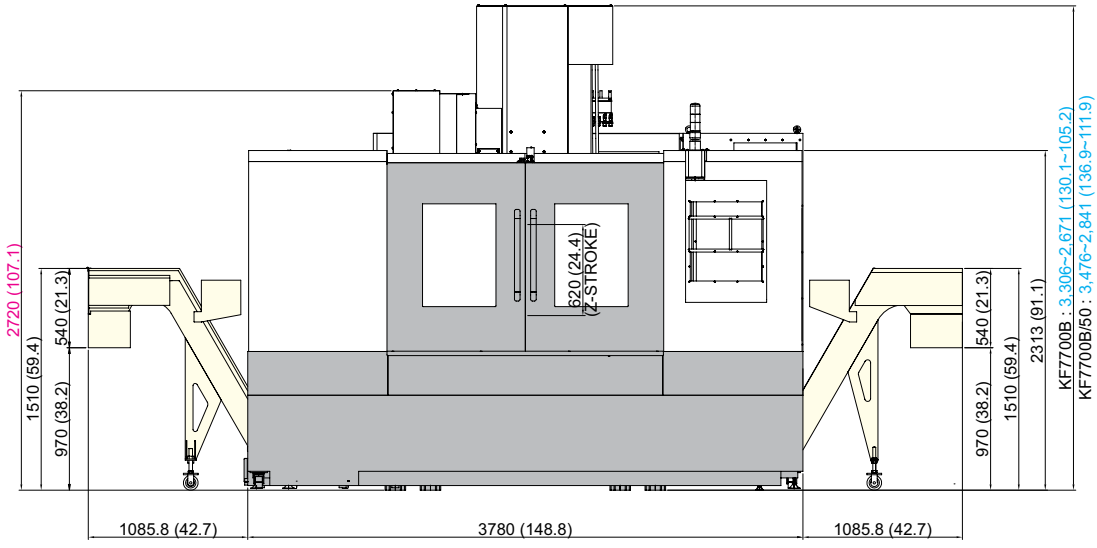


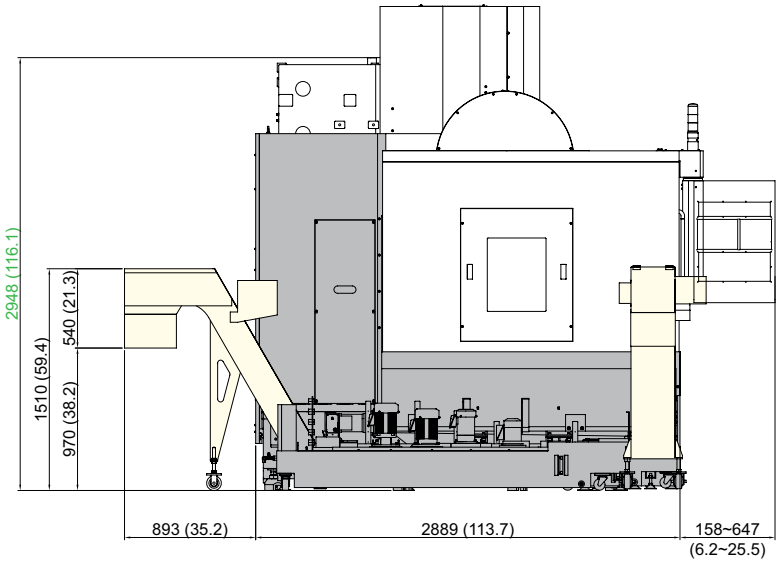
■ : Max. height | ■ : Height to ATC cover | ■ : Height to Z-axis motor

External Dimensions

unit : mm(in)

