

HYST Series

HYBRID TYPE
VERTICAL MACHINING CENTER



SMEC Co., Ltd.

157-10, Goldenroot-ro, Juchon-myeon, Gimhae-si,
Gyeongsangnam-do, Korea
Tel +82 55 340 4800 / Fax +82 55 340 4740
www.esmec.com



HYST Series

| HYST 5700L
| HYST 6700

***HY**brid **ST**rong!*



Hybrid Type HYST Series
HYST 5700L/6700

Largest in class X-axis travel and table with low-center of gravity design

- largest in class X-axis travel of 1,600mm (HYST 5700L)
- largest in class table size of 1,700 x 570mm (HYST 5700L)
- easy user accessibility with a table surface height of 900mm
- with 4 rows of Roller LM-Guides in the Y-axis, overhang is prevented
- high strength and high precision with the highly rigid saddle and arched column design
- maximized space efficiency with the compact design

Category		HYST 5700L	HYST 6700
Travel (X/Y/Z)	mm	1,600/570/520	1,300/670/650
Table size	mm	1,700 x 570	1,550 x 670
Table loading capacity	kgf	1,000	1,300
Table surface	mm	18H8 T-slot × p125 × 4ea	18H8 T-slot × p125 × 5ea
Max. spindle speed	rpm	12,000	6,000(BT50)/8,000(BT50)/12,000(BT40)
Tool-to-tool time	sec	1.3(60Hz), 1.6(50Hz)	1.3(60Hz), 1.6(50Hz)
Rapid traverse (X/Y/Z)	mm	30/36/30	36/36/30
Tool storage capacity	EA	30	30

Hybrid Machining Center (X / Y-axis LM Guide, Z-axis Box Guide)

Z-axis Box Guide enhances rigidity and enables heavy duty cutting

X / Y-axis with LM Guides improve travel precision and significantly reduces non-cutting time

Easy Accessibility

The low center of gravity design and minimized gap between the front cover and table edge allows easy load/unload of materials with minimal operator effort and easier machine maintenance

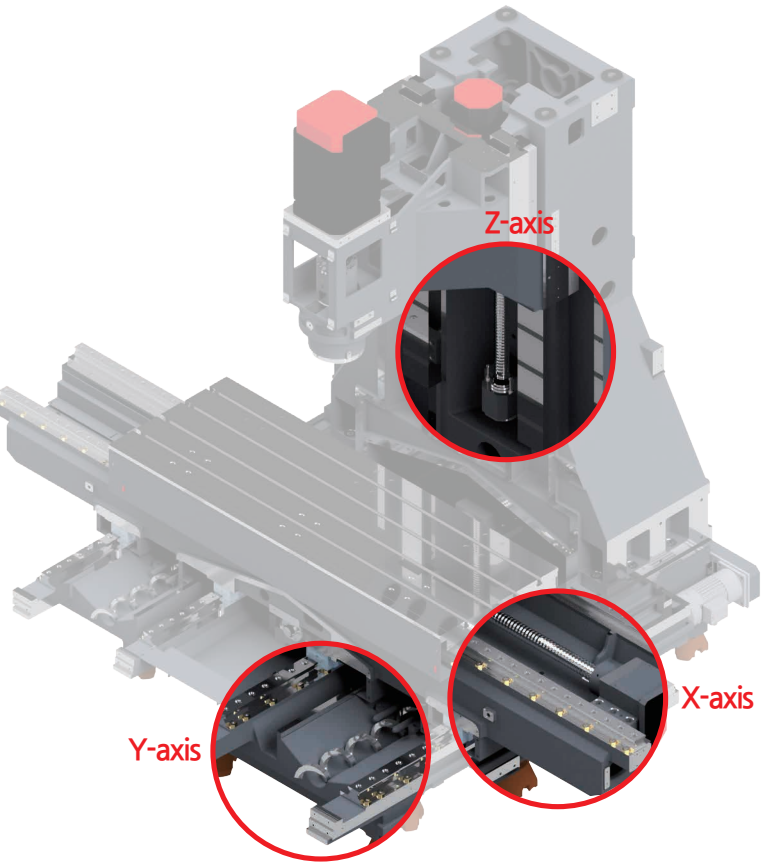
Operator Convenience

The high performance NC option (S4 package), standard operator-centric OP Panel (15" screen) and eco-friendly coolant system maximizes operator convenience

HYST Series

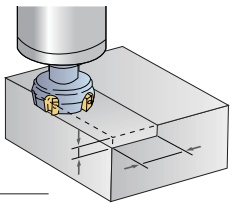
VERTICAL MACHINING CENTER

Hybrid Machining Center



A new type of hybrid machining center that combines the high speed traverse of LM Guide Type machining centers and the rigidity of Box Guide Type machining centers

X / Y-axis : Roller Type LM Guide
Z-axis : Box Guide



Other model cut depth : 3mm
Other HYST model cut depth : 4mm
20% increase

※ When cutting with the same cutting conditions

Roller type LM guide way

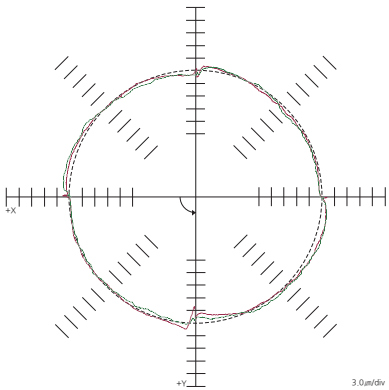
The use of roller type LM guide ways with excellent responsiveness minimizes the amount of noise generated during travels and greatly shortens non-cutting times.

- Enhanced speed, rigidity and durability
- Compared to ball type LM guides, it significantly improves wear resistance, thus improving travel precision and durability



Specifically design machine structure to provide high-quality precision

- High-rigidity single-piece bed designed with a low-center of gravity box structure
- Overhang prevented through the adoption of the widest-in-class saddle for the roller type LM guideway
- High speed, high rigidity direct spindle

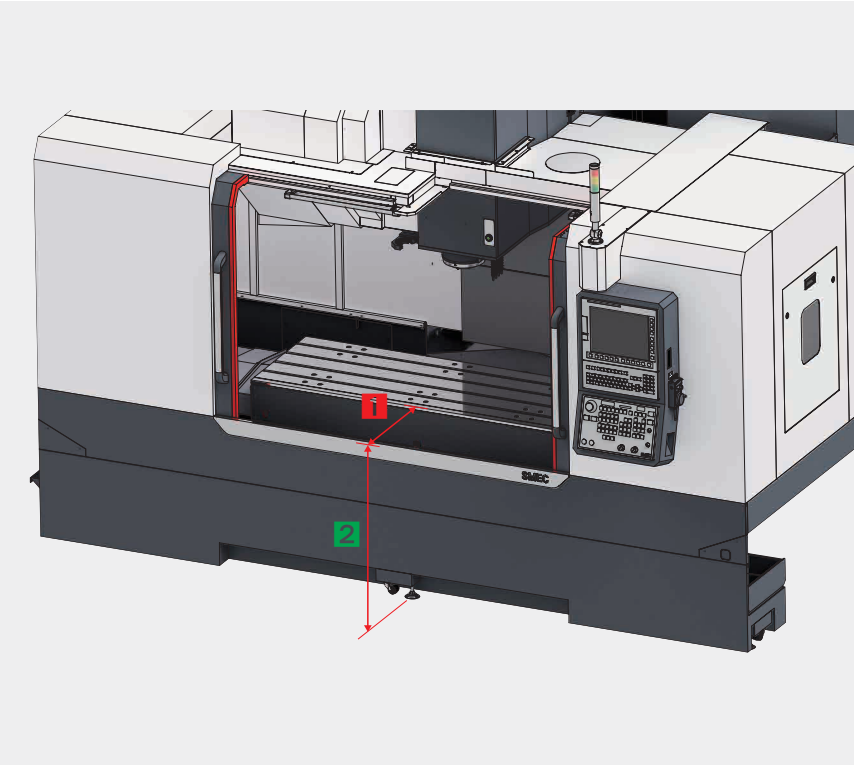


	Non-cutting time	Cutting time	Total cutting time
Other Box Guide model	14 min. 53 sec.	31 min. 57 sec.	Approx. 47 min.
Other HYST model	13 min. 12 sec.	29 min. 37 sec.	Approx. 43 min.

