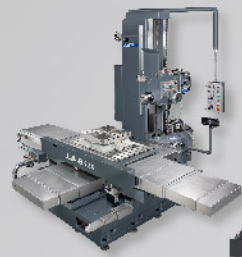


# CNC Horizontal Machining Center



Conventional Horizontal Boring & Milling Machine  
LB SERIES



CNC Horizontal Boring & Milling Machine (FIXED COLUMN)  
LB-RS SERIES



CNC Double Column Machining Center  
LD SERIES



CNC Horizontal Boring & Milling Machine (MOVABLE COLUMN)  
LB-R SERIES



LEADWELL CNC MACHINES MFG.,CORP.  
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※ All performance are based on 220V/3PH/60HZ. Specification are subject to change without notice.

2017.04

## LH Series

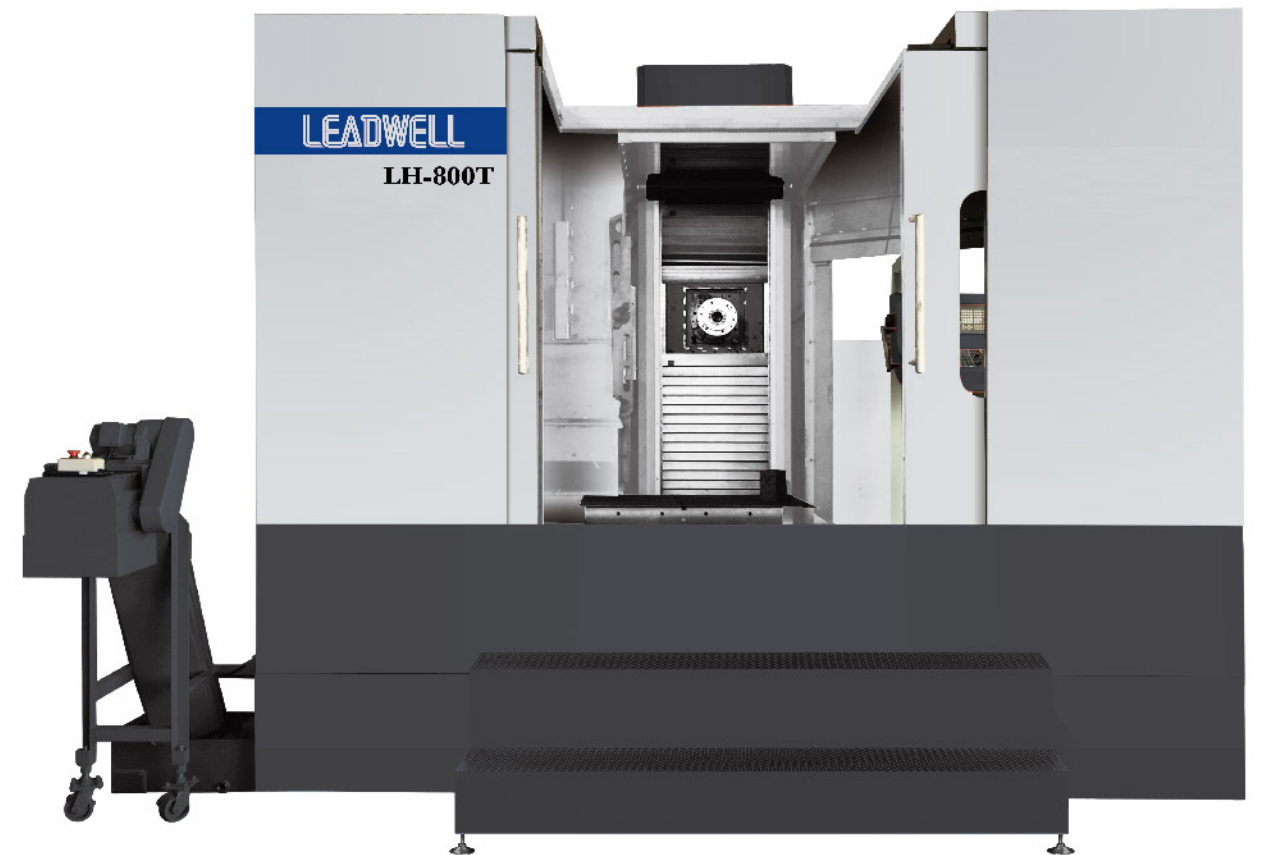
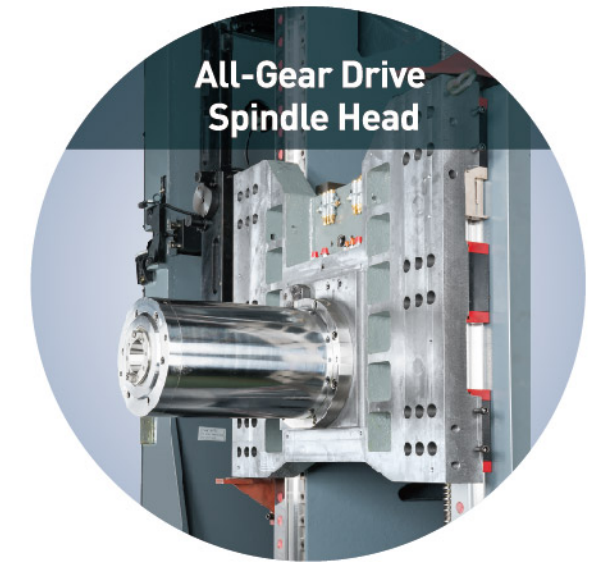
**LH-630TA,800TAS  
LH-800TA,1000TAS**  
**( TWO-STATION PALLET CHANGE )**

CNC HORIZONTAL MACHINING CENTER  
(CENTER-MOUNT SPINDLE HEAD)



