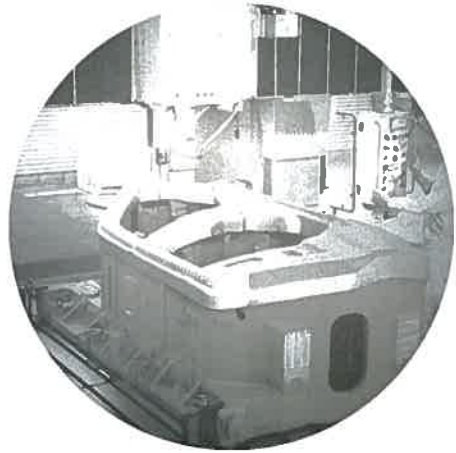


# MCV-2100/2600

**Extra Big Capacity, Precision and Stability to Meet Your Rigorous Production Needs.**



Whether your requirements are for big mold or big parts machining, the Dah Lih MCV-2100 and 2600 series vertical machining centers are an excellent choice. Their outstanding features make machining efficient, precise and easy. Large capacity is achieved through the increased X,Y and Z-axes travel. Powerful spindle drive allows heavy duty machining with ease. Two-step gear transmission for the spindle produces the torque output you need. Heavy duty construction throughout for optimum structural rigidity and accuracy. Plus - Dah Lih's tradition of maximum quality dependability. These are just a few reasons why Dah Lih's MCV-2100 and 2600 fully satisfy the rigorous requirements for big mold machining, aerospace parts machining and big parts machining.



MCV-2100

MCV-2100

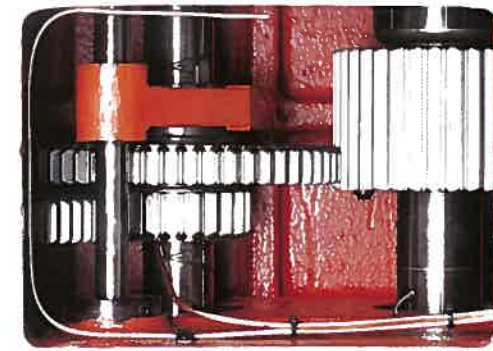
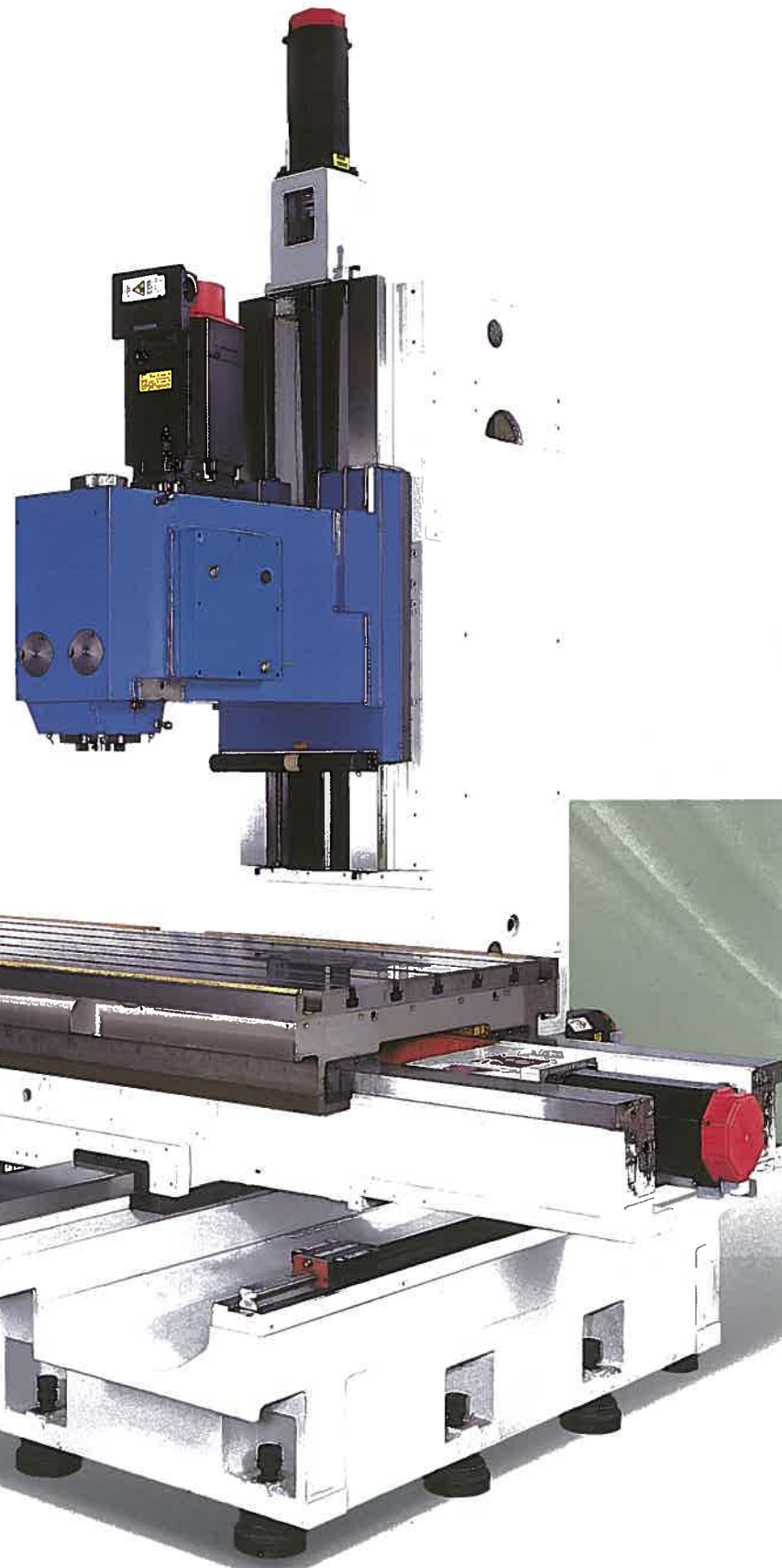
VERTICAL MACHINING CENTER

