

The Ultimate in Performance

MH Series

MH-500i / MH-630 Horizontal Machining Center

LEADWELL

LEADWELL CNC MACHINES MFG., CORP.

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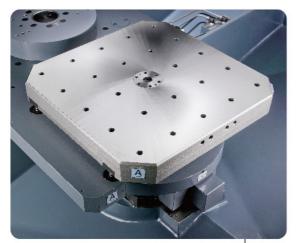
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* All performance are based on 220V/3PH/60HZ. Specifications are subject to change without notice

STRUCTURE

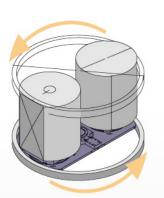
CAST IRON CONSTRUCTION

LEADWELL uses only top quality well-ribbed castings. Finite Element Analysis (FEA) is used on each new casting to determine the size and location of all internal ribs ensuring high torsional stiffness and minimum vibration. The travel column design reduces the required floor space and provides excellent accessibility to the machine table. Heavy duty linear guide ways ensure accurate positioning and rapid travel for all axes. The cast iron base column, saddle, headstock and tables have over 10 times the dampening capacity of those made from steel resulting in superior cutting performance.



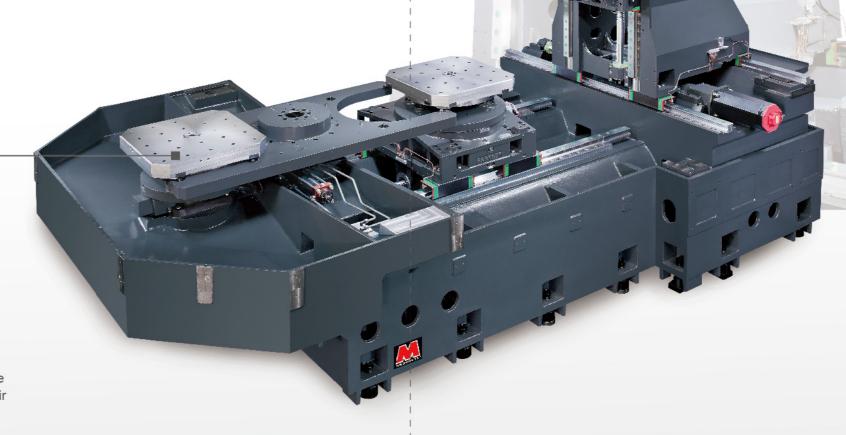
BAXIS

- •B-axis has a standard of one degree turning with oversized bearing.
- The force driving position between the worm and worm gear has a curved surface which provides 2-3 times higher driving capacity than the conventional complex screws. The driving force is properly distributed, and this ensures the backlash between teeth is controlled under 0.1mm.



SWING TYPE APC

The MH-series machine has a standard 2 pallet swing type changer system, the load position at the front of the machine allows easy loading and unloading of workpieces. The pallets are positioned and clamped to the table with four precision taper cones to ensure accuracy and rigidity. During the pallet changing cycle compressed air is blown through the cones to clean the clamping surfaces, removing chips and coolant. This air assures pallet location accuracy and long component life.





OVERSIZED TAPERED CONES

- The B axis movement and Z axis cross movement are equipped with oversized tapered cones for extremely accurate pallet positioning. This assures outstanding machining accuracy.
- The bigger O.D. of cones than other makers and over 75% contact surface each other for each pair. The rigidity and the repeatability of continuous cutting with 0.001 degree better than the 1 degree divided cutting.

FEATURES

BALL BAR TESTING

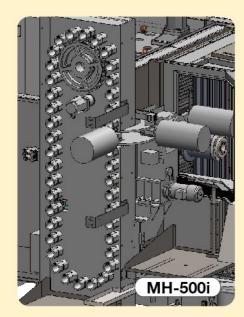
LEADWELL uses a stringent ball bar test that checks not only linear accuracy but also machine geometry. This test ensures that each machine meets the three-dimensional squareness and accuracy requirements



5 AXES ROTARY TABLE (OPTIONAL)

The contouring rotary tables with a minimum indexing increment of 0.001 offer simultaneous machining factions for complex profiles workpieces. Extra large preloaded thrust bearings insure smooth and accurate table rotation. Four clamping cones ensure accurate and repeatable pallet location along with excellent rigidity.







