The Latest and Best Quality Machinery.

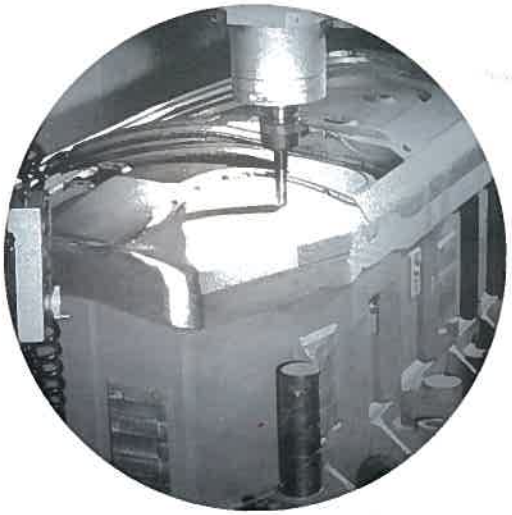
DAHLIH®

VERTICAL MACHINING CENTER

MCV-1700

MCV-1700

The Ideal VMC for Molds



Highest Quality with Utmost Accuracy!

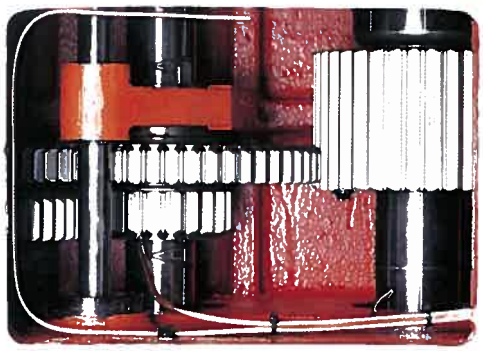
This massive vertical machining center is especially ideal for sheet metal molds for automobiles and motorcycles, and medium and big sized molds for injection molding machines. In fact, wherever there is a demand of high speed and high precision machining. Its heavy duty rigid design and construction 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-1700 Vertical Machining Center!

VERTICAL MACHINING CENTER


and Dies.
DAH LIH
MCV-1700
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.