KF7700B





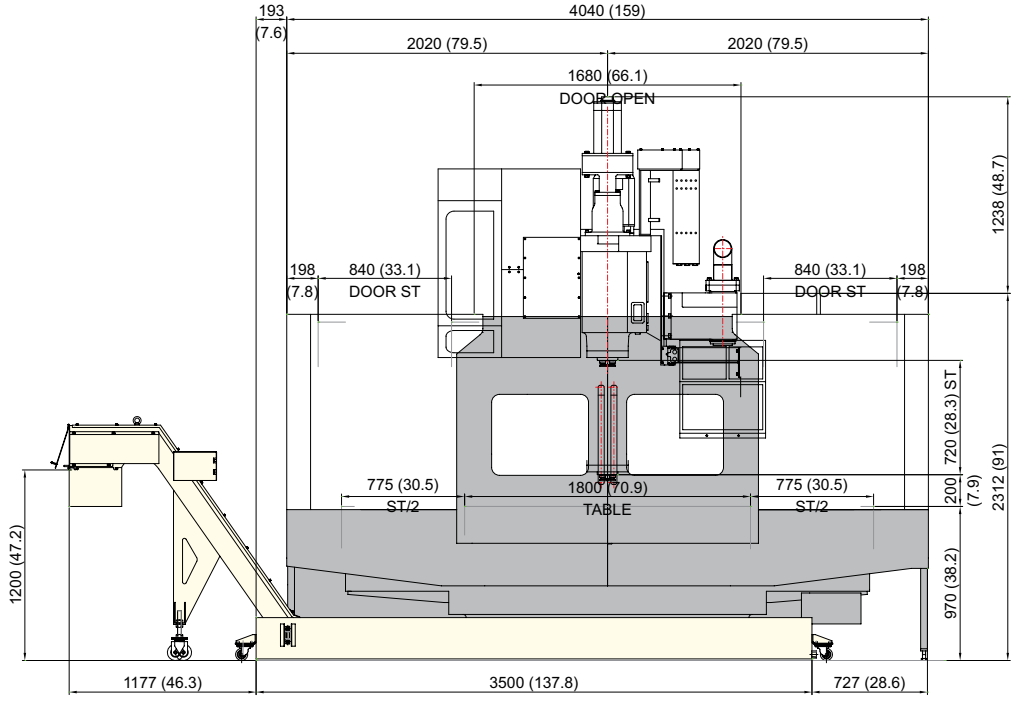
■ : Max. height | ■ : Height to ATC cover | ■ : Height to Z-axis motor

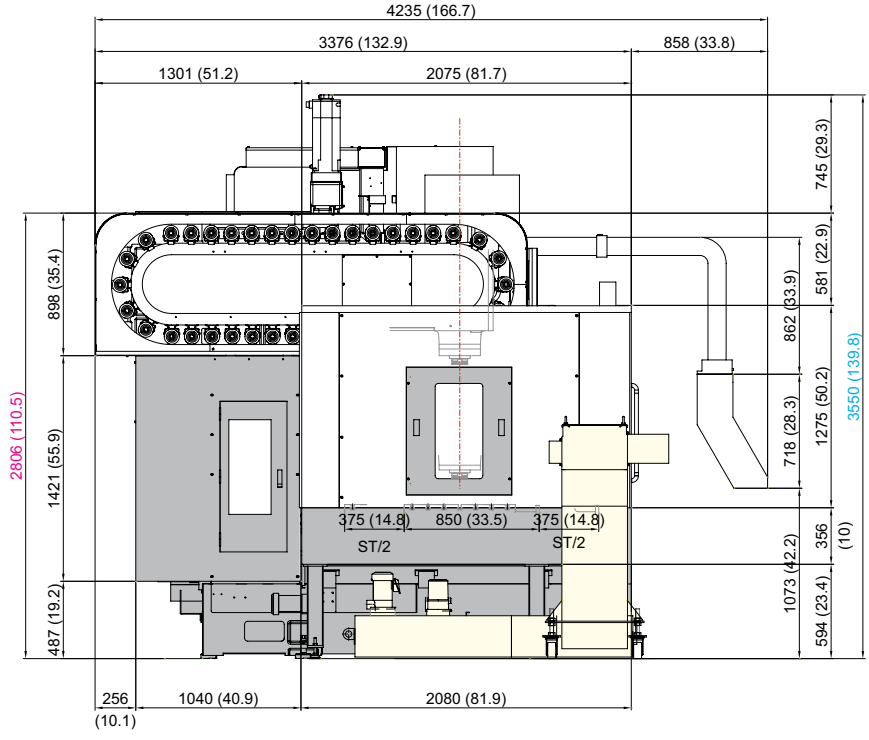
SPECIFICATIONS

External Dimensions

unit : mm(in)