CHAIN-TYPE MAGAZINE

• 40/60/90/120 available

AUTOMATIC TOOL CHANGING SYSTEM

The high-speed ATC activates a high-pressure air blast to clean the spindle taper and the pot to ensure accurate tool holding. Tools are automatically returned to their original location, eliminating tool interference from oversized tools in the magazine.

OPTIONAL









■ Oil Skimmer

■ Mist Collector

■ Automatic workpiece measurement

■ Automatic tool length measurement





■ Ball Screw with Hollow Shaft Design

■ Direct Gearbox

FEA REPORT(Finite Element Analysis)

Optimum

- Section areas
- Moments of inertia
- · Torsional constant
- Plate thickness

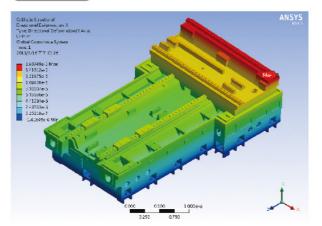
Bending stiffness

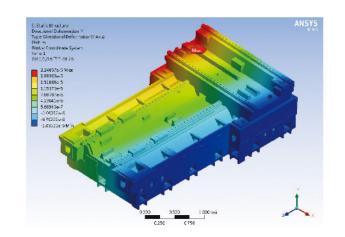
- Transverse shear
- Vibration reduce

With FEA you can:

- 1. Predict and improve product performance and reliability.
- 2. Reduce physical prototyping and testing .
- 3. Evaluate different designs and materials .
- 4. Optimize designs .

MH-630



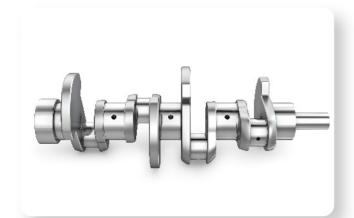


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LEADWELL SMART PROCESSOR

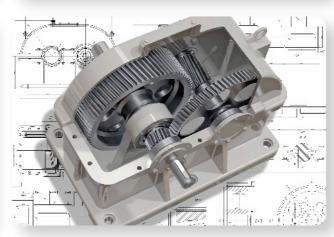
EXCELLENT FOR DIVERSIFIED INDUSTRIES

- · Precision (profiled) parts machining
- General mold machining
- · Automotive and motorcycle part machining
- 3C industries
- · Aerospace parts machining
- Semi-conductor industry
- FMC & FMS unmanned production lines













More than a machine

Leadwell is never simply about building a machine and to launch onto the market. Our years of experience, we learn that the right programs must be developed to ensure the competitiveness of the users.









Pre-machining setting

It contains the function that the operator will frequent use before the operations. This including the coordinates setting, tool measurement, tool magazine measurement, and the calculator function.











It includes the parameter data setting, and all the other statistics of the machines; such as the accumulated machining time, and the tool management.



Leadwell Assistor

The assistor contains the functions to help the user to optimize thet machine setting.



14 difference useful functions







Operators would be able to gain the current status of the machine, and to access the internet to obtain more useful information.

Machined work pieces.

Users' full satisfaction have always been Leadwell's main focus.

