

HORIZONTAL MACHINING CENTER
HS630/800

HYUNDAI-KIA MACHINE



HYUNDAI-KIA MACHINE

World Top Class Quality HYUNDAI-KIA Machine

High productivity & performance machining center with the ample rigidity structure

HS
630/800

HS630/800

Horizontal Machining Center

High-productivity & performance Horizontal Machining Center

Linear Roller Guide at each axes

2 steps gear driven type for the heavy duty cutting

The Heaviest load Capability on the table, 1,200kg

BIG PLUS Spindle as a standard



■ HS630

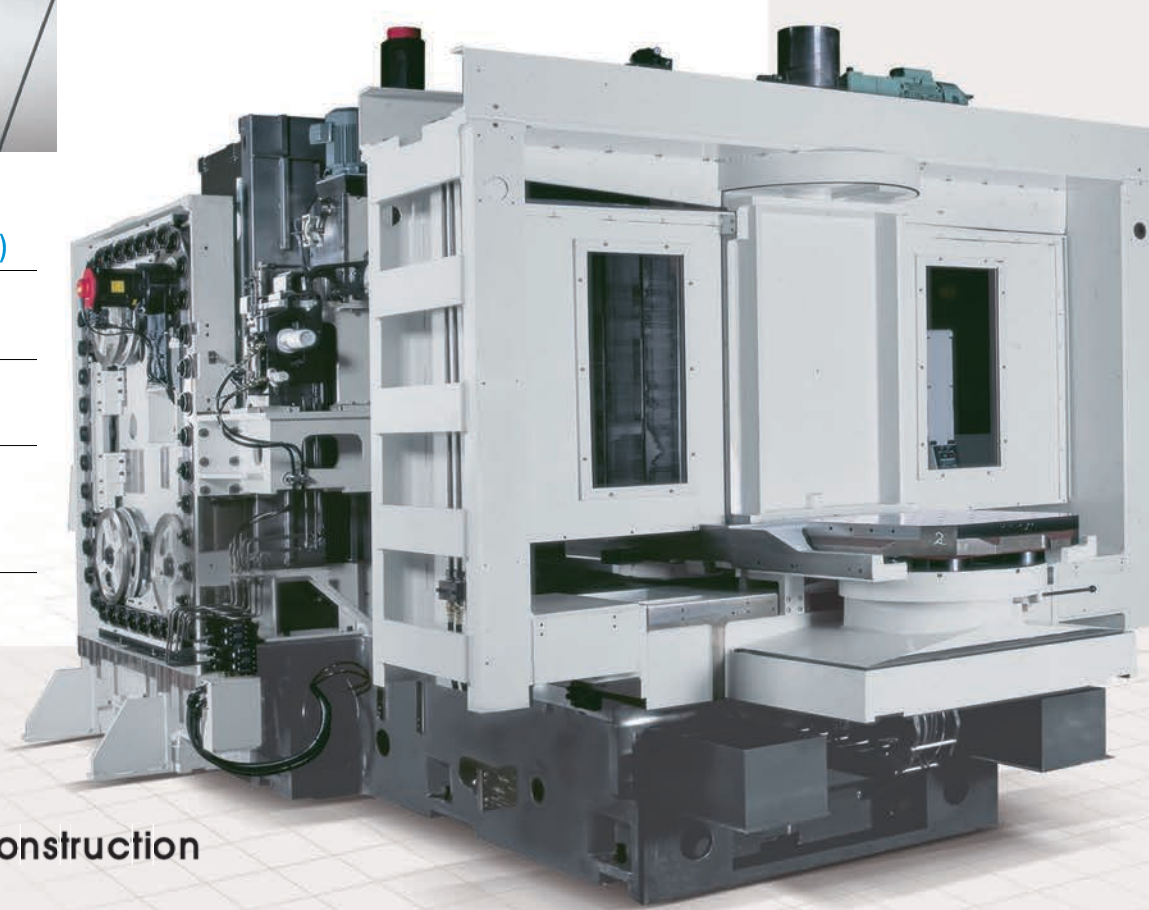
■ HS800

■ Table Size	630×630mm (24.8"×24.8")	800×800mm (31.5"×31.5")
■ Max. Load on the Table	1,200kg (2,646lb)	1,600kg (3527lb)
■ Spindle Speed	8,000rpm : 2Steps Gear [12,000rpm : Built-in]	8,000rpm : 2Steps Gear [12,000rpm : Built-in]
■ Rapid Traverse (X/Y/Z)	50/50/50m/min (1,969/1,969/1,969ipm)	50/50/50m/min (1,969/1,969/1,969ipm)
■ Tool change time (C-C)	7sec	7sec

[]:option

