

HYUNDAI WIA

High Speed & Productivity Vertical Machining Center

# KF-II Series

KF4600 II | KF5600 II | KF6700 II | KF5600L II | KF5600/50 II | KF6700/50 II

# Technical Leader

## State-of-the-art Vertical Machining Center with High-speed and large work space

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

| ITEM         | Direct Spindle |        |        |        |        | Tool Shank |       | ATC   |       |       |       |
|--------------|----------------|--------|--------|--------|--------|------------|-------|-------|-------|-------|-------|
|              | 8,000          | *8,000 | 10,000 | 12,000 | 15,000 | BBT40      | BBT50 | 24 EA | 30 EA | 40 EA | 60 EA |
| KF4600 II    | ●              | ○      | ○      | ○      | ○      | ●          |       |       | ●     | ○     |       |
| KF5600 II    | ●              | ○      | ○      | ○      | ○      | ●          |       |       | ●     | ○     | ○     |
| KF6700 II    | ●              | ○      | ○      | ○      | ○      | ●          |       |       | ●     | ○     | ○     |
| KF5600L II   | ●              | ○      | ○      | ○      | ○      | ●          |       |       | ●     | ○     |       |
| KF5600/50 II |                | ●      |        |        |        |            | ●     | ●     |       |       |       |
| KF6700/50 II |                | ●      |        |        |        |            | ●     | ●     | ○     |       |       |

\* High-Torque Spindle

● : Standard ○ : Option

# KF-II Series

## High Speed & Productivity Vertical Machining Center

- High-precision machining by improved spindle quality
- High-speed roller type LM guide in all axes
- 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

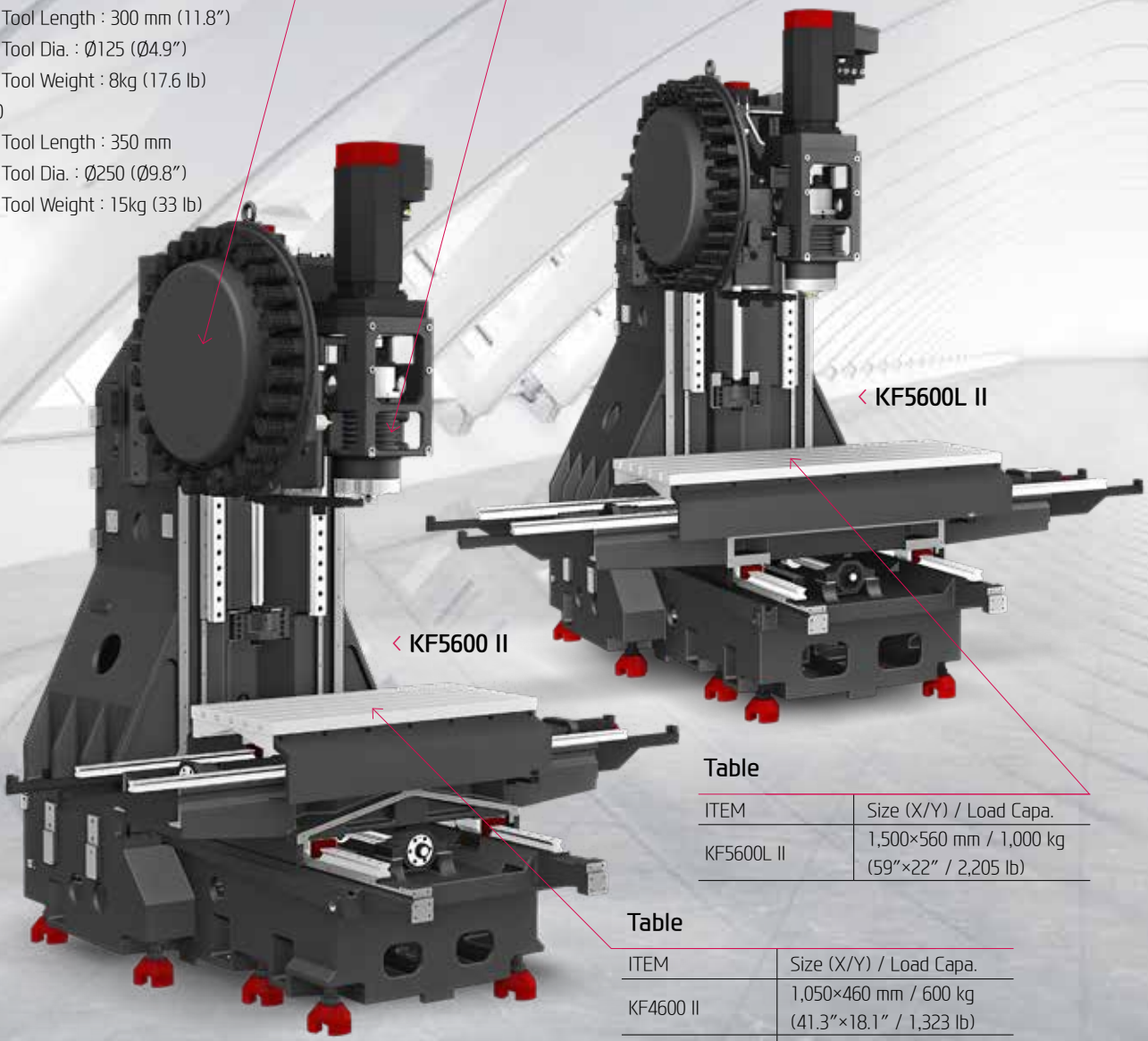
High Speed & Productivity Vertical Machining Center

## Magazine

- BBT40
  - Max. Tool Length : 300 mm (11.8")
  - Max. Tool Dia. :  $\varnothing 125$  ( $\varnothing 4.9$ ")
  - Max. Tool Weight : 8kg (17.6 lb)
- BBT50
  - Max. Tool Length : 350 mm
  - Max. Tool Dia. :  $\varnothing 250$  ( $\varnothing 9.8$ ")
  - Max. Tool Weight : 15kg (33 lb)

## High Precision Spindle

- BBT40 : KF4600 II, KF5600 II, KF5600L II, KF6700 II
- BBT50 : KF5600/50 II, KF6700/50 II
- Spindle Type : Direct



## Table

| ITEM       | Size (X/Y) / Load Capa.                         |
|------------|---|
| KF5600L II | 1,500×560 mm / 1,000 kg<br>(59"×22" / 2,205 lb) |

## Table

| ITEM             | Size (X/Y) / Load Capa.                           |
|------------------|---|
| KF4600 II        | 1,050×460 mm / 600 kg<br>(41.3"×18.1" / 1,323 lb) |
| KF5600 II Series | 1,250×560 mm / 1,000 kg<br>(49.2"×22" / 2,205 lb) |
| KF6700 II Series | 1,500×670 mm / 1,300 kg<br>(59"×26.4" / 2,866 lb) |

# HIGH-PRECISION, SPEED & LARGE WORKING AREA

## HIGH-PRECISION STRUCTURE

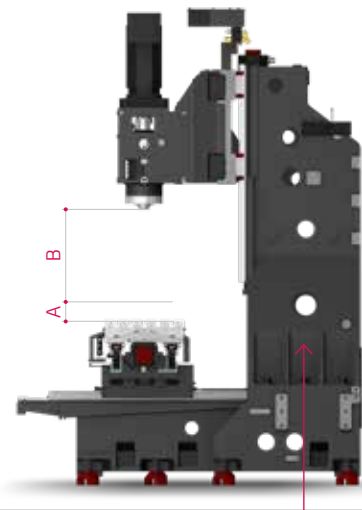
### Optimal Structural Analysis

KF-II Series 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.

### One Piece High Column (Direct Sp.)

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



### Incomparably Strong Rigidity Compared to the Block-type High Column

| ITEM         |             | Travel of Z-Axis | Height of High Column | A              | B                         |
|--------------|-------------|------------------|-----------------------|----------------|---------------------------|
| KF4600 II    | Std. Column | 520 mm (20.5")   | -                     | 150 mm (5.9")  | 150~670 mm (5.9"~26.4")   |
|              | High Column | 520 mm (20.5")   | 200 mm (7.9")         | 350 mm (13.8") | 350~870 mm (13.8"~34.3")  |
| KF5600 II    | Std. Column | 520 mm (20.5")   | -                     | 150 mm (5.9")  | 150~670 mm (5.9"~26.4")   |
|              | Opt. 635mm  | 635 mm (25")     | -                     | 150 mm (5.9")  | 150~785 mm (5.9"~30.9")   |
|              | High Column | 635 mm (25")     | 300 mm (7.9")         | 450 mm (17.7") | 450~1,085mm (17.7"~42.7") |
| KF5600/50 II | Std. Column | 520 mm (20.5")   | -                     | 200 mm (7.9")  | 200~720 mm (7.9"~28.3")   |
|              | Opt. 635mm  | 635 mm (25")     | -                     | 200 mm (7.9")  | 200~835 mm (7.9"~32.9")   |
|              | High Column | 635 mm (25")     | 300 mm (7.9")         | 500 mm (19.7") | 500~1,135mm (19.7"~44.7") |
| KF6700 II    | Std. Column | 635 mm (25")     | -                     | 150 mm (5.9")  | 150~785 mm (5.9"~30.9")   |
|              | High Column | 635 mm (25")     | 300 mm (7.9")         | 500 mm (19.7") | 450~1,085mm (17.7"~42.7") |
| KF6700/50 II | Std. Column | 635 mm (25")     | -                     | 200 mm (7.9")  | 200~835 mm (7.9"~32.9")   |
|              | High Column | 635 mm (25")     | 300 mm (7.9")         | 500 mm (19.7") | 500~1,135mm (19.7"~44.7") |
| KF5600L II   | Std. Column | 520 mm (20.5")   | -                     | 150 mm (5.9")  | 150~670 mm (5.9"~26.4")   |

- High column can be applied to column with Z-axis traverse distance of 635mm for KF5600 II (520mm Standard column + 300mm High column cannot be applied)

◆ High Column : Option

# 02 HIGH-SPEED FEED

Highest Quality, High-speed Vertical Machining Center

[ ] : Option

## Travel (X/Y/Z)

KF4600 II

**900/460/520** mm  
(35.4"/18.1"/20.5")

KF5600 II

**1,100/560/520 [635]** mm  
(43.3"/22"/20.5" [25"])

KF6700 II

**1,300/670/635** mm  
(51.2"/26.4"/25")

KF5600L II

**1,300/560/520** mm  
(51.2"/22"/20.5")

KF5600/50 II

**1,100/560/520** mm  
(43.3"/22"/20.5")

KF6700/50 II

**1,300/670/635** mm  
(51.2"/26.4"/25")

## Rapid Traverse Rate (X/Y/Z)

KF4600 II

**36/36/30** m/min  
(1,417/1,417/1,181 ipm)

KF5600 II

**36/36/30** m/min  
(1,417/1,417/1,181 ipm)

KF6700 II

**36/36/30** m/min  
(1,417/1,417/1,181 ipm)

KF5600L II

**36/36/30** m/min  
(1,417/1,417/1,181 ipm)

KF5600/50 II

**36/36/30** m/min  
(1,417/1,417/1,181 ipm)

KF6700/50 II

**36/36/30** m/min  
(1,417/1,417/1,181 ipm)

# REDUCED NON-CUTTING TIME & IMPROVED FEED PRECISION

## GUIDE WAY

### High-Speed Roller LM Guideway

Linear roller guideways are applied to reduce non-cutting time and bring high rigidity. Each axis is directly connected to a highly reliable digital servo motor to provide high rigidity and minimal thermal displacement.

### Improvement in Slide Cover

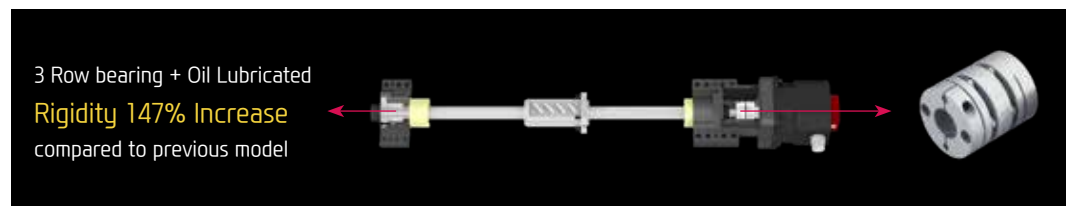
The increased slope of slide cover makes chip disposal easier and minimizes slide cover breakage.



### 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.



### 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



# 03 HIGH PRECISION SPINDLE

Excellent machining performance with high-precision spindle

## KF4600 II/5600 II/6700 II Spindle Specifications

| PC                                 | Speed r/min             | Motor (Max./Cont.)         | Torque (Max./Cont.)              | Type   |
|------------------------------------|-------------------------|----------------------------|----------------------------------|--------|
| HYUNDAI WIA<br>FAHUC<br>SMART PLUS | 8,000/10,000 rpm        | 18.5/11 kW (25/15 HP)      | 118/52.5 N·m (87/38.7 lbf·ft)    | Direct |
|                                    | 8,000 rpm (KF6700 II)   | 18.5/15 kW (25/20 HP)      | 118/71.6 N·m (87/52.8 lbf·ft)    |        |
|                                    | 8,000 rpm (High-torque) | 15/11 kW (20/15 HP)        | 286/143 N·m (210.9/105.5 lbf·ft) |        |
|                                    | 12,000 rpm              | 18.5/11 kW (25/15 HP)      | 118/52.5 N·m (87/38.7 lbf·ft)    |        |
|                                    | 15,000 rpm              | 18.5/11 kW (25/15 HP)      | 118/52.5 N·m (87/38.7 lbf·ft)    |        |
| SIEMENS                            | 12,000 rpm              | 16.2/8.5 kW (21.7/11.4 HP) | 119.7/63 N·m (88.3/46.5 lbf·ft)  |        |
| HEIDENHAIN                         | 12,000 rpm              | 17/10 kW (22.8/13.4 HP)    | 108.6/63.7 N·m (80/47 lbf·ft)    |        |

## KF5600/50 II | KF6700/50 II Spindle Specifications

| PC                      | Speed r/min | Motor (Max./Cont.)  | Torque (Max./Cont.)                  | Type   |
|-------------------------|-------------|---------------------|--------------------------------------|--------|
| H/W FAHUC<br>SMART PLUS | 8,000 rpm   | 22/11 kW (30/15 HP) | 353.2/143.2 N·m (260.5/105.6 lbf·ft) | Direct |



# HIGH-PERFORMANCE, HIGH-PRECISION SPINDLE

## SPINDLE

### Direct Driven Spindle

The directly coupled spindle at a maximum revolution of 15,000rpm, allows high-speed processing. Additionally, the large diameter and the thickness of the spindle add to the stability of the machine.

(KF5600/50 II, KF6700/50 II : 8,000rpm)

### Spindle Cooling (Over 10,000 rpm / BT50 : 8,000 rpm Std.)

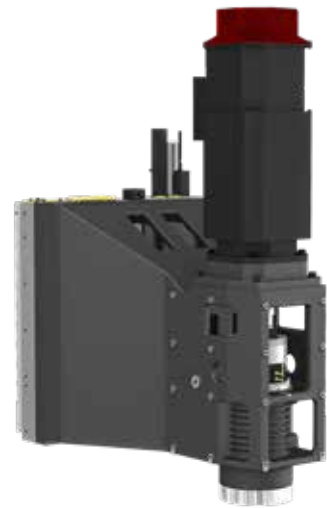
The spindle cooling system minimizes thermal displacement which can happen during lengthy machining operations, and offers continued accuracy based on the thermal stability.

❖ Improved cooling capability with chilling through head frame

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

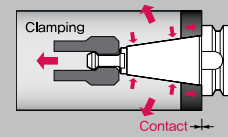
Through Spindle Coolant is exceedingly useful when drilling deep holes. It helps increase the lifetime of the tool, while decreasing cycle time.

