

GSF SERIES



VISION WIDE TECH CO., LTD.

No.43, 17th Industrial Rd., Taiping, Taichung 41154, Taiwan

Tel: 886-4-22712000

Fax: 886-4-22712009

E-mail: info@visionwide.com.tw

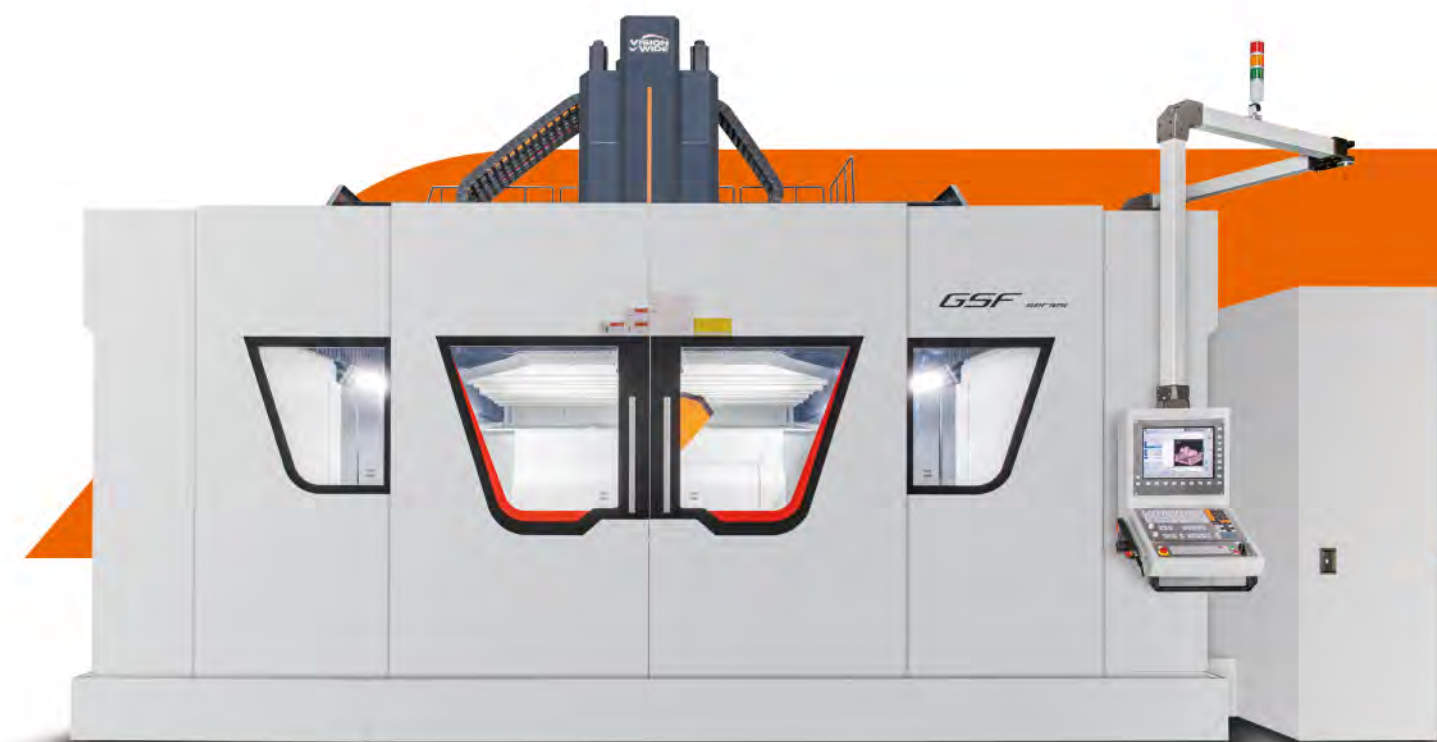
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GSF-E-202011

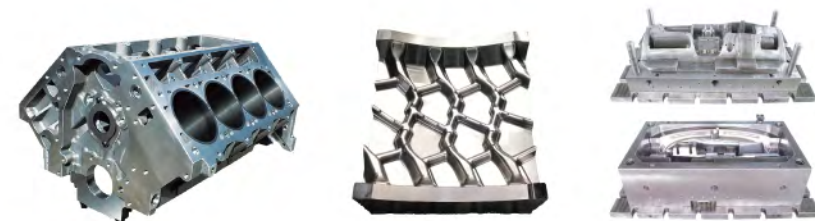
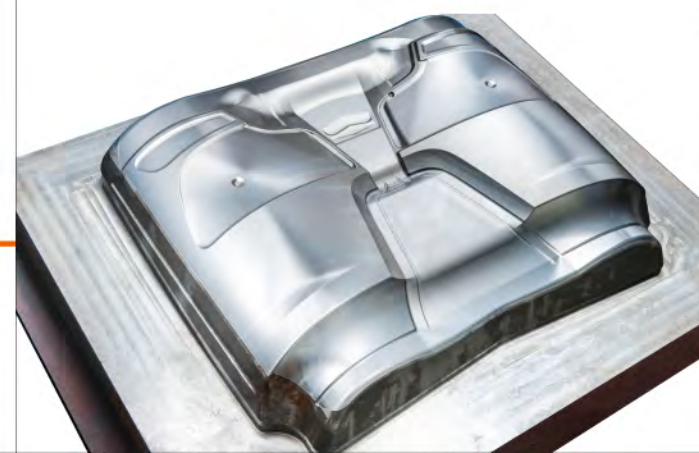
GSF SERIES