**LH-630T,800TS  
LH-800T,1000T**  
**( SINGLE TABLE )**

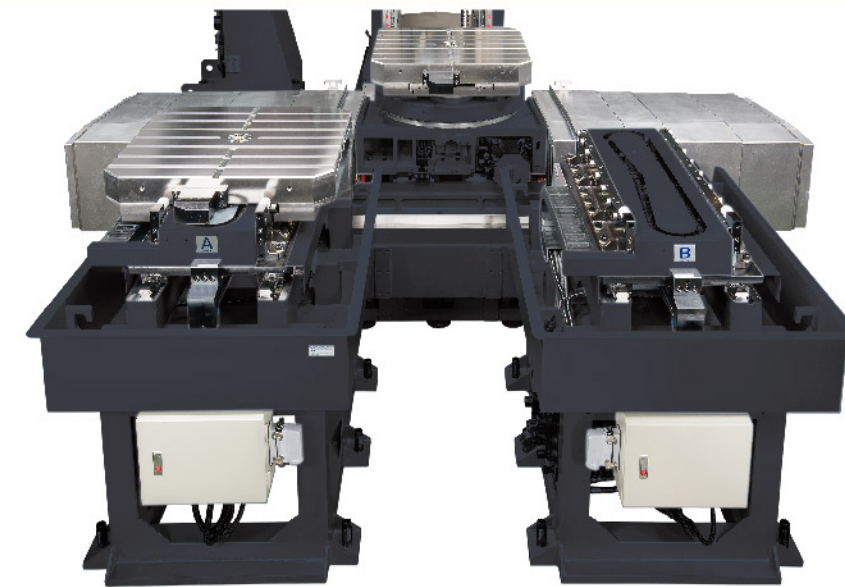
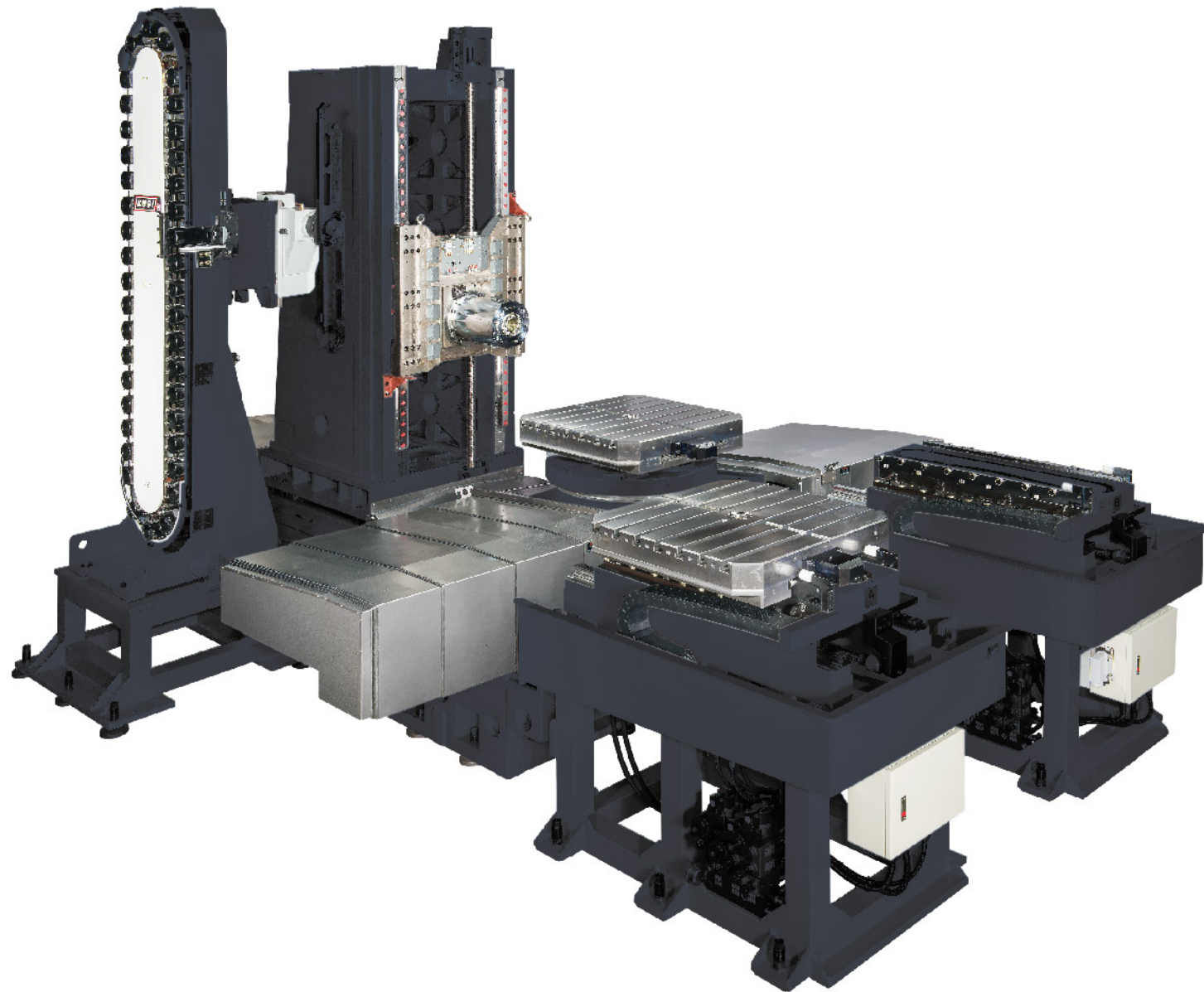
CNC HORIZONTAL MACHINING CENTER  
(CENTER-MOUNT SPINDLE HEAD)





# OPTIMAL RIGIDITY THROUGH T-SHAPED STRUCTURE

With heavy duty roller type linear guideways on X, Y, Z-axis along with the use of high precision linear scales, high machining accuracy can be achieved. The spindle is gear-driven with two-speed ranges, which provides full power output at 320 rpm and high speed can reach 6000 rpm (8000 rpm optional). The spindle head moves on linear ways on the column in combination with each 3 blocks on the right and left linear ways, thus dramatically upgrading rigidity and stability in heavy cutting.

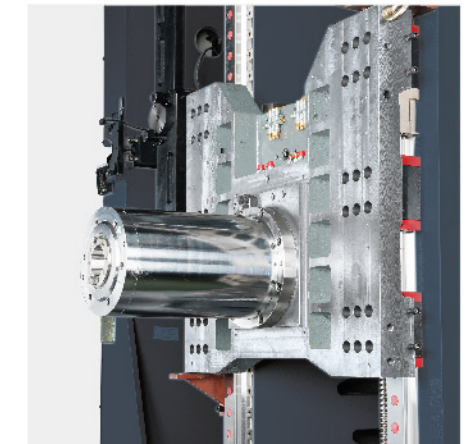


## Automatic Pallet Changer (A. P. C.)

The A. P. C. is a parallel change design without restriction of weight difference, that features extremely smooth motions and allows for greater working range.

## 6 Blocks on Y-Axis Linear Ways

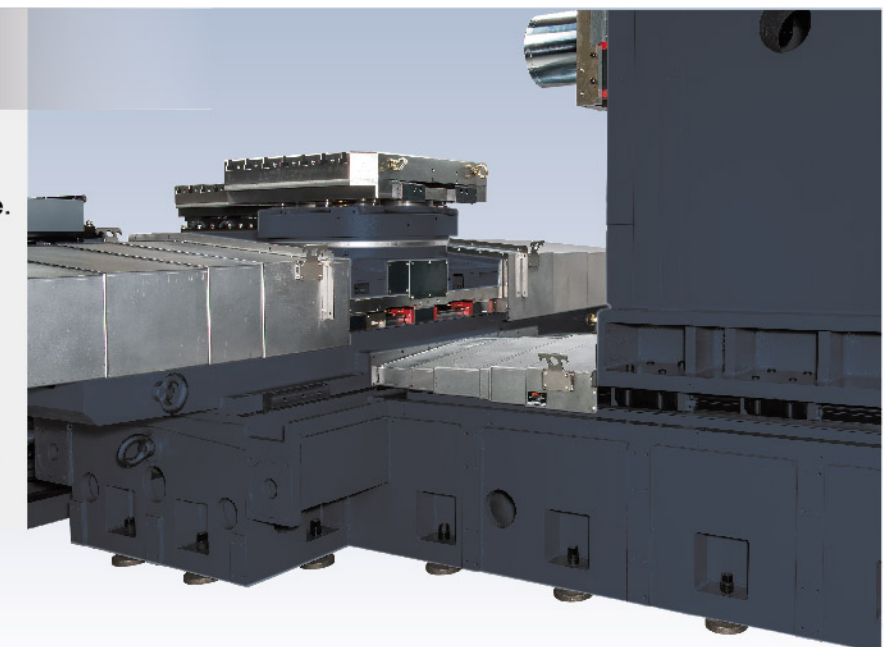
Each linear way on Y-axis is equipped with 3 blocks to increase the contact area between the spindle head and the linear ways, resulting in higher rigidity when performing heavy cutting.



