



L.K Machinery Corp.

力盡淬鍊 勁是完美

LH series



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CE ISO 9001
ISO 14001

LH201902(E)

LH-500, the only one of main features is environmentally friendly machine, conserve the resources and beauty on earth.

High speed and rigidity of LH-500 machine, is comparatively light in total machine weight, with up to 20% accelerated feed rate, and the structure of machine body is used the high rigid casting.

Potentially used from low speed in casting processing to high speed in aluminum processing, to meet a wide range of needs in variety, but mainly for automotive industry.



Basic Structure ▶▶ Rapid travel increased by 20%

Rapid Travel (X/Y/Z)

LH-500
60m/min

Cutting feedrate (X/Y/Z)

LH-500
60m/min

* SIEMENS Controller up to 60 m/min

Environment Protection ▶▶ Oil Pressure and Frequency inverter (for energy saving) design

Reduce power consumption

LH-500
476Wh >>
Reduction level **30%**

Reduce standby power consumption

LH-500
850W >>
Reduction level **57%**

▶▶ High-rigidity Bed

X axis and Y axis linear guideway configure high position to achieve high rigid machine body.

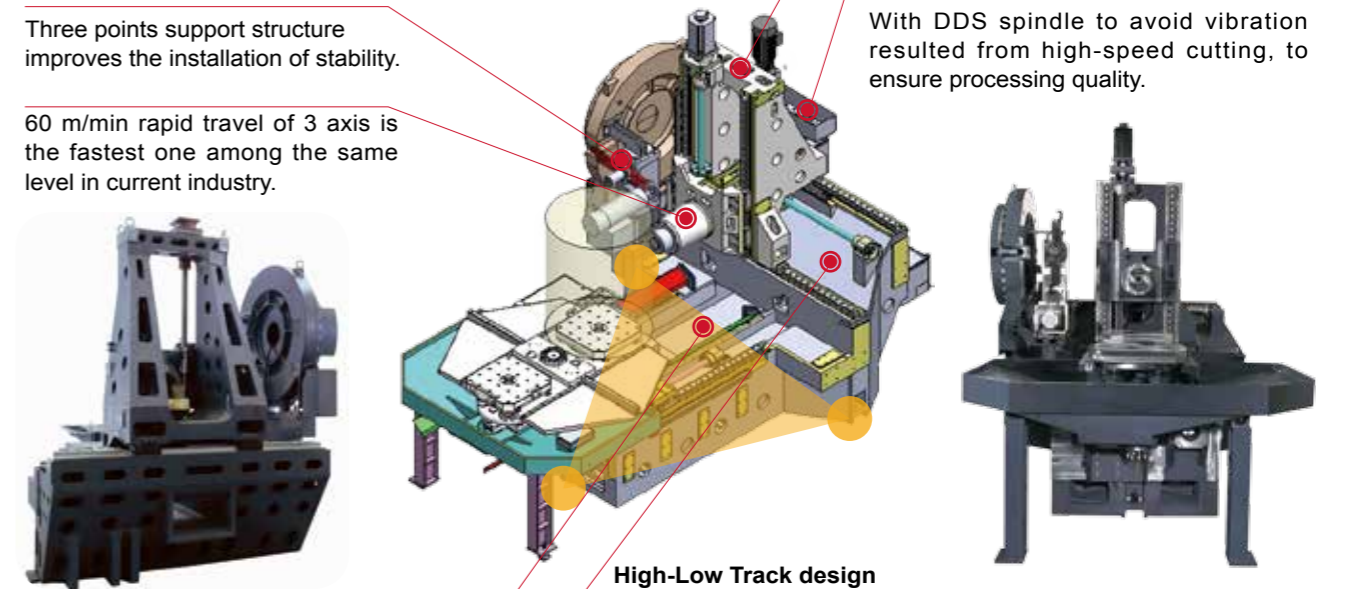
Three points support structure

Three points support structure improves the installation of stability.

60 m/min rapid travel of 3 axis is the fastest one among the same level in current industry.