8.6% reduction

※ The above results are based on certain cutting conditions and may differ depending on the cutting condition

Superior Accessibility



- Compact design minimizes installation footprint
- Effective chip discharge
- Centralized OP Panel for user convenience
- With the door opened, a hoist can be brought in past the center point of the table, making it very easy to move heavy materials into the machine
- The distance between the cover and the table was minimized for easy loading/unloading of materials and to allow access to the entire table surface

1 Distance between front door and table

HYST 5700L : 220mm

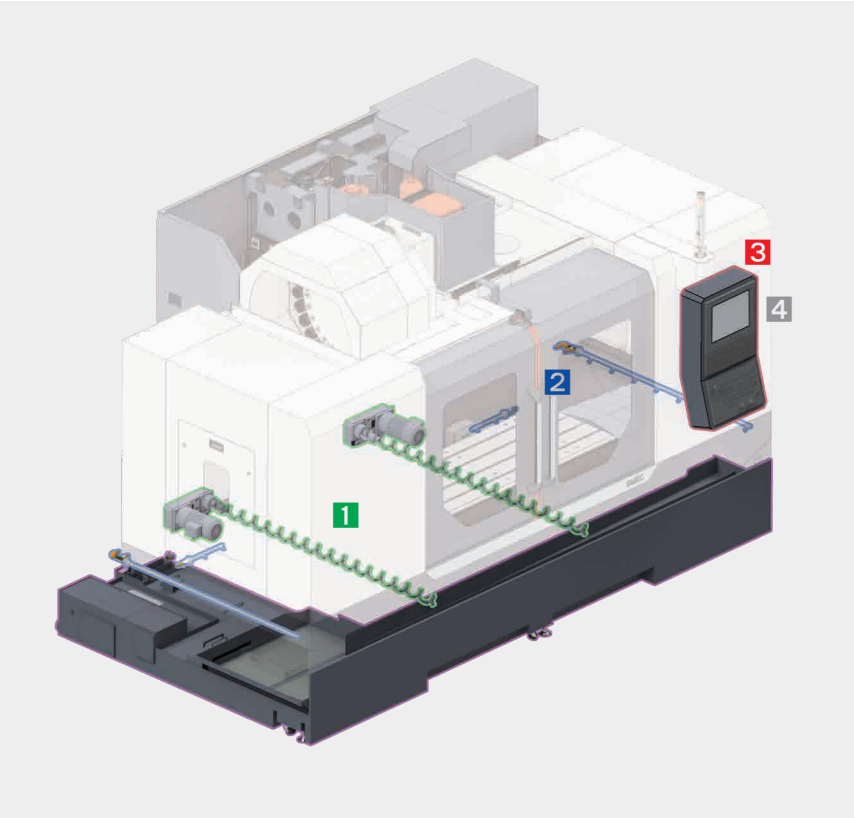
HYST 6700 : 250mm

2 Distance from floor to table top

HYST 5700L : 900mm

HYST 6700 : 950mm

Operator Convenience



1 Coil Conveyor

The 2 standard internal coil conveyors efficiently removes the chips that are created during machining

2 Bed Flushing(HYST 5700L:STD, HYST 6700:OPT)

The standard bed flush system installed along the sides of the machine prevents chip build-up and ensure effective chip removal

3 Operator-centric OP Panel

The swivel-type OP Panel is easy to work with and the QWERTY keyboard and high visibility buttons and efficient arrangement improves operator convenience

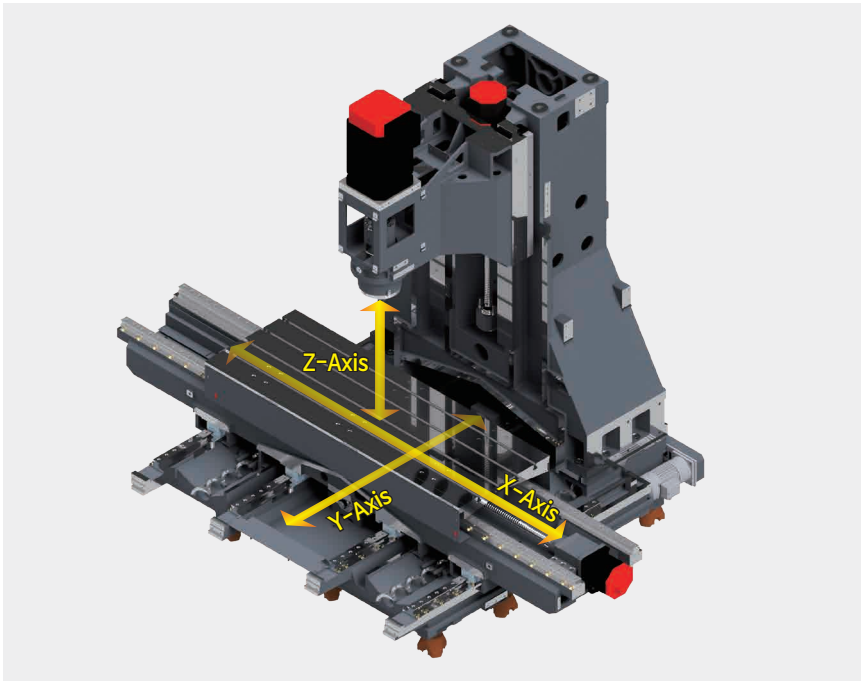
4 Machining Performance Enhancing
High Performance NC Options Made Standard

The large 15" LCD display, data server and various NC options are made standard to significantly improve machining performance

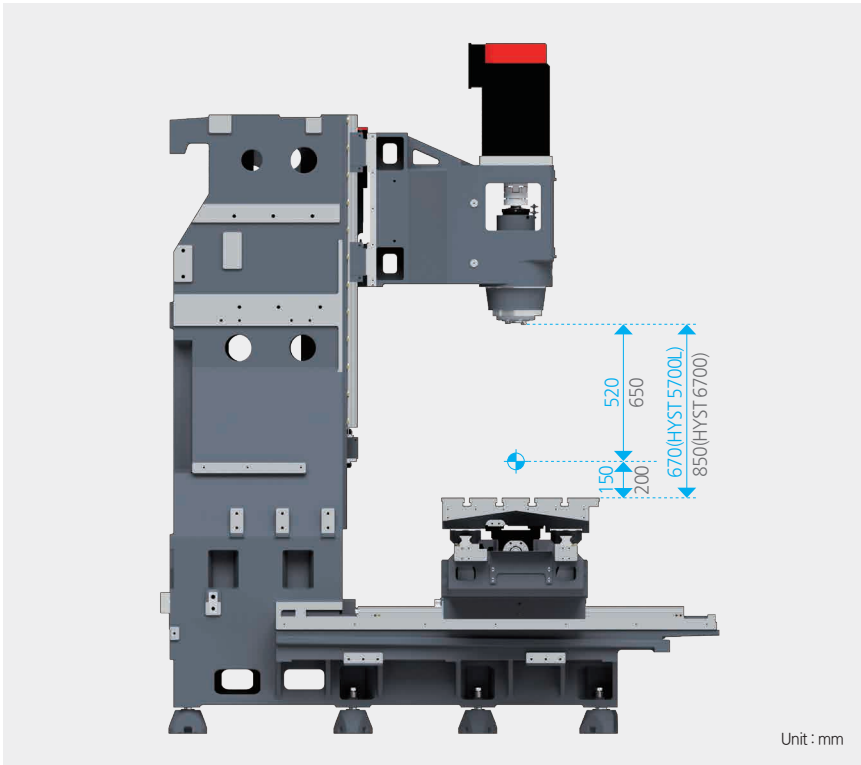
HYST Series

VERTICAL MACHINING CENTER

Machine Design



Model	Travel(mm)		
	X-axis	Y-axis	Z-axis
HYST 5700L	1,600	570	520
HYST 6700	1,300	670	650



Unit : mm

The application of Roller Type LM Guides to X and Y axes minimizes the noise created during travel and the superior accel / decel minimizes the non-cutting time

The application of Box Guide to only the Z-axis minimizes backlash while minimizing the disadvantages that other fully box-guide machines have with horizontal travel (X/Y).

Highly Rigid Saddle with no X-axis Overhang

The highly rigid saddle enables reliable machining of various materials and is suitable for long materials

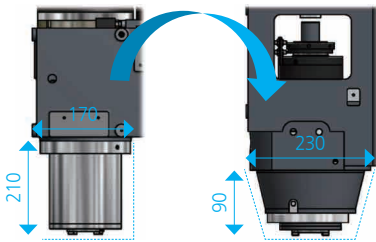
4 Row Y-axis Guide Way Bed (HYST 5700L)

Overhang is minimized with the 4 rows of LM Guides supporting the Y-axis with the widest in class span

