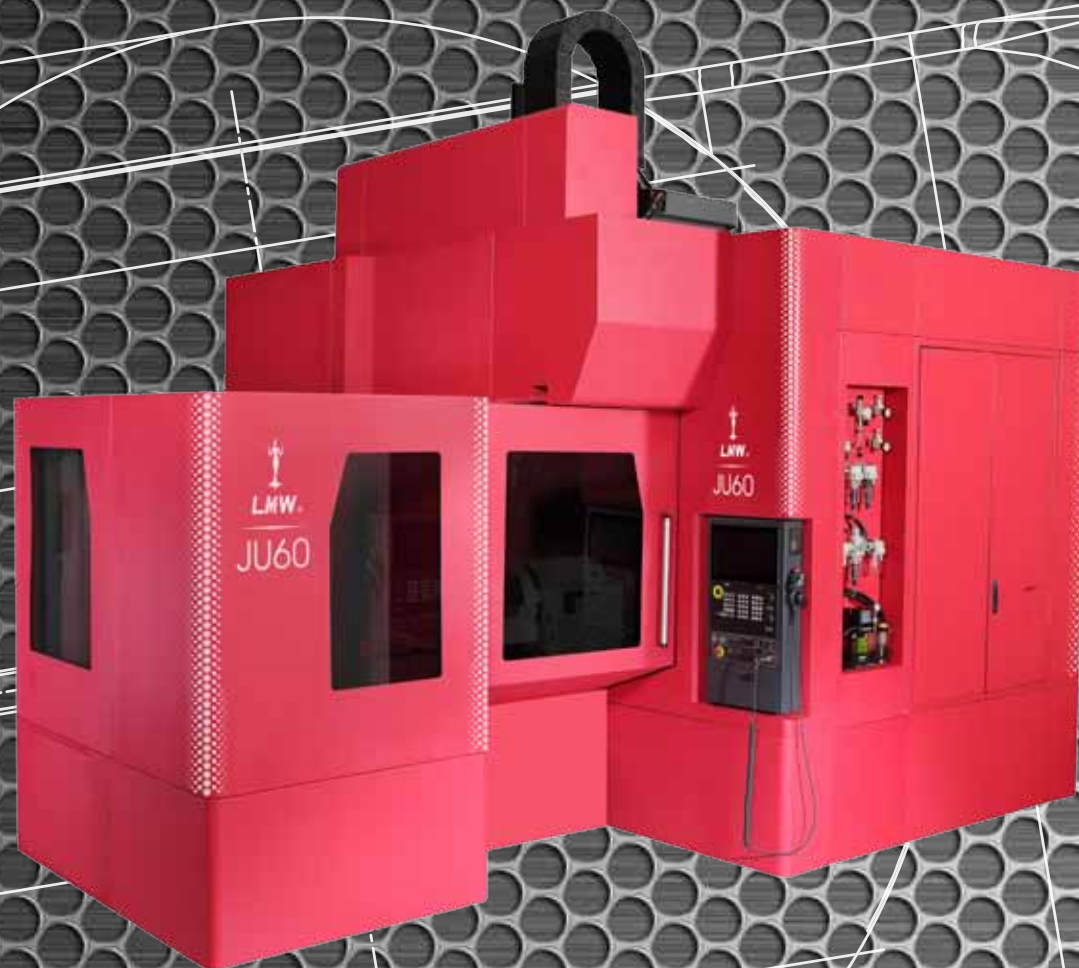




JU Series

5-Axis Machining Center



JU60



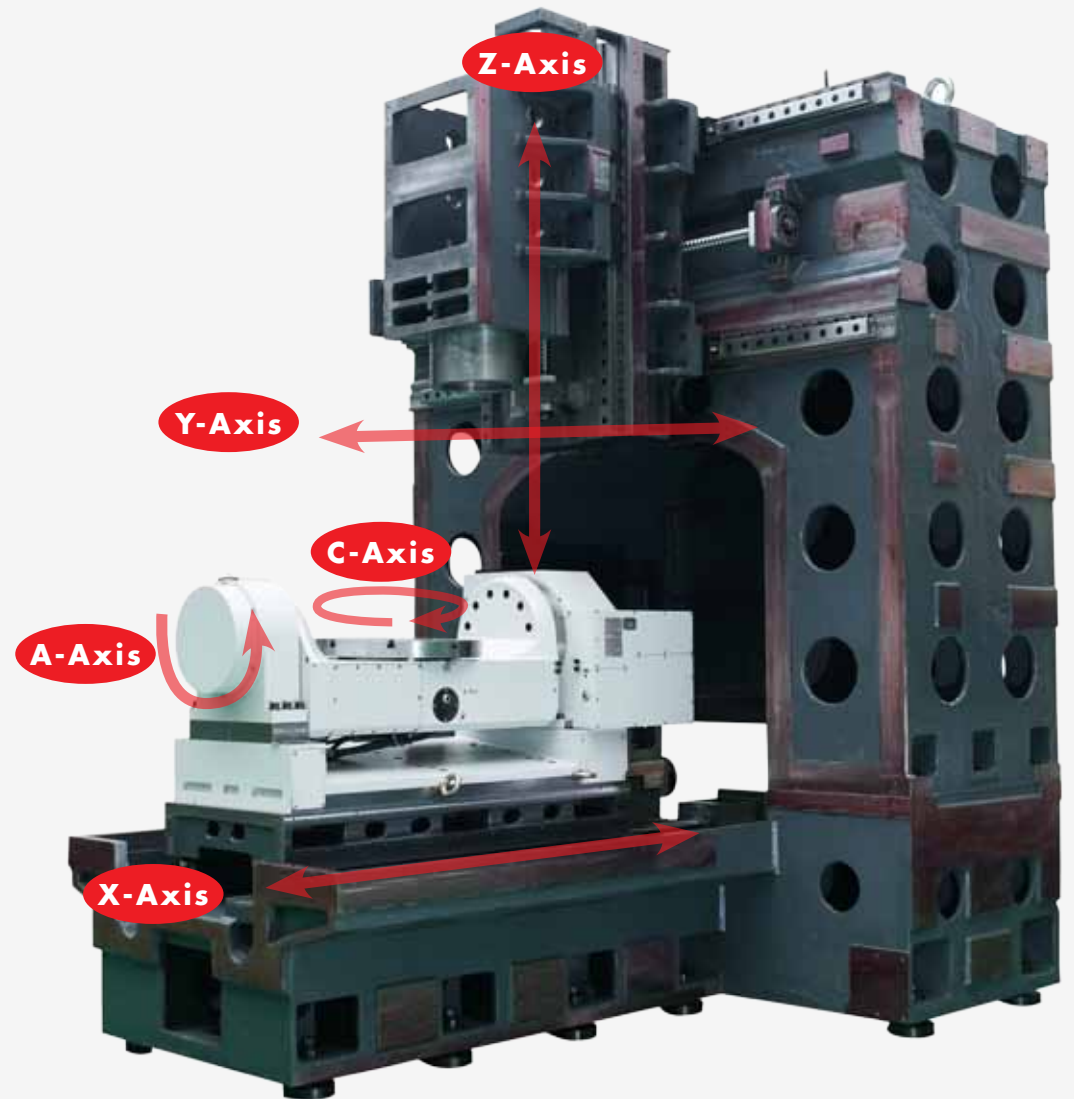
ACCURACY AND PERFORMANCE

Market is demanding for speed and accuracy in complex shape machining.

The new JU60 5 Axis vertical machining centre provides efficient and quality machining performance.