## One-Piece Fabricated Base

The base is a one-piece configuration so as to increase the rigidity of the entire machine. The base structure may effectively prevent cutting fluid from leaking and facilitate chip exhaust.

The use of 65 mm type linear ways on Z-axis makes the machine ideal for heavy machining on large workpieces.





## Traveling Column With Center-Mount Spindle Head

### MACHINE SPECIFICATIONS

( ): As Optional

	MODLE	UNIT	LH-630T	LH-630TA	LH-800TS	LH-800TAS	LH-800T	LH-800TA	LH-1000T	LH-1000TA	LH-1212T	LH-1512T	LH-1612T	LH-2012T	LH-3212T
TABLE	Table Size	mm	630 x 630	630 x 630APC	800 x 800	800 x 800APC	800 x 800	800 x 800APC	1000 x 1000	1000 x 1000APC	1200 x 800 Long Table		1600 x 900 Long Table	2000x1100 Long Table	3000x1100 Long Table
	T-slots Size	mm	20 x 5		22 x 5		22 x 7	22 x 7	22 x 7		22 x 7		22 x 7		
	Maximum Load	kg	2000 (2500)	2000	2500	2000	4000	3000	4000	3000	4000	4000	4000	5000	6000
	Indexing Degree		1° (0.001°)					1° (0.001°)		-		-			
TRAVEL	X-Axis	mm	1200 (1600)		1600		1600 (2000)	1600 (2000)	1600 (2000)		1200	1500	1600	2000	3200
	Y-Axis	mm	1200 (1350)	1000 (1350)	1200 (1350)	1000 (1350)	1200 (1350)	1000 (1350)	1200 (1350)	1000 (1350)	1270 (1350)		1270 (1350)		
	Z-Axis	mm	1000		1000		1200	1200	1200		1000		1200		
SPINDLE	Spindle Speed	rpm	6000 (8000)					4000 (6000, 8000)							
	Spindle Taper		7/24 taper ISO.50, BT-50					7/24 taper ISO.50, BT-50							
DISTANCES	Spindle Center to Table	mm	0~1200 (1350)	0~1000 (1350)	0~1200 (1350)	0~1000 (1350)	0~1200 (1350)	0~1000 (1350)	0~1200 (1350)	0~1000 (1350)	0~1270 (1350)		0~1270 (1350)		
	Spindle Nose to Table Center	mm	200~1200		200~1200		200~1400	200~1400	200~1400		200~1200		200~1400		
	Hight From Ground to Table Surface	mm	1060	1300	1060	1300	1195	1350	1195	1350	1180		1180		
FEED RATE	Rapid Feed Rate X/Y/Z	m/min	20					20							
	Minimum Setting	mm	0.001					0.001							
	Cutting Feed Rate	mm/min	1~5000					1~5000							
MOTOR	Spindle Motor - cont. / 30min.	kW	11/15 (15/18.5)		11/15 (15/18.5)		15/18.5 (22/26)	15/18.5 (22/26)	15/18.5 (22/26)		11/15 (15/18.5)		15/18.5 (22/26)		
	X/Y/Z/B-Axis	kW	4/7/4/4		4/7/4/4		4/7/4/4	4/7/4/4	4/7/4/4		4/7/4		4/7/4		
	Lubricator Motor	kW	0.15					0.15							
	Hydraulic Pump	kW	2.25					2.25							
	Coolant Pump	kW	1.17					1.17							
	Chip Conveyor	kW	0.2					0.2							
	Oil Cooler Pump	kW	0.75					0.75							
ATC	No. of Tools	pieces	40 (60)					40 (60)							
	Tool Selection		Random (Absolute)					Random (Absolute)							
	Max. Tool (dia. / leng.)	sec	Dia. Ø125/Ø250 (Without Adjacent Tool) / Length 400					Dia. Ø125/Ø250 (Without Adjacent Tool) / Length 400							
	Max. Tool Weight	kg	18 (25)					18 (25)							
MISCELLANEOUS	Power Required	kVA	40		40	45	45	45		40		45			
	Compressed Air	kg/cm <sup>2</sup>	6					6							

■ Specifications are subject to change without prior notice.

#### STANDARD ACCESSORIES :

- |                                 |  |  |
|---------------------------------|--|--|
| 1. Linear scale on X, Y, Z-axis | 8. Work lamp                               | 15. Operation manuals                  |
| 2. Spindle oil cooler           | 9. M. P. G.                                | 16. Machine inspection lists           |
| 3. Automatic power off          | 10. RS-232 interface                       | 17. Splash guards (around the table)   |
| 4. Hydraulic system             | 11. Heat exchanger                         | 18. Toolbox with spanners & wrenches   |
| 5. Coolant system               | 12. Chip conveyor and cart                 | 19. Fanuc OiMF controller              |
| 6. Lubricator system            | 13. Leveling bolts and pads                | 20. ATC: 40 Tools (Cam drive arm type) |
| 7. Alarm lamp                   | 14. Controller manuals and circuit diagram |  |

#### OPTIONAL ACCESSORIES :

- |   |   |  |
|---|---|--|
| 1. ATC: 60 Tools  | 6. Coolant through spindle                            | 11. 2500kg table load on LH-630T                   |
| 2. Oil mist device  | 7. 0.001° indexing on B-axis (Simultaneous machining) | 12. Chip auger on Z-axis                           |
| 3. Variety of controllers<br>( FANUC / MELDAS / SIEMENS<br>/ HEIDENHAIN / SELCA ) | 8. Tool measurement device                            | 13. Coolant jets around spindle (independent pump) |
| 4. Various auxiliary work tables  | 9. Workpiece centering measurement device             |  |
| 5. Air conditioner at electrical cabinet  | 10. Swing arm type magazine (Max. tool weight 25kg)   |  |