KF760BM





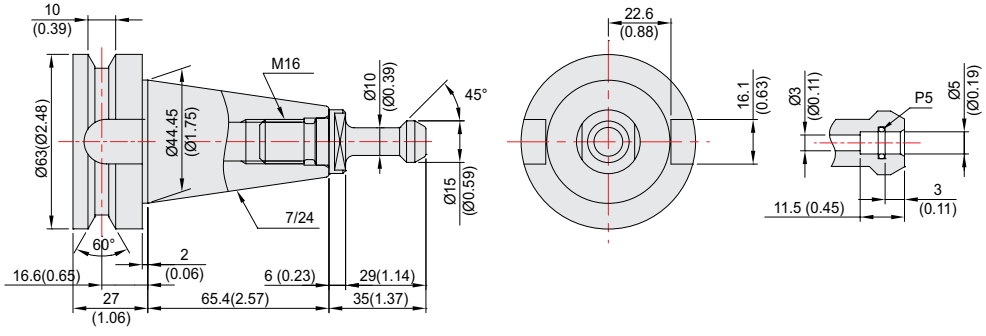
■ : Max. height | ■ : Height to ATC cover

SPECIFICATIONS

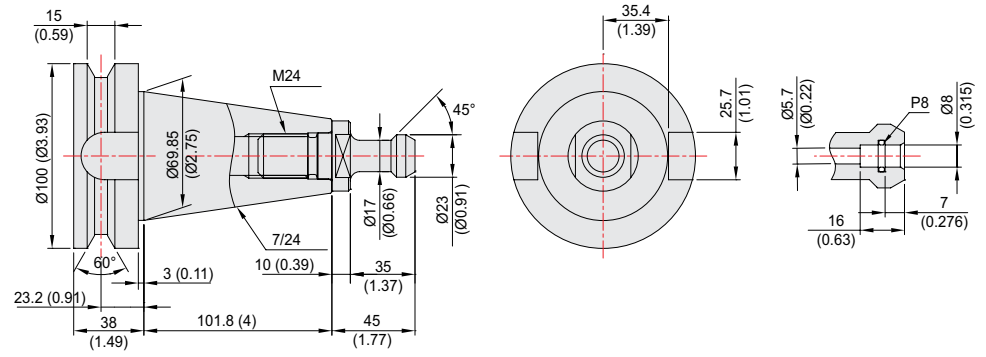
Tool Shank

unit : mm(in)

