

Maximart[®]

Maximart Corporation

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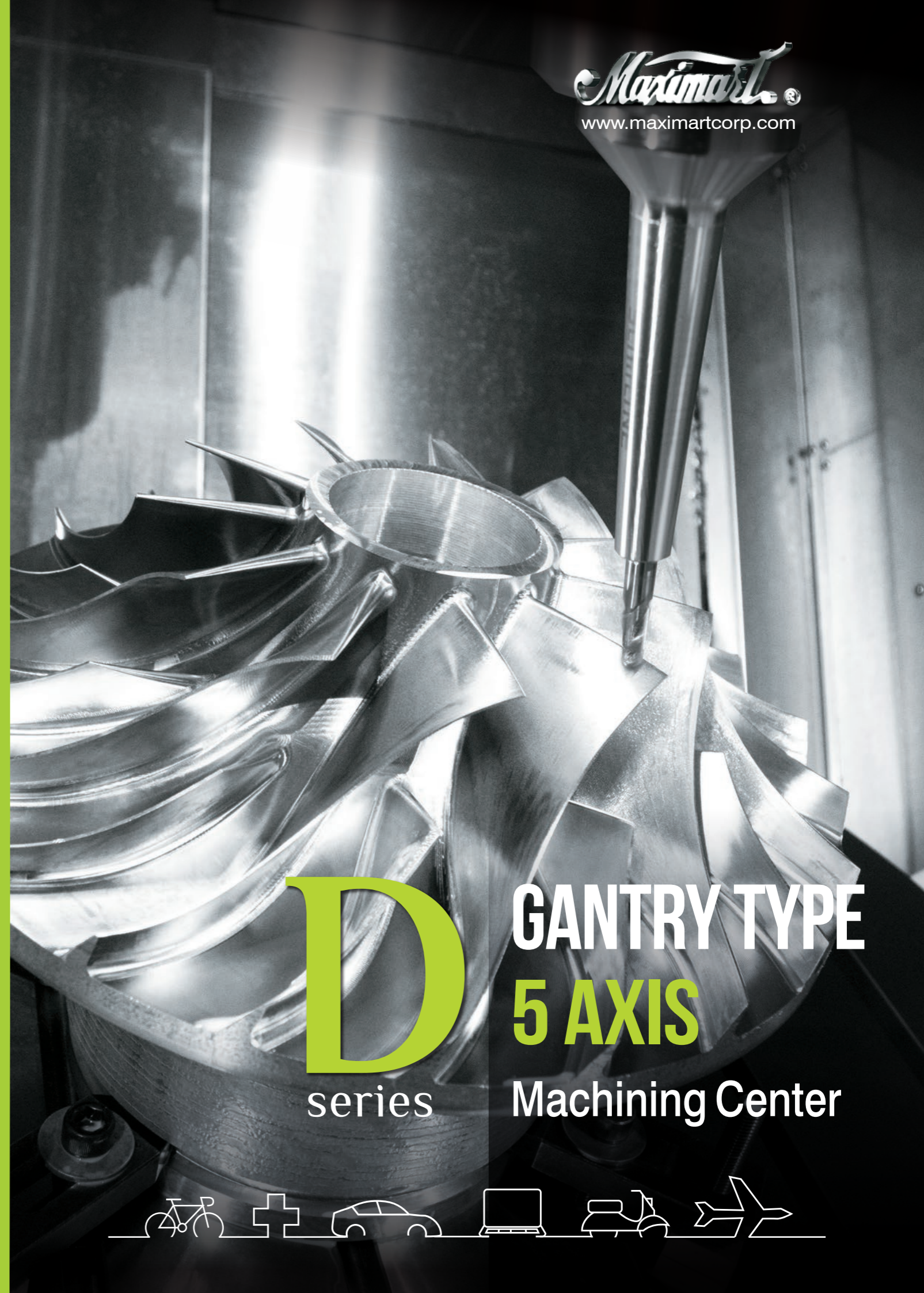
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CE/EMC ISO 9001



D
series

**GANTRY TYPE
5 AXIS
Machining Center**



D Dynamic Machining Performance series

> Large Workpiece 5 Axis Performance

This type of 5 Axis gantry type machining is especially suited to the requirements of workshops producing a wide range of components for Aerospace, Medical, Automotive and Energy Engineering Industries.

> Built-in Spindle

The built-in spindle is equipped with high power motor, delivering excellent cutting performance. With the integrated cooling system, the design ensures thermal stability during machining. Moreover, regarding the turning and milling capability, the hydraulic clamping system of the built-in spindle offers great stability and rigidity, promising accurate turning processes.

> Thermal Stability

The D series 5 Axis machining center feature cooling systems for both the ballscrews and the direct drive motors to eliminate the effects of thermal growth and maintain excellent precision in your machining.