# LH-630

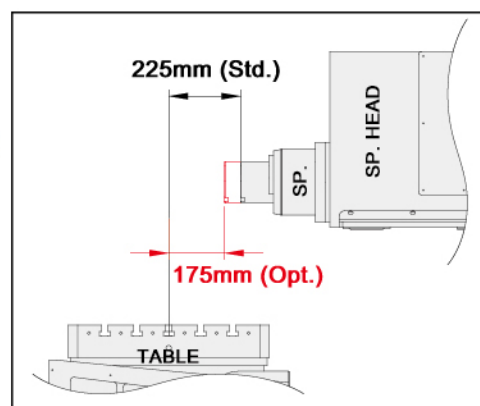
## CNC HORIZONTAL MACHINING CENTER (SIDE-MOUNT SPINDLE HEAD)

- X, Y, Z-axis travel: 1500x1200x1000mm (Standard)  
1600x1200x1100mm (Optional)
- Rapid traverse rates on X, Y, Z-axis: 15/12/15 m/min
- Three linear guide ways on base
- 1° indexing rotary table (Standard)  
0.001° indexing rotary table (Optional)
- BT50 spindle taper
- Linear scales on three axes



## LEADWELL LH-630 VS Competitor's 630 series Comparison Table Of Machine Structure And Features

Manufacturer	LH-630	Taiwanese Competitor's 630 Series
X, Y, Z-axis travel	1500/1200/1000mm	1200/950/800mm
X, Y, Z-axis rapid traverse	15/12/15m/min	12/10/12m/min
Width of Y-axis box ways	95mm	80mm
Span between Y-axis box ways	430mm	400mm
Distance from spindle nose to table center	225~1225mm	250~1050mm
Spindle motor	11/15kW	7.5/11kW
Gearbox	German ZF- 2K-250	German ZF-2K-120
X, Z-axis linear guide ways	Japanese THK HSR55 or German Schneebberger MRD55	German Schneebberger MRD55
X, Y, Z-axis ball screws	Hiwin Ø50	Hiwin Ø45
Overall span among three linear guide ways	1450mm	1300mm
Overall length of X-axis saddle	2850mm	2300mm



### Shorter Distance From Spindle Nose To Table Center

- Exclusively designed distance from spindle nose to table center is shortened to 225mm, resulting in higher stability of machining.
- Upon request, extra short distance of 175mm from spindle nose to table center is available. This exhibits outstanding stability especially when performing deep hole boring operation.

## Extra Large Travels on Three Axes A Pioneer in the Industry

### High Quality Cast Iron Deformation Free

- All structural parts are manufactured from high quality cast iron (FC 30), tempered and stress relieved.

### Extra Large X, Y, Z-axis Travel

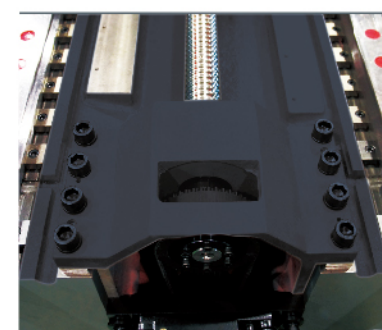
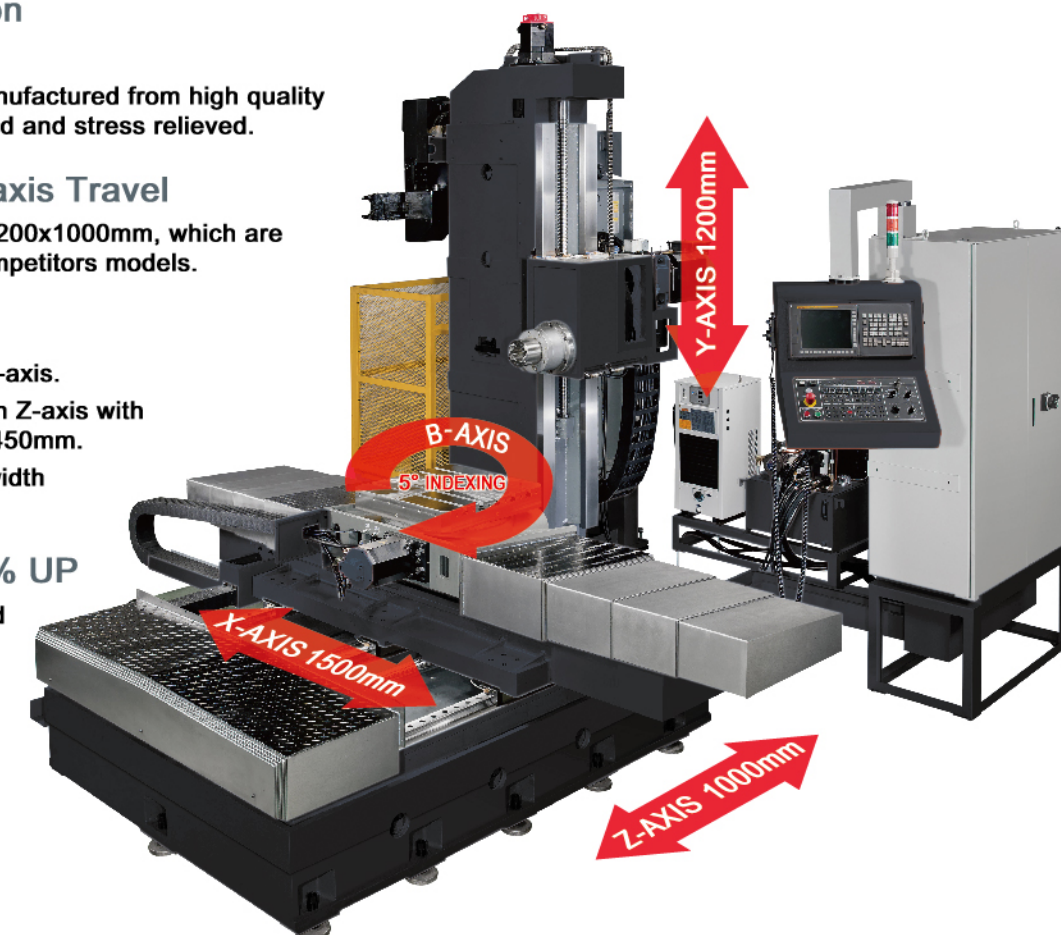
- X, Y, Z-axis travel 1500x1200x1000mm, which are larger than that on our competitors models.

### Guide Ways

- Linear guide ways on X, Z-axis.
- Three linear guide ways on Z-axis with an overall span of up to 1450mm.
- Box ways on Y-axis with width increased by 18%.

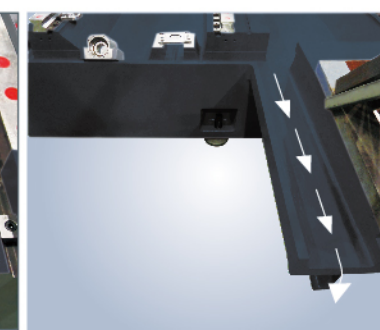
### Extra Wide Base 12% UP

- The bed width is increased by 12%.