The spear head Mechanism of Horizontal Machining Center

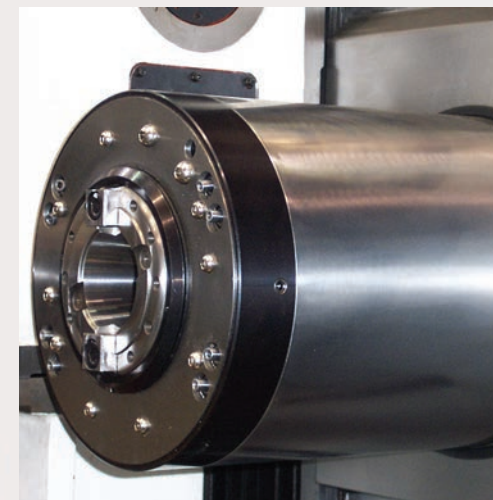
HS630/800



- Rapid Traverse
X/Y/Z Axis : 50m/min (1,969 ipm)
- Cutting feedrate
1~50,000mm/min (1,969 ipm)
- Tool Storage Capacity
40ea (std.) 60,90,120ea (opt.)
- Sp. speed
8,000rpm (std.)
12,000rpm (opt.)

Astonishing power, Utmost performance

- Applying the oil chiller on the spindle unit which maintains the proper temperature, guarantees the high precision accuracy machining.
- Linear scale can be installed (opt.)
- Automatic Work Measuring Device (opt.)



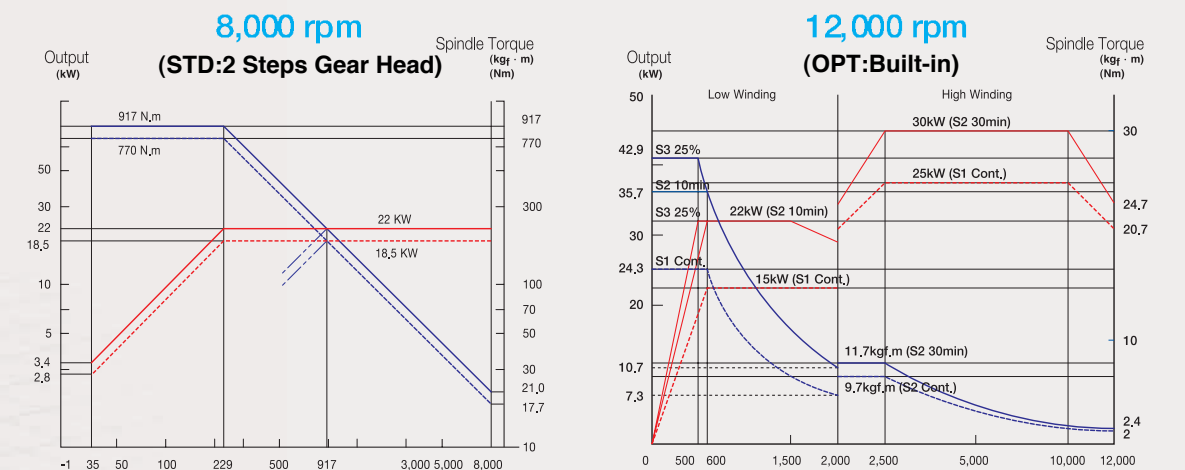
Powerful High Precision Spindle

Symmetrical formation (for the minimum heat distortion) angular ball bearing spindle and housing are designed for rigidity and the powerful tool clamping force (4,629.7 lbs). AC spindle motor has 30 HP output with 8,000 rpm for the heavy duty cutting, as well as the high speed precision cutting.