**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.



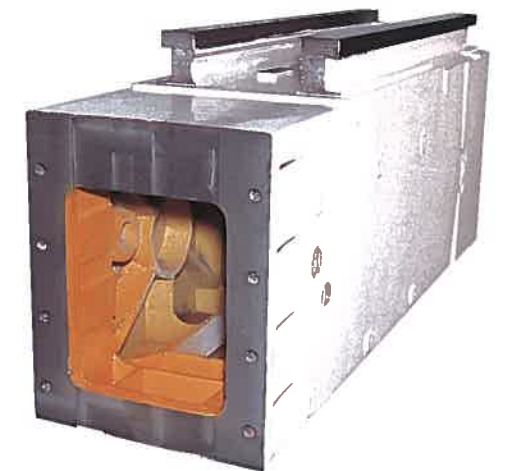
## EXCELLENT PERFORMANCE SPINDLE

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



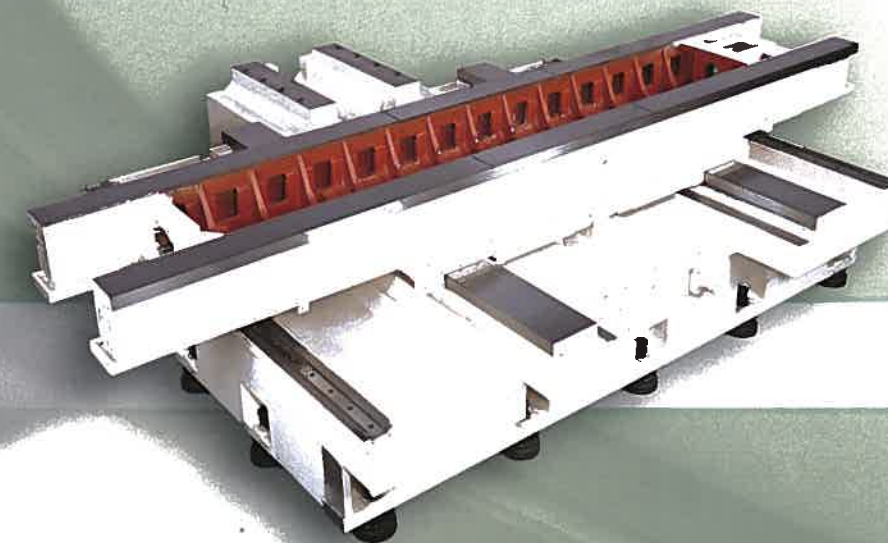
## PRECISE CUTTING HEADSTOCK

- Spindle 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.