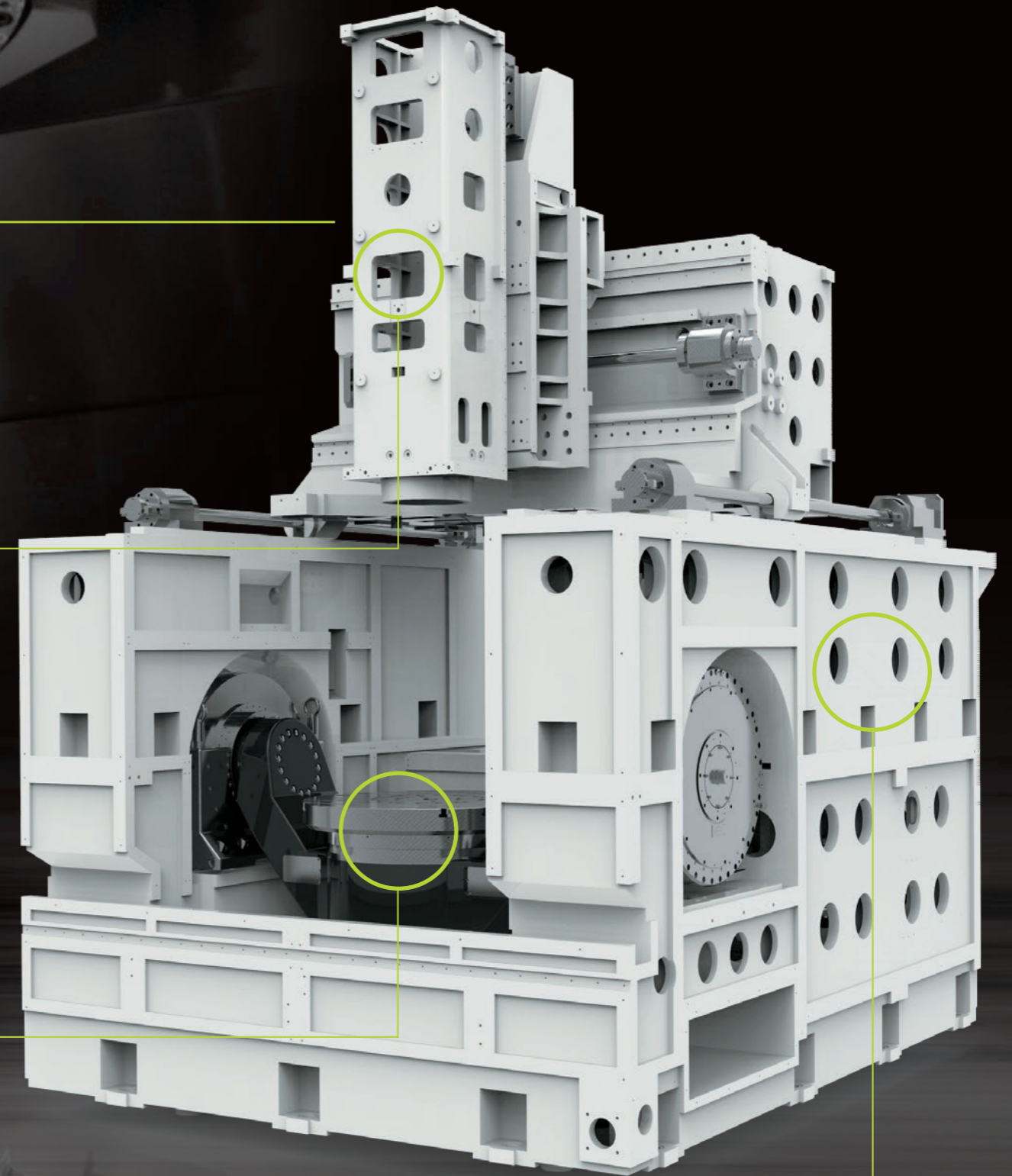
> Highly Rigid One-Piece Structure

The U-Type design of the structure on this machine delivers excellent thermal performance and stability under loading. This will deliver years of high precision performance in your workshop.

This design minimizes the floating effect during movement. The full integration of the rotary table into the base ensures excellent accuracy during machining.

> Servo Driven Tool Magazine

The servo driven tool magazine on this series delivers short indexing times and keeps the tools completely isolated from the work processing area to avoid contamination. The magazines come with 64/96/120 tool pockets to suit your complex machining requirements.



D Rotary Table series

> Extreme Multi Axis Precision

Multi Axis precision is vital in 5 axis simultaneous machining as any errors are multiplied by the synchronous movement. Rotary Swivel tables deliver the ultimate positional accuracy with heavy workpieces that you need to maintain the excellent precision your components need.

> Dynamic Performance

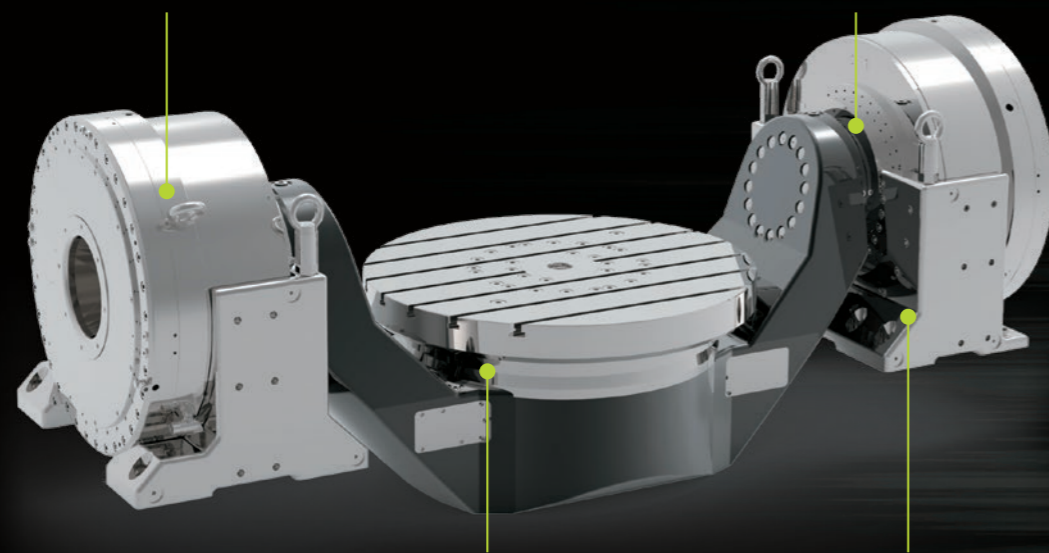
With the integration of the latest German torque motors on the rotary swivel tables of the D Series Machining center, you can achieve high acceleration and swivel speeds with the addition of the turning function for a truly versatile operational performance.