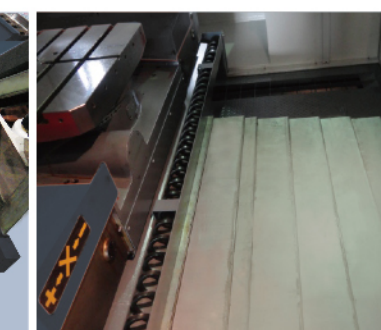
### Secure Screw Support Without Loosening

- The ball screw supports on X, Y, Z-axis are all tightened by 8 screws to eliminate loosening problem while ensuring the transmission rigidity.



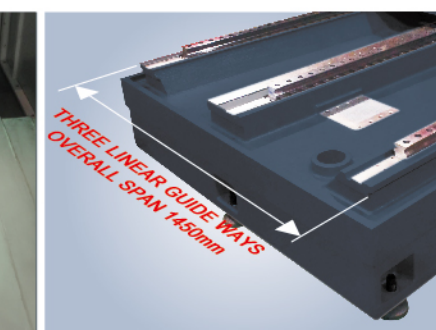
### Waste Oil Reclaim Channel

- An additional waste oil reclaim channel is designed at the back side of the base, that effectively prevents waste oil from splashing on the floor causing pollution or slipping problems. Another benefit is to prevent the waste oil mixing with the cutting fluid.



### Additional Chip Auger

- An additional chip auger is mounted between the table and the column for removing chips out of the machine.



### Three Linear Guide Ways on Base

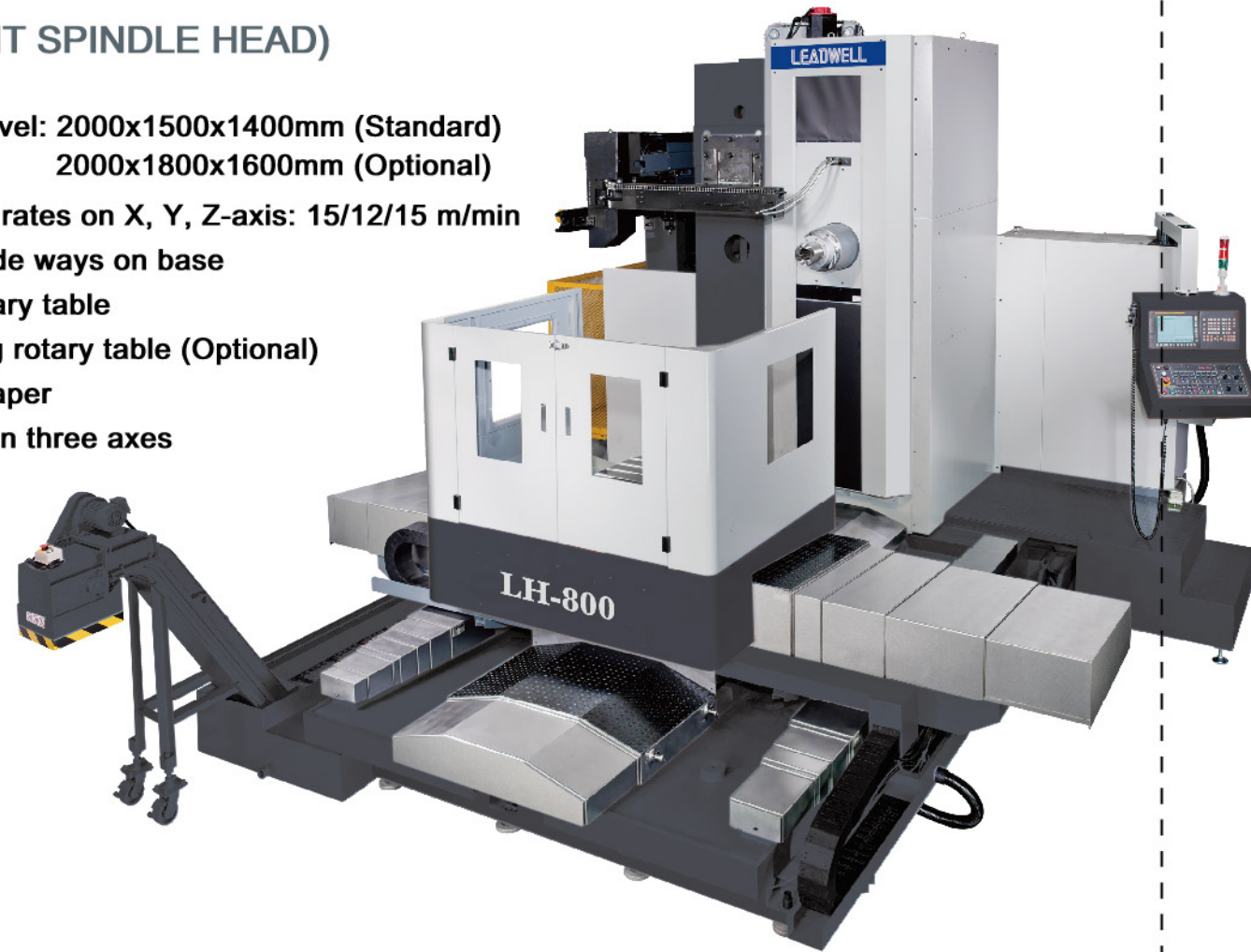
- The overall span among the three linear guide ways reach 1450mm, which is the largest among its class. It assists in upgrading machining stability.
- Extra long saddle length features higher stability than our competitors' models.
- X, Z-axis linear guide ways provide a choice of Japanese THK HSR 55 type or German Schneebberger MRD 55 type.



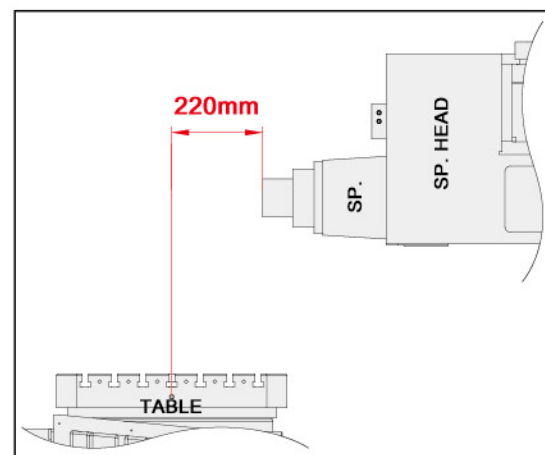
# LH-800

## CNC HORIZONTAL MACHINING CENTER (SIDE-MOUNT SPINDLE HEAD)

- X, Y, Z-axis travel: 2000x1500x1400mm (Standard)  
2000x1800x1600mm (Optional)
- Rapid traverse rates on X, Y, Z-axis: 15/12/15 m/min
- Four linear guide ways on base
- 1° indexing rotary table
- 0.001° indexing rotary table (Optional)
- BT50 spindle taper
- Linear scales on three axes



Spacious splash guard (Optional)



### Shorter Distance From Spindle Nose To Table Center

- Exclusively designed distance from spindle nose to table center is shortened to 220 mm, resulting in higher stability of machining.

## Four Linear Guide Ways on Base A Perfect Combination of Efficiency And Stability

### High Quality Cast Iron Deformation Free

- All structural parts are manufactured from high quality cast iron (FC 30), tempered and stress relieved.