FEATURES

- ◇ 5 axes Simultaneous
- ◇ Built in Spindle (15,000 rpm)
- ◇ Ideal axes layout with two spindle axes and three table axes
- ◇ Symmetrical Structure for Thermal stability
- ◇ Linear scale
- ◇ Automatic tool changer (40 Tools)
- ◇ BBT 40 spindle taper for higher accuracy
- ◇ Higher Rapid traverse rate (X, Y & Z - 30, 48 & 48 m/min)
- ◇ Pre loaded axial & radial roller bearing to withstand the load exerted during machining
- ◇ Trunnion type both end supported A axis table
- ◇ Larger clamping area (Dia 500 mm)
- ◇ Siemens 840 D control system



JU60



DESIGNED TO PROVIDE ACCURACY & SPEED DEMANDED FOR 5 AXIS MACHINE

The number of operations and setups can be reduced by multi (5) face machine is possible in a single work piece setup

Stability

- ◇ FEM analyzed bed structure
- ◇ Symmetrical cast iron structure
- ◇ Minimised thermal deformation
- ◇ High Rigidity to resist heavy cutting loads

Ideal axes layout with two spindle axes and three table axes

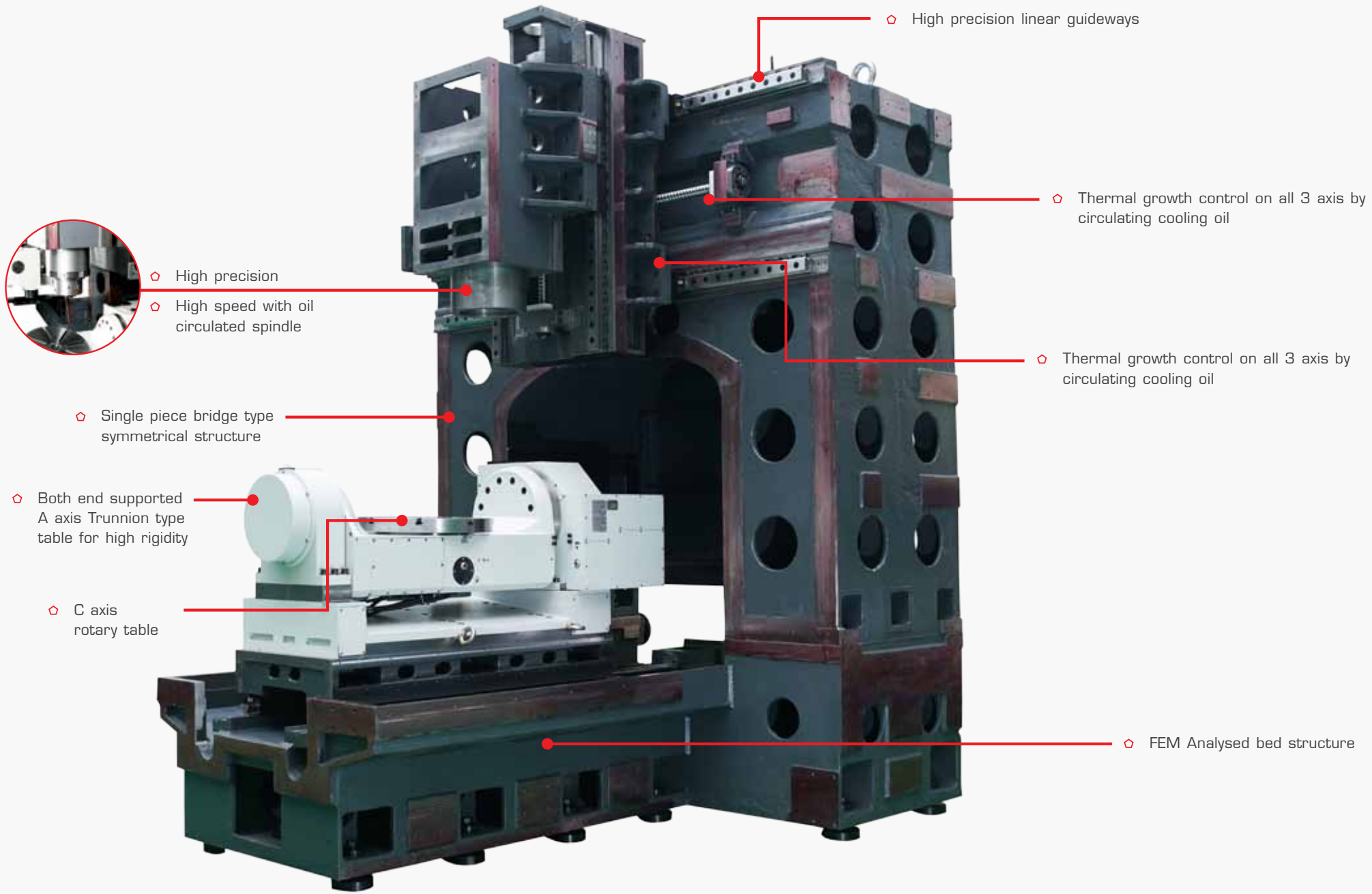
- ◇ The Y and Z axes are provided by the spindle and X, A and C axes by the table. This axes design has adapted considering the inertia and cumulative error at the spindle nose position.
- ◇ The A-axis positioned parallel to the X-axis to avoid pendulum motion by the grade when the X-axis moves at high rapid rate.

