

# HYUNDAI WIA MACHINE TOOL



## KF7600L

High Speed, Wide Range Vertical Machining Center

EXPERIENCE THE NEW TECHNOLOGY



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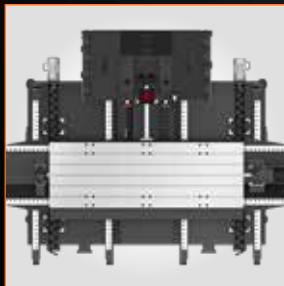


**You Tube** HYUNDAI WIA MT  
[www.youtube.com/HYUNDAIWIAMT](http://www.youtube.com/HYUNDAIWIAMT)

<http://machine.hyundai-wia.com>  
HYUNDAI WIA Machine Tools  
Global Links

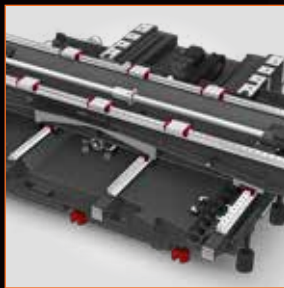
**KF7600L**

# HIGHLIGHT



## Wide Machining Area

- > Wide structure of 2,100mm (82.7") X-axis
- > Large table application for machining long parts
- > High rigidity with Y-axis 4way design



## Optimized Structure for High Speed Machining

- > Rapid traverse rate (X/Y/Z) : 30/30/24 m/min
- > High speed/High rigidity roller guide in all axes
- > Securing rigidity by applying 3-row ball screw support bearings



## Enhanced Chip Disposal

- > 2 way interior screw chip conveyor (Std.)
- > Bed flushing coolant standard application
- > Upper-type chip conveyor standard application

# KF 7600L

Technical Leader ▶

## ATC & Magazine

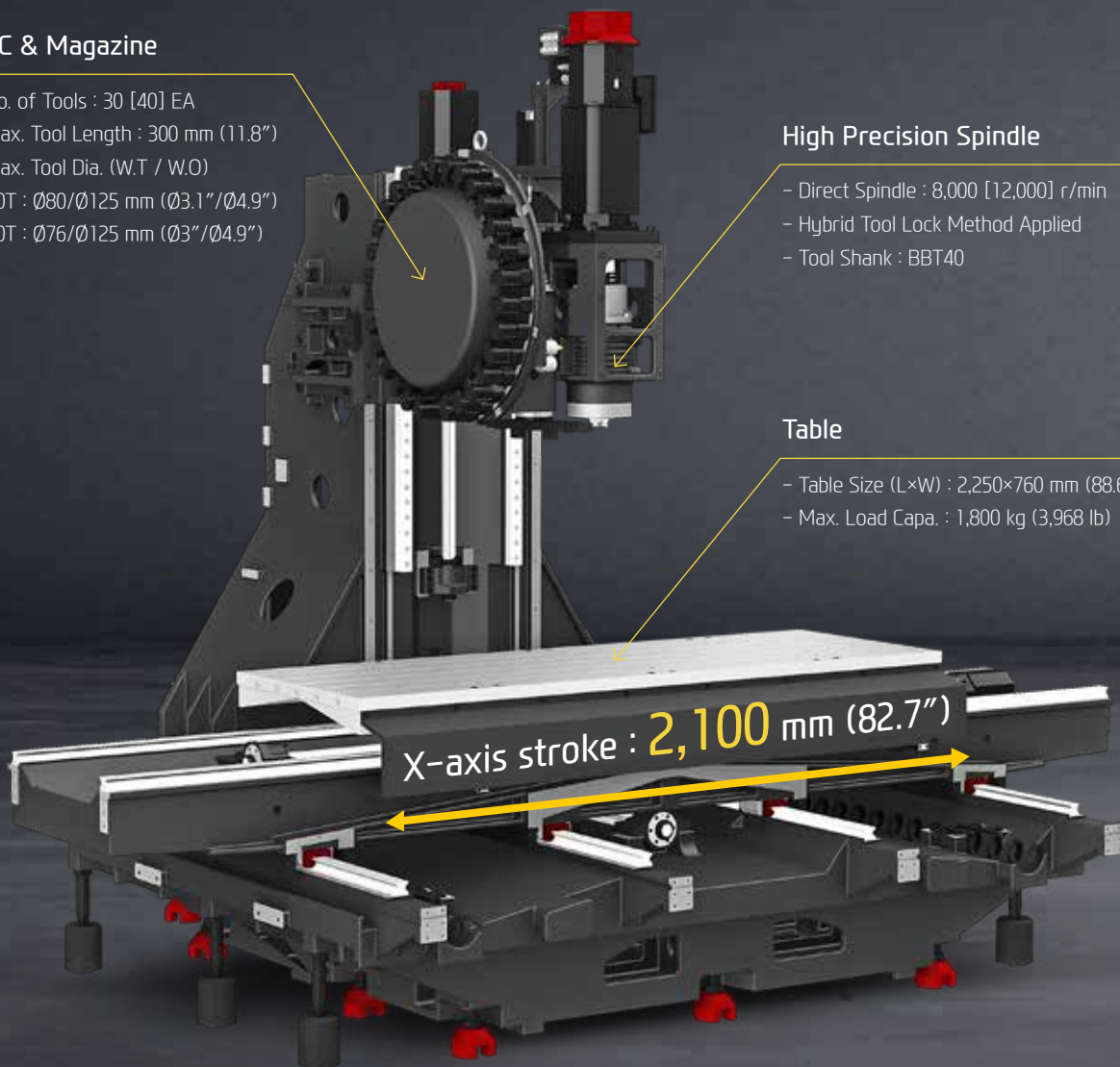
- No. of Tools : 30 [40] EA
- Max. Tool Length : 300 mm (11.8")
- Max. Tool Dia. (W.T / W.O)  
30T :  $\varnothing 80/\varnothing 125$  mm ( $\varnothing 3.1"/\varnothing 4.9"$ )  
40T :  $\varnothing 76/\varnothing 125$  mm ( $\varnothing 3"/\varnothing 4.9"$ )