Symmetrical column design greatly reduce the effects of thermal displacement.

With DDS spindle to avoid vibration resulted from high-speed cutting, to ensure processing quality.

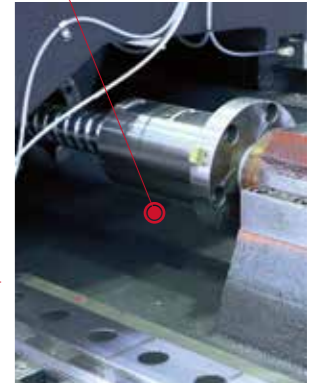
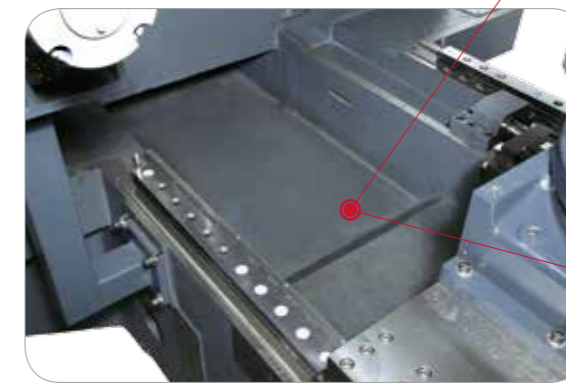


High-Low Track design

The base is designed in high and low rails with lightweight column, which shows the lowest energy consumption and optimal characteristics. The large gap between high and low rail design, not only with the best cutting rigidity, but largely enhance the stability of the base.

Central chip removal system design

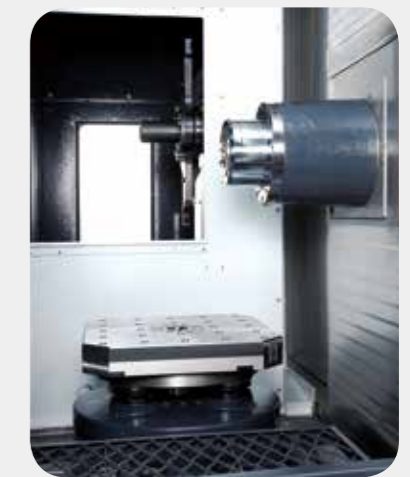
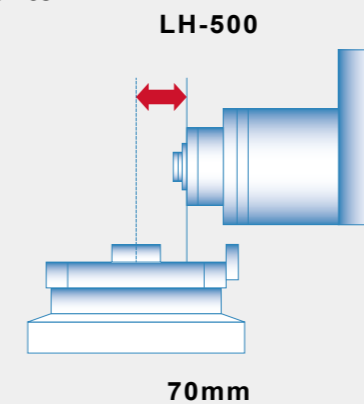
The middle of the base designed especially for chip removal system to clear chips efficiently.



▶▶ A shorter tool can be used

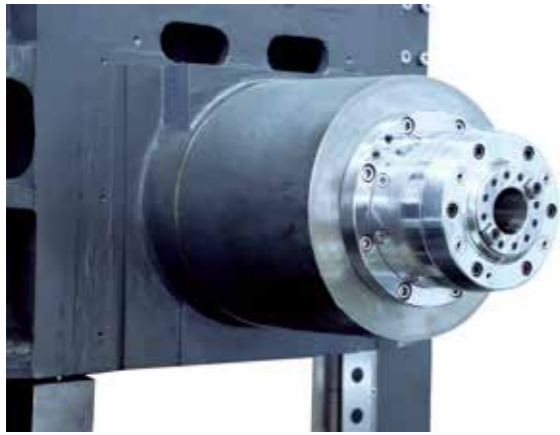
By shorten minimize the distance from spindle nose to the table centre for 84mm, and shorter tool can be used to achieve higher rigidity.