Speed

- ◇ 15000 rpm built in motor spindle
- ◇ 23.6 kW spindle power
- ◇ 120 Nm torque
- ◇ Higher Rapid traverse rate (X, Y & Z - 30, 48 & 48m/min)

Accuracy

- ◇ Linear scale optical direct measurement system for X,Y and Z axes
- ◇ Cooling system reduces operating heat at source by circulating a large volume of temperature control cooling oil to
 - Spindle Jacket
 - Spindle Motor Stator
 - Axes Motor Flange
 - Ball Screw nutswhich reduces Thermal error at greater dimension
- ◇ BBT 40 Spindle
- ◇ Positioning accuracy 0.010 mm (ISO230/2)



- ◇ High precision
- ◇ High speed with oil circulated spindle

◇ High precision linear guideways

◇ Thermal growth control on all 3 axis by circulating cooling oil

◇ Thermal growth control on all 3 axis by circulating cooling oil

◇ Single piece bridge type symmetrical structure

◇ Both end supported A axis Trunnion type table for high rigidity

◇ C axis rotary table

◇ FEM Analysed bed structure

JU60



ULTIMATE IN SPEED, VERSATILITY AND PRODUCTIVITY

Die & Mould



Car Tyre Mould

5 Axis simultaneous processing, the projection carving quality.

Medical



Artificial Knee Joint

5 Axis simultaneous machining skew

Aerospace



Blade

Long thin blade processing

Energy



Blade

5 Axis simultaneous processing using blade processing method



JU60



SPECIFICATIONS



Axes & Table

Table Size	mm	Ø 500
Maximum Workpiece Dimension	mm	Ø 650 x 500
Load Capacity	kg	300
X-axis Travel	mm	720
Y-axis Travel	mm	1030
Z-axis Travel	mm	500
A-axis Table Indexing Angle	deg	+30° to -120°
C-axis Table Indexing Angle	deg	360°
Rapid Traverse (X,Y,Z)	m/min	30, 48 & 48
Max. Table Speed (A,C)	rpm	11,16

Spindle

Spindle Type		BBT - 40
Max. Spindle Speed	rpm	15000
Spindle Output Power	kW	23.6
Spindle Torque Max.	Nm	120
Bearing inner diameter	mm	70
Spindle Transmission		Built-in Motor

