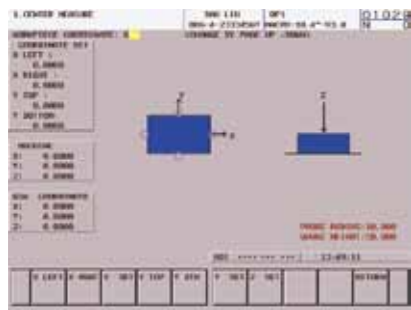


## Dah Lih developed software, upgrading programming efficiency



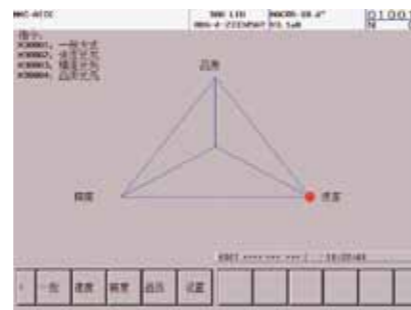
### Workpiece coordinate setting

With the use of the edge search function, the workpiece home position can be easily & quickly set.



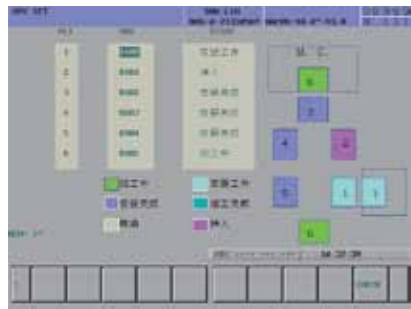
### Spindle load monitoring (SLM)

With the spindle load monitoring function, the CNC will monitor spindle load at all times. In case the spindle load exceeds the setting value, machining motions will stop immediately.



### Multi-condition machining selection (MMC)

This function provides a choice of five machining modes, including Q1 (Ultra high speed mode), Q2 (High speed mode), Q3 (Normal mode), Q4 (Accuracy mode) and Q5 (Ultra high accuracy mode).



### Machining process management

This function provides management support, so that the operator can clearly identify the status. This combined with a personalized operation interface, makes it easy to change machining programs and therefore, machining error is minimized.



### Adjustment function

With the help of this function, the operator does not need to memorize various "keep relays" due to the difference in models. Also, changing "keep relays" is easy to do without looking at the operating manual.



### Quick switch for rotary axis

When dismantling the rotary axis, no change of parameter is required. The only thing to change is the machine's on/off to complete preparation before machining.