### Extra Large X, Y, Z-axis Travel

- X, Y, Z-axis travel 2000x1500x1400mm which are larger than that on our competitors' models. As a result, greater machining range can be achieved.

### Guide Ways

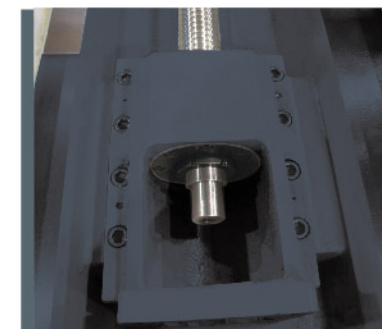
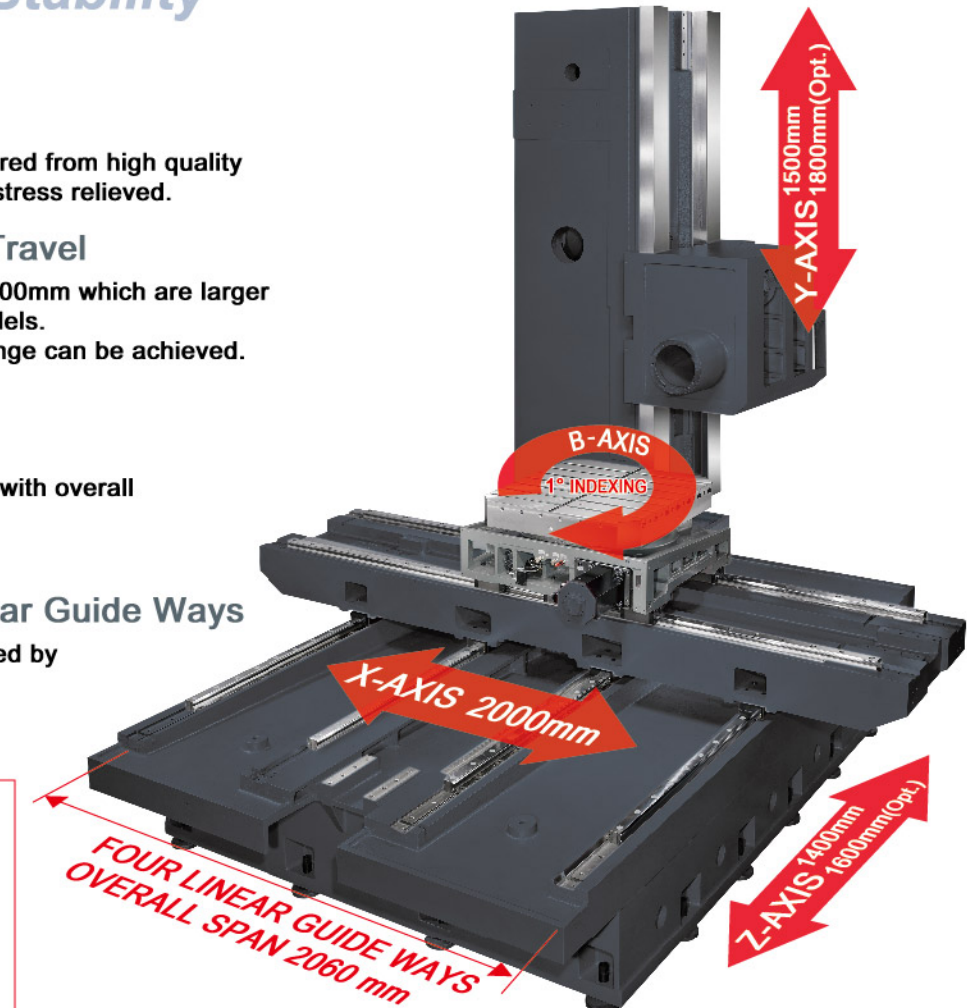
- Linear guide ways on X, Z-axis.
- Four linear guide ways on Z-axis with overall span of up to 2060mm.
- Box ways on Y-axis.

### Rib Supported under Linear Guide Ways

- All linear guide ways are supported by additional ribs to ensure deformation-free performance for a heavy load.

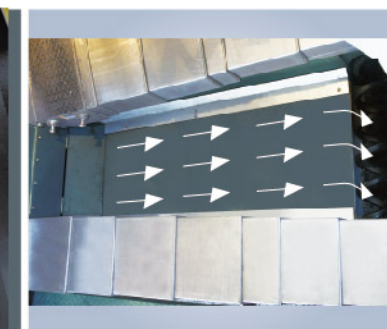
### Oversized Base With Four Linear Guide Ways

- The specially designed oversized base is a one-piece construction with the largest sizes among its class, featuring exceptional rigidity.
- Z-axis is deployed with four linear guide ways for resisting heavy load as well as firm support of workpiece.
- X, Z-axis linear guide ways provide a choice of Japanese THK HSR 55 type or German Schneberger MRD55 type.



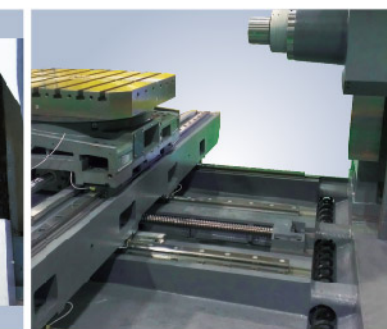
### Secure Screw Support Without Loosening

- The ball screw supports on X, Y, Z-axis are all tightened by 8 screws to eliminate loosening problem while ensuring the transmission rigidity.



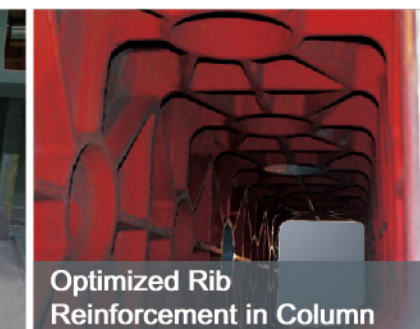
### Additional Chip Removing Plate

- An additional chip plate is fitted to back side of the saddle, that may remove chips on the base to the chip auger and save manual removing of chips.



### Additional Chip Auger

- An additional chip auger is mounted between the table and the column for removing chips out of the machine.