Besides, with the versatile rotary table that equipped with balancing and monitoring system, D-800T can process accurate milling and turning processes, achieving multiple machining. The D-800T mill-turn machining center can be applied to aerospace, automotive, and medical sectors, producing precision components in a productive tempo.

> Key Features

High Productivity – Rapid Acceleration

High Rigidity & Robust Design

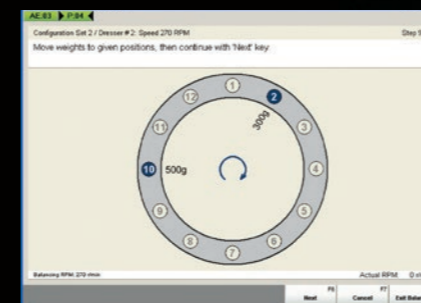


Extreme Accuracy – Positioning Performance

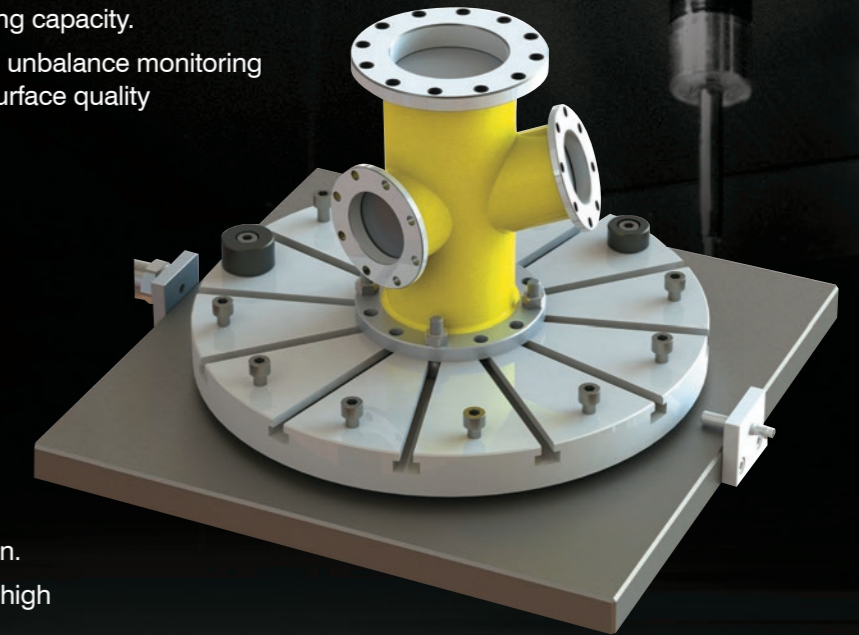
German Torque Motor Drive

D-800T Gantry Type Mill-Turn Machining Center series

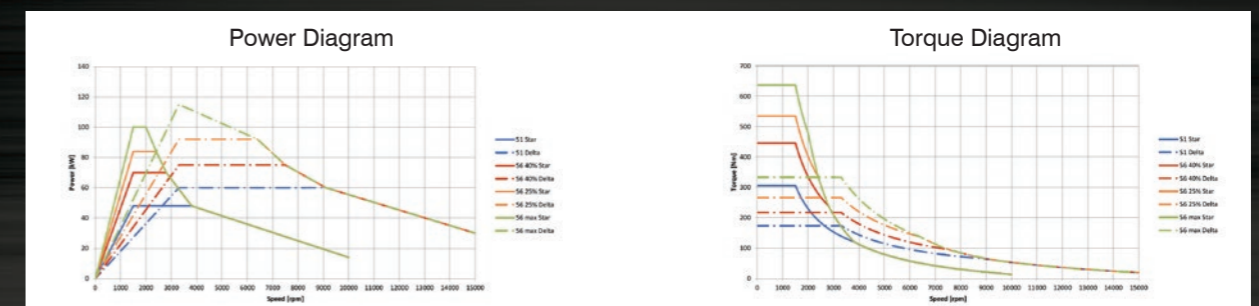
- Simultaneous 5-axis machining plus turning capacity.
- MARPOSS pre-balancing and continuous unbalance monitoring system ensures safety and workpiece's surface quality



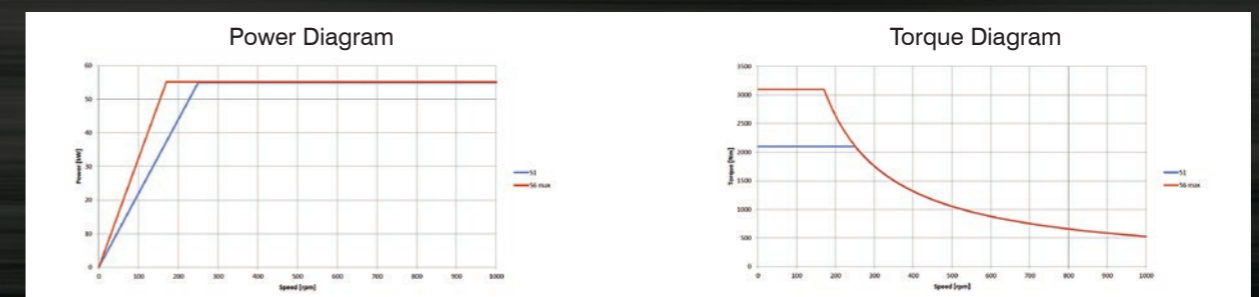
- Turning is performed with A axis not only 0 and 90 degree but 0~90 degree position.
- Fully cooling oil and water is provided for high accuracy turning.



