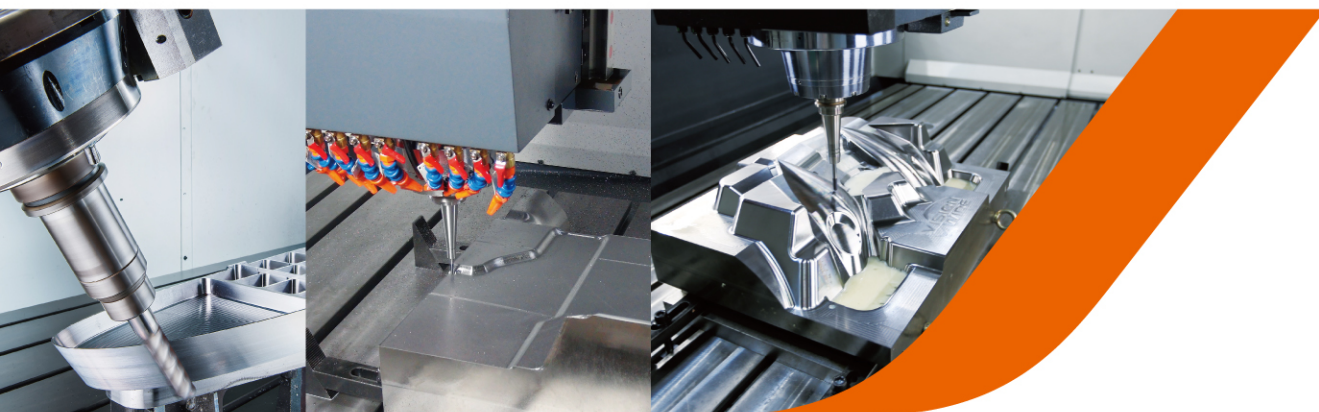


GS / GSA SERIES



VISION WIDE TECH CO., LTD.

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GS/GSA-E-202301

GS / GSA SERIES

3-axis / 3+2 axes Gantry Type Machining Center



GS series is Particularly Design for Precision Mold and Aluminum Cutting Industries to Meet Strict Requirements

The performance of High Speed Machining (HSM)

- ▶ 0.5G acceleration
- ▶ 28,000 rpm
- ▶ 20 m/min feed rate (OPT. 30m/min)
- ▶ Powerful spindle

High speed and mess chip removal capacity.

- ▶ Precise contour accuracy
- ▶ High cutting feed rate
- ▶ Delicate surface roughness

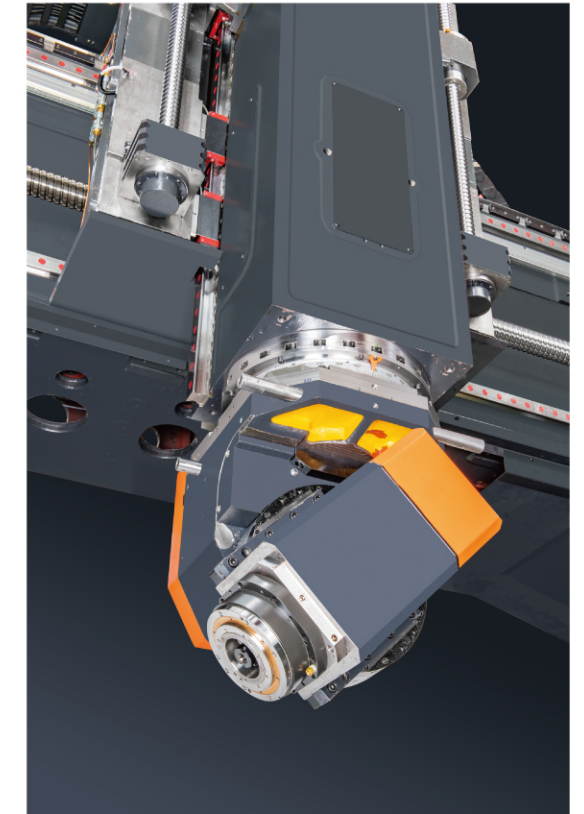
Positioning accuracy P 0.006mm

Repeatability Ps 0.004mm

Aluminum alloy chips removal rate 5,000 cc/min

GS 3-axis series
GSA 3+2 axes series

Indexing Head (IAC)
Gantry Type Machining Center



Precise mechanism & multiple spindle create the varied machining applications !

The Optimized Performance is from the Best Arrangement between Rigidity and Structure.

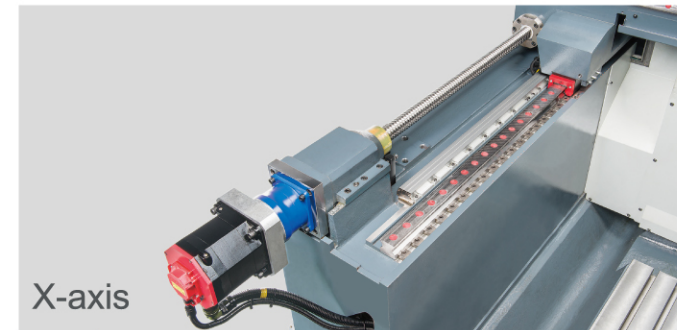
- ▶ Pyramid type weight is proportionally distributed into spindle, ran, cross beam, and bed.
- ▶ Position accuracy feedback on linear scales. Dual servo feeding system.
- ▶ Thermal symmetrical structure.
- ▶ Combination of columns, bed, and table in one piece casting.
- ▶ Low inertia at Z axis motion without counterweight.
- ▶ No weight affect during cutting.
- ▶ Linear scale is standard for 3 axis.



3 Axes Direct-driven with Roller Type Linear Ways Realize Rapid Motion at Cutting.

The maximum rapid of 3 axes is 24,000mm/min

The maximum feed rate is 24,000mm/min



Dual direct-driven servo motor + dual linear scales ensures positioning accuracy at high speed motion.



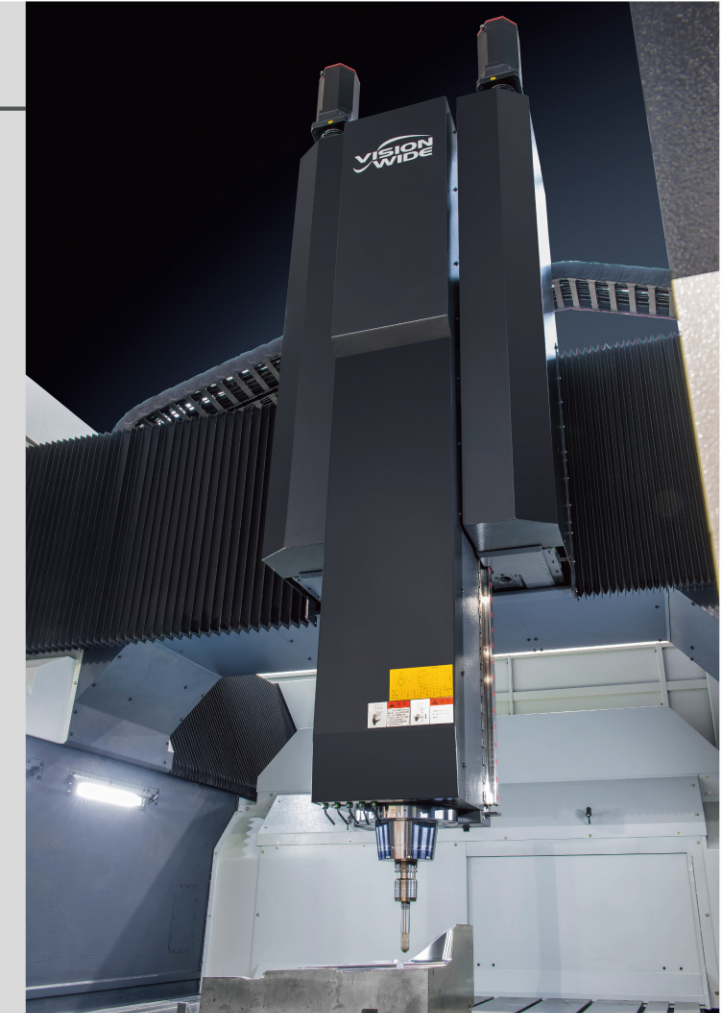
Direct-driven servo motors + light rigid casting part improve performance.

