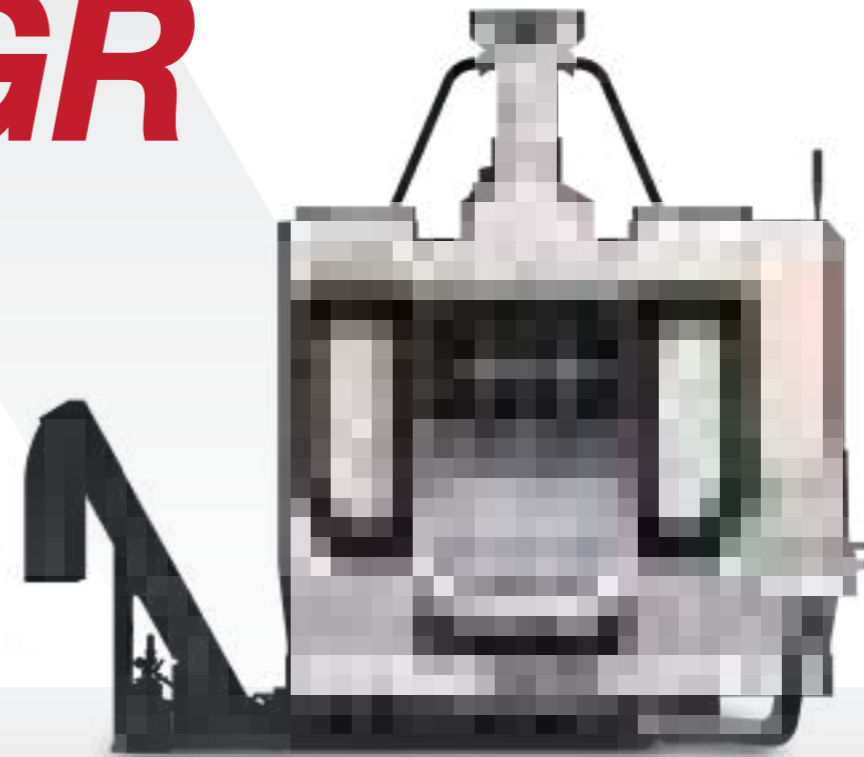
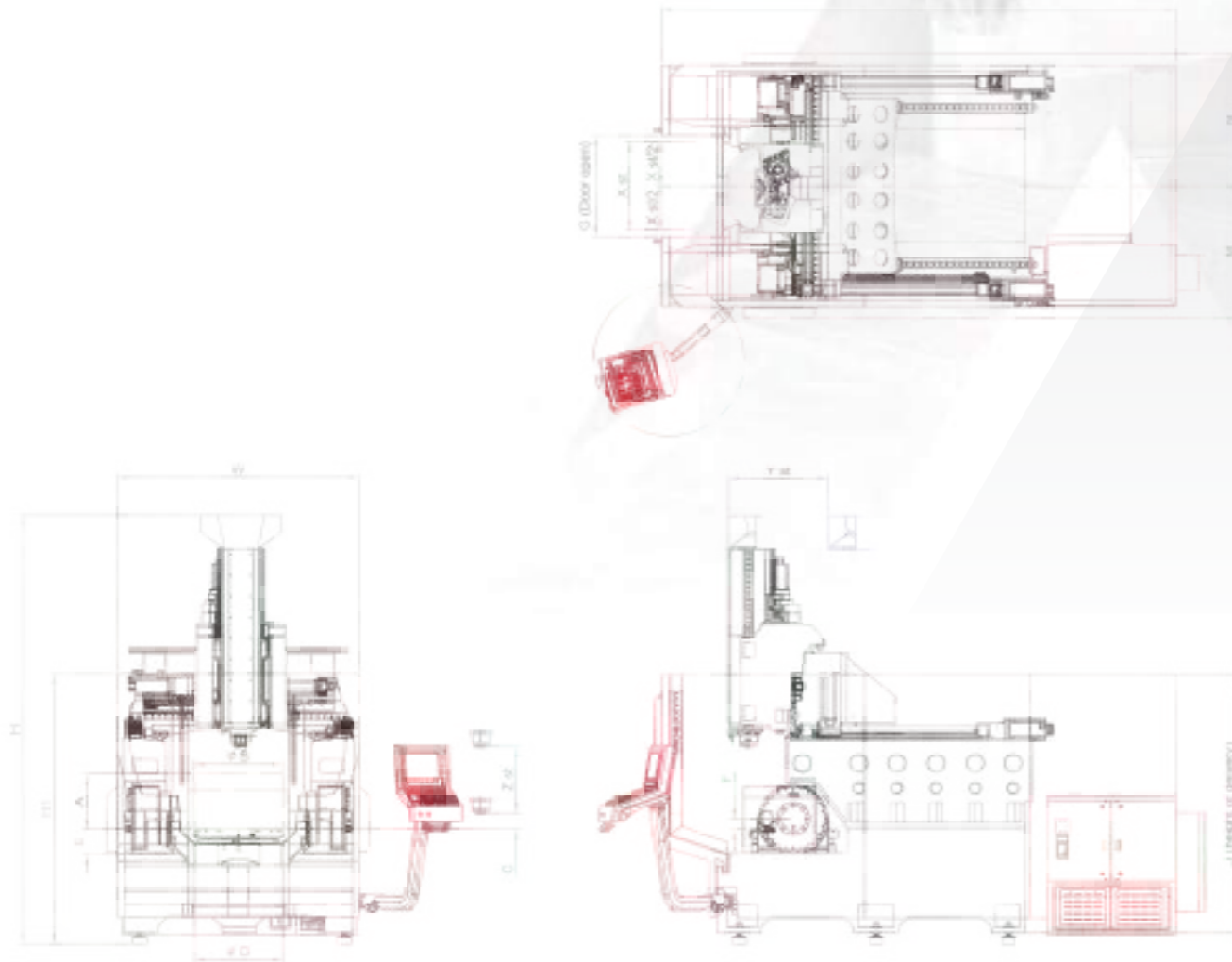