The improved quality of rotary joint prevents oil leakage.



### Dual Contact Spindle

The Big Plus spindle system (BBT40) provides dual contact between the spindle face and the flange face of the tool holder.



❖ Direct Spindle - Hybrid Tool Lock : Reducing heat and noise by removing the hydraulic motor

## HSK TOOL HOLDER

**OPTION**

HSK tool holder is utilized for precise positioning with less expansion in the spindle taper during high speed rotation. This ensures an excellent level of precision for die mold machining.



HSK Tool

# 04 ATC & MAGAZINE

High Productivity Achieved with High Rigidity, Accuracy Machining

## ATC & Magazine

[ ] : Option

| Model        | No. of Tools   | Max. Tool Length | Max. Tool Dia. (W.T/W.O)   | Max. Tool Weight | Tool Shank          |
|--------------|----------------|------------------|--|------------------|---------------------|
| KF4600 II    | 30 [40] EA     | 300 mm (11.8")   | 30T : $\varnothing 80/125$ mm ( $\varnothing 3.1"/\varnothing 4.9"$ )<br>[40, 60T : $\varnothing 76/125$ mm ( $\varnothing 3"/\varnothing 4.9"$ )] | 8 kg (18 lb)     | BBT40<br>[HSK-A63]  |
| KF5600 II    | 30 [40, 60] EA |                  |  |                  |                     |
| KF6700 II    | 30 [40] EA     |                  |  |                  |                     |
| KF5600L II   | 30 [40] EA     | 350 mm (13.8")   | $\varnothing 125/\varnothing 250$ mm   | 15 kg (33 lb)    | BBT50<br>[HSK-A100] |
| KF5600/50 II | 24 EA          |                  |  |                  |                     |
| KF6700/50 II | 24 [30] EA     |                  |  |                  |                     |

# HIGH RIGIDITY, TOOL CHANGE SYSTEM

## ATC & MAGAZINE

### 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.



### Tool Change Time (C-C)

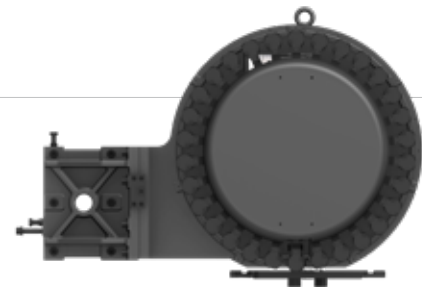
KF4600 II : 3.2 sec      KF5600 II : 3.2 sec      KF5600L II | KF6700 II : 3.5 sec

(KF5600/50 II | KF6700/50 II : 5.5 sec)

### Magazine

The tool magazine holds **30 tools** as standard and **60 tools** as an option. Due to the wider selection of tools and the random tool selection method, tool change time has improved.

(KF4600 II / KF5600L II : Opt. 40 tools)



[Fixed : Option]

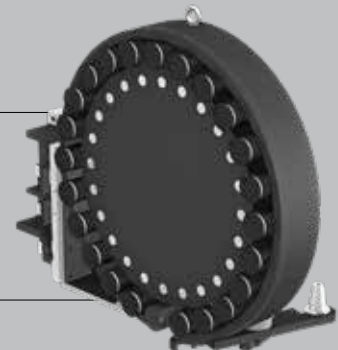
## BBT50 ATC & MAGAZINE

### BBT50 (KF5600/50 II | KF6700/50 II)

KF5600/50 II, KF6700/50 II provides a tool magazine of 24 tools as standard.

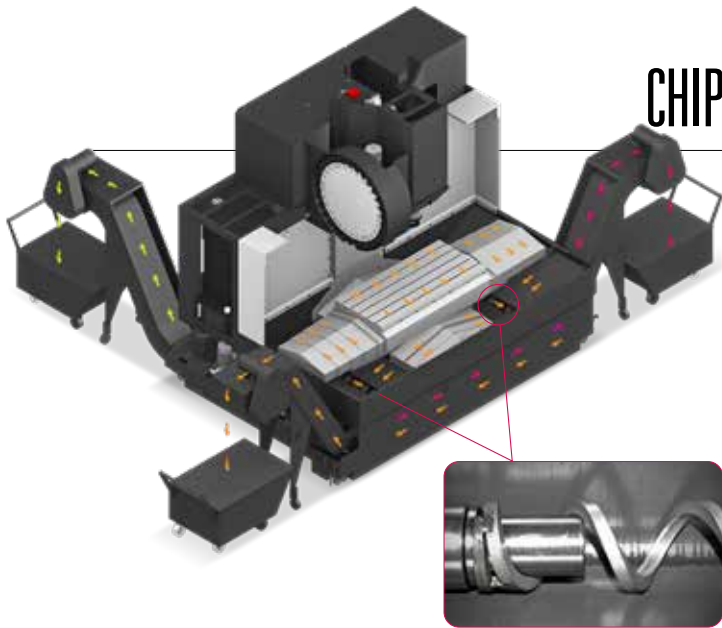
Also, ATC with high precision CAM provides fast and accurate tool change, reducing non-cutting time.

(KF6700/50 II : Opt. 30EA)



# 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)

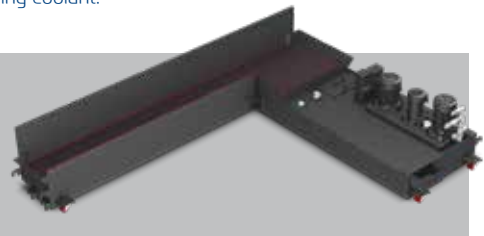
Dual screw type chip conveyors are located at each side of the bed which makes it convenient to remove chips. The interior screw and the chip conveyor operate at the same time and can be controlled separately at the time of prior consultation.

(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 365 liter (KF5600II, 6700II) of 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 hyundai 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.



### Automatic Grease Supply Unit

Optional automatic grease lubrication eliminates the need for an oil skimmer and significantly reduces maintenance costs against oil lubrication.



### 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 ROTARY 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 HYUNDAI WIA FANUC – SMART PLUS

The Compatible All-round Control



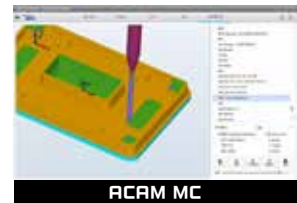
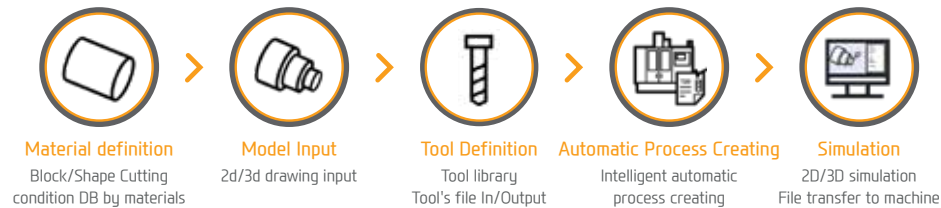
**15" Touch-type Monitor as a standard**

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

## ACAM (Automatic CAM)

Cloud-based automatic CAM S/W that automatically creates NC programs only by inputting drawing files

Cloud-based Intelligent Programming



## MMS (Machine Monitoring System)



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



### 1. MMS Cloud

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

### 2. MMS Edge

A client server-based tool monitoring system for collection/analysis of facility operation data. (Compatible with client MES / ERP interface)

## 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.

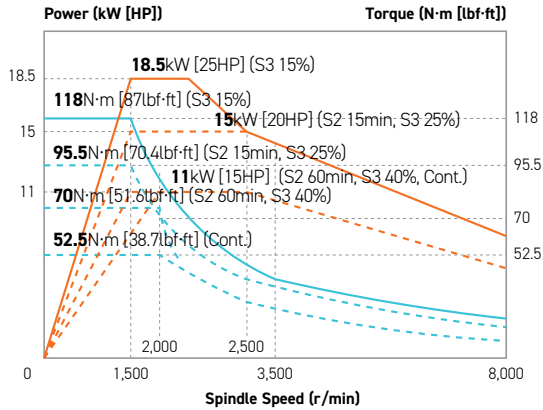
### 2. LAUNCHER

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

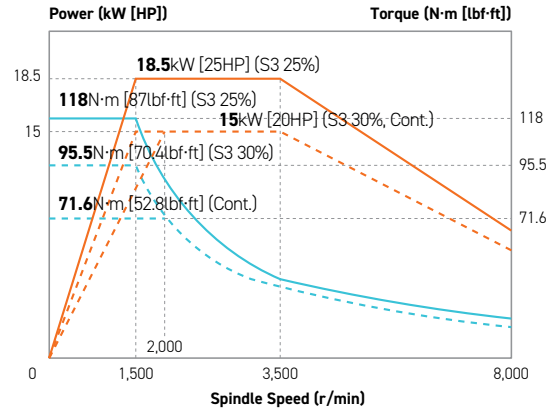
# SPECIFICATIONS

## Spindle Output/Torque Diagram

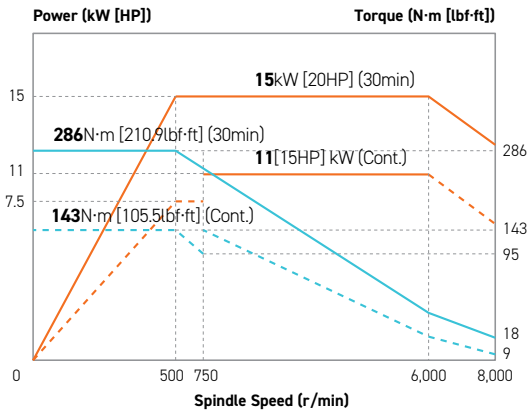
### Direct 8,000rpm (KF4600II/5600II)



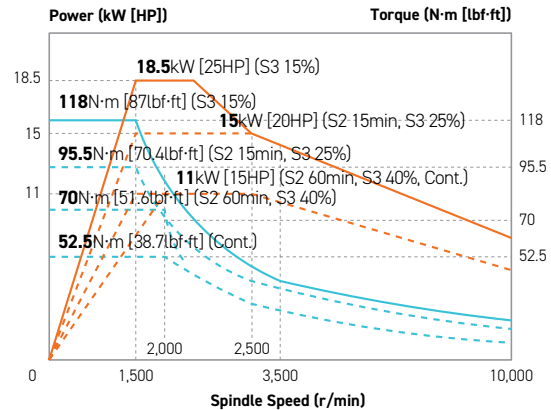
### Direct 8,000rpm (KF6700II)



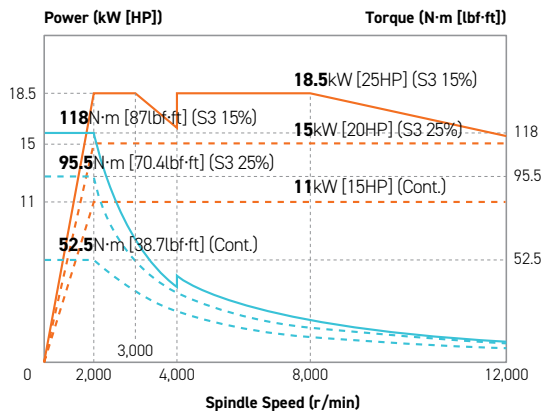
### Direct 8,000rpm (High-Torque)



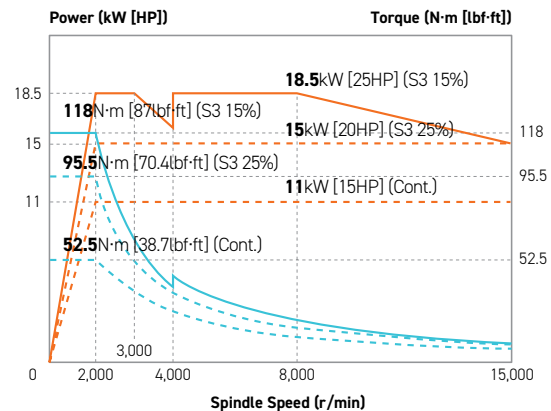
### Direct 10,000rpm



### Direct 12,000rpm



### Direct 15,000rpm

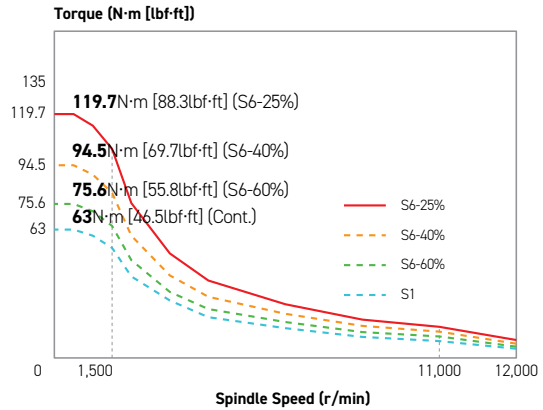
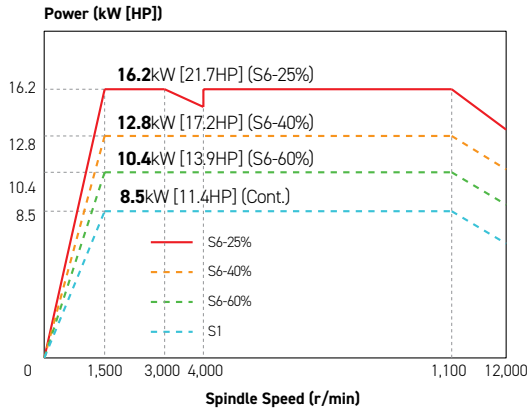




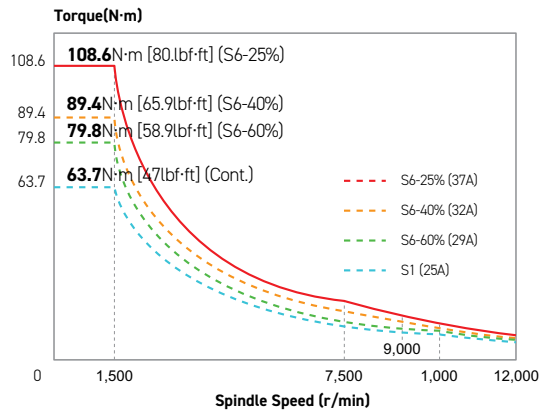
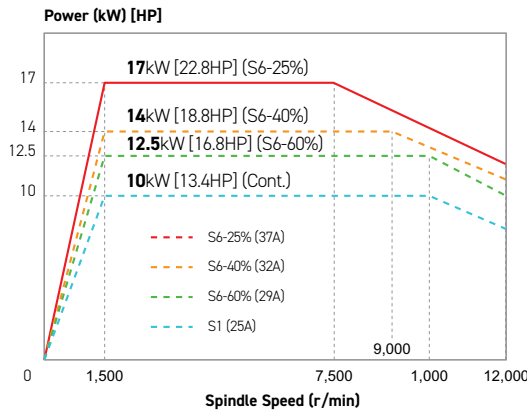
# SPECIFICATIONS

