

HYUNDAI WIA MACHINE TOOL



KF52000

Column Moving Type Vertical Machining Center

EXPERIENCE THE NEW TECHNOLOGY



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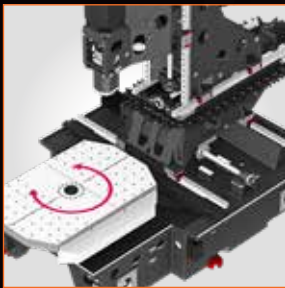


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www.youtube.com/HYUNDAIWIAMT

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Global Links

KF5200D

HIGHLIGHT



Increased Productivity

- > Dual table structure for high productivity
- > Rapid Traverse Rate (X/Y/Z) : 42/42/42m/min



Improved Machining Ability

- > Max. machining capability 45% enhanced compared to prior model
- > 42 tool pick-up type ATC application



Optimal Structure for Automation

- > Rotary valve for fixture under the table (Opt.) and maintenance space secured
- > Rear chip disposal available
- > Suitable for line production layout (Machine width 1.9m)

KF 5200D

Technical Leader ▶

Pick-up Type ATC

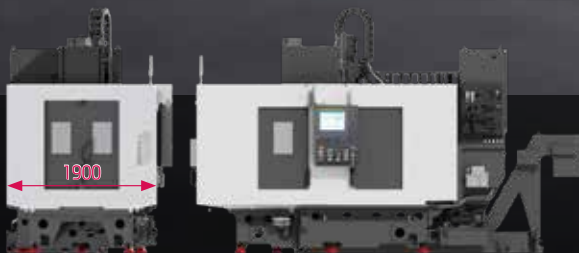
- No. of Tools : 42EA
- Max. Tool Length : 300 mm (11.8")
- Max. Tool Dia. (W.T/W.O)
Ø80/Ø125 mm (Ø3.1"/Ø4.9")

High Precision Spindle

- Direct Spindle
8,000 [8,000] [12,000] [15,000] r/min
- Tool Shank : BBT40 [HSK-A63]

Dual Table

- Table Size : 2-860×570 mm (2-33.9"×22.4")
- Max. Load Capacity : 2-350 kg (2-772 lb)
- Table Change Time : 5.5 sec



Optimal Structure For Line Automation

- Machine width 1.9m Decreased by 21%
- Rear chip disposal available (Prior model unavailable)

DUAL TABLE & COLUMN MOVING TYPE

PRODUCTIVITY ENHANCED & THERMAL DISPLACEMENT REDUCED

Dual Table

New work piece setup can be done on the loading area while machining is under way. Reduction in work piece setup time leads to higher productivity.

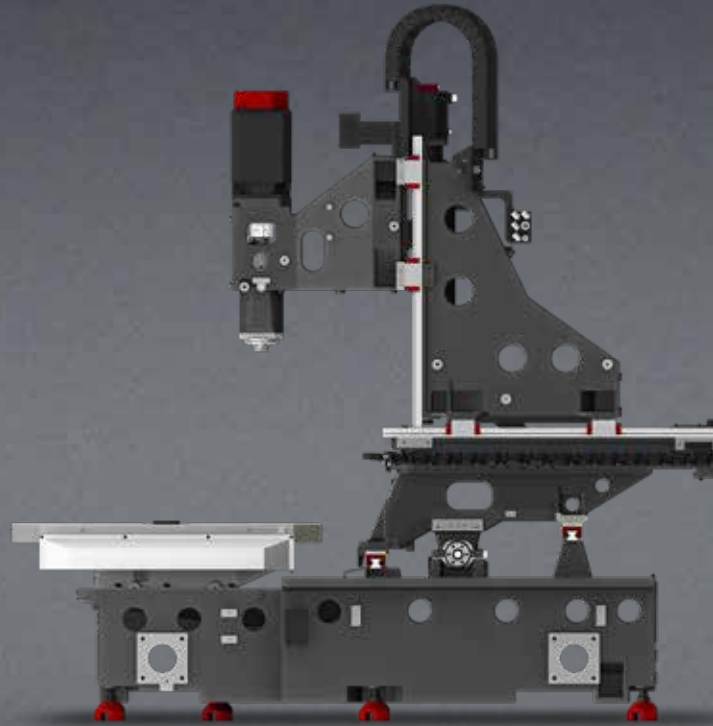
Column Moving Structure

KF5200D has a dual table column moving structure to maximize productivity. The symmetrical heat structure enhances machining precision.