Z-axis High Rigidity Arched Column

The arched column ensures high rigidity and high precision machining performance

Quill-Type Head stock



High speed direct drive head
- high precision and efficient cooling operation

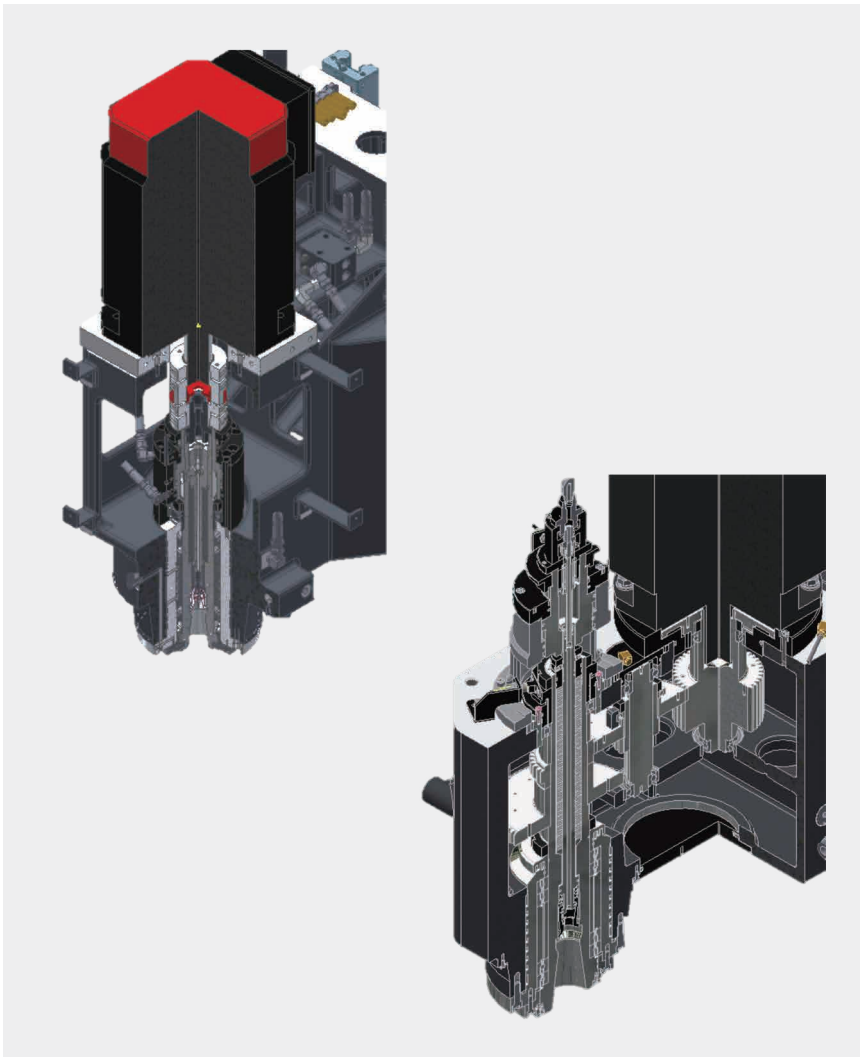
The standard quill-type head enables high speed, ultra precise machining while providing greater rigidity and minimizes thermal growth with forced heat dissipation

Spindle to table-top distance

150~670mm (HYST 5700L)

200~850mm (HYST 6700)

Spindle



The ultra precision spindle is supported by 4 rows of P4 class high-speed angular bearings allowing high speed, high precision machining with the direct-coupled head that minimizes thermal growth through forced heat dissipation.

Direct Drive Type

HYST 5700L / HYST 6700 **BT40**

Max spindle speed : 12,000rpm

Power(Cont/Max) : 11/22.2kW

Torque(Cont/Max) : 70/141.4N·m

HYST 6700 **BT50**

Max spindle speed : 8,000rpm

Power(Cont/Max) : 11/15kW

Torque(Cont/Max) : 143/286N·m

Gear Head Type

HYST 6700 **BT50**

Max spindle speed : 6,000rpm

Power(연Cont/Max) : 15/18.5kW

Torque(Cont/Max) : 497.5/767N·m

JACKET Circulation Cooling

Semi-permanent grease lubrication applied to the bearings, while thermal growth is minimized using jacket circulation cooling around the bearing housing (a source of heat) via a Fan Cooler, ensuring stable performance and extending the lifetime of the spindle.

Standardized Dual-Contact Spindle

The dual-contact system that provides taper and flange contact when tool holders are clamped into the spindle

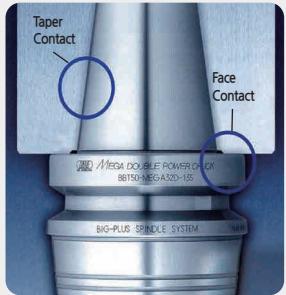
- with both the taper and flange in contact, improved stability with reduced vibration
- improved machining capability and surface finish under extreme conditions
- 100% compatible with current tools

High Efficiency Spindle Cooling System (12R STD)

For long-term high speed continuous operation, an oil cooler may be installed to circulate chilled oil around the spindle bearings to prevent thermal growth in the spindle and allow high precision machining



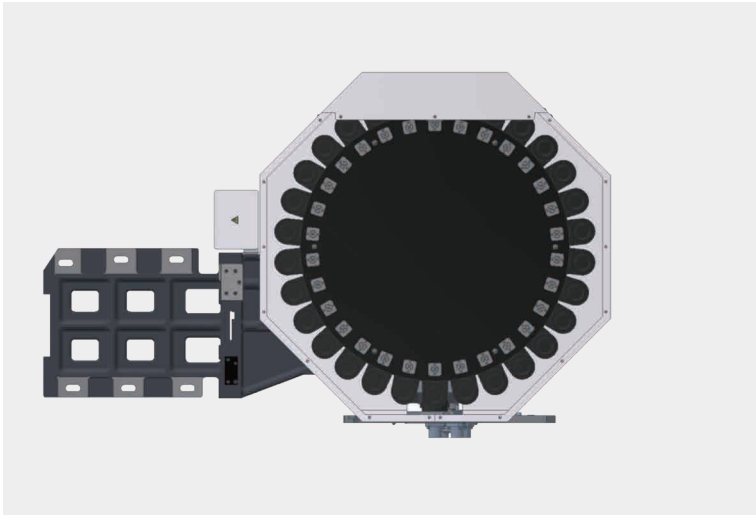
Big Plus Tool
(Simultaneous Dual Contact)



HYST Series

VERTICAL MACHINING CENTER

ATC / Magazine



ATC Magazine

Designed with a standard 30 tool magazine with short travel distance to enable quick tool changes

Fast and errorless tool changes are made possible using the memory random technique and double arm type tool changer, minimizing non-cutting time

HYST 5700L / HYST 6700 BT40

- Tool storage capacity : 30
- Tool-to-tool time : 1.3(60Hz)sec
- Max. tool dia.(adjacent empty) : 80(125)mm
- Max. tool length : 300mm
- Max. tool weight : 8kg



HYST 6700 BT50

- Tool storage capacity : 30
- Tool-to-tool time : 2.45(60Hz)sec
- Max. tool dia.(adjacent empty) : 100(195)mm
- Max. tool length : 300mm
- Max. tool weight : 15kg

Table

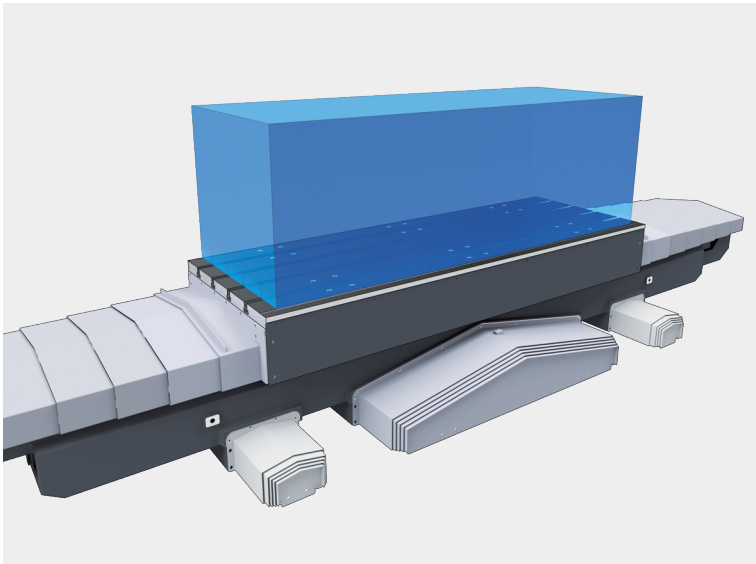


Table size and Table loading capacity were increased to support larger work area

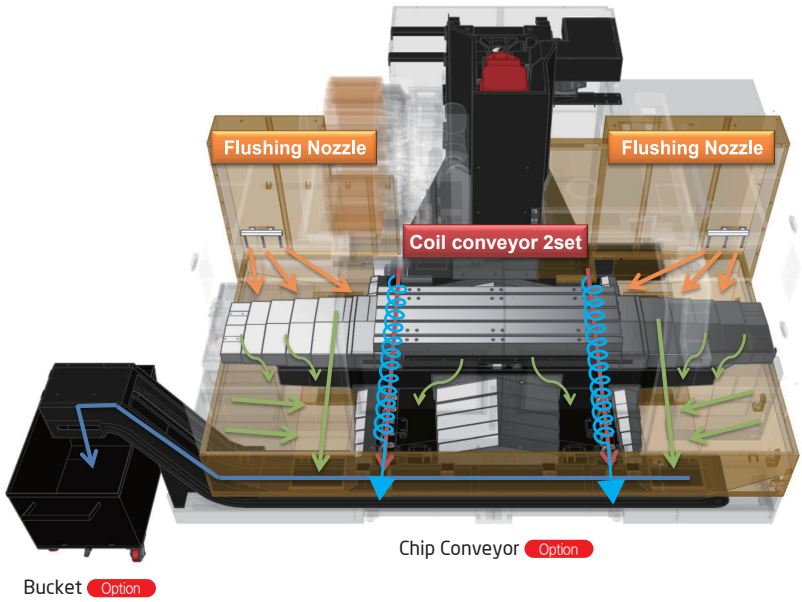
HYST 5700L

- Table size : 1,700×570mm
- Table surface : 18H8×p125×4ea
- Table loading capacity : 1,000kgf