## Spindle Output/Torque Diagram

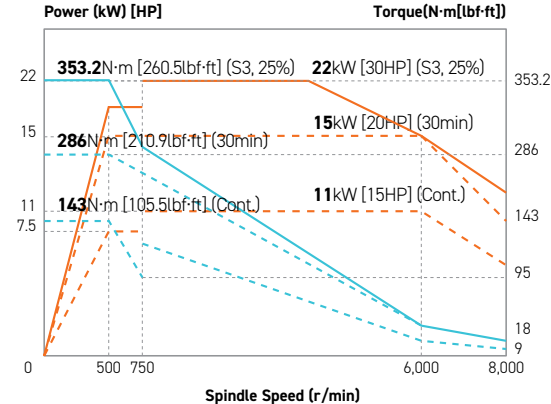
### SIEMENS Direct 12,000rpm



### HEIDENHAIN Direct 12,000rpm



### KF5600/50 II | KF6700/50 II Direct 8,000rpm



# SPECIFICATIONS

## Standard & Optional

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

| Spindle                                |                     | KF4600 II |
|--|---------------------|-----------|
| 8,000rpm                               | FANUC               | ●         |
| 8,000rpm (High-torque)                 | FANUC               | ○         |
| 10,000rpm                              | FANUC               | ○         |
| 12,000rpm                              | FANUC               | ○         |
| 15,000rpm                              | FANUC               | ○         |
| 12,000rpm                              | SIEMENS             | ○         |
| 12,000rpm                              | HEIDENHAIN          | ○         |
| Spindle Cooling System                 | 8,000rpm            | ○         |
|  | Over 10,000rpm      | ●         |
| ATC                                    |                     |           |
| ATC Extension                          | 30                  | ●         |
|  | 40                  | ○         |
| Tool Shank Type                        | BBT40               | ●         |
|  | HSK-A63 (12K, 15K)  | ○         |
|  | CAT40/BCV40         | ○         |
| U-Center                               | D'andrea            | ○         |
| Pull Stud                              | 45°                 | ●         |
| Table & Column                         |                     |           |
| T-Slot Table                           |                     | ●         |
| NCRotary Table                         |                     | ☆         |
| High Column                            | 200mm (7.9")        | ○         |
|  | 300mm (11.8")       | -         |
| Coolant System                         |                     |           |
| Std. Coolant (Main Spindle Nozzle)     |                     | ●         |
|  | 20bar               | ○         |
|  | 30bar, 20 ℓ         | ○         |
|  | 70bar, 15 ℓ         | ○         |
|  | 70bar, 30 ℓ         | ○         |
| Through Spindle Coolant                |                     | ○         |
|  |                     | ○         |
| 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 (Sub Tank)             |                     | ☆         |
| Power Coolant System (For Automation)  |                     | ☆         |
| Chip Disposal                          |                     |           |
| Coolant Tank                           | 340                 | ●         |
| Interior Screw Chip Conveyor           |                     | ●         |
| Upper Chip Conveyor (Hinge)            | Left                | ○         |
|  | Right               | ○         |
| Flood Chip Conveyor (Hinge/Scraper)    | Left                | ○         |
|  | Right               | ○         |
|  | Rear                | ○         |
| Screw Type Chip Conveyor               | Left                | ☆         |
|  | Right               | ☆         |
| Drum Filter Type Chip Conveyor         | Left                | ☆         |
|  | Right               | ☆         |
|  | Rear                | ☆         |
| Chip Wagon                             | Standard(180 ℓ)     | ○         |
|  | Swing(200 ℓ)        | ○         |
|  | Large Swing(290 ℓ)  | ○         |
|  | Large Size(330 ℓ)   | ○         |
|  | Customized          | ☆         |
| *Special Option                        |                     |           |
| ATC Auto Shutter                       | 30T/40T             | ○         |
| ATC Full Cover                         | 30T/40T/60T         | ○         |
| *Fine Dust Protecting Package          |                     |           |
| Table Around Cover                     | Wet Machining       | ○         |
| Bellows Cover (X/Y)                    |                     | ○         |
| Multi Cover (Z)                        | Dry Machining       | ○         |
| Guide Way Double Wiper                 |                     | ○         |
| ETC                                    |                     |           |
| Tool Box                               |                     | ●         |
| Customized Color                       | Need for Munsel No. | ☆         |
| CAD&CAM Software                       |                     | ☆         |

| Electric Device  |                 | KF4600 II |
|--|-----------------|-----------|
| Call Light   | 1 Color : ●     | ●         |
| Call Light & Buzzer  | 3 Color : ● ● ● | ○         |
| Electric Cabinet Light   |                 | ○         |
| Remote MPG   |                 | ●         |
| 3 Axis MPG   |                 | ○         |
| Work Counter   | Digital         | ○         |
| Total Counter  | Digital         | ○         |
| Tool Counter   | Digital         | ○         |
| Multi Tool Counter   | Digital         | ☆         |
| Electric Circuit Breaker   | FANUC           | ○         |
|  | SIEMENS         | -         |
| AVR (Auto Voltage Regulator)   |                 | ☆         |
| Transformer  | 30kVA           | ○         |
|  | 35kVA           | -         |
| Auto Power Off   |                 | ○         |
| Back up Module for Black out   |                 | ○         |
| Measuring Device   |                 |           |
| Air Zero   | TACO            | ○         |
|  | SMC             | ○         |
| Work Measuring Device  |                 | ○         |
| TLM  | Touch           | ○         |
|  | Laser           | ○         |
| (Marposs/Renishaw/Blum)  |                 | ○         |
| 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/F  | Single          | ○         |
|  | Channel         | ☆         |
| Control of Additional Axis   | 1Axis           | ○         |
|  | 2Axis           | ☆         |
| External M Code dea  |                 | ○         |
| Automation Interface   |                 | ☆         |
| I/O Extension (In & Out)   | 16 Contact      | ☆         |
|  | 32 Contact      | ☆         |
| Hyd. Device  |                 |           |
| Hyd. Unit for Fixture  | 45bar           | -         |
|  | 70bar           | ○         |
|  | 100bar          | ○         |
|  | Customized      | ☆         |
| S/W  |                 |           |
| Automatic CAM (HW-ACAM)  |                 | -         |
| Dialogue Program (HW-DPRO)   |                 | ○         |
| DNC software (HW-eDNC)   |                 | ○         |
| Machine Monitoring System (HW-MMS Cloud)                                   |                 | ☆         |
| Machine Monitoring System & Analysis (Customer Installation : HW-MMS Edge) |                 | ☆         |
| Smart Guide-i : FANUC  |                 | ●         |
| Smart S/W  |                 | ☆         |

\* Detailed options require consultation with HYUNDAI WIA

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

# SPECIFICATIONS

## Standard & Optional

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

|  |                     | KF5600 II | KF5600L II  |
|--|---------------------|-----------|-------------|
| <b>Spindle</b>                         |                     |           |             |
| 8,000rpm                               | FANUC               | ●         |             |
| 8,000rpm (High-torque)                 | FANUC               | ○         |             |
| 10,000rpm                              | FANUC               | ○         |             |
| 12,000rpm                              | FANUC               | ○         |             |
| 15,000rpm                              | FANUC               | ○         |             |
| 12,000rpm                              | SIEMENS             | ○         |             |
| 12,000rpm                              | HEIDENHAIN          | ○         |             |
| Spindle Cooling System                 | 8,000rpm            | ○         |             |
|  | Over 10,000rpm      | ●         |             |
| <b>ATC</b>                             |                     |           |             |
| ATC Extension                          | 30                  | ●         |             |
|  | 40                  | ○         |             |
|  | 60                  | ○         |             |
| Tool Shank Type                        | BBT40               | ●         |             |
|  | HSK-A63 (12K, 15K)  | ○         |             |
|  | CAT40/BCV40         | ○         |             |
| U-Center                               | D'andrea            | ○         |             |
| Pull Stud                              | 45°                 | ●         |             |
| <b>Table &amp; Column</b>              |                     |           |             |
| T-Slot Table                           |                     | ●         |             |
| NCRotary Table                         |                     | ☆         |             |
| High Column                            | 200mm (7.9")        |           | -           |
|  | 300mm (11.8")       | ○         | ○ (60T : -) |
| <b>Coolant System</b>                  |                     |           |             |
| Std. Coolant (Main Spindle Nozzle)     |                     | ●         |             |
| Through Spindle Coolant                | 20bar               | ○         |             |
|  | 30bar, 20 ℓ         | ○         |             |
|  | 70bar, 15 ℓ         | ○         |             |
|  | 70bar, 30 ℓ         | ○         |             |
| 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 (Sub Tank)             |                     | ☆         |             |
| Power Coolant System (For Automation)  |                     | ☆         |             |
| <b>Chip Disposal</b>                   |                     |           |             |
| Coolant Tank                           | 350 ℓ               | ●         | -           |
|  | 370 ℓ               | -         | ●           |
| Interior Screw Chip Conveyor           |                     | ●         |             |
| Upper Chip Conveyor (Hinge)            | Left                | ○         |             |
|  | Right               | ○         |             |
| Flood Chip Conveyor (Hinge/Scraper)    | Left                | ○         |             |
|  | Right               | ○         |             |
|  | Rear                | ○         |             |
| Screw Type Chip Conveyor               | Left                | ☆         |             |
|  | Right               | ☆         |             |
| Drum Filter Type Chip Conveyor         | Left                | ☆         |             |
|  | Right               | ☆         |             |
| Chip Wagon                             | Rear                | ☆         |             |
|  | Standard(180 ℓ)     | ○         |             |
|  | Swing(200 ℓ)        | ○         |             |
|  | Large Swing(290 ℓ)  | ○         |             |
|  | Large Size(330 ℓ)   | ○         |             |
|  | Customized          | ☆         |             |
| <b>*Special Option</b>                 |                     |           |             |
| ATC Auto Shutter                       | 30T/40T             | ○         | -           |
| ATC Full Cover                         | 30T/40T/60T         | ○         | -           |
| <b>*Fine Dust Protecting Package</b>   |                     |           |             |
| Table Around Cover                     | Wet Machining       | ○         | -           |
| Bellows Cover (X/Y)                    |                     | ○         | -           |
| Multi Cover (Z)                        | Dry Machining       | ○         | -           |
| Guide Way Double Wiper                 |                     | ○         | -           |
| <b>ETC</b>                             |                     |           |             |
| Tool Box                               |                     | ●         |             |
| Customized Color                       | Need for Munsel No. | ☆         |             |
| CAD&CAM Software                       |                     | ☆         |             |

|  |                   | KF5600 II | KF5600L II |
|--|-------------------|-----------|------------|
| <b>Electric Device</b>   |                   |           |            |
| 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   | FANUC             |           | ○          |
|  | SIEMENS           |           | -          |
| AVR (Auto Voltage Regulator)   |                   |           | ☆          |
| Transformer  | 30kVA             |           | ○          |
|  | 35kVA             |           | -          |
| Auto Power Off   |                   |           | ○          |
| Back up Module for Black out   |                   |           | ○          |
| <b>Measuring Device</b>  |                   |           |            |
| Air Zero   | TACO              |           | ○          |
|  | SMC               |           | ○          |
| Work Measuring Device  |                   |           | ○          |
| TLM (Marposh/Renishaw/Blum)  | Touch             |           | ○          |
|  | Laser             |           | ○          |
| Tool Broken Detective Device   |                   |           | ☆          |
| Linear Scale   | X/Y/Z Axis        |           | ○          |
| Coolant Level Sensor (Only for Chip Conveyor, Bladder Type)                |                   |           | ☆          |
| <b>Environment</b>   |                   |           |            |
| Air Conditioner  |                   |           | ○          |
| Oil Mist Collector   |                   |           | ☆          |
| Oil Skimmer (Only for Chip Conveyor)                                       |                   |           | ○          |
| MQL (Minimal Quantity Lubrication)   |                   |           | ☆          |
| <b>Fixture &amp; Automation</b>  |                   |           |            |
| Auto Door  | Std.              |           | ○          |
|  | High Speed        |           | ☆          |
| Auto Shutter (Only for Automatic System)                                   |                   |           | ○          |
| Sub O/P  |                   |           | ☆          |
| NC Rotary Table/F  | Single            |           | ○          |
|  | Channel           |           | ☆          |
| Control of Additional Axis   | 1Axis             |           | ○          |
|  | 2Axis             |           | ☆          |
| External M Code 4ea  |                   |           | ○          |
| Automation Interface   |                   |           | ☆          |
| I/O Extension (In & Out)   | 16 Contact        |           | ☆          |
|  | 32 Contact        |           | ☆          |
| <b>Hyd. Device</b>   |                   |           |            |
| Hyd. Unit for Fixture  | 45bar             |           | -          |
|  | 70bar             |           | ○          |
|  | 100bar            |           | ○          |
|  | Customized        |           | ☆          |
| <b>S/W</b>   |                   |           |            |
| Automatic CAM (HW-ACAM)  |                   |           | -          |
| Dialogue Program (HW-DPRO)   |                   |           | ○          |
| DNIC software (HW-eDNIC)   |                   |           | ○          |
| Machine Monitoring System (HW-MMS Cloud)                                   |                   |           | ☆          |
| Machine Monitoring System & Analysis (Customer Installation : HW-MMS Edge) |                   |           | ☆          |
| Smart Guide-i : FANUC  |                   |           | ●          |
| Smart S/W  |                   |           | ☆          |

\* Detailed options require consultation with HYUNDAI WIA.

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

# SPECIFICATIONS

## Standard & Optional

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

| Spindle                                |                     | KF6700 II |
|--|---------------------|-----------|
| 8,000rpm                               | FANUC               | ●         |
| 8,000rpm (High-torque)                 | FANUC               | ○         |
| 10,000rpm                              | FANUC               | ○         |
| 12,000rpm                              | FANUC               | ○         |
| 15,000rpm                              | FANUC               | ○         |
| 12,000rpm                              | SIEMENS             | ○         |
| 12,000rpm                              | HEIDENHAIN          | ○         |
| Spindle Cooling System                 | 8,000rpm            | ○         |
|  | Over 10,000rpm      | ●         |
| ATC                                    |                     |           |
| ATC Extension                          | 30                  | ●         |
|  | 40                  | ○         |
|  | 60                  | ○         |
| Tool Shank Type                        | BBT40               | ●         |
|  | HSK-A63 (12K, 15K)  | ○         |
|  | CAT40/BVC40         | ○         |
| U-Center                               | D'andrea            | ○         |
| Pull Stud                              | 45°                 | ●         |
| Table & Column                         |                     |           |
| T-Slot Table                           |                     | ●         |
| NCRotary Table                         |                     | ☆         |
| High Column                            | 200mm (7.9")        | -         |
|  | 300mm (11.8")       | ○         |
| Coolant System                         |                     |           |
| Std. Coolant (Main Spindle Nozzle)     | 20bar               | ○         |
|  | 30bar, 20 ℓ         | ○         |
|  | 70bar, 15 ℓ         | ○         |
|  | 70bar, 30 ℓ         | ○         |
| Through Spindle Coolant                |                     | ○         |
| 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 (Sub Tank)             |                     | ☆         |
| Power Coolant System (For Automation)  |                     | ☆         |
| Chip Disposal                          |                     |           |
| Coolant Tank                           | 370 ℓ               | ●         |
| Interior Screw Chip Conveyor           |                     | ●         |
| Upper Chip Conveyor (Hinge)            | Left                | ○         |
|  | Right               | ○         |
| Flood Chip Conveyor (Hinge/Scraper)    | Left                | ○         |
|  | Right               | ○         |
|  | Rear                | ○         |
| Screw Type Chip Conveyor               | Left                | ☆         |
|  | Right               | ☆         |
| Drum Filter Type Chip Conveyor         | Left                | ☆         |
|  | Right               | ☆         |
|  | Rear                | ☆         |
| Chip Wagon                             | Standard(180 ℓ)     | ○         |
|  | Swing(200 ℓ)        | ○         |
|  | Large Swing(290 ℓ)  | ○         |
|  | Large Size(330 ℓ)   | ○         |
| Customized                             |                     | ☆         |
| *Special Option                        |                     |           |
| ATC Auto Shutter                       | 30T/40T             | ○         |
| ATC Full Cover                         | 30T/40T/60T         | ○         |
| *Fine Dust Protecting Package          |                     |           |
| Table Around Cover                     | Wet Machining       | ○         |
| Bellows Cover (X/Y)                    |                     | ○         |
| Multi Cover (Z)                        | Dry Machining       | ○         |
| Guide Way Double Wiper                 |                     | ○         |
| ETC                                    |                     |           |
| Tool Box                               |                     | ●         |
| Customized Color                       | Need for Munsel No. | ☆         |
| CAD&CAM Software                       |                     | ☆         |

| Electric Device  |                   | KF6700 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   | FANUC             | ○         |
|  | SIEMENS           | -         |
| AVR (Auto Voltage Regulator)   |                   | ☆         |
| Transformer  | 30kVA             | ○         |
|  | 35kVA             | -         |
| 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/F  | Single            | ○         |
|  | Channel           | ☆         |
| Control of Additional Axis   | 1Axis             | ○         |
|  | 2Axis             | ☆         |
| External M Code dea  |                   | ○         |
| Automation Interface   |                   | ☆         |
| I/O Extension (In & Out)   | 16 Contact        | ☆         |
|  | 32 Contact        | ☆         |
| Hyd. Device  |                   |           |
| Hyd. Unit for Fixture  | 45bar             | -         |
|  | 70bar             | ○         |
|  | 100bar            | ○         |
|  | Customized        | ☆         |
| S/W  |                   |           |
| Automatic CAM (HW-ACAM)  |                   | -         |
| Dialogue Program (HW-DPRO)   |                   | ○         |
| DNC software (HW-eDNC)   |                   | ○         |
| Machine Monitoring System (HW-MMS Cloud)                                   |                   | ☆         |
| Machine Monitoring System & Analysis (Customer Installation : HW-MMS Edge) |                   | ☆         |
| Smart Guide-i : FANUC  |                   | ●         |
| Smart S/W  |                   | ☆         |