Built-In High Precision Spindle [Option]

By adopting Built-in motor & Ceramic Bearing, it makes 12,000rpm & max. torque 42.9kgf.m possible. Also, Spindle Oil Chiller maintains the spindle accurate & stable for long hours' machining.

Spindle Torque Diagram



High Productivity

The Rapid Traverse of X, Y, & Z axis is 50m/m in (1,969 ipm), which saves a Non-cutting time. The travel of X-Axis 1,050mm (41.3"), Y-Axis 875mm (34.4") & Z-Axis 875mm (34.4") allows a large size work piece to be processed.

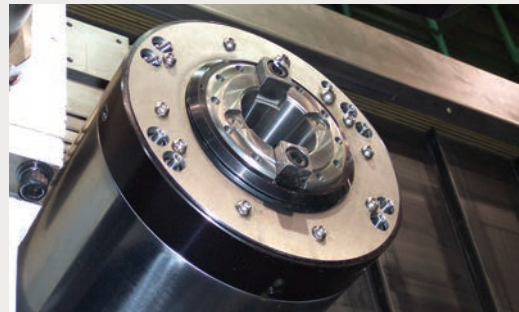
Strong Rigid & Precision Construction

Bed, column, saddle, and head stock are designed to maintain strong rigidity and to minimize heat distortion.

One-piece Construction guarantees Stability and Precision

8 pieces of Coolant Nozzle (Std.)

8 pieces of nozzles can change direction to supply proper coolant for the maintaining precision process.



Linear Roller Guide

Linear Roller Guide design is adopted to minimize non-cutting time and maximize acceleration & deceleration as well as rigidity. The rigid feed-rate system has been heavily improved to confront possible challenges during face mill, drill etc.



Table & Pallet

There are 4 taper cones on the table, 4 taper cones under the pallet that make high level positioning decision.

Taper cones have built-in clamp system to do heavy duty cutting safely also high-precise curvic coupling makes high-accurate Indexing

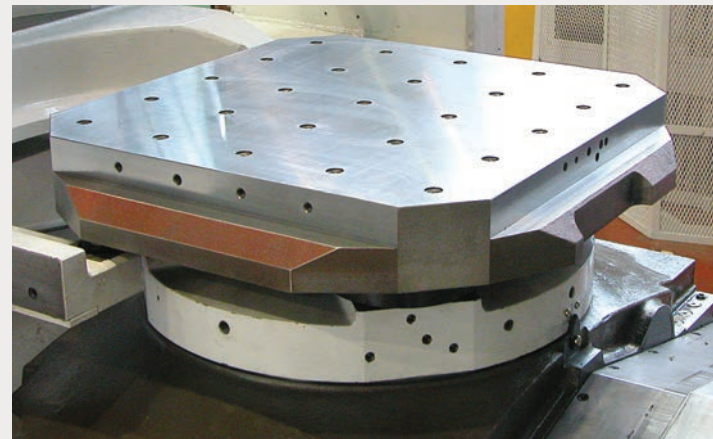


Table size

HS630 : 630 × 630mm (24.8" × 24.8")

HS800 : 800 × 800mm (31.5" × 31.5")

Max. load on the table

HS630 : 1,200kg (2,646 lb)

