HYUNDAI
MOTOR GROUP

EXPERIENCE THE NEW TECHNOLOGY

HYUNDAI WIA Booth No.
Hall 26 / Stand B62

HYUNDAI
WIA
http://machine.hyundai-wia.com

TECH CUBE
HYUNDAI WIA EUROPE TECHNICAL CENTER

HYUNDAI WIA's Machine Tools continues its evolution to satisfy customer's requirements in efficacious and systematic manner.

HYUNDAI WIA
2019 EMO Stand Lay-out

EMO Hannover

Hall 26 / Stand B62

THE HYUNDAI WIA WILL BE EXHIBITING 10 MACHINES AT THE EMO 2019 HANNOVER FROM SEPTEMBER 16TH TO 21ST 2019.

CNC Turning Center

Multitasking : KM2600MTTS | LM1800TTSY

Y-Axis : HD2200SY | HD2600Y | L3000LY

Vertical Machining Center

5-Axis : XF6300 | XF2000

Standard Type : KF4600 | KF5600

Automation System

PLS + HS6300

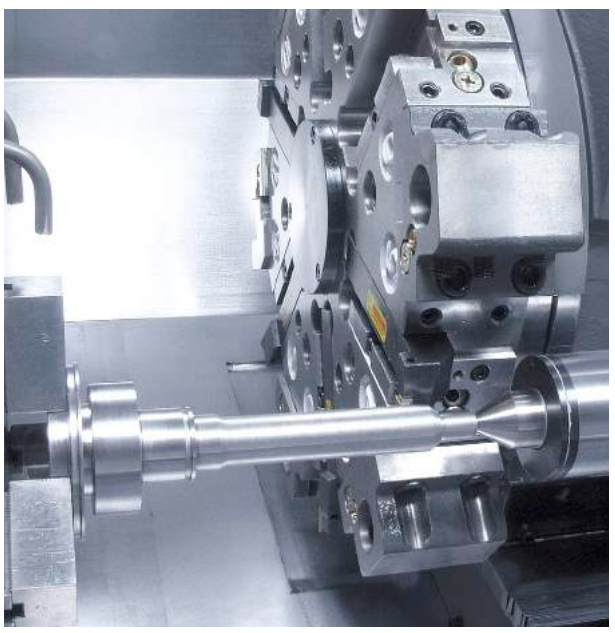
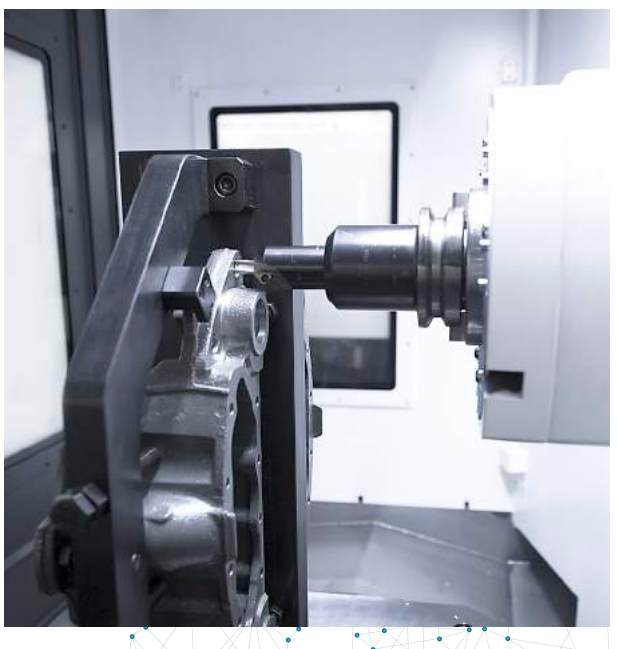
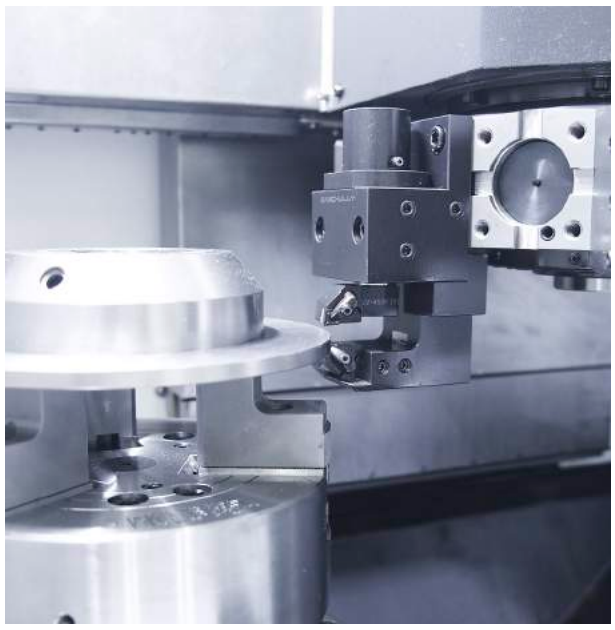
High Performance & Advanced technology

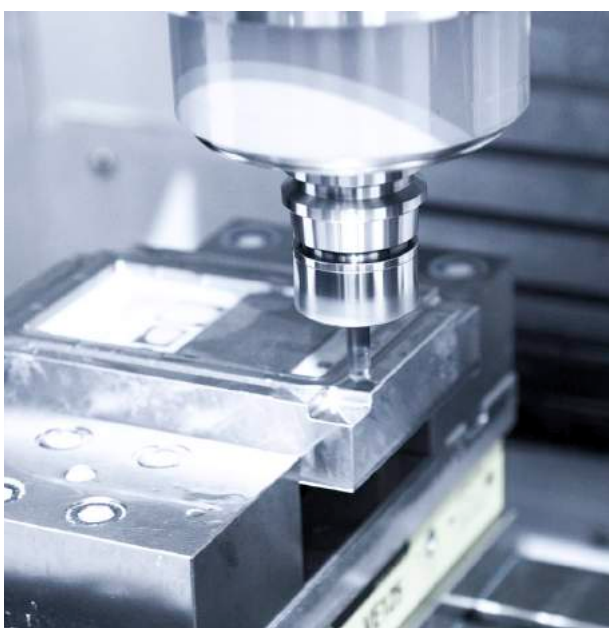
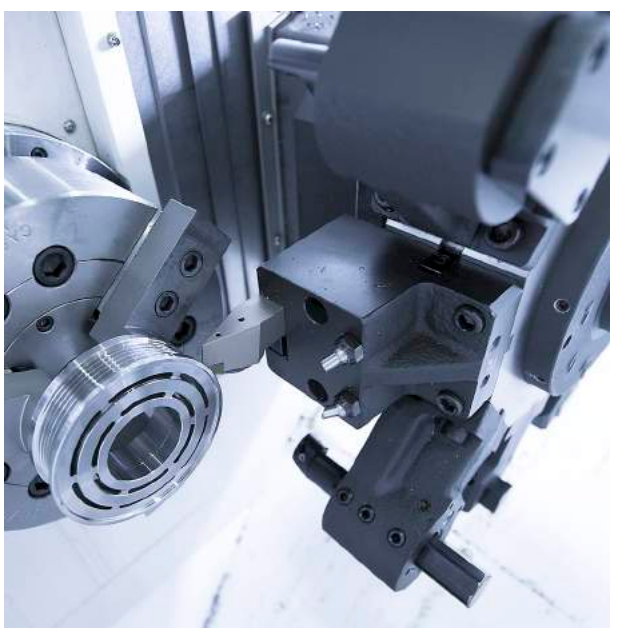
SMART SYSTEM

Faster processing and enhanced accuracy are accomplished through the HYUNDAI WIA Smart System. The environmental-friendly software and equipment monitoring of the Smart System maximize productivity.

HIGH SPEED & POWERFUL MECHANISM

Korean traditional machine tools designed by HYUNDAI WIA with years of expertise and the latest technology maximize productivity while maintaining rigidity and accuracy.

HYUNDAI WIA
EXHIBITION MACHINE LINE-UP

HYUNDAI WIA's Machining Center continues its evolution to satisfy customer's requirements to conduct complex process in simultaneous manner.

HYUNDAI WIA's machining tools, with its world highest quality, provide optimal machining environment for customers through HYUNDAI-iTROL+, in-house developed CNC controller combined with up-to-dated IT technology, and HW-MMS development to cope with the Fourth Industrial Revolution.

Also, we provide the highest satisfaction through Total Solution and quick A/S for our customers.

EMO Hannover

TECH CUBE
HYUNDAI WIA EUROPE TECHNICAL CENTER

HYUNDAI WIA Booth No.
Hall 26 / Stand B62

TECH CUBE, HYUNDAI WIA Europe Technical Center

In our determination to develop machine tools that deliver unrivalled satisfaction to our customers, and our unwavering commitment to grow into the world's best machine tool company, HYUNDAI WIA have established a technical support center in Germany.

Through its new European Technical Center, HYUNDAI WIA will not only enhance technical support for its European clients but also run a variety of marketing campaigns on the continent with the aim of growing into the leading machine tool brand in the entire European market.

Notably, the company will staff the R&D Center with world-class researchers who will take the lead in promoting the technological enhancement by developing new machine tools that far surpass the performance of existing machine tools in Europe.

HYUNDAI WIA is now set to become a global player.

HD2200SY/2600Y N

• Heavy Duty Cutting, Y Axis CNC Turning Center

L3000LY

• Large Working Area, Y Axis CNC Turning Center

LM1800TTSY

• Multitasking CNC Turning Center

KM2600MTTS

• 9-Axis Multitasking Machine

KF4600/5600

• Next Generation Vertical Machining Center

XF6300

• High Speed 5-Axis Vertical Machining Center

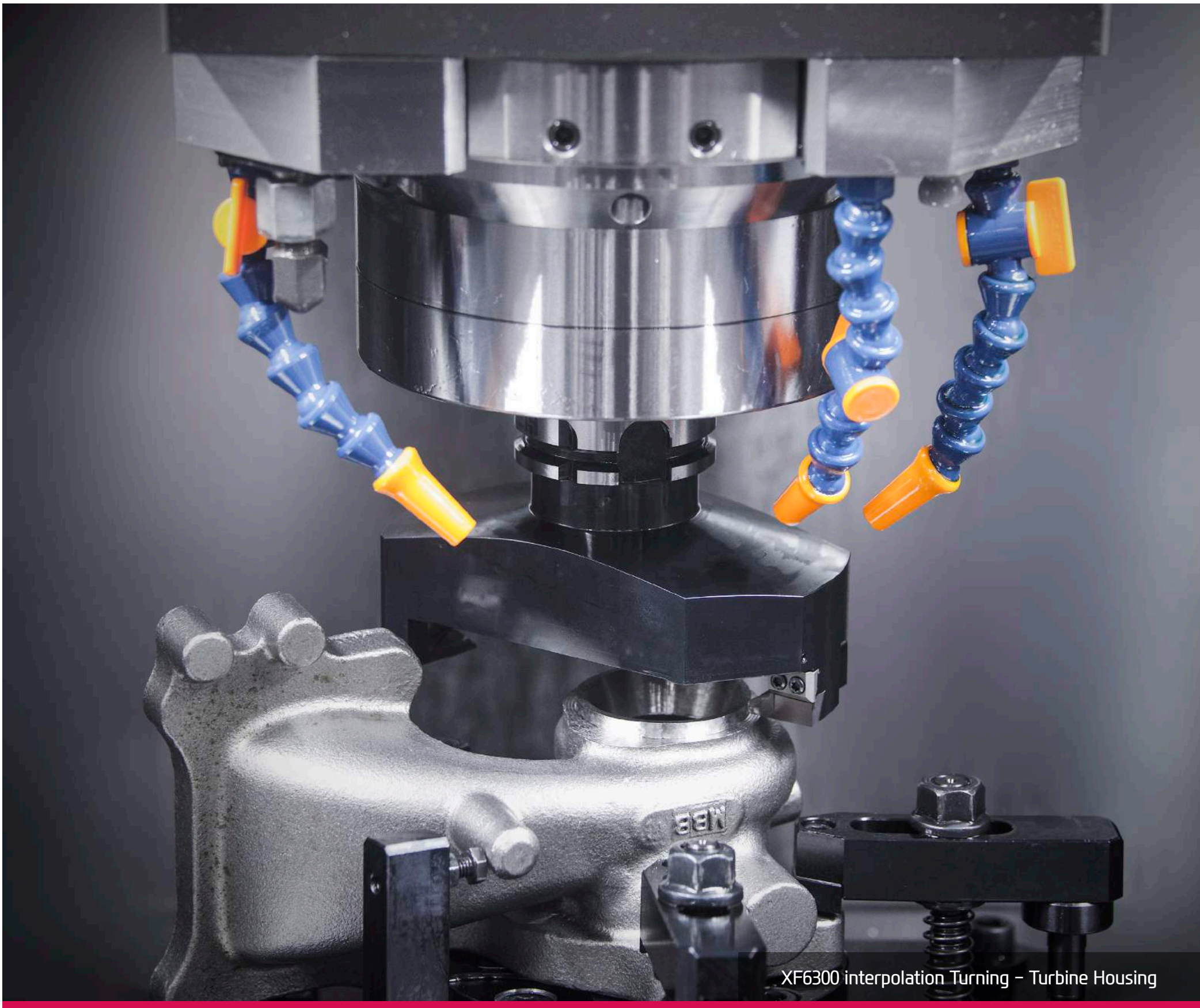
XF2000

• Compact Simultaneous 5-Axis Machining Center

PLS (Pallet Line System)
HS6300
OPERATING S/W

HS6300+PLS N

• High Level of Automation System



XF6300 interpolation Turning – Turbine Housing

XF6300

The world-best 5-axis vertical machining center, developed by HYUNDAI WIA Europe R&D Center, **XF6300** is an equipment to realize the best performance in composite machining and mold machining. High quality machining is possible due to its cutting-edge design such as unified column-bed structure, X/Z axis box-in-box structure, and more.