## DAH LIH MACHINERY INDUSTRY CO., LTD.

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MCV-860

MCV-1060

## HORIZONTAL MACHINING CENTER

MCV-1200

# HC-2000

MCV-1250

MCV-1450

MCV-1680

MCV-1700

MCV-2100

MCV-2600

DCM-2213

MCH-630

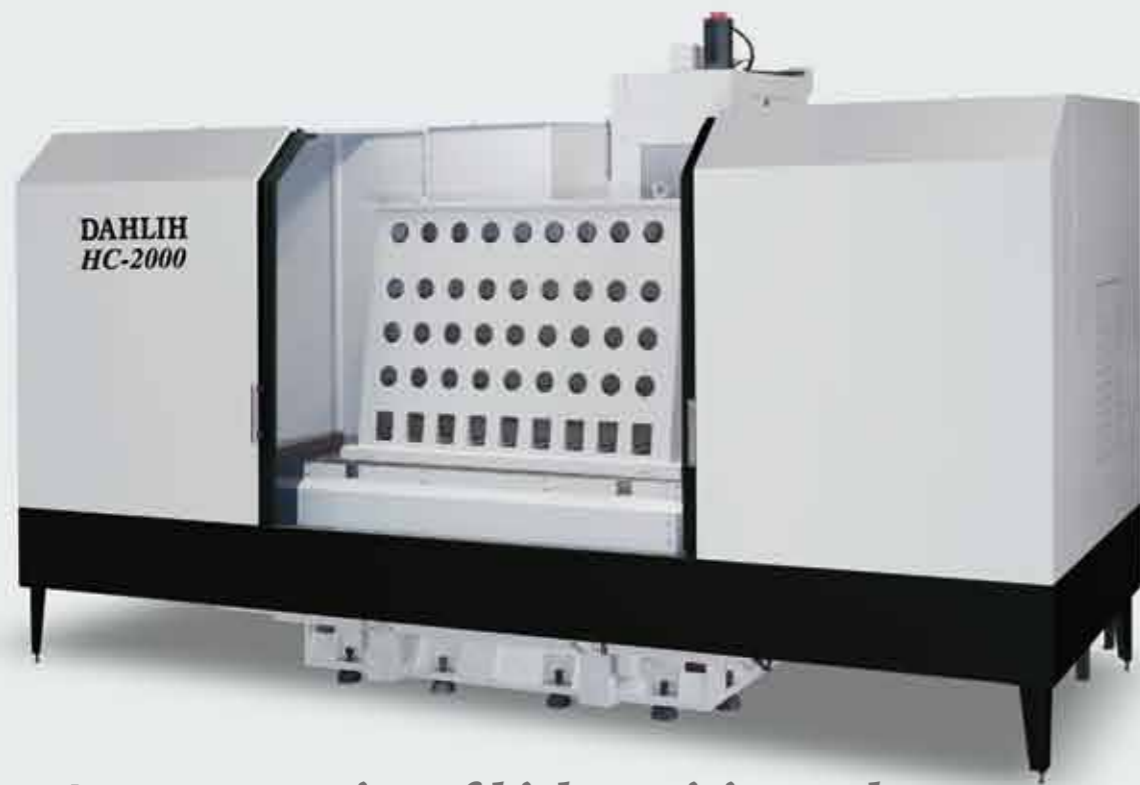


The Latest and Best Quality Machinery.  
**DAHLIH**®

# Horizontal machining center

## The best choice in heavy precise cutting

Dah Lih, a leading brand in horizontal machining centers, is introducing a new high efficiency horizontal machining center for mold and die machining. Its machining capacity is unmatched compared to competing models. With the exclusive design of the air floating column and table, the feed on each axis is smoother without requesting much effort. Moreover, the innovative design of the spindle head with its 8 contact surfaces offers the highest level of stability. Finally, the reversed T-shape machine base and its ultra rigid structure guarantee that the HC-2000 has exceptional consistency and accuracy.



*A new generation of high precision and high efficiency HMC for mold machining.*

### Machine features:

- » Great machining capacity with 2000mm travel on X-axis, 1000mm (optional 1300mm) on Y-axis and 1000mm on Z-axis.
- » The auxiliary vertical table provides convenient support for machining.
- » The machine's column and table are equipped with an air floating system to achieve higher positioning accuracy.
- » The powerful gear-drive spindle combined with its 8 contact surfaces on the head allows for extra heavy cutting.
- » The symmetrical structure of the column increases the machine rigidity and resistance to thermal deformation.



**HC-2000**



**Meticulously constructed structure creates ultimate machine rigidity.**

### Gear-drive spindle

#### Powerful drive! Heavy cutting resistance!

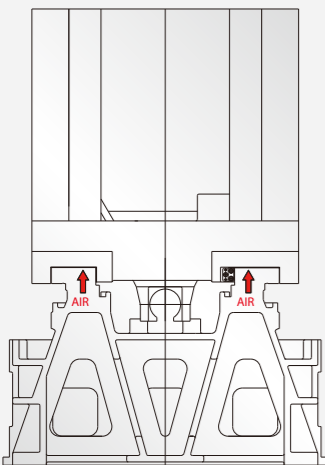
- » The spindle runs in NN type double row roller bearings, making the machine excellent for heavy cutting. Spindle speeds are transmitted through a 2-speed gearbox, which provides full power output at running speeds of 302 RPM.
- » The spindle and gears are equipped with cooling systems to maintain low temperatures while ensuring accuracy.
- » The symmetrical design of the spindle head keeps thermal deformation to the minimum possible level.

#### Linear scale (Optional)

- » The X, Y, Z-axis can be equipped with linear scales, providing close-loop feedback control for higher positioning accuracy.