HYST 6700

- Table size : 1,550×670mm
- Table surface : 18H8×p125×5ea
- Table loading capacity : 1,300kgf

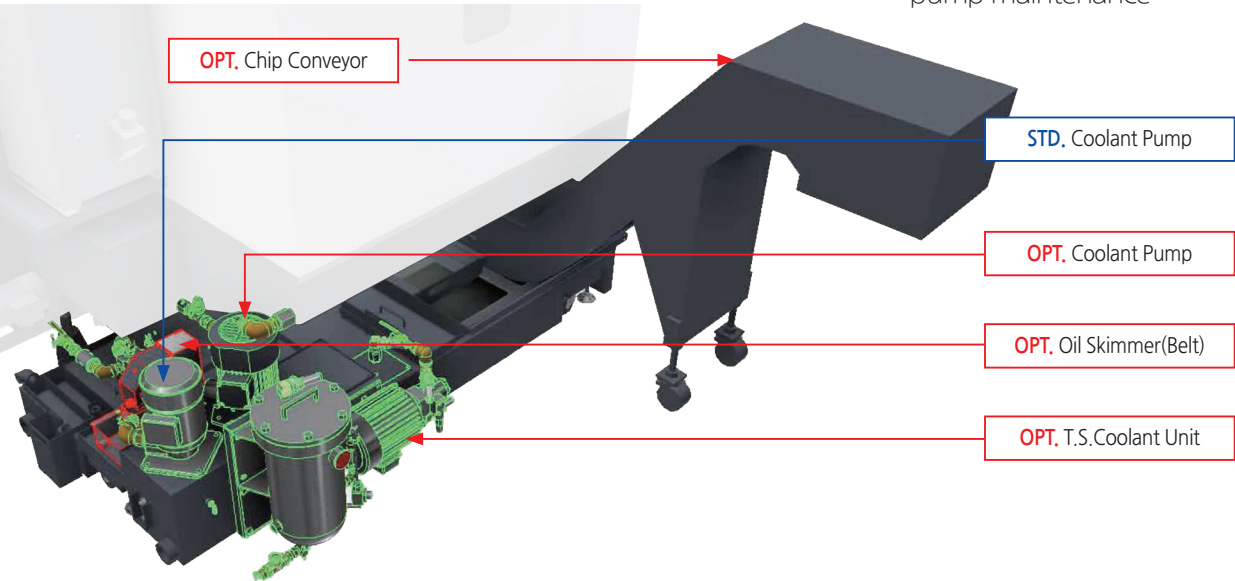
Eco-Friendly Chip Disposal



Complete chip discharge through the series of chip disposal processes by the coolant nozzle, bed flush, coil conveyor and chip conveyor

- the large, rectangular S/GUARD design and rear coolant tank ensures easy chip removal
- using bed flushing, complete chip disposal off the surface of the bed
- the chip conveyor can be installed in either the left or right direction according to the required layout for efficient chip disposal

Automated Coolant Supply



Large capacity coolant tank located behind the machine enables easy coolant exchange, tank cleaning and pump maintenance

Coolant tank capacity : 400ℓ

Options

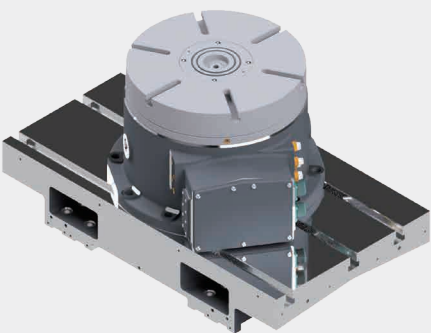
Rotary table and air/hyd fixture preparation

Components necessary for the installation of rotary table and fixtures may be added during assembly wherein hydraulic or pneumatic preparation may be selected.



NC rotary table

When using an NC rotary table, multi-axis machining of diverse shapes is possible.



Tool measurement probe

Various automated tool diameter, length and lifetime measuring devices may be installed.



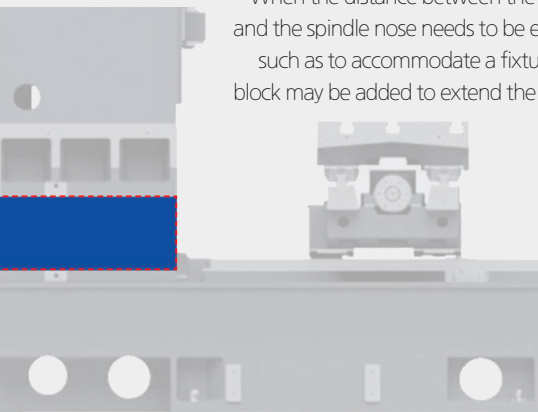
Chip conveyor

Equipment meant to remove chips created during machining



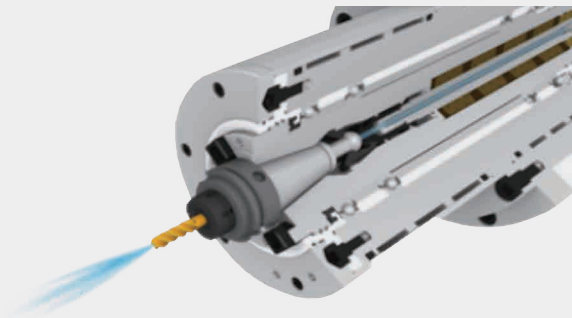
High column

When the distance between the table top and the spindle nose needs to be extended, such as to accommodate a fixture, a riser block may be added to extend the distance.



Through spindle cooling (TSC)

The TSC option may be added to improve machining effectiveness



Cutting performance

BT40 Face mill (Ø80mm) / Carbon steel (SM45C)

Chip removal rate (cm³/min)	Spindle speed (r/min)	Feedrate (mm/min)
605	1,500	2,700

BT50 Face mill (Ø125mm) / Carbon steel (SM45C)

Chip removal rate (cm³/min)	Spindle speed (r/min)	Feedrate (mm/min)
580	968	774

BT40 End mill (Ø25mm) / Carbon steel (SM45C)

Chip removal rate (cm³/min)	Spindle speed (r/min)	Feedrate (mm/min)
68.8	1,528	138

BT50 End mill (Ø25mm) / Carbon steel (SM45C)

Chip removal rate (cm³/min)	Spindle speed (r/min)	Feedrate (mm/min)
63	895	806

BT40 U-Drill (Ø50mm) / Carbon steel (SM45C)

Cutting rate (cm³/min)	Spindle speed (r/min)	Feedrate (mm/min)
353	1,500	210

BT50 U-Drill (Ø50mm) / Carbon steel (SM45C)

Cutting rate (cm³/min)	Spindle speed (r/min)	Feedrate (mm/min)
353	1,500	210

BT40 Tap / Carbon steel (SM45C)

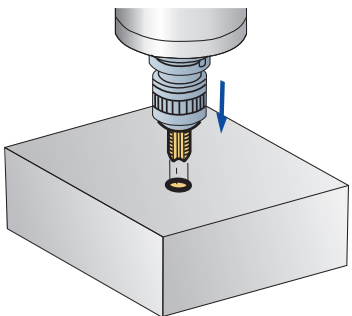
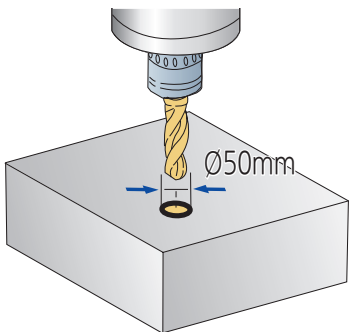
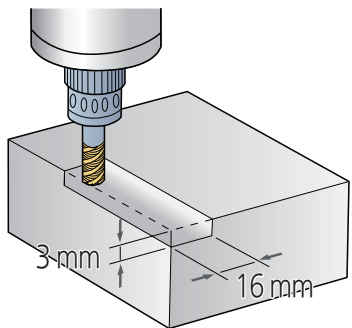
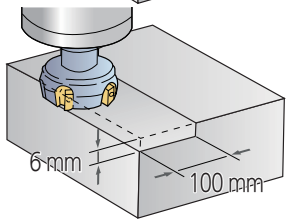
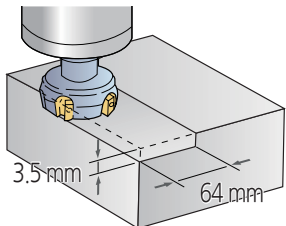
Feedrate (mm/min)	Spindle speed (r/min)	Tap size (mm)
212	742	M30×3.5

BT50 Tap / Carbon steel (SM45C)

Feedrate (mm/min)	Spindle speed (r/min)	Tap size (mm)
966	276	M30×3.5

TEST conditions : 12,000rpm [BT40] 8,000rpm [BT50]

※ The above data is based on internal testing. Values may change depending on cutting conditions.



