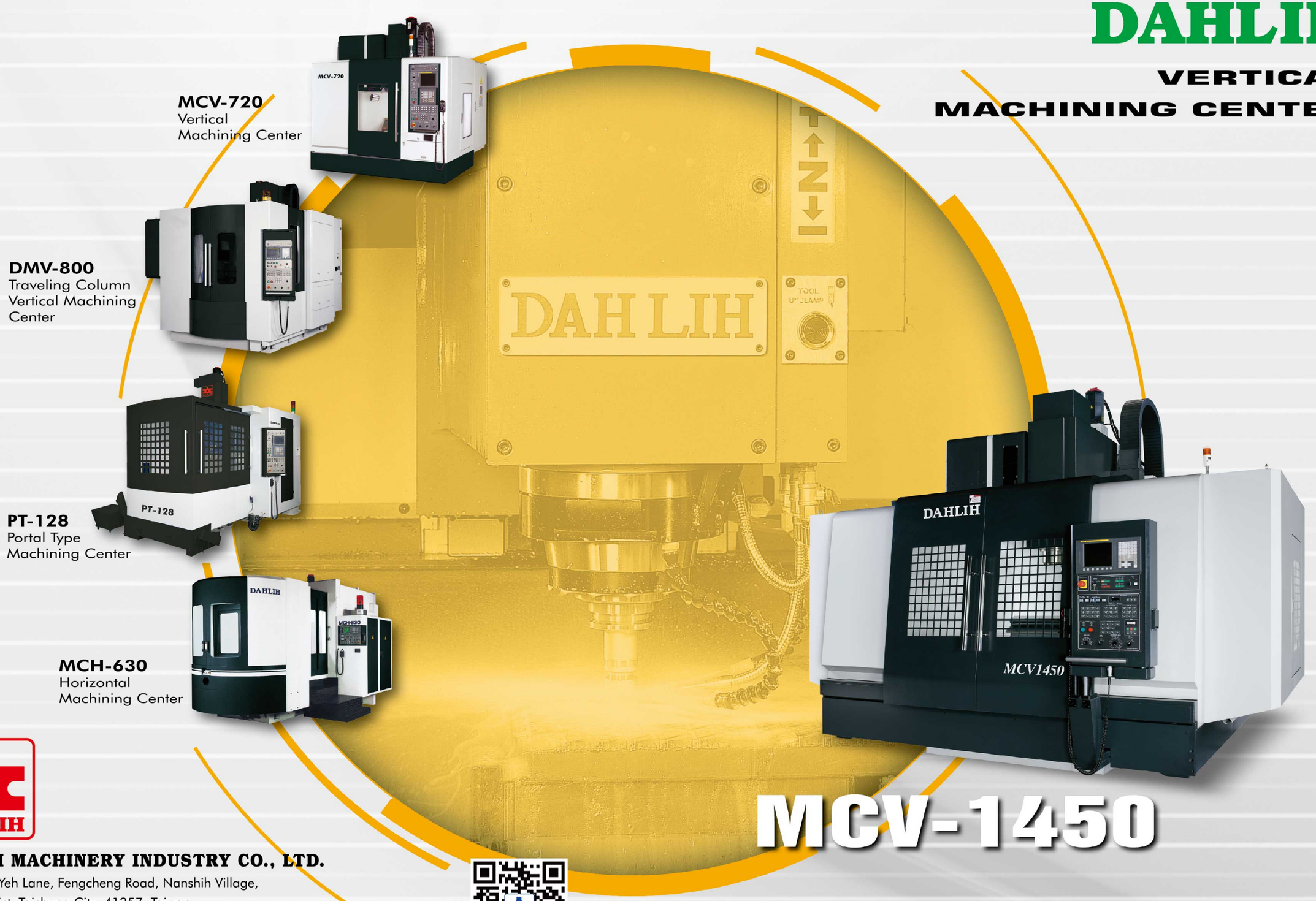
The Latest and Best Quality Machinery.

DAHLIH®

VERTICAL MACHINING CENTER



MCV-1450

DAH LIH MACHINERY INDUSTRY CO., LTD.
No. 3, Kung-Yeh Lane, Fengcheng Road, Nanshih Village,
Wufeng District, Taichung City, 41357, Taiwan.
TEL:886-4-23334567 FAX:886-4-23307567
E-mail:export.sale@dahlih.com.tw Http://www.dahlih.com.tw

002-D2-00-002
1000, 02, 2019

MCV-1450

Dah Lih's Cutting Edge Technology for Precision and Efficient Machining

The Dah Lih MCV-1450 Vertical Machining Center is a rugged and high precision machine with unmatched value. It is the most popular machining center on the market today. Ideal applications include precision mold and die making, middle sized parts machining and automotive and motorcycle parts machining.