Minimized Heat Displacement

To prevent heat displacement of the bed from high temperature coolant, coolant leakage prevention bed cover is applied.

This can provide stable machining precision even during long working hours.



Previous Machine	Change Time	6 sec
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KF5200D	Change Time	5.5 sec	0.5 sec reduction
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Previous Machine	Table Size	2-700×500 mm
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KF5200D	Table Size	2-860×570 mm	40% Improvement
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GUIDE WAY

High-Speed Roller LM Guideway

By applying an roller LM guide structure with high speed and rigidity, a rapid traverse rate of **42m/min** is achieved based on the all axes.

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.

<X-axis : 4 Row bearing>



Improved rapid traverse speed

Previous Machine	X-axis	40 m/min	Y-axis	40 m/min	Z-axis	30 m/min
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KF5200D	X-axis	42 m/min	X-axis	42 m/min	X-axis	42 m/min
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5% Improvement

5% Improvement

40% Improvement

Rapid Traverse Rate (X/Y/Z)

42/42/42 m/min (1,654/1,654/1,654 ipm)

Travel (X/Y/Z)

760/520/570 mm (29.5"/20.5"/22.4")

HIGH PRECISION SPINDLE & HIGH SPEED TOOL CHANGE SYSTEM

SPINDLE

Direct Type Spindle

The spindle motor is directly connected to the main spindle by a high speed and high precision coupling. Rapid spindle acc/deceleration is performed without backlash. The coupling also minimizes vibration and heat transfer from the motor preventing thermal displacement.

Speed (rpm)	Power (Max./Cont.)	Torque (Max./Cont.)
8,000 r/min	18.5/15 kW (30/20HP)	159/95.5 N·m (117.3/70.4 lbf·ft)
[8,000 r/min High-torque]	[15/11 kW (20/15HP)]	[286/143 N·m (210.9/105.5 lbf·ft)]
[12,000 r/min]	[18.5/7.5 kW (25/10HP)]	[118/47.7 N·m (87/35.2 lbf·ft)]
[15,000 r/min]	[18.5/11 kW (25/15HP)]	[118/52.5 N·m (87/38.7 lbf·ft)]

Increased Maximum Cutting Capacity

[] : Option

Previous Machine	SM45C	368 cc/min	
KF5200D	SM45C	535 cc/min	45% Improvement



ATC & MAGAZINE

Pick-up Type Magazine

Automatic tool loading device with unnecessary pick-up type magazine achieves best-in-class tool change time (chip to chip) of 3.9 sec and excellent maintainability.

Chip disposal is enhanced by making the disposal direction going under the tools.

Tool Change Time (Chip to Chip) **3.9** sec

Reduce Tool Change Time

Previous Machine	C-C	4.3 sec	
KF5200D	C-C	3.9 sec	0.5 sec reduction



No. of Tools	Tool Shank	Max. Tool Weight	Max. Tool Length	Max. Tool Dia. (W.T/W.O)
42 EA	BBT40 [HSK-A63]	8 kg (18 lb)	Ø50 : 300 mm (11.8") Ø125 : 170 mm (6.7")	Ø80/Ø125 mm (Ø3.1"/Ø4.9")

OPTIMAL PROCESSING SYSTEM FOR USERS

IMPROVED CHIP DISPOSAL CAPABILITY

- 1 Upper part of machining area sealed to prevent chip leakage.
- 2 Installation taps for oil mist collector & gantry loader applied.
- 3 Convenient layout with rear disposal chip conveyor design.