HYST Series

VERTICAL MACHINING CENTER

Spindle Power & Torque Diagram

Direct Drive Type

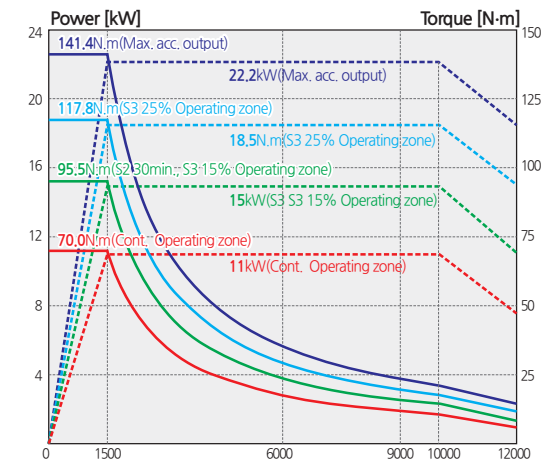
HYST 5700L

HYST 6700 BT40

Max Spindle Speed
12,000rpm

Power (Cont/Max)
11/22.2kW

Torque (Cont/Max)
70/141.4N·m

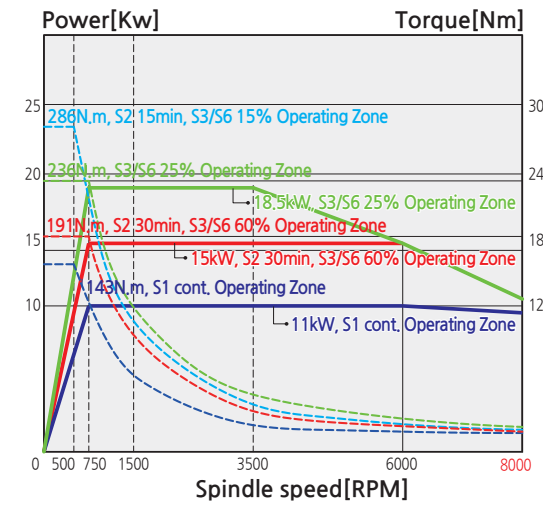


HYST 6700 BT50

Max Spindle Speed
8,000rpm

Power (Cont/Max)
11/15kW

Torque (Cont/Max)
143/286N·m



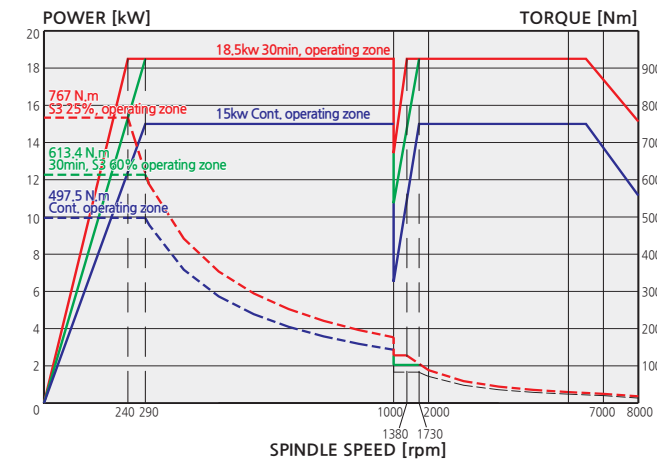
Gear Head Type

HYST 6700 BT50

Max Spindle Speed
6,000rpm

Power (Cont/Max)
15/18.5kW

Torque (Cont/Max)
497.5/767N·m

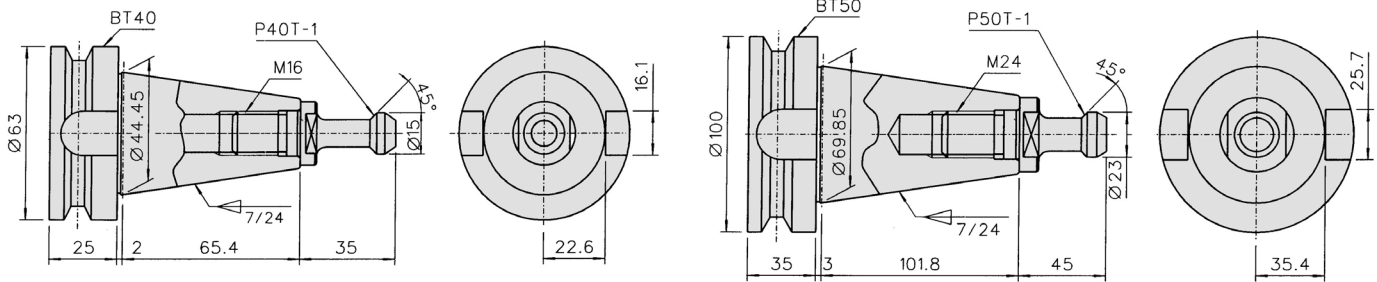


Tool Shank

Unit : mm

BT40

BT50

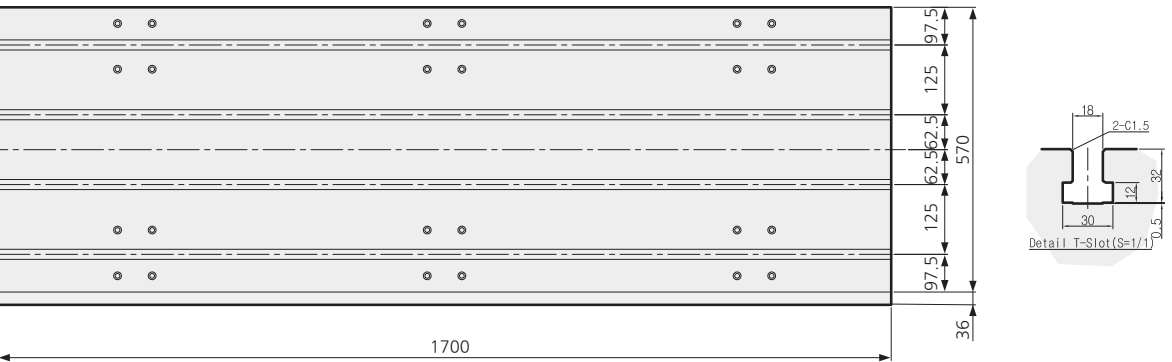


※Pull Stud for Gear Type is MAS P50T-1F(90°)