The minimum distance from the spindle nose to table center



LH-500 Traverse (X/Y/Z)
730 / 730 / 880mm

Spindle



LH-500	Standard specification
The. max. spindle speed	12,000 min ⁻¹
Spindle power	22/26 kW (S6-40%, TS= 2min/continuous)

▶ Increased the inner diameter of the spindle bearing

The inner diameter of the spindle bearing was increased to improve rigidity. At the same moment spindle motor provides the maximum output of the DDS spindle power.

▶ Symmetric spindle configuration

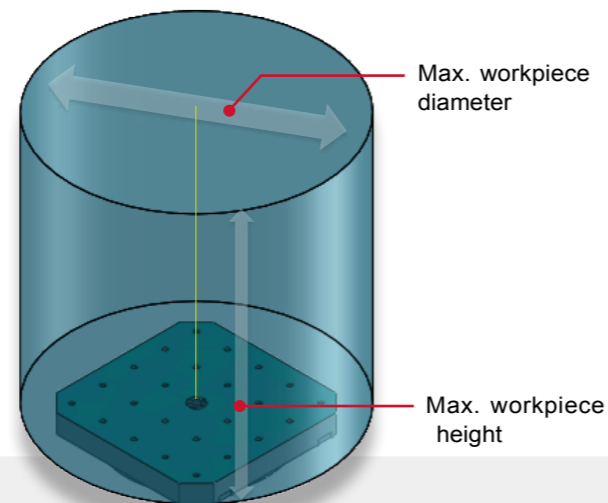
A spindle cutting fluid connection, a piping of cooling oil and an assembling bolt are assembled due to spindle center in a symmetric spindle configuration. Such feature may help to reduce heat distortion, vibration suppression and keep high rigidity of the structure.

▶ Maze type spindle structure

Maze type spindle structure is used to prevent ingress the cutting fluid into the spindle, such feature improves the durability of the spindle.

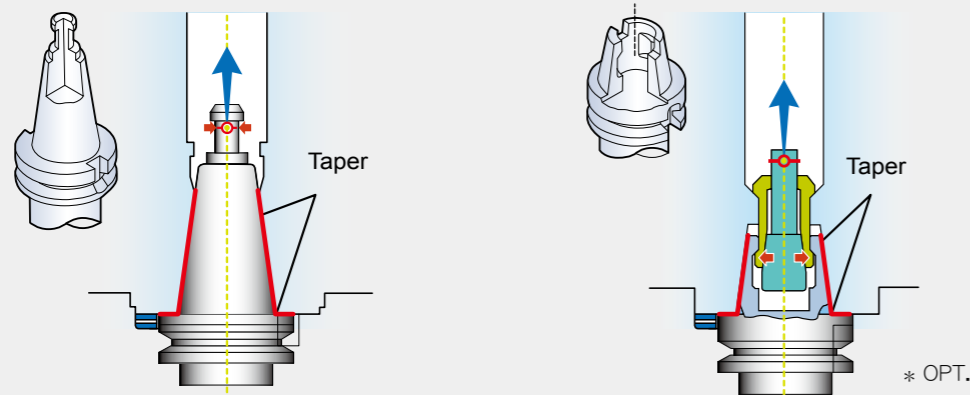
Workpiece dimension

Max. workpiece height	Max. workpiece diameter	Max. table capacity
1000mm	Ø800mm	500kgs [600kgs]