Specifications

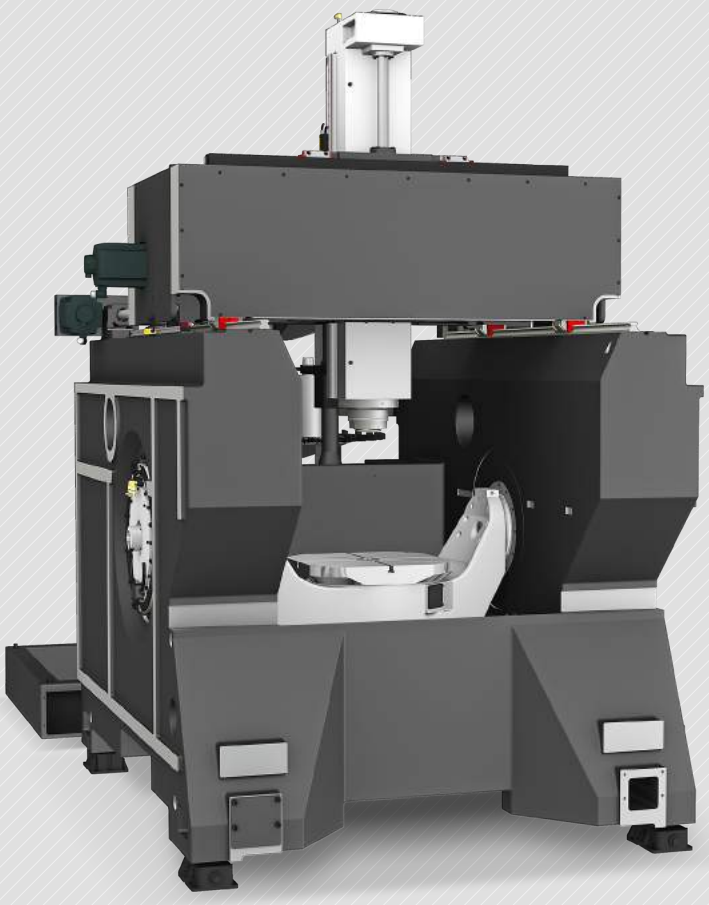
Table Size	mm(in)	Ø630 (Ø24.8")
Max. Load Capacity	kg(lb)	600 (1,323)
Max. Machining Area	mm(in)	Ø800×500 (Ø31.5"×19.7")
Sp. Taper	-	HSK-A63 [40K : HSK-E40]
Sp. Speed	r/min	15,000 [24,000] [40,000]
No. of Tools	EA	34 [68, 102]
Travel (X/Y/Z)	mm(in)	650/600/500 (25.6"/23.6"/19.7")
Rapid Traverse Rate	m/min (ipm)	60/60/60 (2,362/2,362/2,362) [HEIDENHAIN : 50/50/50 (1,967/1,967/1,967)]

[ ] : Option

Cutting Edge Technology

High Precision 5-Axis Vertical Machining Center

MAIN FEATURES



Column / Bed Integrated Structure

The XF6300 is designed with a unified column-bed structure providing superior stability when compared with separate structures. The All-in-One structure delivers high rigidity and excellent vibration absorption providing exceptional performance and superior surface finishes.

Symmetric Structure of Z-axis

The Box-in-Box design is a symmetrical structure without overhang facilitating unprecedented speed, accuracy, stability, and acceleration.

Box-in-Box Structure (X/Z Axis)

The Y-axis is driven by two ball screws and feed motors to provide unprecedented speed, accuracy, stability, and acceleration than general purpose machines.

4-Way Structure on X Axis

X-axis of XF6300 has box-type saddle design with 4-way structure in a cross beam to realize improved strength and minimal thermal displacement.

- **Rapid Traverse Rate**
  (X/Y/Z) : 60/60/60 m/min (2,362/2,362/2,362 ipm)
  [HEIDENHAIN : 50/50/50 m/min (1,967/1,967/1,967 ipm)]
  (A/C) : 70/110 (DDM) rpm [25/50 (Gear)]
- **Travel**
  (X/Y/Z) : 650/600/500 mm (25.6″/23.6″/19.7″)
  (A/C) : 150°/360°

HIGH-PRECISION SPINDLE

Built-In Spindle

The spindle is designed as a built-in structure. This helps reduce vibration and heat and performs with fast acc./dec. rates for high precision machining.

Spindle Cooling

Spindle temperature is controlled by the use of a spindle oil chiller. This ensures consistent spindle temperature which minimizes thermal displacement.

HSK Tool Holder

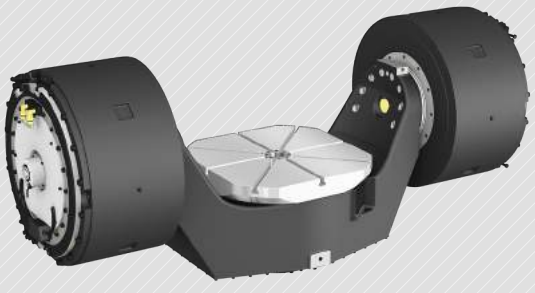
HSK tool holder is utilized for precise positioning with less expansion in the spindle taper during high speed rotation. This ensures an excellent level of precision for die mold machining.

- **Spindle Speed** : 15,000 [24,000] [40,000] rpm
- **Spindle Power** (Max./Cont.)
  31/25 [26/20] [26/18] kW (41.6/33.5 [35/27] [35/24] HP)
- **Spindle Torque** (Max./Cont.)
  153/123 [85.9/66.5] [9.9/6.9] N·m (112.8/91 [63.4/49] [7.3/5] lbf·ft)

MAGAZINE & TABLE

Direct Drive Motor (DDM) Tilting Rotary Table

The XF6300 tilting rotary table is designed to embody highly accurate high speed simultaneous 5-axis motion which allows for the machining of complex prismatic parts with superior accuracy and surface finishes.

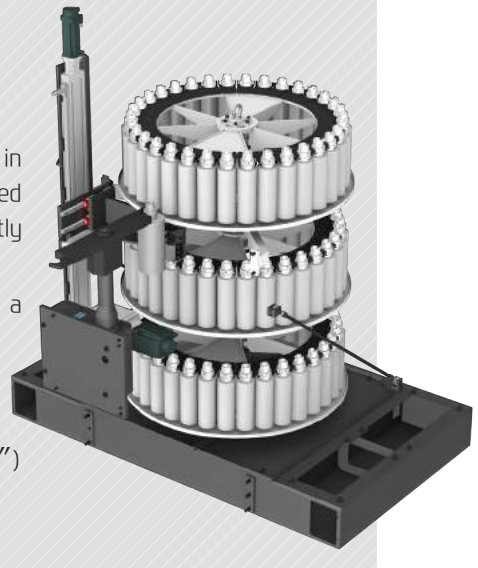


- **Table Size** : Ø630 (Ø24.8″)
- **Maximum Load Capacity** :
  600 kg (1,323 lb)

Magazine & ATC

Tool change time (chip-to-chip) of 4.5 seconds is the best in its class. The rack type tool change mechanism was developed to add unprecedented extra-large capacity tool for vastly complex 5-axis machining applications.

A single step rack magazine of 34 tools is provided as a standard. 68 and 102 tool capacity is optional.



- **No. of Tools** : 34 [68, 102] EA
- **Max. Tool Dia.** (W/T) : Ø90/Ø125 (Ø3.5″/Ø4.9″)
- **Max. Tool Length** : 300 mm (11.8″)

XF2000

The **XF2000**, a high-speed / high-precision compact 5-axis simultaneous machining center developed by HYUNDAI WIA EUROPE R&D Center, has an optimal structure for Impeller machining productivity. The **XF2000** is composed of an integrated column and cantilever-type table for improvement of maintenance and user convenience.

Specifications

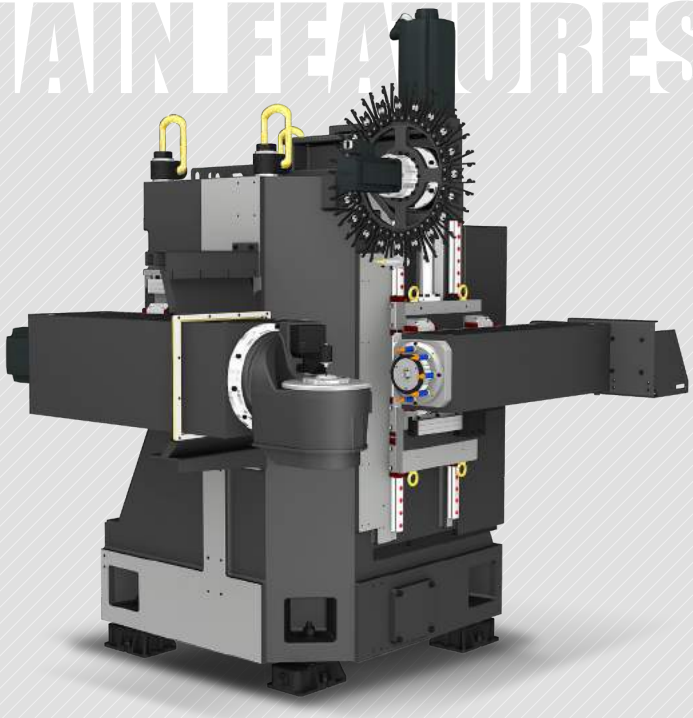
ITEM		XF2000	XF2000i
Table Size	mm(in)	Ø200 (Ø7.9")	Ø260 mm (Ø10.2")
Max. Load Capacity	kg(lb)	15 (33)	50 (110)
Sp. Taper	-	HSK-E40	
Sp. Speed	r/min	40,000	24,000
No. of Tools	EA	20 : Pick up Type	40 : chain Type
Travel (X/Y/Z)	mm(in)	300/300/200 (11.8"/11.8"/7.9")	
Rapid Traverse Rate	m/min (ipm)	50/50/50 (1,969/1,969/1,969)	

[ ] : Option

High Speed & Productivity

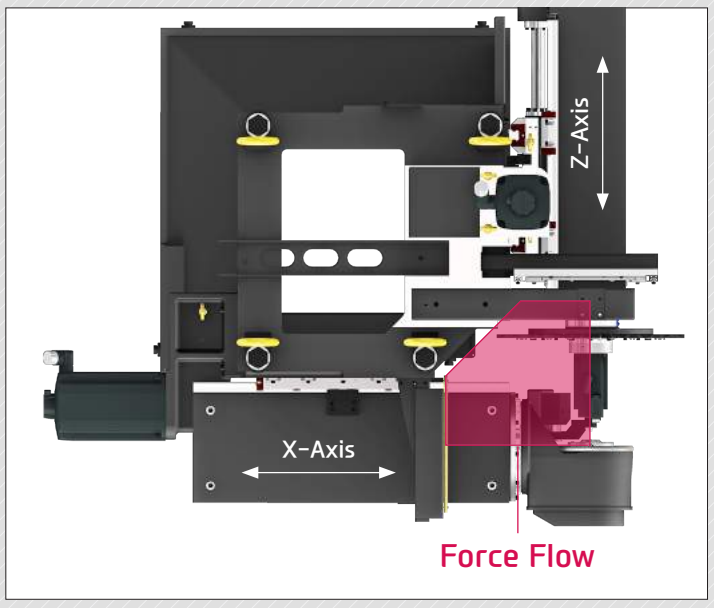
5-Axis Machining Center for Impeller Machining

MAIN FEATURES



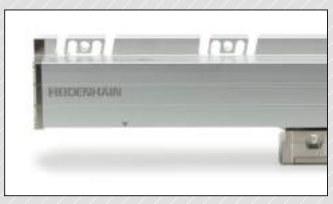
Integrated Bed & Column

The dynamic rigidity of XF2000 has been maximized with integral design of bed and column. Thanks to the concentration of the force flow between the work space and the tool, this machine offers the highest level of structural stability in its class.