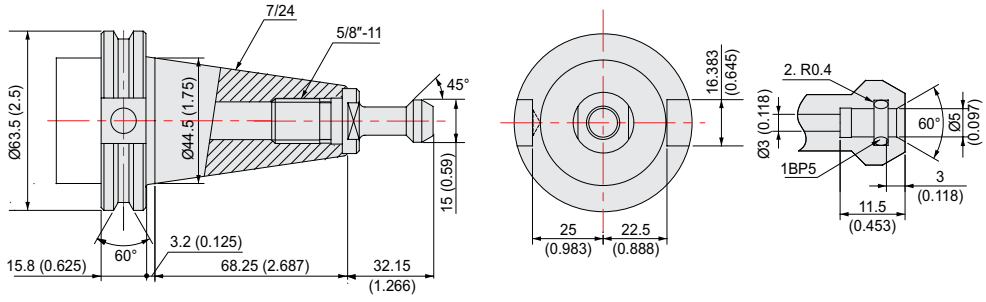
BT40



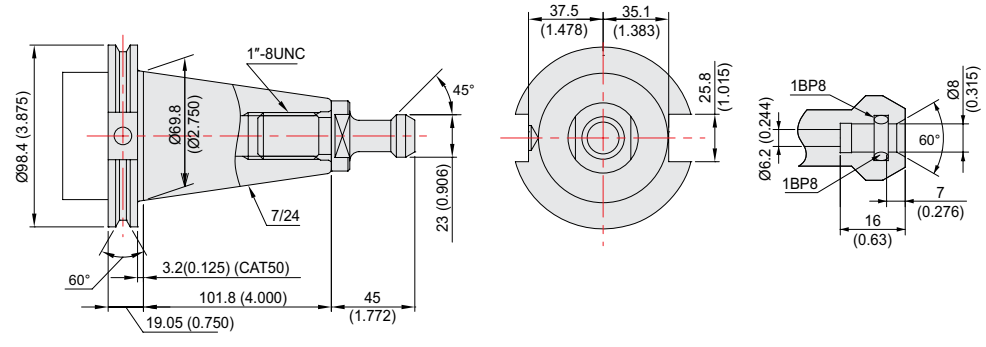
BT50



CAT40



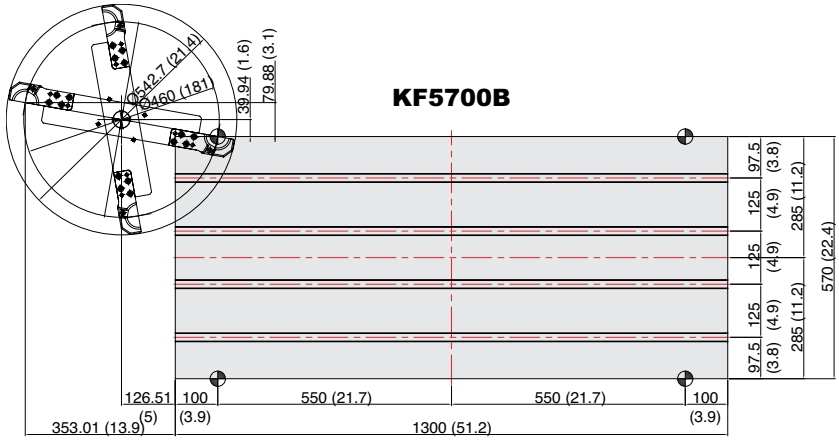
CAT-50

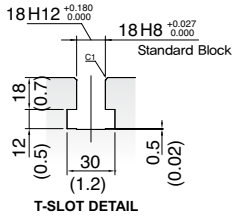


SPECIFICATIONS

Table Dimensions

unit : mm(in)





