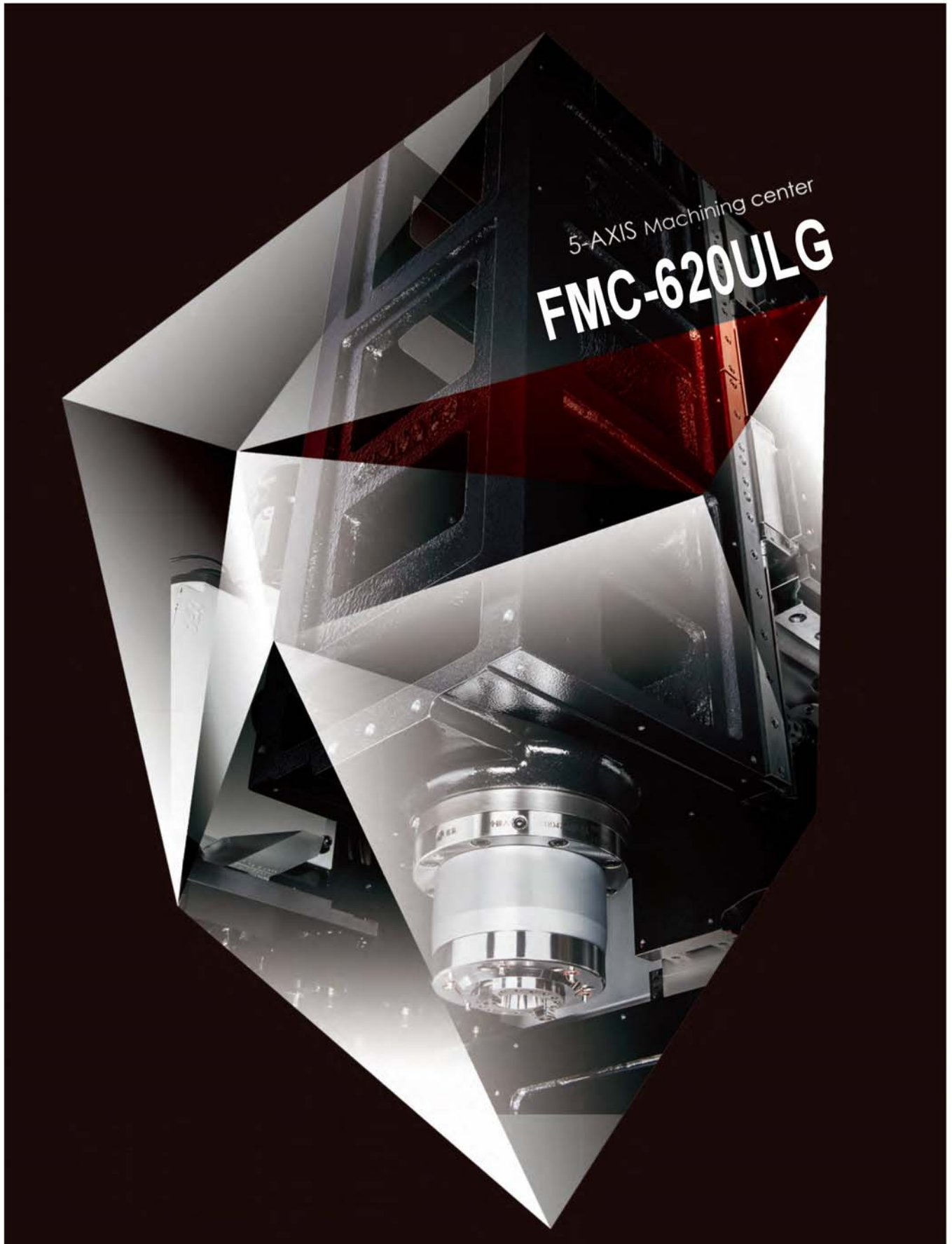




5-AXIS MACHINING CENTER U SERIES



5AXIS MACHINING CENTER

PHOENIX 5-axis machining center offers high speed, high accuracy, reliable quality, easy operation and maintenance.