> 15000rpm 48/70 kW High Power Milling Turning Spindle



> 1000rpm 55/55 kW Direct-drive Motor For Rotary Table



D-800

Gantry Type 5 Axis Machining Center

series

D-700

Gantry Type 5 Axis Machining Center

series



> Heidenhain TNC 640

- 19inch TFT colour flat screen
- Keyboard unit with full keyboard, integrated touchpad, USB and Ethernet interface
- 5 axis transformation machining and tilted workplane function
- Fully digital HSCI interface and EnDat interface
- Programming in Heidenhain conversation format or according DIN/ISO
- Standard drilling and milling cycles
- Touch probe cycles
- Free contour programming
- Dynamic collision monitoring
- Measurement cycle for improving accuracy of rotation & swivelling axes (KinematicOpt)



> Siemens 840 sl

- 19inch TFT Colour Flat Screen
- Keyboard Unit with Full Keyboard, Key-operated Switch and USB and Ethernet interface
- 5 Axis Transformation Machining and Tilted Workplane Function
- Machining Package 5 Axes Contains
- Multi-axis Interpolation
- ShopMill
- Residual Material Detection and Machining for Contour Pockets and Stock Removal
- 3D Simulation (Finished Part)
- Simultaneous Recording
- Advanced Surface Motion Control
- Additional HMI User Memory on Compact Flash Card of the NCU
- 3D Tool Radius Compensation
- Measurement Cycle for Improving Accuracy of Rotation & Swivelling Axes (Measure Kinematics)
- Spline Interpolation (A, B & C Splines)
- TANSMIT/Cylinder Surface Transformation
- Measuring Cycles for Drilling/Milling
- Collision Avoidance



D Technology Center

series



We have accumulated enormous application experience over the years and our machining experts can rapidly understand and design the perfect machining set up for your product.

> Investing in Quality

With the valuable feedback provided by our customers, and years of experience, technology center provides an excellent range of customized services.



> Machine Assembly & Testing

All Maximart machines are assembled by Maximart's skilled technicians in a temperature controlled production facility. During the assembly process, rigorous inspection and testing procedures ensure that each component and the assembled machines exceed customer expectations.

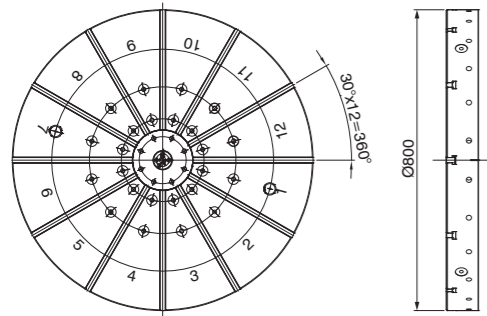
> Machining Testing / Comprehensive Tests

Maximart performs a series of precise machining tests on each machine before packing and shipping. This service is standard for all Maximart customers. The performance results of each machine as well as the workpiece are labelled and logged for reference.