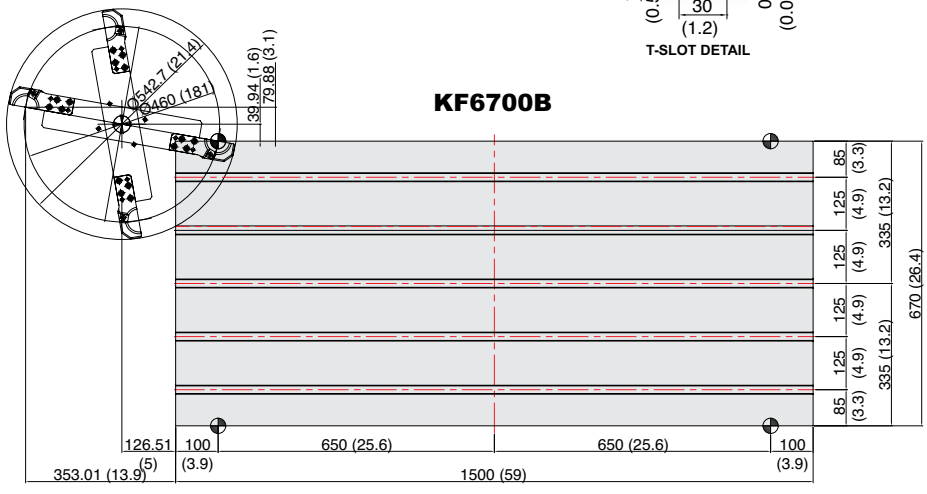
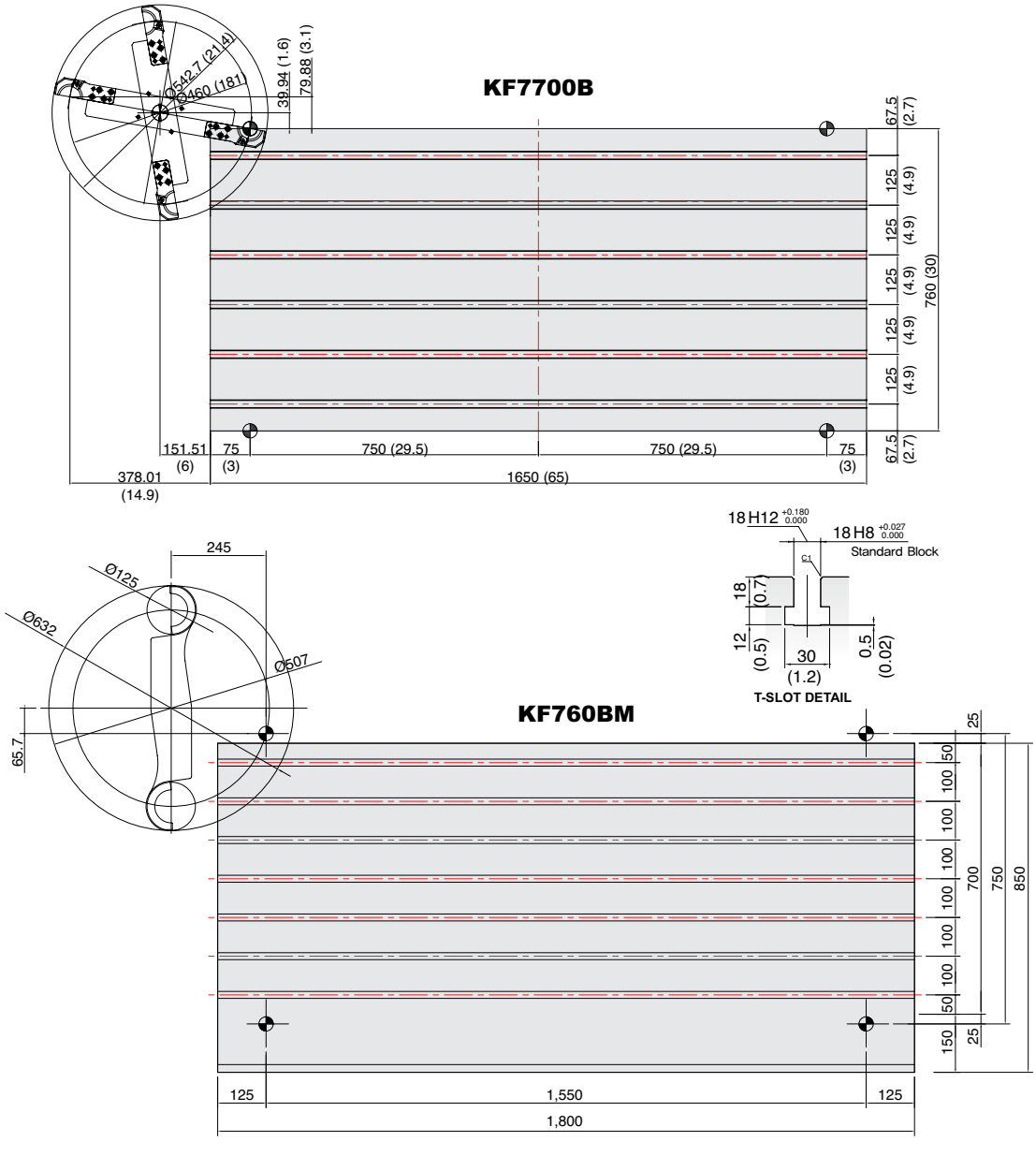


Table Dimensions

unit : mm(in)



SPECIFICATIONS

Specifications

unit : mm(in)