Z-axis

Z-axis adopted dual direct-driven motors without counter weight for high response speed. And its symmetrical design that deployed ball-screws aside spindle head enabled high speed and stability while processing.

The machine head used four-track linear to enhance load and rigidity for Z axis performance.

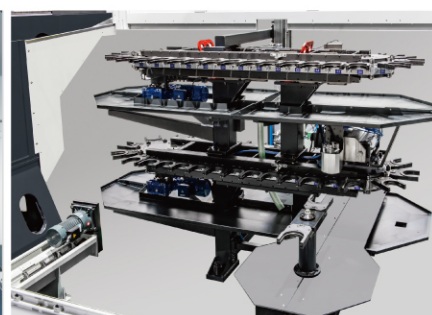
- ▶ DCG, Driving at the Center of Gravity
- ▶ High torque
- ▶ High acceleration
- ▶ Backlashless
- ▶ High accuracy positioning
- ▶ High transmission efficiency



The Best Machine for High Speed Cutting

Easy operation for three in one function

- ▶ Lower table height
- ▶ Closer operating zone
- ▶ Wider door width



- Vertical type tool magazine
- Capacity: 20 / 32T (OPT.) / 40T (OPT.) / 60T (OPT.)
- High speed, contamination-free tool length measurement unit

● Tool length measurement

The Best Solution on the Mass of Chip Removal



- 1 Chips during cutting:
Spindle ring cutting coolant device(OPT.)
Adjustable coolant nozzles
- 2 Chips on table:
Chip clean flushing device(OPT.)
- 3 Chips at chip groove:
Chip clean flushing device(OPT.)
Foot pad above chip groove (OPT.)



- Caterpillar type chip conveyor /
Water tank can remove iron chips efficiently.
- Dual belt type chip conveyor /
Water tank(OPT.) can remove aluminum chips easily.

High Speed Machining & High Feed Rate Machining Shorten Machining Time by 50% !

Aerospace Aluminum Frame High Speed Machining (HSM)

- L1,425 x W680 x H70 mm
- Al 6061
- 10,500 rpm
- 24,000 mm/min
- 2,000 cc/min material removal rate
- Feature:
 - Cutting efficiency 100 cc/min kW
 - (up to 200% increase in productivity)



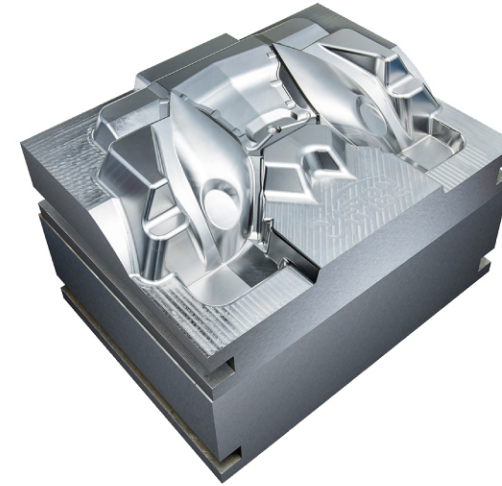
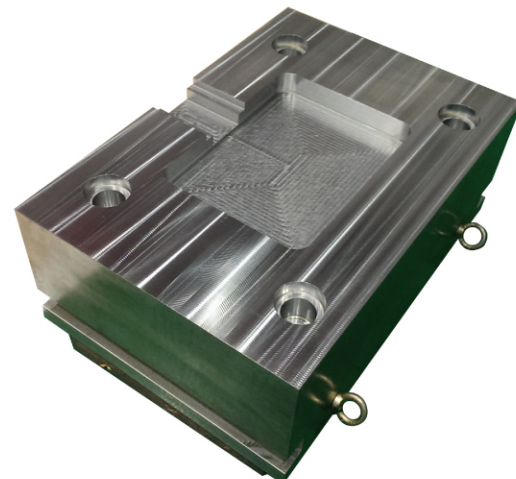
High Accuracy Test Workpiece

- 2,000 x 1,000 x 200 mm
- FC300
- Feature:
 - 1.8 x 0.8 m high position accuracy of boring hole: 0.02mm
 - D900 circular interpolation cutting accuracy: 0.02 mm
 - L50 pitch spacing tolerance: 0.005mm



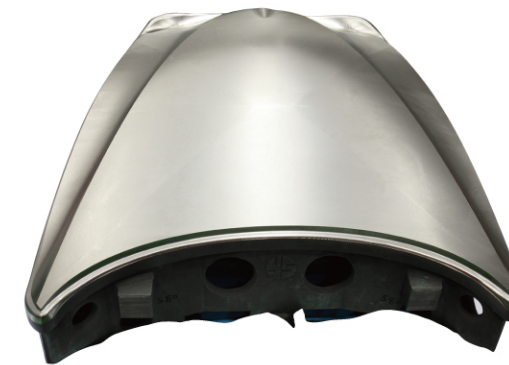
Mold Base High Speed and High Feed Rate Cutting

- L800 x W550 x H250 mm
- S45C
- 2,000 rpm
- 10,000 mm/min
- Feature:
 - Vc 220 m/min
 - 300 cc/min material removal rate
 - Boring positioning accuracy 0.006 mm (Pitch 400 x 700mm)



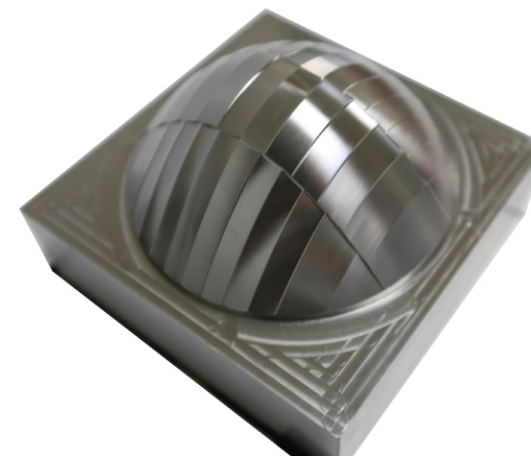
High Speed Mold Surface Finishing Car Headlight Mold

- L800 x W550 x H250 mm
- P20
- 12,000 rpm
- 4,000 mm/min
- Feature:
 - Ra 0.4 μ m
 - Contour Accuracy 0.04 mm



Engine Hood Mold

- L2,000 x W1,600 x H500 mm
- FC300
- 12,000 rpm
- 10,000 mm/min
- Feature:
 - 10 m/min high feed mold face machining
 - 0.3G high acceleration machining
 - Total finish time : 5.2 Hrs.
 - NC path mark gaps < 2 μ m