5-axis Gantry Type Machining Center



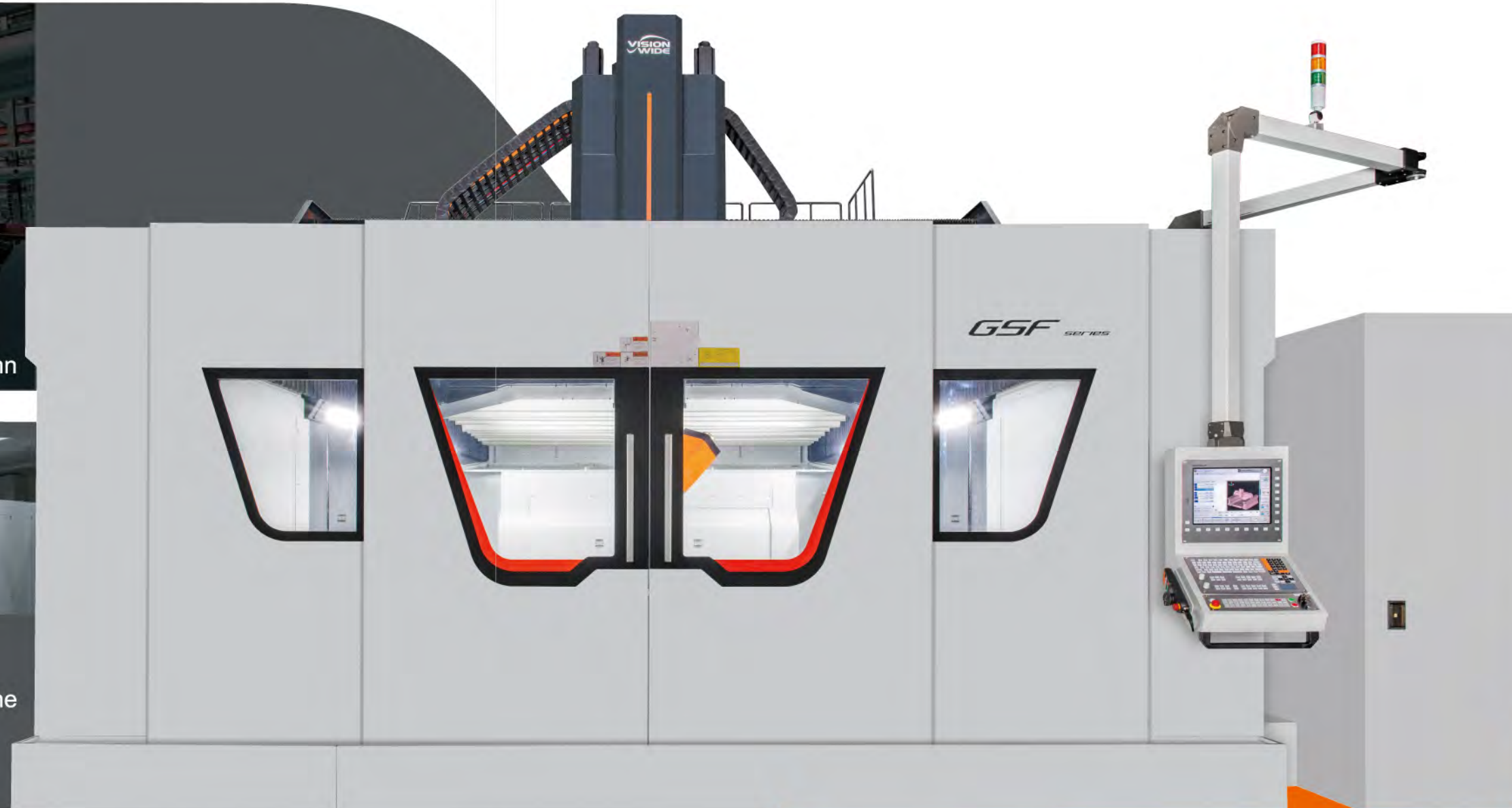


Cutting Application



Safe & Artistic Appearance

The design is coming from safety and convenience, combined with ergonomics and aesthetics, the minimalist design not only improves the maintenance convenience of the operator, but also more comprehensively improves the protection level.



Separate appearance of base and column

GSF-TC Series Rotary Table (OPT.)



GSF-TC Series ▶ 1 Machine / 4 Steps

Milling & Turning

Tools and
workpiece setting

Milling &
Turning

Completion

Single-function machining centers ▶ 3 Machines / 8 Steps

Milling &
Drilling &
Tapping

Tools and
workpiece
setting

Milling &
Drilling &
Tapping

+

Turning

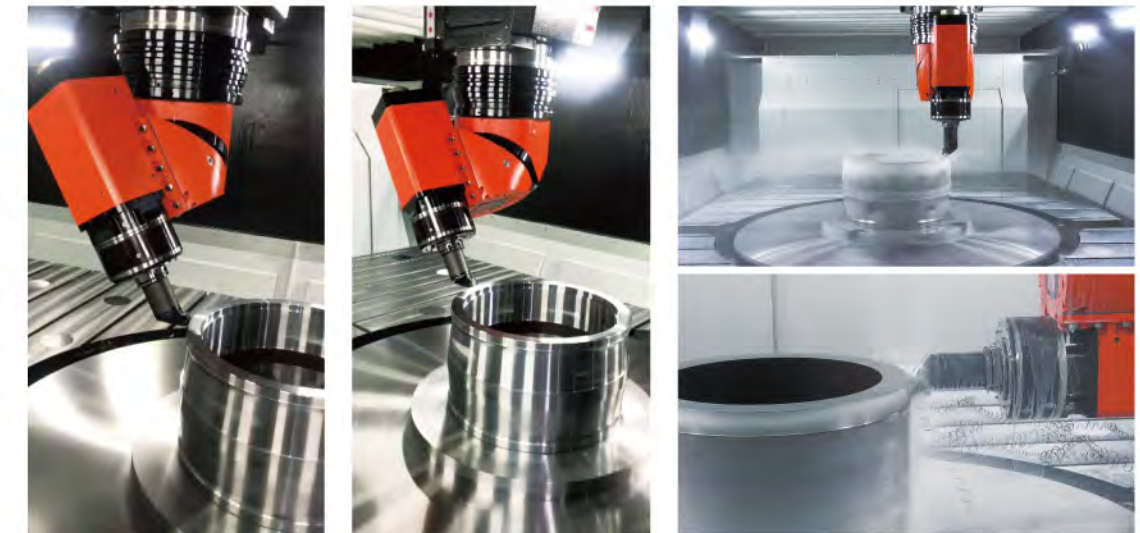
Tools and
workpiece
setting

Turning

+

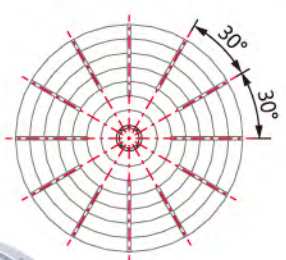
Finishing

Completion



High-Speed & High-Torque Rotary Table

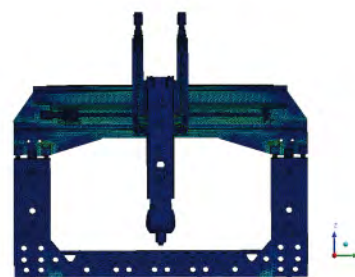
- Max. table load 5,000kg.
- Built-in I.D.D. motor drive.
- Linear scale rotation positioning.
- Min. indexing accuracy 0.001°
- High accuracy: positioning accuracy 10", repeatability accuracy 6".



GSF 1627/ 2227/ 2232 Series

Optimal Structural Rigidity Design

- One piece casting design of column, base & table, which possesses the optimum force flow.
- Spindle, ram, beam & base are constructed in Pyramid structure ratio.
- X / Y / Z axis adopts linear way transmission to provide more stable precision performance.
- X / Y axis ballscrew cooling device ensures the best feed accuracy.
- Largest worktable loading structure design 3 ton/m².