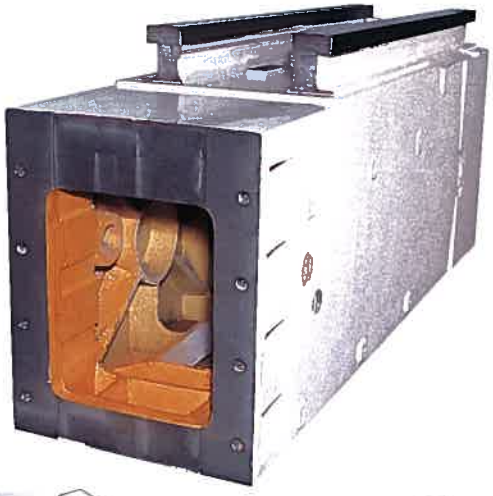


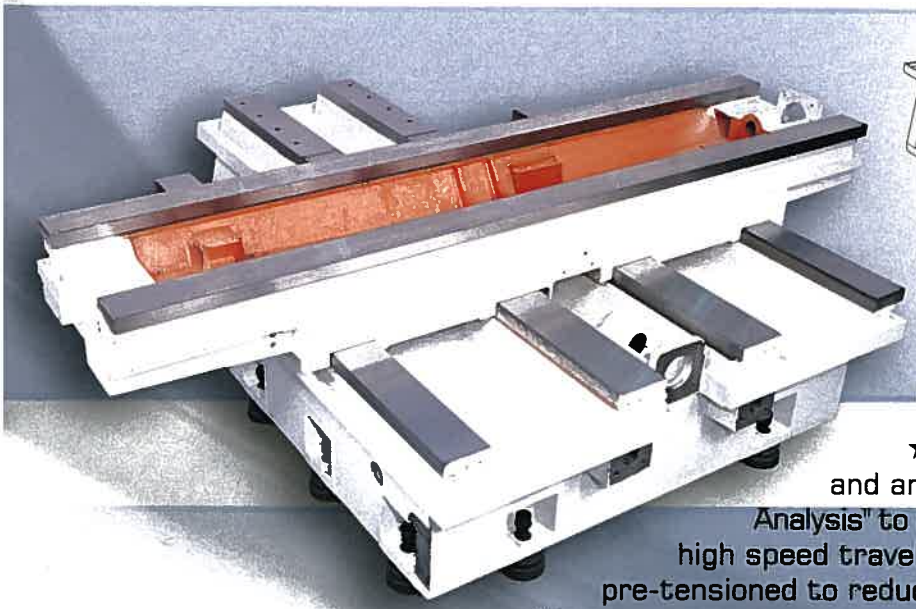
EXCELLENT PERFORMANCE SPINDLE

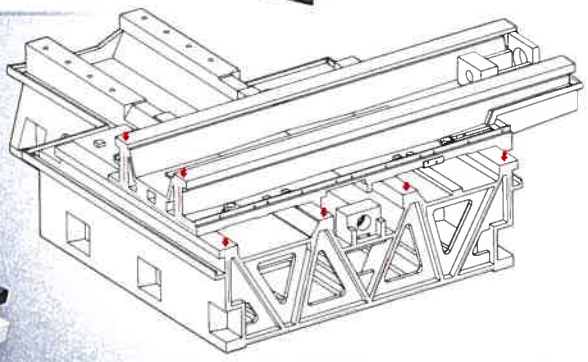
- High torque and performance is achieved from the two step (low and high gear) spindle.
- Accuracy is assured at both high and low speeds.

PRECISE CUTTING HEADSTOCK

- Spindle 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.







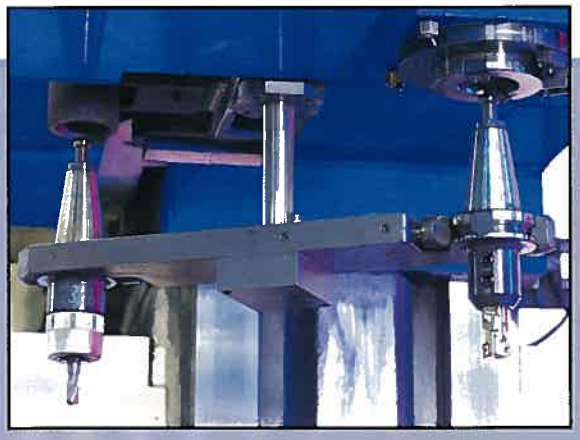
RUGGED CONSTRUCTION

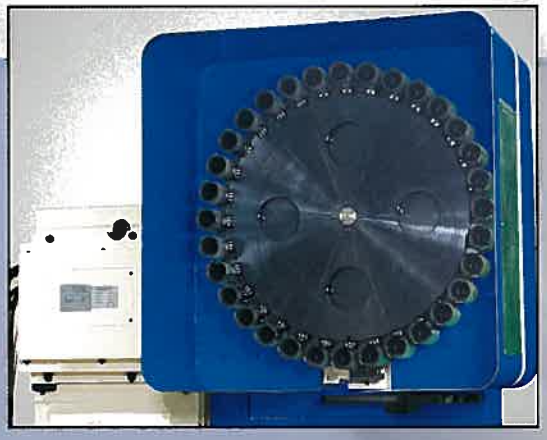
★The machine structure is designed and analyzed by advanced "Finite Element Analysis" to achieve the highest stability and rigidity, high speed travel and light weight.
pre-tensioned to reduce thermal deformation to a minimum.
★Base, saddle and column structures are reinforced by V-shaped ribs with shortened 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 PROD

LATEST ADVANCED CNC CONTROLLER

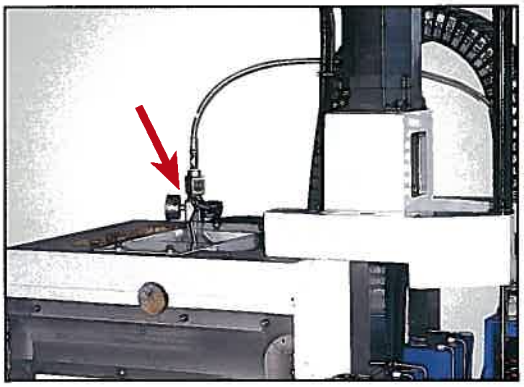
Equipped with Fanuc, Heidenhain and other CNC controllers.