PERFORMANCE

MH-630



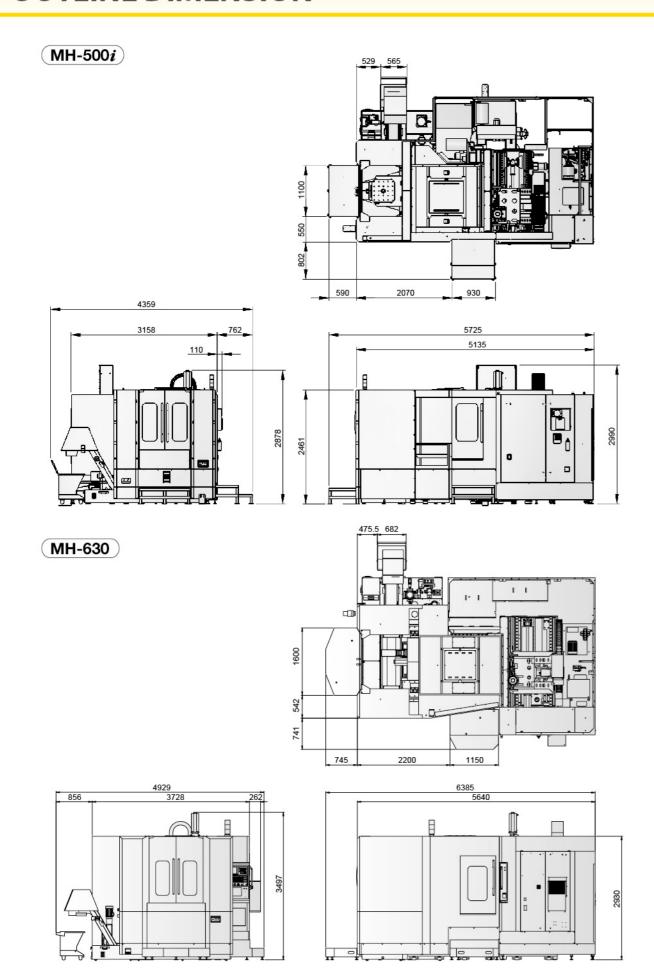
DRILL				
Drilling	Ø60mm			
Tool	Ø60mm			
Spindle Speed	1500rpm			
Feed Rate	100mm/min.			
Depth of Cut	55mm			

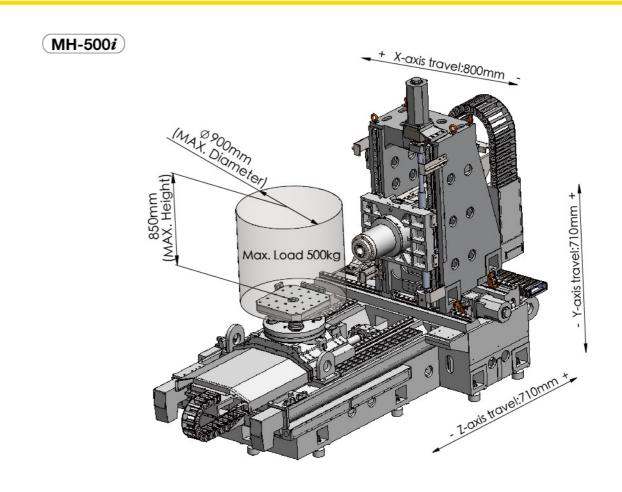
ТАР				
Tapping	M20			
Spindle Speed	300rpm			
Feed Rate	750mm/min.			

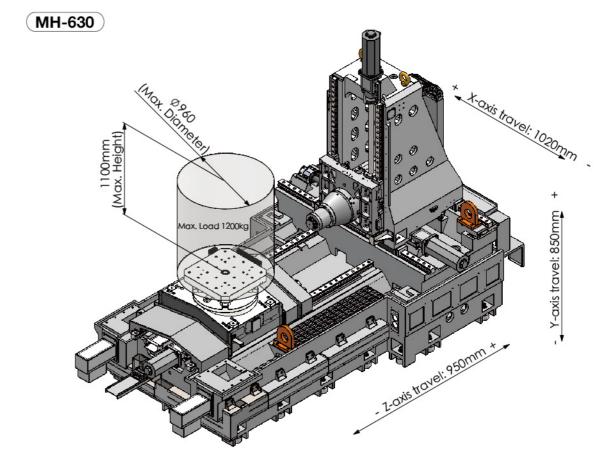
RIGID TAP			
M20			
1000rpm			
2500mm/min.			