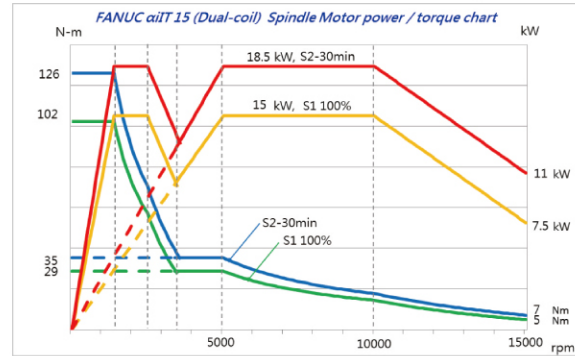


Speedy Mold Surface Finishing Automotive Light Reflector Core

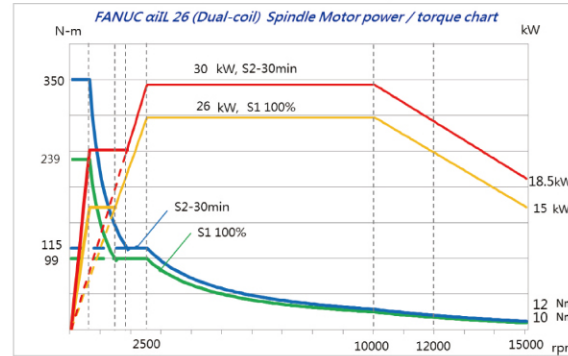
- L160 x W160 x H100 mm
- NAK 80
- 12,000 rpm
- 1,500 mm/min
- Feature:
 - Ra 0.4 μ m
 - Contour Accuracy 0.02 mm

Spindle Power and Torque Charts | FANUC Controller

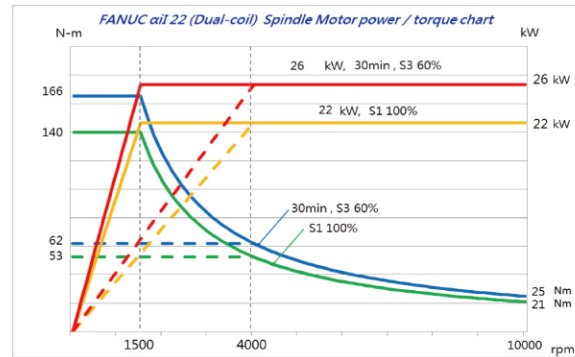
1. Fanuc α iT 15/ Direct-driven/ 15,000 rpm/ BBT-40
(Standard)



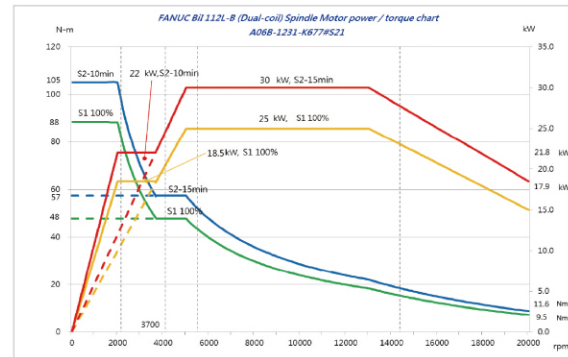
2. Fanuc α iL26/ Direct-driven/ 15,000 rpm / BBT-40
/ 12,000 rpm / BBT-50



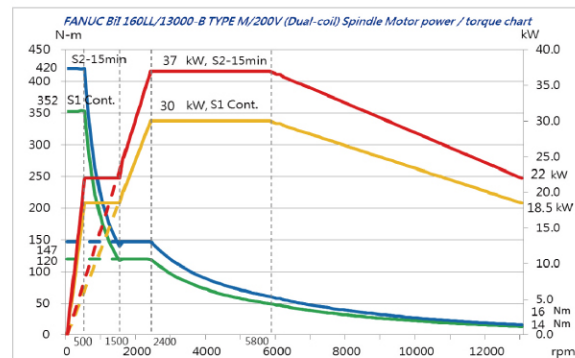
3. Fanuc α iL 22/ α iL22T/ Direct-driven/ 10,000 rpm/ BBT-50



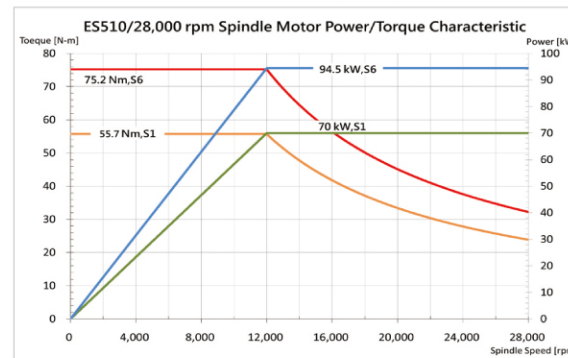
4. FANUC Bi112L/ Built-in/ 20,000 rpm/ HSK-A63



5. FANUC Bi160LL/ Built-in/ 12,000 rpm/ BBT-50

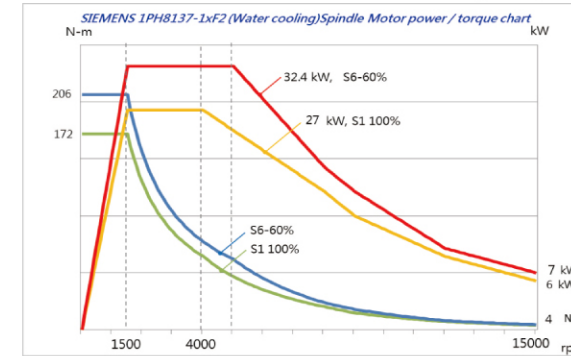


6. HSD ES 510 / Built-in / 28,000 rpm / HSK-A63

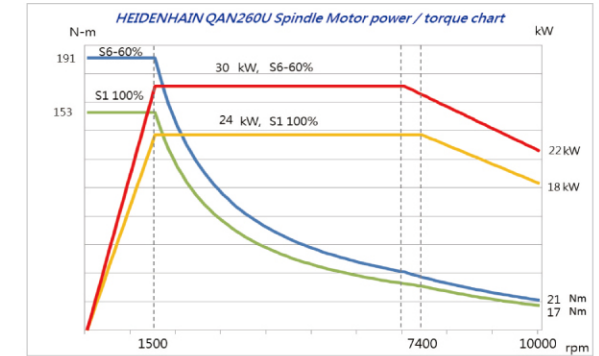


Spindle Power and Torque Charts | HAIDENHAIN Controller

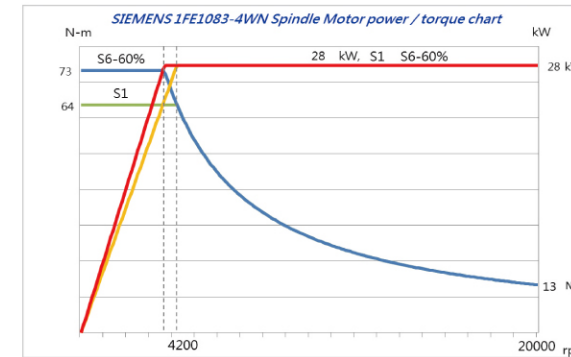
1. SIEMENS 1PH8137 / Direct-driven / 15,000rpm / BBT-40
/ 12,000rpm / BBT-50
/ 12,000rpm / BBT-40



