MCH-630

MCV-720

VERTICAL MACHINING CENTER

MVC-1020A

MCV-1800

MCV-1020BA

MCV-1250

MCV-1450

MCV-1700

MCV-2100

MCV-2600

DCM-2213

The Latest and Best Quality Machinery.

DAHLIH®

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MCV-1800

Strength, High Rigidity and Perfect Accuracy at All Times.

This massive vertical machining center is especially ideal for sheet metal molds for automobiles and motorcycles, and medium and big sized molds for injection molding machines. In fact, wherever there is a demand of high speed and high precision machining. Its heavy duty rigid design and construction assure top accuracy and lifetime deformation-free. Four box ways on the base allow heavy loads to be supported firmly. The special nitrogen gas counter-balancing system features no noise and extremely stable motion. The latest advanced CNC control provides maximum reliability and ease of operation. Two-step gear transmission for the spindle produces the torque output you need. There is much more for you to learn about the Dah Lih's MCV-1800 Vertical Machining Center!

The Ideal VMC for

Molds and Dies

Highest Quality with Utmost Accuracy!

RUGGED CONSTRUCTION

» The machine structure is designed and analyzed by advanced "Finite Element Analysis" to achieve the highest stability and rigidity, high speed travel and light weight.

» Ball screws are pre-tensioned to reduce thermal deformation to a minimum.

» Base, saddle and column structures are reinforced by V-shaped ribs with shortened stress lines. This fully eliminates rib deformation while assuring the maximum rigidity of the machine.

» Saddle is supported four ways featuring uniform load distribution and minimum deformation.

PRECISE CUTTING HEADSTOCK

» Spindle can be equipped with a coolant device which is ideal for deep hole drilling.

» Easy chip removal. Specially-designed spindle is adaptable to all speeds and requirements.

» Spindle bearing life is extended through the floating design of the tool unclamp unit.

» Superior rigidity is achieved through the box-type construction of the headstock.

» The specially-designed longer spindle makes using smaller tools much easier.

Rigid Massive Constructed Design
for Lifetime Accuracy.

EXCELLENT PERFORMANCE SPINDLE

High torque and performance is achieved from the two step (low and high gear) spindle. Accuracy is assured at both high and low speeds.

Structural Features

» Major machine parts are manufactured from rigid cast iron for maximum structural stability.

» Double wall box type structure for column, bed and saddle. Scientifically rib reinforced for added rigidity, while reducing thermal strain to a minimum.

» Four box ways on base assure solid support for heavy loads.

» Symmetric and well counter-balanced design on the column assures precision machining.

» Pre-tension ball screws on the 3 axes reduce thermal growth.

Excellent Technology and Outstanding Products - Surely, The Best Machine From Taiwan.

CAM TYPE MAGAZINE

» The CAM type magazine rotation is driven by a cylindrical cam for fast and dependable tool change. Tool loading capacity is 30 tools. Random tool selection provides highly efficient tool changing.

WORK LIGHT

Two quartz work lights provide lighting for the working area. They feature soft illumination without being irritating to the operator's eyes.

CHIP AUGER

During machining, chips are flushed and fall down to the chip auger for delivering to the chip conveyor. It efficiently removes chips to eliminate being affected by chip heat and keeps work area clean at all times.

NITROGEN GAS COUNTER-BALANCE

» The newly designed nitrogen gas counter-balancing system employs an accumulator which does not require additional power.
» No hydraulic power unit is required.
» No noise, extremely stable motion, no resonance and greatly upgrades machining efficiency.
» Easy to adjust servo parameters.

TOOL KNOCKING DEVICE

»The tool knocking device with floating design features a buffering function which not only fully avoids damage to the spindle and bearings during tool release, but it also extends the service life of the spindle.

»Tool knocking motion is actuated by an air cylinder for efficient tool release.

LATEST ADVANCED CNC CONTROLLER

Equipped with Fanuc, Heidenhain and others CNC controllers.

SPINDLE OIL COOLER

High speed and accurate machining is assured because of the spindle oil cooler. It prevents the spindle from getting variation and thermal deformation.

HEAT EXCHANGER FOR CONTROL CABINET

The high performance heat exchanger ensures a constant temperature inside the control cabinet. It provides protection for electronic components, controller and motor driver.