Dimension



GR



MAXXTRON

**GANTRY TYPE ROTARY TABLE
5-AXIS MACHINING CENTER**

Model	A	B	C	D	E	F	G	H	H1	J	L	M	N	W	Xst	Yst	Zst
GR800 Cam Roller	500	800	100	800	275	50	900	3877	2243	2346	4653	1192	1192	2190	800	900	600
GR800 DD motor	500	800	150	800	225	100	900	3877	2243	2346	4653	1192	1192	2190	800	900	600
GR800+ Cam Roller	600	1000	100	800	275	50	1000	3877	2243	2346	4653	2245	2245	2490	1000	1100	700
GR800+ DD motor	600	900	150	1000	225	100	1000	3877	2243	2346	4653	2245	2245	2490	1000	1100	700
GR1000 DD motor	600	1000	150	1000	245	80	1000	4277	2843	2746	5453	2245	2245	2490	1000	1200	700
GR1000+ DD motor	800	1200	150	1000	245	80	1000	4277	2843	2746	5453	2245	2245	2490	1000	1300	800
GR1200 DD motor	800	1350	150	1000	245	80	1000	4277	2843	2746	5453	2245	2245	2490	1200	1300	900

2024.01 DESIGNED



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Agent

**GR800, GR800Plus
GR1000, GR1000Plus
GR1200**

Characteristic Series Series Series Series Series Series

Rigidity

▶ **Integration casting**

High damping structure.
High rigidity.
Less deformation.

Optimize the structure design and thermal deformation and geometric accuracy and angular error



▶ **High dynamic**

The structure have been powerful advanced.
4 side supported ram and saddle design and they have 3 linear guides and 2 rollers guides.(option/#50 spindle)

▶ **High rigidity**

High rigidity casting base to support the swiveling A/C axis.

▶ **Full stroke support**

High rigid structure has full stroke support to guarantee the most dynamic leveling accuracy and no bending and distortion problem.



4 side supported 3 linear guides and 2 roller guides (option/#50 spindle)



Cam Roller drive

Accuracy

▶ **Linear scale / Angle encoder**

3 axis axial position arrange in Heidenhain/FAGOR linear encoder, to increase position precision, to minimize deviation in processing.