Linear Scale (Std.)

Applied linear scale as a standard for high-precision machining through the compensation of thermal displacement.



High Speed Roller LM Guideway

Roller LM guide with high acc./deceleration and rigidity is applied to reduce non-cutting time.

- **Travel** (X/Y/Z)
  300/300/200 mm (11.8"/11.8"/7.9")
- **Rapid Traverse Rate** (X/Y/Z)
  50/50/50 m/min (1,969/1,969/1,969 ipm)
- **Feed Axis acc./dec.** (X/Y/Z) : 2G/2G/2G

HIGH-PRECISION SPINDLE

Built-In Spindle

Designed with a built-in motor structure, the spindle provides maximum acceleration and deceleration while suppressing vibration and heat that can occur during the high-speed rotation. This leads to excellent performance for high precision machining.

Spindle Cooling

We provide spindle oil cooling device as a standard. Stable spindle temperature can be maintained at all times even during long machining, ensuring stable machining capability.


HSK-E40

HSK Tool Holder

By applying the HSK-E40, which has less expansion of the spindle taper during high-speed rotation, it is possible to achieve high precision accuracy even at high-speed.

- **Spindle Speed**
  XF2000 : 40,000 rpm XF2000i : 24,000 rpm
- **Spindle Power** (Max.)
  XF2000 : 26 kW (35 HP) XF2000i : 10.5 kW (14 HP)

TABLE & MAGAZINE

5-axis DDM Table

Precise 5-axis control can be done simultaneously by adopting DDM table, ensuring world-class travel speed to enhance productivity.

A/B-Axis Rotary Scales Standard

High quality machining is achieved by scale built-in YRT bearing which is applied to the A/B-axis of rotary table.

- **Tilting Angle** (A-axis) : 240° (+120°~-120°)
- **Rapid Traverse Rate** (A/C-axis) :
  XF2000 : 200/200 rpm XF2000i : 120/120 rpm

ATC & Magazine

Since the magazine has developed as a pickup-type with a relatively simple structure, automatic tool loading device is unnecessary, so it is excellent in maintenance.

- **No. of Tools**
  XF2000 : 20 EA XF2000i : 40 EA
- **Tool Change Time** (C-C)
  XF2000 : 4.5 sec XF2000i : 5.0 sec

KF4600 | KF5600

The Fastest, the Most Versatile High end Linear Machining Center

The Vertical Machining Center KF Series, designed by Hyundai WIA with years of expertise and the latest technology, maximizes productivity while maintaining rigidity and accuracy.

Specifications

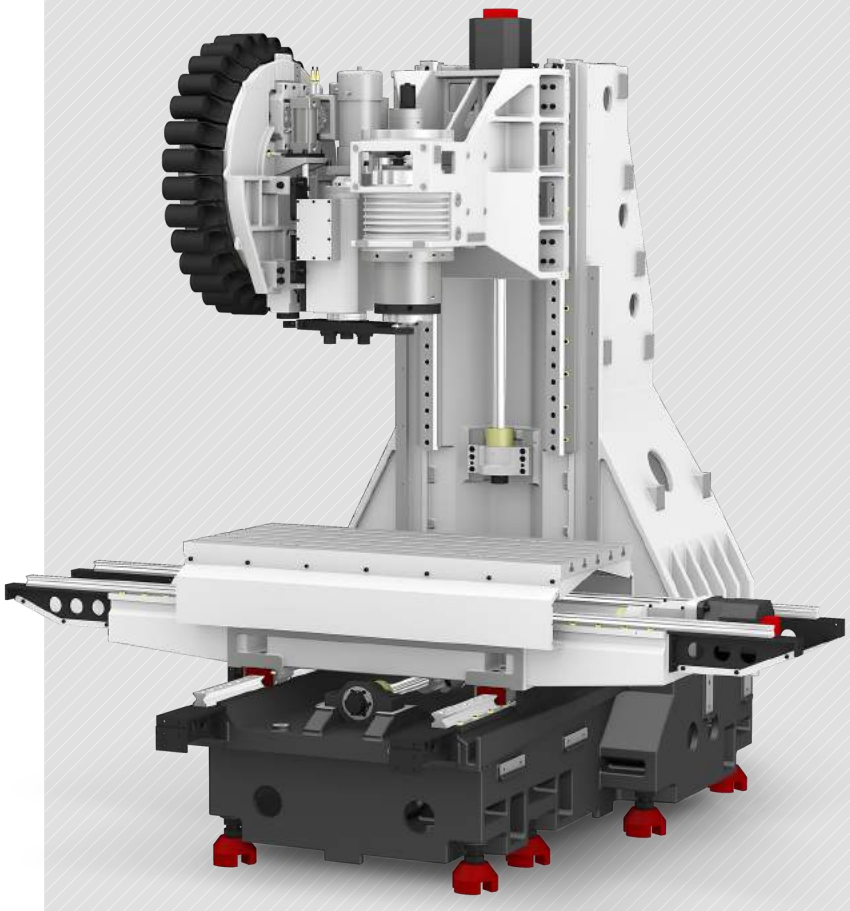
ITEM		KF4600	KF5600	KF5600C	KF6700
Table Size	mm(in)	1,050×460 (41.3″x18.1″)	1,250×560 (49.2″×22″)	1,250×560 (49.2″×22″)	1,500×670 (59″×26.4″)
Max. Load Capacity	kg(lb)	600 (1,323)	1,000 (2,205)	1,000 (2,205)	1,300 (2,866)
Sp. Taper	-	BBT40	BBT40	BBT40	BBT40
Sp. Speed	r/min	8K (β) [10K (β), 8K, 12K, 15K]	8K [8K (β), 10K (β), 12K, 15K, 20K]	8K [8K (β), 10K (β), 12K]	8K [8K (β), 10K (β), 12K, 15K, 20K]
No. of Tools	EA	30 [40]	30 [40]	30 [40]	30 [40]
Travel (X/Y/Z)	mm(in)	900/460/520 (35.4″/18.1″/20.5″)	1,100/560/520 (43.3″/22″/20.5″)	1,100/560/635 (43.3″/22″/25″)	1,300/670/635 (51.2″/26.4″/25″)
Rapid Traverse Rate	m/min (ipm)	36/36/36 (1,417/ 1,417/ 1,417)	40/40/36 (1,575/1,575/1,417)	40/40/36 (1,575/1,575/1,417)	36/36/30 (1,417/1,417/1,181)

[ ] : Option

High Speed & Productivity

Next Generation Vertical Machining Center

MAIN FEATURES



Optimal Structural Analysis

KF Series is designed to have optimal structure through Hyundai WIA's unique structural analysis.

In particular, enhancement of bed and column's rigidity makes excellent performance even in heavy duty cutting.

High-Speed Roller LM Guideway

Linear roller guideways are applied to reduce non-cutting time and bring high rigidity.

3-Row bearing + Oil Lubricated

Double anchored 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.

⊙ **Rapid Traverse Rate** (X/Y/Z)

KF4600 : 36/36/36 m/min (1,417/1,417/1,417 ipm)
KF5600 : 40/40/36 m/min (1,575/1,575/1,417 ipm)
KF6700 : 36/36/30 m/min (1,417/1,417/1,181 ipm)

⊙ **Travel** (X/Y/Z)

KF4600 : 900/460/520 mm (35.4″/18.1″/20.5″)
KF5600 : 1,100/560/520 m/min (43.3″/22″/20.5″)
KF6700 : 1,300/670/635 m/min (51.2″/26.4″/25″)

HIGH-PRECISION SPINDLE

Direct Driven Spindle

The acc/dec. time has been shortened with direct connection of the motor and the spindle. A wide range of machining is possible with spindle speed of up to 12,000rpm.

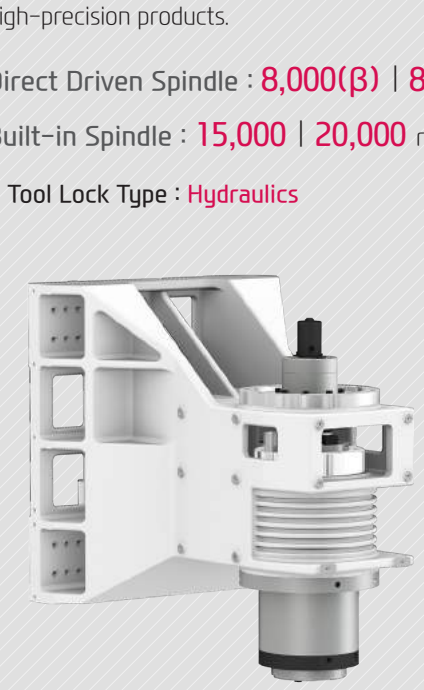
Built-in Spindle

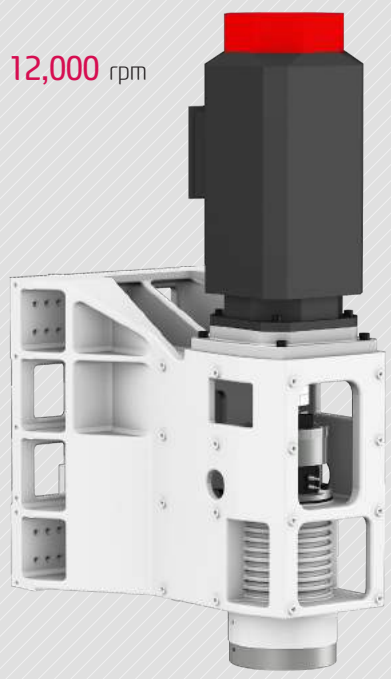
The 15,000rpm and 20,000rpm built-in spindle can minimize vibration transmitted to the spindle. It allows excellent machining performance in mold and high-precision products.

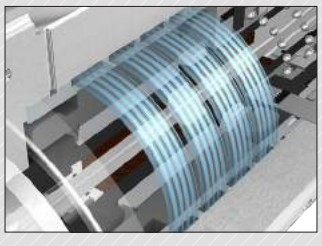
Direct Driven Spindle : 8,000(β) | 8,000 | 12,000 rpm

Built-in Spindle : 15,000 | 20,000 rpm

• Tool Lock Type : Hydraulics







Spindle Cooling
(Standard in Over 10,000rpm)

The spindle cooling system minimizes thermal displacement which can happen during lengthy machining operations, and offers consistent accuracy based on the thermal stability.