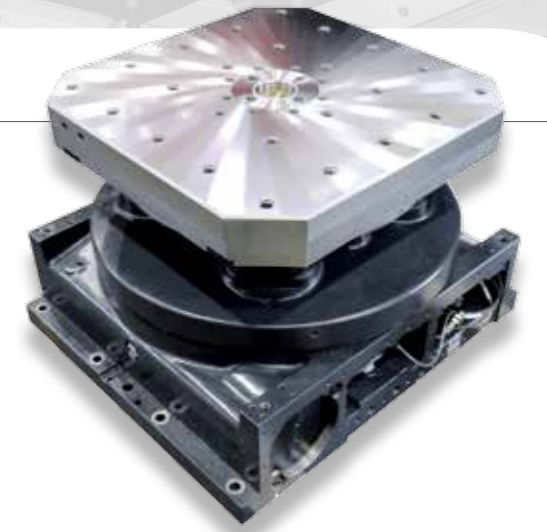
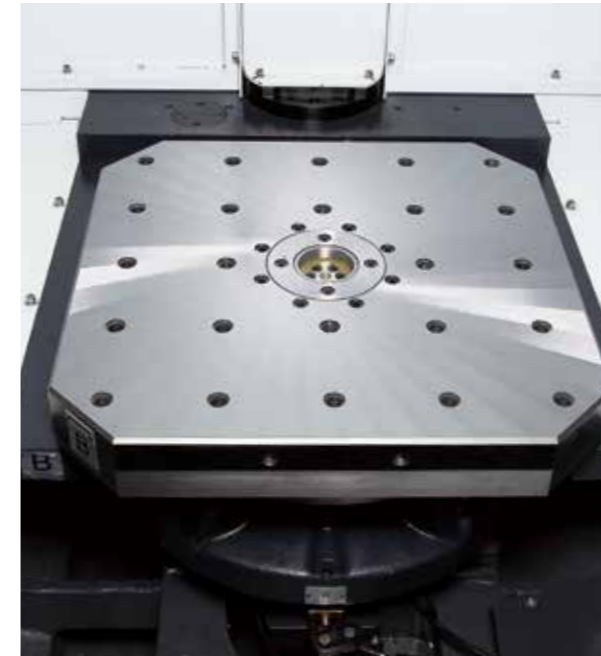


Double-sided constraint configuration

The flexural rigidity of the tool is increased by specifying the end surface slope in addition to the spindle slope. Such feature extends tool life, improves cutting performance and machining accuracy.



Rotary table (B-axis)



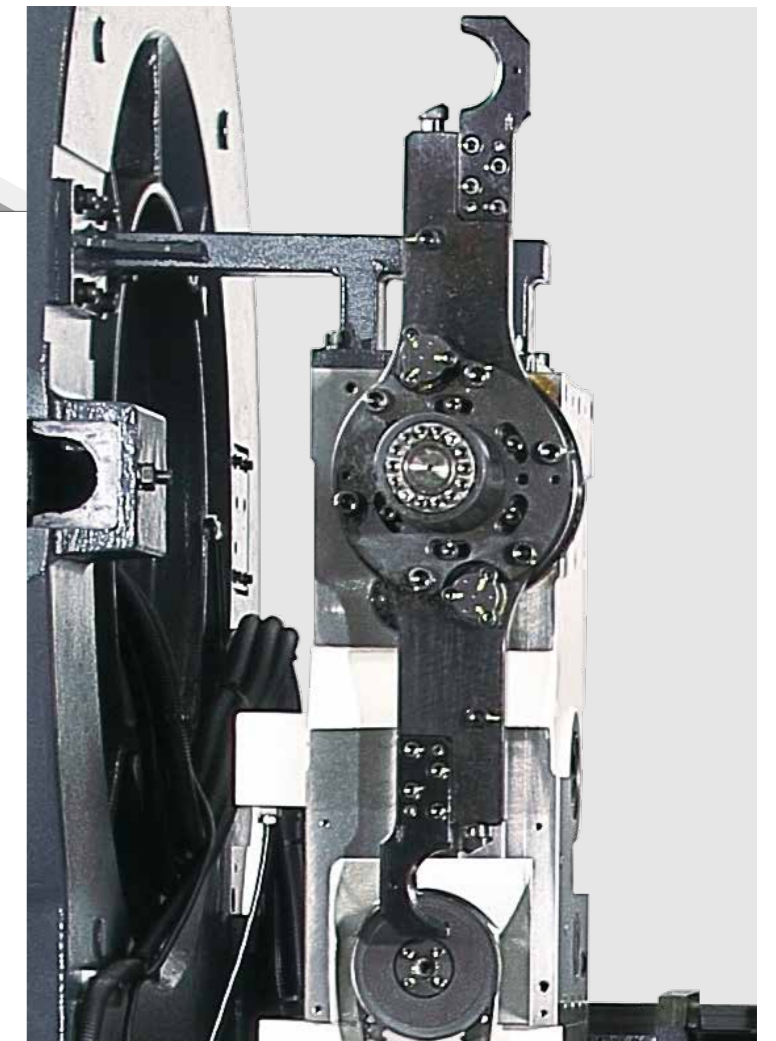
Machine is equipped with high-speed and high-precision will increase the machine work efficiency and reliability.

