The Latest and Best Quality Machinery.

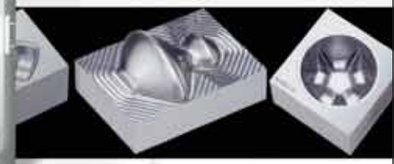
DAHLIH®

VERTICAL MACHINING CENTER

DMV-800
Traveling Column
Vertical Maching Center

PT-86
Rortal Type
Machining Center

DMH-500
Horizontal Maching Center



MCV-1020A

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The Latest and Best Quality Machinery.

DAHLIH®

VERTICAL MACHINING CENTER

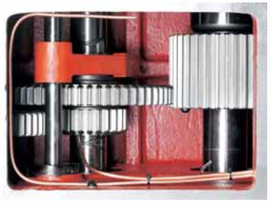
The Perfect Solution for Quality and Efficiency.

- Built with Dah Lih's tradition of high reputation and fine craftsmanship.
- The major castings are designed and analyzed by advanced "Finite Element Analysis" for optimum structural rigidity and accuracy.
- The entire machine is ruggedly constructed throughout for lifetime accuracy and rigidity.
- Coolant jets around the spindle ensure excellent heat removal from the cutting tool and workpiece.
- The gear-drive spindle guardntees outstanding cutting perforrmance.
- High rigidity, high precision, minimum vibration ad minimum noise. Easy to install and maintain.

MCV-1020A

Rigid, Massive Constructed Design for Lifetime Accuracy.

- Major machine parts are manufactured from rigid cast iron for maximum structural stability.
- The column, base and saddle are box type structures, which are subject to process of scientific rib reinforcement for added rigidity and minimum thermal strain.
- Symmetric and well counter-balanced design on the column assures precision machining.
- Pre-loaded ball screws on 3 axes reduce thermal growth.



SUPERIOR SPINDLE TRANSMISSION SYSTEM

- The spindle is transmitted by gears with 2-step speed change (high and low speed ranges). This gear transmission system provides high torque output and excellent cutting performance.
- The spindle runs accurately at high and low speed ranges.

PRECISION SPINDLE HEAD

- The spindle is available to equip with a coolant through spindle device, making the machine ideal for deep-hole drilling.
- Feature of easy chips removal combined with wide range of spindle speeds meets various machining requirements.
- Floating tool knocking design effectively extends service life of the bearings.
- Box type spindle stock features high rigidity.

LATEST ADVANCED CNC CONTROLLER

The machine can be equipped with fanuc, Heidenhain or other brands of CNC controllers.

HIGH RIGIDITY STRUCTURAL PARTS

★ The structural parts of the machine are designed and analyzed by advanced "Finite Element Analysis." Such advanced design software ensures optimal structural stability and rigidity, high travel speed and light weight.

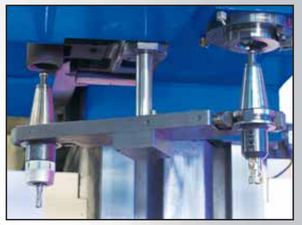
★ Ball screws are pretensioned to reduce thermal deformation to a minimum.

★ The base, saddle and column are reinforced by "V" shaped ribs with the shortest stress distribution. This design feature effectively avoids deformation on the ribs and ensures maximum machine rigidity.

Brilliant Background of Technology!

Perfect Quality!

The NO.1 Choice of VMC



HYDRAULIC ATC

- The double-arm automatic tool changer combined with the specially designed hydraulic tool change permits motions of tool pocket tilting and tool clamping accomplished at a time. This feature not only reduces tool change time remarkably but also enhances the dependability of tool change motion.
- The magazine is mounted at the side of the machine. Such arrangement prevents interference to workpiece and keeps tool clean.

NITROGEN GAS COUNTER-BALANCE (OPTIONAL)

- 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 upgrades machining efficiency.
- Easy to adjust servo parameters.

COOLANT JETS 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.
- Possible damage on the spindle and bearings during tool release, mtion is eliminated and thereby extended spindle service life is achieved.

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

HEAT EXCHANGER FOR CONTROL CABINET

SPINDLE COOLER

The spindle cooler ensures high machining accuracy during high speed machining. In addition, the spindle cooler also helps eliminate spindle vibration and thermal deformation.

WORK LIGHT

The quartz work light provides sufficient and soft illumination in the work area without dazzling light reflection which irritates operator's sight.

