

HYUNDAI WIA MACHINE TOOL



HS5000 II

High Speed, Next Generation Horizontal Machining Center

EXPERIENCE THE NEW TECHNOLOGY



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H55000 II

HIGHLIGHT



High Speed & Precision Machining

- › 15,000rpm high-performance built-in spindle
- › X/Y/Z axis rapid traverse rate : 60m/min
- › X/Y/Z axis acc./deceleration speed : 1.0/1.0/1.0G
- › Ball screw shaft cooling system applied



High Rigidity Structure

- › High rigidity 3-point support bed structure
- › Large dia. Ø50 mm (2") ball screw applied



Increased Productivity

- › Ring type magazine standard application
- › 60T magazine Max call time : 2.9 sec
- › Best-in-class tool change time (c-c) : 2.6 sec

HS

5000 II

Technical Leader ▶

ATC & Magazine

- Ring Type Magazine (Std.)
- Tool Change Time (C-C) : 2.6 sec

High Precision Spindle

- Built-in Spindle : 15,000 r/min
- Oil Cooling System
- BBT40 [HSK-A63]



Pallet

- Pallet Size (L×W) : 500×500 mm (19.7"×19.7")
- Max. Load Capacity : 500 kg (1,102 lb)



15" Large Monitor Applied

The HS5000 II has a 15" large monitor for enhanced visibility. In particular, we can create more convenient use conditions by improving the operating environment such as program setup and simulation through a large screen.

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

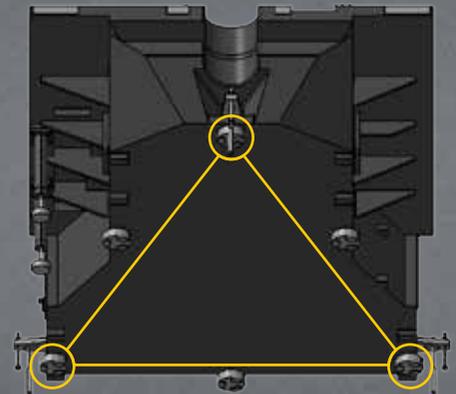
HIGH PRODUCTIVITY - MACHINING CENTER

HIGH RIGIDITY STRUCTURE

3-point support bed structure

The 3-point support bed can only be achieved with sufficient rigidity of the bed, and it is an indicator of a high rigidity bed. During the initial installation, it is easy to install by leveling only 3 parts of the bed, and even when maintenance is required, the maintenance capability has been greatly improved with easy leveling compared to the previous version.

3-point Support Bed > Minimize installation time



GUIDE WAY

Ball Screw Shaft Cooling

HS5000 II is the company's first model to apply the shaft cooling method, so it boasts unchanged precision even for long-term processing (for a maximum stroke of 30 round trips).

Ø50 (2") Large Ball Screw

The increased diameters of all ball screws allow for high accuracy even during heavy duty machining.

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.

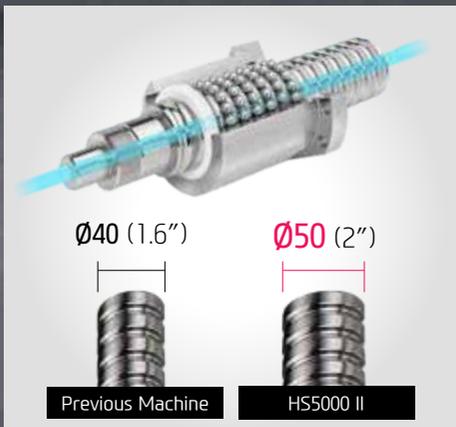
Acc./deceleration speed (X/Y/Z) : 1.0/1.0/1.0G

Rapid Traverse Rate (X/Y/Z)

60/60/60 m/min
(2,362/2,362/2,362 ipm)

Travel (X/Y/Z)

730/730/880 mm
(28.7"/28.7"/34.6")



HIGH-PRECISION STRUCTURE & HIGH SPEED MACHINING SYSTEM

SPINDLE

15,000r/min Built-in Spindle

By using ultra precision class angular ball bearings, fast acc/ deceleration of the main spindle is achieved. The spindle head is designed to minimize heat displacement therefore reducing heat generation and making it possible to maintain high accuracy. Also, thermal displacement can be minimized by applying oil cooling system.



15,000 rpm

15,000 rpm (High-Torque) **OPTION**

30/18.5 kW [40/25HP] Power (Max./Cont.) **230/119** N·m Torque (Max./Cont.)

37/22 kW [50/30HP] Power (Max./Cont.) **303/119** N·m Torque (Max./Cont.)

ATC & APC

40T High speed ring type magazine applied (60T : Opt.)

The HS5000 II has a ring type magazine as standard. The ring type magazine makes less noise than the existing chain type and has faster rotation of the magazine, which contributes to reduced tool exchange time and improved productivity.

60T Magazine Max Call Time : 2.9 sec

● Tool Changing Time Shorten (Chip-Chip)

Previous Machine	3.5 sec
HS5000 II	2.6 sec 0.9 sec reduction



APC & Pallet

HS5000 II provides a lift rotary type APC(automatic pallet changer) as standard. The loading station pallet can be rotated and locked in 90° increments for convenient loading/unloading of workpieces.