\* Detailed options require consultation with HYUNDAI WIA

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

# SPECIFICATIONS

## Standard & Optional

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

|  |                     | KF5600/50 II | KF6700/50 II |
|--|---------------------|--------------|--------------|
| <b>Spindle</b>                         |                     |              |              |
| 8,000rpm                               |                     | ●            |              |
| Spindle Cooling System                 |                     | ●            |              |
| <b>ATC</b>                             |                     |              |              |
| ATC Extension                          | 24                  | ●            |              |
|  | 30                  | -            | ○            |
| Tool Shank Type                        | BBT50               | ●            |              |
|  | HSK-A100            | ○            |              |
|  | CAT50/BCV50         | ○            |              |
| U-Center                               | D'andrea            | ○            |              |
| Pull Stud                              | 45°                 | ●            |              |
| <b>Table &amp; Column</b>              |                     |              |              |
| T-Slot Table                           |                     | ●            |              |
| NCRotary Table                         |                     | ☆            |              |
| High Column                            | 300mm               | ○            |              |
| <b>클린트장치</b>                           |                     |              |              |
| Std. Coolant (Main Spindle Nozzle)     |                     | ●            |              |
| Through Spindle Coolant                | 20bar               | ○            |              |
|  | 30bar, 20 ℓ         | ○            |              |
|  | 70bar, 15 ℓ         | ○            |              |
|  | 70bar, 30 ℓ         | ○            |              |
| 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 (Sub Tank)             |                     | ☆            |              |
| Power Coolant System (For Automation)  |                     | ☆            |              |
| <b>Chip Disposal</b>                   |                     |              |              |
| Coolant Tank                           | 350 ℓ               | ●            | -            |
|  | 370 ℓ               | -            | ●            |
| Interior Screw Chip Conveyor           |                     | ●            |              |
| Upper Chip Conveyor (Hinge)            | Left                | ○            |              |
|  | Right               | ○            |              |
| Flood Chip Conveyor (Hinge/Scraper)    | Left                | -            |              |
|  | Right               | -            |              |
|  | Rear                | -            |              |
| Screw Type Chip Conveyor               | Left                | ☆            |              |
|  | Right               | ☆            |              |
| Drum Filter Type Chip Conveyor         | Left                | ☆            |              |
|  | Right               | ☆            |              |
|  | Rear                | ☆            |              |
| Chip Wagon                             | Standard(180 ℓ)     | ○            |              |
|  | Swing(200 ℓ)        | ○            |              |
|  | Large Swing(290 ℓ)  | ○            |              |
|  | Large Size(330 ℓ)   | ○            |              |
|  | Customized          | ☆            |              |
| <b>ETC</b>                             |                     |              |              |
| Tool Box                               |                     | ●            |              |
| Customized Color                       | Need for Munsel No. | ☆            |              |
| CAD&CAM Software                       |                     | ☆            |              |

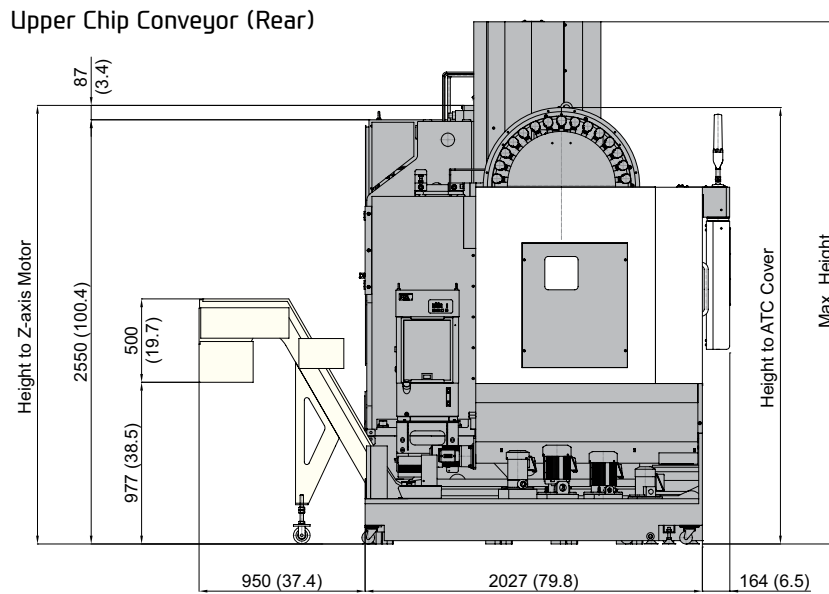
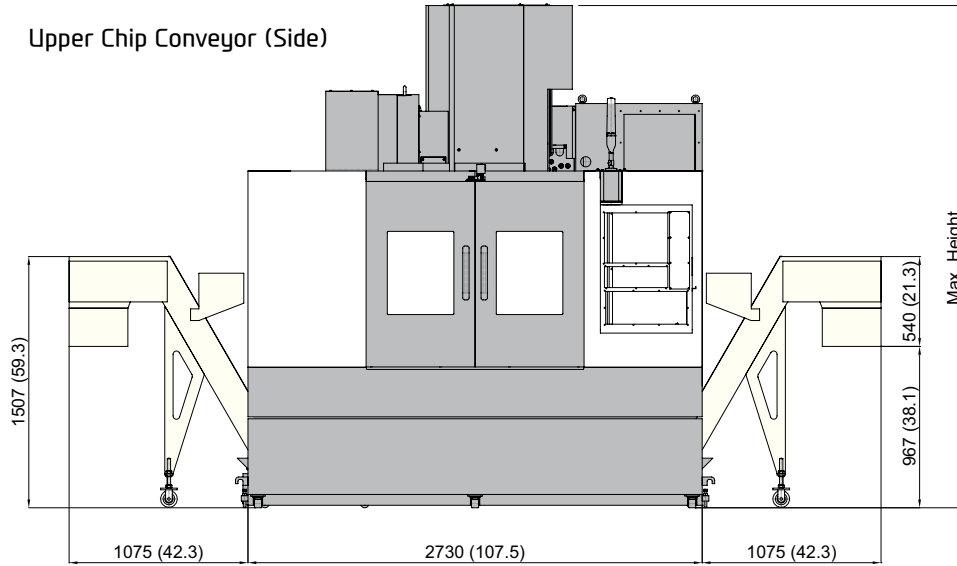
|  |                   | KF5600/50 II | KF6700/50 II |
|--|-------------------|--------------|--------------|
| <b>Electric Device</b>   |                   |              |              |
| Call Light   | 1 Color : ●       | ●            |              |
| Call Light & Buzzer  | 3 Color : ● ● ● B | ○            |              |
| 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             | ○            |              |
| Auto Power Off   |                   | ○            |              |
| Back up Module for Black out   |                   | ○            |              |
| <b>Measuring Device</b>  |                   |              |              |
| Air Zero   | TACO              |              | ☆            |
|  | SMC               |              | ☆            |
| Work Measuring Device  |                   |              | ○            |
| TLM  | Touch             |              | ○            |
| (Marposh/Renishaw/Blum)  | Laser             |              | ○            |
| Tool Broken Detecting Device   |                   |              | ○            |
| Linear Scale   |                   | X/Y/Z Axis   | ○            |
| Coolant Level Sensor (Only for Chip Conveyor, Bladder Type)                |                   |              | ☆            |
| <b>Environment</b>   |                   |              |              |
| Air Conditioner  |                   |              | ○            |
| Oil Mist Collector   |                   |              | ☆            |
| Oil Skimmer (Only for Chip Conveyor)                                       |                   |              | ○            |
| MQL (Minimal Quantity Lubrication)   |                   |              | ☆            |
| <b>Fixture &amp; Automation</b>  |                   |              |              |
| Auto Door  | Std.              |              | ○            |
|  | High Speed        |              | ☆            |
| Auto Shutter (Only for Automatic System)                                   |                   |              | ○            |
| Sub O/P  |                   |              | ☆            |
| NC Rotary Table/F  | Single            |              | ☆            |
|  | Channel           |              | ☆            |
| Control of Additional Axis   | 1Axis             |              | ○            |
|  | 2Axis             |              | ☆            |
| External M Code 4ea  |                   |              | ○            |
| Automation Interface   |                   |              | ☆            |
| I/O Extension (In & Out)   | 16 Contact        |              | ☆            |
|  | 32 Contact        |              | ☆            |
| <b>Hyd. Device</b>   |                   |              |              |
| Hyd. Unit for Fixture  | 45bar             |              | -            |
|  | 70bar             |              | ○            |
|  | 100bar            |              | ○            |
|  | Customized        |              | ☆            |
| <b>S/W</b>   |                   |              |              |
| Automatic CAM (HW-ACAM)  |                   |              | -            |
| Dialogue Program (HW-DPRO)   |                   |              | ○            |
| DNC software (HW-eDNC)   |                   |              | ○            |
| Machine Monitoring System (HW-MMS Cloud)                                   |                   |              | ☆            |
| Machine Monitoring System & Analysis (Customer Installation : HW-MMS Edge) |                   |              | ☆            |
| Smart Guide-i : FANUC  |                   |              | ●            |
| Smart S/W  |                   |              | ☆            |

# SPECIFICATIONS

## External Dimensions

unit : mm(in)

### KF4600 II



\*Level Block Height : Upper Chip Conveyor (Side)\_80mm (3.1"), Upper Chip Conveyor (Rear)\_200mm (7.9")

| ITEM       | Max. Height       |                   | 30T ATC Cover     |                   | 40T ATC Cover     |                   | Z-axis Motor      |                   |
|------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|            | Std.              | H/Column          | Std.              | H/Column          | Std.              | H/Column          | Std.              | H/Column          |
| Upper/Side | 3,028<br>(119.2") | 3,228<br>(127.1") | 2,510<br>(98.8")  | 2,710<br>(106.7") | 2,710<br>(106.7") | 2,910<br>(114.6") | 2,740<br>(107.9") | 2,940<br>(115.7") |
| Upper/Rear | 3,148<br>(123.9") | 3,348<br>(131.8") | 2,630<br>(103.5") | 2,830<br>(111.4") | 2,830<br>(111.4") | 3,030<br>(119.3") | 2,860<br>(112.6") | 3,060<br>(120.5") |

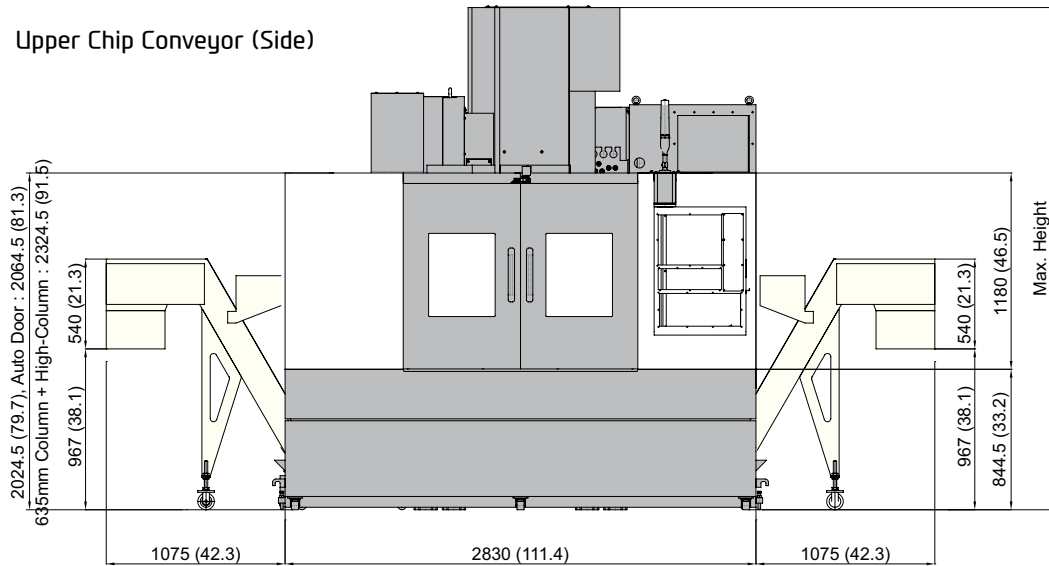
# SPECIFICATIONS

## External Dimensions

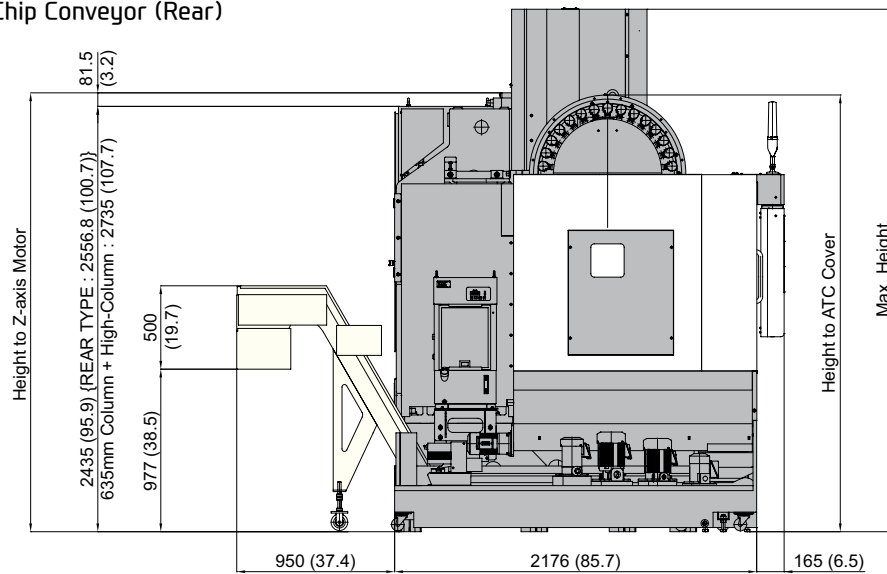
unit : mm(in)

### KF5600 II

Upper Chip Conveyor (Side)



Upper Chip Conveyor (Rear)



\*Level Block Height : Upper Chip Conveyor (Side)\_80mm (3.1"), Upper Chip Conveyor (Rear)\_200mm (7.9")