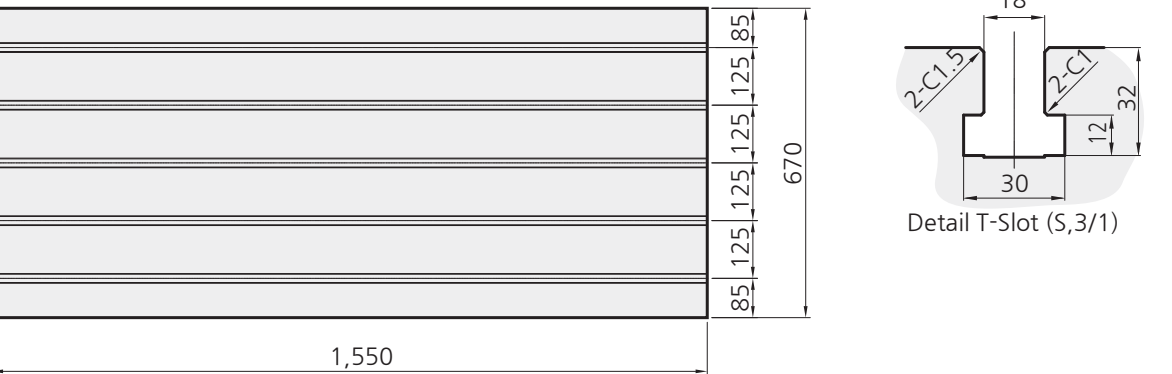
Table & T-Slot

Unit : mm

HYST 5700L



HYST 6700



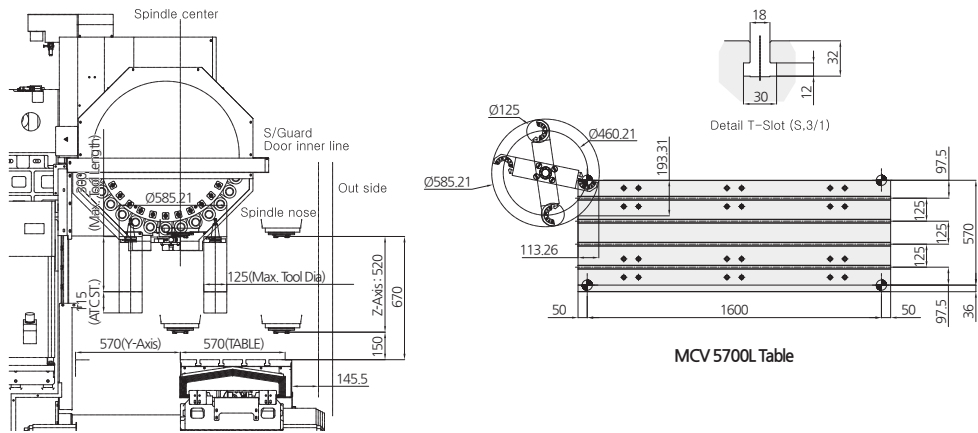
HYST Series

VERTICAL MACHINING CENTER

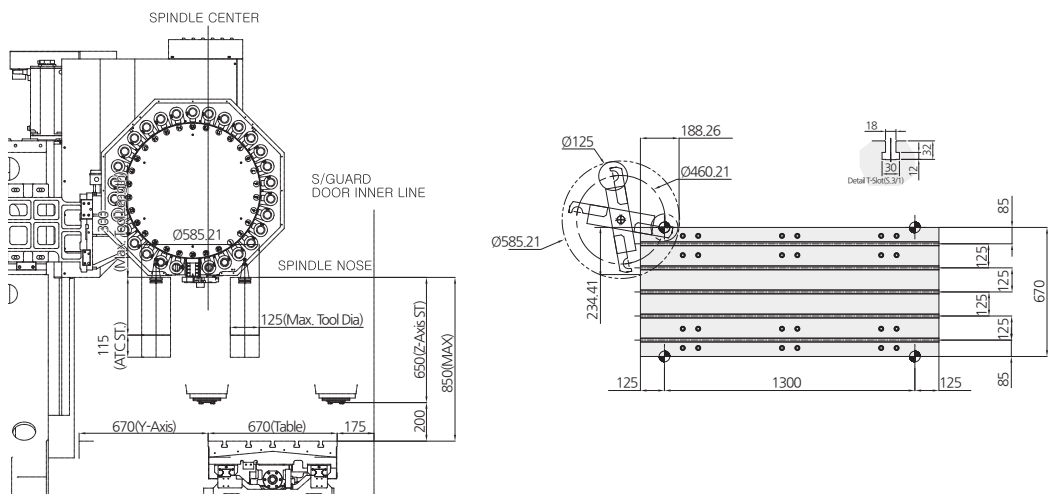
ATC Interference

HYST 5700L

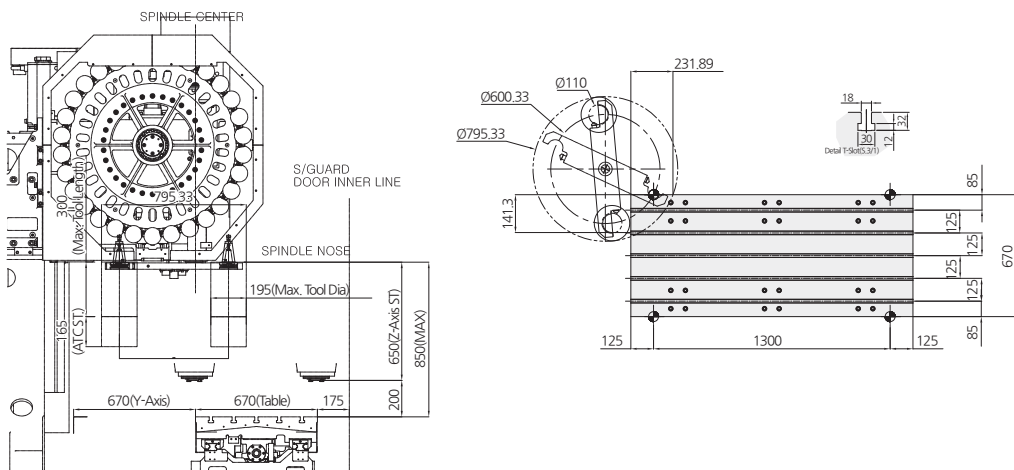
Unit : mm



HYST 6700(BT 40/30MG)



HYST 6700(BT 50/30MG)



Standard / Optional

● : Standard ○ : Optional X : N/A

Category		HYST 5700L	HYST 6700	
			BT40	BT50
Spindle				
RPM	6R(Gear)	X	X	○
	8R	X	X	○
	12R	●	○	X
	15R	X	○	X
Spindle chiller	6R/8R	○	○	
	12R	●	●	
ATC				
Spindle chiller	BBT40	●	●	
	BBT50	○	○	
	CAT40	○	○	
	HSK-A63	X	X	
Pull Stud	45°	●	●	
Table & Column				
T-slot table		●	●	
High column	200mm	○	○	
	300mm	○	○	
	400mm	○	○	
Coolant Equipment				
FULL SPLASH GUARD		●	●	
Shower coolant		○	○	
Coolant gun		○	○	
Bed flushing		●	○	
Air gun		○	○	
Air blow		○	○	
Tool measurement air blow (with tool measuring device)		○	○	
Internal screw conveyor		●	●	
Chip conveyor, HINGE	Left	○	○	
	Right	○	○	
	Rear	X	X	
Chip conveyor, SCRAPER	Left	○	○	
	Right	○	○	
	Rear	X	X	
Chip bucket	STD (380ℓ)	○	○	
	Rotating (200ℓ)	○	○	
Electrical Equipment				
3 step patrol lamp & buzzer		●	●	
Elec. cabinet light		○	○	
Remote MPG		○	○	
3-axis MPG		●	●	
Work counter	GUI	●	●	
Total counter	GUI	●	●	
Tool counter	GUI	●	●	
Multi counter	GUI	●	●	

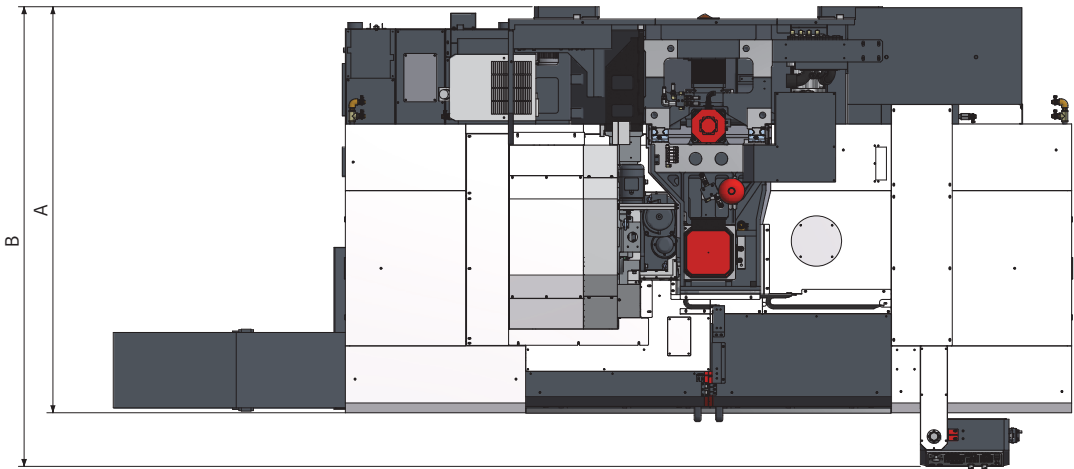
Category		HYST 5700L	HYST 6700
Electrical equipment			
Residual current breaker		○	○
AVR (Auto Voltage Regulator)		○	○
Transformer	50kVA	○	○
Auto power off		○	○
Power outage backup module		○	○
Z-axis drop prevention		●	●
Precision machining option			
AICC II (AI Contour Control II)		●	●
Jerk control		●	●
Smooth tolerance plus control		●	●
Machining condition selection function		●	●
Machining quality selection function		●	●
Data server		●	●
Manual guide i		●	●
Measurement			
Workpiece contact check device	TACO	○	○
	SMC	○	○
Auto tool measuring device		○	○
Tool breakage detection		○	○
Linear scale	X-axis	○	○
	Y-axis	○	○
	Z-axis	○	○
Coolant level detection		○	○
Environmental			
Air conditioner		○	○
Oil mist collector		○	○
Oil skimmer		○	○
Fixture & automation			
Auto door	STD	○	○
	High speed	X	X
Auto shutter		X	X
Operation sub-console		○	○
NC rotary table		○	○
NC rotary table interface		○	○
Rotary table control	+1 axis	○	○
	+2 axis	○	○
Add. M-code (4 sets)		○	○
Robot interface		○	○
I/O expansion		○	○
Hydraulic equipment			
Hydraulic unit for fixtures		○	○
Safety device			
Door interlock		●	●
KCs		●	●

※ For detailed information, please contact your local SMEC dealer.