- » All major structural parts are manufactured from rigid cast iron to ensure optimal structural stability.
- » The reversed T-shape construction with perfect rigidity, providing a solid support for heavy loads.
- » The three axes are supported to eliminate overhang problem.
- » The wide box ways on each axis guarantees maximum stability.
- » The ball screws on all axes are pre-tensioned for effective removed of thermal deformation.



#### Air floating column

- » The column is designed with an air floating system for dramatically lowering friction. This feature creates smoother movement without stick-slip problems. Another benefit that upgrades accuracy and effectively reduces wear is the Turcite-B coating on the slideways.

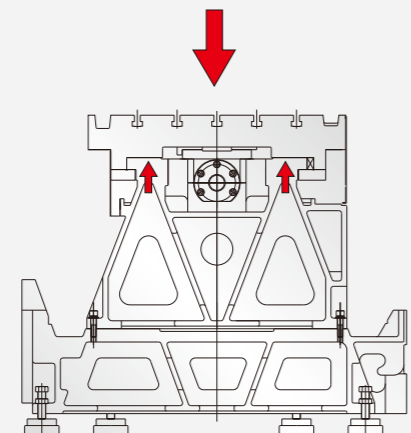
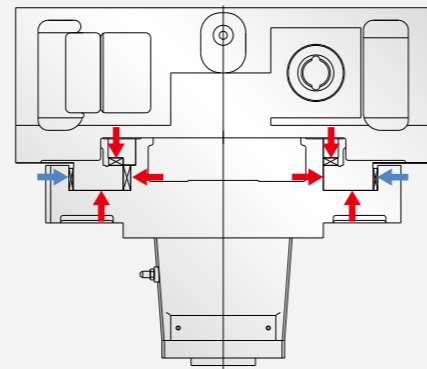


Illustration of table floating

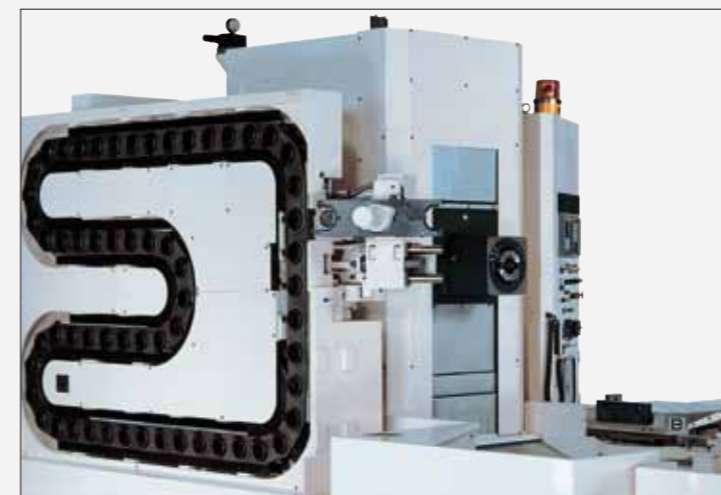
#### Air floating table

- » In addition to the column, the Dah Lih HC-2000 is also designed with an air floating table that allows column and table to move quickly and without much effort. Besides, the sideway stick-slip problem is also eliminated.



#### 8 contact surfaces on the spindle head

- » The spindle head has a unique design based on 8 contact surfaces with the column slideways, leading to increased rigidity. This design also enables the spindle head to maintain maximum stability in heavy cutting.



#### Automatic Tool Changer (ATC)

- » The Automatic Tool Changer is driven by a hydraulic system. Powerful tool clamping with smooth motions. The chain type magazine features bi-directional, random tool selection. An additional "ready position" authorizes pre-selection of "ready tool" for saving time.