FMC-620ULG

► B / C-axis

High performance B / C-axis rotary working table. Table load capacity is up to 300 kg (0° ~ 45°). B-axis swiveling range is -50° ~ +110°.

FMC-620ULG ▶



▶ Door

Double door design is more convenient for loading and unloading workpiece.

▶ Control Panel

Control panel with **160°** swivel design can ensure convenient operation for workers.



FULL ENCLOSED GUARDING



▶ LHL

Standard with LHL lubrication. 90% less oil than the normal lubrication system.

Pump motor consumes 80% less electricity.



Emergency stop for operator's safety.



▶ Roller type linear guide ways

The Linear Motion Guideways feature low friction and free from stick-and-slip problems. Such the characteristics are especially suitable for high speed 3D cutting and finishing. The quality of workpiece surface is increased; the need of manual polishing of workpiece surfaces is reduced.

3-Axis

Standard with roller type linear guide ways which feature low friction and free from stick-and-slip problems. Such characteristics are especially suitable for high speed 3D cutting. The surface finishing result has become remarkable. The need of manual polishing is unnecessary.



Strong linear guide way block gives full support of Head casting.
X / Y / Z rapid feed rate 36 m/min.

Movable column C-shape structure design

Movable column C-shape provides the best rigidity.

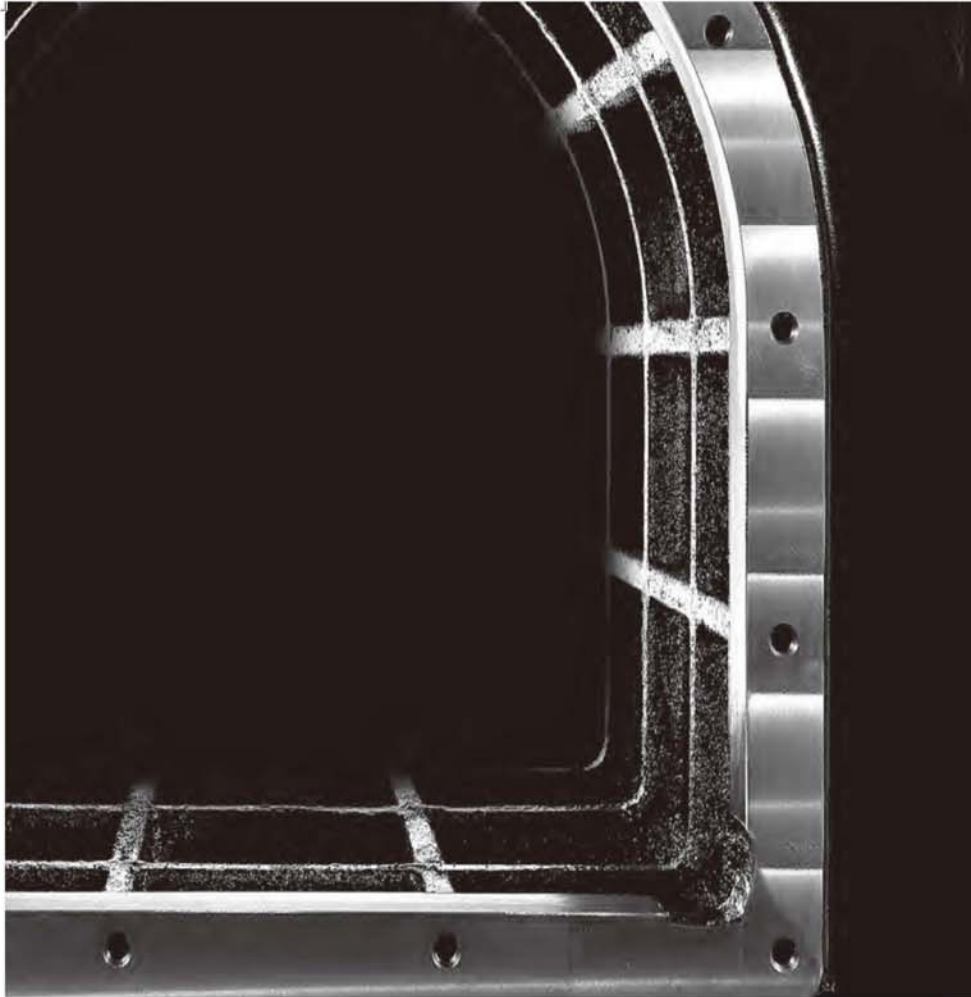
Rotary table with one-piece iron casting provides excellent ductility and greater anti-vibration ability.