Rigid, Precise Spindle

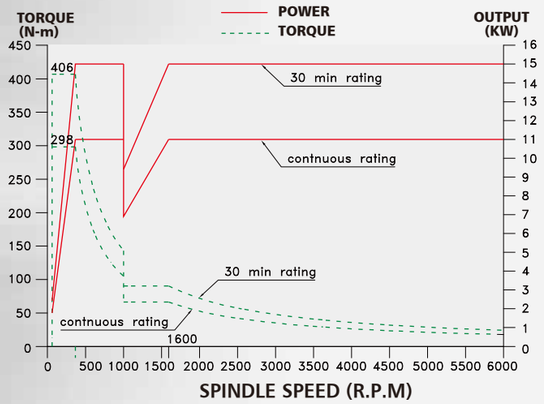
6,000 RPM Precision Spindle Especially

High Speed! High Precision

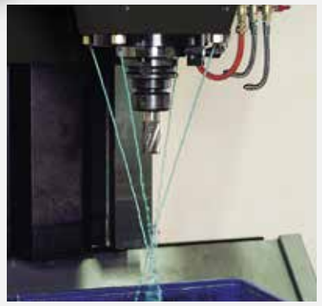
» Two speed ranges for the spindle transmission system provides full power output and high torque output at low speed range, allowing for heavy duty machining. High speed range fully meets high speed machining requirements.

» The spindle runs on ceramic bearing to reduce spindle thermal deformation to a minimum.

SPINDLE POWER / TORQUE DIAGRAM (6,000 RPM)



COOLANT AROUND SPINDLE
The coolant jets around the spindle effectively remove heat from the cutting tool and the workpiece ensuring high cutting accuracy.



More Powerful and Efficient Operations with Extra Optional Accessories

» OPTIONS


AUTOMATIC TOOL LENGTH MEASURING DEVICE


4TH AXIS CONTROL


4TH AXIS CONNECTOR

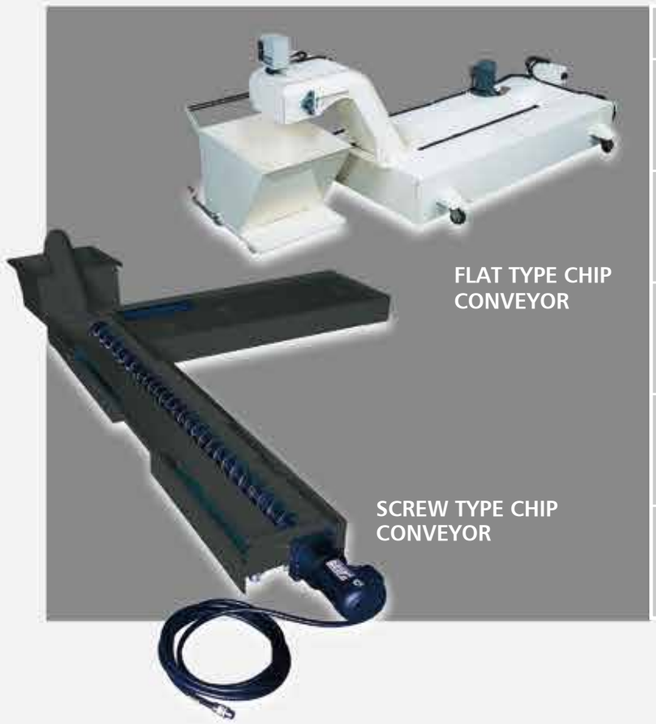

COOLANT THROUGH SPINDLE DEVICE

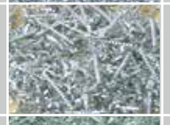

COOLANT WASH


COOLANT THROUGH TOOL


FAST CAM ATC, 40 TOOLS


COOLANT & AIR GUN



Cutting Shape	Material	Steelbelt Chip Conveyor	Screw Type Conveyor
Metallic Chip		O	O
Cast Chip			O
Curly Aluminum Chip		O	
Aluminum Chip			O
Non-Metallic Chip		O	O

SPECIFICATIONS, ACCESSORIES AND DIMENSIONS

SPECIFICATIONS

MODEL		MCV-1800	MCV-1800B	
TABLE				
Working Surface	mm (inch)	2,100 x 1,010 (82.7 x 39.76)		
T-Slots (Size x Number)	mm (inch)	22 x 5 (0.87 x 5)		
Max. Table Load	kgw (lbs)	2,000 (4400)		
TRAVEL				
Longitudinal Travel (X)	mm (inch)	1,800 (70.9)		
Cross Travel (Y)	mm (inch)	800 (31.50)		
Headstock Travel (Z)	mm (inch)	750 (29.53)		
Distance Between Spindle End and Table Top	mm (inch)	200-950 (7.87-37.4)		
Distance Between Spindle Center and Column Surface	mm (inch)	850 (33.46)		
SPINDLE				
Spindle Nose		N.T. 50	N.T. 40	
Spindle Speeds	R.P.M.	6,000	8,000	(10,000)
Spindle Speed Range		Two Gears Variable	Infinite Variable	
FEED				
Cutting Feed	mm/min (inch/min)	10,000 (393.7)		
Rapid Traverse	m/min (inch/min)	15 / 15 / 8 (591 / 591 / 315)		
Minimum Input Increment	mm (inch)	0.001 (0.0001)		
ATC (Automacic Tool Changer)				
Tool Holder		BT 50	BT 40	
Tool Storage Capacity	Tools	30	30	
Max. Tool Dia. x Length	Ø x mm (inch)	105 x 300 (4.1 x 11.8)	76 x 300 (3.0 x 11.8)	
Max. Tool Weight	kgw (lbs)	15 (33)	7 (15.4)	
Max. Tool Dia. of adjacent pots are empty	Øxmm	200	125	
Tool Selection		Random		
MOTORS				
Spindle Drive Continuous Rating	Kw (HP)	11 (15)	7.5 (10)	11 (14.7)
Motor Rated Output for 30 Minutes	Kw (HP)	15 (20)	11 (14.7)	15 (20.1)
Drive Motors X, Y, Z Axis	Kw (HP)	3 (4), 3 (4), 3 (4)		
MACHINE WEIGHT SPACE AND PACKING				
Floor Space	mm (inch)	7,010 x 5,850 (275.98 x 230.32)		
Net Weight	Kgw (lbs)	15,500 (34,100)		