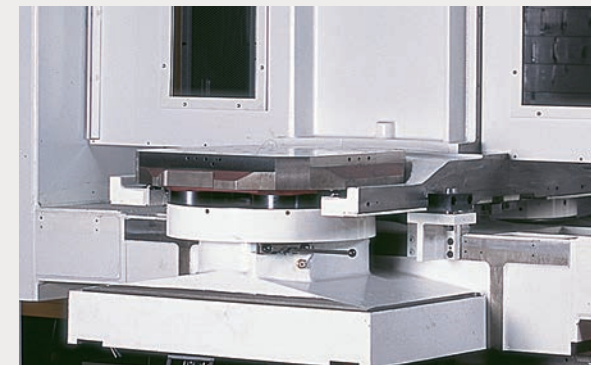
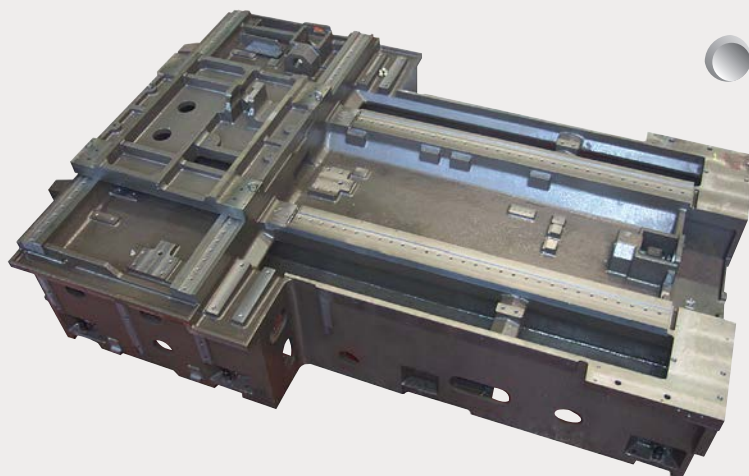
HS800 : 1,600kg (3,527 lb)

Table Index : 1° (STD.) , 0.001° (OPT.)

Finite Element Method

One piece & rugged cast bed is designed perfectly by F.E.M.(Finite Element Method) with CAD system, which can analyze all characteristics including vibration, rigidity and etc that might be issued during the machining.

The bed of HS630/800 is designed like "T" shape which has been engineered for the perfect height and depth of casting to meet the highest standard. Also, this bed can stand perfectly for the very heavy duty cutting because of the special double wall construction design.



APC (Automatic Pallet Changer)

The lift rotary design been applied for Pallet Exchange for the best excess to a work area. Also, APC time is only 12 second for the high productivity. (HS800 : 25sec.)

Max. Working size

HS630 : $\phi 930 \times 1,000\text{mm}$ ($\phi 36.6" \times 39.4"$)

HS800 : $\phi 1,200 \times 1,100\text{mm}$ ($\phi 36.6" \times 39.4"$)

ATC (Automatic Tool Changer)

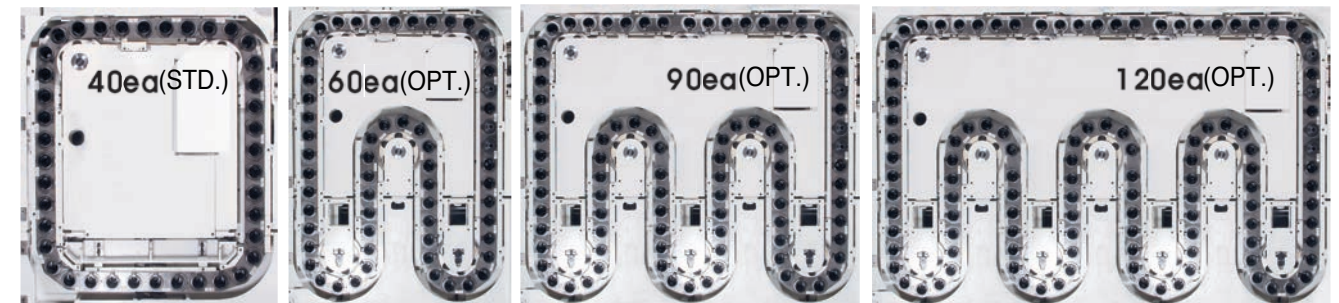
ATC, isolated from chip & coolant, provides you perfectly clean environment.

Cam Type ATC exchanger has been adopted in terms of minimizing tool changing time.