ATC & MAGAZINE

High Speed ATC

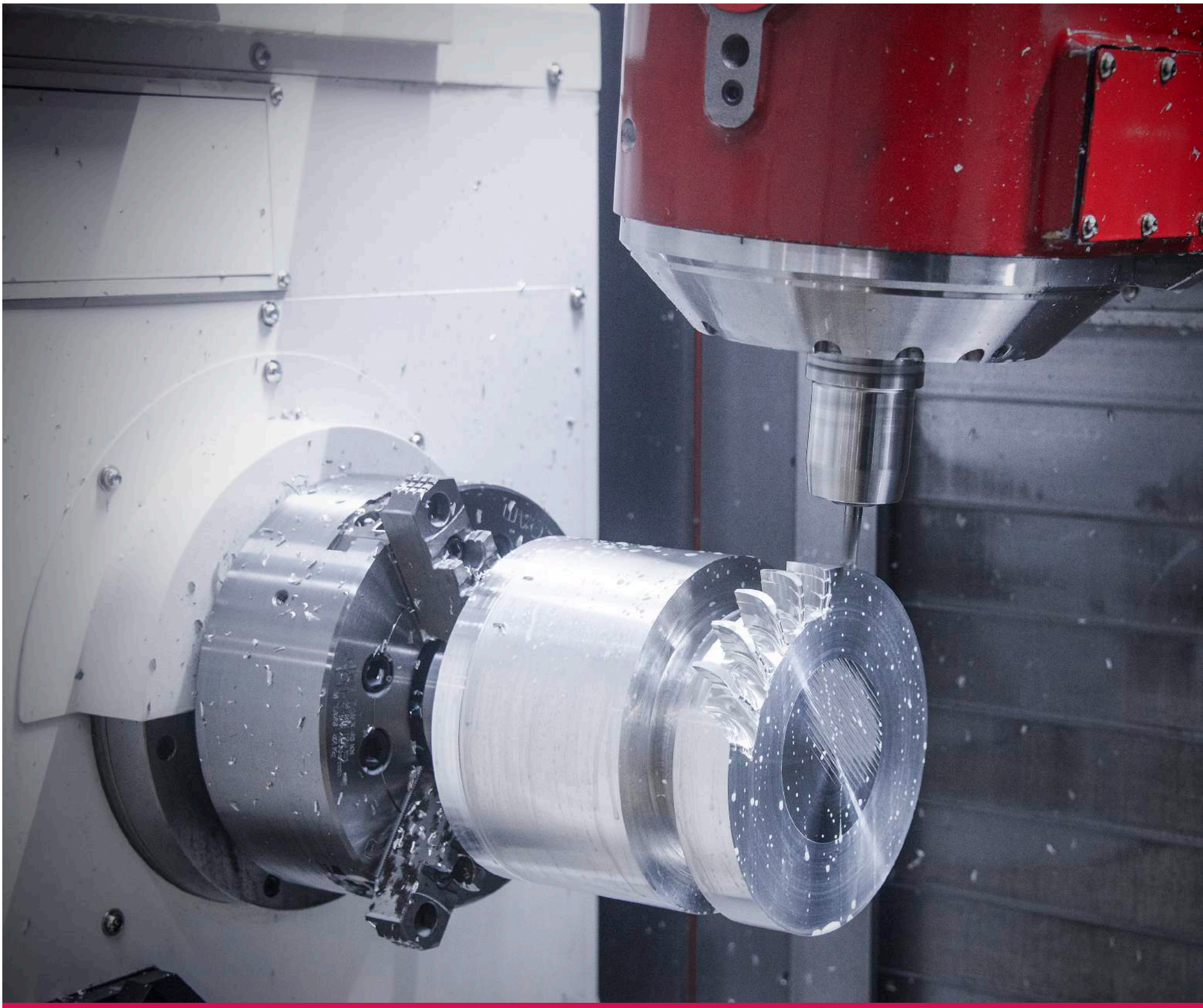
Position control on the Twin Arm ATC has been improved drastically. The twin arm ATC enables faster tool change and increased productivity.

- 40 Tool Magazine Motor : Servo Motor
- 30 Tool Magazine Motor : Geared Motor (Opt. Servo Motor)

⊙ **No. of Tools** : 30 [40] EA

⊙ **Tool Change Time** (C-C) : 3.2 sec

❖ KF6700 Built-in : 3.3 sec



KM2600MTTS

KM2600MTTS multitasking machine with 9-axis is designed to process high-tech industries such as medical and aerospace. Especially, perfect harmony of turning and milling mechanic enables to process any shape of products perfectly.

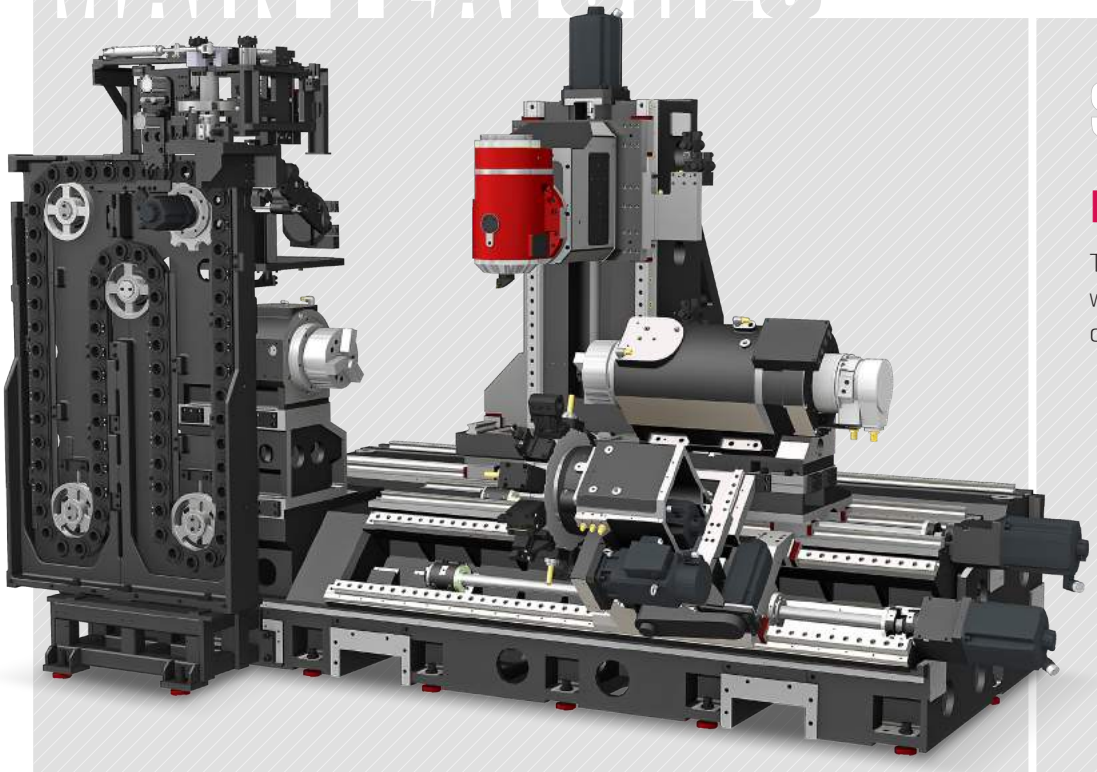
Specifications

Max. Turning Dia. (Mill/Turret)	mm(in)	B axis 140° : Ø750 (29.5″) / Ø390 (15.4″) B axis 90° : Ø630 (24.8″) / Ø390 (15.4″)
Max. Turning Length	mm(in)	1,550 (61″)
Chuck Size	inch	Main/Sub : 10″
Spindle Bore	mm(in)	Main/Sub : Ø91 (3.6″)
Spindle Speed	r/min	Main/Sub : 4,000
Spindle Power (Max)	kW(HP)	Main : 30 (40.2) / Sub : 26 (34.8)
Travel (X1/Z1/Y/X2/Z2/ZB)	mm(in)	750/1,595/250/250/1,500/1,586 (29.5″/62.8″/9.8″/9.8″/59″/62.4″)

[ ] : Option

Mill Head, Spindle and Lower Turret
9-Axis Multitasking Machine

MAIN FEATURES



Z-axis 3-way Stucture

Z-axis in a 3-way structure is applied to remove any interference in conveyance between 45° the tool station and 2nd spindle. Design in 45° slant ensures that cutting chips and cutting oil are discharged smoothly and both high strength and high precision can be maintained.

True Type Y-axis

The true type Y-axis ensures the excellent positioning precision with the simple preparation and correction of program, which enhances productivity.

- **Max. Turning Dia.** (Mill/Turret) :
  Ø750 (29.5″) (B 140°), Ø630 (24.8″) (B 90°)/390 mm (15.4″)
- **Max. Turing Length** : 1,550 mm (61″)
- **Rapid Traverse Rate** (X1/Z1/Y/X2/Z2/ZB) : 40/40/40/30/20/15 m/min (1,574/1,574/1,574/1,181/787/591 ipm)
- **Travel** (X1/Z1/Y/X2/Z2/ZB) : 705/1,595/250/250/1,500/1,586 mm (29.5″/62.8″/9.8″/9.8″/59″/62.4″)

ATC & MAGAZINE

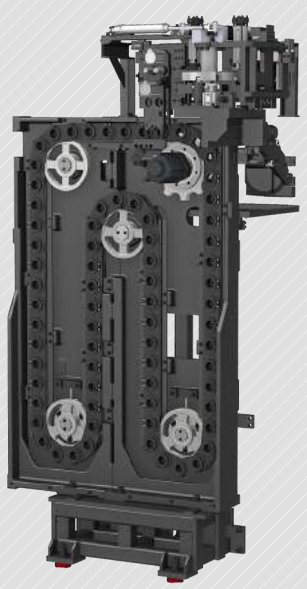
Magazine

The installation of magazine on the front provides the efficient tool exchange and tool setting. Magazine with chain driving method provides 36 tools as a standard, and 72 tools as an option.

ATC

ATC driven by a servo motor increases the positioning precision and control capability due to its tool exchange method in the cam index type.

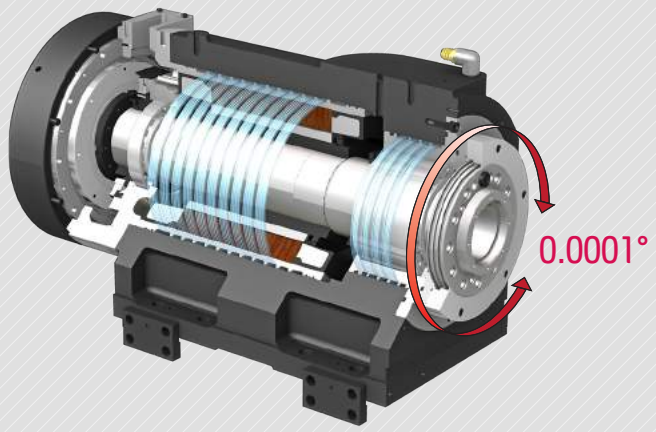
- **No. of Tools** : 36 [72] EA



SPINDLE & MILL HEAD

Built-In 10″ Main & Sub Spindle

The built-in main and sub spindle in high precision is designed in a structure where the spindle head is separated from the base to minimize thermal displacement during the machining.



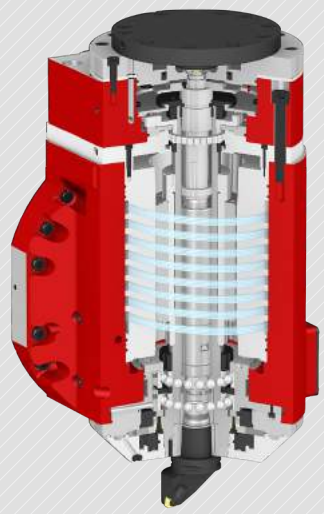
- **Spindle Speed** : 4,000 rpm
- **Bar Capacity** : Ø80 (3.1″)
- **Spindle Power**
  Main : 30 kW (40.2 HP) Sub : 26 kW (34.8 HP)

Mill Head

The mill head of KM2600MTTS, where the B-axis control can be done, is mounted with a high-resolution encoder having a Built-in motor and 0.0001° to secure high positioning precision. This shows the highest machining performance among the same class.

Tool Holder

CAPTO-C6, which allows double-sided circulation, is applied as a standard for maximum cutting capability.