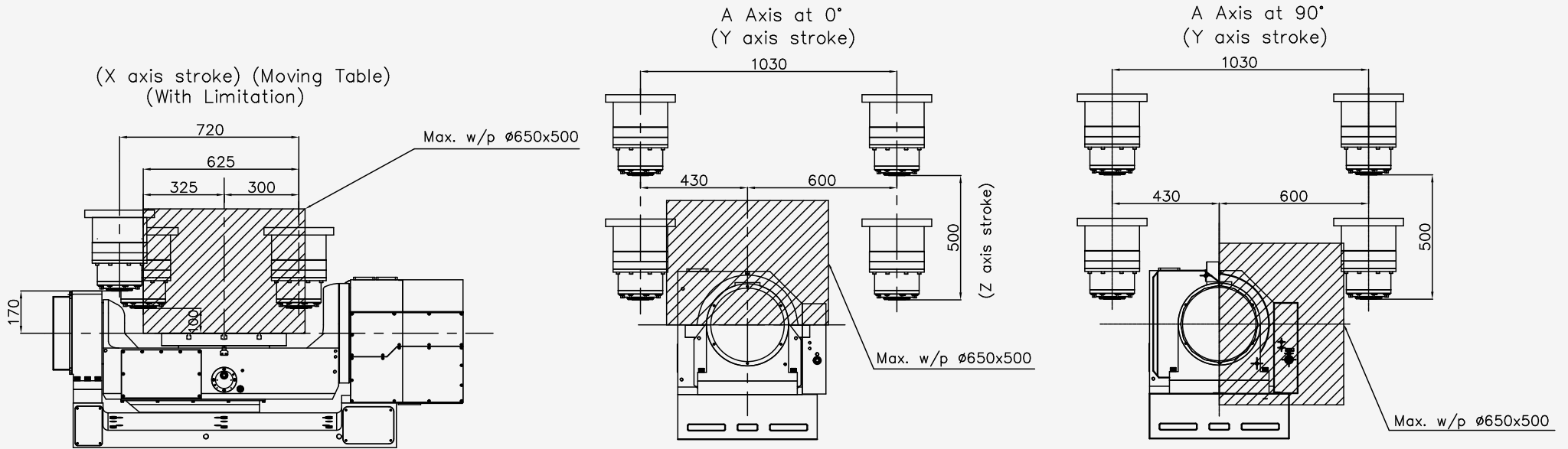
Tool Changer

No. of Tools	No.	40 (60)
Max. Tool Diameter	mm	127
Max. Tool Length	mm	300
Max. Tool Weight	kg	7
Tool to Tool time	sec	3