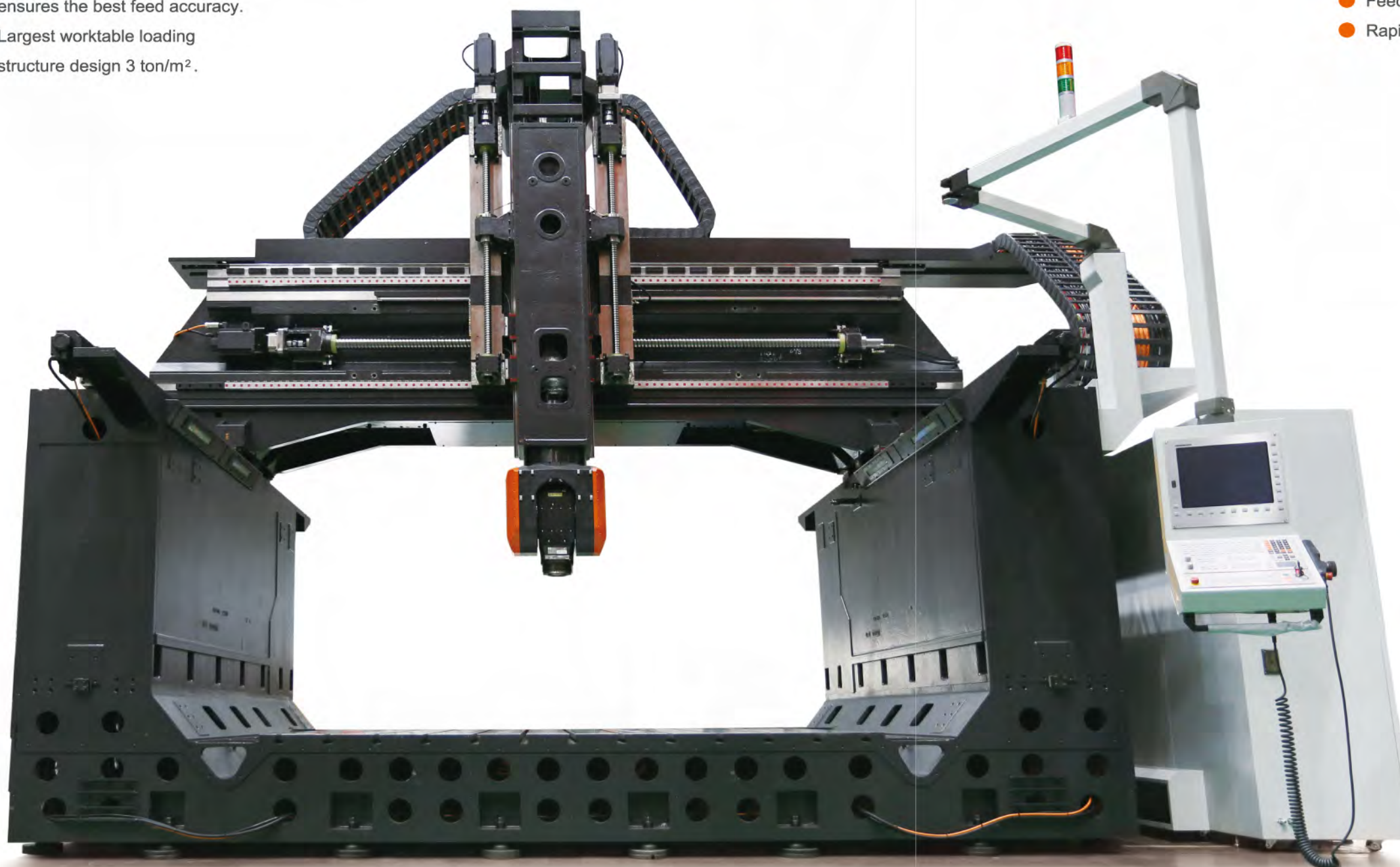


X / Y axis:

- Direct-driven transmission configures roller linear guide.
- Dual roller type linear way support provides the best dynamic stability.
- Enclosed linear scale provides the best positioning accuracy P0.01mm.
- Feedrate 20m/min.
- Rapid traverse 32m/min.

Ballscrew Cooling System

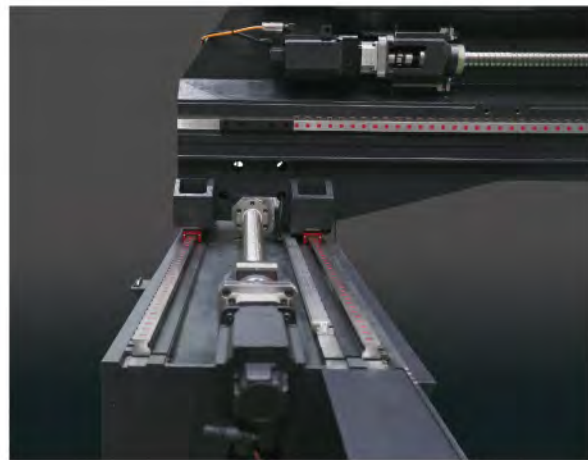
- X / Y axis transmission adopts linear way.
- X / Y axis ballscrew adopts hollow cooling design, to restrain the temperature rise and thermal deformation.
- Ensures the best feed accuracy and positioning accuracy.



High Structural Rigidity and Dynamic Milling Performance

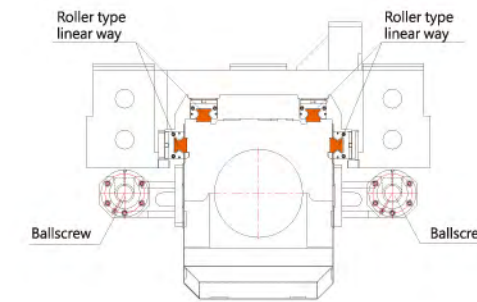
X / Y axis:

- Direct-driven transmission configures roller linear guide.
- Dual roller type linear way support provides the best dynamic stability.
- Enclosed linear scale provides the best positioning accuracy P0.01mm.
- X / Y axis ballscrew cooling device ensures the best feed accuracy.
- Feedrate 20m/min.
- Rapid traverse 32m/min.
- Special supportive device of X axis provides the best accuracy performance for each position.
- Floor standing work table is available for medium, large and ultra large work piece machining.
- Foot type of column design provides the optimum stability and vibration-proof capability.



Z axis:

- Transmission adopts dual servo motor and dual ballscrew.
- No counter weight design enhances response speed.
- Enclosed linear scale provides the optimum positioning accuracy.
- 4 roller linear guides are configured to provide the optimum rigidity and accuracy.
- Feedrate 20m/min.
- Rapid traverse 20m/min.



Machining Application

Aircraft Wing
Dimension : L800 x W600 x H60 mm
Material : Al6061



High speed
removal capability:

- D32 copy mill
- Depth: 10mm
- Width: 32mm
- Feedrate: 10m/min
- Removal rate: 3,200cc/min

5-axis simultaneous
machining:

- D20 end mill
- Inclined wall finishing
 - Depth 30mm
 - 5-axis simultaneous machining
- Rib Top finishing
 - End mill bottom finishing
 - Efficiency 5X

Landing Gear
Dimension : 1,100 x 1,850mm
Material: Titanium Alloy

High efficiency machining :

- D63 helical cutter, grooving roughing, Ap 30mm, Ae 20mm.
- D50 Toroidal cutter, face milling finishing, Ae 40mm.
- D25 end mill tool, 5-axis simultaneous finishing of the side wall
- Boring accuracy 0.02mm



Case
Dimension : D800 x H600 mm
Material : S45C



Milling & Turning Machining:

- Inner and outer wall/ CW and CCW turning application.
- Fixed-angle inner cavity turning machining, reducing tool length and interference area.

Powerful spindle, provides milling ability:

- D40 face mill
- D32 indexable driller
- D20 end mill

High precision machining:

- Surface accuracy: 0.01mm
- Hole positioning accuracy: 0.005°

Aerospace Alumina Frame
High Speed Machining
Dimension : 1,425 x 680 x 70mm
Material : Al6061



- 24 m/min feedrate
- 2.8 times tool diameter-cutting depth ratio (D/Ap)
- 2,000 cc/min high removal rate
- Cutting capacity: 100cc/kW (2 time capacity)
- D25 end mill
- Equal TEA tool path
- 10,500 rpm
- 24,000 mm/min rapid traverse

Aerospace Titanium Alloy Structure
Dimension : L1,800 x W1,500 x H160mm
Material : Titanium Alloy

- Rough/Finish machining on one machine
- One set up finish all machining
- Universal head complete bevel machining
- With fixing workpiece design



Headlight Mold
Dimension: L800 x W550 x H250mm
Material : P20 Die Steel



- 0.2G high acceleration mold finishing
- 45 degrees project zig-zag cutting
- High feed rough machining:
 - D25 mill
 - F10,000mm/min
 - 120cc/min
- High speed mold surface finish machining:
 - D10 R5 ball end tool
 - Spindle speed: 12,000rpm
 - F4,000mm/min
 - Ra0.8 μm high surface roughness
 - 0.04 mm high contour accuracy

Automobile Light Mold
Dimension : L360 x W151 x H360mm
Material: 2311Die Steel

- 0.2G high acceleration mold finishing
- Linear project cutting
- Multi inclined plane, oblique angle cutting
- 35% machining efficiency improved!
- High speed mold surface finishing:
 - D10 R5 ball end tool
 - Spindle speed: 15,000rpm
 - F6,000mm/min
 - 0.04 mm contour accuracy