● Pallet Changing Time Shorten

Previous Machine	12 sec
HS5000 II	9.2 sec 2.8 sec reduction



OPTIMAL PROCESSING SYSTEM FOR USERS

Standard & Optional

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

Spindle		HS5000 II
15,000rpm (30kW [40HP])	Built-in	●
15,000rpm (37kW [50HP])	Built-in (High Torque)	○
Spindle Cooling System		●
ATC		
ATC Extension	40 (Ring Type)	●
	60 (Ring Type)	○
	90/120 (Chain Type)	○
	240 (Matrix)	☆
Tool Shank Type	BBT40	●
	HSK-A63	○
	BCV40	○
Tool Weight	12KG	●
Table, APC & Pallet		
APC	Rotary Turn	●
Tap Type Pallet		●
T-Slot Pallet		○
B Axis Table	1°	●
	0.001°	○
Coolant System		
Std. Coolant (Nozzle)		●
Through Spindle Coolant	20bar	○
	30bar	○
	70bar	○
Shower Coolant		○
Gun 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	570 l (150.1 gal)	●
Chip Conveyor (Hinge/Scraper)	Rear (Right)	○
	Rear (Rear)	○
Special Chip Conveyor (Drum Filter)		☆

❖ Specifications are subject to change without notice for improvement.

Electric Device		HS5000 II
Call Light	1 Color : ●	●
Call Light & Buzzer	3 Color : ● ● ● B	○
Work Light (LED)		●
Electric Cabinet Light		○
Remote MPG		●
3 Axis MPG		○
Work Counter	Digital	○
Total Counter	Digital	○
Tool Counter	Digital	○
Multi Tool Counter	6EA/9EA	○
Electric Circuit Breaker		○
AVR (Auto Voltage Regulator)		☆
Transformer	60kVA	○
AVR (Auto Voltage Regulator)		○
Back up Module for Black out		○
Measuring Device		
Air Zero	TACO	○
	SMC	○
Work Measuring Device		☆
TLM	Touch/Laser	○
Tool Broken Detecting Device		☆
Linear Scale	X/Y/Z Axis	○
Environment		
Air Conditioner		○
Dehumidifier		○
Oil Mist Collector		☆
MQL (Minimal Quantity Lubrication)		☆
Fixture & Automation		
Auto Door		○
Sub O/P		☆
External M Code 4ea		○
Automation Interface		☆
I/O Extension (In & Out)	16/32 Contact	○
6PPL / PLS		☆

Grease Lubrication Device



- PLC control allows for timely supply of extremely small amount of grease
- System alarm (low level, line blockage)
- Oil skimmer is unnecessary
- Up to 60% reduction of annual maintenance costs compared to ordinary lubricant oil



Energy Saving &
ECO System

SPECIFICATIONS

Specifications

[] : Option

ITEM			HS5000 II
PALLET	Pallet Size (L×W)	mm(in)	2-500×500 (2-19.7"×19.7")
	Maximum Load Capacity	kg(lb)	2 - 500 (2 - 1,102)
	Maximum Working Size	mm(in)	Ø800×H1,000 (Ø31.5"×H39.4")
	Min. Indexing Angle	deg	1° [0.001°]
SPINDLE	Spindle Taper	-	BBT40 [HSK-A63]
	Spindle Speed (rpm)	r/min	15,000 [15,000 High-Torque]
	Spindle Power (Max./Cont.)	kW(HP)	30/18.5 (40/25) [37/22 (50/30)]
	Spindle Torque (Max./Cont.)	N·m(lbf·ft)	230/119 (169.6/87.8) [303/119 (223.5/87.8)]
	Spindle Driving Method	-	Built-in
FEED	Travel (X/Y/Z)	mm(in)	730/730/880 (28.7"/28.7"/34.6")
	Rapid Traverse Rate (X/Y/Z)	m/min	60/60/60
	Slide Type	-	Roller Guide
ATC	Number of Tools	ea	Ring Type : 40 [60] [Chain Type : 90, 120] [Matrix : 240]
	Max. Tool Dia. (W.T/W.O)	mm(in)	Ø75/Ø170 (Ø3"/Ø6.7")
	Max. Tool Length	mm(in)	550 (21.7")
	Max. Tool Weight	kg(lb)	12 (26.5)
	Tool Selection Method	-	Ring Type : Random [Chain Type : Fixed]
	Tool Change Time (T-T/C-C)	sec	0.9/2.6
APC	No. of Pallet	ea	2
	APC Type	-	Direct Turn
	Pallet Change Time	sec	9.2
MACHINE	Floor Space (L×W)	mm(in)	2,719×4,402 (107"×173.3")
	Height	mm(in)	2,707 (06.6")
	Weight	kg(lb)	11,500 (25,353)
CNC	Controller	-	HYUNDAI WIA FANUC 31i-B

Specifications are subject to change without notice for improvement.

Spindle Output/Torque Diagram