MORE POWERFUL AND EFFICIENT
Operations with Extra Optional Accessories

Automatic tool length measuring device

Rotary table with 4th axis control

4Th axis connector

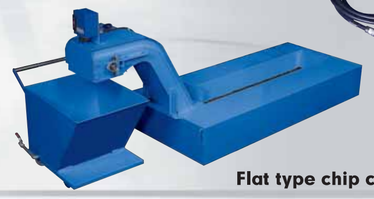
Coolant wash

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-1020A
TABLE		
Working Surface	mm (inch)	1250 x 660(49.21x25.98)
T-Slots (Size x Number)	mm (inch)	18x5(0.71x5)
Max. Table Load	kg (lbs)	1000 (2200)
TRAVEL		
Longitudinal Travel (X)	mm (inch)	1020 (40.16)
Cross Travel (Y)	mm (inch)	550 (21.65)
Headstock Travel (Z)	mm (inch)	560 (22.05)
Distance Between Spindle End and Table Top	mm (inch)	150-710 (5.91-27.95)
Distance Between Spindle Center and Column Surface	mm (inch)	600 (23.62)
SPINDLE		
Spindle Nose		N.T.40 / NT.50
Spindle Speeds	R.P.M.	6000/5000
Spindle Speed Range		Two gears variable
FEED		
Cutting Feed	mm/min (inch/min)	5000(197)
Rapid traverse	mm/min (inch/min)	20/20/18 (787/787/708)
Minimum Input Increment	mm (inch)	0.001 (0.0001)
ATC (Automacic Tool Changer)		
Tool Holder		B.T.40 / B.T.50
Tool Storage Capacity	Tools	25 / 20
Max. Tool Dia. x Length	Ø x mm (inch)	90 x 300 (3.5x11.8)
Max. Tool Weight	kg (lbs)	6 (13)
Tool Selection		Random
MOTORS		
Spindle Drive 30min. Rating	Kw (HP)	5.5 (7.4) / 7.5 (10)
Drive Motors X, Y, Z Axis	Kw (HP)	3.0 (4.0), 3.0 (4.0), 3.0 (4.0)
MACHINE WEIGHT SPACE AND PACKING		
Floor Space	mm (inch)	3575x4000(140.75x157.48)
Net Weight	Kg (lbs)	7000(15400)

Specifications are subject to change without prior notice.

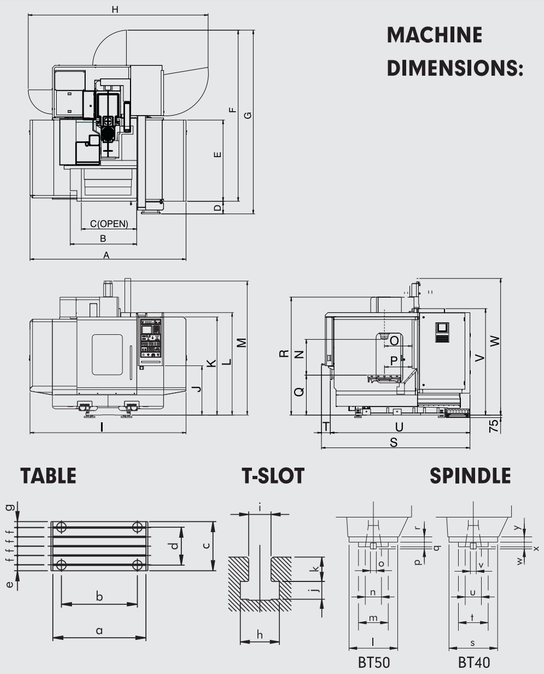
STANDARD ACCESSORIES:

- Heat Exchanger
- Removable Manual Pulse Generator
- Coolant Around Spindle
- Spiral Type Chip Conveyor
- 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

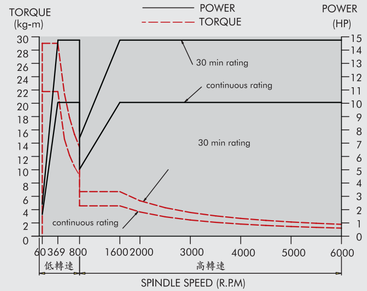
SPECIAL ACCESSORIES:

- Screw type chip conveyor & chip bins
- Flat Type Chip Conveyor
- 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
- 32 Tool CAM ATC / BT40
- 24 Tool CAM ATC / BT50

MACHINE DIMENSIONS:



SPINDLE POWER / TORQUE DIAGRAM (8000 RPM) (STANDARD)



EXTERNAL DIMENSIONS

Model		
Unit	mm	inch
A	3100	122.04
B	1320	51.96
C	1100	43.30
D	250	9.84
E	1615	63.58
F	3400	133.85
G	3650	143.70
H	3575	140.74
I	3100	122.04
J	980	38.58
K	1950	76.77
L	2040	80.31
M	2665	104.92
N	150-710	5.91-27.95
O	550	21.65
P	295-805	11.61-31.69
Q	795	31.29
R	2350	92.51
S	2955	116.33
T	176	6.92
U	2775	109.25
V	2115	83.26
W	2715	106.88

TABLE & T-SLOT

Model		
Unit	mm	inch
a	1250	49.21
b	1020	10.16
c	660	25.98
d	510	20.08
e	80	3.15
f	125	4.92
g	80	3.15
h	31.5	1.24
i	18	0.71
j	13.5	0.53
k	20	0.79
l	170	6.69
m	120	4.72
n	69.85	2.75
o	25.4	1
p	7.5	0.29
q	19	0.75
r	16	0.63
s	158	6.22
t	88.88	3.5
u	44.45	1.75
v	15.9	0.63
w	7	0.28
x	19	0.75
y	16	0.63