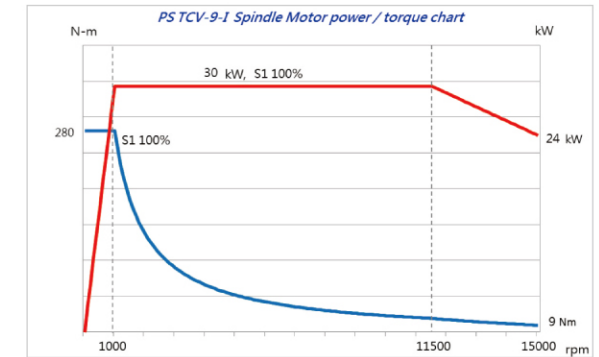
2. HEIDENHAIN QAN260U/ Direct-driven/ 10,000 rpm/ BBT-50



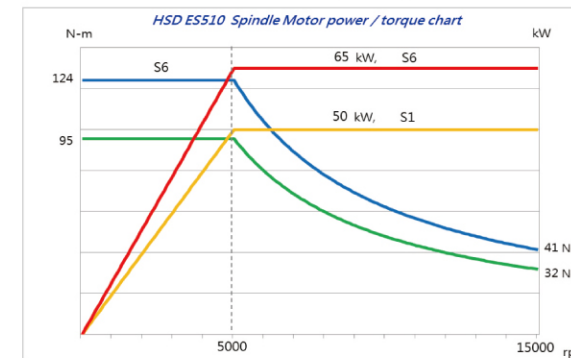
3. SIEMENS 1FE 1083/ Built-in/ 20,000 rpm/ HSK-A63



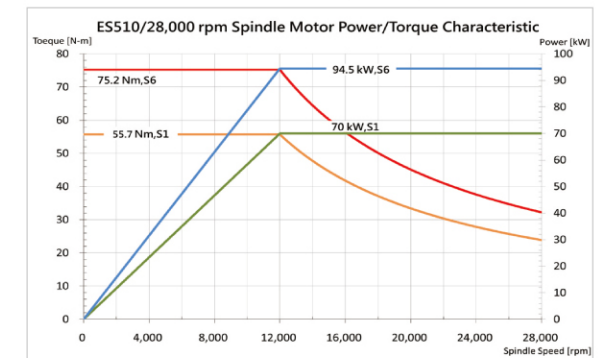
4. PS TCV-9-I / Built-in / 15,000 rpm / HSK-A100



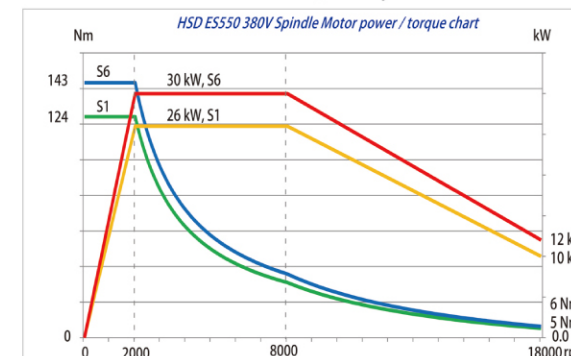
5. HSD ES 510 / Built-in / 15,000 rpm / HSK-A100



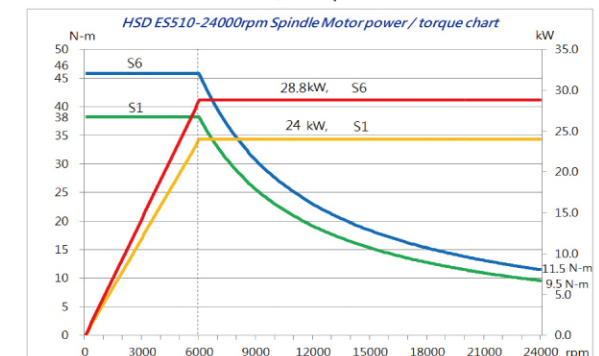
6. HSD ES 510 / Built-in / 28,000 rpm / HSK-A63



7. HSD ES550 Built-in / 18,000 rpm / HSK-A63



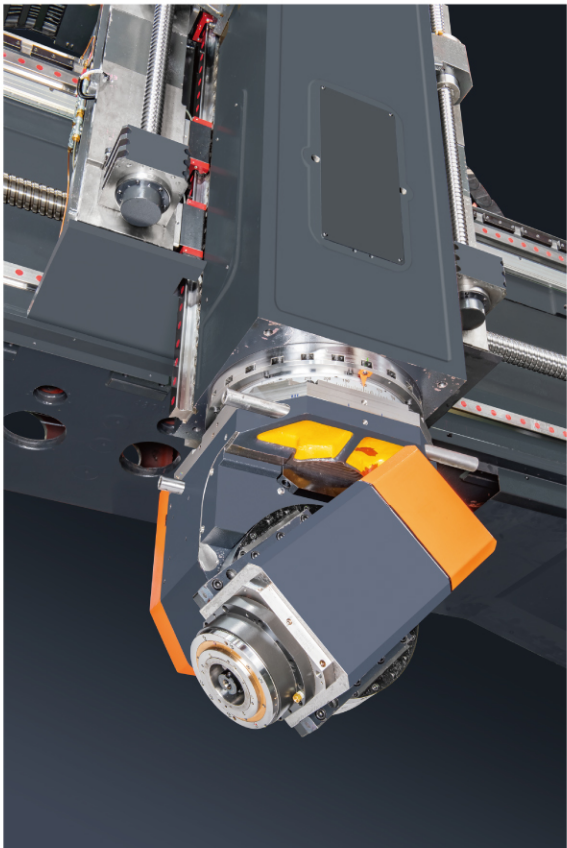
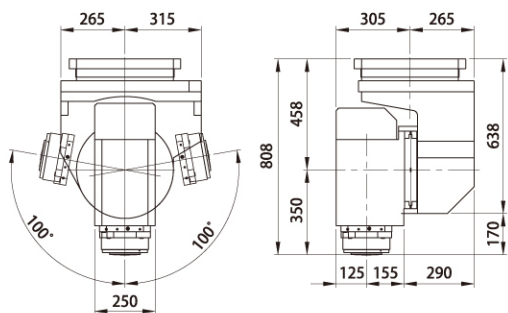
8. ES510 / Built-in / 24,000rpm / HSK-A63



Main Features of AC 2 Axes
Attachment Head

High Power & Speed type

- Above 40kW driving capacity
- 12,000 / 15,000 / 24,000 rpm spindle speed
- Auto tool clamping
- Auto indexing: B axis 1° / C axis 1°
- Rotation range: B axis ±100° / C axis ±200°
- Spindle cooling system
- High tool clamping force: 20 kN
- Surrounding coolant nozzles
- Coolant through spindle interface, 20 / 70 bars
- Independent encoder for position feedback for each rotation axis.