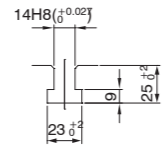
D-800T Dimensions

D-800 Dimensions

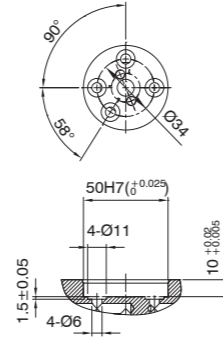
Unit: mm



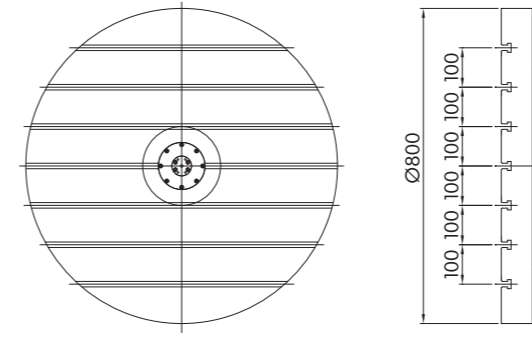
Center-hole Diameter



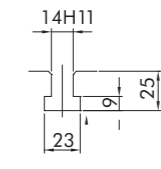
Width of T-Slot



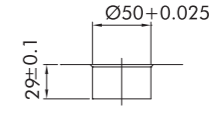
Center-hole Diameter



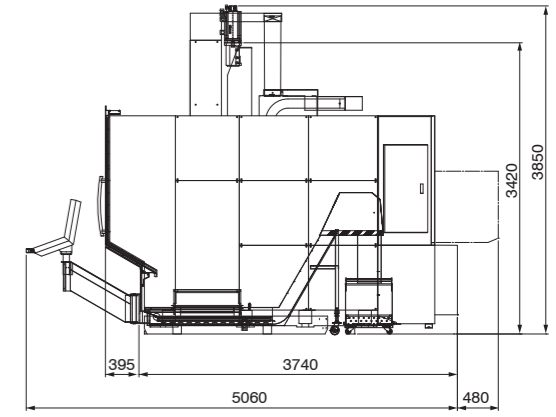
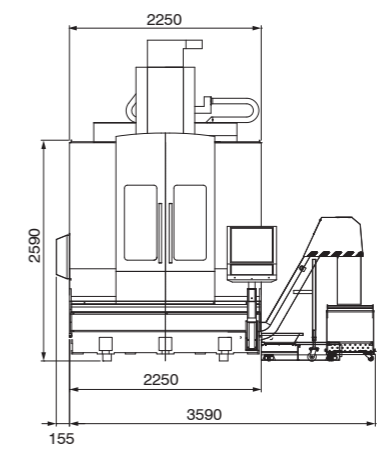
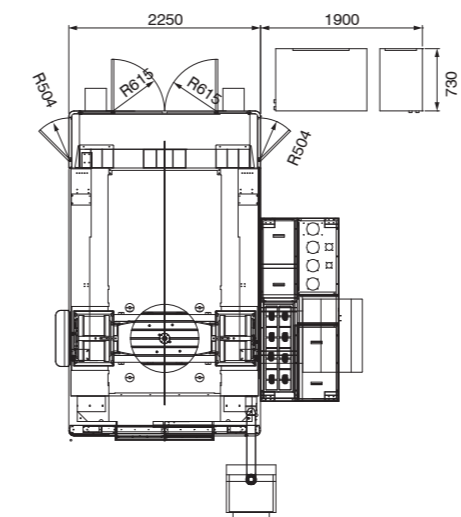
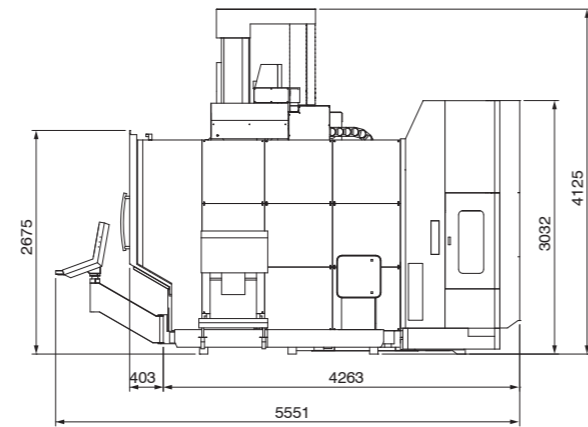
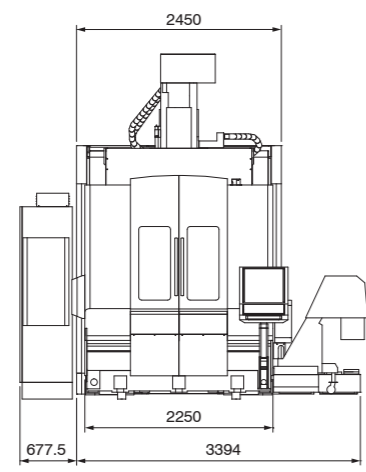
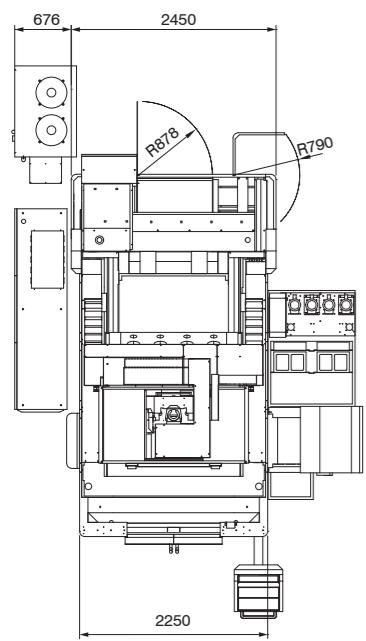
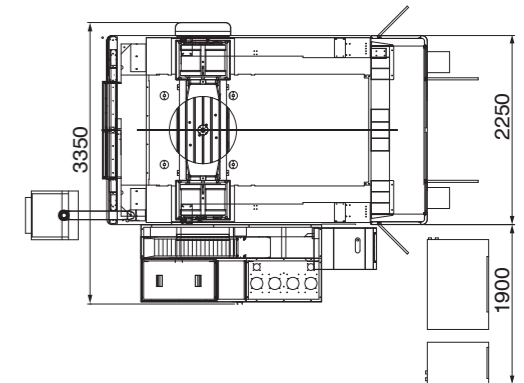
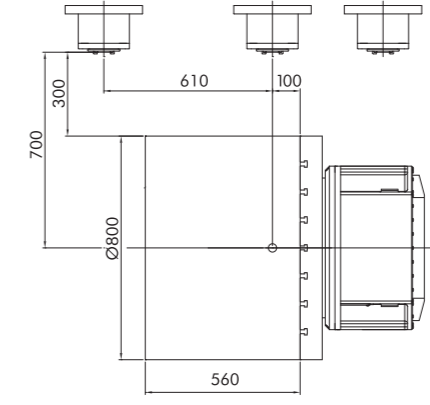
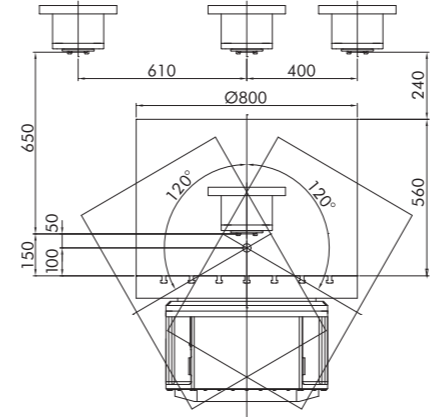
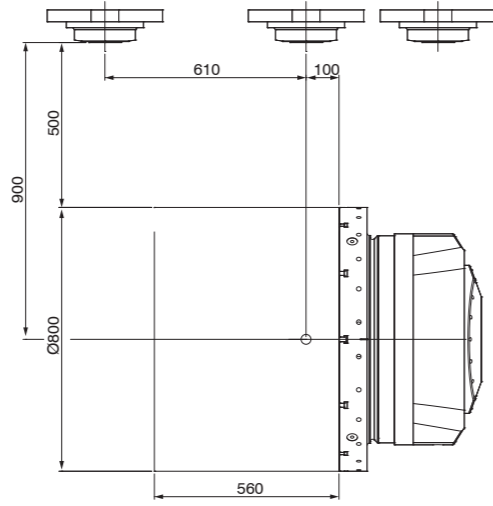
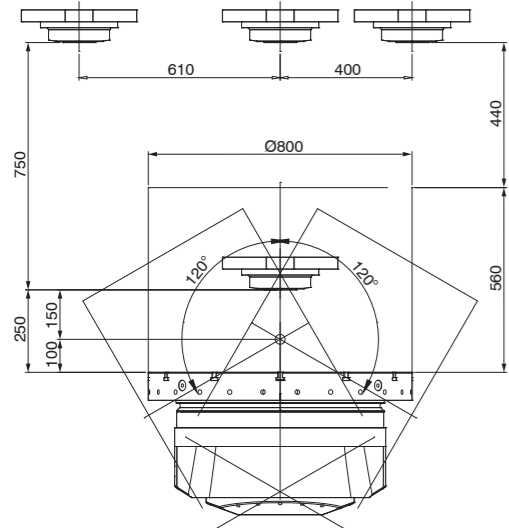
Center-hole Diameter