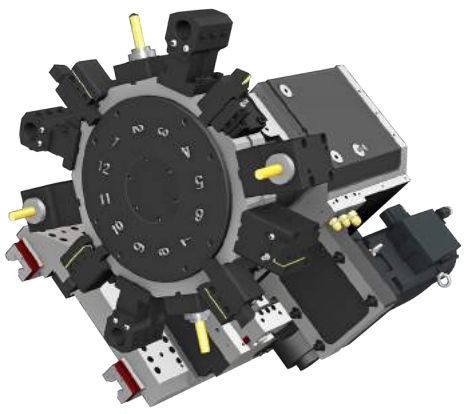


- **Speed** : 12,000 rpm
- **Power** : 26 kW (34.8 HP)
- **Driven Type** : Built-in
- **Indexing Angle** : 0.0001°

BMT Lower Turret

The lower turret adopts 2 servo motors in good performance to ensure high durability and precision.

- **Tool Size** (O.D/I.D)
  □ 25/Ø40 (□ 1″/Ø1.6″)



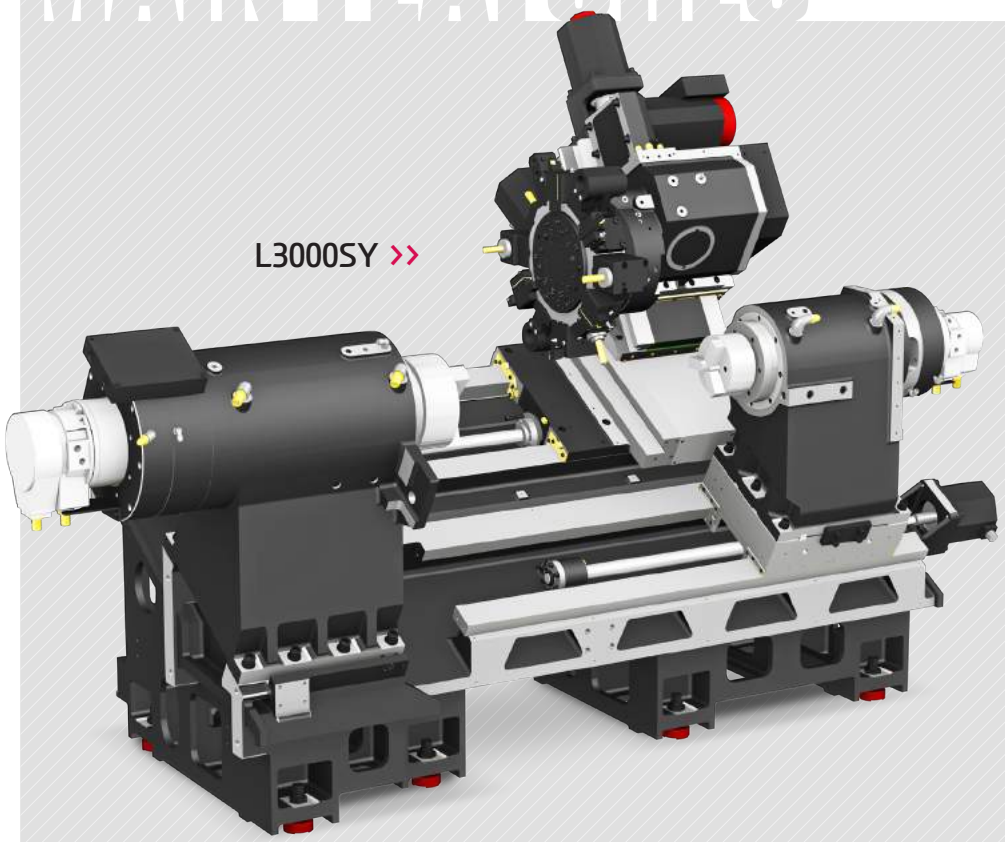
L3000LY

The CNC Turning Center L-SY Series, Y-axis function horizontal Turning Center is designed with BOX GUIDE in all axes for heavy-duty cutting. Built-in main and sub spindles help to process workpiece more precisely and wedge type Y-axis structure leads to the stable machining.

ITEM	Main Chuck			Sub Chuck	Max. Turning Length		
	8″	10″	12″	6″	520 mm (20.5″)	760 mm (29.9″)	1,280 mm (50.4″)
L2000Y	●				●		
L2000SY	●			●	●		
L2000LY	●					●	
L2000LSY	●			●		●	
L2600Y		●				●	
L2600SY		●		●		●	
L2600LY		●					●
L3000Y			●			●	
L3000SY			●	●		●	
L3000LY			●				●

Heavy-Duty Cutting
Y-Axis Cutting CNC Turning Center

MAIN FEATURES



30° Slant Type Bed

30° of slanted bed design is based on FEM analysis which provides improvement in vibration absorption and machining stability during heavy duty cutting.

Box Guideway

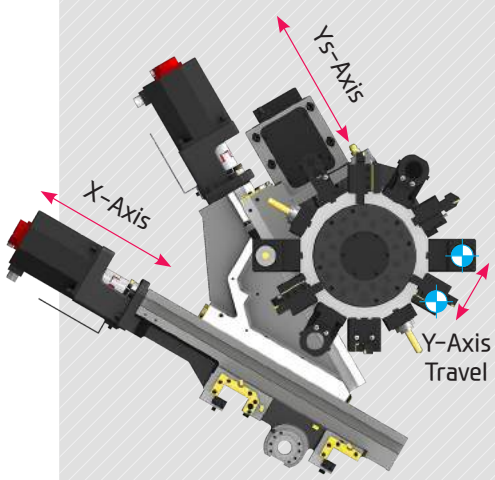
All axes of L-SY Series are designed with Box Guideways for better travel ability.
Box Guideways show great performance in offsetting vibrations caused by heavy duty cutting.

- **Rapid Traverse Rate** (X/Z/ZB)
  30/30/30 m/min (1,181/1,181/1,181 ipm)
- **Travel** (X/Z/ZB)

  L2000Y/SY
  265/590/590 mm (10.4″/23.2″/23.2″)

  L2000LY/LSY, L2600Y/SY, L3000Y/SY
  265/830/830 mm (10.4″/32.7″/32.7″)

  L2600LY, L3000LY
  265/1,350 mm (10.4″/53.1″)



Wedge Type Y-axis

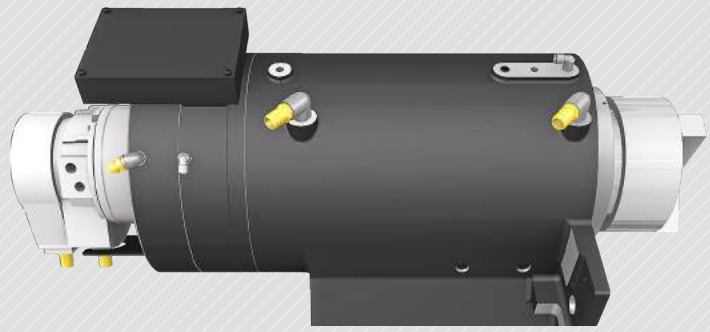
The L2000SY/2600SY/3000SY are designed with a wedge type Y-axis, which is transferred by the simultaneous operation of the Ys-axis and the X-axis. In addition, excellent rigidity makes possible to perform superb quality when machining a heavy-duty cutting.

- **Y-Axis Rapid Traverse Rate** :
  10 m/min (294 ipm)
- **Y-Axis Feed Travel** :
  120 {±60} mm (4.7″ {±2.4″})

SPINDLE

Built-In Main & Sub Spindle

Built-in type spindle reduces noise, heat and vibration effectively at high speed rates. Also, rapid acc./deceleration reduces non-cutting time leading to higher productivity.



Belt Type Main & Sub Spindle OPTION

Belt type main spindle has a wide torque range and it is designed to minimize thermal displacement. This enables accurate machining during high speed constant processing.

C-Axis Control

C-axis control of main and sub spindle allows machining of various products with the use of live tools on the Y-axis.

TURRET

Mill Turret (BMT65P)

The BMT turret secures the tool with four bolts and key on the tool mounting surface of the turret, making it possible to powerfully fix the tool, ensuring high reliability in rigidity and precision.

- **Speed** : 5,000 rpm
- **Output** (Max./Cont.) : 5.5/1.5 kW (7.4/2 HP)
- **Indexing Time** : 0.15 sec/step
- **Tool Size** (OD/ID) : □ 25/Ø50 (Ø1″/Ø1.9″)
- **Collet size** : Ø25 (Ø1″) {ER40}

HD2200SY / 2600Y

The CNC Turning Center HD-SY Series, horizontal turning center with Y-axis, is designed with BOX GUIDE in all axes for heavy-duty cutting. Built-in main and sub spindles help to process workpiece more precisely and wedge type Y-axis structure leads to the stable machining.

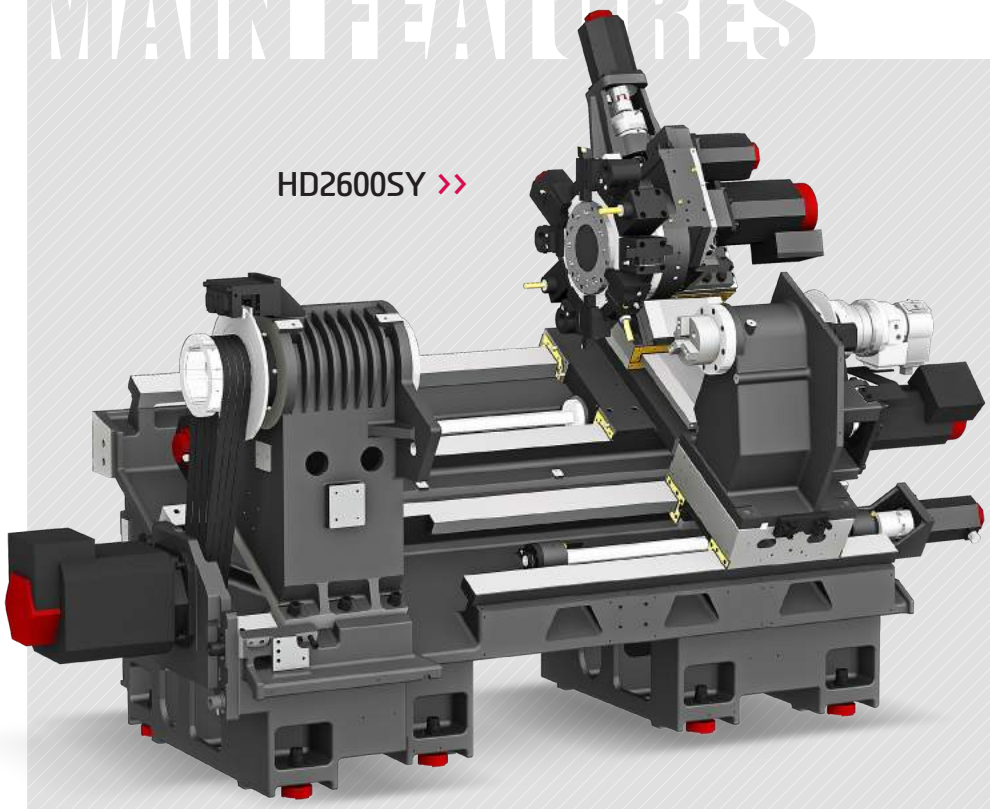
Specifications

ITEM		HD2200Y	HD2200SY	HD2600Y	HD2600SY
Max. Swing	mm(in)	Ø820 (32.3″)	Ø820 (32.3″)	Ø820 (32.3″)	Ø820 (32.3″)
Max. Turning Length	mm(in)	610 (24″)	610 (24″	610 (24″)	610 (24″)
Chuck Size	inch	8″	Main : 8″ Sub : 5″	10″	Main : 10″ Sub : 5″
Sp. Speed	r/min	4,000 [4,000]	Main : 4,000 [4,000] Sub : 6,000	3,500 [3,500]	Main : 3,500 [3,500] Sub : 6,000
Motor (Max.)	kW(HP)	18.5(25) [22.5(30)]	Main : 18.5(25) [22.5(30)] Sub : 5.5(7.5)	18.5(25) [41.8(56)]	Main : 18.5(25) [41.8(56)] Sub : 5.5(7.5)
Travel (X/Y/Z/ZB)	mm(in)	215/110/680 (8.5″/4.3″/26.8″)	215/110/680/680 (8.5″/4.3″/26.8″/26.8″)	215/110/680 (8.5″/4.3″/26.8″)	215/110/680/680 (8.5″/4.3″/26.8″/26.8″)
No. of Tools	EA	12	12 [24]	12	12 [24]
Controller	-	HW FANUC i Series [HYUNDAI-iTROL]			

[ ] : Option

Heavy-Duty Cutting
Y-Axis Cutting CNC Turning Center

MAIN FEATURES



Optimal Structural Analysis

Structural analysis was applied to the design of the machine to increase the tool post body and reduce the machine's height so as to maintain the bed's dynamic rigidity even during heavy-duty cutting.