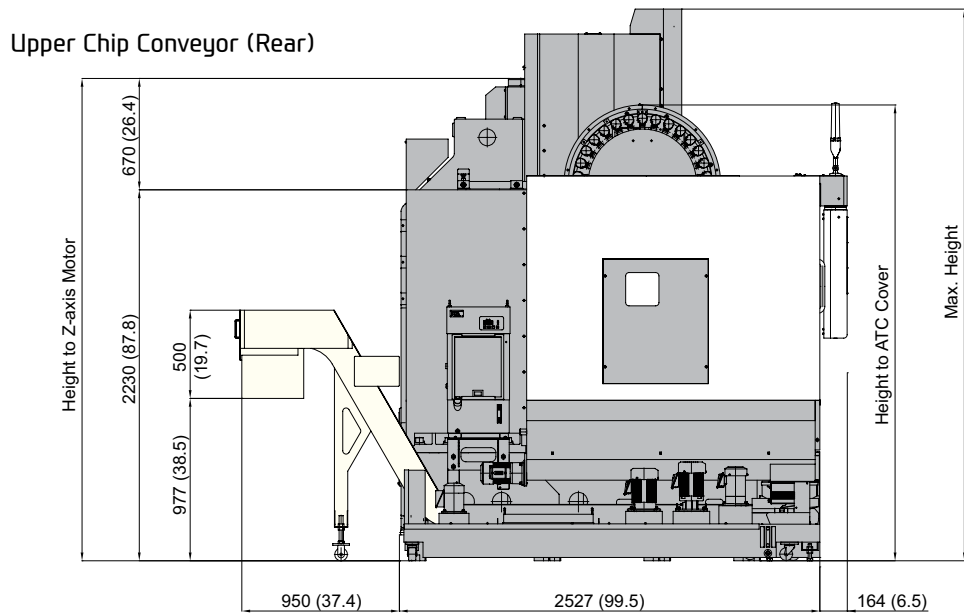
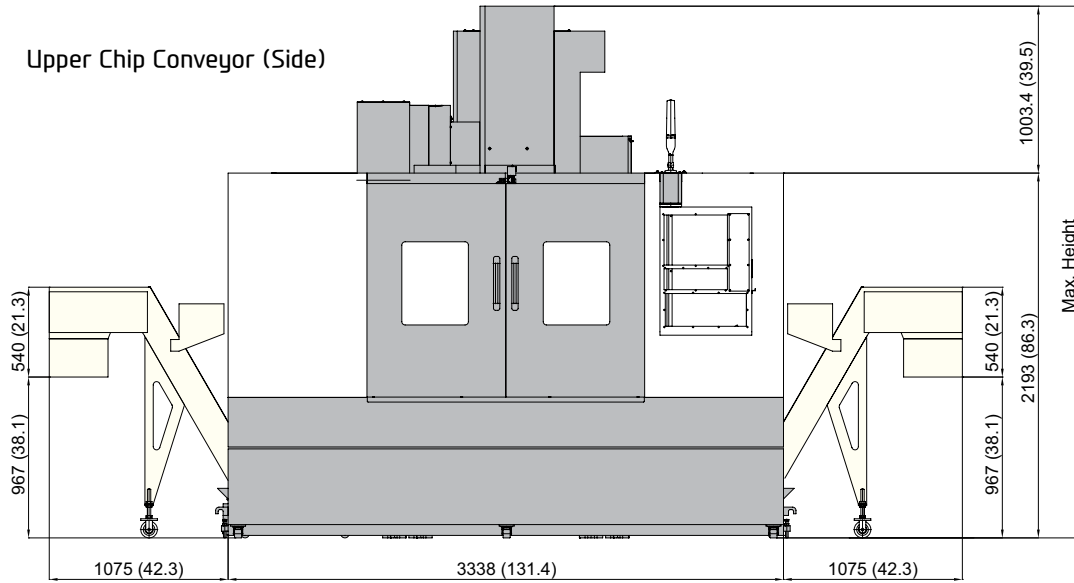
| ITEM           | Max. Height       |                   | 30T ATC Cover     |                   |                   | 40T ATC Cover     |                   |                   | 60T ATC Cover    |                  |                   | Z-axis Motor      |                   |                   |
|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|
|                | Std.              | H/C               | Std.              | 635mm /C          | H/C               | Std.              | 635mm /C          | H/C               | Std.             | 635mm /C         | H/C               | Std.              | 635mm /C          | H/C               |
| Upper/<br>Side | 3,028<br>(119.2") | 3,443<br>(135.6") | 2,510<br>(98.8")  | 2,627<br>(103.4") | 2,926<br>(115.2") | 2,710<br>(106.7") | 2,828<br>(111.3") | 3,126<br>(123.1") | 2,380<br>(93.7") | 2,495<br>(98.2") | 2,680<br>(105.5") | 2,740<br>(107.9") | 2,855<br>(112.4") | 3,155<br>(124.2") |
| Upper/<br>Rear | 3,148<br>(123.9") | 3,563<br>(140.3") | 2,630<br>(103.5") | 2,748<br>(108.2") | 3,046<br>(119.9") | 2,830<br>(111.4") | 2,948<br>(116.1") | 3,246<br>(127.8") | 2,500<br>(98.4") | 2,615<br>(103")  | 2,800<br>(110.2") | 2,860<br>(112.6") | 2,975<br>(117.1") | 3,275<br>(128.9") |

# SPECIFICATIONS

## External Dimensions

unit : mm(in)

### KF6700 II



\*Level Block Height : Upper Chip Conveyor (Side)\_80mm (3.1"), Upper Chip Conveyor (Rear)\_200mm (7.9")

| ITEM           | Max. Height       |                   | 30T ATC Cover     |                   | 40T ATC Cover     |                   | 60T ATC Cover    |                   | Z-axis Motor      |                   |
|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|
|                | Std.              | H/Column          | Std.              | H/Column          | Std.              | H/Column          | Std.             | H/Column          | Std.              | H/Column          |
| Upper/<br>Side | 3,196<br>(125.8") | 3,496<br>(137.6") | 2,620<br>(103.1") | 2,920<br>(115")   | 2,820<br>(111")   | 3,120<br>(122.8") | 2,380<br>(93.7") | 2,680<br>(105.5") | 2,780<br>(109.4") | 3,080<br>(121.3") |
| Upper/<br>Rear | 3,316<br>(130.6") | 3,616<br>(142.4") | 2,740<br>(107.9") | 3,040<br>(119.7") | 2,940<br>(115.7") | 3,240<br>(127.6") | 2,500<br>(98.4") | 2,800<br>(110.2") | 2,900<br>(114.2") | 3,200<br>(126")   |

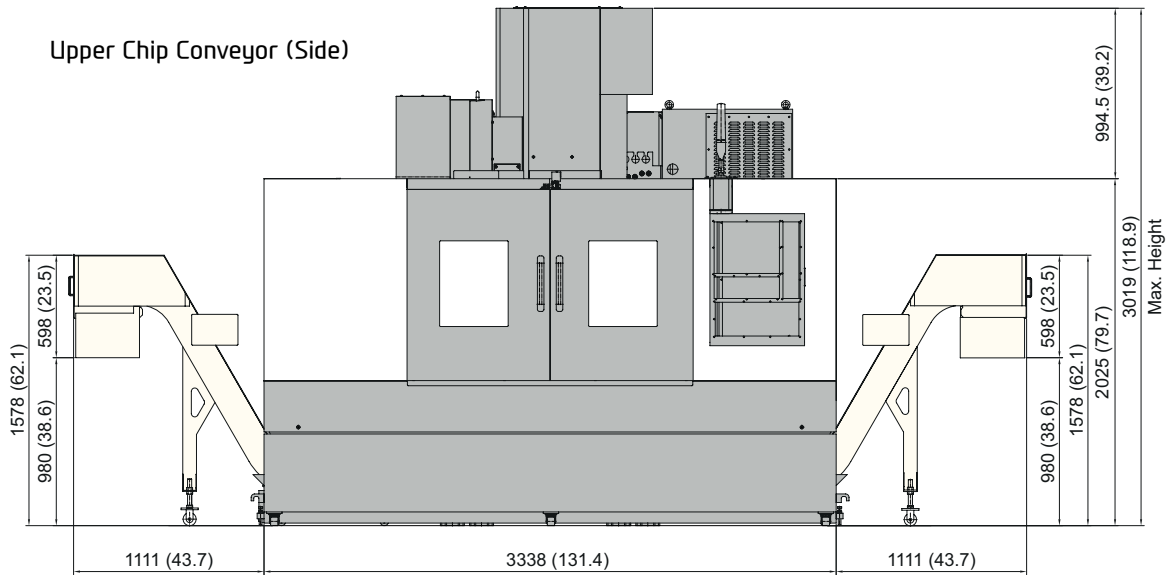


# SPECIFICATIONS

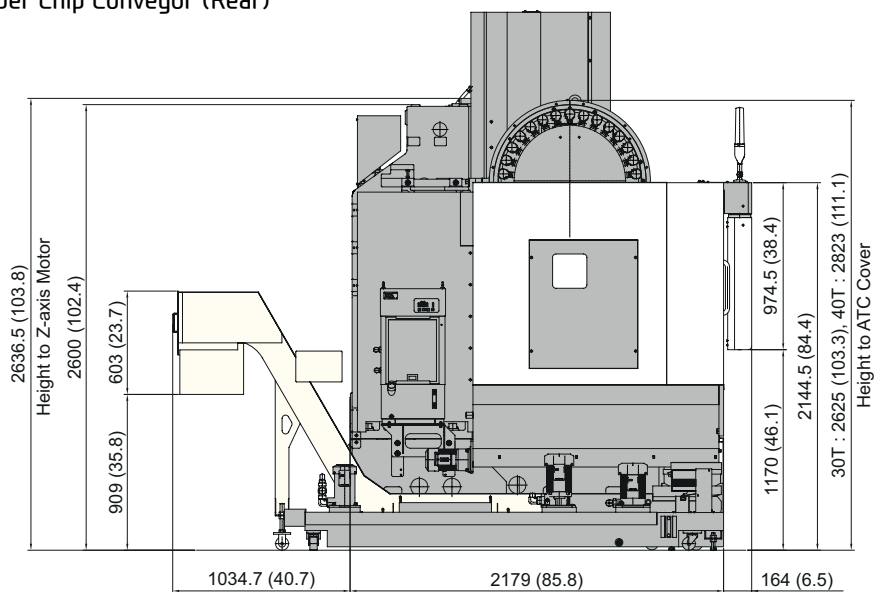
## External Dimensions

unit : mm(in)

### KF5600L II



### Upper Chip Conveyor (Rear)



\*Level Block Height : Upper Chip Conveyor (Side)\_80mm (3.1"), Upper Chip Conveyor (Rear)\_200mm (7.9")

| ITEM           | Max. Height      |          | 30T ATC Cover    |          | 40T ATC Cover    |          | Z-axis Motor       |          |
|----------------|------------------|----------|------------------|----------|------------------|----------|--------------------|----------|
|                | Std.             | H/Column | Std.             | H/Column | Std.             | H/Column | Std.               | H/Column |
| Upper/<br>Side | 3,019<br>(118.9) | -        | 2,505<br>(98.6)  | -        | 2,703<br>(106.4) | -        | 2,517<br>(99.1)    | -        |
| Upper/<br>Rear | 3,139<br>(123.6) | -        | 2,625<br>(103.3) | -        | 2,823<br>(111.1) | -        | 2,636.5<br>(103.8) | -        |

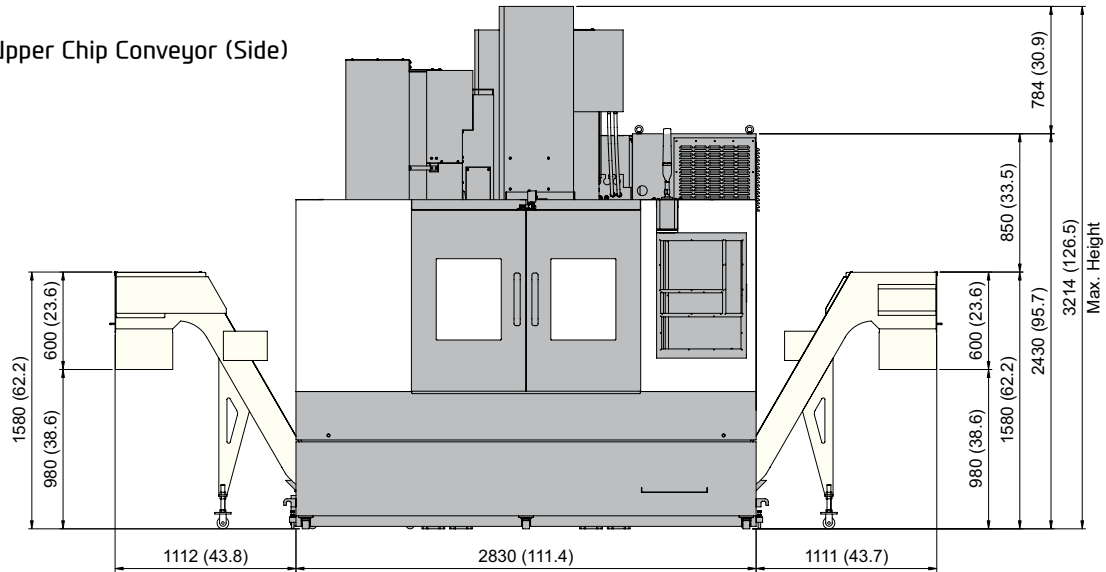
# SPECIFICATIONS

## External Dimensions

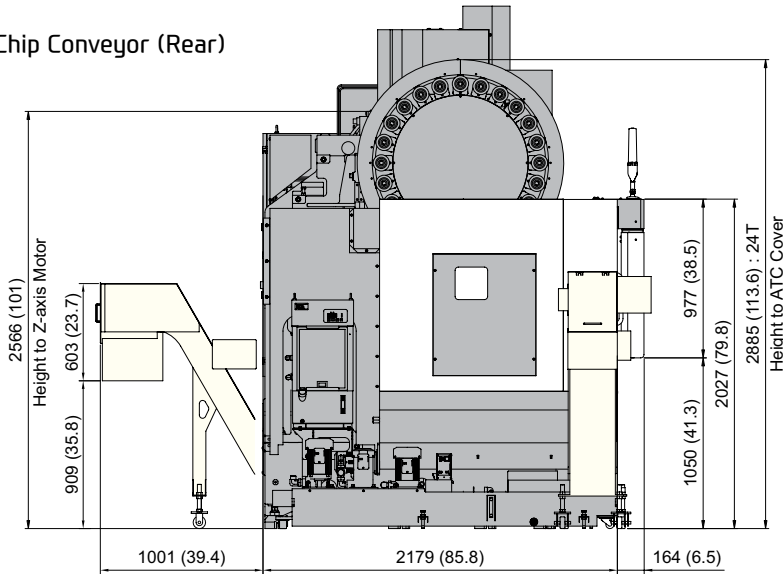
unit : mm(in)

### KF5600/50 II

Upper Chip Conveyor (Side)



Upper Chip Conveyor (Rear)



\*Level Block Height : Upper Chip Conveyor (Side) \_80mm (3.1"), Upper Chip Conveyor (Rear) \_200mm (7.9")

| ITEM           | Max. Height      |                  | 24T ATC Cover    |                  |                  | Z-axis Motor     |                  |                  |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                | Std.             | H/Column         | Std.             | 635mm/C          | H/Column         | Std.             | 635mm/C          | H/Column         |
| Upper/<br>Side | 3,214<br>(126.5) | 3,629<br>(142.9) | 2,885<br>(113.6) | 3,003<br>(118.2) | 3,301<br>(130)   | 2,566<br>(101)   | 2,711<br>(106.7) | 2,981<br>(117.4) |
| Upper/<br>Rear | 3,334<br>(131.3) | 3,749<br>(147.6) | 3,005<br>(118.3) | 3,123<br>(123)   | 3,421<br>(134.7) | 2,686<br>(105.7) | 2,831<br>(111.5) | 3,101<br>(122.1) |