Width of T-Slot



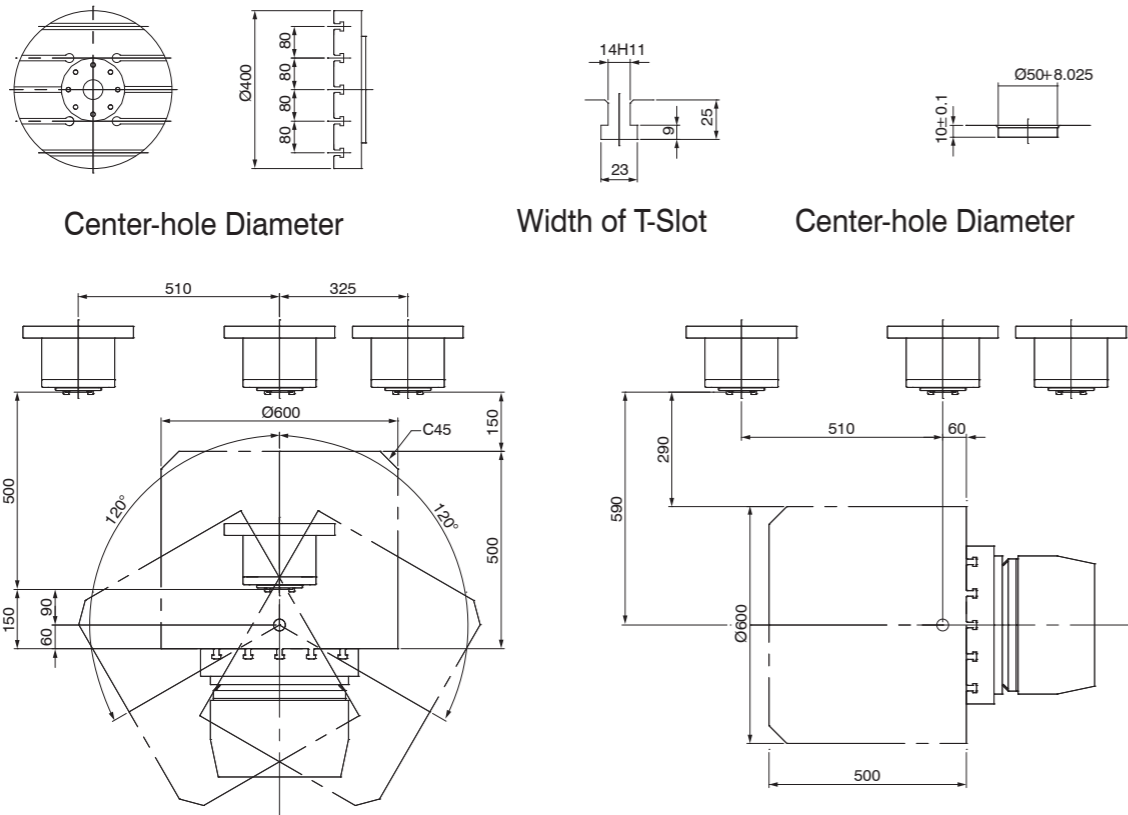
Center-hole Diameter



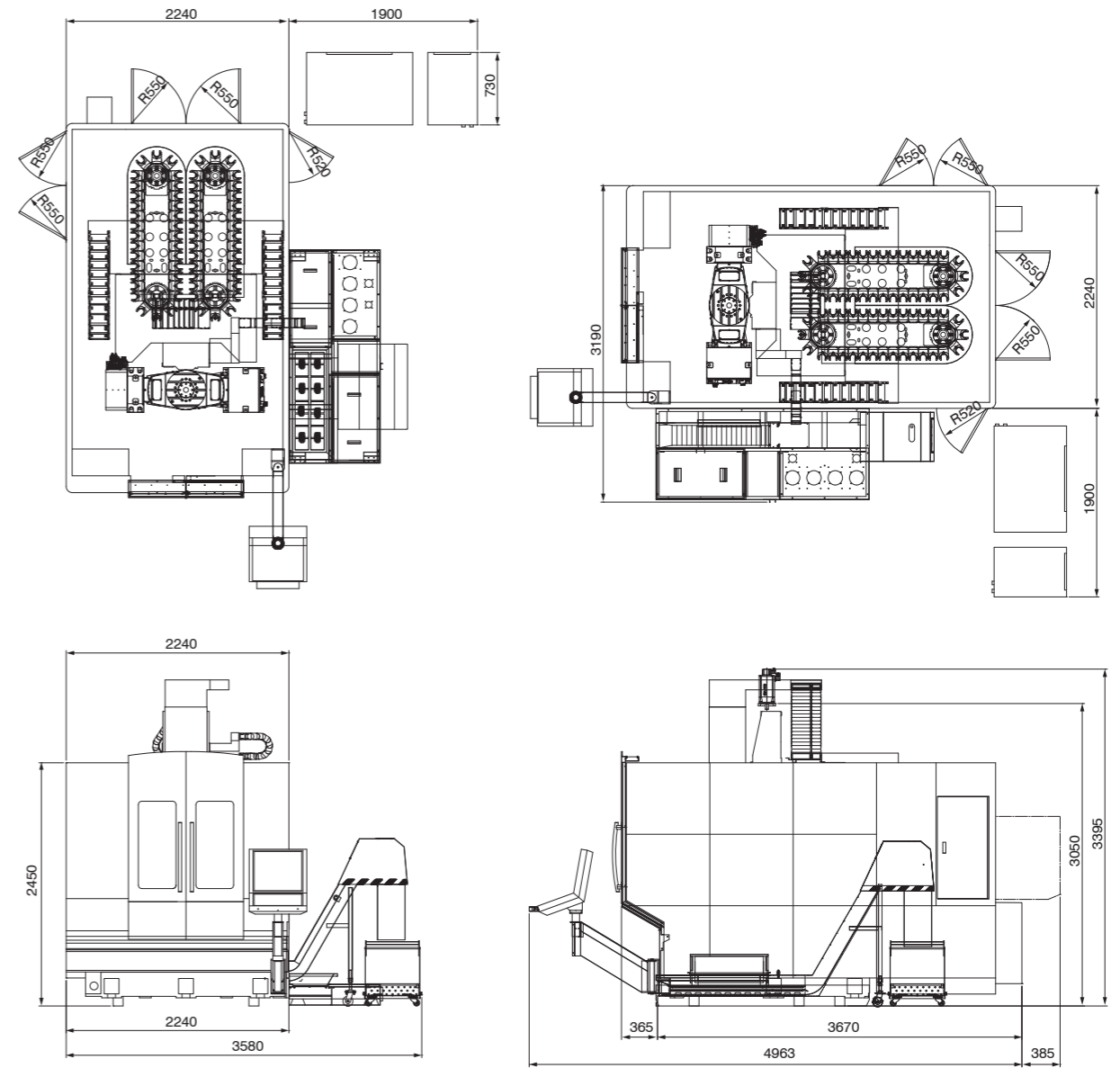
D-600 / 700 Dimensions

Unit: mm

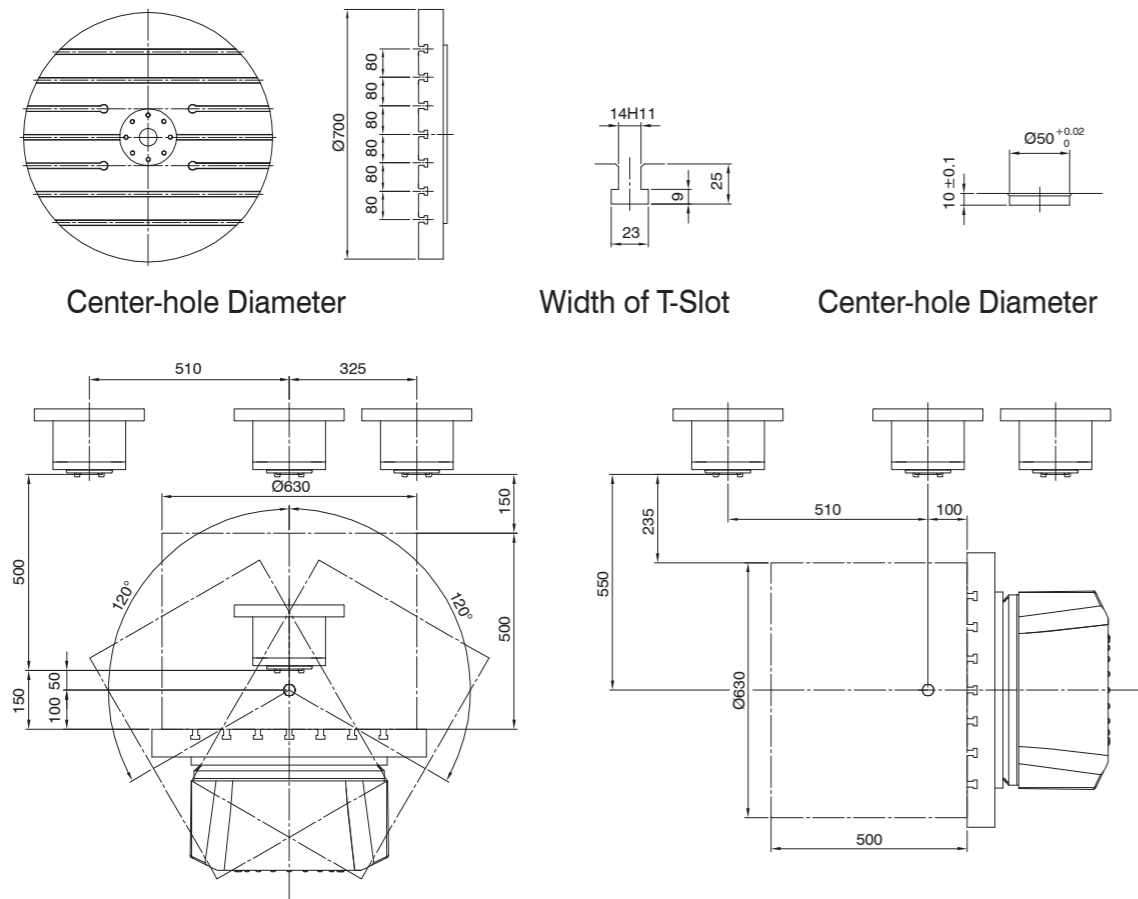
D-600



D-600/700



D-700



Specification & Accessories

ITEM / MODEL		D-600	D-700	D-800	D-800T
		Single Driven Table	Double Driven Table	Double Driven Table	Double Driven Table
Work Table					
Worktable Size	mm	Ø600	Ø700	Ø800	Ø800
T-Slot		14H11 x 7	14H11 x 7	14H11 x 7	14H8 x 6
Max. Workpiece	mm	Ø600 x H500	Ø600 x H500	Ø800 x H560	Ø800 x H560
Worktable Load	kg	500	850	1300	850(Turning)/1200(Milling)
Movement					
X Axis Travel	mm	600	650	800	800
Y Axis Travel	mm	835	835	1010	1010
Z Axis Travel	mm	450	500	650	750
Spindle Nose to Worktable	mm	200 ~ 650	150 ~ 650	150 ~ 800	250 ~ 1000
A Axis Rotating Angle		± 120°	± 120°	± 120°	± 120°
C Axis Rotating Angle		360°	360°	360°	360°
X/Y/Z Positioning Accuracy	mm	0.010	0.010	0.010	0.010
X/Y/Z Repeatability Accuracy	mm	0.006	0.006	0.006	0.006
A/C Positioning Accuracy	arc-sec	10	10	10	10
A/C Repeatability Accuracy	arc-sec	5	5	5	5
Spindle					
Spindle Taper		BBT40 / HSKA63	BBT40 / HSKA63	BBT40 / HSKA63	HSK T100
Max Spindle Speed	rpm	20000	20000	20000	15000
Spindle Drive Method		Built-in	Built-in	Built-in	Built-in
Spindle Power (S1-100% / S6-40%)	kW	25 / 35	25 / 35	25 / 35	48 / 70
Max Torque (S6-40%)	Nm	85 / 120	85 / 120	85 / 120	445
Feeds					
Rapid Speed (X/Y/Z)	M/min	32 / 32 / 32	32 / 32 / 32	48 / 48 / 48	48 / 48 / 48
Cutting Feed (X/Y/Z)	M/min	16	16	20	20