Standard table 650mm(25.59").

Base slope designs

Machine base slope design and standard with high pressure chip wash down efficiently removes tiny chips and ensure the cleaning of the machine.



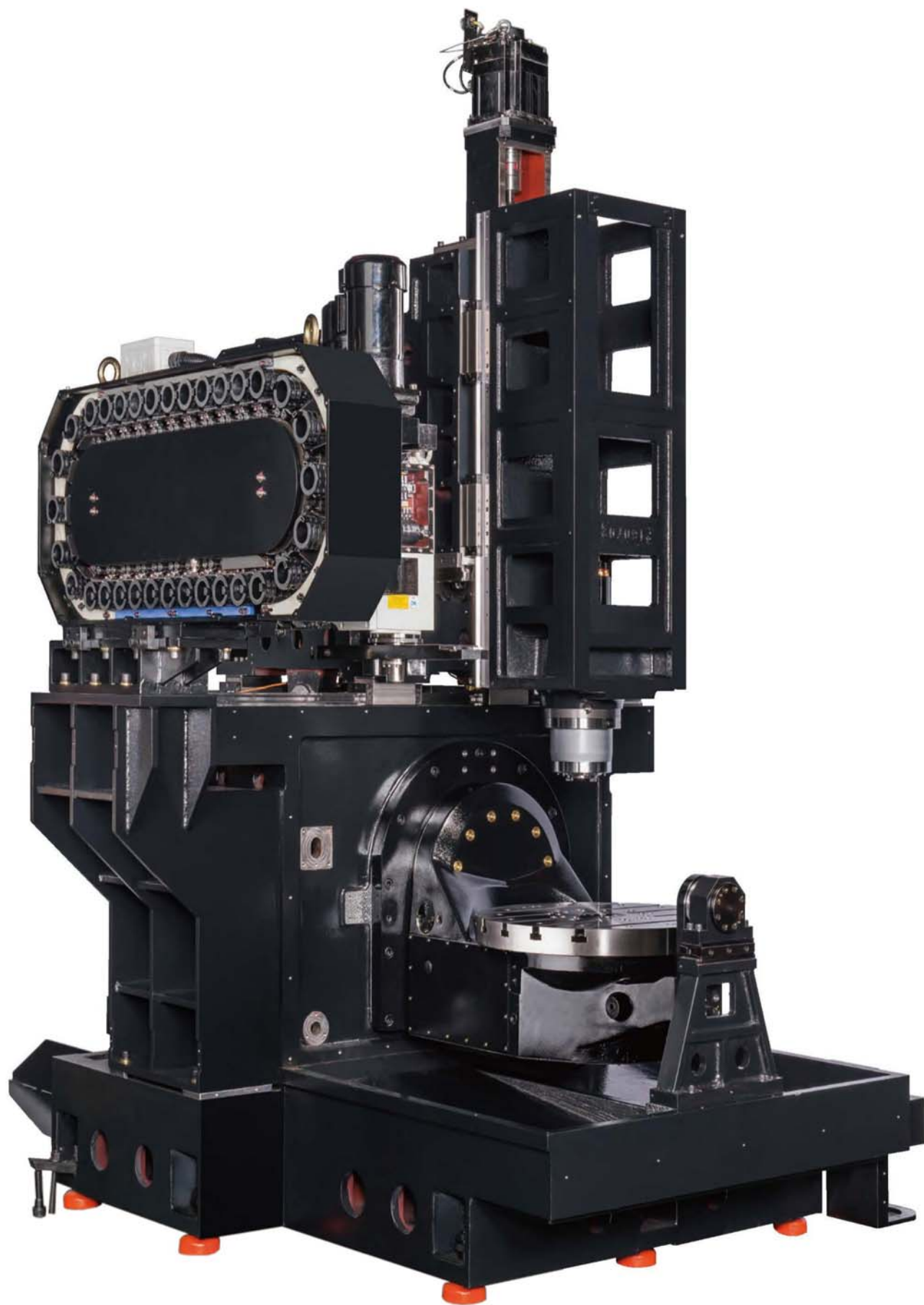


Mechanical strength of machine

Guided by Finite Element Analysis and utilizing high tension Meehanite casting structure allows one-piece bed, column and saddle to reach optimal design. Mechanical strength of machine can sustain extremely heavy cutting while maintaining long-term excellent accuracy.

Column adopts one-piece thick ribs structure with 4 large-sized linear blocks on each side well support saddle which remains steady while fast movement machining on Y-axis.

X / Y / Z axes are direct driven by AC servo motor with absolute encoder, which provides powerful thrust and fast acceleration.