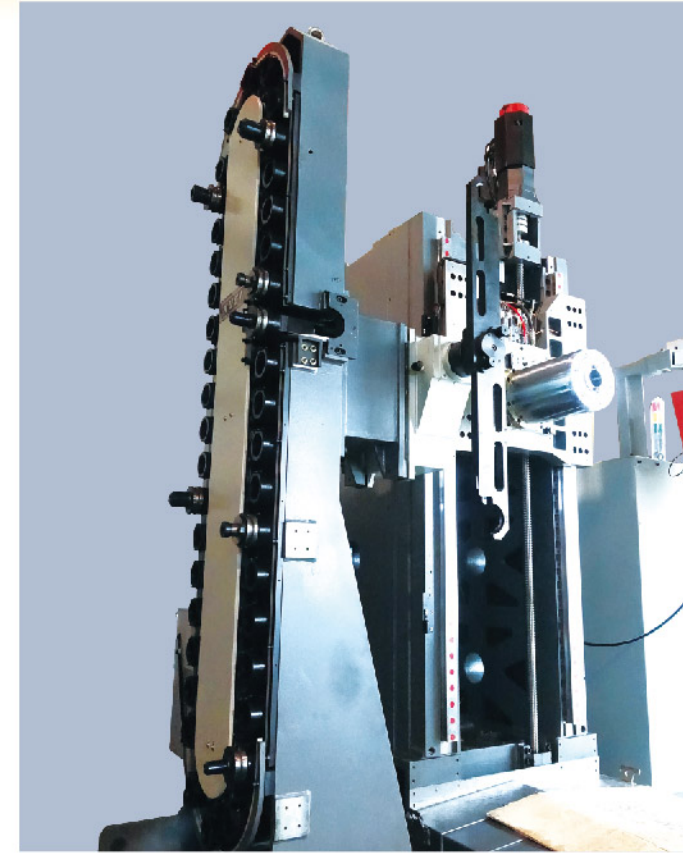
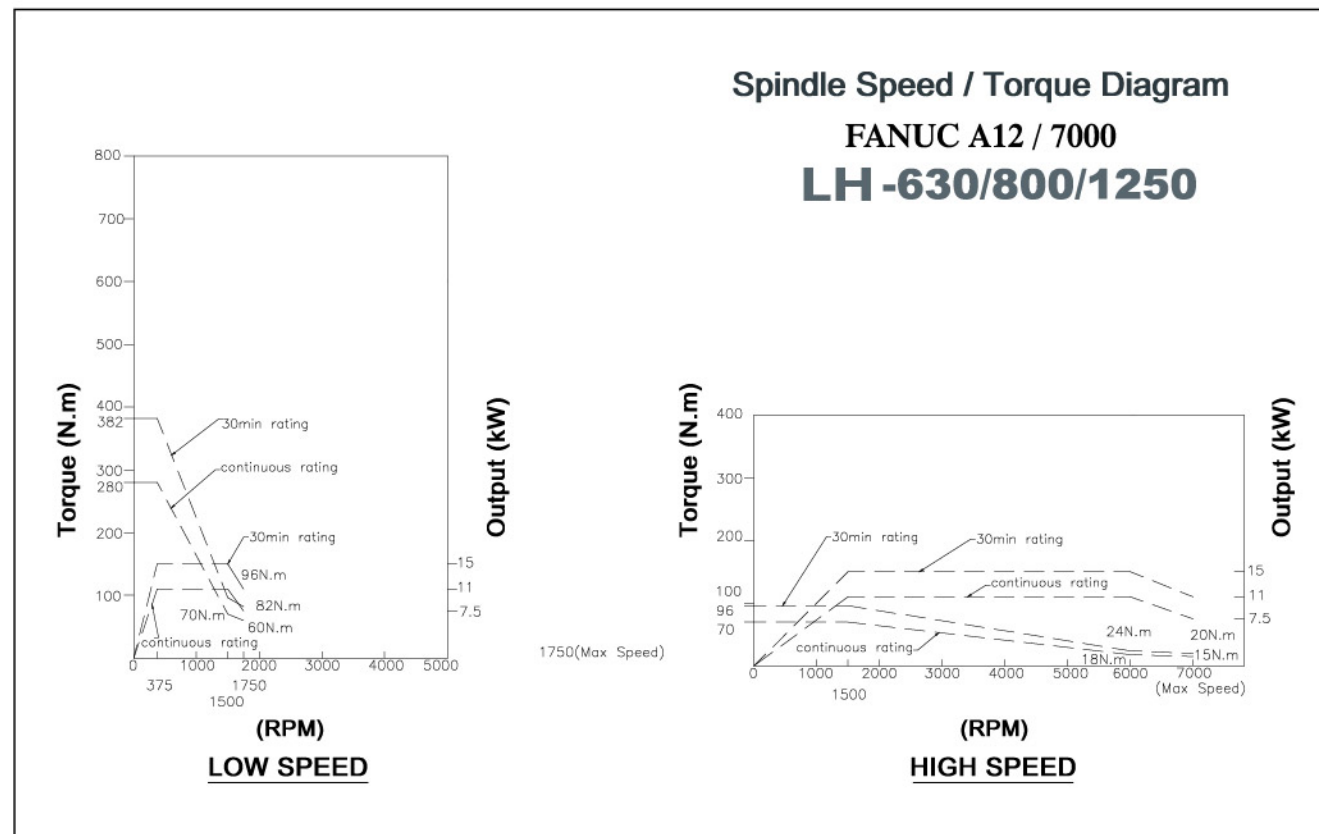
### Optimized Rib Reinforcement in Column

- The column interior is reinforced by "O" shaped ribs with an "O" shaped rib at the center of ribs. Such ribs deployment may effectively avoid column deformation during heavy cutting.
- Specially designed double-wall column construction provides a dramatic increase in structural rigidity.



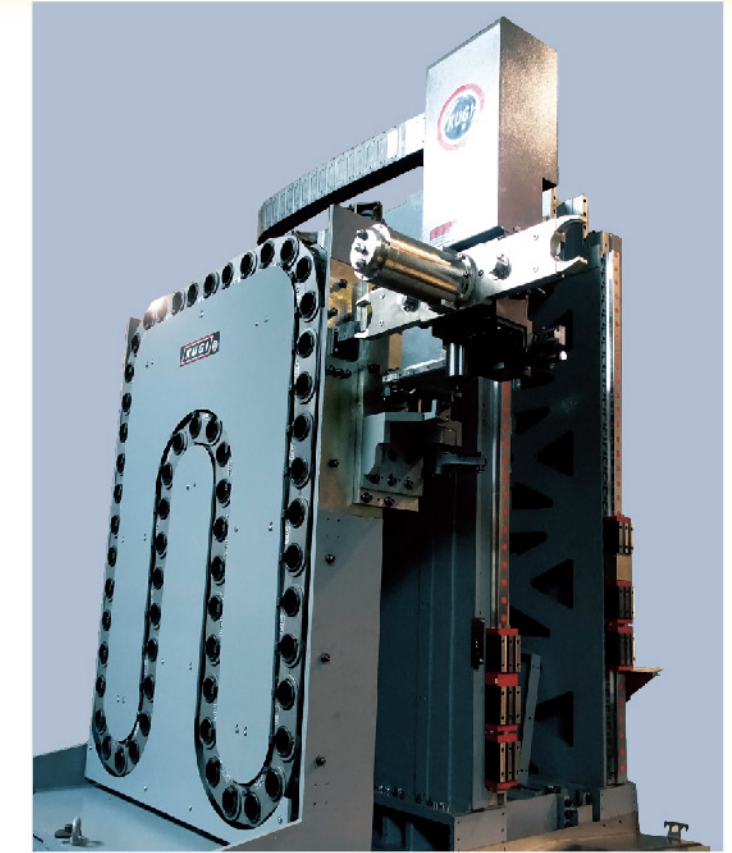
## LH-800

Fully Enclosed Splash Guard (Optional)



Cam-Drive Arm Type Magazine (40T, 60T)

- Applicable for the center-mount spindle on models 630T, 630TA, 800TS, 800TAS, 800T, 800TA, 1000T and 1000TA.