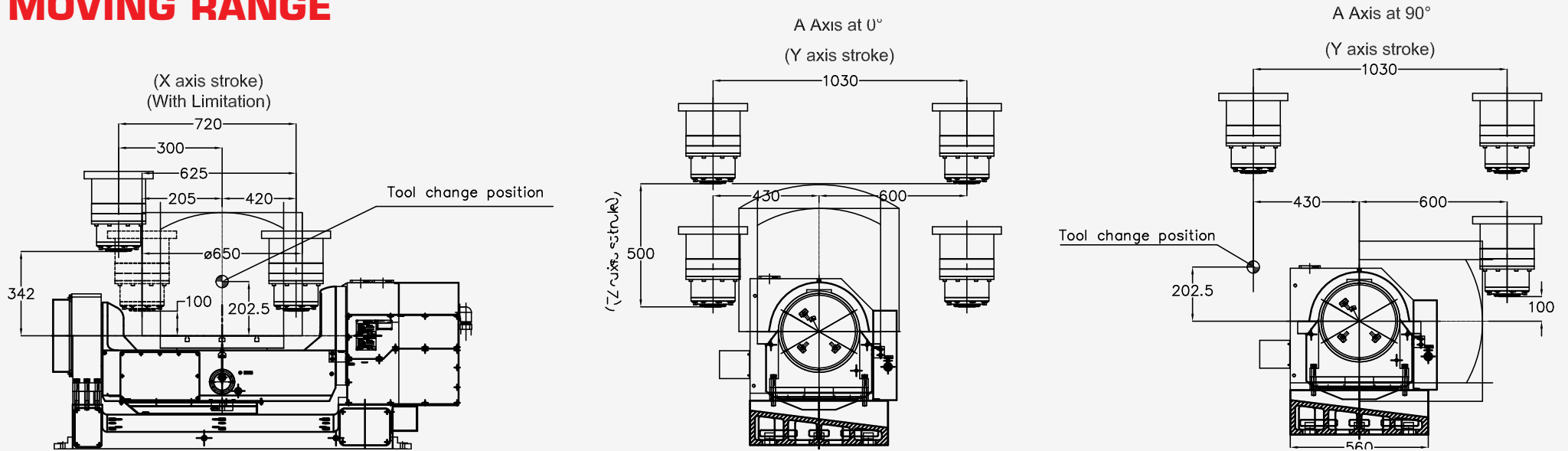
CNC Controller

- ◇ Siemens 840 D SL
- ◇ 5 axes Simultaneous machining
- ◇ Advanced Surface motion control
- ◇ 3D tool radius compensation
- ◇ 3D simulation (finished part)
- ◇ Residual material detection
- ◇ 15" Monitor with LCD Touch Screen

INTERFERENCE DIAGRAM



MOVING RANGE



JU60



STANDARD AND OPTIONAL ACCESSORIES

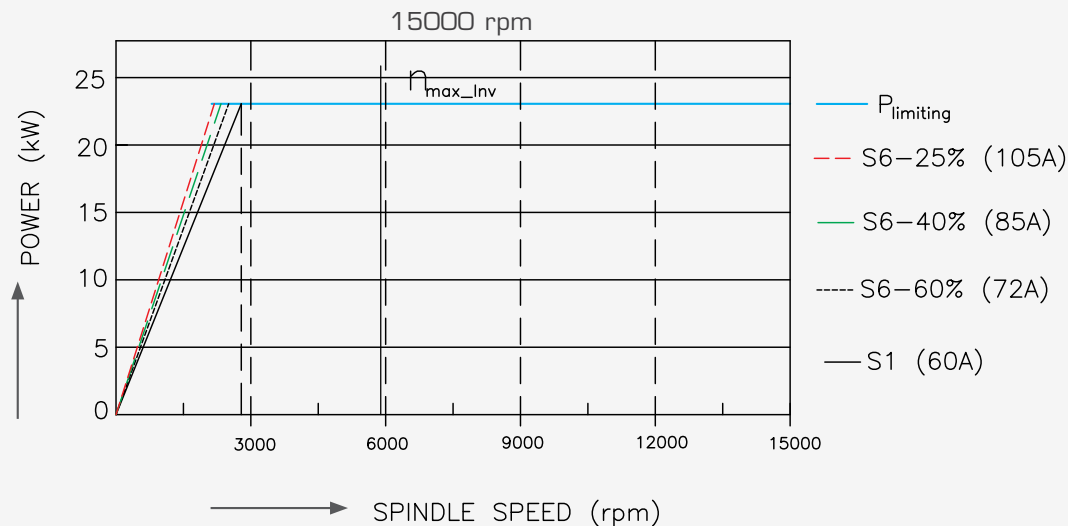
Standard

- ◇ Built in motor spindle 15000 rpm
- ◇ Trochoid type High pressure coolant pump for coolant thru spindle - 25lpm 4bar
- ◇ Air curtain for main spindle
- ◇ Spindle air blow
- ◇ Ball LM guide for linear axis
- ◇ Automatic centralised oil lubrication
- ◇ Direct driven axes with rigid coupling
- ◇ 40 tool ATC
- ◇ Hydraulic system
- ◇ Hydraulic counter balance
- ◇ Pneumatic system
- ◇ Air drier unit

Optional

- ◇ Table shower
- ◇ Coolant gun
- ◇ Splash guard
- ◇ Machine manuals (1 set)
- ◇ Linear scale for X/Y/Z axes
- ◇ Oil chiller - cooling for feedbox bearing, rear flange bearing, Ballnut and motor flange
- ◇ Additional pull stud for ATC
- ◇ Hydraulic Counter Balance
- ◇ Chip conveyor
- ◇ Auto door
- ◇ Mist collector
- ◇ Trochoid type High Pressure Coolant pump for Coolant thru Spindle - 25lpm 20bar