## High Precision Spindle

- Direct Spindle : 8,000 [12,000] r/min
- Hybrid Tool Lock Method Applied
- Tool Shank : BBT40

## Table

- Table Size (L×W) : 2,250×760 mm (88.6"×29.9")
- Max. Load Capa. : 1,800 kg (3,968 lb)



## Vertical Machining Center with Best-in-class Performance & Wide Machining Area

KF7600L, developed by applying the accumulated know-how and the latest technology of Hyundai WIA, is a next-generation machine tool optimized for processing products with long material lengths through the application of a large and wide table.

# STATE-OF-THE-ART MECHANISM DESIGN, HIGH-PRECISION STRUCTURE

## HIGH SPEED & WIDE MACHINING RANGE

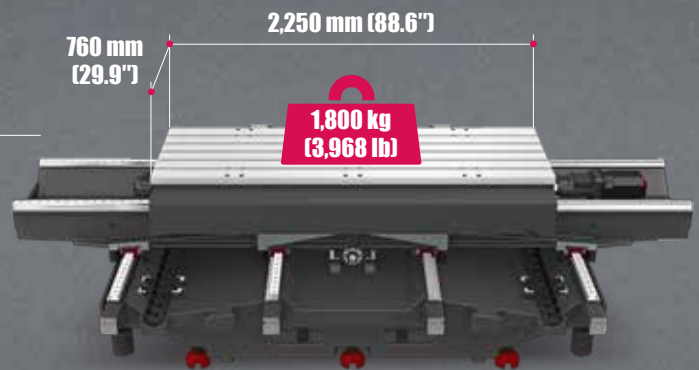
### WIDE MACHINING AREA

#### Expanded X-axis Structure

The X-axis feed length is designed to be 2,100mm, ensuring sufficient machining area for long-axis product machining. In particular, by extending the X-axis by more than 600mm compared to the existing equipment of the same class, even products that could not be processed with existing equipment can now be processed.