Swing Arm Type Magazine (40T, 60T, 90T) (Optional)

- Applicable for the center-mount spindle on models 630T, 630TA, 800TS, 800TAS, 800T, 800TA, 1000T and 1000TA.

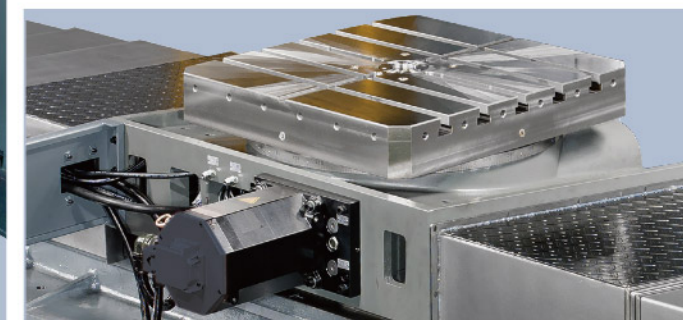


Chain Type Magazine (Applicable for Side-Mount Spindle Head)

- 40-tool magazine is standard.
- 60-tool magazine is optional.



Spacious Splash Guard (Optional)



Rotary Table

- 700x700 or 700x900 (For LH-630)
- 800x1000 or 1000x1000 (For LH-800)



Air conditioner for Electrical Cabinet



## Fixed Column With Side-Mount Spindle Head

### MACHINE SPECIFICATIONS

[ ]: As Optional

	MODLE	UNIT	LH-630	LH-630A	LH-800	LH-800A	LH-1250	LH-1250A	LH-1512	LH-2015
TABLE	Table Size	mm	630x630x360D	630x630x360D(APC)	800x800x360D	800x800x360D(APC)	1250x1250x360D	1250x1250x360D(APC)	1100 x 800	1500x800 Long Table
	T-slots Size	mm	20 x 5		22 x 7		22 x 7		20 x 5	
	Maximum Load	kg	2000 (2500)		4000	3000	5000		2500	4000
	Indexing Degree		1°/360 (0.001°)				1°/360 (0.001°)		-	-
TRAVEL	X-Axis	mm	1500 (1600)		2000		2000		1500 (1600)	2000
	Y-Axis	mm	1200	1000	1500 (1800)	1500	1500 (1800)	1500	1200	1500 (1800)
	Z-Axis	mm	1000 (1100)	1000	1400 (1600)	1400	1400		1000 (1100)	1400
SPINDLE	Spindle Speed	rpm	4000 (6000)				4000 (6000)		4000 (6000)	
	Spindle Taper		7/24 taper ISO.50, BT-50				7/24 taper ISO.50, BT-50		7/24 taper ISO.50, BT-50	
DISTANCES	Spindle Center to Table	mm	0-1200	0-1000	0-1500 (1800)	0-1500	0-1500 (1800)	0-1500	40-1240	0-1500 (1800)
	Spindle Nose to Table Center	mm	[175-1175] 225-1225	225-1225	220-1620 (1820)	220-1620	370-1770		225-1225	220-1620 (1800)
	Hight From Ground to Table Surface	mm	1110	1260	1325	1480	1350	1480	1075	1325
FEED RATE	Rapid Feed Rate X/Y/Z	m/min	15 / 12 / 15				15 / 12 / 15		15 / 12 / 15	
	Minimum Setting	mm	0.001				0.001		0.001	
	Cutting Feed Rate	mm/min	1-5000				1-5000		1-5000	
MOTOR	Spindle Motor - cont. / 30min.	kW	11/15 (15/18.5)		15/18.5 (22/26)		15/18.5 (22/26)		11/15 (15/18.5)	15/18.5 (22/26)
	X/Y/Z/B-Axis	kW	3/3/4/3		4/4/4/3		4/4/4/4		3/3/4	4/4/4
	Lubricator Motor	kW	0.15				0.15		0.15	
	Hydraulic Pump	kW	2.25				2.25		2.25	
	Coolant Pump	kW	1.17				1.17		1.17	
	Chip Conveyor	kW	0.2				0.2		0.2	
	Oil Cooler Pump	kW	0.75				0.75		0.75	
	No. of Tools	pieces	40 (60)				40 (60)		40 (60)	
ATC	Tool Selection		Absolute				Absolute		Absolute	
	Tool Change Time (approx.) (T to T)	sec	15				15		15	
	Max. Tool (dia. / leng.)	mm	Dia. Ø125/Ø250 (Without Adjacent Tool) / Length 400				Dia. Ø125/Ø250 (Without Adjacent Tool) / Length 400		Dia. Ø125/Ø250 (Without Adjacent Tool) / Length 400	
	Max. Tool Weight	kg	18				18		18	
MISCELLANEOUS	Power Required	kVA	30		45		45		30	45
	Compressed Air	kg/cm <sup>2</sup>	6				6		6	
	Change Time (approx.)	sec.	-	45	-	90	-	120	-	-

■ Specifications are subject to change without prior notice.

#### STANDARD ACCESSORIES :

- |                                 |  |
|---------------------------------|--|
| 1. Linear scale on X, Y, Z-axis | 11. Heat exchanger                         |
| 2. Spindle oil cooler           | 12. Chip conveyor and cart                 |
| 3. Automatic power off          | 13. Leveling bolts and pads                |
| 4. Hydraulic system             | 14. Controller manuals and circuit diagram |
| 5. Coolant system               | 15. Operation manuals                      |
| 6. Lubricator system            | 16. Machine inspection lists               |
| 7. Alarm lamp                   | 17. Splash guards (around the table)       |
| 8. Work lamp                    | 18. Toolbox with spanners & wrenches       |
| 9. M. P. G.                     | 19. Fanuc OiMF controller                  |
| 10. RS-232 interface            | 20. ATC: 40 Tools                          |

#### OPTIONAL ACCESSORIES :

- |   |  |
|---|--|
| 1. ATC: 60 Tools                          | 7. Various work tables are available             |
| 2. Oil mist device                        | 700x700, 700x900 mm ( for LH-630 )               |
| 3. Variety of controllers                 | 800x1000, 1000x1000 mm ( for LH-800 )            |
| ( FANUC / MELDAS / SIEMENS / HEIDENHAIN ) | 8. 0.001° indexing on B-axis                     |
| 4. Various auxiliary work tables          | 9. Oil-feed holder                               |
| 5. Air conditioner at electrical cabinet  | 10. Spacious splash guard                        |
| 6. Coolant through spindle                | 11. Fully enclosed splash guard (with top guard) |
|   | 12. 2500kg table load on LH-630                  |

## LH-1250A