MODEL			KF5700B	KF5700B/50
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 [8,000]
	Spindle Driving Method	-	DIRECT [DIRECT]	DIRECT [GEAR]
	Spindle Power Output (Max./Cont.)	kW(HP)	15/11 (20.1/14.7) [18.5/11 (24.8/14.7)]	15/11 (20.1/14.7) [18.5/15 (24.8/20.1)]
	Spindle Torque (Max.)	N·m(lbf·ft)	286/143 (210.9/105.5) [118/70 (87/51.6)]	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/Ø220 (4.9″/8.7″)
	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 T-T	sec	1.5	2.5
	Tool Change Time C-C	sec	3.5	5.5
TANK CAPACITY	Coolant Tank	ℓ (gal)	550 (145.3)	
	Lubricating Tank	ℓ (gal)	4 (1)	
	Hydraulic Tank	ℓ (gal)	3.9 (1)	
POWER SUPPLY	Air Consumption (0.5MPa)	ℓ/min(gal)	110 (29)	
	Electric Power Supply	KVA	26 [30]	32
	Thickness of Power Cable	Sq	Over 25	
	Voltage	V/Hz	220/60 (200/50)	
MACHINE	Floor Space (L×W)	mm(in)	3,150×2,673 (124″×105.2″)	
	Height	mm(in)	3,089 (121.6″)	3,259 (128.3″)
	Weight	kg(lb)	8,500 (18,739)	
NC	Controller	-	HYUNDAI WIA FANUC i Series	

SPECIFICATIONS

Specifications

[ ] : Option

MODEL			KF6700B	KF6700B/50
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 [8,000]
	Spindle Driving Method	-	DIRECT [DIRECT]	DIRECT [GEAR]
	Spindle Power Output (Max./Cont.)	kW(HP)	15/11 (20.1/14.7) [18.5/11 (24.8/14.7)]	15/11 (20.1/14.7) [18.5/15 (24.8/20.1)]
	Spindle Torque (Max.)	N·m(lbf·ft)	286/143 (210.9/105.5) [118/70 (87/51.6)]	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/Ø220 (4.9″/8.7″)
	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 T-T	sec	1.5	2.5
	Tool Change Time C-C	sec	3.5	5.5
TANK CAPACITY	Coolant Tank	ℓ (gal)	590 (155.9)	
	Lubricating Tank	ℓ (gal)	4 (1)	
	Hydraulic Tank	ℓ (gal)	3.9 (1)	
POWER SUPPLY	Air Consumption (0.5MPa)	ℓ/min(gal)	110 (29)	
	Electric Power Supply	KVA	26 [30]	32
	Thickness of Power Cable	Sq	Over 25	
	Voltage	V/Hz	220/60 (200/50)	
MACHINE	Floor Space (L×W)	mm(in)	3,350×2,822 (131.9″×111.1″)	
	Height	mm(in)	3,204 (1261″)	3,374 (132.8″)
	Weight	kg(lb)	10,000 (22,046)	
NC	Controller	-	HYUNDAI WIA FANUC i Series	

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Specifications

[ ] : Option

MODEL			KF7700B	KF7700B/50
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 [8,000]
	Spindle Driving Method	-	DIRECT [DIRECT]	DIRECT [GEAR]
	Spindle Power Output (Max./Cont.)	kW(HP)	15/11 (20.1/14.7) [18.5/11 (24.8/14.7)]	15/11 (20.1/14.7) [18.5/15 (24.8/20.1)]
	Spindle Torque (Max.)	N·m(lbf·ft)	286/143 (210.9/105.5) [118/70 (87/51.6)]	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(ipm)	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/Ø220 (4.9″/8.7″)
	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 T-T	sec	1.5	2.5
	Tool Change Time C-C	sec	3.5	5.5
TANK CAPACITY	Coolant Tank	ℓ (gal)	620 (163.7)	
	Lubricating Tank	ℓ (gal)	4 (1)	
	Hydraulic Tank	ℓ (gal)	3.9 (1)	
POWER SUPPLY	Air Consumption (0.5MPa)	ℓ/min(gal)	110 (29)	
	Electric Power Supply	KVA	26 [30]	32
	Thickness of Power Cable	Sq	Over 25	
	Voltage	V/Hz	220/60 (200/50)	
MACHINE	Floor Space (L×W)	mm(in)	3,780×3,037 (148.8″×119.6″)	
	Height	mm(in)	3,306 (130″)	3,476 (136.9″)
	Weight	kg(lb)	13,000 (28,660)	
NC	Controller	-	HYUNDAI WIA FANUC i Series	

Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Specifications

[ ] : Option

MODEL			KF760BM
TABLE	Table Size (L×W)	mm(in)	1,800×700 (70.9"x27.6")
	Maximum Load Capacity	kg(lb)	2,000 (4,409)
SPINDLE	Spindle Taper	-	Big Plus #50
	Spindle RPM	r/min	12,000
	Spindle Driving Method	-	BUILT-IN
	Spindle Power Output (Max./Cont.)	kW(HP)	30/25 (40.2/33.5)
	Spindle Torque (Max.)	N·m(lbf·ft)	420/238 (309.7/175.5)
FEED	Travel (X/Y/Z)	mm(in)	1,550/760/720 (61"/29.9"/28.3")
	Rapid Traverse Rate (X/Y/Z)	m/min(ipm)	16/16/12 (630/630/472.4)
	Distance from Table Top to SP. Nose	mm(in)	200~920 (7.9"/36.2")
	Distance from Column to SP. center	mm(in)	790 (31.1")
	Slide Type	-	BOX GUIDE
ATC	Number of Tools	ea	30 [40]
	Tool Shank	-	BBT50
	Max. Tool Dia. (W.T / W.O)	mm(in)	Ø125/Ø240 (4.9"/9.4")
	Max. Tool Length	mm(in)	300 (11.8")
	Max. Tool Weight	kg(lb)	25 (55)
	Tool Selection Method	-	RANDOM
	Tool Change Time T-T	sec	4
	Tool Change Time C-C	sec	8.5
TANK CAPACITY	Coolant Tank	ℓ (gal)	400 (105.7)
	Lubricating Tank	ℓ (gal)	3.1 (0.8)
	Hydraulic Tank	ℓ (gal)	24 (6.3)
POWER SUPPLY	Air Consumption (0.5MPa)	ℓ/min(gal)	250 (66)
	Electric Power Supply	KVA	35
	Thickness of Power Cable	Sq	Over 25
	Voltage	V/Hz	220/60 (200/50)
MACHINE	Floor Space (L×W)	mm(in)	4,040×4,235 (159"x166.7")
	Height	mm(in)	3,550 (139.8")
	Weight	kg(lb)	14,500 (31,967)
NC	Controller	-	FANUC 31i-B

Specifications are subject to change without notice for improvement.

CONTROLLER

HYUNDAI WIA FANUC i Series

[ ] : Option ☆ Needed technical consultation

Controlled axis / Display / Accuracy Compensation	
Control axes	3 axes (X, Y, Z)
	4 axes (X, Y, Z, B)
Simultaneously controlled axes	3 axes [Max. 4 axes]
Least setting Unit	X, Y, Z axes : 0.001 mm (0.0001 inch)
	B axes : 1 deg [0.001] deg
Least input increment	X, Y, Z axes : 0.001 mm (0.0001 inch)
	B axes : 1 deg [0.001] deg
Inch / Metric conversion	G20 / G21
High response vector control	
Interlock	All axes / Each axis
Machine lock	All axes
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 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 axes (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
Cylindrical interpolation	G07.1
Inverse time feed	G93
Look-ahead block	20 blocks (AI APC)
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 (± 99,999.9999 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
G code system	A

Program input	
Programmable mirror image	G51.1, G50.1
G code preventing buffering	G4.1
Optional chamfering corner R	
Polar coordinate command	G15, G16
Scaling	G50, G51
Coordinate system rotation	G68, G69
Auxiliary function / Spindle speed function	
Auxiliary function	M 4 digit
Spindle speed function	S 4 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	1280m (512KB)
No. of registerable programs	400 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	RS 232C serial port, 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 20 languages
Display language switching	Selection of 5 optional Languages
LCD Screen Saver	Screen saver

Option	
Additional optional block skip	9 ea ☆
Fast ethernet	Needed option board
Data server	Needed option board
Protection of data at 8 levels	
Additional Axis	
Manual Guide i	Conversational auto program
Manual handle feed	2/3 units
Addition of custom macro	#100 ~ #199,
	#500 ~ #999, #98000 ~ #98499
Tool management function	
Part program storage size	5120m (2MB)
No. registerable programs	Max. 1000 EA
Add. Workpiece	Max. 300 pairs (G54.1 P1 ~ P300)
AICC II	40 blocks
	200 blocks
	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.