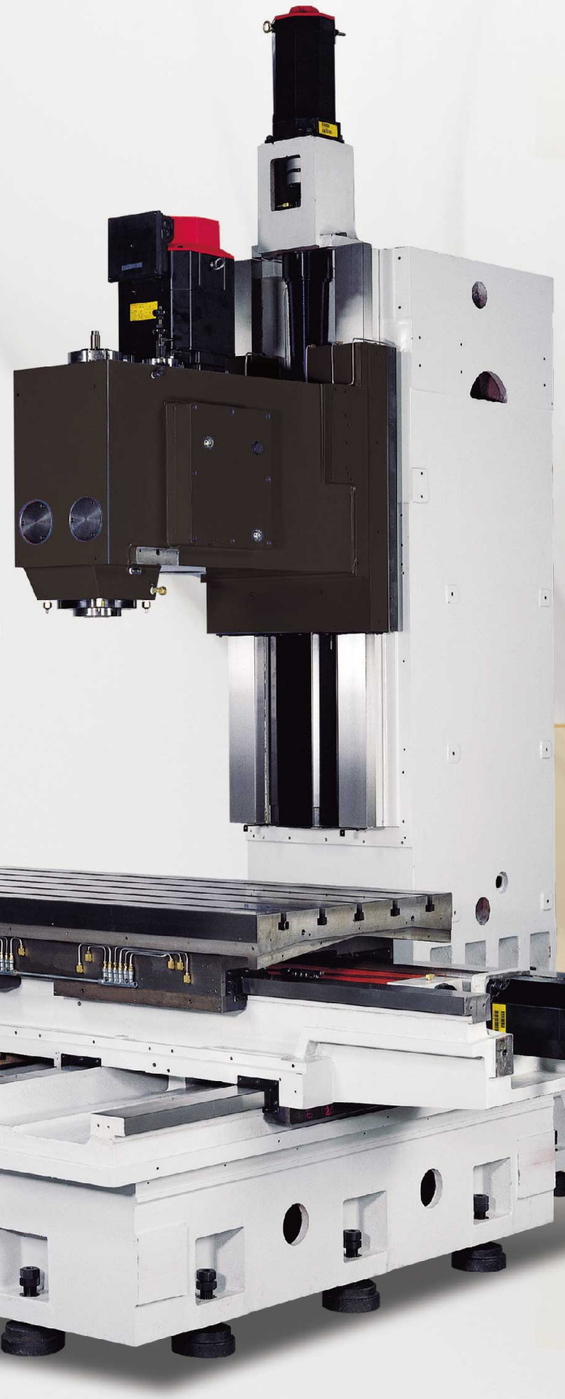
Its outstanding value results from the fact that it offers many features - as you have come to expect. It is ruggedly constructed throughout for optimum structural rigidity and accuracy. Four box ways on the base provide extra firm support for heavy loads. The nitrogen gas counter-balancing system assures extremely stable motion. Cutting feed rate is up to 10,000 mm/min for increased efficiency.

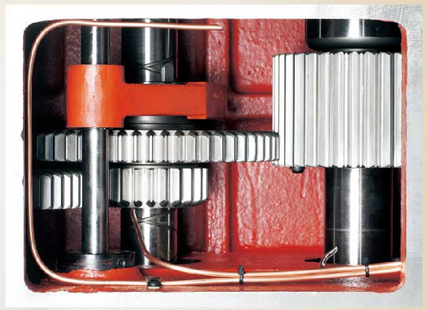
VERTICAL MACHINING CENTER

Strength, High Rigidity and Perfect Accuracy at All Times.

Rigid, Massive Constructed Design for Lifetime Accuracy.

- 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.





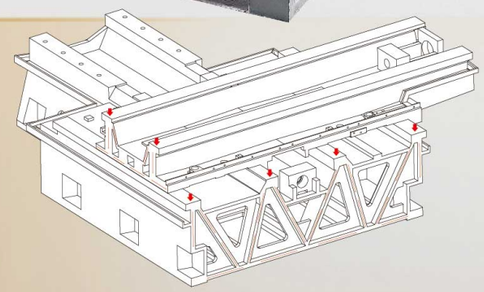
EXCELLENT PERFORMANCE SPINDLE

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

PRECISE CUTTING HEADSTOCK

- Spindle through 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.



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.

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.

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.

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.

WORK LIGHT

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

LATEST ADVANCED CNC CONTROLLER

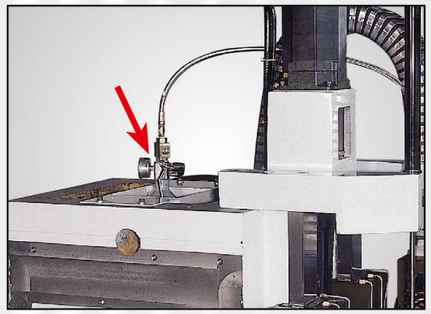
Equipped with Fanuc, Heidenhain and other CNC controllers.