Chip to Chip : 7sec

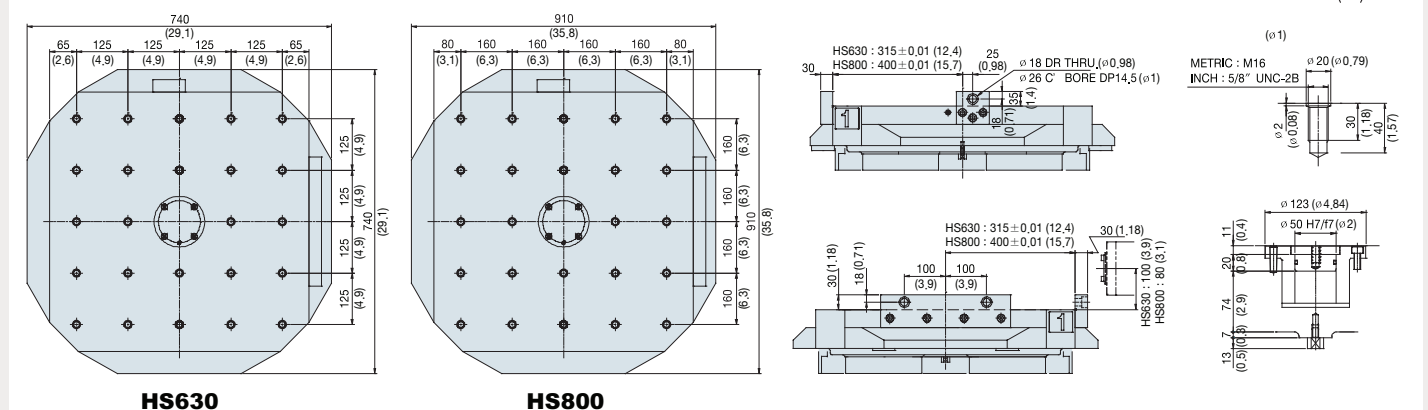


Various Magazine (40/60/90/120)



Tool Weight 15kg [25kg], 33.1 lb [55.1 lb] [] : Heavy tool option

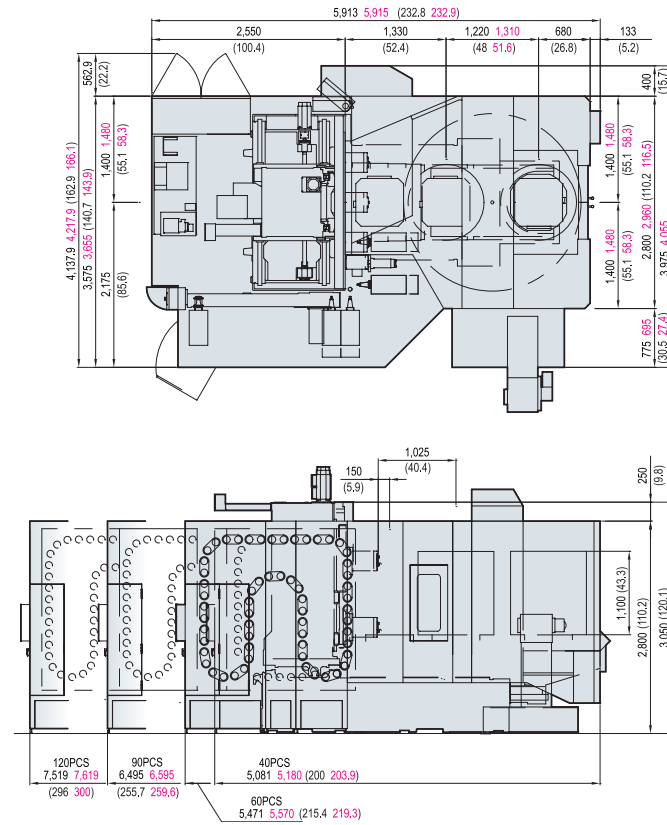
Table Dimensions



Specification

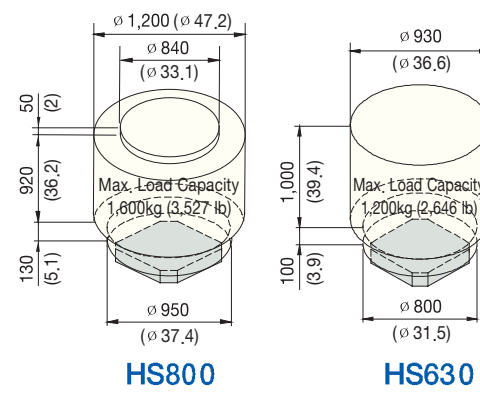
Horizontal Machining Center **HS630/HS800**