High Flexibility in Fixture Installation

Rotary valve for fixture under the table and maintenance space secured
Route for fixture rotary valve hose & wire secured on top of the table
Taps on all sides of the bed for fixture clamp valve installation (No.1 ~ 5)



Standard & Optional

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

Spindle		KF5200D
8,000rpm (18.5kW)	Direct	●
8,000rpm (15kW)	Direct (High Torque)	○
12,000rpm (18.5kW)	Direct	○
15,000rpm (18.5kW)	Direct	○
Spindle Cooling System		●
ATC		
ATC Extension	42	●
ATC Type	Pick-up	●
Tool Shank Type	BBT40	●
	HSK-A63	○
U-Center	D'andrea	-
Pull Stud	45°	●
Table		
APC	Rotary Turn	●
Tap Type Table		●
T-Slot Table		○
NC Rotary Table		☆
Coolant System		
Std. Coolant (Main Spindle Nozzle)		●
Through Spindle Coolant	20bar	○
	30bar, 20 ℓ	○
	70bar, 15 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		☆
Power Coolant System (For Automation)		☆
Chip Disposal		
Coolant Tank	400 ℓ	●
Chip Conveyor (Hinge/Scraper)	Rear (Rear)	○
	Rear (Right)	-
Special Chip Conveyor (Drum Filter)		☆
Chip Wagon	Standard (180 ℓ)	○
	Swing (200 ℓ)	○
	Large Swing (290 ℓ)	○
	Large Size (330 ℓ)	○
	Customized	☆
Controller		
FANUC Oi - SMART PLUS		●
Fanuc 31i-B		○

Electric Device		KF5200D
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	35kVA	○
Auto Power Off		●
Back up Module for Black out		○
Measuring Device		
Air Zero	TACO	○
	SMC	○
Work Measuring Device		○
TLM	TLM	○
	Laser	○
Tool Broken Detecting Device		☆
Linear Scale	X/Y/Z Axis	○
Rotary Scale	A/C 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		○
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		
Std. Hyd. Unit	45bar/60 ℓ	○
Center Hyd. Supply Device	2×3 (6 Port)	○
	2×5 (10 Port)	○
	70bar	○
Fixture Hyd. Unit	100bar	○
	Customized	☆

❖ Specifications are subject to change without notice for improvement.