Automobile Engine
Dimension: W600 x L800 x H440mm
Material : Casting Aluminum

- Piston diameter D85 x L136mm
- Positioning accuracy 0.015mm
- Boring accuracy 0.02mm
- Conicity accuracy 0.01mm



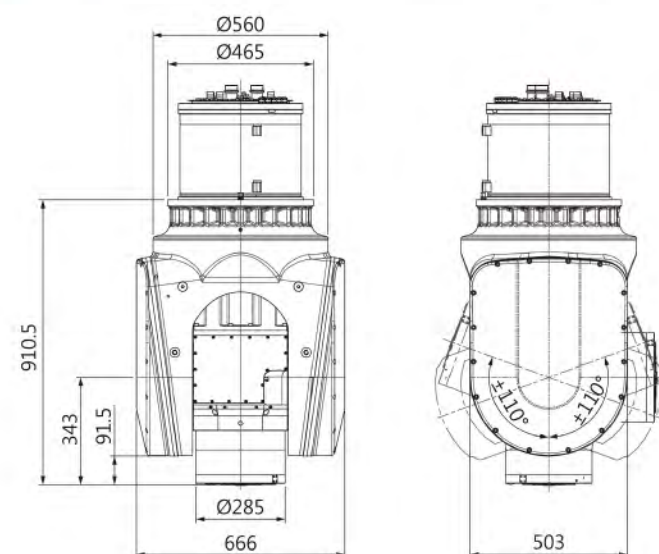
Bumper Mold
Dimension: L900 x W2300 x H930mm
Material: FC300



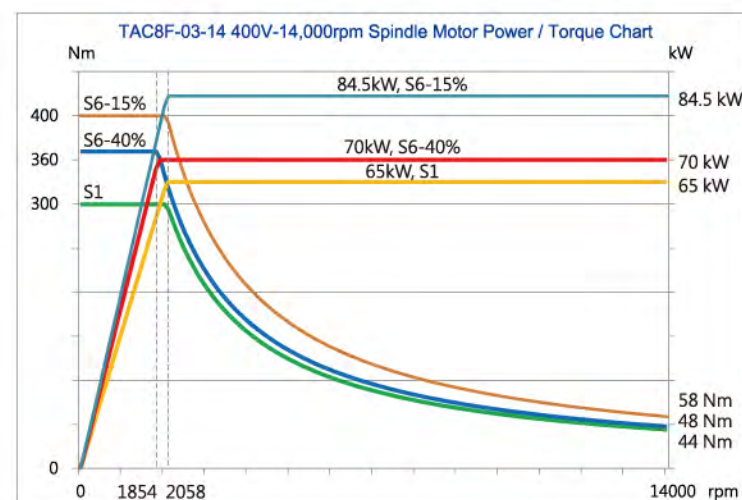
- 5-axis simultaneous machining, 30% machining efficiency improved!
- Long spindle nose is the benefit to enhance the tool rigidity and reduce the cutting vibration.
- Surface project zig-zag cutting
- D20 R10 ball end tool
- Pitch: 0.5mm
- Project zig-zag cutting
- Spindle speed: 12,000rpm
- Cutting feedrate: 5,000 mm/min

High-Torque Titanium Alloy Machining

- High torque spindle is adopted to enhance the machining efficiency.
- Built-in spindle configures direct-driven B/C axis.
- A long spindle nose design is adopted to decrease the interference area.
- B/C axis high rotary positioning accuracy $\pm 5''$
- B/C axis adopts double-fork design to provide the best rigidity.
- The hydraulic clamping of B/C axis is available for multi-angle machining.

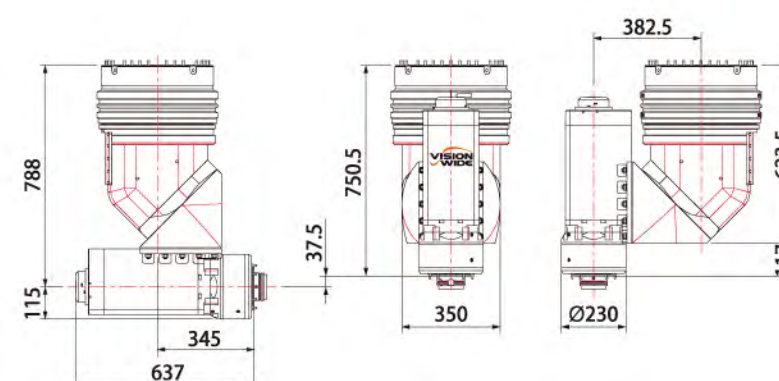


Spindle NO.	TAC8F-03-14	
Spindle Speed	rpm	14,000
Spindle Power(S1/S6/Max.)	kW	65 / 70 / 84.5
Spindle torque(S1/S6/Max.)	Nm	300 / 360 / 400
Spindle tool shank	-	HSK-A100
	B axis	C axis
Rotation range	°	$\pm 110^\circ$ $\pm 360^\circ$
Max. rotation speed	rpm	60 60
Positioning accuracy	sec	± 2.5 ± 2.5
Rapid torque	Nm	1,000 1,000
Max. torque	Nm	1,500 1,500
Clamping torque	Nm	6,000 6,000

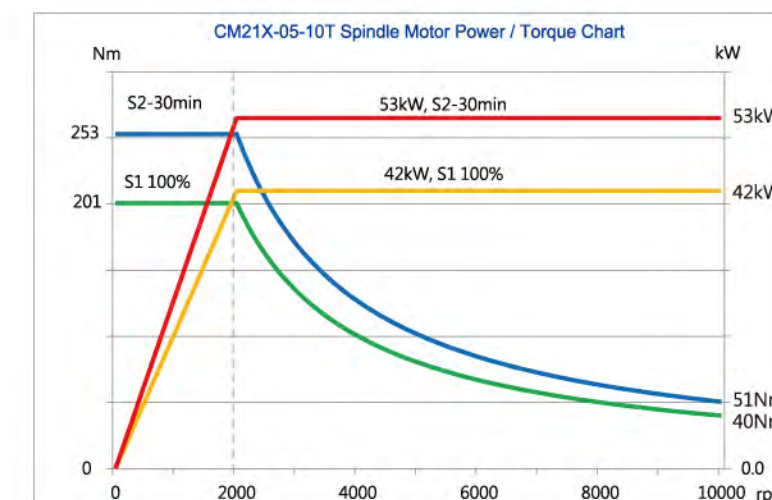


High-Torque Milling & Turning Machining

- B/C axis adopts built-in Torque Motor.
- High rotary acceleration.
- 45° inclination of rotation axis:
 - The shortest distance from spindle nose to table of B axis ensures the optimum rigidity.
 - The least interference between rotary head and work piece.
- Temperature rise protection of built-in motor.
- High resolution feedback system of B axis.