A Axis Max Speed	rpm	60	50	40	40
C Axis Max Speed	rpm	100	80	75	1000
A Axis Working Torque (R/M)	Nm	1040 / 2080	1040 x 2 / 2080 x 2	1870 x 2 / 3740 x 2	2380 x 2 / 4760 x 2
C Axis Working Torque (R/M)	Nm	401 / 800	1040 / 2080	1870 / 3740	2100 / 3100
A Axis Clamping Force	Nm	3200	3200 x 2	3500 x 2	4000 x 2
C Axis Clamping Force	Nm	2000	3200	2500	3500
A.T.C.					
Tool Magazine			64 / 96 / 120		88 / 176
Tool Change Mechanism			Drum driven by AC servo motor		Arm type
Max Tool Diameter & Empty Adjacent Tool	mm		100 (125)		125 (245)
Max Tool Weight	kg		7		25
Max Tool Length	mm		300		500
Cutting Coolant System					
Coolant Tank Capacity	L		350		
Coolant Motor			380V / 50Hz 1.08kW 2kg/cm ² - 100L/min 380V / 60Hz 1.62kW 3.2kg/cm ² - 100L/min		
Coolant Spray Gun			380V / 50Hz 0.85kW 2kg/cm ² - 67L/min 380V / 60Hz 1.27kW 3kg/cm ² - 67L/min		
Coolant Thru Spindle			20bar (380V / 50Hz 2.2kW / 60Hz 4.0kW) 50bar (380V / 50Hz 5.5kW / 60Hz 4.0kW) 70bar (380V / 50/60Hz 5.5kW)		
Chip Conveyor			Screw type 380V / 50/60Hz 0.2kW x2 Chain type / Scrape type 380V / 50/60Hz 0.2kW		
Others					
Power Consumption	kVA	40	45	55	75
Machine Size (w/swinging Control Panel)	mm	4963 x 2240 x 3395 (64T)	4963 x 2240 x 3395 (64T)	5060 x 2405 x 3850 (64T)	5551 x 2450 x 4125 (88T)
Machine Weight	kg	13500	14000	19200	20000

■ Above specification are for reference only, and are subject to change without prior notice.

ITEM / MODEL	D-600	D-700	D-800	D-800T
20 Bar CTS w/Change-over Inline Filter	●	●	●	●
Spindle Side Air Blow / Tool Unclamping Air Blow / Spindle Air Curtain	●	●	●	●