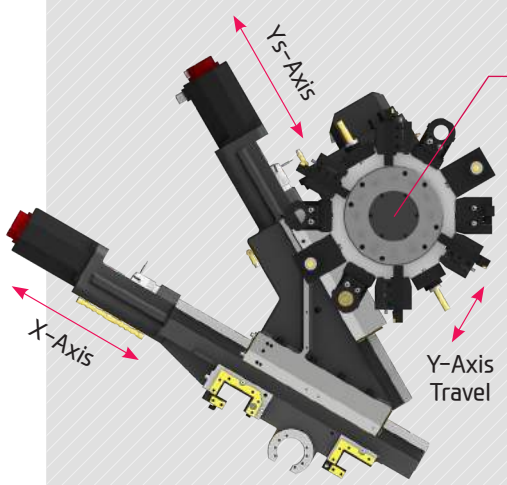
In addition, the HD-SY Series bed slope is pitched at 30 degrees to ensure more stable machining.

Box Guideway

All axes of HD-SY Series are designed with Box Guideways for better travel ability. Box Guideways show great performance in offsetting vibrations caused by heavy duty cutting.

Wedge Type Y-axis

The HD-SY Series is designed with a wedge type Y-axis that is transferred by the simultaneous operation of the Ys-axis and the X-axis. In addition, excellent rigidity makes possible to perform superb quality when machining a heavy-duty cutting.



Mill Turret (BMT55P)

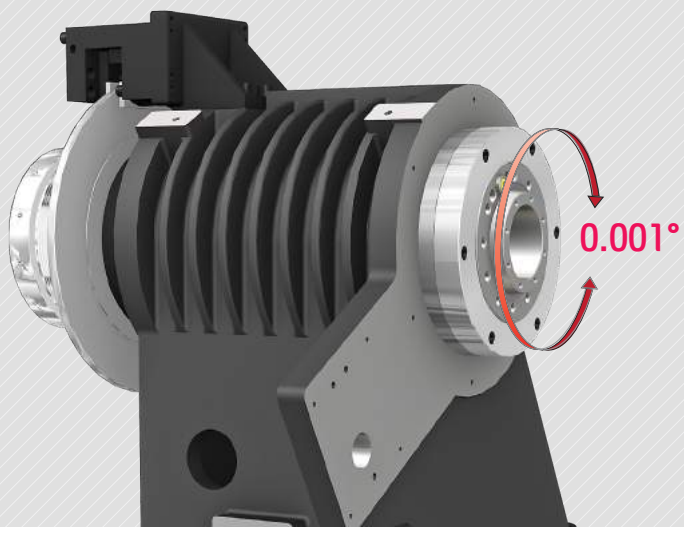
The BMT holder is firmly fixed with 4 screws keeping it in place during heavy operations, especially during milling, drilling, and tapping.

- **Speed** : 6,000 rpm
- **Output** (Max./Cont.)
  5.5/3.7 kW (7.5/5 HP)
- **Indexing Time** : 0.2 sec/step
- **Rapid Traverse Rate** (X/Y/Z/ZB)
  24/10/30/24 m/min (945/394/1,181/945 ipm)
- **Travel** (X/Y/Z/ZB)
  215/110/680/680 mm (8.5″/4.3″/26.8″/26.8″)

SPINDLE & TAIL STOCK

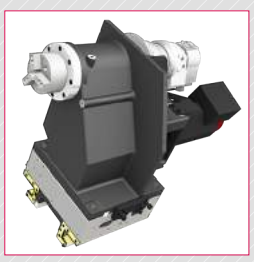
Spindle for Heavy Cutting

The main spindle is designed with the same structure as that often found in larger sized machines. The combination of double cylindrical roller bearings and angular contact ball bearings leads to excellent heavy duty cutting performance. Also, machining performance is enhanced by applying ribstar belt to minimize noise and belt slipping problems. The spindle is designed with a labyrinth structure to minimize possible bearing damage from coolant and to improve machining stability.



C-Axis Control

C-axis control of main and sub spindle allows machining of various products with the use of live tools on the Y-axis.



5″ Sub Spindle ('SY' Type)

The Belt-type sub spindle with 5″chuck is designed to minimize thermal displacement during the continuous machining, offering from the heavy-duty cutting to the high-speed machining.

- **Speed** : 6,000 rpm
- **Output** (Max./Cont.) : 5.5/3.7 kW (7.5/5 HP)
- **Torque** (Max./Cont.) : 46.6/23.5 N·m [33.4/17.3 lb.ft]

Tail Stock ('Y' Type)

The HD-SY series is fitted with tailstocks as a standard for excellent machining quality. In addition, the travel distance of quill can be as long as 120mm(4.7″), thus expanding the support area.

- **Quill Type** : MT#4
- **Quill Dia.** : Ø80 mm (Ø3.1″)
- **Quill Travel** : 120 mm (4.7″)
- **Travel** : 680 mm (26.8″)

LM1800TTSY

LM-TT Series demonstrates HYUNDAI-WIA's technological capability by machining any type of complex parts with twin spindles, twin turrets and additional Y-axis.

Specifications

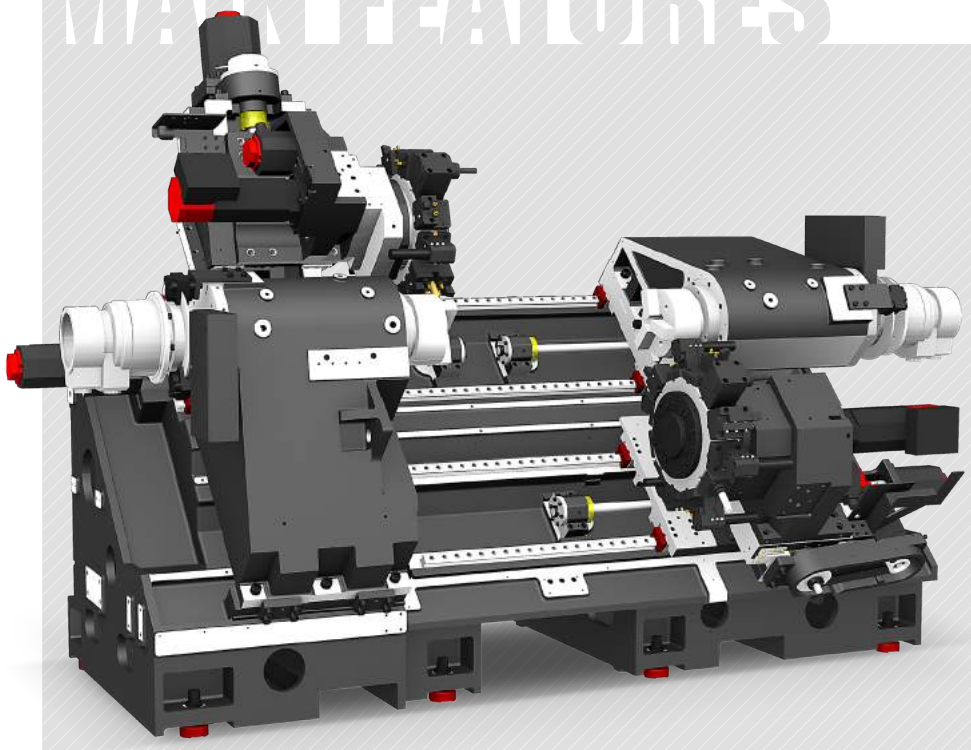
Max. Turning Dia.	mm(in)	Ø230 (9.1")
Max. Turning Length	mm(in)	673 (26.5")
Chuck Size	inch	Main/Sub : 8"
Spindle Bore	mm(in)	Main/Sub : Ø76 (3")
Spindle Speed	r/min	Main/Sub : 5,000
Spindle Power (Max./Cont.)	kW(HP)	Main/Sub : 22/11 (30/15)
Travel (X1/X2/Z1/Z2/Y/ZB)	mm(in)	165/195/700/720/100{±50}/668 (6.5"/7.7"/27.6"/28.3"/3.9"/26.3")

[ ] : Option

Twin Spindle and Twin Turret

Multitasking CNC Turning Center

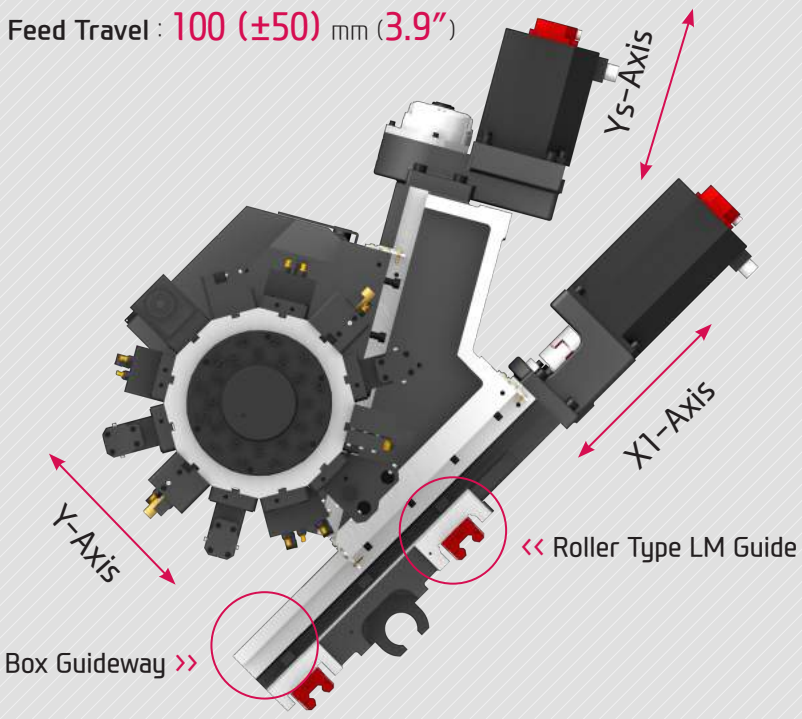
MAIN FEATURES



Y-Axis Structure

Y-axis structure with BMT55P turret enables a combination of metal removal operations, by one machine, in a single set-up. In addition, the wedge type Y-axis offers a compact, space-saving design with superior positional accuracy and is easy to program.

- **Y Axis Rapid Traverse Rate** : 7.5 m/min (295.3 ipm)
- **Y Axis Feed Travel** : 100 (±50) mm (3.9″)



Hybrid Slideway

An optimal combination of Linear Guideway for Z-axis, and Box Guideways for X-axis and Y-axis offers the best rigidity and productivity. The Z axis move quickly to reduce non-cutting time, while the box guideways of X-axis and Y-axis add rigidity for heavy-duty cutting.

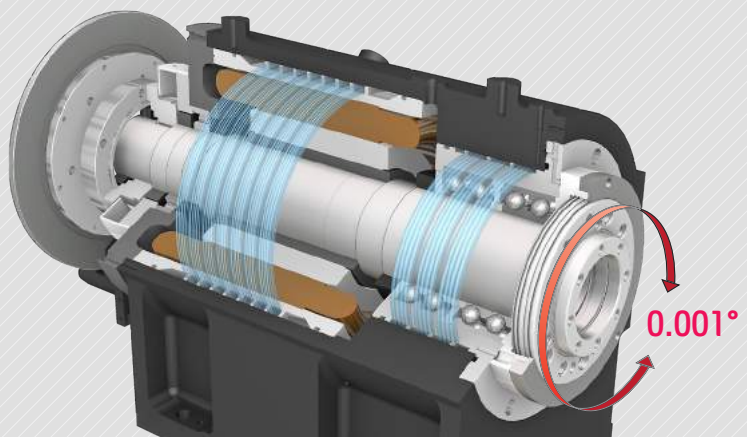
- **Rapid Traverse Rate** (X1/X2/Z1/Z2/ZB)
  20/20/40/40/40 m/min (787/787/1,575/1,575/1,575 ipm)
- **Travel** (X1/X2/Z1/Z2/ZB)
  165/195/700/720/668 mm (6.5″/7.7″/27.6″/28.3″/26.3″)

SPINDLE

Built-in Main & Sub Spindle

The LM1800TTSY features a built-in main spindle, which reduces noise and vibration even at high speeds or when taking heavy-duty cuts, improving precision and surface finish.