Spindle NO.	CM21X-05-10T	
Spindle Speed	rpm	10,000
Spindle Power(S1/S6)	kW	42 / 53
Spindle torque(S1/S6)	Nm	201 / 253
Spindle tool shank	-	HSK-T100
	B axis	C axis
Rotation range	°	$\pm 180^\circ$ $\pm 270^\circ$
Max. rotation speed	rpm	25 50
Positioning accuracy	sec	5 3
Repeatability accuracy	sec	3 2
Rapid torque	Nm	1,500 1,500
Max. torque	Nm	2,000 2,000
Clamping torque	Nm	6,000 6,000



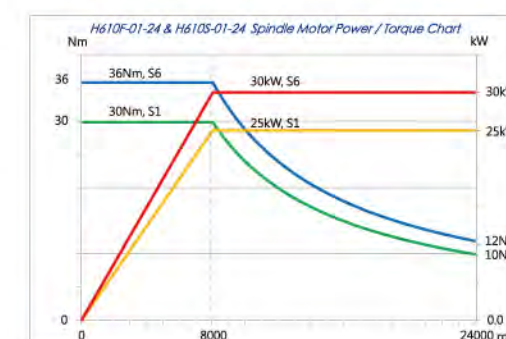
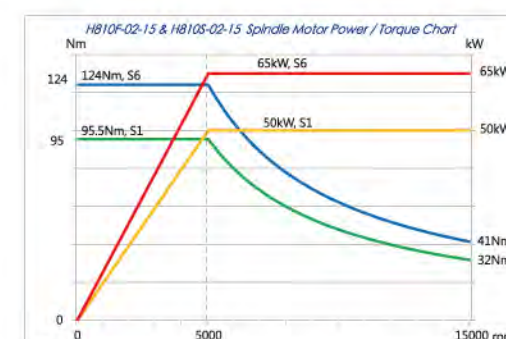
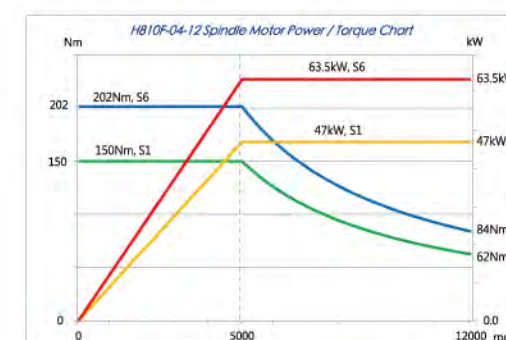
High-Speed & High-Precision Machining

- High speed spindle enhances the machining efficiency.
- Built-in spindle configures direct-driven B/C axis.
- Long spindle nose design is adopted to decrease the interference area.
- B/C axis high rotary positioning accuracy $\pm 5''$
- The hydraulic clamping of B/C axis is available for multi-angle machining.
- Single-fork design decreases the interference area.
- Double-fork design enhances the optimum rigidity.

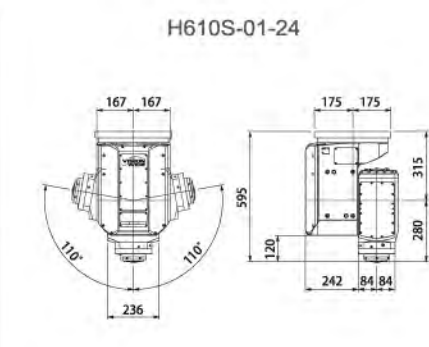
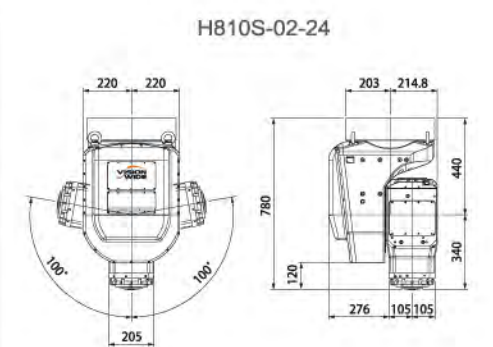
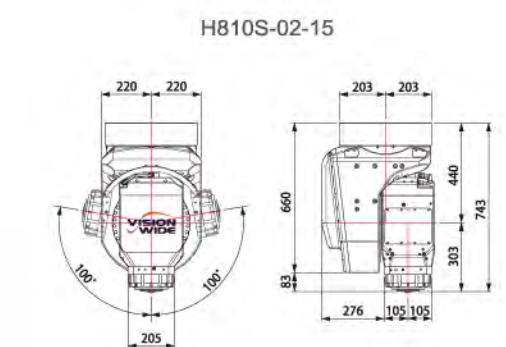
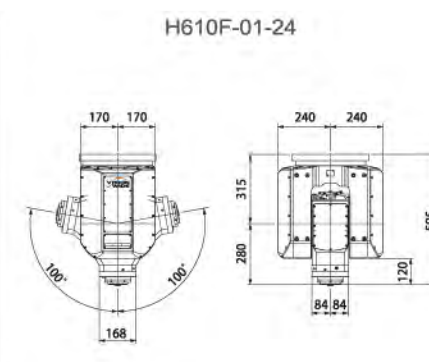
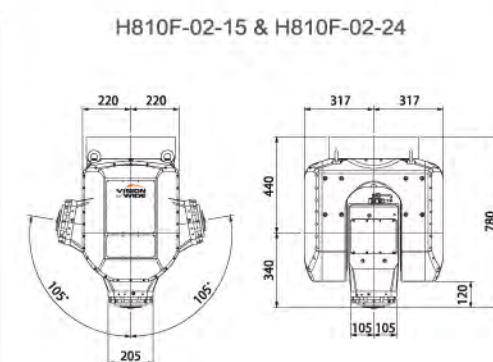
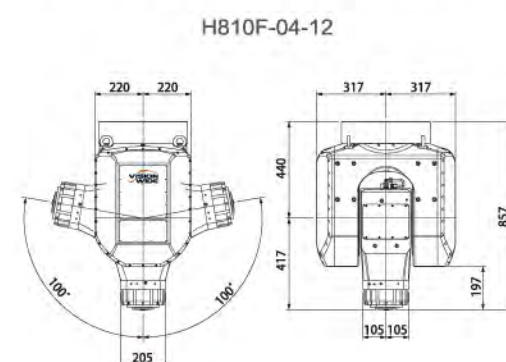


Spindle NO.		H810F-04-12		H810F-02-15		H810S-02-15		H810F-01-24		H810S-01-24		H610F-01-24		H610S-01-24	
Spindle Speed	rpm	12,000		15,000		15,000		24,000		24,000		24,000		24,000	
Spindle Power (S1/S6)	kW	47 / 63.5		50 / 65		50 / 65		42 / 55		42 / 55		25 / 30		25 / 30	
Spindle torque (S1/S6)	Nm	150 / 202		95.5 / 124		95.5 / 124		67 / 87.5		67 / 87.5		30 / 36		30 / 36	
Spindle tool shank	-	HSK-A100		HSK-A100		HSK-A100		HSK-A63		HSK-A63		HSK-A63		HSK-A63	
		B axis	C axis	B axis	C axis	B axis	C axis	B axis	C axis	B axis	C axis	B axis	C axis	B axis	C axis
Rotation range	°	± 100°	± 270°	± 105°	± 270°	± 100°	± 270°	± 105°	± 270°	± 100°	± 270°	± 100°	± 270°	± 110°	± 270°
Max. rotation speed	rpm	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Positioning accuracy	sec	8	8	8	8	8	8	8	8	8	8	5	4	10	8
Repeatability accuracy	sec	6	6	6	6	6	6	6	6	6	6	2	2.5	8	6
Rapid torque	Nm	622	539	782	688	391	688	622	622	311	539	230	330	230	330
Max. torque	Nm	1,414	1,250	1,414	1,250	707	1,250	1,414	1,414	707	1,250	480	680	480	680
Clamping torque	Nm	4,000	4,000	4,000	4,000	2,000	4,000	4,000	4,000	2,000	4,000	1,200	2,000	1,800	2,000
Propose															
Die & Mold		V		V		V									
Aluminum alloy				V		V		V		V		V		V	

Spindle Power and Torque Charts



Continuous 2-axis Head Dimension





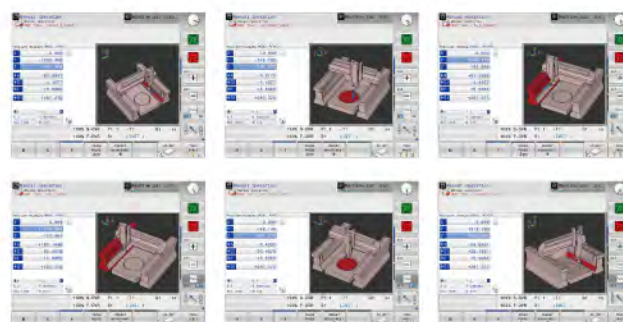
High Speed.
High Precision.
High Efficiency.