Material:S45C

Unit:mm

IAC Speed	12,000 rpm (47/63.5 kW & 150/202 Nm)		15,000 rpm (50/65 kW & 95.5/124 Nm)		24,000 rpm (40/55 kW & 67/87.5 Nm)	
Cutting type	Heavy	High Feed rate (HFM)	Heavy	High Feed rate (HFM)	Heavy	High Feed rate (HFM)
Tool Dia. (mm)	80	40	80	40	80	40
Cutting width (Ae) (mm)	50	32	50	32	50	32
Cutting depth (Ap) (mm)	3	2	2	1.5	1.3	1.4
Feed rate (mm/min)	3,000	12,000	3,000	12,000	3,000	12,000
Removal rate (cc/min)	450	768	300	576	195	540

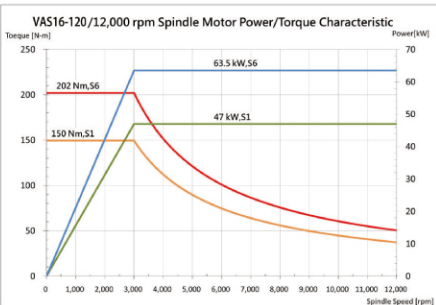
Material:Al6061

Unit:mm

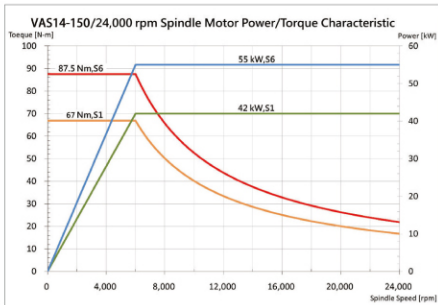
IAC Speed	12,000 rpm (47/63.5 kW & 150/202 Nm)		15,000 rpm (50/65 kW & 95.5/124 Nm)		24,000 rpm (40/55 kW & 67/87.5 Nm)	
Cutting type	High speed cutting(HSC)	High speed machining(HSM)	High speed cutting(HSC)	High speed machining(HSM)	High speed cutting(HSC)	High speed machining(HSM)
Tool Dia. (mm)	80	25	80	25	80	25
Cutting width (Ae) (mm)	60	1.8	60	2	60	1.6
Cutting depth (Ap) (mm)	3.8	70	4	7	3.3	70
Feed rate (mm/min)	24,000	24,000	24,000	24,000	24,000	24,000
Removal rate (cc/min)	5,472	3,024	5,760	3,360	4,752	2,688

High Torque
High Speed Spindle (HEIDENHAIN)

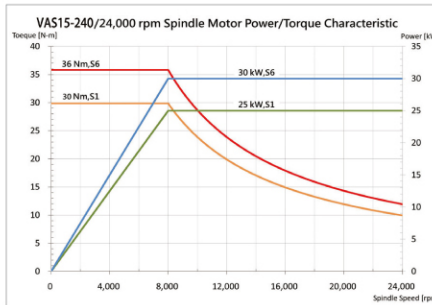
VAS16-120 / Built-in / 12,000rpm / HSK-A100



VAS14-150 / Built-in / 15,000rpm / HSK-A100



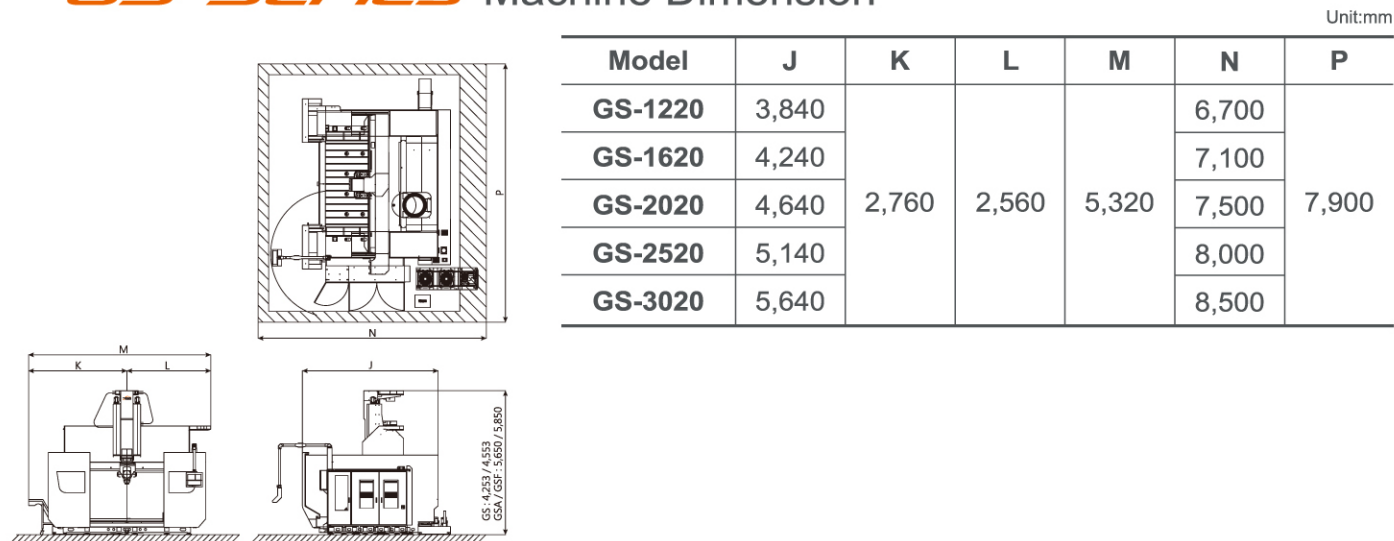
VAS15-240 / Built-in / 24,000rpm / HSK-A63



● Please contact our sales representatives for more spindle data.