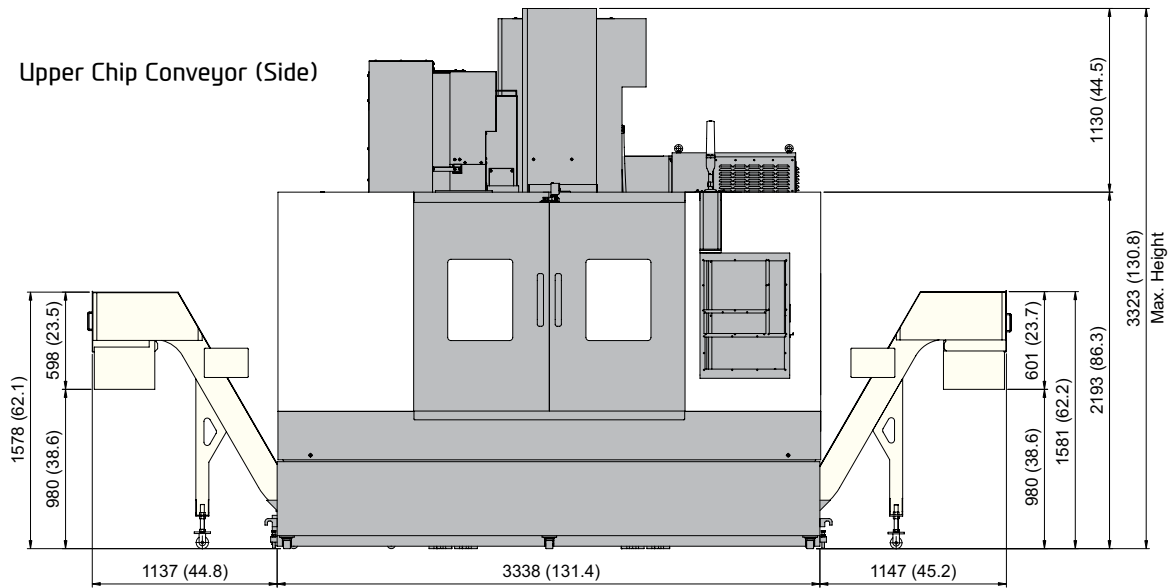
# SPECIFICATIONS

## External Dimensions

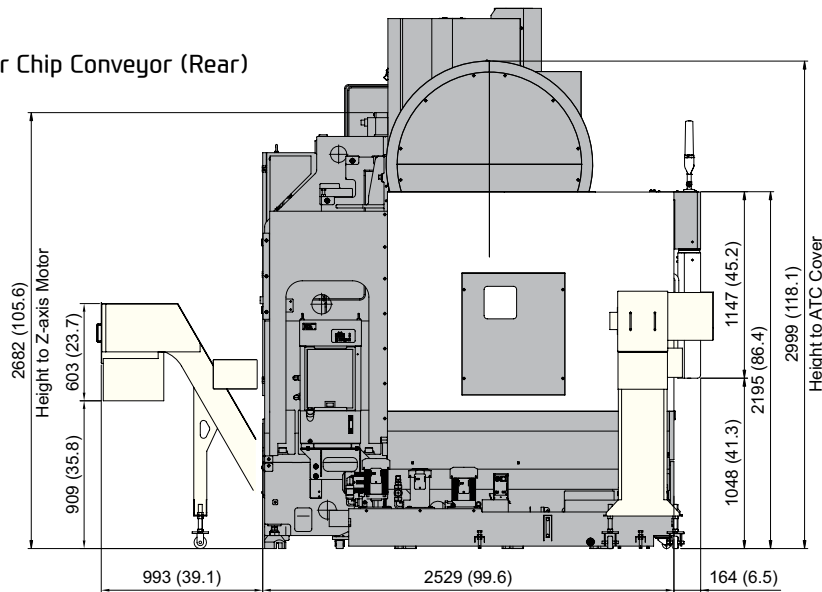
unit : mm(in)

### KF6700/50 II

Upper Chip Conveyor (Side)



Upper Chip Conveyor (Rear)



\*Level Block Height : Upper Chip Conveyor (Side) \_80mm (3.1"), Upper Chip Conveyor (Rear) \_200mm (7.9")

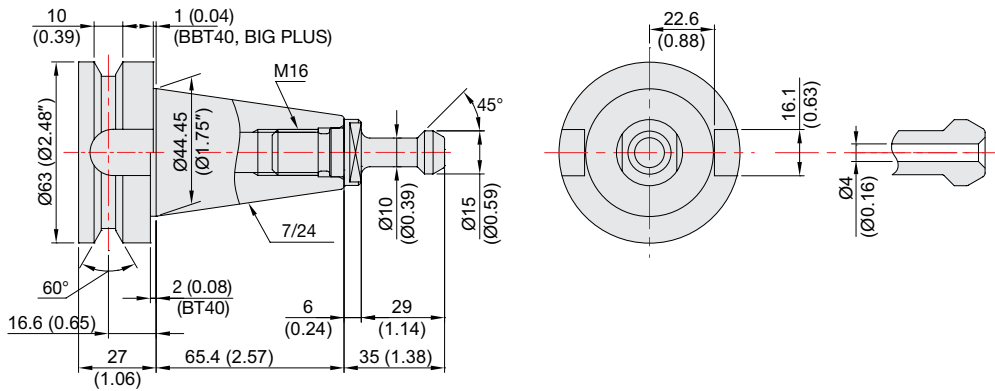
| ITEM           | Max. Height      |                  | 24T ATC Cover    |                  | 24T ATC Cover    |                  | Z-axis Motor     |                  |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                | Std.             | H/Column         | Std.             | H/Column         | Std.             | H/Column         | Std.             | H/Column         |
| Upper/<br>Side | 3,323<br>(130.8) | 3,623<br>(142.6) | 2,999<br>(118.1) | 3,299<br>(129.9) | 2,605<br>(102.6) | 2,905<br>(114.4) | 2,682<br>(105.6) | 2,982<br>(117.4) |
| Upper/<br>Rear | 3,443<br>(135.6) | 3,743<br>(147.4) | 3,119<br>(122.8) | 3,419<br>(134.6) | 2,725<br>(107.3) | 3,025<br>(119.1) | 2,802<br>(110.3) | 3,102<br>(122.1) |

# SPECIFICATIONS

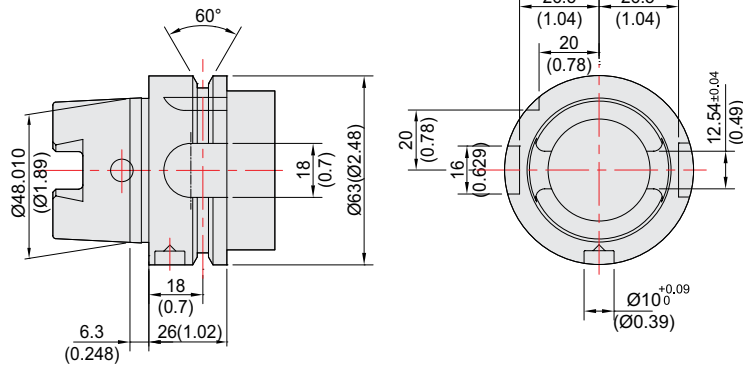
Tool Shank

unit : mm(in)

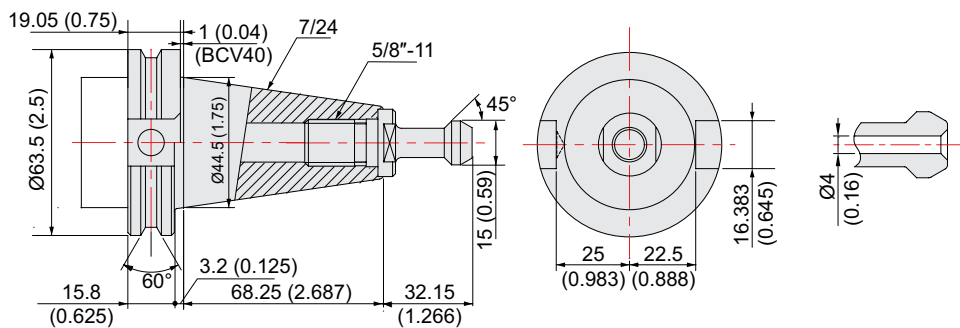
## BT40/BBT40, BIG PLUS



## HSK A-63



## CAT40/BCV40

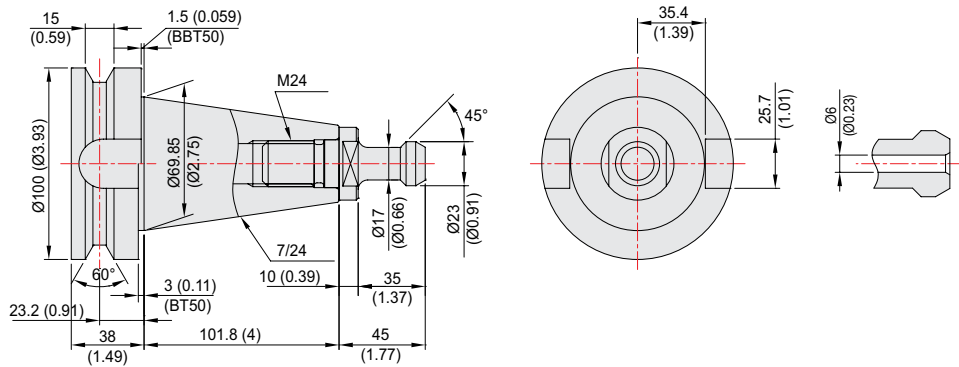


# SPECIFICATIONS

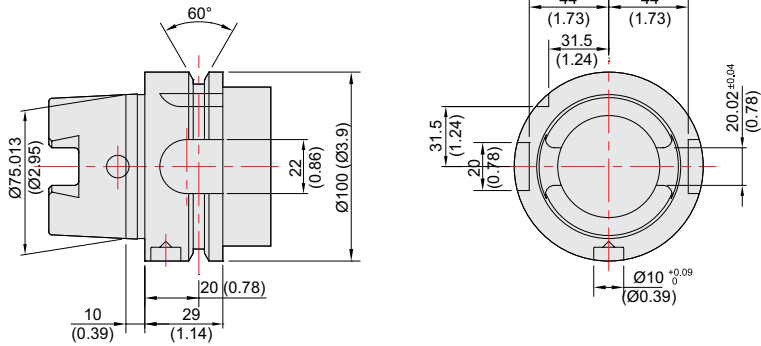
Tool Shank

unit : mm(in)

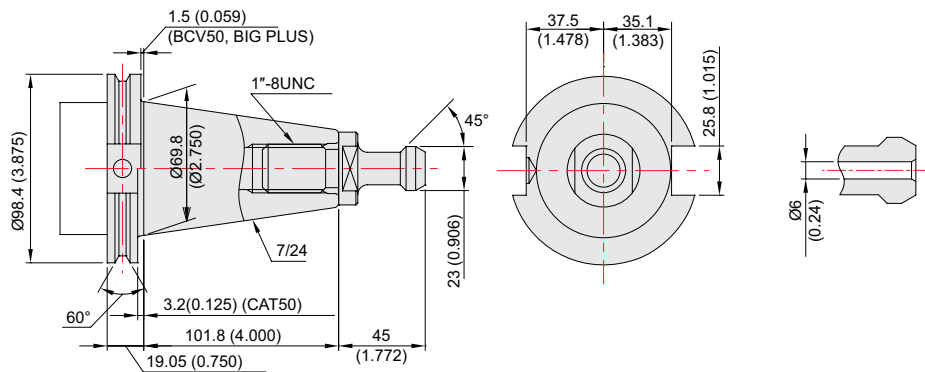
## BT50/BBT50, BIG PLUS



## HSK A-100



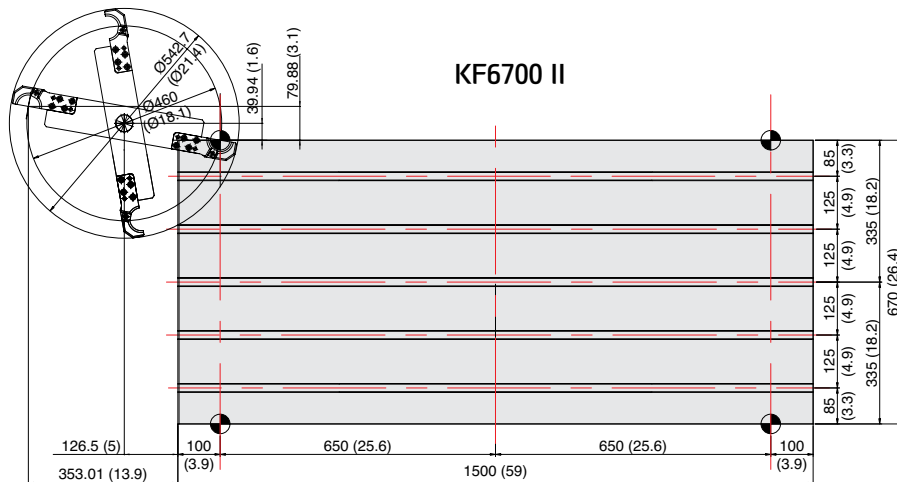
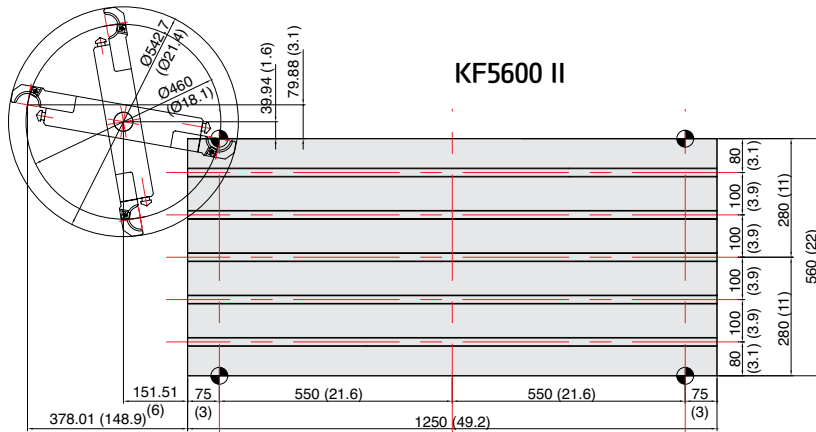
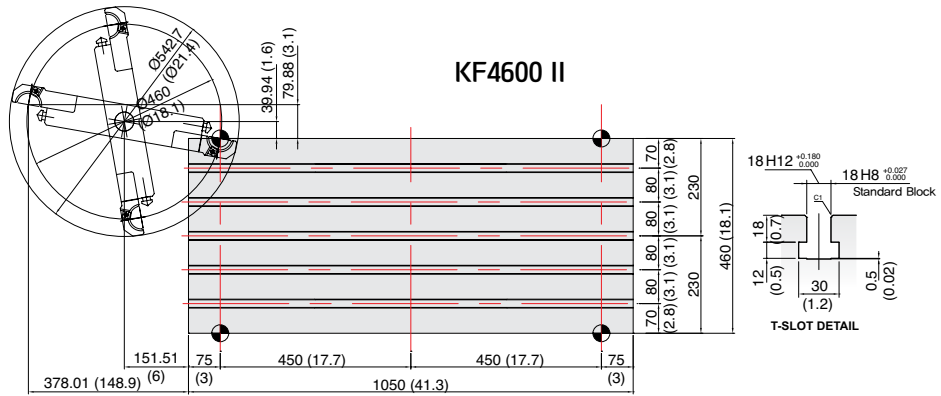
## CAT50/BCV50