HYDRAULIC TYPE ATC

- The double tool change arms, combined with special hydraulically operated ATC, allow tool holder tilting and tool clamping motions to be accomplished simultaneously. These features enormously shorten tool change time while upgrading the reliability of tool changing.
- The magazine is located at the side of machine to avoid interference against workpieces and to keep tools clean.



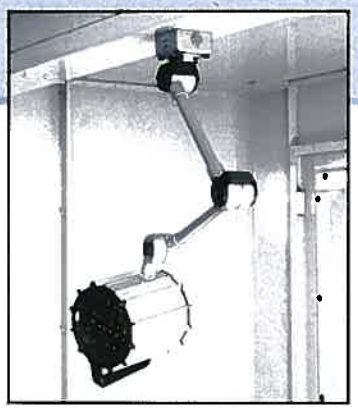
NITROGEN GAS COUNTER-BALANCE

- 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.

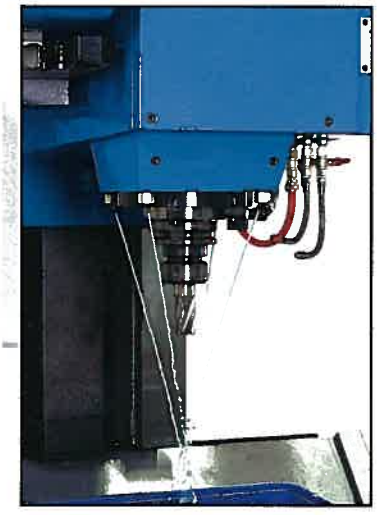
CTS - SURELY, THE BEST MACHINE FROM TAIWAN.

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.



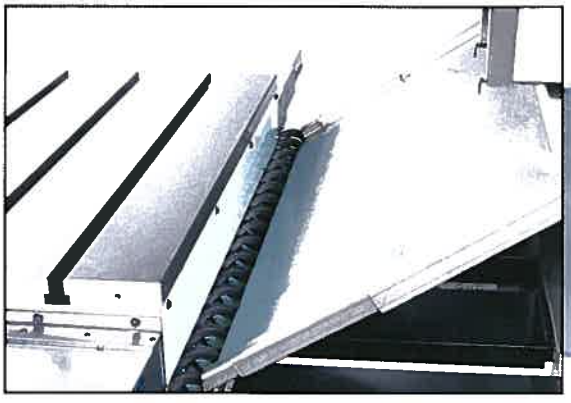
WORK LIGHT
Two quartz work lights provide lighting for the working area. They feature soft illumination without being irritating to the operator's eyes.



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.



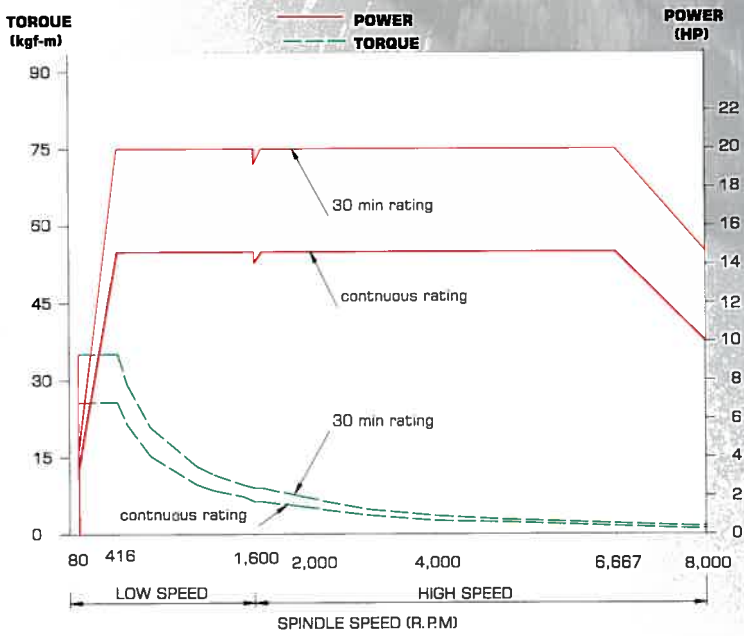
CHIP AUGER
During machining, chips are flushed and fall down to the chip auger for delivering to the chip conveyor. It efficiently removes chips to eliminate being affected by chip heat and keeps work area clean at all times.