▶ **Spindle cooler equipment**

The equipment control temperature differenc in $\pm 0.1^{\circ}\text{C}$, that can effective control spindle temperature.

▶ **Machine thermal control system**

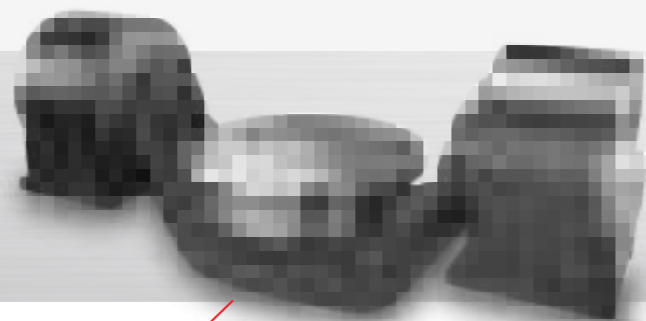
Real time casting thermal monitor and control.

▶ **5-axis Roller Cam rotary table**

Max. speed up to 40rpm (GR800).
Zero backlash.
Ultra-high efficiency conduction.
No thermal displacement.
Long life and maintenance-free.

▶ **5-axis DD motor drive rotary table**

Max. speed up to 100rpm (GR1000).
High Torque up to 4200 Nm (GR1000).
Zero backlash. No reduction mechanism.



DD motor drive

Effectiveness

▶ **3 axis moving rapid**

The highest feed at 36 m/min. (GR800 Plus and above)
The highest cutting feed at 20 m/min.

▶ **High speed spindle HSK-A63**

Build-in spindle 18000rpm (Grease) as standard, and 24000rpm (Oil-mist) as option.

▶ **TCPM axis simultaneously move**

TCPM to reduce extra steps.

▶ **High precision transmission components**

Mechine adopts high precision transmission components to reach high speed, high precision and high efficiency.



High speed
High precision
High efficiency
Highest feed at 36 m/min
Rotary table speed 100rpm (optional)

User-friendly interface and integrated

▶ **User-friendly operation space**

Approach operation space design, the min. distance of manual-tool-change 200mm.

▶ **Swivel operation panel**

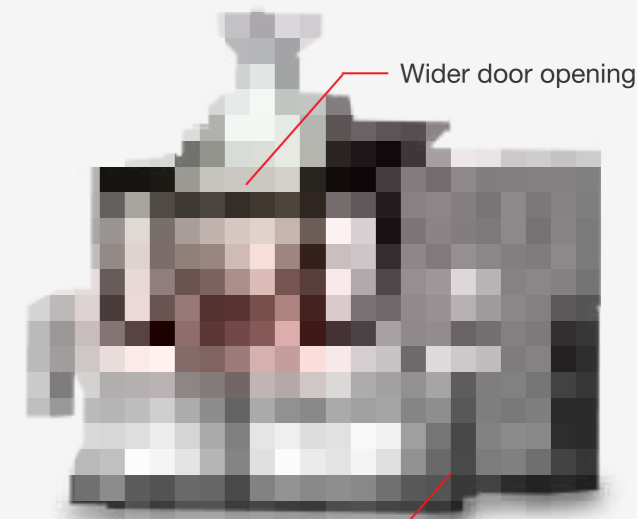
According to operator, allow adjusted operating with any position and angle.

▶ **Wider door opening**

The wider space of door opening makes workpiece easier to be loaded and unloaded.

▶ **Indication light barr**

Obviously indication status of machine, keep watching of the machine situation.



Wider door opening

Swivel operation panel

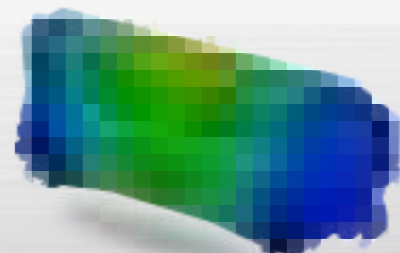
FEM

▶ **FEM of the cast iron strength**

FEM is used to dynamic analyze of structure and optimize the structure improvement deisgn.

▶ **Minimum deformation design**

Improve machine durability and accuracy.