# SPECIFICATIONS

Table Dimensions

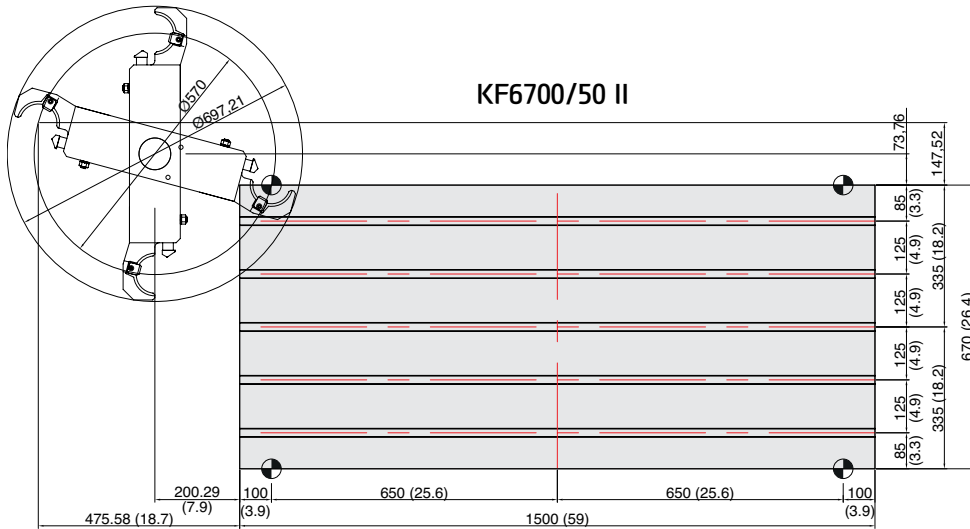
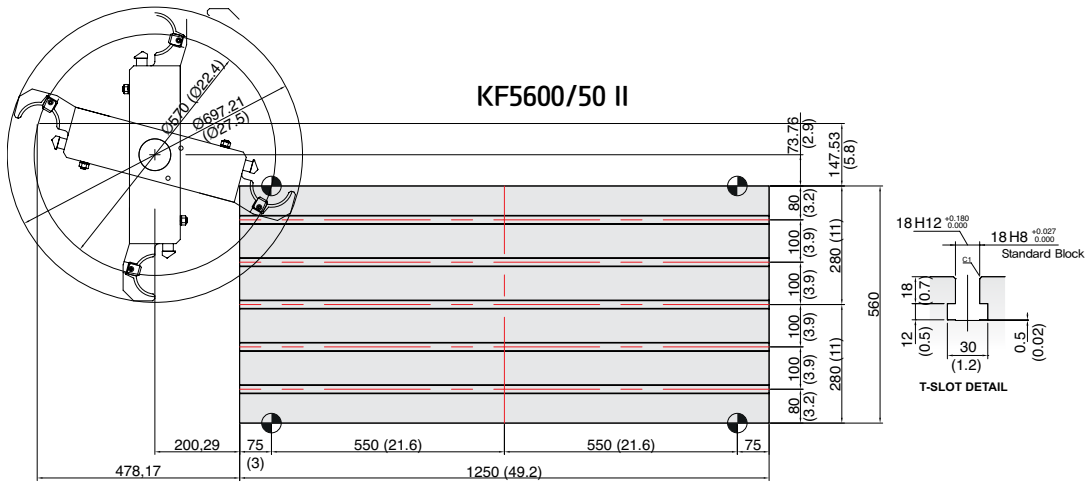
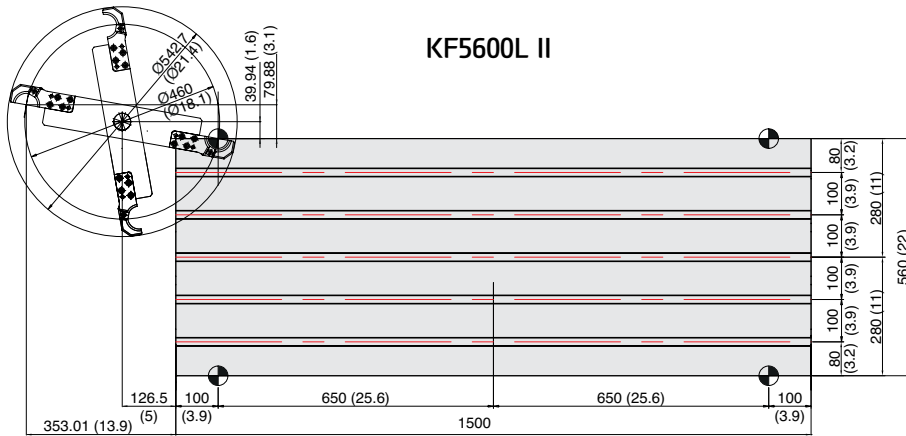
unit : mm(in)



# SPECIFICATIONS

Table Dimensions

unit : mm(in)



# SPECIFICATIONS

## Specifications

[ ] : Option

| ITEM          |                                     | KF4600 II   |  |
|---------------|-------------------------------------|-------------|--|
| TABLE         | Table Size (L×W)                    | mm(in)      | 1,050×460 (41.3"×18.1")                                    |
|               | Maximum Load Capacity               | kg(lb)      | 600 (1,323)  |
| FEED          | Travel (X/Y/Z)                      | mm(in)      | 900/460/520 (35.4"/18.1"/20.5")                            |
|               | Rapid Traverse Rate (X/Y/Z)         | m/min       | 36/36/30   |
|               | Distance from Table Top to SP. Nose | mm(in)      | 150 ~ 670 [870] (5.9" ~ 26.4" [34.3"])                     |
|               | Distance from Column to SP. center  | mm(in)      | 585 (23")  |
|               | Slide Type                          | -           | ROLLER TYPE LM GUIDE                                       |
| ATC           | Number of Tools                     | ea          | 30 [40]  |
|               | Tool Shank                          | -           | BBT40 [12K, 15K : HSK-A63]                                 |
|               | Max. Tool Dia. (W.T / W.O)          | mm(in)      | 30T : Ø80 [40T : Ø76]/Ø125 (30T : Ø3.1" [40T : Ø3"]/Ø4.9") |
|               | Max. Tool Length                    | mm(in)      | 300 (11.8")  |
|               | Max. Tool Weight                    | kg(lb)      | 8 (17.6)   |
|               | Tool Selection Method               | -           | RANDOM [FIXED]   |
|               | Tool Change Time                    | T-T         | sec  |
| C-C           |                                     | sec         | 3.2  |
| TANK CAPACITY | Coolant Tank                        | ℓ (gal)     | 340 (89.8)   |
|               | Lubricating Tank                    | ℓ (gal)     | 4 (1)  |
|               | Hydraulic Tank                      | ℓ (gal)     | - (BOOSTER CYLINDER)                                       |
| POWER SUPPLY  | Air Consumption (0.5MPa)            | ℓ /min(gal) | 110 (29)   |
|               | Electric Power Supply               | KVA         | 26   |
|               | Thickness of Power Cable            | Sq          | Over 25  |
|               | Voltage                             | V/Hz        | 220/60 (200/50)  |
| MACHINE       | Floor Space (L×W)                   | mm(in)      | 2,730×2,027 (107.5"×79.8")                                 |
|               | Height                              | mm(in)      | 3,028 (119.2")   |
|               | Weight                              | kg(lb)      | 5,500 (12,125)   |

## Spindle

[ ] : Option

| ITEM                               | Speed r/min           | Power (Max./Cont.) kW (HP) | Torque (Max./Cont.) N·m (lb·ft) | Driving Method |
|------------------------------------|-----------------------|----------------------------|---------------------------------|----------------|
| HYUNDAI WIA<br>FAPIIC - SMART PLUS | 8,000                 | 18.5/11 (25/15)            | 118/52.5 (87/38.7)              | DIRECT         |
|                                    | [8,000 : High-torque] | 15/11 (20/15)              | 286/143 (210.9/105.5)           |                |
|                                    | [10,000]              | 18.5/11 (25/15)            | 118/52.5 (87/38.7)              |                |
|                                    | [12,000]              | 18.5/11 (25/15)            | 118/52.5 (87/38.7)              |                |
|                                    | [15,000]              | 18.5/11 (25/15)            | 118/52.5 (87/38.7)              |                |
| SIEMENS                            | [12,000]              | 16.2/8.5 (21.7/11.4)       | 119.7/63 (88.3/46.5)            |                |
| HEIDENHAIN                         | [12,000]              | 17/10 (22.8/13.4)          | 108.6/63.7 (80/47)              |                |



# SPECIFICATIONS

## Specifications

[ ] : Option

| ITEM          |                                     | KF 5600 II   | KF5600L II   |                                       |
|---------------|-------------------------------------|--|--|---------------------------------------|
| TABLE         | Table Size (L×W)                    | mm(in) 1,250×560 (49.2"×22")                       | 1,500×560 (59.1"×22")  |                                       |
|               | Maximum Load Capacity               | kg(lb)   | 1,000 (2,205)  |                                       |
| FEED          | Travel (X/Y/Z)                      | mm(in) 1,100/560/520 [635] (43.3"/22"/20.5" [25"]) | 1,300/560/520 (51.2"/22"/20.5")  |                                       |
|               | Rapid Traverse Rate (X/Y/Z)         | m/min  | 36/36/30   |                                       |
|               | Distance from Table Top to SP. Nose | mm(in)   | 150 ~ 670 (5.9" ~ 26.4") [150 ~ 785 (5.9" ~ 30.9") [450 ~ 1,085 (17.7" ~ 42.7")] |                                       |
|               | Distance from Column to SP. center  | mm(in)   | 635 (23.4")  |                                       |
|               | Slide Type                          | -  | ROLLER TYPE LM GUIDE   |                                       |
| ATC           | Number of Tools                     | ea   | 30 [40, 60] 30 [40]  |                                       |
|               | Tool Shank                          | -  | BBT40 [12K, 15K : HSK-A63]   |                                       |
|               | Max. Tool Dia. (W.T / W.O)          | mm(in)   | 30T : Ø80/Ø125 (30T : Ø3.1"/Ø4.9") [40, 60T : Ø76/Ø125 (Ø3"/Ø4.9")]              |                                       |
|               | Max. Tool Length                    | mm(in)   | 300 (11.8")  |                                       |
|               | Max. Tool Weight                    | kg(lb)   | 8 (17.6)   |                                       |
|               | Tool Selection Method               | -  | RANDOM [FIXED] RANDOM  |                                       |
|               | Tool Change Time                    | T-T  | sec  | 1.3                                   |
|               |                                     | C-C  | sec  | 3.2 [Z-axis 635 mm (23.4") : 3.5] 3.5 |
| TANK CAPACITY | Coolant Tank                        | ℓ (gal)  | 365 (96.4) 370 (97.7)  |                                       |
|               | Lubricating Tank                    | ℓ (gal)  | 4 (1)  |                                       |
|               | Hydraulic Tank                      | ℓ (gal)  | - (BOOSTER CYLINDER)   |                                       |
| POWER SUPPLY  | Air Consumption (0.5MPa)            | ℓ /min(gal)  | 110 (29)   |                                       |
|               | Electric Power Supply               | kVA  | 26   |                                       |
|               | Thickness of Power Cable            | Sq   | Over 25  |                                       |
|               | Voltage                             | V/Hz   | 220/60 (200/50)  |                                       |
| MACHINE       | Floor Space (L×W)                   | mm(in)   | 2,830×2,176 (111.4"×85.7") 3,338×2,178 (131.4"×85.8")                            |                                       |
|               | Height                              | mm(in)   | 3,028 (119.2") [3,443 (135.6")] 3,022 (119")                                     |                                       |
|               | Weight                              | kg(lb)   | 6,500 (14,330) [7,000 (15,432)] 6,700 (14,771)                                   |                                       |

## Spindle

[ ] : Option

| ITEM                              | Speed r/min           | Power (Max./Cont.) kW (HP) | Torque (Max./Cont.) N·m (lbf·ft) | Driving Method |
|-----------------------------------|-----------------------|----------------------------|----------------------------------|----------------|
| HYUNDAI WIA<br>FANUC - SMART PLUS | 8,000                 | 18.5/11 (25/15)            | 118/52.5 (87/38.7)               | DIRECT         |
|                                   | [8,000 : High-torque] | 15/11 (20/15)              | 286/143 (210.9/105.5)            |                |
|                                   | [10,000]              | 18.5/11 (25/15)            | 118/52.5 (87/38.7)               |                |
|                                   | [12,000]              | 18.5/11 (25/15)            | 118/52.5 (87/38.7)               |                |
|                                   | [15,000]              | 18.5/11 (25/15)            | 118/52.5 (87/38.7)               |                |
| SIEMENS                           | [12,000]              | 16.2/8.5 (21.7/11.4)       | 119.7/63 (88.3/46.5)             |                |
| HEIDENHAIN                        | [12,000]              | 17/10 (22.8/13.4)          | 108.6/63.7 (80/47)               |                |

# SPECIFICATIONS

## Specifications

[ ] : Option

| ITEM          |                                     | KF6700 II   |  |
|---------------|-------------------------------------|-------------|--|
| TABLE         | Table Size (L×W)                    | mm(in)      | 1,500×670 (59"×26.4")  |
|               | Maximum Load Capacity               | kg(lb)      | 1,300 (2,866)  |
| FEED          | Travel (X/Y/Z)                      | mm(in)      | 1,300/670/635 (51.2"/26.4"/25")  |
|               | Rapid Traverse Rate (X/Y/Z)         | m/min       | 36/36/30   |
|               | Distance from Table Top to SP. Nose | mm(in)      | 150 ~ 785 (5.9" ~ 30.9") [450 ~ 1,085 (17.7" ~ 42.7")]                 |
|               | Distance from Column to SP. center  | mm(in)      | 690 (27.2")  |
|               | Slide Type                          | -           | ROLLER TYPE LM GUIDE   |
| ATC           | Number of Tools                     | ea          | 30 [40, 60]  |
|               | Tool Shank                          | -           | BBT40 [12K, 15K : HSK-A63]   |
|               | Max. Tool Dia. (W.T / W.O)          | mm(in)      | 30T : Ø80/Ø125 (30T : Ø3.1"/Ø4.9")<br>[40, 60T : Ø76/Ø125 (Ø3"/Ø4.9")] |
|               | Max. Tool Length                    | mm(in)      | 300 (11.8")  |
|               | Max. Tool Weight                    | kg(lb)      | 8 (17.6)   |
|               | Tool Selection Method               | -           | RANDOM [FIXED]   |
|               | Tool Change Time                    | T-T         | sec  |
| C-C           |                                     | sec         | 3.5  |
| TANK CAPACITY | Coolant Tank                        | ℓ (gal)     | 365 (96.4)   |
|               | Lubricating Tank                    | ℓ (gal)     | 4 (1)  |
|               | Hydraulic Tank                      | ℓ (gal)     | - (BOOSTER CYLINDER)   |
| POWER SUPPLY  | Air Consumption (0.5MPa)            | ℓ /min(gal) | 110 (29)   |
|               | Electric Power Supply               | KVA         | 26   |
|               | Thickness of Power Cable            | Sq          | Over 25  |
|               | Voltage                             | V/Hz        | 220/60 (200/50)  |
| MACHINE       | Floor Space (L×W)                   | mm(in)      | 3,338×2,527 (131.4"×99.5")   |
|               | Height                              | mm(in)      | 3,196 (125.8")   |
|               | Weight                              | kg(lb)      | 7,600 (16,755)   |

## Spindle

[ ] : Option

| ITEM                               | Speed r/min           | Power (Max./Cont.) kW (HP) | Torque (Max./Cont.) N·m (lb·ft) | Driving Method |
|------------------------------------|-----------------------|----------------------------|---------------------------------|----------------|
| HYUNDAI WIA<br>FAPIIC - SMART PLUS | 8,000                 | 18.5/15 (25/20)            | 118/71.6 (87/52.8)              | DIRECT         |
|                                    | [8,000 : High-torque] | 15/11 (20/15)              | 286/143 (210.9/105.5)           |                |
|                                    | [10,000]              | 18.5/11 (25/15)            | 118/52.5 (87/38.7)              |                |
|                                    | [12,000]              | 18.5/11 (25/15)            | 118/52.5 (87/38.7)              |                |
|                                    | [15,000]              | 18.5/11 (25/15)            | 118/52.5 (87/38.7)              |                |
| SIEMENS                            | [12,000]              | 16.2/8.5 (21.7/11.4)       | 119.7/63 (88.3/46.5)            |                |
| HEIDENHAIN                         | [12,000]              | 17/10 (22.8/13.4)          | 108.6/63.7 (80/47)              |                |