Rigid, Precise Spindle

8,000 RPM Precision Spindle Especially

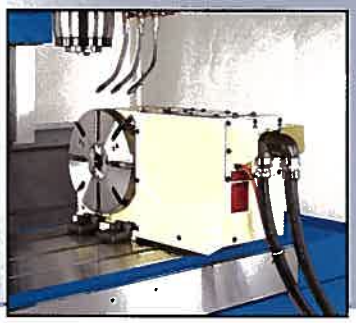
- Two speed ranges for the spindle transmission system provides full power output and high torque output at low speed range, allowing for heavy duty machining. High speed range fully meets high speed machining requirements.
- Satellite gear drive design minimizes backlash while assuring extremely smooth 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)

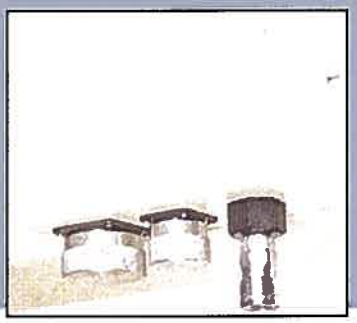


More Powerful and Efficient Operations with Extra Optional Accessories

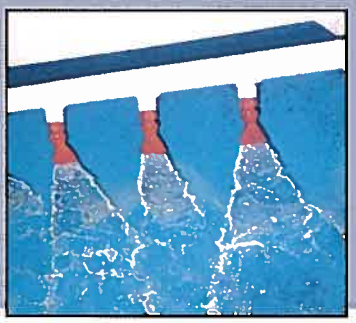
Automatic Tool Length Measuring Device



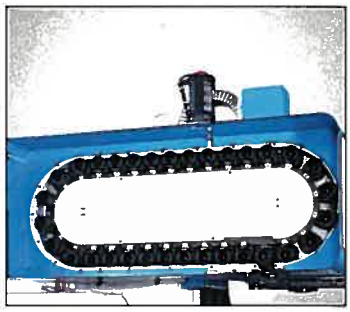
Rotary Table With 4th Axis Control



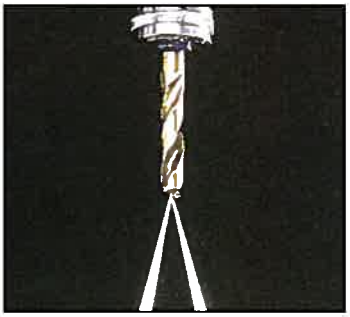
4th Axis Connector



Coolant Wash

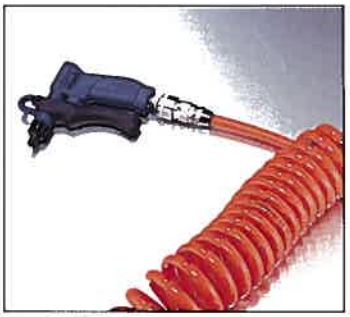


Fast CAM ATC, 40 Tools

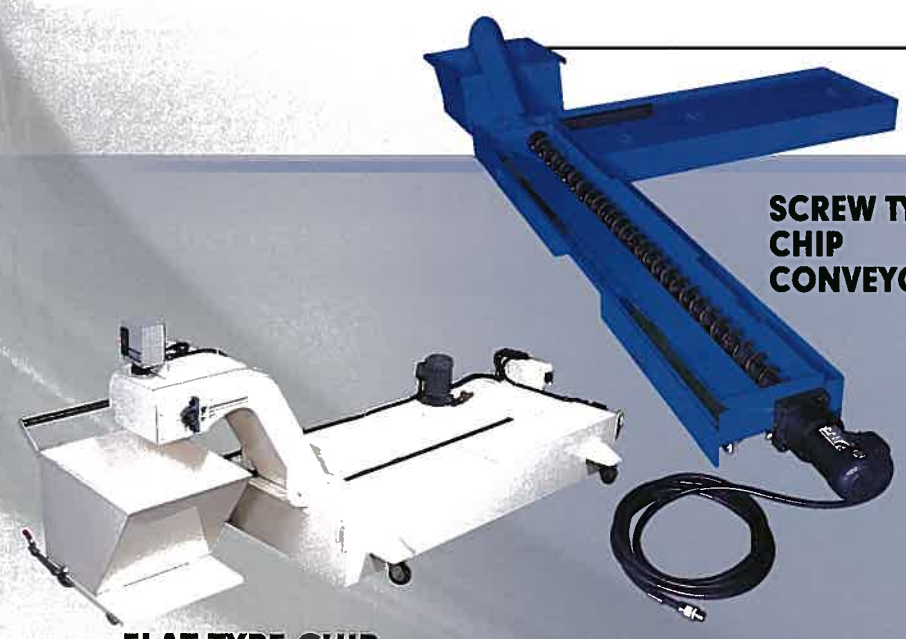


Coolant Through Spindle Device

Coolant Through Tool

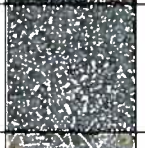