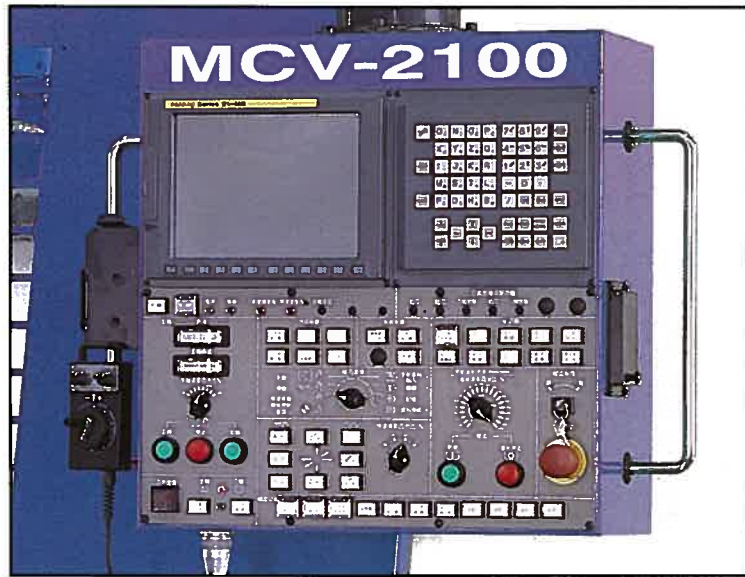
## RUGGED CONSTRUCTION

- ★ 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 highly flexible, high torsion and rigid cross ribs, assuring lifetime accuracy, high structural rigidity and reduced weight.
- ★ Saddle is supported four ways featuring uniform load distribution and minimum deformation.





# EXCELLENT TECHNOLOGY AND OUTSTANDING PRODUCTS - SURELY, THE BEST MACHINE FROM TAIWAN.



## LATEST ADVANCED CNC CONTROLLER

Equipped with Fanuc, Heidenhain and other CNC controllers.

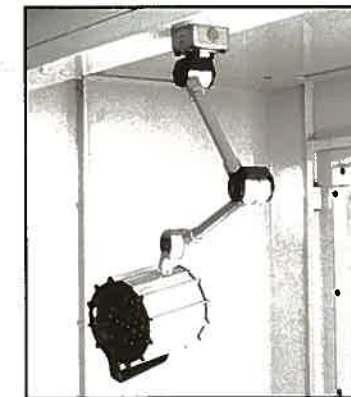


## HEAT EXCHANGER FOR CONTROL CABINET

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

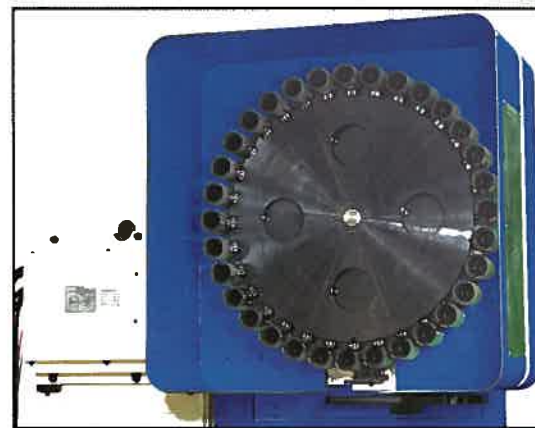
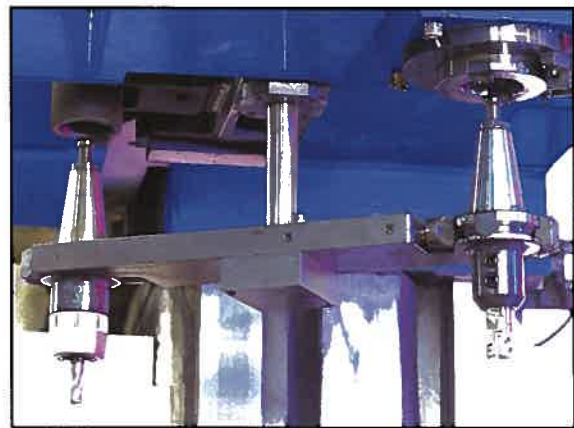
## SPINDLE OIL COOLER