Intelligentization Control for Milling/Turning



Dynamic Collision Monitoring

- Auto program protection
- Minimize losses, maximize efficiency
- Manual/Auto mode are available



Coolant System



- Coolant ring nozzles



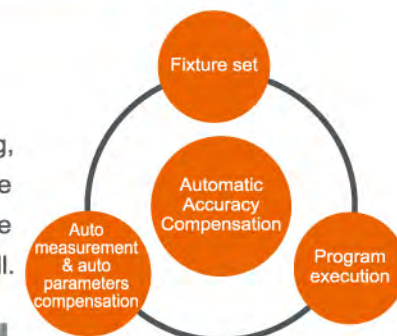
- CTS (Opt.)

Automatic Measurement & ATC



Automatic Accuracy Compensation

The "geometric error" is measured through the contact probe and the standard ball jig, the compensation control is performed according to the measurement result to reduce the measurement labors and errors of manual correction, the dynamic accuracy of the machine can be adjusted on time and the machining accuracy can be improved as well.

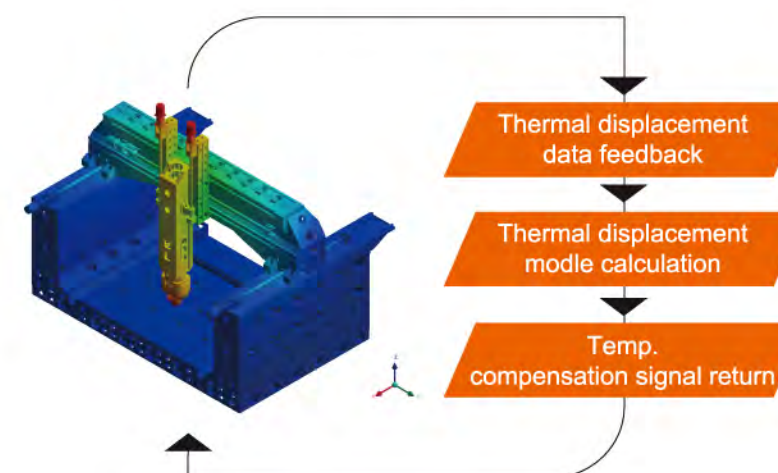


Automatic Temperature Compensation

ATC, Ambient Temperature Compensation

When the machining is processed under the non-fixed temperature environment and also the change of the thermal displacement of the machine structure, the accuracy of the machining products would be affected.

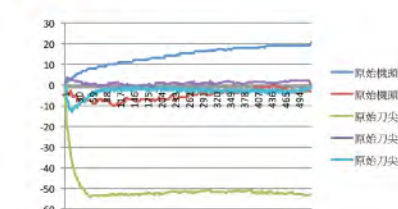
ATC is based on the thermal displacement phenomenon of the machine structure, through the temperature and feed position information returned by the sensor to calculate the thermal displacement value of the machine structure caused by the environmental temperature variation, and accurately control it.



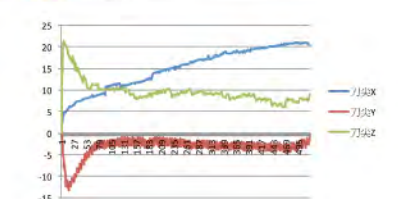
STC, Spindle Thermal Compensation

When the spindle is running at high speed, the heat arisen and result in the spindle thermal displacement, then affected the accuracy of the machining products. STC mainly focuses on the spindle temperature variation, the spindle temperature and position data would be turned through the sensor and the compensation can be controlled accordingly.

● Before



● After



Machine Dimension

Model	J	K	L	M	N	P
GSF-1627	4,520	3,750	3,550	7,300	6,900	8,600
GSF-2227	5,120				7,500	
GSF-3027	5,920				9,100	
GSF-4027	6,920				10,100	
GSF-5027	7,920				11,100	
GSF-6027	8,920				12,100	
GSF-2232	5,120	4,000	3,800	7,800	7,500	9,100
GSF-3032	5,920				9,100	
GSF-4032	6,920				10,100	
GSF-5032	7,920				11,100	
GSF-6032	8,920				12,100	

Unit:mm

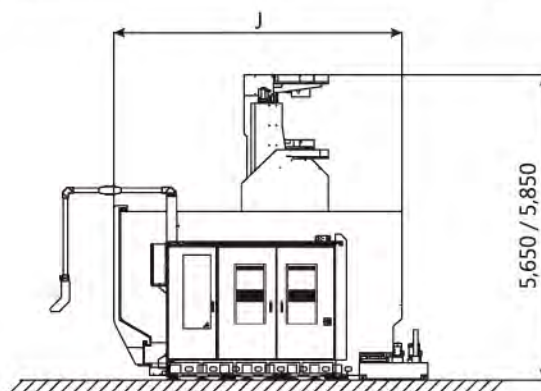
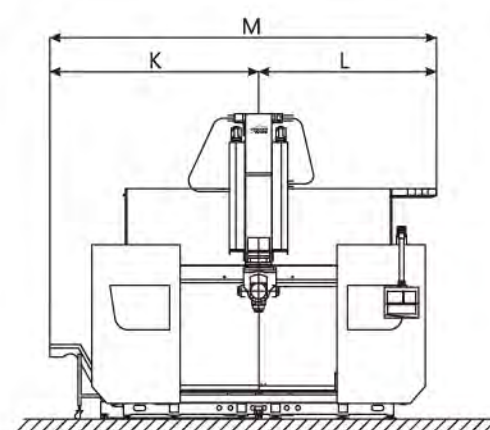
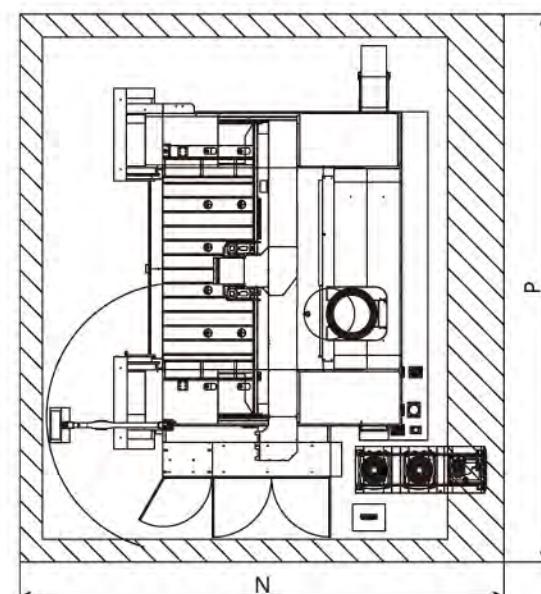
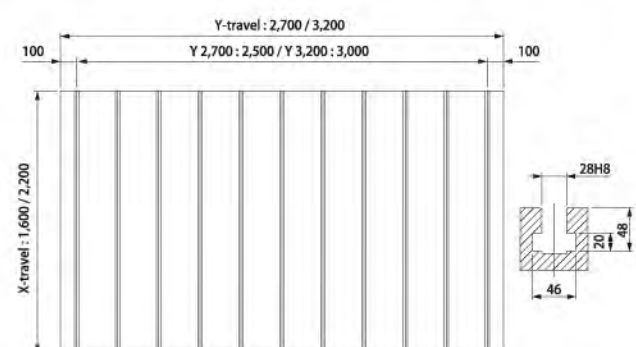
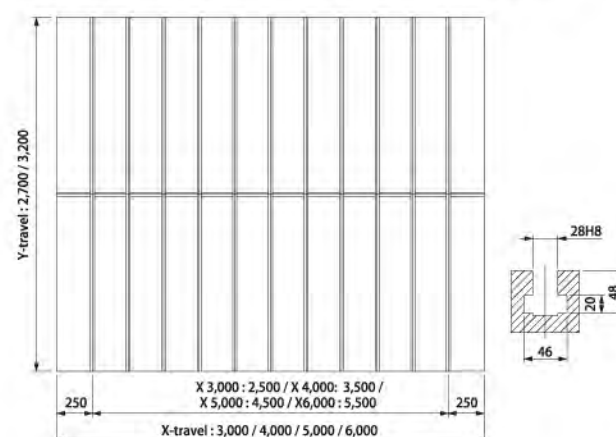