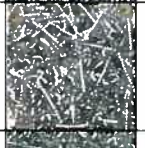
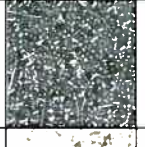


Coolant and Air Gun



SCREW TYPE CHIP CONVEYOR

FLAT TYPE CHIP CONVEYOR

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

SPECIFICATIONS:

MODEL		UNIT	MCV-1700	MCV-1700B
TABLE				
Working Surface		mm (inch)	1,900 x 1,010 (74.8 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)	1,700 (66.92)	
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.	45-4,500	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 (Automactic Tool Changer)				
Tool Holder			BT 50	BT 40
Tool Storage Capacity		Tools	32	30
Max. Tool Dia. x Length		Ø x mm (inch)	110 x 350 (4.3 x 13.8)	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	150	—
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)	4.2 (5.6), 4.2 (5.6), 4.2 (5.6)	
MACHINE WEIGHT SPACE AND PACKING				
Floor Space		mm	6,310 x 4,610	
		inch	(248.43 x 181.50)	
Net Weight		Kgw (lbs)	15,500 (34,100)	

Specifications are subject to change without prior notice.

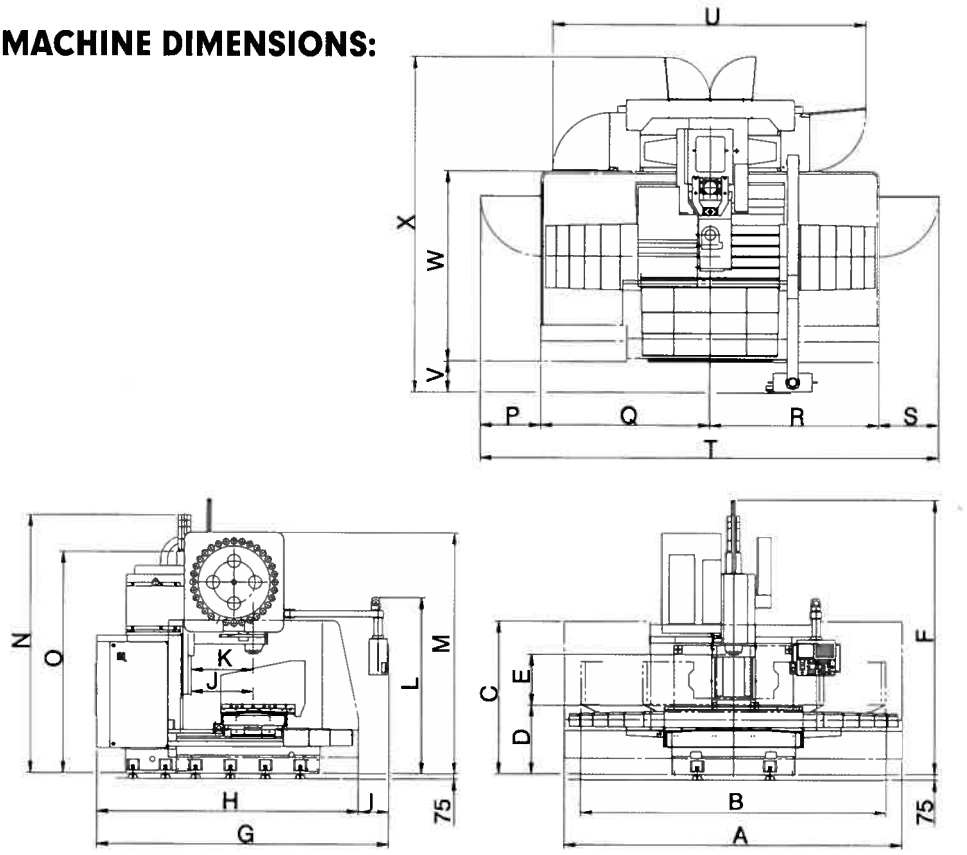
STANDARD ACCESSORIES:

- 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
- Pendant Type Operator Panel
- 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)
- Automatic Pallet Changer
- Cam Mechanism ATC (40 Tools)

MACHINE DIMENSIONS:



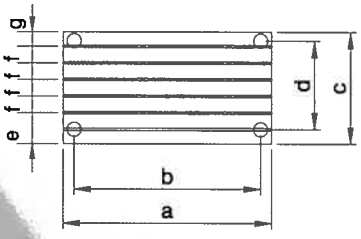
EXTERNAL DIMENSIONS

Model		
Unit	mm	inch
A	4650	183.07
B	4200	165.35
C	2100	82.68
D	945	37.20
E	200-960	7.8-37.8
F	3770	148.43
G	4020	158.27
H	3600	141.73
I	420	16.54
J	475-1225	18.7-48.2
K	850	33.46
L	2420	95.28
M	3310	130.31
N	3585	141.14
O	3085	121.46
P	830	32.68
Q	2325	91.53
R	2325	91.53
S	830	32.68
T	6310	248.43
U	4310	169.69
V	420	16.54
W	2615	102.95
X	4610	181.50

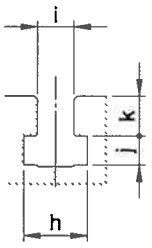
TABLE & T-SLOT

Model	MVC-1700		MVC-1700B	
Unit	mm	inch	mm	inch
a	1900	74.80	1900	74.80
b	1700	66.92	1700	66.92
c	1010	39.76	1010	39.76
d	800	31.50	800	31.50
e	280	11.02	280	11.02
f	150	5.91	150	5.91
g	130	5.12	130	5.12
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

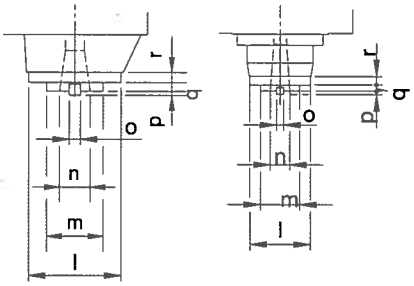
TABLE



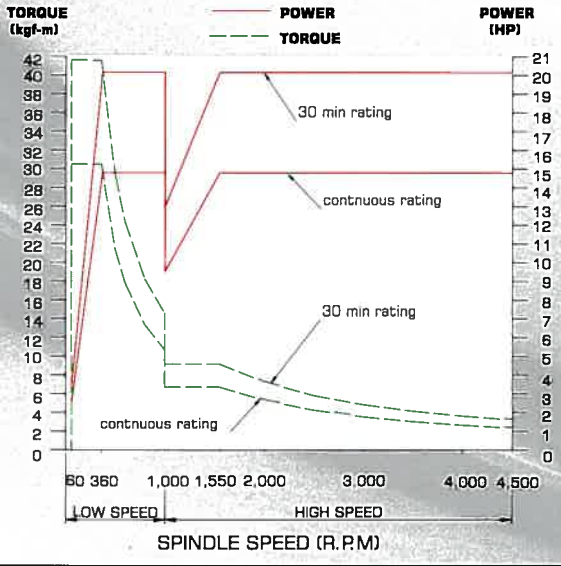
T-SLOT



SPINDLE



SPINDLE POWER / TORQUE DIAGRAM (MCV-1700 / 4,500 RPM)



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MCV-720
Vertical
Machining Center

DMV-800
Traveling Column
Vertical Machining
Center

PT-128
Portal Type
Machining Center

MCH-630
Horizontal
Machining Center

DAHLIH

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