◎ Comparison of X-axis feed lengths of our Y-axis 700mm class equipment

Similar Model A	1,550 mm (61")
Similar Model B	1,500 mm (59")
<b>KF7600L</b>	<b>2,100 mm (82.7")</b>



#### Large Working Area Table

A large, 2,250×760mm (88.6"×29.9") table is suitable for large product machining.

The table has a maximum load capacity of up to 1,800kg (3,968 lb), which demonstrates its ability to handle heavy-duty tasks.

### GUIDE WAY

#### High-Speed Roller LM Guideway

By applying an roller LM guide structure with high speed and rigidity, a rapid traverse rate of **30m/min** is achieved based on the X/Y axis.

#### Y-axis 4 Slideways

**4 Slideways** on the Y-axis to minimize sagging of X-axis, enabling manufacture of high precision products.

◎ Comparison of X-axis rapid traverse rates of our X-axis 2,000~2,500mm class equipment

Similar Model A	X-axis : 2,450mm (96.5")	16 m/min
Similar Model B	X-axis : 2,160mm (85")	24 m/min
<b>KF7600L</b>	<b>X-axis : 2,100mm (82.7")</b>	<b>30 m/min</b>



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

**30/30/24** m/min (1181/1181/945 ipm)

#### Travel (X/Y/Z)

**2,100/760/635** mm (82.7"/29.9"/25")

# HIGH PRECISION SPINDLE & HIGH SPEED TOOL CHANGE SYSTEM

## SPINDLE

### Direct Driven Spindle

The directly coupled spindle at a maximum revolution of 8,000rpm [Opt. 12,000rpm], allows high-speed processing. Additionally, the large diameter and the thickness of the spindle add to the stability of the machine.

### Through Spindle Coolant **OPTION**

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



20 bar / 30 bar / 70 bar

**Hybrid Tool Lock** : Reducing heat and noise by removing the hydraulic motor



8,000 rpm

12,000 rpm **OPTION**

**18.5/15** kW (25/20HP) **118/71.6** N·m (87/528 lbf·ft)  
Power (Max./Cont.) Torque (Max./Cont.)

**18.5/11** kW (25/20HP) **118/52.5** N·m (87/38.7 lbf·ft)  
Power (Max./Cont.) Torque (Max./Cont.)

## 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.

### Magazine

The tool magazine holds 30 tools as standard and 40 tools as an option. Due to the wider selection of tools and the random tool selection method, tool change time has improved.

Tool Change Time (Chip to Chip) **3.7** sec



no. of Tools	Tool Shank	Max. Tool Weight	Max. Tool length	Max. Tool dia. (W.T/W.O)
30 [40] EA	BBT40	8 kg (18 lb)	300 mm (11.8")	30T : Ø80/Ø125 mm (Ø3.1"/ Ø4.9") [40T : Ø76/Ø125 mm (Ø3"/ Ø4.9")]

# OPTIMAL PROCESSING SYSTEM FOR USERS

## Chip Disposal & Coolant Unit



Bed Flushing Coolant (Std.)



Interior Screw Chip Conveyor (Std.)



### Upper-type Conveyor (Std.)

The upper type chip conveyor is applied as a standard to efficiently remove chips generated during machining.