Spindle

BBT40 taper provides a firmer grip to the tools, which prevents tool vibration that affects machining accuracy. Spindle can option with direct type or build-in type.

Spindle type: Direct Drive Spindle

Max. rpm: 12000rpm

Controller: HEIDENHAIN TNC640

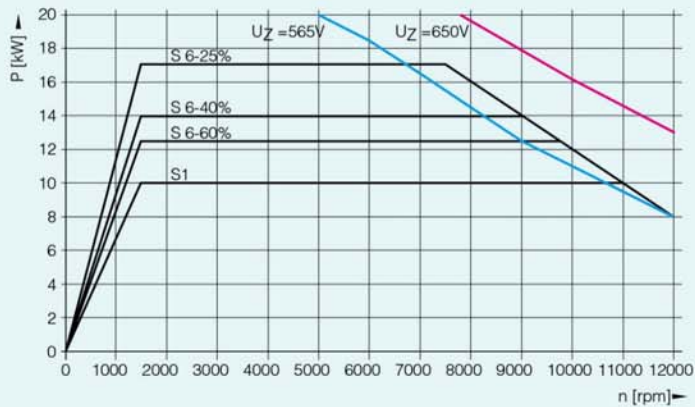
Workpiece material: Aluminum

Duty Cycle Speed n Power P Torque M Current I

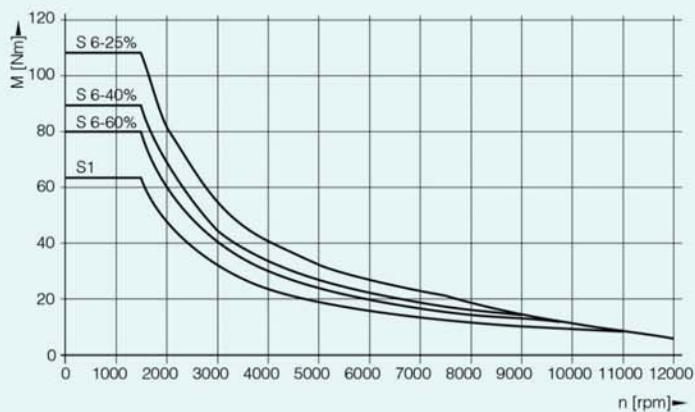
S1	1500 rpm	10.0 kW	63.7 Nm	25.0 A
	11000 rpm	10.0 kW	23.9 Nm	-
	12000 rpm	8.0 kW	6.4 Nm	-
S6-60 %	1500 rpm	12.5 kW	79.8 Nm	29.0 A
	9800 rpm	12.5 kW	12.2 Nm	-
	12000 rpm	8.0 kW	6.4 Nm	-
S6-40 %	1500 rpm	14.0 kW	89.4 Nm	32.0 A
	9000 rpm	14.0 kW	19.1 Nm	-
	12000 rpm	8.0 kW	6.4 Nm	-
S6-25 %	1500 rpm	17.0 kW	108.6 Nm	37.0 A
	7500 rpm	17.0 kW	21.7 Nm	-
	12000 rpm	8.0 kW	6.4 Nm	-