Also, sub-spindle's flexibility and productivity has been increased with the ability to perform secondary machine operations in a single set-up.



C-Axis Control

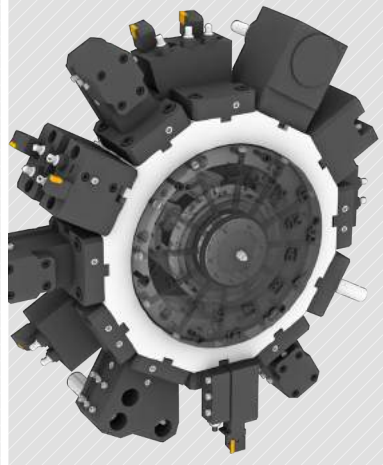
C-axis control of main and sub spindle allows machining of various products with the use of live tools on the Y-axis.

- **Speed** : 5,000 rpm
- **Power** (Max./Cont.) : 22/11 kW (30/15 HP)
- **Torque** (Max./Cont.) : 358/118 N.m (264/87 lb.ft)

TURRET

Mill Turret (BMT55P)

Twin 12-station BMT turrets (Opt. 24) anchored in upper and lower positions, for a total of 24 tools (Opt. 48), enable the LM1800TTSY multitasking machines to perform high accuracy milling operations in a single set-up. The BMT turret is driven by a high torque servo motor which can index in either direction .



- **Speed** : 5,000 rpm
- **Output** (Max./Cont.)
  5.5/1.1 kW (7.4/1.5 HP)
- **Tool Size** (OD/ID)
  □ 20/Ø32 (□ 0.8″/Ø1.3″)
- **Collet size**
  Ø16 (Ø0.6″) {ER25}
- **Indexing Time** : 0.15 sec/step

HS6300

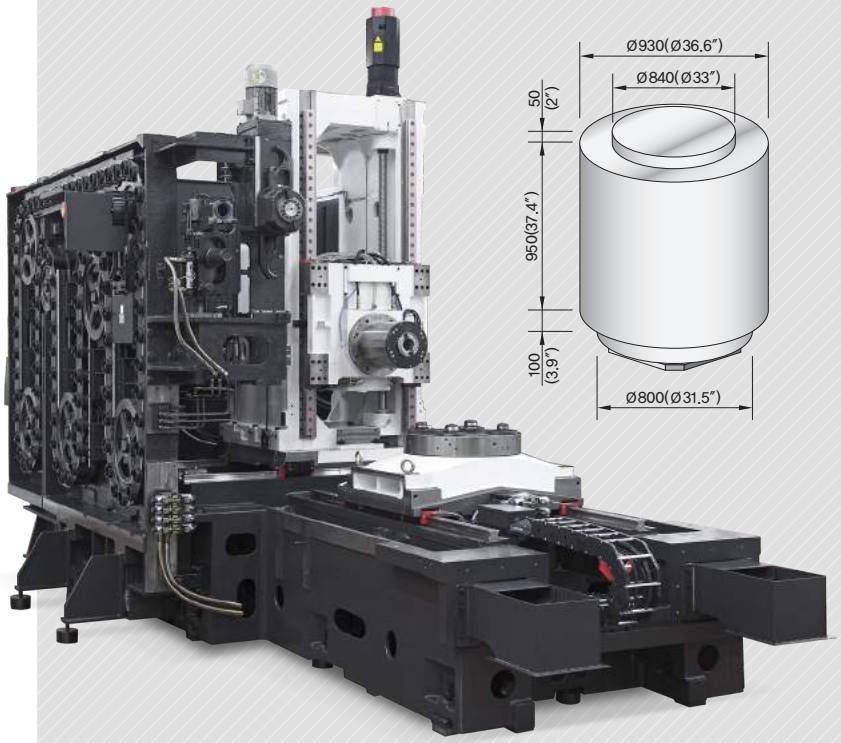
Horizontal Machining Center HS6300, designed by Hyundai WIA with years of expertise and the latest technology, provides high speed, high performance and maximum productivity.

Specifications

Pallet Size	mm(in)	2-630×630 (2-24.8″×24.8″)
Max. Load Capacity	kgf(lbf)	2-1,200 (2-2,646)
Spindle Taper	-	BIG PLUS #50 [HSK-A100]
Spindle Speed	r/min	8,000 [8,000] [12,000]
Spindle Power (Max.)	kW(HP)	22 (30) [26 (35)] [30 (40)]
Number of Tools	ea	40 [60, 90, 120]
Travel (X/Y/Z)	mm(in)	1,050/875/875 (41.3″/34.4″/34.4″)
Rapid Traverse Rate	m/min(ipm)	50/50/50 (1,969/1,969/1,969)

[ ] : Option

MAIN FEATURES



Optimal Structural Analysis

Through Hyundai WIA's unique structural analysis, these horizontal machining centers are optimally designed for increased rigidity while reducing heat displacement and machine vibration.

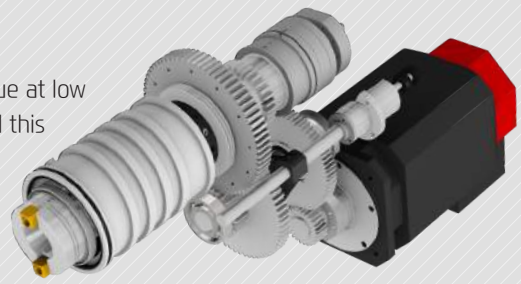
High-Speed Roller LM Guideway

HS6300 applies large linear roller guideways to reduce non-cutting time and bring high rigidity.

- **Rapid Traverse Rate** (X/Y/Z)
  50/50/50 m/min (1,969/1,969/1,969 ipm)
- **Travel** (X/Y/Z)
  1,050/875/875 mm (41.3"/34.4"/34.4")

HIGH-PRECISION SPINDLE

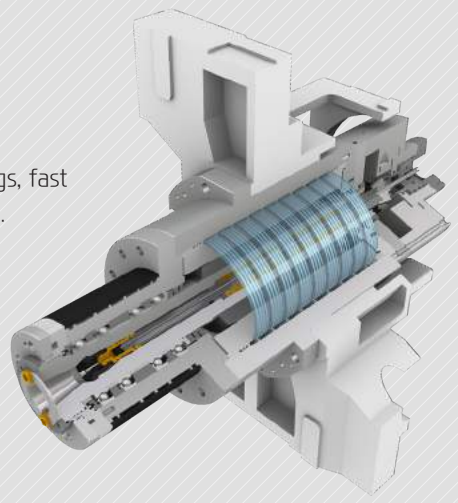
Gear Type Spindle



The gear type spindle provides powerful torque at low speeds and stable rotation at high speeds and this enables wide range of machining.
The spindle uses angular ball bearings and is designed to maximize rigidity.
Also, powerful tool clamping force improves cutting ability.

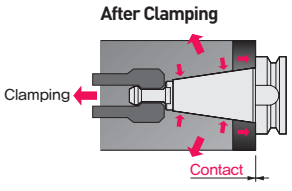
- **Spindle Speed** : 8,000 rpm
- **Spindle Power** (Max.) : 22 kW (30 HP)

Built-in Spindle OPTION



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.

- **Spindle Speed** : 12,000 rpm
- **Spindle Power** (Max.) : 30 kW (40 HP)



Dual Contact Spindle

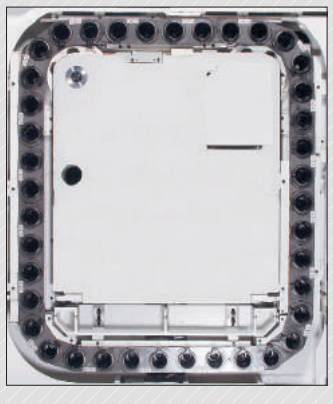
The Big Plus spindle system (BBT#50) provides dual contact between the spindle face and the flange face of the tool holder.

ATC & APC

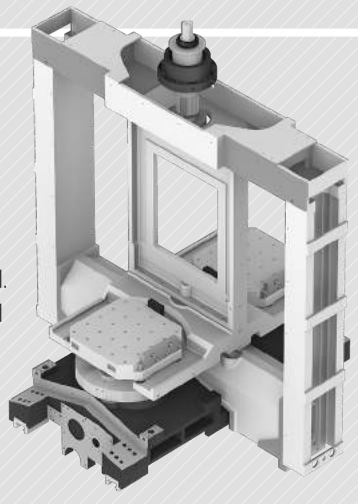
ATC & Magazine

The tool magazine holds 40 tools as standard and up to 120 tools as an option depending on the model. Servo control, fixed address tool selection method and a separate magazine control panel enhance user convenience.

- **No. of Tools** : 400 [60/90/120] EA



APC



HS6300 provides a rotary shuttle APC (automatic pallet changer) as a standard. The loading station pallet can be rotated and locked in 90° increments for convenient loading/unloading of workpieces.

Air Clearing System

During the pallet change cycle, strong air blasts from the taper cones on the machine table help remove chips and provide a clean surface for locating the pallet.

- **APC Type** : DIRECT TURN

NEW

HS6300+PLS

High Level of Automation System

PALLET LINE SYSTEM

Hyundai WIA's Pallet Line System

is a highly advanced automation system equipped with multi-level pallet racks.

Hyundai WIA PLS is an unmanned automation system for horizontal machining centers with two-storied pallet stackers to achieve a reasonable installation area.
Especially, it contributes to productivity improvement by easy and efficient system operation to flexibly respond to changes in production volume.

PALLEX

This PLS operation software is designed to support the efficient operation of unmanned automation systems.

- 1~7[10] HMC (Includes 1 Washer)
- 1~4 Loading Stations
- 12~72[81] Pallets (3 Levels)

PLS (Pallet Line System)

[ ] : Prior Consultation

Pallet Size	mm(in)	630×630 (24.8″×24.8″)
Load Capacity	kg(lb)	1,200 (2,646)
Max. Processing Dia	mm(in)	Ø1,050 (41.3″)
Max. Processing Height	mm(in)	1,350 (53.1″)
No. of Pallet	EA	12~72 [81]
No. of Loading Station	EA	1~4
No. of Machine Tools	EA	1~7 [10]

MATRIX ATC

Number of Tools	EA	195, 240, 300, 360
Driving Method (U/V-Axis)	-	Servo
Tool Selection Method	-	Fixed
Max. Tool Dia.	mm(in)	Ø75/Ø140 (3″/5.5″)
Max. Tool Length	mm(in)	450 (17.7)
Max. Tool Weight	kg(lb)	10 (22)

HS6300

Pallet Size	mm(in)	2-630×630 (2-24.8″×24.8″)
Load Capacity	kg(lb)	2-1,200 (2-2,646)
Spindle Taper	-	BIG PLUS #50 [HSK-A100]
Spindle speed	r/min	8,000 [8,000] [12,000]
Travel (X/Y/Z)	mm(in)	1,050/875/875 (41.3″/34.4″/34.4″)
Rapid Traverse Rate (X/Y/Z)	m/min (ipm)	50/50/50 (1,969/1,969/1,969)

HYUNDAI-iTROL+

Seamless Connectivity Toward Smarter Machining

It is available to maximize productivity through high efficiency, high precision machining, powerful networking function and eco-friendly software using HYUNDAI WIA's enhanced smart system.

HYUNDAI-iTROL+ HYUNDAI Intelligent Control

HYUNDAI-iTROL+ & SIEMENS Motor & Drive provide the best solution!

- **01** 19 inch Multi-touch Monitor
- **02** Convenience enhanced White Grip
- **03** Quick Function Bar
- **04** Keyboard/MCP Integrated Panel that enables 30° folding (Keypad LED Lighting)

HYUNDAI-iTROL+ Smart Function

Smart Factory

It is able to check machining list and its status using Regular Maintenance App. Also, you can improve the work by analyzing the problems occurred in the past.