COOLANT AROUND SPINDLE

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

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.



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.

CHIP AUGER

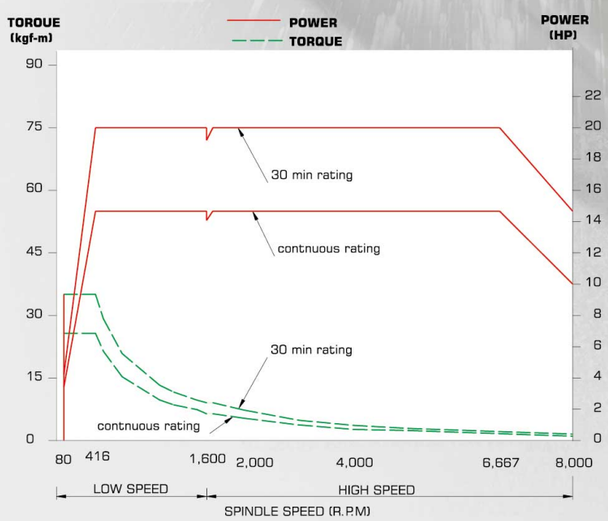
During machining, chips are flushed and fall down to the chip auger for delivering to the chip conveyor. It efficiently removes chips to eliminate being affected by chip heat and keeps work area clean at all times.

Rigid, Precise Spindle

8,000 RPM Precision Spindle Especially

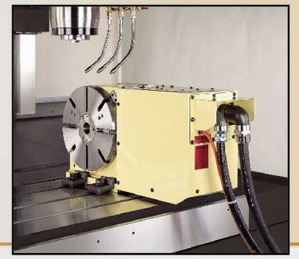
- Two speed ranges for the spindle transmission system provides full power output and high torque output at low speed range, allowing for heavy duty machining. High speed range fully meets high speed machining requirements.
- Satellite gear drive design minimizes backlash while assuring extremely smooth running at high speed.
- The spindle runs on ceramic bearing to reduce spindle thermal deformation to a minimum.

DIRECT-DRIVE SPINDLE POWER / TORQUE DIAGRAM (8,000 RPM)



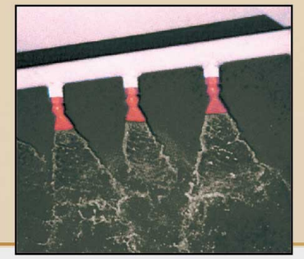
More Powerful and Efficient Operations with Extra Optional Accessories

Automatic Tool Length Measuring Device



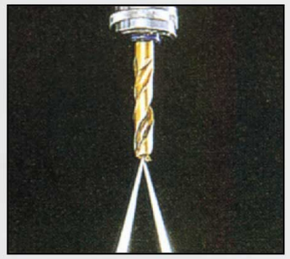
Rotary Table With 4th Axis Control

4th Axis Connector

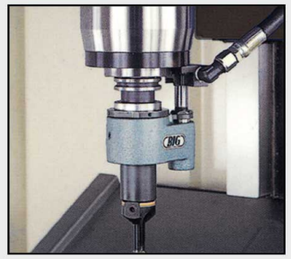


Coolant Wash

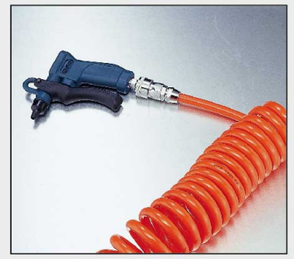
Fast CAM ATC, 40 Tools



Coolant Through Spindle Device

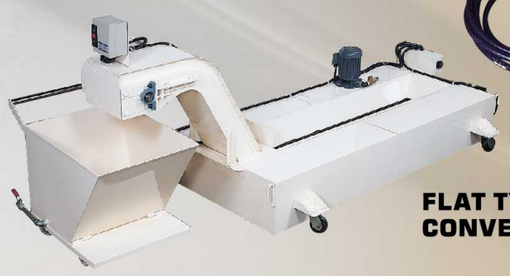


Coolant Through Tool



Coolant and Air Gun

SCREW TYPE CHIP CONVEYOR



FLAT TYPE CHIP CONVEYOR

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:

MODEL		MCV-1450	MCV-1450B
TABLE			
Working Surface	mm (inch)	1,600 x 800 (62.99 x 31.5)	
T-Slots (Size x Number)	mm (inch)	22 x 5 (0.87 x 5)	
Max. Table Load	kgw (lbs)	2,000 (4,400)	
TRAVEL			
Longitudinal Travel (X)	mm (inch)	1,450 (57.09)	
Cross Travel (Y)	mm (inch)	750 (29.53)	
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)	20/20/12 (787/787/472)	
Minimum Input Increment	mm (inch)	0.001 (0.0001)	
ATC (Automatic 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)	
Motor	Rated Output for 30 Minutes Kw (HP)	15 (20)	
Drive Motors	X, Y, Z Axis Kw (HP)	4.0 (5.4), 7.0 (9.4), 3 (4)	
MACHINE WEIGHT SPACE AND PACKING			
Floor Space	mm	5,330 x 4,150	
	inch	(209.84 x 163.39)	
Net Weight	Kgw (lbs)	14,500 (33,880)	

Specifications are subject to change without prior notice.

STANDARD ACCESSORIES:

- 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
- Spare Fuses
- Spindle Cooler
- Rigid Tapping

SPECIAL ACCESSORIES:

- Enclosed Splash Guard
- 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)

MACHINE DIMENSIONS:

Unit:mm

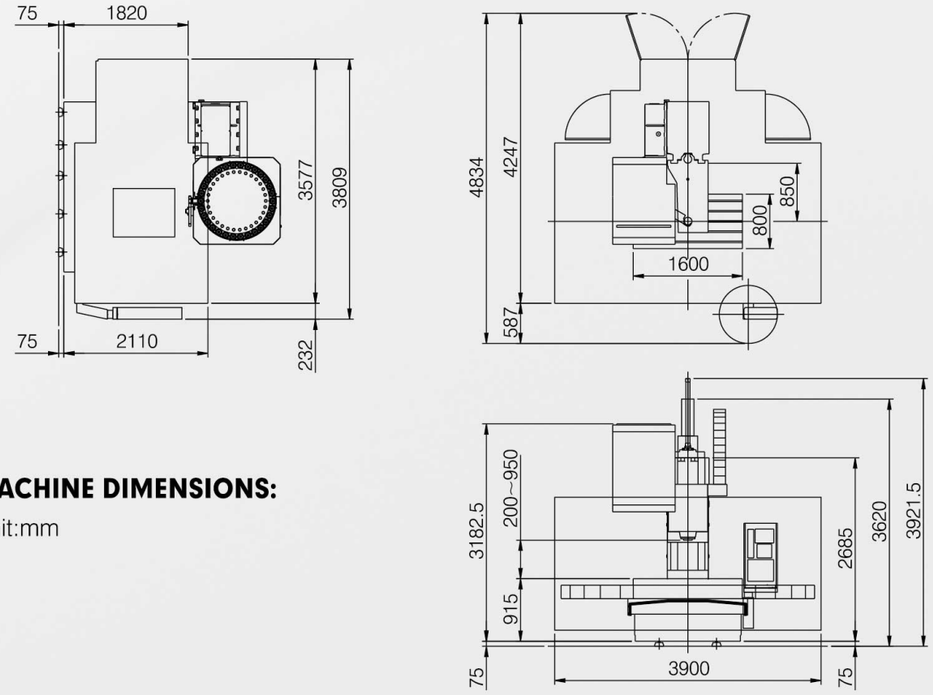
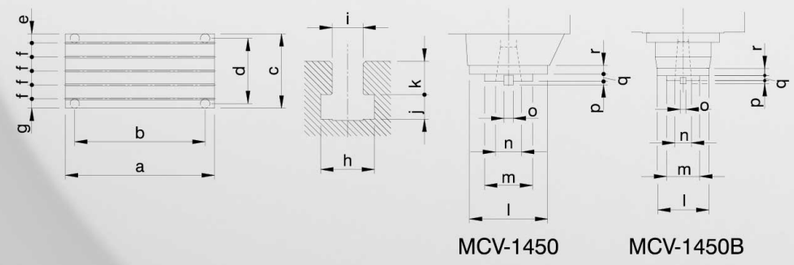


TABLE & T-SLOT & SPINDLE



Model	MCV-1450		MCV-1450B	
Unit	mm	inch	mm	inch
a	1600	62.99	1600	62.99
b	1450	57.09	1450	57.09
c	800	31.50	800	31.50
d	750	29.53	750	29.53
e	100	3.94	100	3.94
f	150	5.91	150	5.91
g	100	3.94	100	3.94
h	38.5	1.52	38.5	1.52
i	22	0.87	22	0.87
j	17.5	0.69	17.5	0.69
k	24	0.94	24	0.94
l	210	8.27	138	5.43
m	128.6	5.06	88.88	3.5
n	69.85	2.75	44.45	1.75
o	25.4	1	15.9	0.63
p	9	0.35	8	0.31
q	20	0.79	13	0.51
r	23	0.91	20	0.79

SPINDLE POWER / TORQUE DIAGRAM (6,000 RPM)