GS Series Machine Dimension



GS Series Working Range

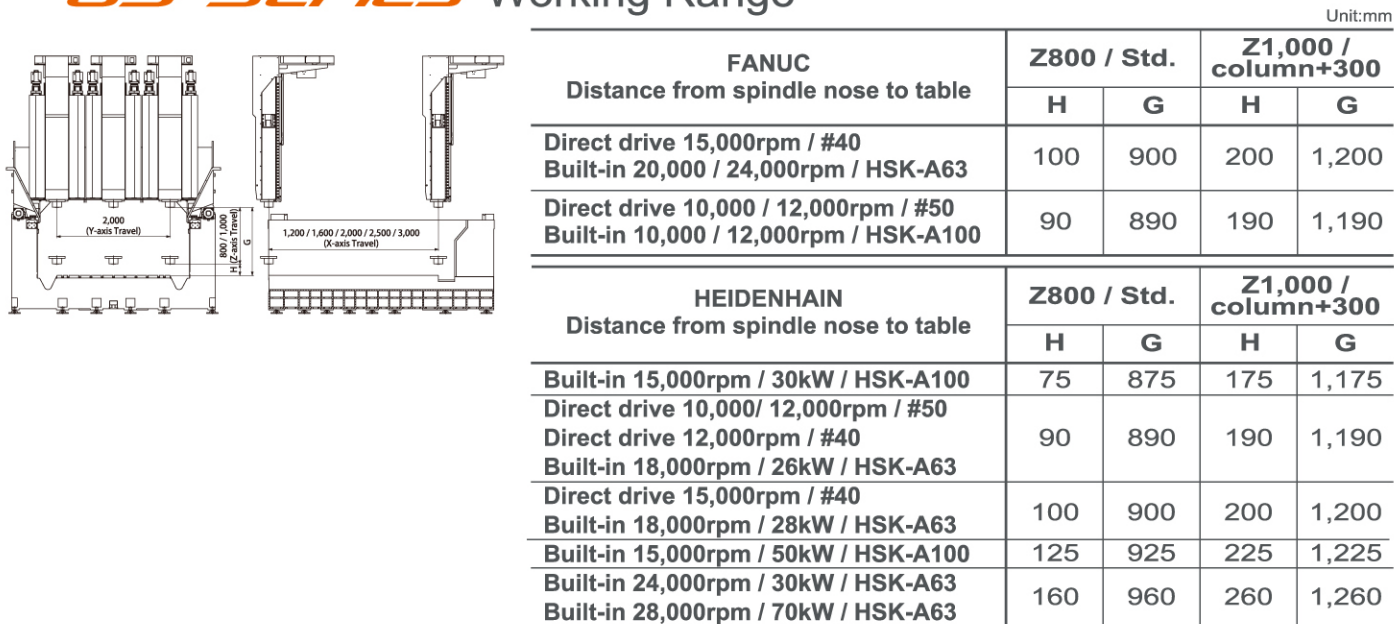
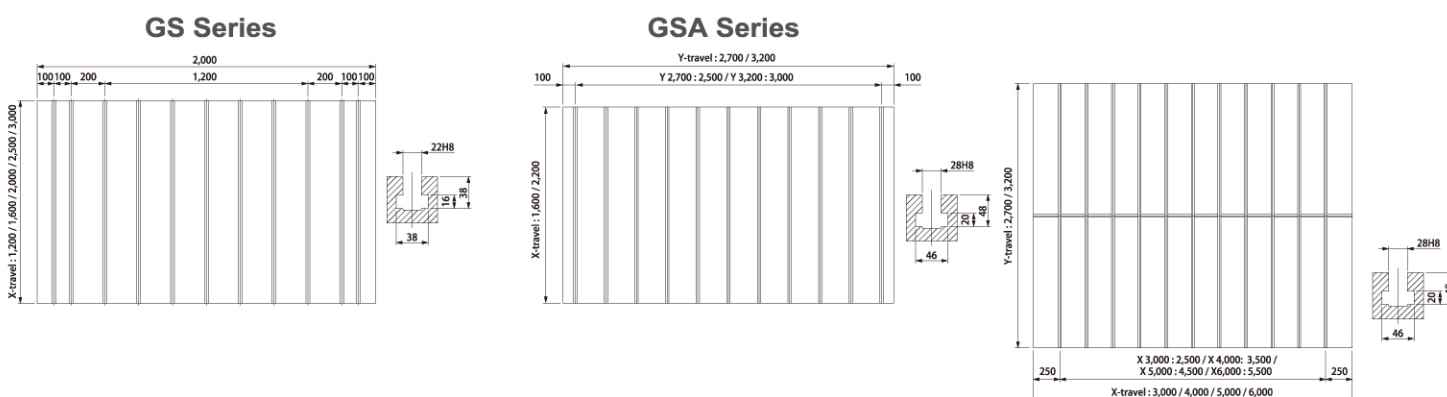
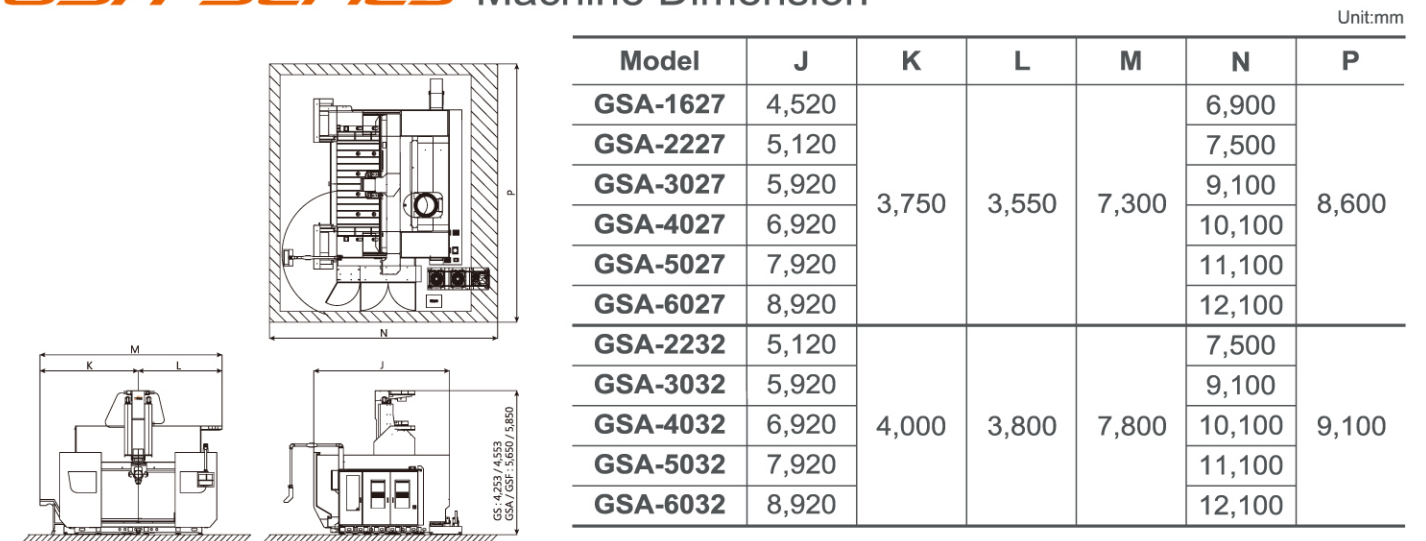