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



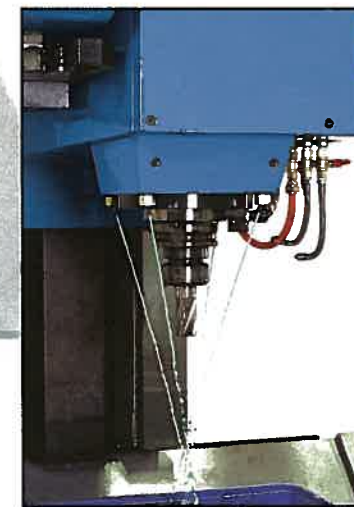
## WORK LIGHT

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



## 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.



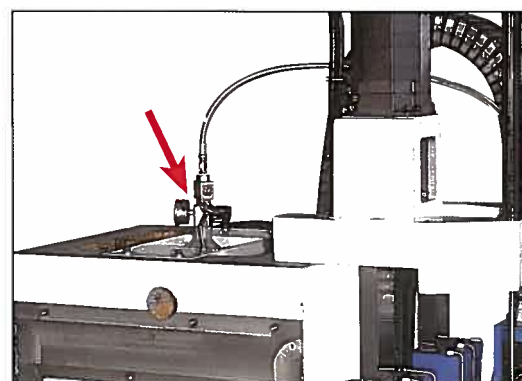
## COOLANT AROUND SPINDLE

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.



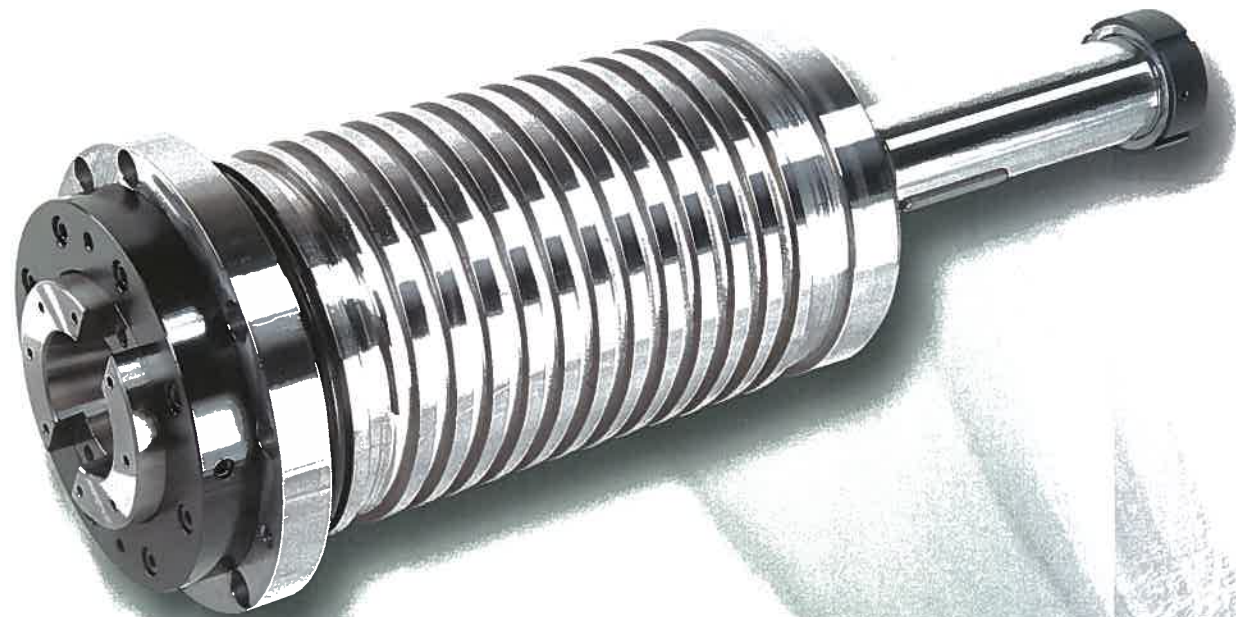
## CHIP AUGER

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.