FEM is used to dynamic analyze of structure

Characteristic

Machining Function

► 5-axi machining

Work in inclined planes, 3+2, 4+1, etc. and continuous 5-axis RTCP machining.
Library of kinematics.



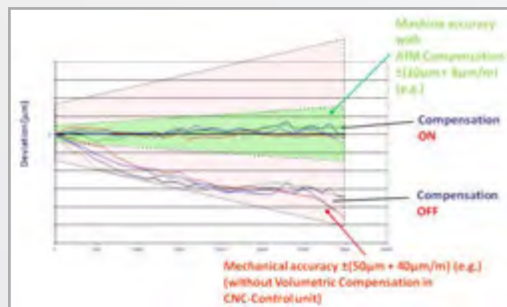
► Automatic kinematics calibration

During the start-up of the machine, due to its continuous use or due to some incident, it is necessary to correct the values that indicate the mechanical situation of kinematics.



► FVC Fagor Volumetric Compensation

50% increase in machine volumetric precision.
Tighter part tolerances may be reached.

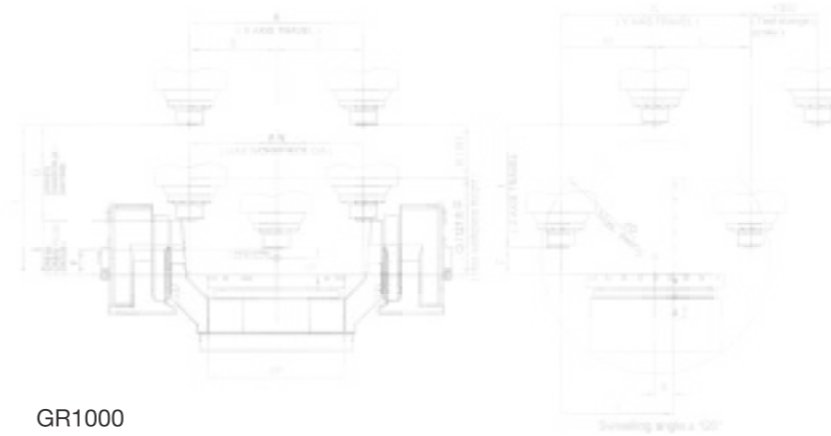


► FCAS (Fagor Collision Avoidance System)

The FCAS (Fagor Collision Avoidance System) option monitors tool movements in real time to avoid collisions with the machine.
When the FCAS option detects the possibility of a collision, it stops the movement, within the safety margin defined by the machine manufacture.



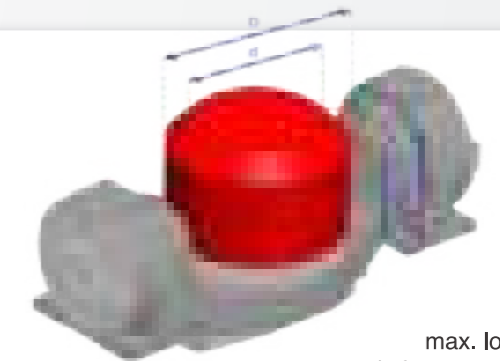
Max. Workpiece space



GR1000
XYZ travel 1100x1200x700mm

	GR800 Cam Roller	GR800 DD motor	GR800+ Cam Roller	GR800+ DD motor	GR1000 DD motor	GR1000+ DD motor	GR1200 DD motor
A	800	800	1000	1000	1000	1200	1350
B/C	400	400	500	500	500	600	675
D	984	1140	984	1140	1198	1250.1	1250.1
E	-	150	221.5	310	364	-	-
F	100	150	100	150	150	150	150
G	-	600	578.5	700	486	-	-
H	700	750	800	850	850	950	1050
I	600	600	700	700	700	800	900
J	500	550	600	650	680	730	730
K	900	900	1100	1100	1200	1300	1300
L/M	450	450	550	550	600	650	650
N	800	800	1000	900	1000	1200	1350
P	800	800	800	800	1000	1000	1000
Q	500	500	600	600	600	800	800
Q1	500	550	600	650	650	750	750
R	200	250	200	250	250	150	150
R1	200	200	200	200	200	200	200
S	50	100	50	100	80	80	80