## Standard & Optional

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

Spindle		KF7600L
8,000rpm (15kW)	Direct	●
12,000rpm (18.5kW)	Direct	○
Spindle Cooling System	8,000rpm	○
	12,000rpm	●
ATC		
ATC Extension	30	●
	40	○
Tool Shank Type	BBT40	●
	BCV40	○
U-Center	D'andrea	○
Pull Stud	45°	●
Table & Column		
T-Slot Table		●
NC Rotary Table		☆
High Column	300mm (11.8")	☆
Coolant System		
Std. Coolant (Main Spindle Nozzle)		●
Through Spindle Coolant	20bar	○
	30bar, 20 ℓ (5.3 gal)	○
	70bar, 15 ℓ (4 gal)	○
	70bar, 30 ℓ (7.9 gal)	○
Top Cover		●
Shower Coolant		○
Gun Coolant		○
Bed Flushing Coolant		●
Air Gun		○
Cutting Air Blow		○
Tool Measuring Air Blow (Only for TLM)		●
Chip Disposal		
Coolant Tank	525 ℓ (138.7 gal)	●
Interior Screw Chip Conveyor		●
Upper Chip Conveyor (Hinge)	Left	○
	right	○
Screw Type Chip Conveyor	Left	☆
	right	☆
Drum Filter Type Chip Conveyor	Left	☆
	right	☆
	rear	☆
Chip Wagon	Standard (180 ℓ)	○
	Swing (200 ℓ)	○
	Large Swing (290 ℓ)	○
	Large Size (330 ℓ)	○
	Customized	☆
Controller		
FANUC Oi - SMART PLUS		●

❖ Specifications are subject to change without notice for improvement.

Electric Device		KF7600L
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		○
Transformer	30kVA	○
Auto Power Off		○
Back up Module for Black out		○
Measuring Device		
Air Zero	TACO	○
	SMC	○
Work Measuring Device		○
TLM	TLM	○
	Laser	○
Tool Broken Detective Device		☆
Linear Scale	X/Y/Z Axis	○
Coolant Level Sensor (Bladder Type)		☆
Environment		
Air Conditioner		○
Oil Mist Collector		☆
Oil Skimmer (Only for Chip Conveyor)		○
MQL (Minimal Quantity Lubrication)		☆
Fixture & Automation		
Auto Door		○
Auto Shutter (Only for Automatic System)		○
Sub O/P		☆
NC rotary Table/F	Single	○
	Channel	☆
Control of Additional Axis	1 Axis	○
	2 Axis	☆
External M Code 4EA		○
Automation Interface		☆
I/O Extension (In & Out)	16 Contact	○
	32 Contact	○
Hyd. Device		
Hyd. Unit for Fixture	45bar	-
	70bar	○
	100bar	○
	Customized	☆





# SPECIFICATIONS

## Specifications

[ ] : Option

ITEM		KF7600L	
TABLE	Table Size (L×W)	mm(in)	2,250×760 (88.6"×29.9")
	Maximum Load Capacity	kg(lb)	1,800 (3,968)
SPINDLE	Spindle Taper	-	BBT40
	Spindle Speed (rpm)	r/min	8,000 [12,000]
	Spindle Power (Max./Cont.)	kW(HP)	18.5/15 (25/20) [18.5/11 (25/20)]
	Spindle Torque (Max./Cont.)	N·m(lbf·ft)	118/71.6 (87/52.8) [118/52.5 (87/38.7)]
	Spindle Driving Method	-	Direct
FEED	Travel (X/Y/Z)	mm(in)	2,100/760/635 (82.7"/29.9"/25")
	Distance from Table Top to Sp. Center	mm(in)	150~785 (5.9"~30.9")
	Distance from Table Center to Sp. Nose	mm(in)	820 (32.3")
	Rapid Traverse Rate (X/Y/Z)	m/min(ipm)	30/30/24 (1,181/1,181/945)
	Slide Type	-	Roller Guide
ATC	Tool Shank	-	BBT40
	Number of Tools	ea	30 [40]
	Max. Tool Dia. (W.T/W.O)	mm(in)	Ø80/Ø125 (Ø3.1"/Ø4.9") [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
	Tool Change Time (C-C)	sec	3.7
MACHINE	Floor Space (L×W)	mm(in)	4,900×2,819 (192.9"×111")
	Height	mm(in)	3,266.4 (128.6")
	Weight	kg(lb)	13,000 (28,660)
CNC	Controller	-	HYUNDAI WIA FANUC i Series - SMART PLUS

Specifications are subject to change without notice for improvement.

## Spindle Output/Torque Diagram