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INTERNAL DIMENSION



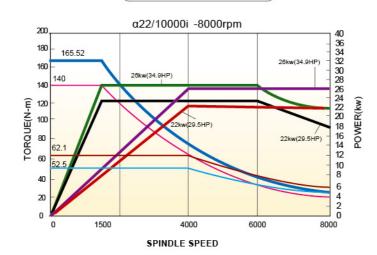




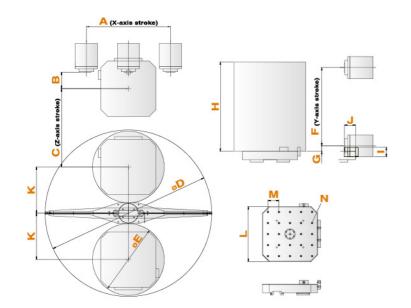
SPINDLE POWER CURVE



MH-500*i* / MH-630

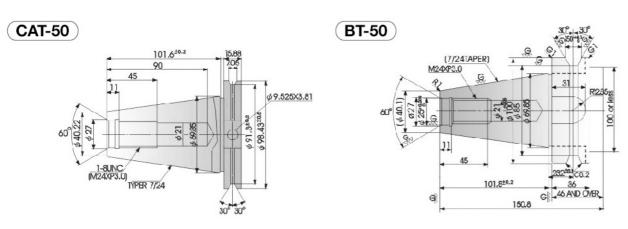


THREE AXES TRAVEL RANGE



ITEM	MH-500 <i>i</i>	MH-630
А	800	1020
В	150	150
С	710	950
D	1900	2190
E	900	960
F	710	850
G	50	100
Н	850	1100
I	90	-
J	109	-
K	500	615
L	500 630X630	
М	100 125	
N	25-M16x2.0x30L	24-M16X2.0P

TOOL SHANK SPECIFICATIONS



MACHINE SPECIFICATIONS

ITEM MODI	ĒL	MH-500 <i>i</i>	MH-630
CAPACITY	Unit		
X axis travel	mm(in)	800(31.5)	1020 (40.2)
Y axis travel	mm(in)	710(28)	850 (33.5)
Z axis travel	mm(in)	710(28)	950 (37.4)
Distance from table top to spindle center	mm(in)	50-760(2-30)	100-950 (4-37.4)
Distance from table center to spindle end	mm(in)	150-860(5.9-33.9)	150-1100 (6-43.4)
TABLE			
Table size	mm(in)	500x500 (19.6x19.6)	630X630 (24.8X24.8)
Max. workpiece swing diameter & height	mm(in)	900X850(35.4X33.5)	960X1100 (37.8X43.4)
Permissible mass of workpiece	kg(lb)	500X2(2204)	1200 (2645)
Min. table indexing angle	deg	1	1
SPINDLE			
Spindle speed	rpm	8000	8000
Spindle nose (nominal size, NO.)		ISO NO.50	7/24 Taper, NO.50
Spindle bearing inner diameter	mm(in)	90 (3.5)	90 (3.5)
FEED RATE			
Rapid traverse	m/min	60	X/Z axis=48 , Y axis=36
A.T.C			
Tool storage capacity	pcs	40	40
Max. tool diameter (with adjacent tools)	mm(in)	125 (5)	118 (4.6)
Max. tool diameter (without adjacent tools)	mm(in)	250 (9.8)	236 (9.3)
Max. tool length	mm(in)	500(19.7)	400 (15.7)
Tool change time (T-T/C-C)	sec	3/	5 /
A.P.C			
Number of pallets		2	2
Pallet changing time	sec	16	15
MOTORS			
Spindle motor (30min/cont.) FANUC	kw(hp)	α22/10000i 18.5/22(24.7/29.3)	α22/10000i 18.5 / 22 (24.7 / 29.3
X/Y/Z axis feed motors	kw(hp)	7/7/4(9.4/9.4/5.4)	6/6/7(8/8/9.4)
MACHINE SIZE			
Height of machine (H)	mm(in)	3024(119)	3500(137)
Floor space (LXW)	mm(in)	4188x5427(164.8x213.6)	6382x4700 (251x185)
Total machine weight	kg	14500	22500
Power requirement	KVA	60	70
Controller	FANUC	Oi-M	0i-M

AVAILABLE CONTROLLER: SIEMENS

STANDARD ACCESSORIES

- Spindle oil cooler
- Rigid tapping
- Metric table
- Fully enclosure guarding
- Shower coolant
- Chip conveyor inside machine (auger type)
- Chip conveyor outside machine & Chip bucket
- Work light
- Alarm lamp
- Heat exchanger
- Remote MPG
- Coolant gun(MH-500i)
- Simple tool life

OPTIONAL ACCESSORIES

- A.T.C 60/90/120 tools magazine
- Two speed gearbox
- C.T.S from A
- Inch table
- Linear scale (X/Y/Z)
- Tool overload detection
- Automatic tool length measurement
- Automatic workpiece measurement
- Simple tool life management
- Coolant gun (MH-630)
- Oil skimmer
- Oil mist collector
- Air conditioner

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