SPECIFICATIONS

Spindle Output/Torque Diagram

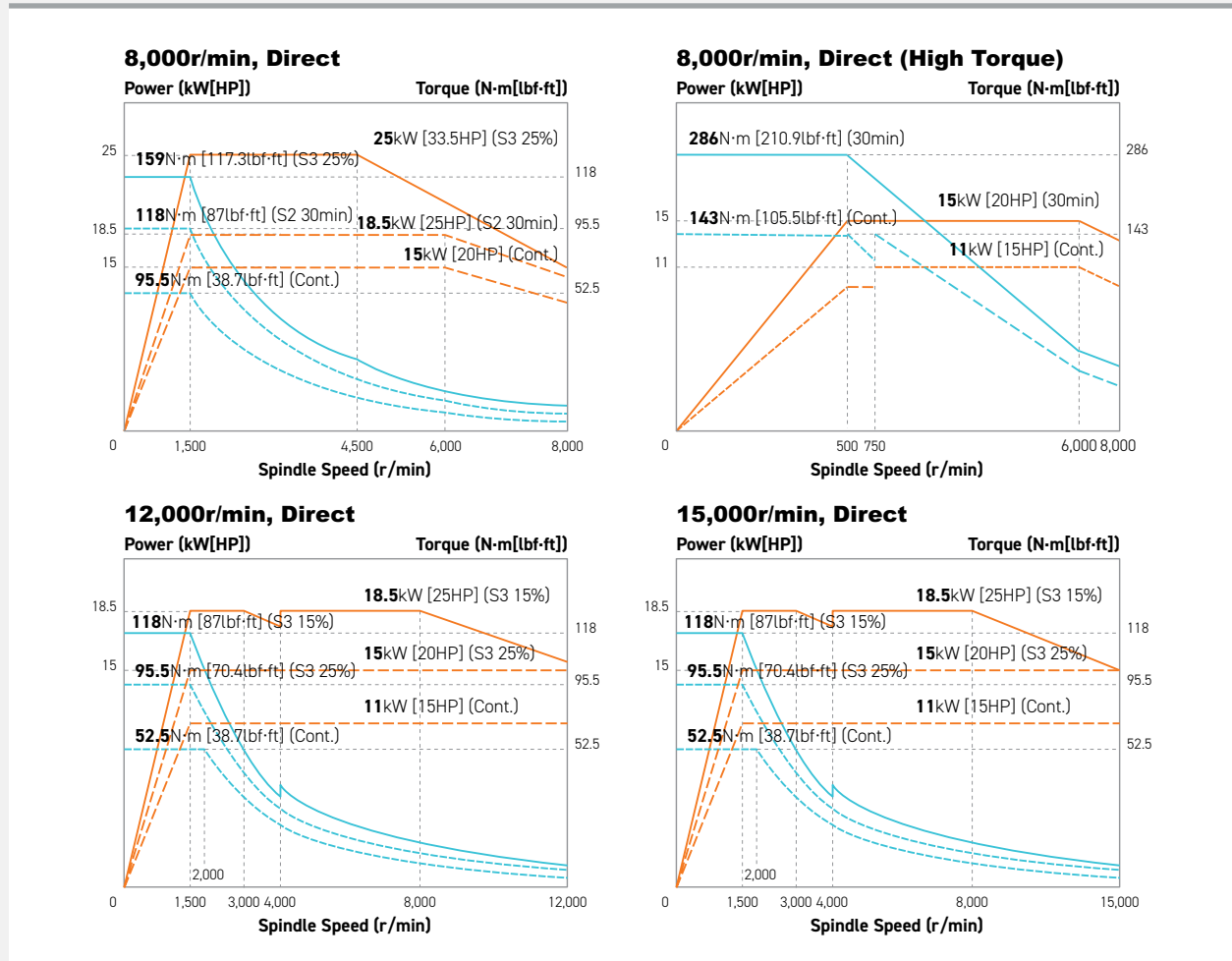
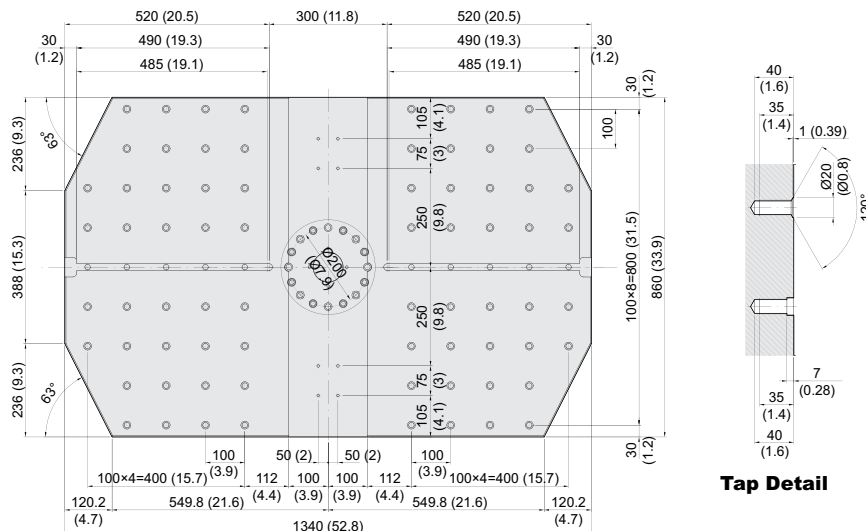


Table Dimensions

unit : mm(in)