Type of rotary table	Standard	Option
Indexing	0.001°	1°

Automatic Tool Changer (ATC)

▶ Reliable ATC Automatic Tool Change System

ATC cam mechanism adopts inverter drive to increase the reliability of tool change, support the multivariate variable speed adjustment and use by hold control rod fix tool, even much longer and heavier tool also can be fixed will and achieved reliable tool change.



Magazine



Tool Storage Capacity

Disk type

40 set 60 set (OP)

Chain type

90 set (OP) 120 set (OP)

This machine is installed with the high speed indexing and disk type magazines (40 tool specs) as standard. It comes up with the disk and chain type magazines for optional usage.

Max. Tool length

LH-500
550mm

Max. tool weight

LH-500
8kg

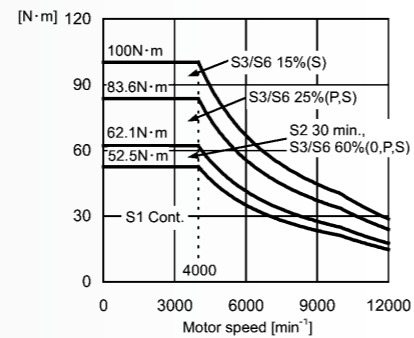
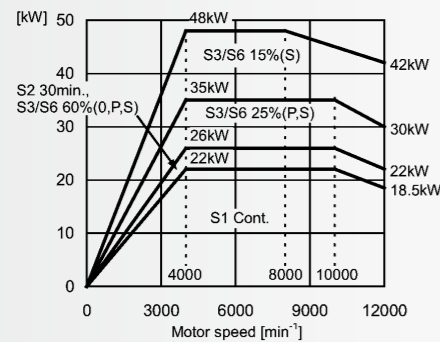
Max. tool diameter (no adjacent tool)

LH-500
Ø130mm

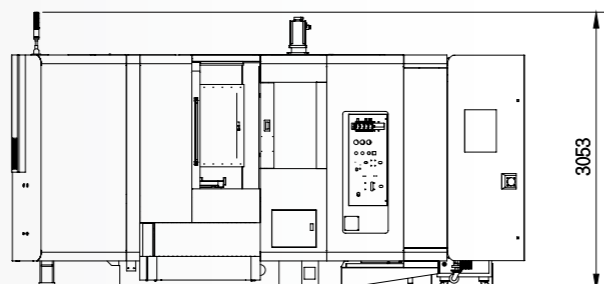
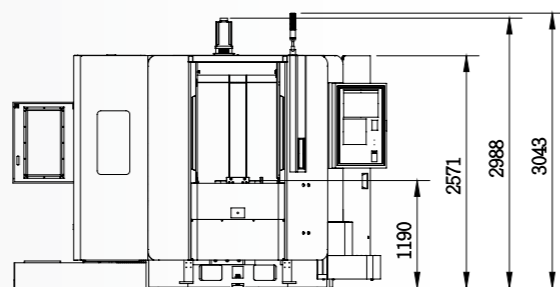
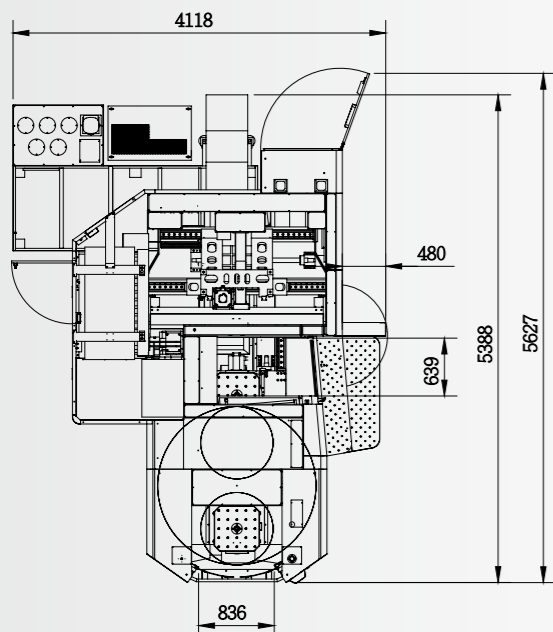
Tool changes per sec