Table & T slot

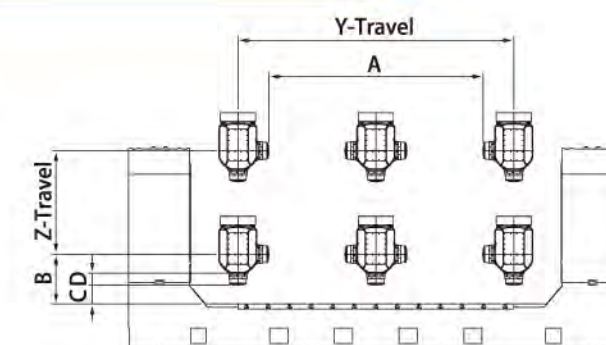
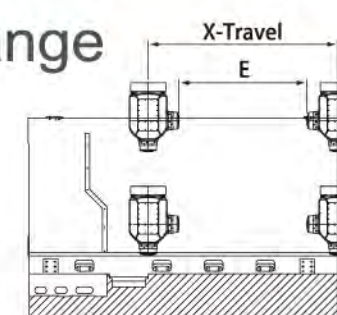
One piece structure of Base/Column/Table



Separate structure of Column/Table



Working Range



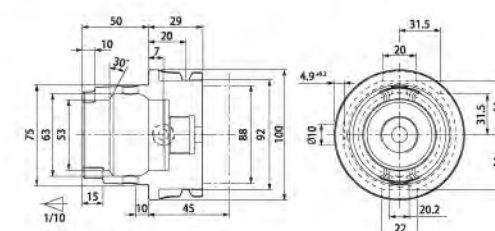
E	X axis travel					
Spindle NO.	1,600	2,200	3,000	4,000	5,000	6,000
TAC8F-03-14	914	1,514	2,314	3,314	4,314	5,314
CM21X-05-10T	-	-	2,310	3,310	4,310	5,310
H810F-04-12	766	1,366	2,166	3,166	4,166	5,166
H810F-02-15	920	1,520	2,320	3,320	4,320	5,320
H810S-02-15	994	1,594	2,394	3,394	4,394	5,394
H810F-01-24	920	1,520	2,320	3,320	4,320	5,320
H810S-01-24	920	1,520	2,320	3,320	4,320	5,320
H610F-01-24	1,040	1,640	2,440	3,440	4,440	5,440
H610S-01-24	1,040	1,640	2,440	3,440	4,440	5,440

Spindle NO.	Y axis travel	Z axis travel	A	B	C	D
TAC8F-03-14	2,700 3,200	1,000/12,00 1,000/12,00	2,014 2,514	453	110	915
CM21X-05-10T	2,700 3,200	1,000/12,00 1,000/12,00	2,010 2,510	162	200	117
H810F-04-12	2,700 3,200	1,000/12,00 1,000/1,200	1,866 2,366	578	160	197
H810F-02-15	2,700 3,200	1,000/1,200 1,000/1,200	2,020 2,520	578	240	120
H810S-02-15	2,700 3,200	1,000/1,200 1,000/1,200	2,090 2,590	578	275	83
H810F-01-24	2,700 3,200	1,000/1,200 1,000/1,200	2,020 2,520	578	240	120
H810S-01-24	2,700 3,200	1,000/1,200 1,000/1,200	2,020 2,520	578	240	120
H610F-01-24	2,700 3,200	1,000/1,200 1,000/1,200	2,140 2,640	503	225	120
H610S-01-24	2,700 3,200	1,000/1,200 1,000/1,200	2,140 2,640	503	225	120

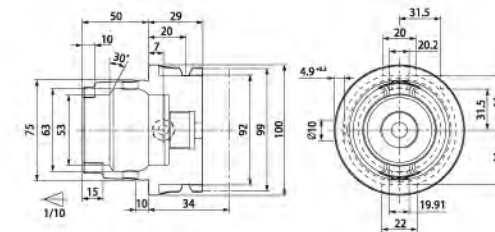
Unit:mm

Tool Shank & Pull Stud

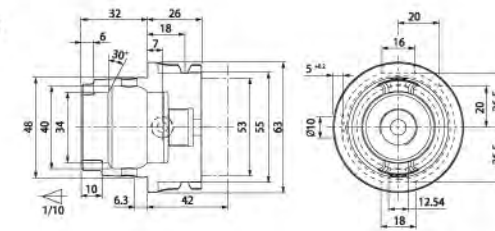
HSK-A100



HSK-T100



HSK-A63



GSF Specification | GSF-xx27

	MODEL		Unit	GSF-1627	GSF-2227	GSF-3027	GSF-4027	GSF-5027	GSF-6027
1	TRAVEL								
1-1	X axis		mm	1,600	2,200	3,000	4,000	5,000	6,000
1-2	Y axis		mm	2,700					
1-3	Z axis		mm	1,000 / 1,200					
1-4	Distance from spindle nose to table	TAC8F-03-14	mm	Z1,000: 110~1,110 / Z1,200: 110~1,310					
		CM21X-05-10T	mm	-		Z1,000: 200~1,200 / Z1,200: 200~1,400			
		H810F-04-12	mm	Z1,000: 160~1,160 / Z1,200: 160~1,360					
		H810F-02-15	mm	Z1,000: 240~1,240 / Z1,200: 240~1,440					
		H810S-02-15 STD	mm	Z1,000: 275~1,275 / Z1,200: 275~1,475					
		H810S-01-24	mm	Z1,000: 240~1,240 / Z1,200: 240~1,440					
		H810F-01-24	mm	Z1,000: 240~1,240 / Z1,200: 240~1,440					
		H610F-01-24	mm	Z1,000: 225~1,225 / Z1,200: 225~1,425					
				Z1,000: 225~1,225 / Z1,200: 225~1,425					
1-5	Distance between columns (port width)		mm	3,400					
2	TABLE								
2-1	Dimension		mm	1,600 x 2,700	2,200 x 2,700	3,000 x 2,700	4,000 x 2,700	5,000 x 2,700	6,000 x 2,700
2-2	T-slot(Width x Number x Pitch)		mm	28x11x250			28x15x250	28x19x250	28x23x250
2-3	Max. table load		kg/m ²	3,000					
3	SPINDLE								
	H810S-02-15								
3-1	Spindle motor(S1/S6)		kW	50 / 65					
3-2	Spindle speed		rpm	15,000					
3-3	Spindle taper		-	HSK-A100					
3-4	Spindle torque(S1/S6)		Nm	95.5 / 124					
4	FEED								
4-1	Cutting feedrate		mm/min	1-20,000					
4-2	Rapid traverse		m/min	XY:32 / Z:20					
5	ACCURACY								
5-1	Positioning accuracy(JIS-B6333)		mm	±0.005 / Full travel		±0.007 / Full travel			±0.008 / Full travel
5-2	Positioning accuracy(ISO 10791)		mm	P0.008			P0.010	P0.012	P0.015
5-3	Repeatability accuracy(JIS-B6333)		mm	±0.002					
5-4	Repeatability accuracy(ISO 10791)		mm	PS0.006				PS0.008	PS0.012
6	ATC								
6-1	Capacity		pcs	20 / 32 / 40 / 60					
6-2	Max. tool size-Full		mm	HSK-A63: Φ75 / HSK-A100: Φ125					
6-3	Max. tool size-Empty		mm	HSK-A63: Φ130 / HSK-A100: Φ250					
6-4	Max. tool length		mm	300					
6-5	Max. tool weighth		kg	HSK-A63: 8 / HSK-A100: 15					
7	OTHER								
7-1	Power requirement		kVA	130					
7-2	Pneumatic requirement		kg/m ²	6					
7-3	Machine net weight		kg	39,000	44,000	43,500	52,500	61,000	70,500
7-4	Machine gross weight		kg	43,500	48,500	48,000	57,500	66,500	76,500
7-5	Floor space (L x W x H)		m	6.9x8.6x5.5	7.5x8.6x5.5	9.1x8.6x5.5	10.1x8.6x5.5	11.1x8.6x5.5	12.1x8.6x5.5