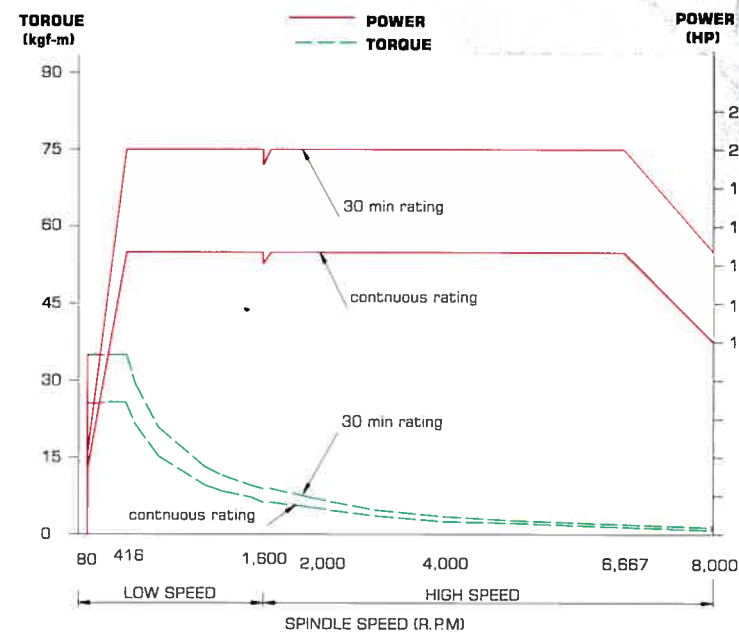
# Rigid, Precise Spindle

## 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.

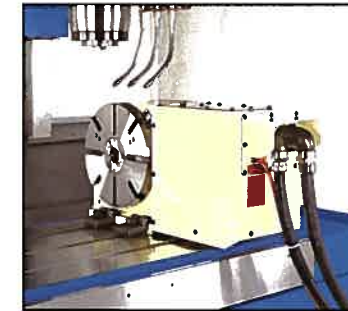
**DIRECT-DRIVE SPINDLE POWER / TORQUE DIAGRAM (8,000 RPM)**



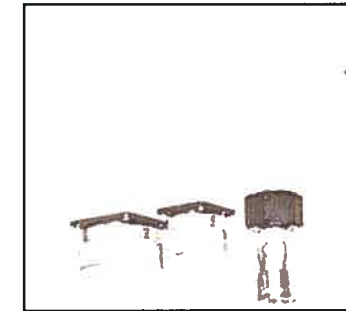
## More Powerful and Efficient Operations with Extra Optional Accessories



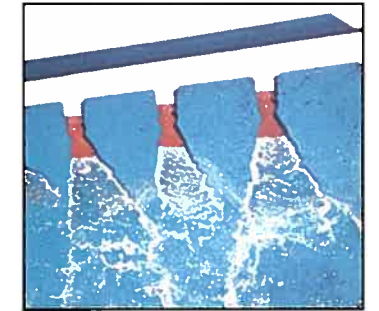
**Automatic Tool Length Measuring Device**