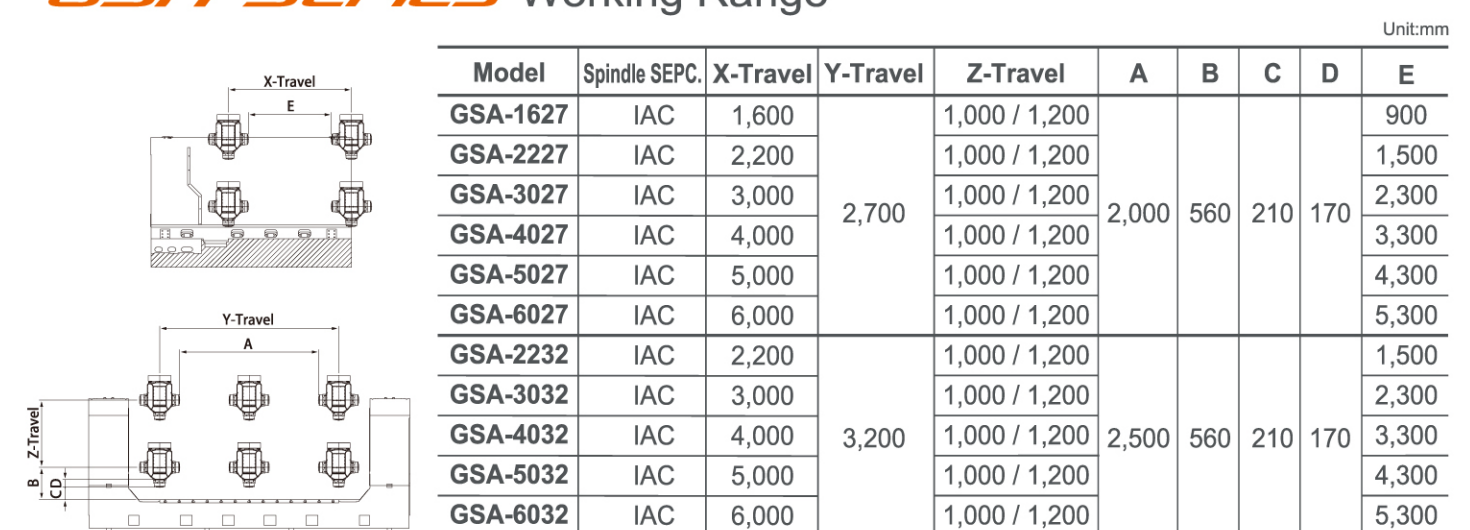
Table & T slot



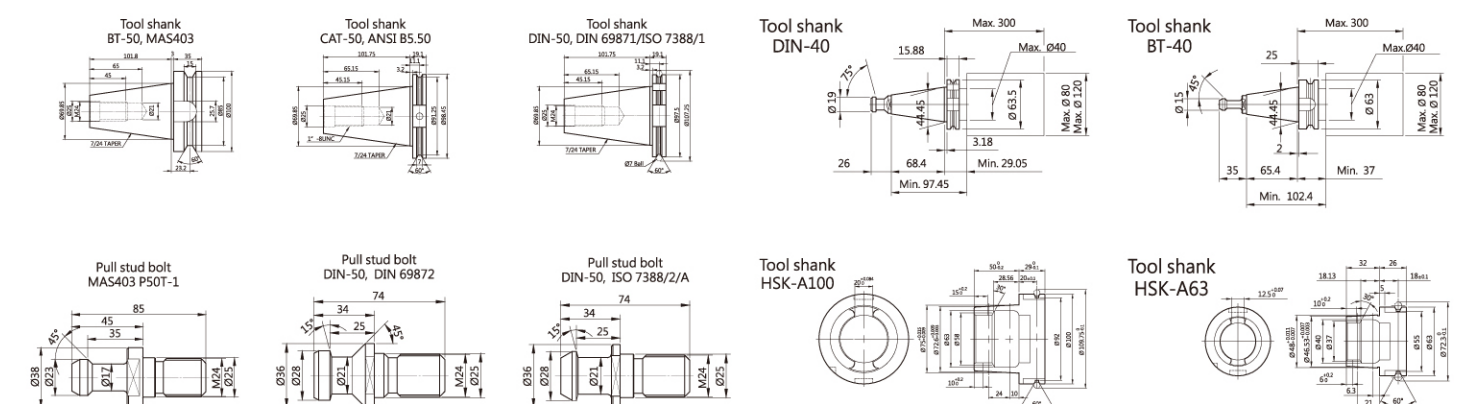
GSA Series Machine Dimension

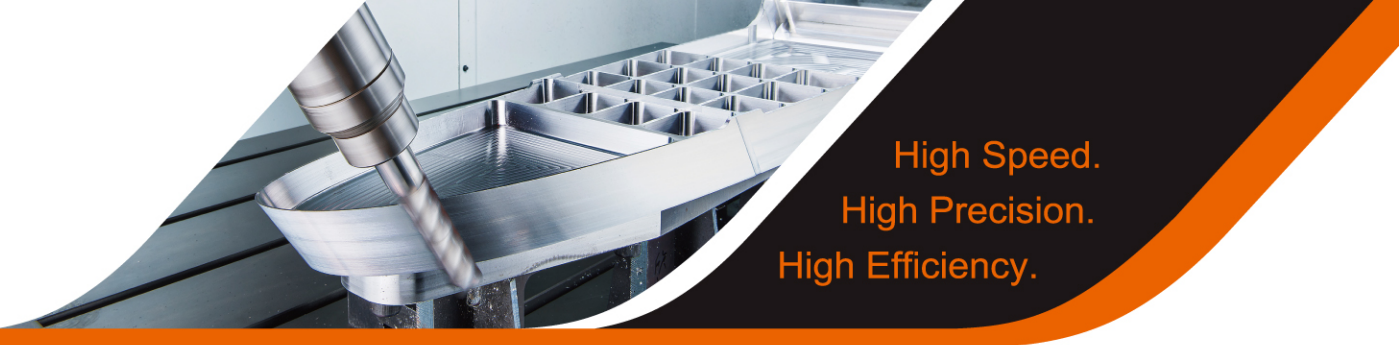


GSA Series Working Range



Tool Shank & Pull Stud





GS Specification

Model			Unit	GS-1220	GS-1620	GS-2020	GS-2520	GS-3020
Travel								
X axis			mm	1,200	1,600	2,000	2,500	3,000
Y axis			mm	2,000				
Z axis			mm	800 / 1,000 (Opt.)				
Distance from spindle nose to table	Direct-drive 40#	Z axis=800	mm	100~900				
		Z axis=1000(column +300)	mm	200~1,200				
The distance between columns (Port width)			mm	2,600				
Table								
Dimension			mm	1,200 x 2,000	1,600 x 2,000	2,000 x 2,000	2,500 x 2,000	3,000 x 2,000
T-slot (Dimension x Number x Pitch)			mm	22 x 11 x 200				
Max. table load			kg/m²	3,000				
Spindle ✱								
Spindle motor (S1/S6)			kW	15 / 18.5				
Spindle speed			rpm	15,000				
Tool shank			-	BBT-40				
Spindle Torque (S1/S6)			Nm	L: 120 / 126 H: 29 / 35				
Feeding								
Cutting feed rate			mm/min	1~24,000				
Rapid traverse			m/min	XYZ: 24 / 30 (Opt.)				
Accuracy								
Positioning accuracy (JIS-B6333)			mm	±0.005 / Full Travel				
Positioning accuracy (VDI3441)			mm	P0.006				
Repeatability accuracy (JIS-B6333)			mm	±0.002				
Repeatability accuracy (VDI3441)			mm	Ps0.004				
ATC								
Magazine capacity			pcs	20T / 32T (Opt.) / 40T (Opt.) / 60T (Opt.)				
MAX. tool(Dia./Length/Weight)			kg	BBT-40 : Ø75 (Ø130) mm / 300 mm / 8kg				
Others								
Power requirement			kVA	50				
Pneumatic requirement			kg/cm²	6				
Net weight			kg	25,500	28,500	31,500	34,500	37,500
Machine gross weight			kg	29,500	32,500	35,500	38,500	41,500
Max. floor space (L x W x H)			m	6.9 x 7.8 x 3.8	7.2 x 7.8 x 3.8	7.6 x 7.8 x 3.8	8.1 x 7.8 x 3.8	8.6 x 7.8 x 3.8

✱ Please refer to the chart of page 9 & 10 for spindle power and torque information.

Standard accessories and function

- 1 FANUC 0i-MF controller
- 2 Direct drive spindle 15,000rpm
- 3 Z-axis travel 800mm
- 4 Spindle cooler system
- 5 Vertical type tool magazine 20T
- 6 Centralized auto lubrication system
- 7 Independent lubrication oil collector for 3-axis
- 8 Air blast through spindle
- 9 Wash gun & pneumatic interface
- 10 Cutting fluid cooling system
- 11 Enclosed sheet metal guard without roof
- 12 Screw type chip conveyor on table sides
- 13 Caterpillar type chip conveyor / Water tank
- 14 Heat exchanger for electrical cabinet
- 15 Working lamp
- 16 Operation cycle finish and alarm light
- 17 Movable manual pulse generator
- 18 RJ45 interface
- 19 Footswitch for tool clamping
- 20 XYZ-axis Linear scales(FAGOR)
- 21 Auto power off function
- 22 Spindle cutting load software protection
- 23 XYZ axis travel hard limits protection
- 24 Foundation pads and bolts kits
- 25 Adjustment tool and tool kits
- 26 Z-axis retract function at power failure
- 27 Thermal compensation system
- 28 Technical manuals
(operation, maintenance manual and circuit diagram)

Option accessories and function

- 1 FANUC 31iB controller;
HEIDENHAIN TNC620/ 640 controller
- 2 Built-in spindle only for FANUC Controller:
12,000rpm (#50/HSK-A100)
20,000/ 24,000/ 28,000rpm (#40/HSK-A63)
- 3 Built-in spindle only for HEIDENHAIN Controller:
15,000rpm (#50/HSK-A100)
18,000/ 20,000/ 24,000/ 28,000rpm (#40/HSK-A63)
- 4 Direct driven spindle only for FANUC Controller:
15,000rpm (#40/HSK-A63)
10,000/ 12,000rpm (#50/HSK-A100)
- 5 Direct driven spindle only for HEIDENHAIN Controller:
12,000/ 15,000rpm (#40/HSK-A63)
10,000/ 12,000rpm (#50/HSK-A100)
- 6 XYZ-axis rapid traverse 30m/min
- 7 Z-axis travel 1,000mm, 300mm higher column
- 8 Vertical type tools magazine 32T/ 40T/ 60T
- 9 Coolant through spindle system 20/70 bar
(Vertical spindle)
- 10 Spindle ring cutting coolant device
- 11 Oil skimmer
- 12 Oil mist cooling device
- 13 Enclosed sheet metal guard with roof
- 14 Chip clean flushing device on table side grooves
- 15 Helical blade screw conveyor on table sides
- 16 Foot pad above chip groove
- 17 Dual belt type chip conveyor/Water tank
- 18 Chip cart
- 19 Sub working table
- 20 3-axis independent manual pulse generator
- 21 Remote monitoring software-professional
- 22 Auto tool length measurement
- 23 Auto workpiece coordinate measurement
- 24 Transformer