Above chart is based on Heidenhain QAN200U

Power chart



Torque chart



Above chart is based on Heidenhain QAN200U

Batman Cutting data

Tools	Value	Feed	Deep
D25R5	V=298m/min	F=2000 m/min	d=0.8mm
D12R1	V=248m/min	F=2500 m/min	d=0.8mm
R5	V=314m/min	F=1500 m/min	d=0.5mm
R3	V=188m/min	F=1500 m/min	d=0.1mm





FMC-620ULG

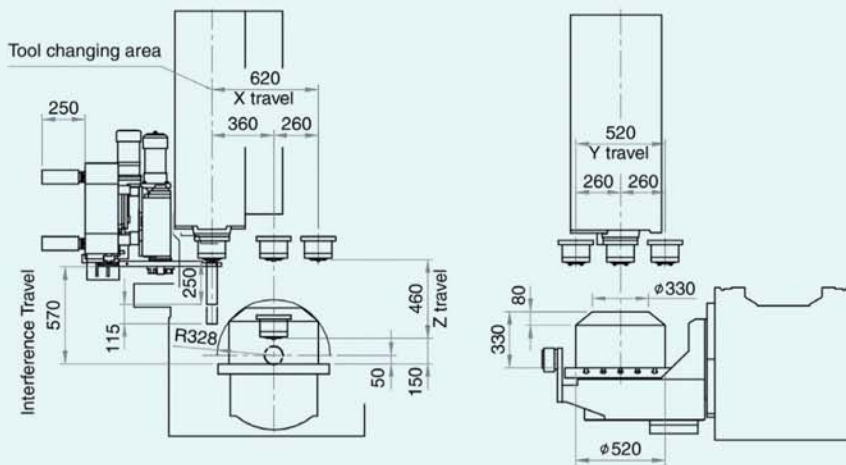
Standard Accessories

- BC axes with encoders
- Heat exchanger
- Remote handwheel
- Central lubrication system
- Full guarding (without top cover)
- High pressure water scour for chip removal
- Chip conveyor
- Coolant gun
- Air gun
- Spindle oil cooler
- LED work light
- Program light 3 colors
- Leveling bolts & plate
- Tools & box

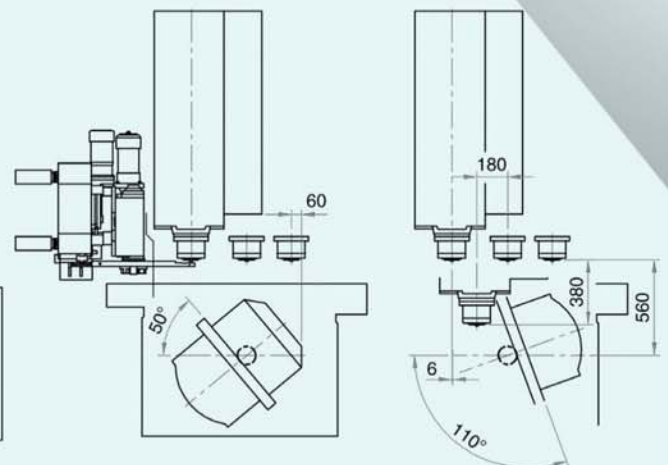
Optional Accessories

- CTS30BAR
- CE
- Linear scales
- Chain type ATC 40T & 60T
- Air conditioner for electrical box