SPEED POWER GRAPH



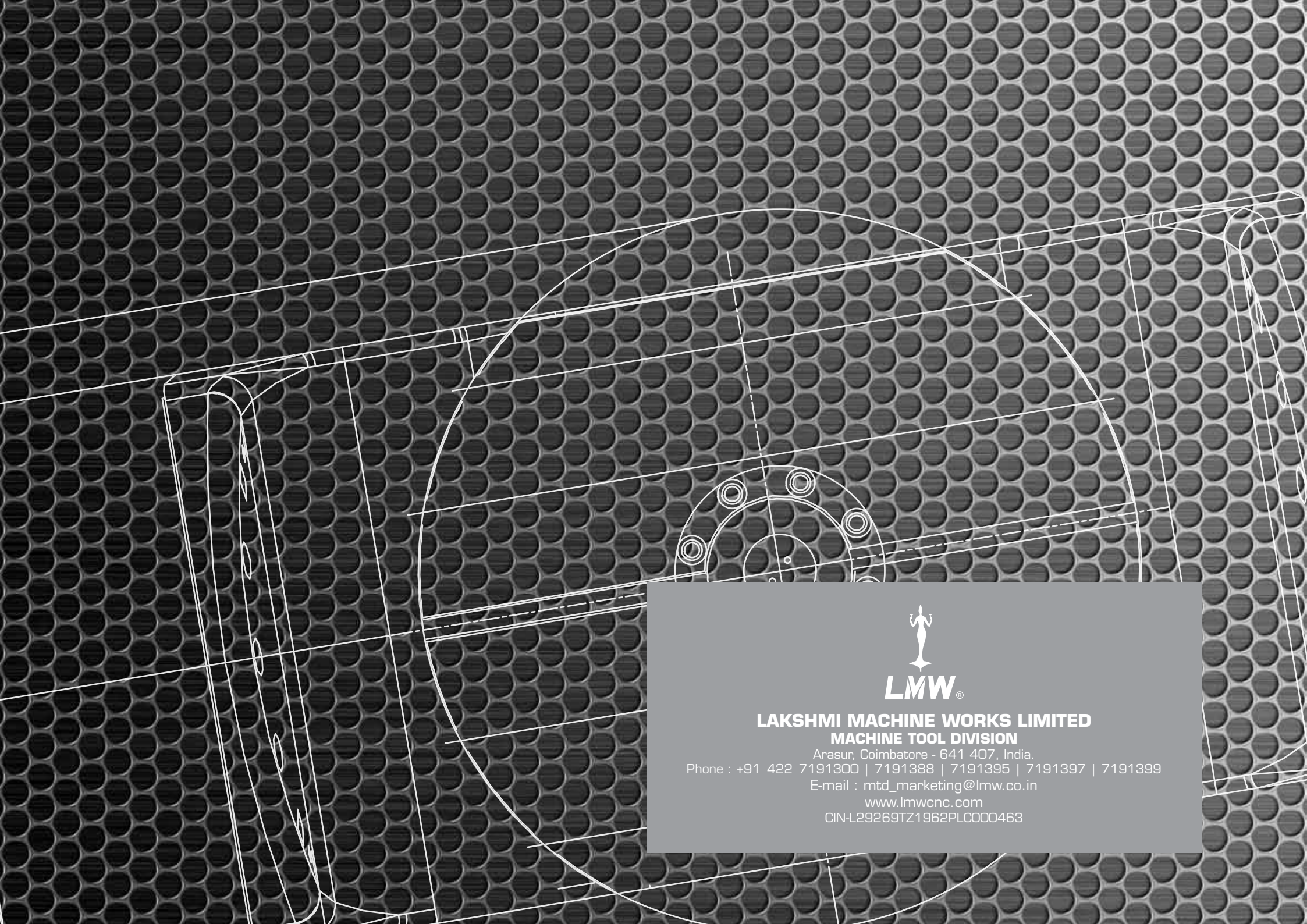
Siemens



COMPLEX PROFILE SOLUTIONS



AND MORE...



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CIN-L29269TZ1962PLC000463