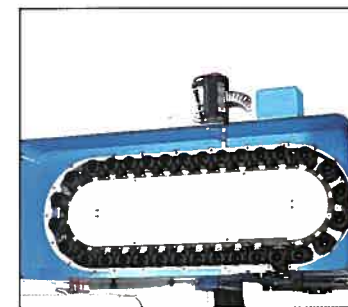
**Rotary Table With 4th Axis Control**



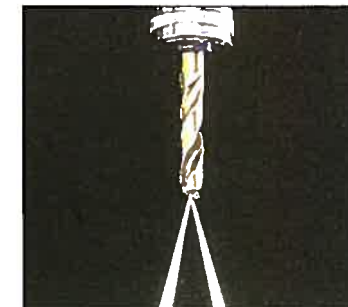
**4th Axis Connector**



**Coolant Wash**



**Fast CAM ATC, 40 Tools**



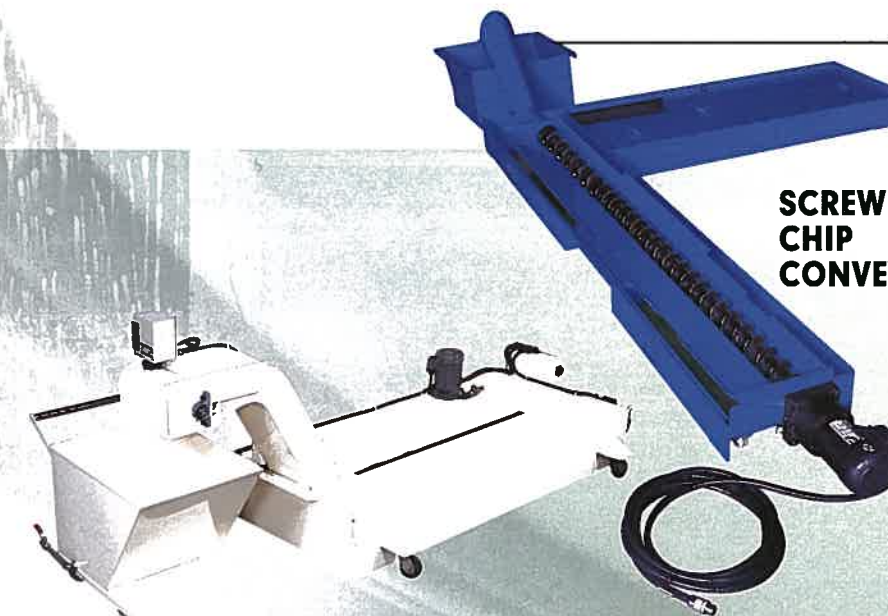
**Coolant Through Spindle Device**



**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		<input type="checkbox"/>	<input type="checkbox"/>
Cast Chip		<input type="checkbox"/>	<input type="checkbox"/>
Curly Aluminum Chip		<input type="checkbox"/>	<input type="checkbox"/>
Aluminum Chip		<input type="checkbox"/>	<input type="checkbox"/>
Non-Metallic Chip		<input type="checkbox"/>	<input type="checkbox"/>



## SPECIFICATIONS:

MODEL		MCV-2100	MCV-2100B	MCV-2600	MCV-2600B
<b>TABLE</b>					
Working Surface	mm (inch)	2,300 x 970 (90.55 x 38.19)		2,800 x 970 (110.24 x 38.19)	
T-Slots (Size x Number)	mm (inch)	22 x 5 (0.87 x 5)		22 x 5 (0.87 x 5)	
Max. Table Load	kgw (lbs)	3,000 (6,600)		3,000 (6,600)	
<b>TRAVEL</b>					
Longitudinal Travel (X)	mm (inch)	2,100 (82.68)		2,600 (102.36)	
Cross Travel (Y)	mm (inch)	870 (34.25)		870 (34.25)	
Headstock Travel (Z)	mm (inch)	760 (29.92)		760 (29.92)	
Distance Between Spindle End and Table Top	mm (inch)	200-960 (7.87-37.8)		200-960 (7.87-37.8)	
Distance Between Spindle Center and Column Surface	mm (inch)	850 (33.46)		850 (33.46)	
<b>SPINDLE</b>					
Spindle Nose		N.T. 50	N.T. 40	N.T. 50	N.T. 40
Spindle Speeds	R.P.M.	4,500	8,000 (10,000)	4,500	8,000 (10,000)
Spindle Speed Range		Two Gears Variable	Infinite Variable	Two Gears Variable	Infinite Variable
<b>FEED</b>					
Cutting Feed	mm/min (inch/min)	10,000 (393.7)		10,000 (393.7)	
Rapid Traverse	m/min (inch/min)	10 / 10 / 8 (393.7 / 393.7 / 314.96)		10 / 10 / 8 (393.7 / 393.7 / 314.96)	
Minimum Input Increment	mm (inch)	0.001 (0.0001)		0.001 (0.0001)	
<b>ATC (Automatic Tool Changer)</b>					
Tool Holder		BT 50	BT 40	BT 50	BT 40
Tool Storage Capacity	Tools	32	30	32	30
Max. Tool Dia. x Length	∅ x mm (inch)	110 x 350 (4.33 x 13.78)	76 x 300 (3.0 x 11.8)	110 x 350 (4.33 x 13.78)	76 x 300 (3.0 x 11.8)
Max. Tool Weight	kgw (lbs)	15 (33)	7 (15.4)	15 (33)	7 (15.4)
Max. Tool Dia. of adjacent pots are empty	∅xmm	150	—	150	—
Tool Selection		Random		Random	
<b>MOTORS</b>					
Spindle Drive	Continuous Rating Kw (HP)	15 (20)	11 (15)	15 (20)	11 (15)
Motor	Rated Output for 30 Minutes Kw (HP)	18.5 (25)	15 (20)	18.5 (25)	15 (20)
Drive Motors	X, Y, Z Axis Kw (HP)	4.2(5.6), 4.2(5.6), 4.2(5.6)		4.2(5.6), 4.2(5.6), 4.2(5.6)	
<b>MACHINE WEIGHT SPACE AND PACKING</b>					
Floor Space	mm	7,700 x 4,694		8,600 x 4,694	
	inch	(303.15 x 184.80)		(338.58 x 184.80)	
Net Weight	Kgw (lbs)	18,000 (39,600)		19,000 (41,800)	