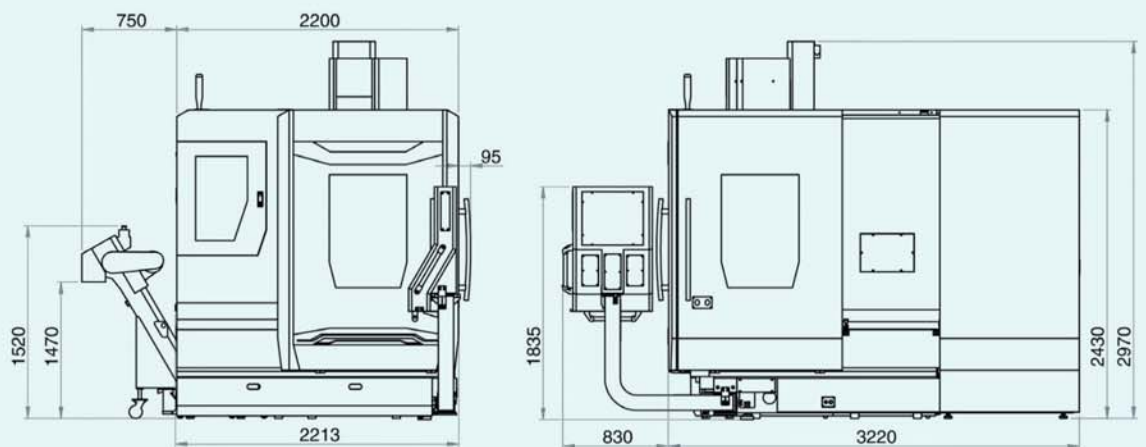
Cutting Area



Interfere Area



Machine Dimension



mm

Specifications

Model	Unit	FMC-620ULG
X/Y/Z travel	mm	620/520/460 (24.4/20.4/18.1 inch)
3 axis slide ways		Linear guide (roller type)
Table size	mm	ø650 (25.5 inch)
Spindle center to column surface	mm	150~610 (5.9~24 inch)
B axis swiveling range	deg	-50°~+110°
C axis rotary range	deg	360°
Table load capacity (Horizontal)	kg	300
Table load capacity (Tilting)	kg	200
Rapid feed rate (X/Y/Z)	m/min	36/36/36
T slot (Q'ty×size×Dist)		5×18×100
Cutting feed rate	m/min	1~15000mm
ATC storage capacity		32T
Max. tool size (Full)	Mm	Ø75 (2.9 inch)
Max. tool size (Next empty)	Mm	Ø125 (4.9 inch)
Max. tool length	mm	250 (9.8 inch)
Max. tool weight	kg	7
Spindle taper		BBT40
Spindle speed	rpm	12000 (opt 15000, 24000)
Spindle motor	kw	10 / 12.5
Spindle transmission		Direct type (opt Build-in)
Machine dimensions (approx.)	mm	4250x4120x3100 (167.3x162.2x122.0)
Machine net weight (approx.)	kg	8200

• The manufacturer reserves the right to modify the design, specifications, mechanisms...etc. to improve the performance of the machine without prior notice. All the specifications shown above are just for reference.



**TOP PHOENIX
INTERNATIONAL CORP.**
Machinery Exporter & Importer

No. 48-3, Wayao Rd., Dali Dist.,
Taichung City 412, Taiwan
E-Mail: sales@topphoenix.com.tw; topphoenix24@gmail.com;
top.phoenix@msa.hinet.net
http://www.topphoenix.com.tw
Tel: 886-4-2406-5028 (Rep.) Fax:886-4-2406-5019

Aug.-2020