Specifications are subject to change without prior notice.

» STANDARD

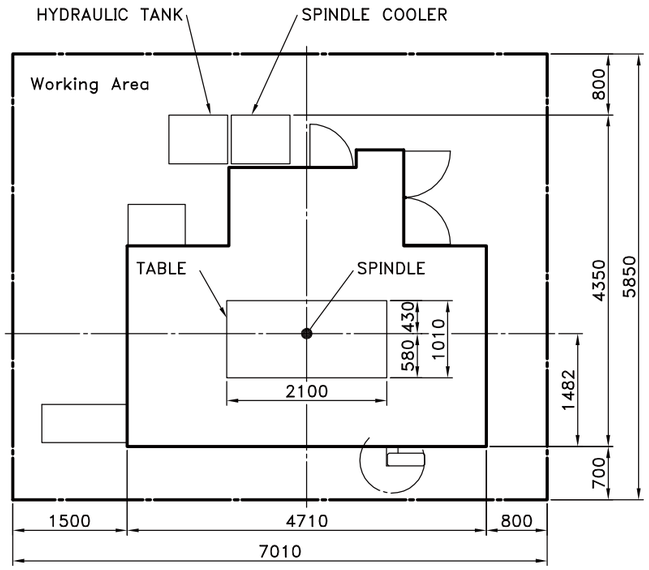
- Heat Exchanger
- Removable Manual Pulse Generator
- Coolant Around Spindle
- Spiral Type Chip Conveyor
- Semi-enclosed Splash Guard
- RS-232 Interface
- Automatic Power Off
- Call Light
- Automatic Lubrication Equipment
- Work Light
- Tool Kit & Box
- Spare Fuses
- Spindle Cooler
- Rigid Tapping
- Stand Type Controller

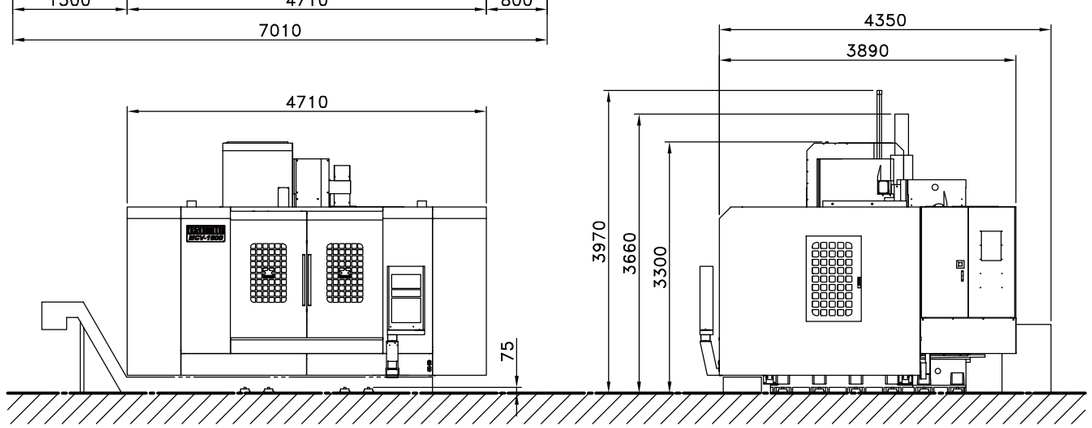
» OPTIONS

- Screw Type Chip Conveyor
- Flat Type Chip Conveyor and Chip Wagon
- Rotary Table With 4th Axis Control
- 4th Axis Connector
- Coolant Through Tool
- Coolant Through Spindle With Filter
- Coolant Wash
- Automatic Tool Length Measuring Device
- Automatic Centering Device (Renishaw MP-10)
- Cam Mechanism ATC (40 Tools)
- Direct-drive spindle 10,000 / 12,000 / 15,000 rpm

MACHINE DIMENSIONS

Unit:mm





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