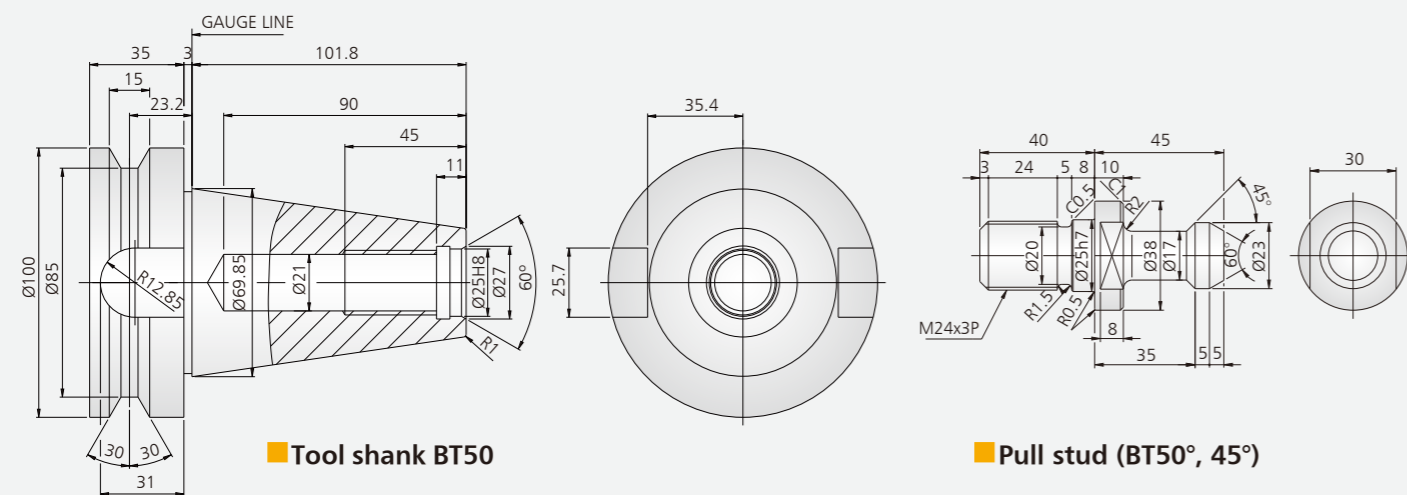


# SPECIFICATIONS, ACCESSORIES AND DIMENSIONS

## SPECIFICATIONS

MODEL	UNIT	HC-2000
<b>TABLE</b>		
Pallets dimensions	mm (inch)	2,300 x 970 (90.6 x 38.2)
T-slot (WxNo.)	mm (inch)	22 x 5 (0.87 x 5)
Max table load	kgw (lbs)	7,000 (15148)
<b>TRAVEL</b>		
Longitudinal travel (X-axis)	mm (inch)	2,000 (78.7)
Vertical travel (Y-axis)	mm (inch)	1,000 (39.4)
Cross travel (Z-axis)	mm (inch)	1,000 (39.4)
Distance from spindle nose to table center	mm (inch)	385~1,385 (15~54.5)
Distance from spindle center to table surface	mm (inch)	75~1,075 (2.95~42.3)
<b>SPINDLE</b>		
Spindle nose taper		N.T. 50
Spindle speed	R.P.M.	3,500 / 6,000
Spindle speed change		Two-step
<b>FEED</b>		
Cutting feed rate	mm/min (inch/min)	1~4,000 (0.01~157)
Rapid traverse rate	mm/min (inch/min)	10,000 (393.7)
Min input increment	mm (inch)	0.001 (0.0001)
<b>ATC (AUTOMATIC TOOL CHANGER)</b>		
Tool storage capacity	Tools	60
Max tool (Dia x length)	Ø x mm (inch)	Ø110 x 500 (4.3 x 20)
Max tool weight	kgw (lbs)	20 (44)
Tool selection		Bi-directional
<b>MOTORS</b>		
Spindle motor (Cont./30min rating)	Kw (HP)	18.5 (25)
Servo motor X-axis	Kw (HP)	3 (4)
Servo motor Y-axis	Kw (HP)	3 (4)
Servo motor Z-axis	Kw (HP)	3 (4)
<b>INSTALLATION SPACE &amp; MACHINE WEIGHT</b>		
Floor area occupied	mm (inch)	5,750 x 5,605 (226.4 x 220.7)
Machine weight	Kgw (lbs)	21,000 (46,255)

Specifications are subject to change without prior notice.