CONTROLLER

FANUC 31i-B

[ ] : Option ☆ Needed technical consultation

Controlled axis / Display / Accuracy Compensation	
Control axes	3 axes (X, Y, Z) 4 axes (X, Y, Z, B)
Simultaneously controlled axes	3 axes [Max. 4 axes]
Least setting Unit	X, Y, Z axes : 0.001 mm (0.0001 inch)
	B axes : 1 deg [0.001] deg
Least input increment	X, Y, Z axes : 0.001 mm (0.0001 inch)
	B axes : 1 deg [0.001] deg
Inch / Metric conversion	G20 / G21
High response vector control	
Interlock	All axes / Each axis
Machine lock	All axes
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 axes Machine lock, Stroek check before move
Single block	
Search function	Program Number / Sequence Number
Interpolation functions	
Nano interpolation	
Positioning	G00
Linear interpolation	G01
Cylinderical 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 axes(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 (± 99,999.9999 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 axes 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 NC program
Memory card program edit	
Data input / output & Interface	
I/O interface	RS 232C serial port, 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
Cylinderical 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 management function	
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.
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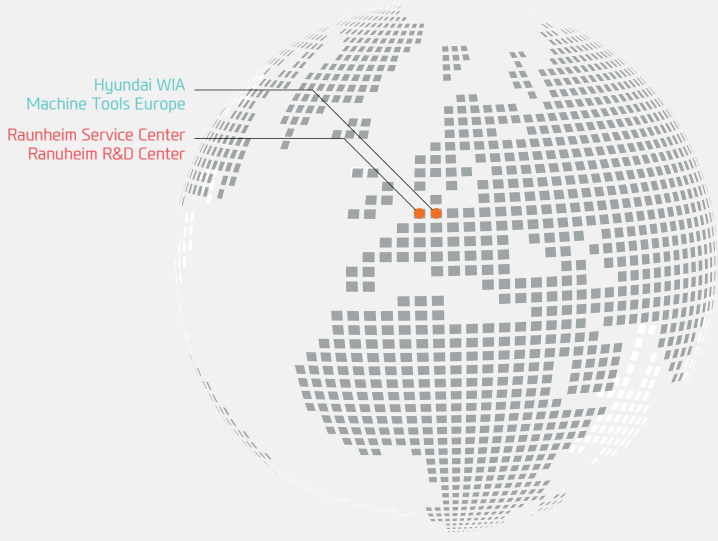
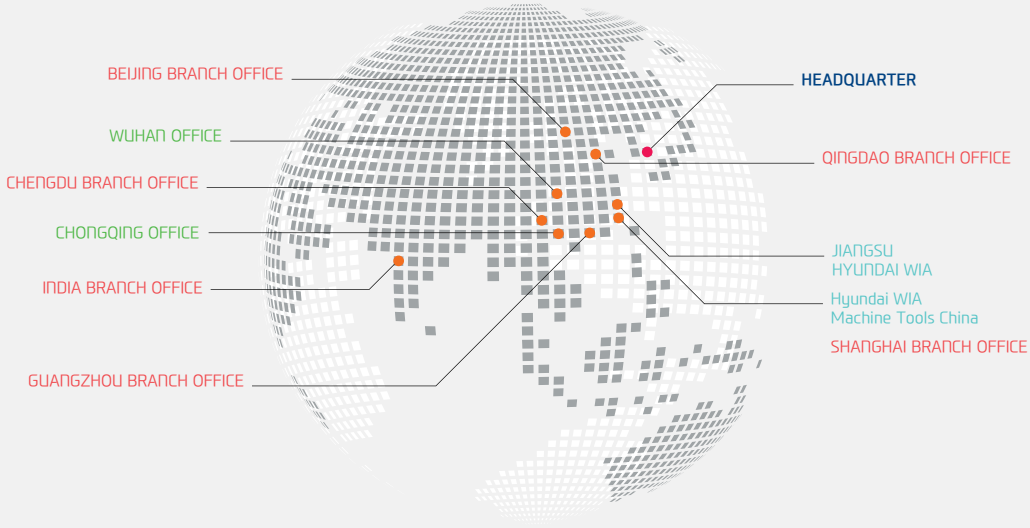
GLOBAL NETWORK





GLOBAL NETWORK

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