External Dimensions



Max. Work Area

• unit : mm(in)



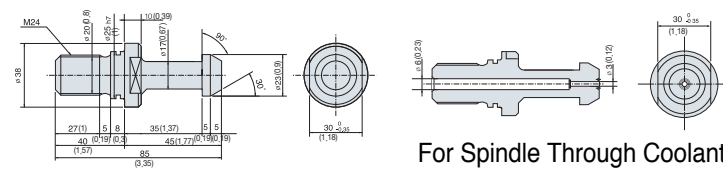
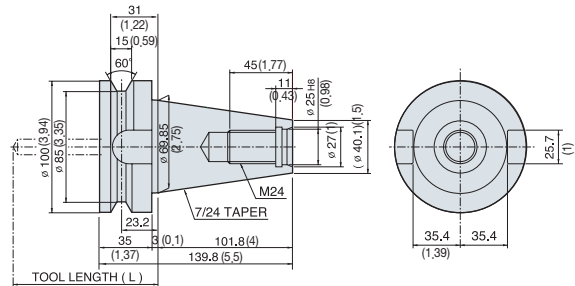
HS800

HS630

• HS630 HS800

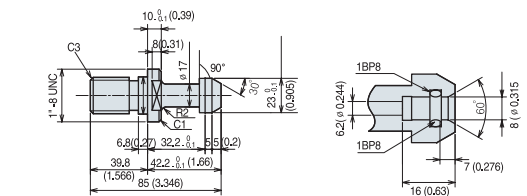
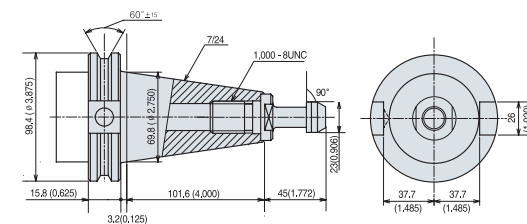
Tool Shank

TOOL SHANK (BT50)



PULL STUD BOLT

TOOL SHANK (CAT50)



PULL STUD BOLT

Specifications

ITEM		HS630	HS800
TABLE	Table Size	630 × 630 (24.8" × 24.8")	800 × 800 (31.5" × 31.5")
	Maximum Load Capacity	1,200 (2,646)	1,800 (3,927)
	Maximum Working size	∅ 930 × H1,000 (∅ 36.6" × H39.4")	∅ 1,200 × H1,100 (∅ 47.2" × H43.3")
	Table Indexing Time	4	4
	Min. Indexing Angle	1° 0.001"	
TRAVERSE DISTANCE FOR EACH AXIS	X/Y/Z Axis	1,050/875/375 (41.3"/34.4"/34.4")	
	Distance from table surface to Sp. center	100 ~ 975 (3.9" ~ 38.4")	80 ~ 955 (3.1" ~ 37.6")
	Distance from table center to Sp. nose	150 ~ 1,025 (5.9" ~ 40.4")	210 ~ 1,025 (8.3" ~ 40.4")
SPINDLE	Guide Type	Roller Guide	
	Spindle Taper	#50	
	Spindle RPM	8,000 [12,000]	
	Spindle Power Output (Max./Cont.)	22/18.5 (30/25) [30/25 (40/34)]	
	Spindle Torque (Max./Cont.)	79.7/67 (576.5/484.6) [42.9/24.3 (310.3/175.8)]	
FEED RATE	Cutting Feed Rate (X/Y/Z)	1 ~ 50,000 (1,969)	
	Rapid Feed Rate (X/Y/Z)	50 / 50 / 50 (1,969/1,969/1,969)	
ATC	Number of Tools	EA 40 [60 / 90 / 120]	
	Tool Type	BT50 (BIG PLUS)	
	Max. tool dia. (with out a adjacent tool)	∅ 125/∅ 245 (∅ 4.9"/∅ 9.6")	
	Max. Tool Length	500 (19.7)	
	Max. Tool Weight	15 (33) [25 (55)]	
APC	APC Type	Direct Turn	
	No. of Pallet	2	
CUTTING OIL	Tank Capacity	800 (211.3)	
	Hydraulic Tank Capacity	60 (15.9)	
POWER SOURCE	Air Consumption Rate	5 (71)	
	Required Power Capacity (220 V/60 Hz)	53 [60]	
MACHINE OUTER DIMENSIONS	Floor space (L × W)	3,725 × 5,913 (146.7" × 232.8")	4,055 × 5,915 (159.6" × 232.9")
	Machine Weight	23,000 (50,705)	25,000 (55,116)
CONTROLLER	Memory Capacity	320	
	CNC	Fanuc 18i-M	