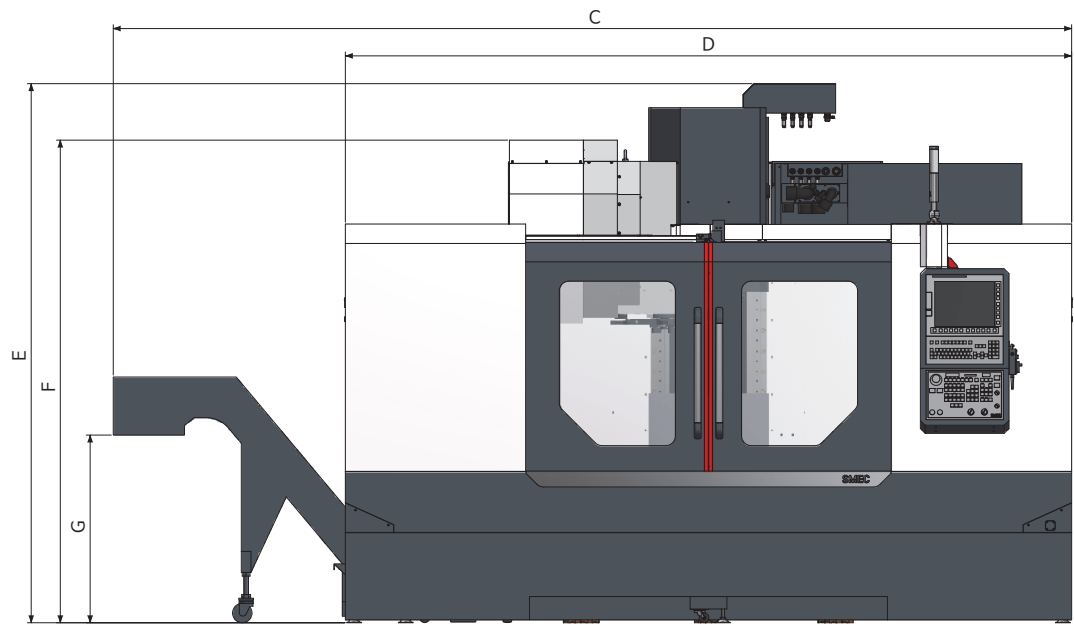
Machine Dimensions

Top view

Unit : mm



Front view

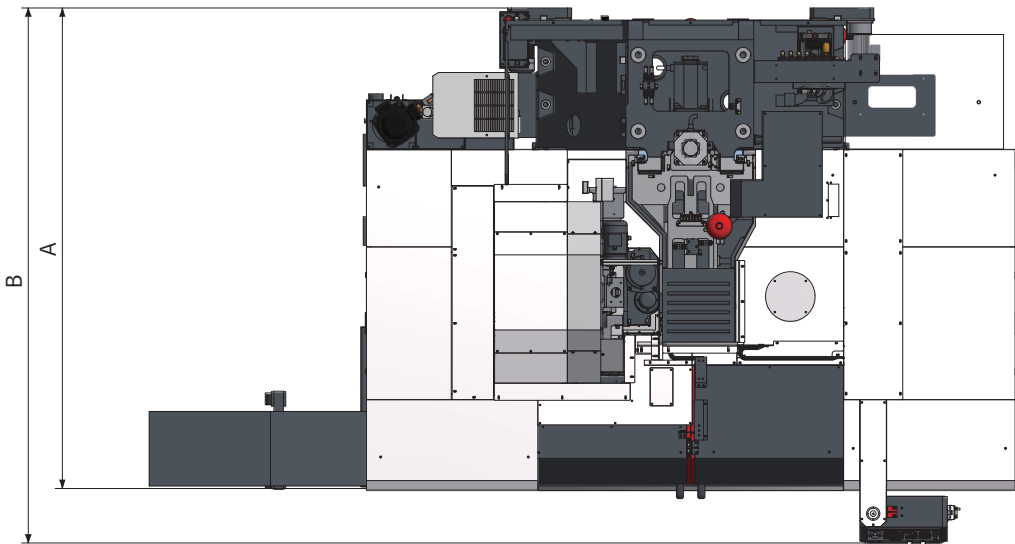


Model	A Length	B Length (ind OP Panel)	C Width (ind C/C)	D Width	E Height (max)	F Height (magazine)	G Height (C/C disposal chute)
HYST 5700L	2,099	2,376.6	4,954	3,754	2,786.4	2,494.6	970

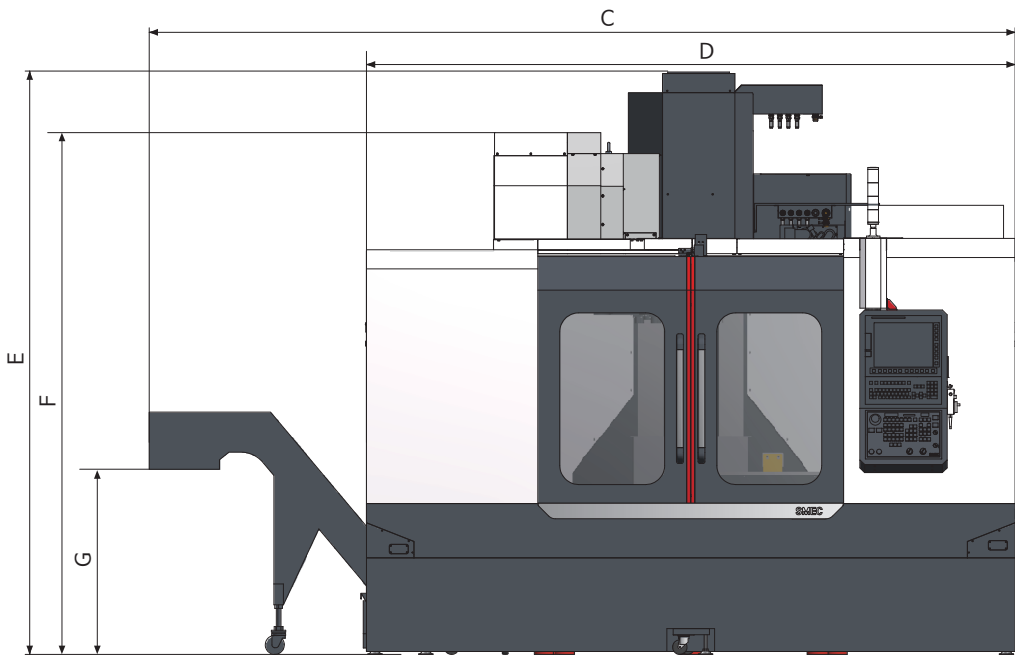
Machine Dimensions

Top view

Unit : mm



Front view

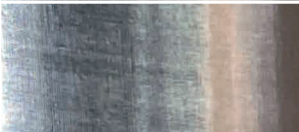
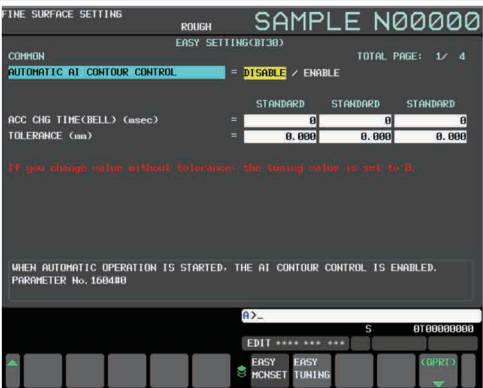


Model	A Length	B Length (ind OP Panel)	C Width (ind C/C)	D Width	E Height (max)	F Height (magazine)	G Height (C/C disposal chute)
HYST 6700(BT50)	2,527	2,700	4,488	3,350	3,160	2,993	970
HYST 6700(BT40)	2,527	2,700	4,488	3,350	3,045	2,872	970

Machining Solution (STD)

S4(SMEC SMOOTH SURFACE SYSTEM) Package

High performance NC options to improve machining performance provided as standard



Without S4 Package



With S4 Package

15 inch LCD monitor standard	
AICC II (AI Contour Control II)	Efficient accel/deceleration (200 block look ahead)
Jerk control	Speed control during acceleration changes
Smooth tolerance plus control	Stable curved shape forming
Machining conditions selection function	Adjust accuracy level according to machining conditions
Machining quality selection function	
Manual Guide i	Visual machining check and setup guide
Data server	Transfer large program files
Part program storage	2MB (5,120M)
Number of registered programs	1,000ea

IoT Solution (OPT)



NC-Gate Basic Platform



IoT-Gate Expansion Platform

NC-Gate / IoT-Gate

The NC-Gate / IoT-Gate that was developed in-house with our ICT technology is a universal gateway that not only interworks with our machine tools, but machine tools from other manufacturers, robots, automation equipment, and analog / digital sensors as a network device capable of bi-directional communication.

Supported drivers : Fanuc / Mitsubishi / Siemens NC, Modbus TCP, DeviceNet, Profibus, Ethernet, AI/DI/DO

KPI (Key Performance Indexes)



Provides key performance indicators and displays target achievement

- Indicators : achievement rate, productivity, process defect rate, equipment and factory usage, quality defect rate, lead time, and average cycle time

OEE (Overall Equipment Effectiveness)



Provides figures and graphs of overall equipment effectiveness

- Availability, performance, quality, etc.

Realtime Monitoring



Provides operation status and alarm information in case of problems in the production line

- Provides information about the operation status, speed, production alarms, etc. of each machine

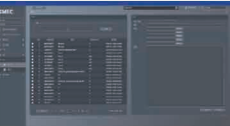
Remote Control/Management



Remote control and operation

- Emergency stop switch, program editing, etc.