# SPECIFICATIONS

## Specifications

[ ] : Option

| ITEM          |                                     |             | KF5600/50 II                            | KF6700/50 II                    |
|---------------|-------------------------------------|-------------|---|---------------------------------|
| TABLE         | Table Size (L×W)                    | mm(in)      | 1,250×560 (49.2"×22")                   | 1,500×670 (59"×26.4")           |
|               | Maximum Load Capacity               | kg(lb)      | 1,000 (2,205)                           | 1,300 (2,866)                   |
| SPINDLE       | Spindle Taper                       | -           | BBT50 [HSK-A100]                        |                                 |
|               | Spindle RPM                         | r/min       | 8,000                                   |                                 |
|               | Spindle Power Output (Max./Cont.)   | kW(HP)      | 22/11 (30/15)                           |                                 |
|               | Spindle Torque (Max./Cont.)         | N·m(lbf·ft) | 353.2/143 (260.5/105.5)                 |                                 |
|               | Spindle Driving Method              | -           | DIRECT                                  |                                 |
| FEED          | Travel (X/Y/Z)                      | mm(in)      | 1,100/560/520 (43.3"/22"/20.5")         | 1,300/670/635 (51.2"/26.4"/25") |
|               | Rapid Traverse Rate (X/Y/Z)         | m/min       | 36/36/30                                |                                 |
|               | Distance from Table Top to SP. Nose | mm(in)      | 200~720 mm (7.9"~28.3")                 | 200~835 mm (7.9"~32.9")         |
|               | Distance from Column to SP. center  | mm(in)      | 635 (23.4")                             | 690 (27.2")                     |
|               | Slide Type                          | -           | ROLLER TYPE LM GUIDE                    |                                 |
| ATC           | Number of Tools                     | ea          | 24                                      | 24 [30]                         |
|               | Tool Shank                          | -           | BBT50 [HSK-A100]                        |                                 |
|               | Max. Tool Dia. (W.T / W.O)          | mm(in)      | Ø125/Ø250 ( Ø4.9"/Ø9.8")                |                                 |
|               | Max. Tool Length                    | mm(in)      | 350 (13.8")                             |                                 |
|               | Max. Tool Weight                    | kg(lb)      | 15 (33)                                 |                                 |
|               | Tool Selection Method               | -           | RANDOM                                  |                                 |
|               | Tool Change Time                    | T-T         | sec                                     | 2.8                             |
| C-C           |                                     | sec         | 5.5                                     |                                 |
| TANK CAPACITY | Coolant Tank                        | ℓ (gal)     | 350 (92.5)                              | 370(97.7)                       |
|               | Lubricating Tank                    | ℓ (gal)     | 4                                       |                                 |
|               | Hydraulic Tank                      | ℓ (gal)     | - (BOOSTER CYLINDER)                    |                                 |
| POWER SUPPLY  | Air Consumption (0.5MPa)            | ℓ /min(gal) | 110 (29)                                |                                 |
|               | Electric Power Supply               | KVA         | 26                                      |                                 |
|               | Thickness of Power Cable            | Sq          | Over 25                                 |                                 |
|               | Voltage                             | V/Hz        | 220/60 (200/50)                         |                                 |
| MACHINE       | Floor Space (L×W)                   | mm(in)      | 2,830×2,176 (111.4"×85.7")              | 3,338×2,527 (131.4"×99.5")      |
|               | Height                              | mm(in)      | 3,137 (123.5")                          | 3,336 (131.3")                  |
|               | Weight                              | kg(lb)      | 7,300 (16,094)                          | 9,000 (19,842)                  |
| NC            | Controller                          | -           | HYUNDAI WIA FANUC i Series - Smart Plus |                                 |

Specifications are subject to change without notice for improvement.

# CONTROLLER

## HYUNDAI WIA FANUC i Series – SMART PLUS

[ ] : Option ☆ Needed technical consultation

| Controlled axis / Display / Accuracy Compensation |   |
|---|---|
| Control axes                                      | 3 axes (X, Y, Z)<br>[4 axes (X, Y, Z, A)] [5 axes (X, Y, Z, A, C)]  |
| Simultaneously controlled axes                    | 3 axes [Max. 4 axes]  |
| Least setting Unit                                | X, Y, Z axes : 0.001 mm (0.0001 inch)<br>B axes : 1 deg [0.001] deg   |
| Least input increment                             | X, Y, Z axes : 0.001 mm (0.0001 inch)<br>B axes : 1 deg [0.001] deg   |
| Inch / Metric conversion                          |   |
| High response vector control                      |   |
| Interlock   | All axes / Each axis  |
| Machine lock                                      | All axes  |
| Backlash compensation                             | ± 0 ~ 9999 pulses<br>(Rapid traverse / Cutting feed)  |
| Position switch                                   |   |
| LCD / MDI   | 15 inch LCD unit (with Touch Panel)   |
| Feedback  | Absolute motor feedback   |
| Stored stroke check 1                             | Over travel   |
| Stored stroke check 2, 3                          |   |
| Stored pitch error compensation                   |   |
| Operation   |   |
| Automatic operation (Memory)                      |   |
| MDI operation                                     |   |
| DNC operation                                     | Needed DNC software / CF card   |
| Program restart                                   |   |
| Wrong operation prevention                        |   |
| Program check function                            | Dry run, Program check, Z axis Machine lock<br>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<br>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<br>Jog : 0~2,000mm/min (79 ipm)<br>Manual handle : x1, x10, x100 pulses<br>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<br>(Cutter and tool length)        |
| Tool length measurement                     | Z axis Input C  |
| Editing function                            |   |
| Part program storage size                   | 5,120m (2MB)  |
| No. of registerable programs                | 1,000 ea  |
| Program protect                             |   |
| Background editing                          |   |
| Extended part program editing               | Copy, move and change of NC program                       |
| Memory card program edit                    |   |
| Data input / output & Interface             |   |
| I/O interface                               | CF card, USB memory<br>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<br>#100 ~ #199,<br>#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.

# CONTROLLER

## SIEMENS 828D

[ ] : Option ☆ Needed technical consultation

### Controlled axis / Display / Accuracy Compensation

|                                |  |
|--------------------------------|--|
| Control axes                   | 3 axes (X, Y, Z)<br>[4 axes (X, Y, Z, A)]<br>[5 axes (X, Y, Z, A, C)]        |
| Simultaneously controlled axes | Max. 4 axes  |
| Least setting Unit             | X, Y, Z axes : 0.001 mm (0.0001 inch)<br>[A, C (B) axes : 1 deg [0.001] deg] |
| Least input increment          | X, Y, Z축 : 0.001 mm (0.0001 inch)<br>[A, C (B) axes : 1 deg [0.001] deg]     |
| Inch / Metric changeover       | G70 (inch) / G71 (metric)  |
| Interlock                      | All axes / Each axis   |
| Pitch error compensation       |  |
| Feedforward control            |  |
| LCD / MDI                      | 10.4 inch color LCD<br>[15 inch color LCD (With Touch panel)]                |
| Keyboard                       | QWERTY full keyboard   |
| Stored stroke check            | Over travel  |

### Operation

|                        |  |
|------------------------|--|
| Automatic operation    |  |
| MDI operation          |  |
| Program restart        |  |
| Program check function | Dry run / Program check / Machine lock |
| Single block           |  |
| Block search           | Block search                           |
| Reposition             |  |
| Working area limit     | Working area limitations               |

### Interpolation functions

|   |   |
|---|---|
| Positioning   | G00   |
| Linear interpolation  | G01   |
| Circular interpolation  | Circular Interpolation CW (G02)<br>Circular Interpolation CCW (G03) |
| Exact position stop   | Single block exact stop (G09)<br>Exact stop G60 (G601, G602, G603)  |
| Dwell   | Dwell (G04)   |
| Reference position return                                     | Return to reference point<br>Return to 2nd reference point          |
| Helical interpolation   |   |
| Spline interpolation  | Non-uniform rational B splines                                      |
| Compressor for 3-axis machining (Improving machining quality) | Compacd /Compcurv (Cycle 832)                                       |

### Feed function / Acc. & Dec. control

|                         |   |
|-------------------------|---|
| Manual feed             | Rapid traverse<br>Jog<br>Manual handle<br>Reference position return |
| Cutting Feed command    | Direct input F code   |
| Feedrate override       | 0 ~ 200% (10% Unit)   |
| Rapid traverse override | 1%, 25%, 50%, 100%  |
| Feed per minute         | G94   |
| Feed per revolution     | G95   |
| Look-ahead block        | 300 block<br>450 block : (SW28X Mold)<br>[600 block]                |

### Program input

|                             |  |
|-----------------------------|--|
| ISO correspondence          | G291 (ISO)/G290<br>(ISO G Code system-A)   |
| Optional block skip         | 2  |
| Program stop / end          | M00, M01 / M02, M30  |
| Maximum command unit        | ± 999,999.999 mm, ± 99,999.9999 inch   |
| Plane selection             | X-Y : G17, X-Z : G18, Y-Z : G19<br>G54 ~ G57, G505~G549  |
| Workpiece coordinate system | G500 (Basic frame - settable zero offset)<br>G53 (Work offset non modal)<br>G153 (basic frame non modal) |
| Sub program call            | 11 folds nested  |
| G code preventing buffering | STOPRE   |
| Drilling/Milling cycle      | Programing (Cycle 82, 83, 84, 840)   |
| User cycle                  |  |

### Auxiliary function / Spindle speed function

|                                |                      |
|--------------------------------|----------------------|
| Auxiliary function             | M Code 4 digit       |
| Spindle speed function         | S Code 5 digit       |
| Spindle override               | 0% ~ 150% (10% Unit) |
| Spindle orientation            | SPOS                 |
| Rigid tapping                  |                      |
| Automatic mode Interchange     | Spindle / Axis mode  |
| Constant surface speed control | G96, G97             |
| Spindle speed limitation       | LIMS                 |

### Tool function / Tool compensation

|                              |  |
|------------------------------|--|
| Tool function                | Tool number & Tool name<br>Tool : T + Offset : D |
| Tool life management         |  |
| Tools in tool list           | 256 ea<br>768 ea : (SW28X Mold)                  |
| Cutting Edges in tool list   | 512 ea<br>1,536 ea : (SW28X Mold)                |
| Tool radius compensation     | ISO (G40, G41, G42)                              |
| Tool length offset           |  |
| Geometry / Wear compensation |  |
| Measurement of tool length   |  |
| Tool management function     |  |

### Editing function

|                               |   |
|-------------------------------|---|
| Part program storage size     | 5MB<br>10MB : (SW28X Mold)              |
| No. of registerable programs  | 750 ea                                  |
| External Storage devices      | Local network, Server, USB, Flash drive |
| 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 interface (ONLY 10.4")<br>USB memory interface<br>Embedded Ethernet memory interface |
|---------------|--|

### Screenshot

### 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.<br>Support 9 languages<br>Chinese (Simplified/Traditional), English,<br>French, German, Italian, Korean,<br>Portuguese, Spanish<br>[☆ 22 Support languages : Inquiry need] |
| Multi language display            |  |
| LCD Screen Saver                  | Screen saver & Motion sensing  |

### Option

|                                |  |
|--------------------------------|--|
| Additional optional block skip | 10 ea                                  |
| Additional axis control        |  |
| Contour handwheel              |  |
| 3D simulation                  |  |
| Real time simulation           |  |
| ShopMill                       | Machining step programming for milling |

# MOVEMENT FOR BETTER TOMORROW



## ECO FRIENDLY

Protect the environment for all humanity and generation to come

**01**

**Achieve  
carbon  
neutrality**

- Develop Net-zero Roadmap
- Heighten carbon emissions management
- Achieve carbon neutrality goals

**02**

**Boost  
resource  
circulation**

- Detail plans to reduce environmental impact
- Gradually reduce pollutant emissions
- Build eco-friendly supply chain

**03**

**Establish  
environmental  
management  
framework**

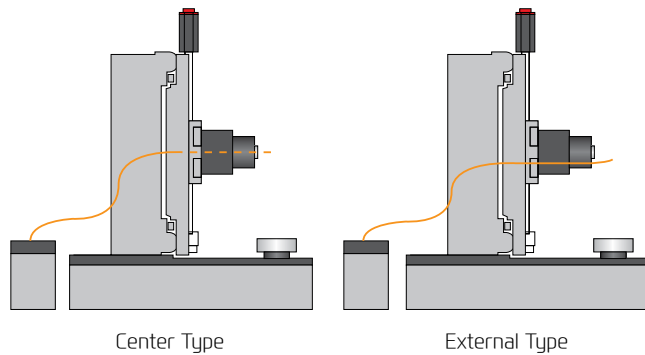
- Set up environmental management process
- Assess business impact of climate change risks

# HYUNDAI WIA ECO SYSTEM

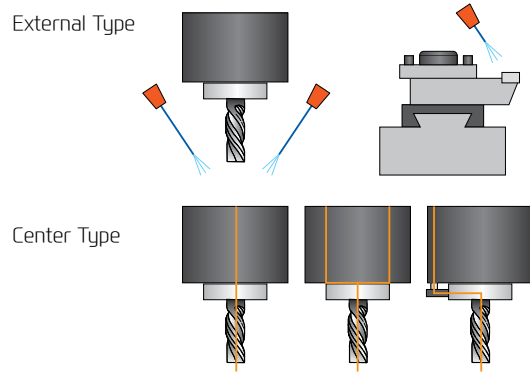
## MQL (Minimal Quantity Lubrication)

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.

### Example of Machining Center Application



### Example of Etc.



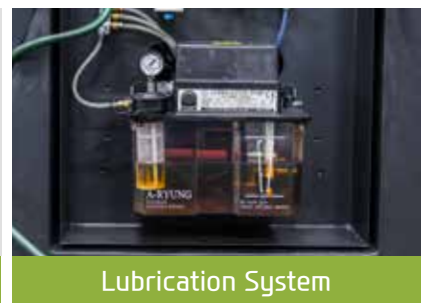
Oil Skimmer

An oil skimmer can increase coolant and tool life by removing tramp oil contaminants.



Mist Collector

Mist Collector reduces the amount of smoke and oil mist in the air. This helps build a safe and comfortable working environment and improve durability.



Lubrication System

By applying lubricant only when the machines axis are moving lubrication consumption is reduced by compared to standard systems.

# HYUNDAI WIA ENERGY SAVING

## HW-ESS (HYUNDAI WIA Energy Saving System)

HYUNDAI WIA Machine tool provides the optimum power saving function that can easily save energy with an intuitive user interface.



1. **Machine-ready power saving function** : Put all servo motors and other motors into sleep mode when no control or operation is done for a set time
2. **Work light auto-off function** : The work light is turned off automatically when no control or operation is done for a set time
3. **Chip conveyor auto power saving** : Operation/non operation time (timer) can be set to save energy
4. **Auto Power-off** : Auto power off after ending the an operation after a period of time
5. **Eco function** : Machine ready sleep mode can be activated/de-activated from the controller panel
6. **Power consumption monitor** : Real time power consumption can be monitored through the OP screen



You Tube HYUNDAI WIA MT

[www.youtube.com/HYUNDAIWIAMT](http://www.youtube.com/HYUNDAIWIAMT)

## EXPERIENCE THE NEW TECHNOLOGY

With its top-quality HYUNDAI WIA machine tool creates a new and better world.



<http://machine.hyundai-wia.com>

HYUNDAI WIA Machine Tools  
Global Links

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