※ Specifications are subject to change for improvement without notice.

[] : Option

Standard

- Coolant Tank (800 l)
- Std. Coolant System
- Tool Box & Hand Tool Kit
- Leveling Plads
- Work Light
- Full Splash Guard
- Cal Light (Yellow)
- Spindle Override

Option

- ATC (60, 90, 120EA)
- Heavy Tool (25kg)
- External Chip Conveyor (Side)
- Jet Coolant
- Gun Coolant
- Tool Broken Detection Device
- Cal Light (3colors)
- Sp. Through Coolant [30, 70Bar]
- Built-In 12,000rpm Spindle
- Chip Flushing Coolant

Specification

Horizontal Machining Center **HS630/HS800**

Controller

FANUC 18i-M

Controls	Controlled Axes(max) Simultaneous Controllable Axes Least Input Increment/Least Command Increment	4(6) axes 4 axes X/Y/Z axis : 0.001mm(0.0001") B axis : 0.001deg.
Spindle functions	Spindle Speed Command Spindle Speed Override Spindle Orientation (1 Position)	S5 digits, Binary Output 10% ~ 150% Provided
Programming functions	Maximum Programmable Dimensions Interpolation Functions Absolute and Incremental Command Decimal Point Input Miscellaneous Function Rigid Tap Program Stop Program End Programmable Data Input(G10)	+/- 9999.9999"(+/- 8digits) Positioning/Linear/Circular(G00/G01/G02/G03) G90 ~ G91 Provided M2 Provided M00, M01 M02, M30a Provided
Feed functions	Manual Jog Feed : Rapid, Jog Feed, Handle Manual Handle Feed-rate F initial value setting Rapid Traverse Override Manual Continuous Feed Jog-Handle (Same Mode) Incremental Feed	0~5,000mm/min[197 ipm] x1, x10, x100 Provided F0, F25, F50, F100% Simultaneous, 1 Axis Provided X1-1000
Tool functions	Cutter Compensation C Tool Length Compensation Tool Offset Number	G40~G42 G43, G44, G49 64 Pairs
Tape functions	Tape Code Number of Register-able Program Part Program Storage Length	EIA RS-244-A/ISO 840(Automatic Recognition) 63 piece 80M(262 FT)
Other functions	Custom Macro B Skip Function CRT/MDI Program Protect Key Back Ground Editing Run Hour Display	Provided G31 10.4" Color LCD/MDI Provided Provided Provided
Options	Additional 1 Axis Advanced Preview Control(G80) Additional Work Coordinate System(48 Pairs) Polar Coordinate Command / Interpolation Helical Interpolation Cylindrical Interpolation(Additional axis needed) Extended Part Program Editing Single Direction Positioning(G60) Coordinate System Rotation Tool Length Measurement External Data Input / Output Remote Buffer Data Server AICC HPCC Optional Chamfering/Corner R Optional Block Skip 9 EA Part Program Storage	160/320/640/1280/2560M(8,400FT)

• Figures in inch are converted from metric values. • Design and specifications are subjected to change without notice.

HYUNDAI-KIA MACHINE



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