Workpiece	GR800 Cam Roller Drive	GR800 DD motor Drive	GR800+ Cam Roller Drive	GR800+ DD motor Drive	GR1000 DD motor Drive	GR1000+ DD motor Drive	GR1200 DD motor Drive
D	Φ800	Φ800	Φ1000	Φ1000	Φ1000	Φ1200	Φ1350
d	Φ600	Φ600	Φ800	Φ800	Φ800	1000	1150
H	500	500	600	600	600	800	800
h	400	400	500	500	500	700	700
max. load	1000kg	1200kg	1000kg	1200kg	1200kg	1200kg	1500kg



GR1000
max. load 1200kg
max. workpiece Φ1050x600mm

Application

- GR series is widely used in the industries of aerospace, automotive and mold machining.
- CAD/CAM integration
Comprehensive training class.
Cutting program, post etc,
Integrated and testing.



Characteristic

Spindle

- GR series provide direct-drive and built-in type spindle to meet different machining requirements.

The spindle speed ranges from 15000rpm to 24000rpm.

- The built-in thermal compensation system (optional) decrease the effect of thermal variation, assuring the accuracy during operation.
- Spindle cooling system reduces thermal variation and prolongs working life of spindle.
- Large diameter spindle and high precision ceramincs bears increase cutting rigidity and reduce tool vibration.



▶ Direct drive 18000rpm (Option)
20/62.2kW, 58/180Nm

▶ Built-in 18000/24000rpm (Option)
22/126kW, 73.5/153Nm

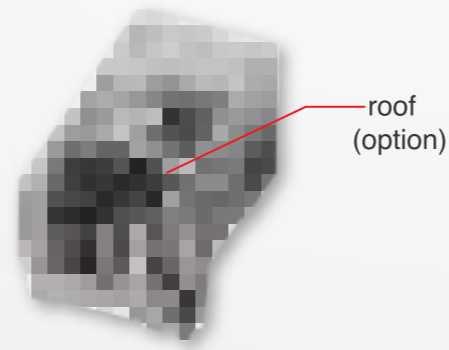
ATC & Magazine

- Armless 32 Tools magazine (standard)
- 32/64, 80, 48/96, 60/120 Tools magazine (option)



Splash guard

- Full enclosed splash guard with roof (option) can prevent the chip, oil-mist and coolant throw out.



STANDARD :

- HEIDENHAIN TNC640 5-axis /15"LCD
- 5 axis absolute encoder motors
- Ethernet, USB interface
- 3 axis linear scales
- Build-in spindle 18000rpm (Grease)
- Tilting and Rotary Table
- Armless type ATC 32 tools magazine
- 3 axis linear guide way
- Centralized auto lubrication system
- Spindle cooler
- Spindle air blast
- Cutting coolant system
- Cutting air blast
- Working lamp and indication lamp
- Electric cabinet air conditioner
- Full enclosure splash guard
- Coolant tank and coolant flushing system
- Washing gun and air gun
- Steel belt type chip conveyor and cart
- Oil skimmer
- Hydraulic pressure system
- Leveling blocks and bolts
- Tool kits
- Operation manual