Specifications are subject to change without prior notice.

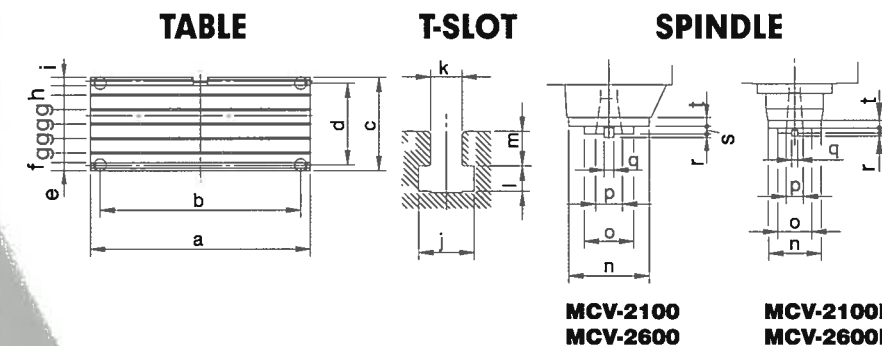
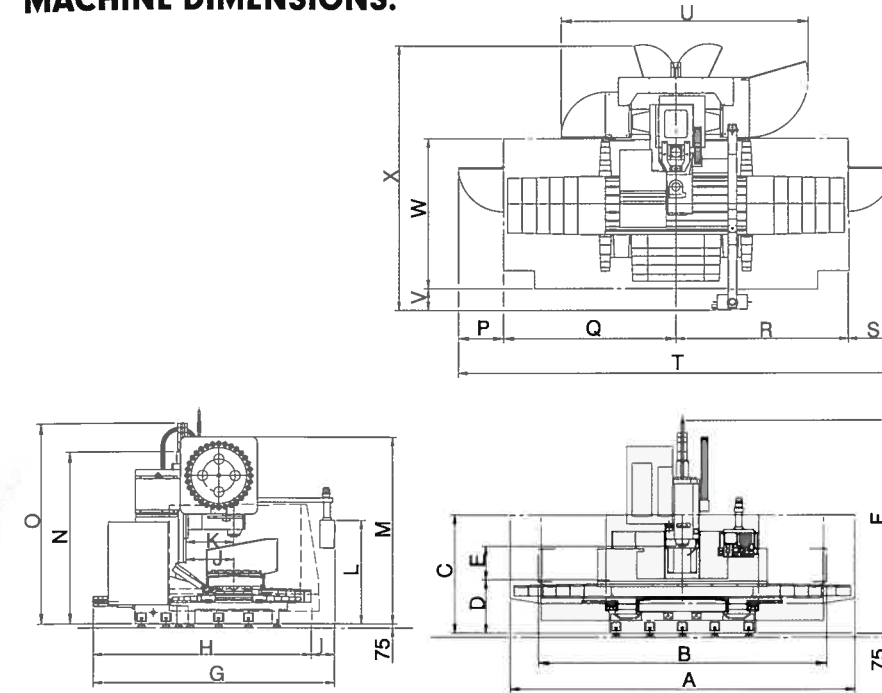
## STANDARD ACCESSORIES:

- 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

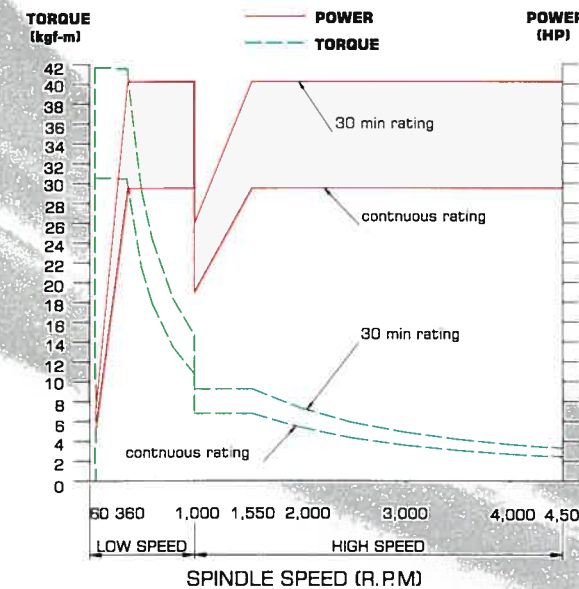
## SPECIAL ACCESSORIES:

- 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)

## MCV-2100 / 2600 MACHINE DIMENSIONS:



## SPINDLE POWER / TORQUE DIAGRAM (MCV-2100/2600 4,500RPM)



## EXTERNAL DIMENSIONS

Model	MCV-2100		MCV-2600	
	mm	inch	mm	inch
A	6100	240.16	7000	275.59
B	5100	200.79	6100	240.2
C	2095	82.48	2095	82.48
D	945	37.20	945	37.20
E	200-960	7.8-37.79	200-960	7.8-37.79
F	3770	148.43	3770	148.43
G	4278	168.43	4278	168.43
H	3863	152.09	3863	152.09
I	415	16.34	415	16.34
J	430-1330	16.93-52.36	430-1330	16.93-52.36
K	850	33.46	850	33.46
L	1834	72.20	1834	72.20
M	3320	130.71	3320	130.71
N	3085	121.46	3085	121.46
O	3585	141.14	3585	141.14
P	800	31.50	800	31.50
Q	3050	120.08	3500	137.80
R	3050	120.08	3500	137.80
S	800	31.50	800	31.50
T	7700	303.15	8600	338.58
U	4370	172.05	4370	172.05
V	384	15.12	384	15.12
W	2650	104.33	2650	104.33
X	4694	184.80	4694	184.80

## TABLE & T-SLOT

Model	MCV-2100		MCV-2100B		MCV-2600		MCV-2600B	
	mm	inch	mm	inch	mm	inch	mm	inch
a	2300	90.55	2300	90.55	2800	110.24	2800	110.24
b	2100	82.68	2100	82.68	2600	102.36	2600	102.36
c	970	38.19	970	38.19	970	38.19	970	38.19
d	850	33.46	850	33.46	850	33.46	850	33.46
e	85	3.35	85	3.35	85	3.35	85	3.35
f	100	3.94	100	3.94	100	3.94	100	3.94
g	150	5.91	150	5.91	150	5.91	150	5.91
h	100	3.94	100	3.94	100	3.94	100	3.94
i	85	3.35	85	3.35	85	3.35	85	3.35
j	38.5	1.52	38.5	1.52	38.5	1.52	38.5	1.52
k	22	0.87	22	0.87	22	0.87	22	0.87
l	17.5	0.69	17.5	0.69	17.5	0.69	17.5	0.69
m	24	0.94	24	0.94	24	0.94	24	0.94
n	210	8.27	138	5.43	210	8.27	138	5.43
o	128.6	5.06	88.88	3.5	28.6	5.06	88.88	3.5
p	69.85	2.75	44.45	1.75	69.85	2.75	44.45	1.75
q	25.4	1.00	15.9	0.63	25.4	1.00	15.9	0.63
r	9	0.35	8	0.31	9	0.35	8	0.31
s	20	0.79	13	0.51	20	0.79	13	0.51
t	23	0.91	20	0.79	23	0.91	20	0.79