Standard accessories and function

- HEIDENHAIN TNC640 controller
- HEIDENHAIN DCM (Dynamic Collision Monitoring)
- 15,000rpm HSK-A100 spindle
- 2-axis head central monitoring protection system
- Spindle bearing vibration monitoring
- Spindle and motor temperature monitoring
- B/C-axis motor temperature monitoring
- Spindle cutting load software protection
- Spindle cooler system
- Spindle ring cutting coolant device

- Air blast through spindle
- 2-axis head rotary compensation system
- Z-axis travel 1,000 mm
- X/Z axis are driven by dual ballscrew and Y axis is driven by single ballscrew.
- X/Y axis ballscrew cooling system
- X/Y/Z axis high rigidity roller type linear guideway
- X axis ballscrew support device (axis 4m above)
- X axis dual linear scale, Y/Z-axis linear scale
- Spindle and structure temperature thermal compensation system

- XYZ-axis travel hard limits protection
- Centerized auto lubrication system
- Independent lubrication oil collector for 3-axis
- Wash gun & pneumatic interface
- Vertical type tool magazine 20T
- Swiveling arm type operation panel
- Movable manual pulse generator
- Air conditioner for electrical cabinet
- Working lamp
- Operation cycle finish and alarm light
- RJ45 interface
- Enclosed sheet metal guard without roof

GSF Specification | GSF-xx32

MODEL		Unit	GSF-2232	GSF-3032	GSF-4032	GSF-5032	GSF-6032		
1	TRAVEL								
1-1	X axis		mm	2,200	3,000	4,000	5,000	6,000	
1-2	Y axis		mm	3,200					
1-3	Z axis		mm	1,000 / 1,200					
1-4	Distance from spindle nose to table	TAC8F-03-14	mm	Z1,000: 110~1,110 / Z1,200: 110~1,310					
		CM21X-05-10T	mm	-	Z1,000: 200~1,200 / Z1,200: 200~1,400				
		H810F-04-12	mm	Z1,000: 160~1,160 / Z1,200: 160~1,360					
		H810F-02-15	mm	Z1,000: 240~1,240 / Z1,200: 240~1,440					
		H810S-02-15 STD	mm	Z1,000: 275~1,275 / Z1,200: 275~1,475					
		H810S-01-24	mm	Z1,000: 240~1,240 / Z1,200: 240~1,440					
		H810F-01-24	mm	Z1,000: 240~1,240 / Z1,200: 240~1,440					
		H610F-01-24	mm	Z1,000: 225~1,225 / Z1,200: 225~1,425					
	H610S-01-24	mm	Z1,000: 225~1,225 / Z1,200: 225~1,425						
1-5	Distance between columns (port width)		mm	3,900					
2	TABLE								
2-1	Dimension		mm	2,200 x 3,200	3,000 x 3,200	4,000 x 3,200	5,000 x 3,200	6,000 x 3,200	
2-2	T-slot(Width x Number x Pitch)		mm	28x13x250	28x11x250	28x15x250	28x19x250	28x23x250	
2-3	Max. table load		kg/m ²	3,000					
3	SPINDLE								
			H810S-02-15						
3-1	Spindle motor(S1/S6)		kW	50 / 65					
3-2	Spindle speed		rpm	15,000					
3-3	Spindle taper		-	HSK-A100					
3-4	Spindle torque(S1/S6)		Nm	95.5 / 124					
4	FEED								
4-1	Cutting feedrate		mm/min	1-20,000					
4-2	Rapid traverse		m/min	XY:32 / Z:20					
5	ACCURACY								
5-1	Positioning accuracy(JIS-B6333)		mm	±0.005 / Full travel	±0.007 / Full travel			±0.008 / Full travel	
5-2	Positioning accuracy(ISO 10791)		mm	P0.008		P0.010	P0.012	P0.015	
5-3	Repeatability accuracy(JIS-B6333)		mm	±0.002					
5-4	Repeatability accuracy(ISO 10791)		mm	PS0.006			PS0.008	PS0.012	
6	ATC								
6-1	Capacity		pcs	20 / 32 / 40 / 60					
6-2	Max. tool size-Full		mm	HSK-A63: Φ75 / HSK-A100: Φ125					
6-3	Max. tool size-Empty		mm	HSK-A63: Φ130 / HSK-A100: Φ250					
6-4	Max. tool length		mm	300					
6-5	Max. tool weight		kg	HSK-A63: 8 / HSK-A100: 15					
7	OTHER								
7-1	Power requirement		kVA	130					
7-2	Pneumatic requirement		kg/m ²	6					
7-3	Machine net weight		kg	46,000	45,500	55,000	64,000	73,500	
7-4	Machine gross weight		kg	50,500	50,000	60,000	69,500	79,500	
7-5	Floor space (L x W x H)		m	7.5x9.1x5.5	9.1x9.1x5.5	10.1x9.1x5.5	11.1x9.1x5.5	12.1x9.1x5.5	

- Screw type chip conveyor on table sides
- Caterpillar type chip conveyor / Water tank
- Cutting fluid cooling system
- Footswitch for tool clamping/unclamping
- Remote monitoring software-standard(CNC Talkbox)
- Auto power off function
- Z-axis retract function at power failure
- Foundation pads and bolts kits
- Adjustment tool and tool kits
- Technical manuals (operation, maintenance manual and circuit diagram)

Option accessories and function

- 24,000 rpm HSK-A63 spindle
- 12,000 / 14,000 HSK-A100 spindle
- 10,000 HSK-T100 spindle
- Z-axis travel 1,200 mm
- Vertical type tool magazine 32/40/60T
- Coolant through spindle system:20 bar / 60 bar
- Oil mist cooling device
- Oil skimmer
- Helical blade screw conveyor on table sides
- Dual belt type chip conveyor / Water tank
- without chip auger / without chip conveyor / without tank
- Foot pad above chip groove

- Foot pad above chip groove
- Chip cart
- Enclosed sheet metal guard with roof
- Sub working table
- XYZ-axis independent manual pulse generator
- Remote monitoring software-professional(CNC Talkbox)
- Auto tool length measurement
- Auto workpiece measurement
- Automatic correction software of rotary axis error
- Spindle vibration protection device
- Transformer
- Oil mist recycle device
- Intelligent feed machining function