Specification

Table	unit	GR800	GR800 Plus	GR1000	GR1000 Plus	GR1200
Table dimension	mm	Ø800	Ø800	Ø1000	Ø1000	Ø1200
Drive type		Cam Roller Drive opt:DD motor Drive	Cam Roller Drive opt:DD motor Drive	DD motor Drive	DD motor Drive	DD motor Drive
Max. workpiece (Diameter x H)	mm	Ø900 x 800 (A 0°) Ø900 x 500	Ø1000 x 800 (A 0°) Ø1000 x 600	Ø1200 x 800 (A 0°) Ø1200 x 600	Ø1200 x 800 (A 0°) Ø1200 x 600	Ø1350 x 800 (A 0°) Ø1350 x 650
Max. load - Horizontal / Vertical position	kg	800 / 1000	1000 / 1200	1600 / 2000	1600 / 2000	1800 / 2500
T-Slot	mm	7x14HxP100	7x14HxP100	9x14HxP90	9x14HxP90	11x14HxP90
Travel						
X/Y/Z axis travel	mm	800 / 900 / 600 opt:700 / 800 / 900	1000 / 1100 / 700 opt:800 / 900	1000 / 1200 / 700 opt:800 / 900	1200 / 1300 / 800 opt:900	1200 / 1300 / 900
Dist. between spindle nose & table surface	mm	100 - 700 opt:100 - 800/900/1000	150 - 850 opt:150 - 950/1050	150 - 850 opt:150 - 950/1050	150 - 950 opt:150 - 1050	150 - 1050
Tilting rotary table A/C axis						
Tilting rotary table A/C axis motor power	kW	5.1+5.1 / 5.1	5.1+5.1 / 5.1	14.4+14.4 / 14.4	14.4+14.4 / 14.4	19.1+19.1 / 19.1
Swivelling angle A/C	degree	-120° to +120° / 360°	-120° to +120° / 360°	-120° to +120° / 360°	-120° to +120° / 360°	-120° to +120° / 360°
Max. speed A/C	rpm(360°/S)	25 / 40	25 / 40	100 / 100	100 / 100	100 / 100
Clamping torque A/C	Nm	6962 + 6962 / 6962	6962 + 6962 / 6962	4200 + 4200 / 4200	4200 + 4200 / 4200	4200 + 4200 / 4200
Indexing accuracy A/C (no encoder)	arc.sec	35" / 15"	35" / 15"	±5" / ±5" (encoder)	±5" / ±5" (encoder)	±5" / ±5" (encoder)
Min. Increment A/C	degree	0.001 / 0.001	0.001 / 0.001	/	/	/
Spindle						
Spindle type		Direct drive	Direct drive	Built-in (HA170)	Built-in (HA230)	
Spindle speed	rpm	15000	18000	24000	18000/24000	
Spindle power (s1/Pmax)	kW	20 / 59	20 / 62.2	25 / 111	22 / 126	
Spindle torque (s1/Mmax)	Nm	20 / 59	20 / 62.2	25 / 111	22 / 126	
Spindle taper		HSK-A63 / ISO40	HSK-A63 / ISO40	HSK-A63	HSK-A63	
Feedrate						
Rapid traverse(X/Y/Z)	m/min	30 / 30 / 30	36 / 36 / 36	36 / 36 / 36	36 / 36 / 36	36 / 36 / 36
Cutting feedrate	mm/min	1-20000	1-20000	1-20000	1-20000	1-20000
ATC & Magazine						
ATC type		Armless type	Armless type	Armless type	Armless type	Armless type
Magazine capacity	pcs	32/64, 48/96, 60/120	32/64, 48/96, 60/120	32/64, 48/96, 60/120	32/64, 48/96, 60/120	32/64, 48/96, 60/120
Max. tool weight	kg	8	8	8	8	8
Max. tool length	mm	300	300	300	300	300
Max. tool diameter(next empty)	mm	75 / 125	75 / 125	75 / 125	75 / 125	75 / 125
System Requirement						
Electrical power consumption	kVA	75	75	90	90	90
Hydraulic pressure	Kg/cm2	70	70	70	70	70
Pneumatic pressure	Kg/cm ² (L/min)	6 (1600)	6 (1600)	6 (1600)	6 (1600)	6 (1600)
Dimension (LxWxH)	mm	5000x2950x3700	5500x3350x4000	6200x3800x4300	6600x3800x4300	6600x3800x4300
Machine Weight (without opt.)	kgs	17000	19000	23000	26000	28000

*Specifications are subject to change without notice.

OPTIONAL ACCESSORIES :

- HEIDENHAIN/SIEMENS/FAGOR 5 axis controller
- FANUC/MITSUBISHI 4+1 axis controller
- KinematicsOPT/DCM/TCPM
- Angle encoder
- HSK-A63/ISO40 and HSK-A100 Built-in and Direct-drive type high speed spindle
- Spindle thermal compensation system
- Magazine 32/64, 80, 48/96, 60/120 tools
- Centralized auto grease lubrication
- Tool length measurement system
- Workpiece measurement system
- Transformer and regulator
- Oil mist cutting system
- Oil mist collector
- Machine thermal control system
- Scraper type chip conveyor
- CTS 20/40/70 bar
- Roof
- Multiple pallets changer
- Spin window