- Check regular inspection and past work history
- Check Work Order/Machining Criteria/Shape of Object/Tool List before machining
- Check machining load, change of transfer speed, status of other equipment during operation

Smart Programming

This cloud-based programming automation system enables programming by inputting a 3D model, one-touch shape analysis, and NC program creation.

- Model file input / 3D modeling function (NX, STEP, IGES, DWG, DXF, etc.)
- One-touch automatic creation of 5-face part machining programs
- 3D simulated machining / forecasting of machining time

Smart Operation

Collision simulation based on a virtual machine can prevent collision caused by worker negligence in the manual mode.

- 3D machining monitoring through the virtual machine and machining function
- Collision prevention function in the manual operation mode
- Enhanced tool and workpiece setting for user convenience

Smart Machining

Tool monitoring (TM), machining speed adaptive control (AFC) features are equipped as default to improve convenience, and machining accuracy is improved by balance measurement of workpiece.

- Equipped with Tool Monitoring (TM) and machining speed adaptive control (AFC) features as default.
- Shifted load compensation feature through balance measurement of workpiece

Smart Diagnosis

Automatic recovery is available through 1 time click of ATC recovery button. It is able to use it to analyze machine's defective status through data collection function for electronic manual and equipment diagnose.

- Reinforced ATC Recovery Function
- Electronic manual is equipped for convenient search and accessibility
- Collect main data for equipment diagnose

Smart Network Service

Smart Network Services, that can monitor the operating status of machining tools in the factory, can perform documentations and CAC/CAM through remote access to user PC.

- Monitor the status of factory operation
- Remote access to other equipment and office PCs

HYUNDAI-iTROL SMART FACTORY

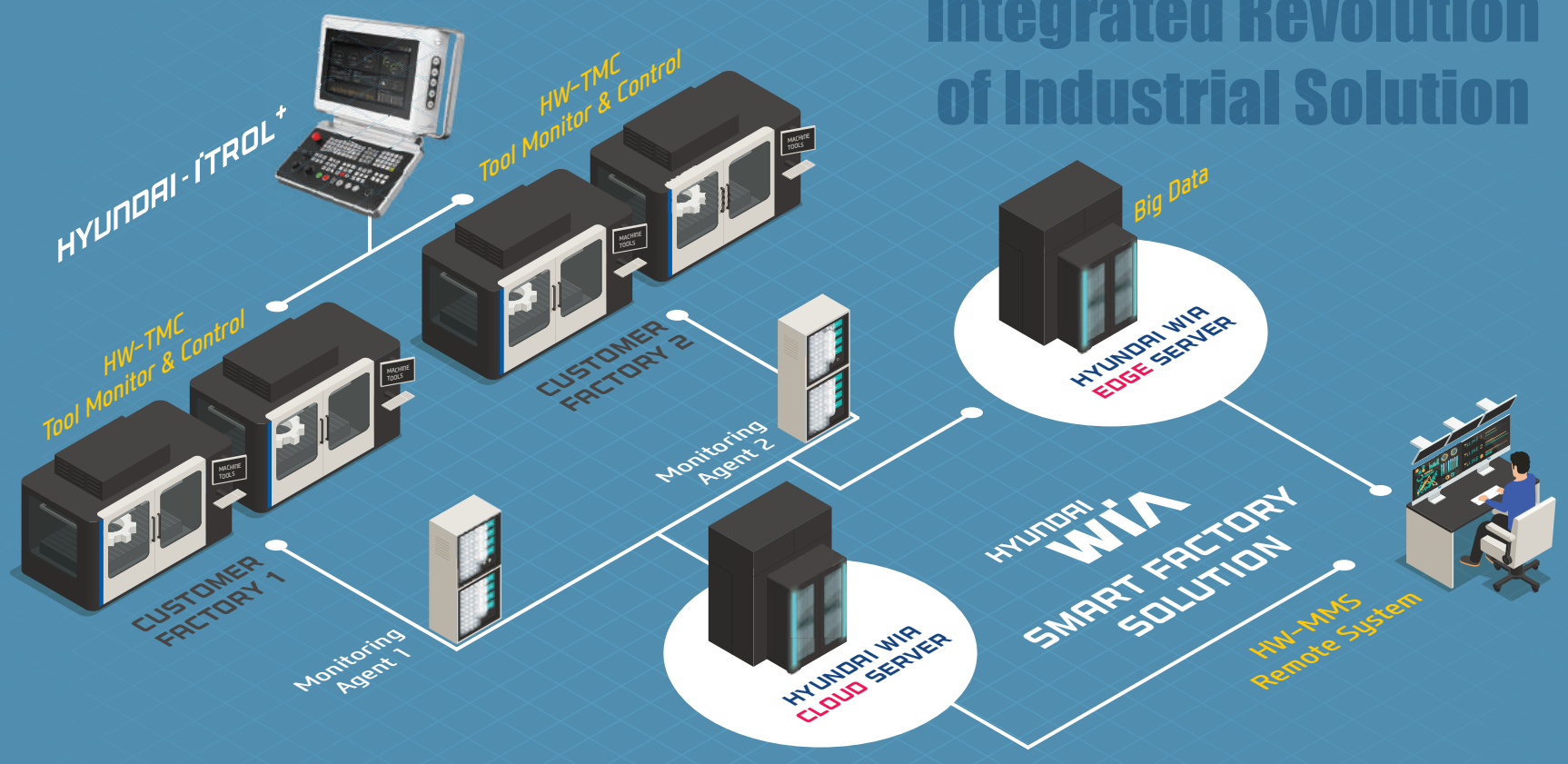
iRiS HYUNDAI WIA Smart Factory Solution

integrated Revolution of industrial Solution

iRiS is a unique smart factory solution developed by HYUNDAI WIA.

iRiS is a SMART MONITORING SYSTEM that integrates and manages equipment around the world and a SMART MACHINING SYSTEM that takes into consideration the convenience of the operator, quality, productivity and safety.

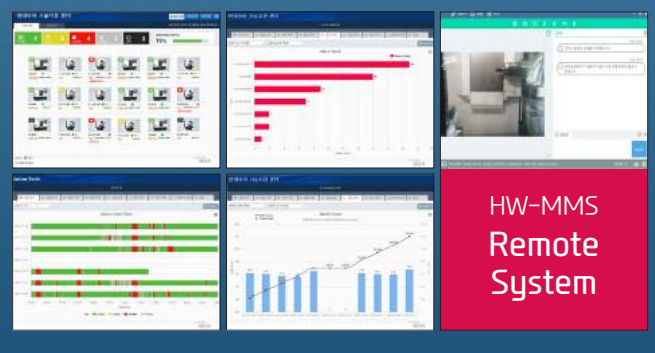
HYUNDAI WIA introduces the iRiS, innovative solutions for the era of smart factories.
iRiS includes HW-MMS, which integrates and manages equipment all over the world, CNC HYUNDAI-iTROL with intelligent apps of HYUNDAI WIA, HW-TMC, World-class high-performance monitoring solution, and these high-performance solutions provide seamless connectivity as if they were a single machine through HYUNDAI WIA's MMS EDGEBOX.



01 HW-MMS (HYUNDAI WIA-Machine Monitoring System)

HW-MMS, a machine monitoring system of HYUNDAI WIA iRiS, is a software that monitors the operation status of machine tools in the factory in real-time and informs the status of non-operation to workers immediately. It is essential software for smart factory that can improve productivity and efficiency.

01 Real-time monitoring of the machine's operation status
02 Work count info collection statistics
03 Tool lifespan info collection and statistics
04 Alarm notification by e-mail & SMS
05 Online diagnosis and control
06 Support for old machines and 3rd party models
07 MES, ERP data interface



02 HYUNDAI-iTROL+ (HYUNDAI Intelligent Control)

It is available to maximize productivity through high efficiency, high precision machining, powerful networking function and eco-friendly software using HYUNDAI WIA's enhanced smart system.

01 19 inch multi-touch monitor
02 Convenience enhanced white grip
03 Quick function bar
04 Keyboard/MCP integrated panel that enables 30° folding (Keypad LED lighting)


SMART Factory


SMART Programming


SMART Operation

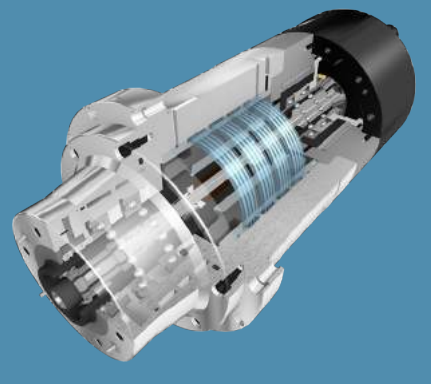

SMART Machining


SMART Diagnosis

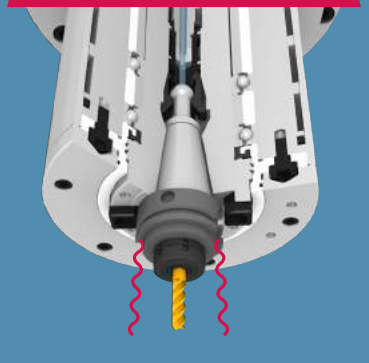

SMART Network Service

03 HW-TMC (HYUNDAI WIA-Tool Monitoring & Control)

HW-TMC is a new concept of integrated tool monitoring system that monitors the vibration generated by the tool and catches the abnormal state during machining in real time and optimizes machining through active control.



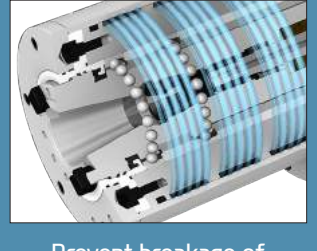
Tool Monitoring based on Sensor



World-class realtime breakage detection of small diameter tool

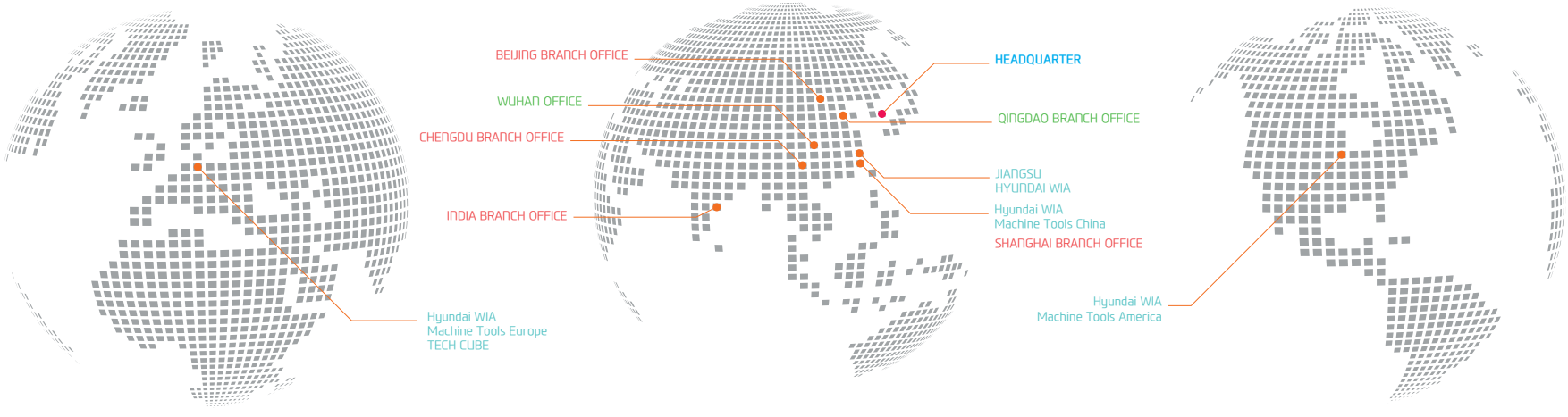

Optimization of feeding speed
<Improved Machining>


Detection of
tool abrasion & breakage


Prevent breakage of
spindle bearing

http://machine.hyundai-wia.com

OVERSEAS OFFICES



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