KESSLER Rotary-swivel Table	●	●	●	●
KESSLER Built-in Spindle (Germany)	●	●	●	●
Spindle Nose Coolant Jet Flushing & Front Side Coolant Nozzle	●	●	●	●
Extra Coolant Flushing Injection at Both Side of Spindle and Table	●	●	●	●
Spindle Cooling Unit	●	●	●	●
Automatic Grease Lubrication System for Guideways and Ballscrews	●	●	●	●
3 Axes Roller-type Guideway	●	●	●	●
64 Tool Magazine	●	●	●	—
88 Tool Magazine	—	—	—	●
Chain Type Chip Conveyor	●	●	●	●
A/C Axis with Heidenhain Angle Encoder	●	●	●	●
Laser Tool Setting System	●	●	●	●
Workpiece Measurement System and Calibration Ball	●	●	●	●
Machine Window with Safety Glass	●	●	●	●
Auto Power Off	●	●	●	●
Z Axis Brake Motor Without Counter-balance Block	●	●	●	●
Ethernet Port	●	●	●	●
Rigid Tapping	●	●	●	●
3-Color Warning Lamp	●	●	●	●
LED Work Lamp	●	●	●	●
Tools & Tool Box	●	●	●	●
Spray Gun	●	●	●	●
CE/EMC Conformity	○	○	○	○
Chip Cart	○	○	○	○
Transformer	○	○	○	○
Voltage Regulator	○	○	○	○
Oil-mist Coolant System	○	○	○	○
Oil-mist Filtering & Recycle System	○	○	○	○
Cutting Fluid Cooling System	○	○	○	○
Coolant Purification System	○	○	○	○
C1 Class Ballcrews w/Ceramic Ball	○	○	○	○
Ballscrews with Internal Cooling System	○	○	○	○
THK Roller Type Linear Guideway	○	○	○	○
176 Tool Magazine	—	—	—	○
96 / 120 Tool Magazine	○	○	○	—
Absolute Type X, Y, Z Axes Optical Scale	○	○	○	○
Centrifugal Tank for 20 Bar CTS	○	○	○	○
50 bar or 70 bar CTS w/Paper Filter Tank & Proportional Pressure Control Valve	○	○	○	○

■ Checking sign ● is for Standard Accessories. ○ is for Optional Accessories