GSA Specification | GSA-xx27 Series

Model	Unit	GSA-1627	GSA-2227	GSA-3027	GSA-4027	GSA-5027	GSA-6027
Travel							
X axis	mm	1,600	2,200	3,000	4,000	5,000	6,000
Y axis	mm	2,700					
Z axis	mm	1,000 / 1,200(Opt.)					
Distance from spindle nose to table	mm	Z1,000: 210-1,210 / Z1,200: 210-1,410(Opt.)					
Distance between columns(port width)	mm	3,400					
Table							
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
T-slot (Dimension x Number x Pitch)	mm	28 x 11 x 250			28 x 15 x 250	28 x 19 x 250	28 x 23 x 250
Max. table load	kg/m ²	3,000					
Spindle							
Spindle motor (S1/S6)	kW	50 / 65					
Spindle speed	rpm	15,000					
Tool shank	-	HSK-A100					
Spindle Torque (S1/S6)	Nm	95.5 / 124					
Feed rate							
Cutting feedrate	mm/min	1-20,000					
Rapid traverse (X/Y/Z)	m/min	XY:32 / Z:20					
Accuracy							
Positioning accuracy (JIS-B6333)	mm	±0.005 / Full Travel		±0.007 / Full Travel			±0.008 / Full Travel
Positioning accuracy (VDI3441)	mm	P0.008			P0.010	P0.012	P0.015
Repeatability accuracy (JIS-B6333)	mm	±0.002					
Repeatability accuracy (VDI3441)	mm	PS0.006				PS0.008	PS0.012
ATC							
ATC capacity	pcs	20 / 32(Opt.) / 40(Opt.) / 60(Opt.)					
Max. tool size (Full tools)	mm	Ø 125					
Max. tool size (Next pockets empty)	mm	Ø 250					
Max. tool length	mm	300					
Max. tool weight	kg	18					
Others							
Electric power consumption	kVA	130					
Pneumatic input pressure	kg/cm ²	6					
Net weight	kg	38,500	43,500	43,000	52,000	60,500	70,000
Max. 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

- 1 HEIDENHAIN TNC640 controller

2 IAC-15,000rpm/HSK-A100

3 IAC head protection system:

Spindle and motor temperature monitoring

Rotation axis motor temperature monitoring

Spindle cutting load software protection

4 IAC head rotation error mechanism chain correction

5 Z-axis travel 1,000 mm

6 Spindle and structure temperature thermal compensation system

7 Air blast through spindle

8 Spindle cooling system

9 Spindle ring cutting coolant device(for no head attachment)

10 Cutting fluid cooling system
- 11 X axis ball screw support device (axis 4m above)

12 X axis dual linear scale, Y/Z-axis linear scale

13 XYZ-axis travel hard limits protection

14 X/Z axis is driven by dual ballscrew and Y axis is driven by single ballscrew

15 Centerized auto lubrication system

16 Independent lubrication oil collector

17 Wash gun and pneumatic interface

18 Enclosed sheet metal guard without roof

19 Vertical type tool magazine 20T with arm type ATC

20 Screw type chip conveyor on table sides

21 Caterpillar type chip conveyor / Water tank

22 Swiveling arm type operation panel

23 Air conditioner for electrical cabinet
- 24 Working lamp

25 Operation cycle finish and alarm light

26 Movable manual pulse generator

27 RJ45 interface

28 Footswitch for tool clamping

29 Remote monitoring software-standard

30 Auto power off function

31 Tool axis retract function at power failure

32 Foundation pads and bolts kits

33 Adjustment tool and tool kits

34 Technical manuals (operation, maintenance manual and circuit diagram)

GSA Specification | GSA-xx32 Series

Model	Unit	GSA-2232	GSA-3032	GSA-4032	GSA-5032	GSA-6032
Travel						
X axis	mm	2,200	3,000	4,000	5,000	6,000
Y axis	mm	3,200				
Z axis	mm	1,000 / 1,200(Opt.)				
Distance from spindle nose to table	mm	Z1,000: 210-1,210 / Z1,200: 210-1,410(Opt.)				
Distance between columns(port width)	mm	3,900				
Table						
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
T-slot (Dimension x Number x Pitch)	mm	28 x 13 x 250	28 x 11 x 250	28 x 15 x 250	28 x 19 x 250	28 x 23 x 250
Max. table load	kg/m ²	3,000				
Spindle						
Spindle motor (S1/S6)	kW	50 / 65				
Spindle speed	rpm	15,000				
Tool shank	-	HSK-A100				
Spindle Torque (S1/S6)	Nm	95.5 / 124				
Feed rate						
Cutting feedrate	mm/min	1-20,000				
Rapid traverse (X/Y/Z)	m/min	XY:32 / Z:20				
Accuracy						
Positioning accuracy (JIS-B6333)	mm	±0.005 / Full Travel	±0.007 / Full Travel			±0.008 / Full Travel
Positioning accuracy (VDI3441)	mm	P0.008		P0.010	P0.012	P0.015
Repeatability accuracy (JIS-B6333)	mm	±0.002				
Repeatability accuracy (VDI3441)	mm	PS0.006			PS0.008	PS0.012
ATC						
ATC capacity	pcs	20 / 32(Opt.) / 40(Opt.) / 60(Opt.)				
Max. tool size (Full tools)	mm	Ø 125				
Max. tool size (Next pockets empty)	mm	Ø 250				
Max. tool length	mm	300				
Max. tool weight	kg	18				
Others						
Electric power consumption	kVA	130				
Pneumatic input pressure	kg/cm ²	6				
Net weight	kg	46,000	45,500	55,000	64,000	73,500
Max. 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

Option accessories and function

- 1 HEIDENHAIN DCM (Dynamic Collision Monitoring)

2 IAC-12,000 rpm/HSK-A100

3 IAC-24,000 rpm/HSK-A63

4 Automatic correction software of rotary axis error

5 Z-axis travel 1,200 mm

6 Vertical type tool magazine 32T with arm type ATC

7 Coolant through spindle system: 20 bar / 70 ba

8 The interface of coolant through spindle

9 Oil skimmer

10 Oil mist cooling device

11 Enclosed sheet metal guard with roof

12 Helical blade screw conveyor on table sides

13 Dual belt type chip conveyor / Water tank

14 Without chip conveyor system (Chip auger, chip conveyor, and water tank)
- 15 Foot pad above chip groove

16 Chip cart

17 Sub working table

18 XYZ-axis independent manual pulse generator (only FANUC)

19 Remote monitoring software-professional

20 Auto tool length measurement

21 Auto workpiece coordinate measurement

22 Transformer

23 Transformer and Voltage Stabilizer

24 Oil mist recycle device

25 Adaptive Feed Control (AFC)(for head attachment)