LH-500
4sec

Torque Curve



Floor Plan



單位 :mm

LH-500 SPECIFICATION

Model	Unit	LH-500
CNC Control System	-	Mitsubishi M80
3 axis Travel		
X axis Travel	mm	730
Y axis Travel	mm	730
Z axis Travel	mm	880
Distance from Spindle Center to Table	mm	80-810
Spindle Nose to the Center of Table	mm	70~950
Spindle		
Spindle Speed	rpm	DDS 12,000
Spindle Nose	BT	#40
Spindle Motor(Cont./30min)	kw	22/26
Spindle Torque	Nm	140
Motor		
X/Y/Z Axial Motor Power	kw	4.5 / 7 / 3
X/Y/Z Axial Motor Torque	Nm	37.2 / 49 / 22.2
B Axis Motor Power	kw	2
B Axis Motor Torque	Nm	13.17
APC Motor Power	kw	2
APCMotor Torque	Nm	13.17
Table		
Table Size	mm	500 x 500
T-Slot Size	mm	24 - M16 x P2.0
Max. Table Capacity	kg	500
Rotary Table Min. Scale	degree	0.001°
Max. Workpiece Range	mm	Ø800 x 1000
APC		
Table Size	mm	500 x 500
Table Quantity	pcs	2
Max. Allowable Workpiece Load	kg	500 x 2
Change Time	sec	9
Motor	kw	2 (Servo)
Rapid Travel		
Rapid Travel(X/Y/Z)	m/min	60 / 60 / 60
Cutting Speed Rate	m/min	1-60
Tool Magazine		
Tool Change Type	-	Arm
Tool Capacity	set	40
Max. Tool Weight	kg	8
Max. Tool Length Distance	mm	550
Max. Tool Diameter	mm	Ø90 / Ø130
Tool Change Time(T-T)	sec	4
Others		
Compress Air Supply	kg/cm ²	5~7
Machine Size(LxWxH)	mm	6366 x 4076 x 3109
Net Weight	kg	11,000

*The company reserves the right to design and change the specifications of this catalog.

* The company will not be responsible for any modifications to the sold machines or accessories.

Standard Equipment

- Mitsubishi M80 / 15" LCD Screen
- DDS 12,000rpm
- BT-40
- Arm Type 40 tools
- CTS
- Spindle Tool Change Air Blow
- Linear Scale on X/Y/Z/B axes
- Water curtain
- Coolant Flush System
- Separate Hand Wheel (MPG)
- Full Chip Enclosure
- Heat Exchanger
- Link Type Chip Conveyor
- Working Light
- Tri-color Indicator Lamp
- Tool Box
- Leveling Bolts & Blocks

Optional Equipment

- SIEMENS 828D / 15" LCD Screen
- Fanuc 0i-MF
- DDS 10,000/15,000rpm
- Built-in 12,000/15,000/18,000rpm
- BT-50
- Disk Type 60 tools
- Chain Type 90/120 tools
- CTS 40/70Bar
- Automatic Tool Length Measurement System (Marposs TS-30)
- Automatic Workpiece Measurement System(OPM60)
- Grease Lubrication
- Screw Type Chip Conveyor
- 4 way APC distributor