## » STANDARD

- Spindle cooling device
- Heat exchanger
- Removable manual pulse generator
- Spiral type chip auger
- Automatic power cut-off device
- Call light
- Work light
- Tool box & tool kits
- Table jig
- 1300mm (3080kgw)
- 1000mm (2500kgw)

## » OPTIONS

- ATC tool storage: 90/120 tools
- Coolant system for deep hole drilling
- Oil mist device
- Flat type chip conveyor with chip wagon
- Automatic centering device
- Tool breakage detection device
- Tool length measuring device
- Linear scale feedback control
- C type splash guard
- Y-axis travel 1300mm



## Operational panel

» The control panel is located close to the spindle for easy access. Operation keys and switches are centralized on the control panel for greater operating experience. The MPG handwheel facilitates workpiece setup.

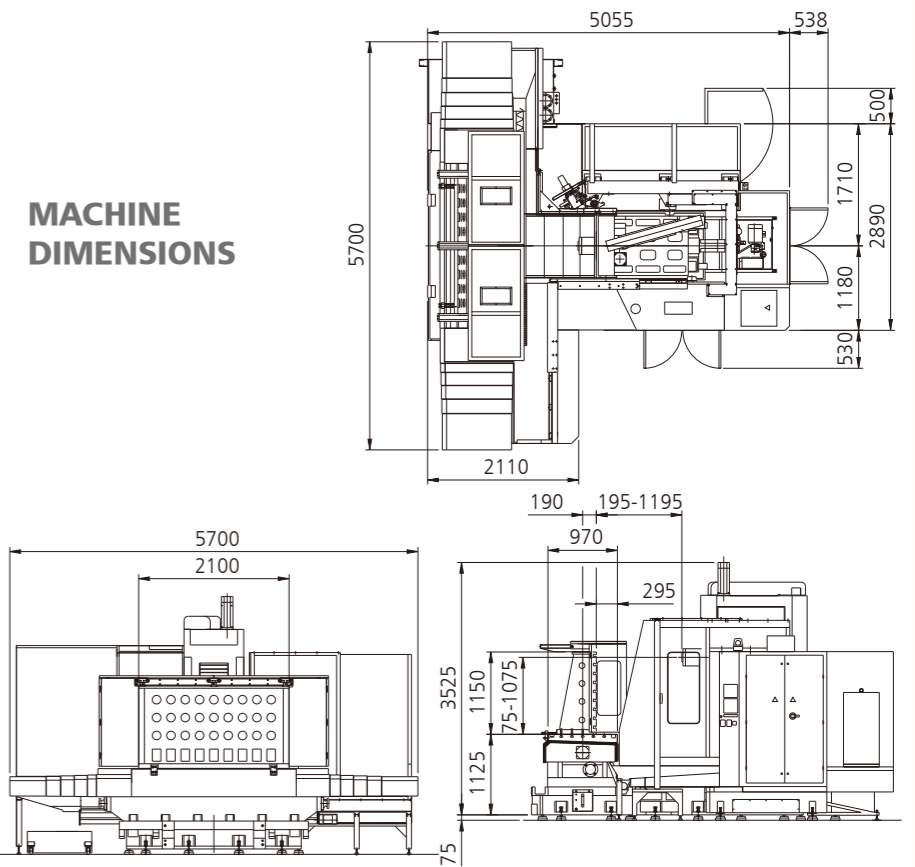


## Rigorous quality inspection

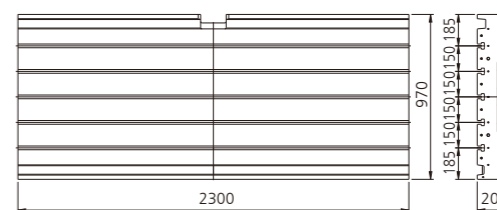
» Rigorous quality control is conducted at each processing step from design, production to machine assembly. The quality of Dah Lih's machine is ensured by using various sophisticated inspection instruments for testing, such as:

1. Accuracy calibration by laser
2. Ball bar tester and circular cutting test

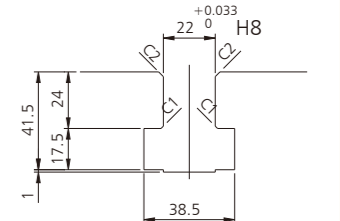
## MACHINE DIMENSIONS



## TABLE DIMENSIONS



## T-SLOT SIZES DIMENSIONS



## Spindle power / Torque diagram HC-2000 (6000 RPM)