SPECIFICATIONS

Specifications

[] : Option

ITEM			KF5200D
TABLE	Table Size (L×W)	mm(in)	2-860×570 (2-33.9"×22.4")
	Max. Load Capacity	kg(lb)	2-350 (2-772)
	Table Change Time	sec	5.5
	Change Method	-	Rotary Turn
	Table Driving Method	-	Rotating Cylinder
FEED	Travel (X/Y/Z)	mm(in)	760/520/570 (29.5"/20.5"/22.4")
	Rapid Traverse Rate (X/Y/Z)	m/min(ipm)	42/42/42 (1,654/1,654/1,654)
	Slide Type	-	Roller Guide
ATC	Tool Shank	-	BBT40 [HSK-A63]
	Number of Tools	ea	42 : Pick-up Type
	Max. Tool Dia. (W.T / W.O)	mm(in)	Ø80/Ø125 (Ø3.1"/Ø4.9")
	Max. Tool Length	mm(in)	Ø50 : 300 (11.8") / Ø125 : 170 (6.7")
	Max. Tool Weight	kg(lb)	8 (17.6)
	Tool Selection Method	-	Fixed
	Tool Change Time (C-C)	sec	3.9
MACHINE	Floor Space (L×W)	mm(in)	1,900×4,280 (74.8"×168.5")
	Height	mm(in)	3,250 (128")
	Weight	kg(lb)	8,400 (18,519)
CNC	Controller	-	HYUNDAI WIA FANUC i Series - Smart Plus [FANUC 31i-B]

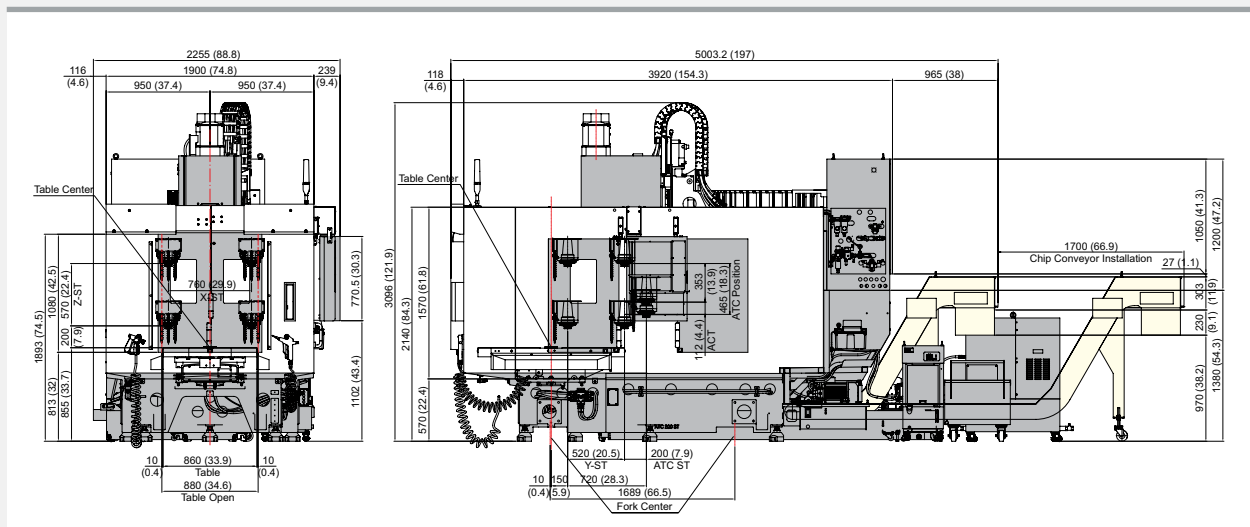
Spindle

[] : Option

Spindle Speed r/min	Power (Max./Cont.) kW (HP)	Torque (Max./Cont.) N·m (lbf·ft)	Spindle Driving Method	Spindle Tape
8,000	18.5/15 (25/20)	118/95.5 (87/70.4)	Direct	BBT40 [HSK-A63]
[8,000 : High Torque]	15/11 (20/15)	286/143 (210.9/105.5)		
[12,000]	18.5/7.5 (25/10)	118/47.7 (87/35.2)		
[15,000]	18.5/11 (25/15)	118/52.5 (87/38.7)		

External Dimensions

unit : mm(in)



Specifications are subject to change without notice for improvement.