Remote A/S



Problem diagnosis via remote control

- Provide remote diagnosis services to users via the IIoT solution

SMEC User Interface



Fanuc Oi MF Plus

- 15" LCD color display
- Part program size 2MB
- High quality designed OP Panel
- SMEC Custom S/W
- Portable M.P.G

SMEC Custom S/W displayed using MDI's  button or OP Panel's  button

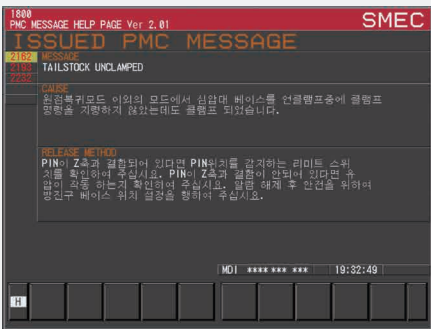
 **CUSTOM** : Provide operator convenience and improve productivity using the support function for tool management and additional device setting.

SMEC HMI



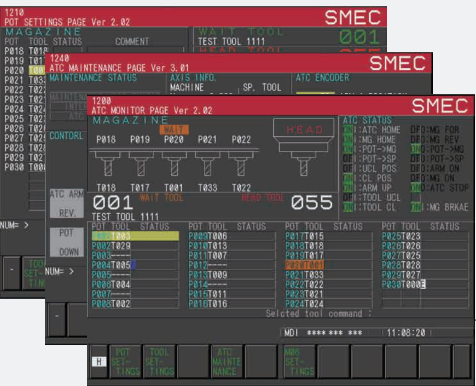
M/G-Code check function

Allows the operator to directly read the M/G-Code on the machine for easy application programming

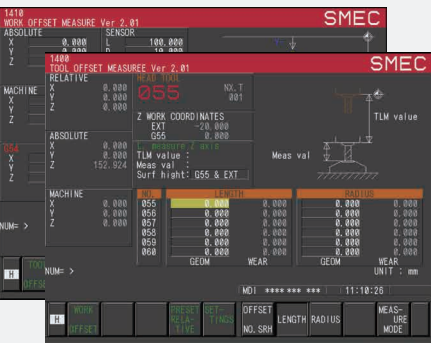


PMC alarm check function

When a PMC alarm occurs, the cause and countermeasures are described in detail, making operation and maintenance more convenient



ATC Magazine status check, setting and maintenance function



Work coordinates, tool setting support function



Counter for each T-Code

HYST Series

VERTICAL MACHINING CENTER

Machine Specifications

Category			HYST 5700L
Travel	X-axis travel	mm	1,600
	Y-axis travel	mm	570
	Z-axis travel	mm	520
	Spindle to table surface	mm	150 ~ 670
Table	Table size	mm	1,700 × 570
	Table loading capacity	kgf	1,000
	Table surface	mm	18H8 T-slot × p125 × 4ea
Spindle	Spindle speed	rpm	12,000
	Power (Cont/Max)	kW	11/22.2
	Torque (Cont/Max)	N.m	70.1/141
Feedrate	X-axis rapid traverse rate	m/min	30
	Y-axis rapid traverse rate	m/min	36
	Z-axis rapid traverse rate	m/min	30
	Cutting feed (X/Y/Z)	mm/min	1-15,000
ATC	Tool shank	-	BT40
	Pull stud	-	MAS P40T-1
	Tool storage capacity	ea	30
	Max tool diameter (adjacent empty)	mm	Ø80(Ø125)
	Max tool length / weight	mm	300/8
	Tool-to-tool time	sec	1.3(60Hz), 1.6(50Hz)
	Tool changing method	mm	Double Arm Swing
	Tool select type	mm	Memory random
Machine	Size (with SIDE chip conveyor) L×W×H	mm	3,754(4,954) × 2,099 × 2,786
	Weight	kg	7,000
Coolant tank capacity		Liter	400
Electric power supply		kVA/V	32/220
Controller			FANUC Oi-MF Plus

※ Design and specifications are subject to change without notice.

Machine Specifications

Category			HYST 6700(BT50)	HYST 6700(BT40)
Travel	X-axis travel	mm	1,300	1,300
	Y-axis travel	mm	670	670
	Z-axis travel	mm	650	650
	Spindle to table surface	mm	200 ~ 850	200 ~ 850
Table	Table size	mm	1,550 × 670	1,550 × 670
	Table loading capacity	kgf	1,300	1,300
	Table surface	mm	18H8 T-slot × p125 × 5ea	18H8 T-slot × p125 × 5ea
Spindle	Spindle speed	rpm	Direct 8,000 Gear 6,000	Direct 12,000
	Power (Cont/Max)	kW	Direct 11/18.5 Gear 15/18.5	11/18.5
	Torque (Cont/Max)	N.m	Direct 143/286 Gear 497.5/767	70.1/141
Feedrate	X-axis rapid traverse rate	m/min	36	36
	Y-axis rapid traverse rate	m/min	36	36
	Z-axis rapid traverse rate	m/min	30	30
	Cutting feed (X/Y/Z)	mm/min	1~15,000	1~15,000
ATC	Tool shank	-	BT50	BT40
	Pull stud	-	Direct MAS P50T-1 Gear MAS P50T-1F	MAS P40T-1
	Tool storage capacity	ea	30	30
	Max tool diameter (adjacent empty)	mm	Ø100(Ø195)	Ø80(Ø125)
	Max tool length / weight	mm	300/15	300/8
	Tool-to-tool time	sec	2.45(60Hz), 2.75(50Hz)	1.3(60Hz), 1.6(50Hz)
	Tool changing method	mm	Double Arm Swing	Double Arm Swing
	Tool select type	mm	Memory random	Memory random
Machine	Size (with SIDE chip conveyor) L×W×H	mm	3,350(4,488) × 2,527 × 3,160	3,350(4,488) × 2,527 × 3,045
	Weight	kg	10,000	10,000
Coolant tank capacity		Liter	400	400
Electric power supply		kVA/V	32/220	32/220
Controller			FANUC Oi-MF Plus	FANUC Oi-MF Plus

※ Design and specifications are subject to change without notice.

HYST Series

VERTICAL MACHINING CENTER

NC Specification / FANUC

● : STD ○ : Optional () : Option X : N/A



Category		0i-MF Plus
Controlled axis	Controlled axes	X, Y, Z
	Max simultaneously controlled axes	4
	Least input increment	0.001mm / 0.0001"
	Built-in stroke limit	Soft overtravel 1, 2, 3
	Machine lock	●
Operation function	Manual handle feed	X1, X10, X100
	Dry run	●
	Single block	●
	Feed per minute	G94
	Feed per revolution	G95
	DNC operation	Ethernet, CF card
	Retraction for rigid tapping	●
Interpolation function	Linear interpolation	G01
	Circular interpolation	G02, G03
	Dwell	G04
	Cylindrical interpolation	G70.1
	Skip	G31
	Fine surface machining	●
	Smooth tolerance control	●
	Nano smoothing	●
	Polar coordinate interpolation	X
	Reference position (zero) return	G28
	Reference position (zero) return check	G27
	2nd, 3rd, 4th reference point return	G30
Feed function	Rapid traverse override	F0, 25%, 50%, 100%
	Feedrate override	0~200%
	Jog override	0 ~ 5,000 mm/min
	AI look ahead	20 block
	AI contour control II	200 block
	Look ahead block expansion (F0i) (400 Block)	○
	High-speed processing	X
	Look ahead block expansion (F31i)	X
	Jerk Control	●
Spindle function	Spindle orientation	●
	Rigid tapping	M29
	Spindle override	50 ~ 150%
Tool function	Tool number command	T2-Digt Tool number
	Tool nose radius compensation	G40 ~ G42
	Tool offset pairs	400 pairs
	Tool geometry / wear offset	●
	Tool length offset	●
	Tool life management	●
	Tool path graphic display	●

NC Specification / FANUC

● : STD ○ : Optional () : Option X : N/A



Category		0i-MF Plus
Program input	Absolute / incremental command	G90/G91
	Repeating canned cycle	X
	Repeating canned cycle 2	X
	Canned cycles	X
	Drilling canned cycle	G73/74/76, G80~89
	Decimal point input	●
	Inch / metric conversion	G20 / G21
	Program restart	●
	Sub program call	●
	Max programmable value	±99999.999mm/±9999.9999"
	M function	3 digit
	Custom macro	●
	Addition of custom macro common variables	#100~#199, #500~#999 (#98000~#98499)
	Programmable data input	G10
	Tape code	ISO / EIA
	Optional block skip	●
	Workpiece coordinate system	G52 ~ G59
	Addition of workpiece coordinate system	48(300) pairs
Interface function	Embedded ethernet	●
	Fast ethernet	100 Mbps
Setting and display	Alarm and operator history display	●
	Run hour and parts count display	●
	Loadmeter display	●
	Self diagnosis function	●
	Extended part program editing	●
	Machining condition selection function (10 levels)	●
	Machining quality level adjustment (3 levels)	●
	Display screen	15" LCD
	Multi-language display	25 language
Data input/output	Fast data server	○
	RS232C interface	●
	Memory card input / output	●
Editing operation	USB memory input / output	●
	Part program storage size	2MB
	Number of registered programs	1,000EA
	Manual guide i	●
	Manual guide Oi	○