

MCH-630

MCV-720

VERTICAL MACHINING CENTER

MCV-1020A

MCV-860

MCV-1020BA

MCV-1250

MCV-1450

MCV-1700

MCV-2100

MCV-2600

DCM-2213



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The Latest and Best Quality Machinery.
DAHLIH®

Quality and Efficiency The Perfect Solution from DAHLIH

- » Built with DAHLIH's tradition of high reputation and fine craftsmanship.
- » The major casting parts 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.
- » 360° coolant flow around the spindle provides excellent supply for all tools.
- » For fast worldwide distribution, the machine is designed to fit into a standard container. The machine offers a wide range of machining applications to suit all manufacturing sectors.
- » High rigidity, high precision, minimum vibration, minimum noise. Easy to install and maintain.

MCV-860



Designed for Exceptional
Performance

High Speed, High Precision Machining

Designed from advanced concepts that provide unrivalled machining efficiency.

The Best Choice for Precision Machining

- » Automotive and motorcycle industry
- » Precision parts machining
- » General machining
- » Molds and dies

Perfect Machine Structure Design Stable! Rigid! Precise!

- » Extra wide column base provides a rigid fastening to the machine base to provide a solid foundation for precision machining.
- » All major castings are analyzed through "Finite Element Analysis" software that ensures excellent machine rigidity and cutting accuracy.
- » All structural parts are manufactured from high quality cast iron, assuring the best possible stability and structure.
- » The box type column and base are symmetrical construction combined with scientific cross ribs reinforcement. This results in greater structural rigidity while reducing thermal deformation to a minimum.
- » The feed systems on the three axes are separate construction for reducing length of ball screw, while ensuring excellent rotational inertia during high speed rotation.
- » The three axes slideways are mounted with ball/roller type linear ways.

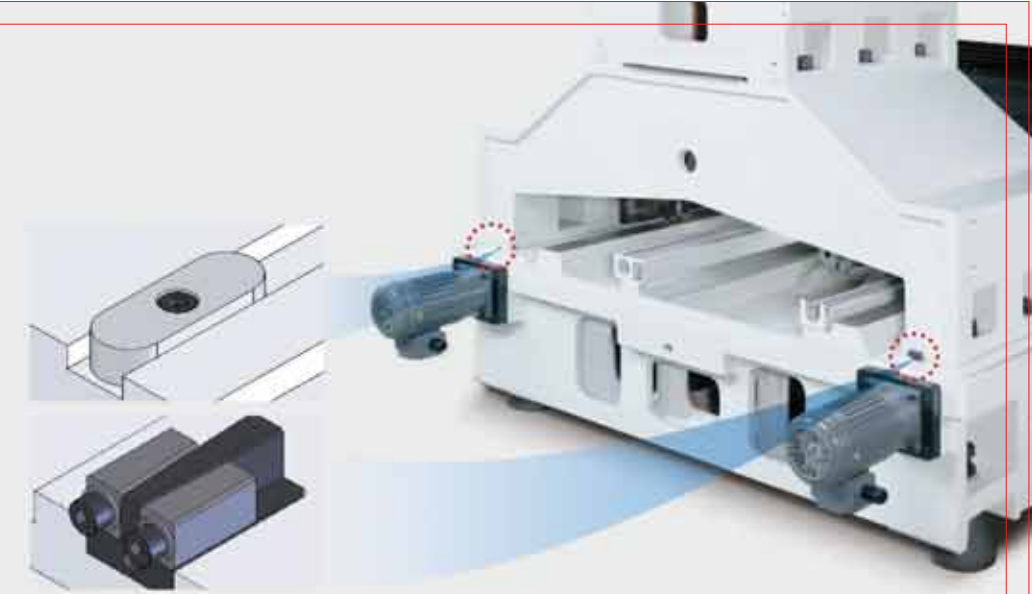


Y-AXIS TELESCOPIC GUARD

Additional telescopic guard is provided at the rear side of Y-axis for increasing chip prevention effect on Y-axis.

CONVENIENT TABLE DISMANTLING AND MOUNTING

The table is fastened downward, making table dismantling and mounting easier. Also, convenient for maintenance and adjustment.



COLUMN SUPPORT

The column is fully supported across the full width of the base. This is combined with positioning keys and tapered gibs to achieve complete support, resulting in greater rigidity.

LARGE Y-AXIS SPAN

» Extra large span between Y-axis slideways always keeps gravity located in base when table travels in X-axis. This feature prevents overhang problem on saddle and increases machining stability.

STABLE COLUMN

The column is a reversed "Y" shape symmetrical construction with superior balance design, representing high machining accuracy.

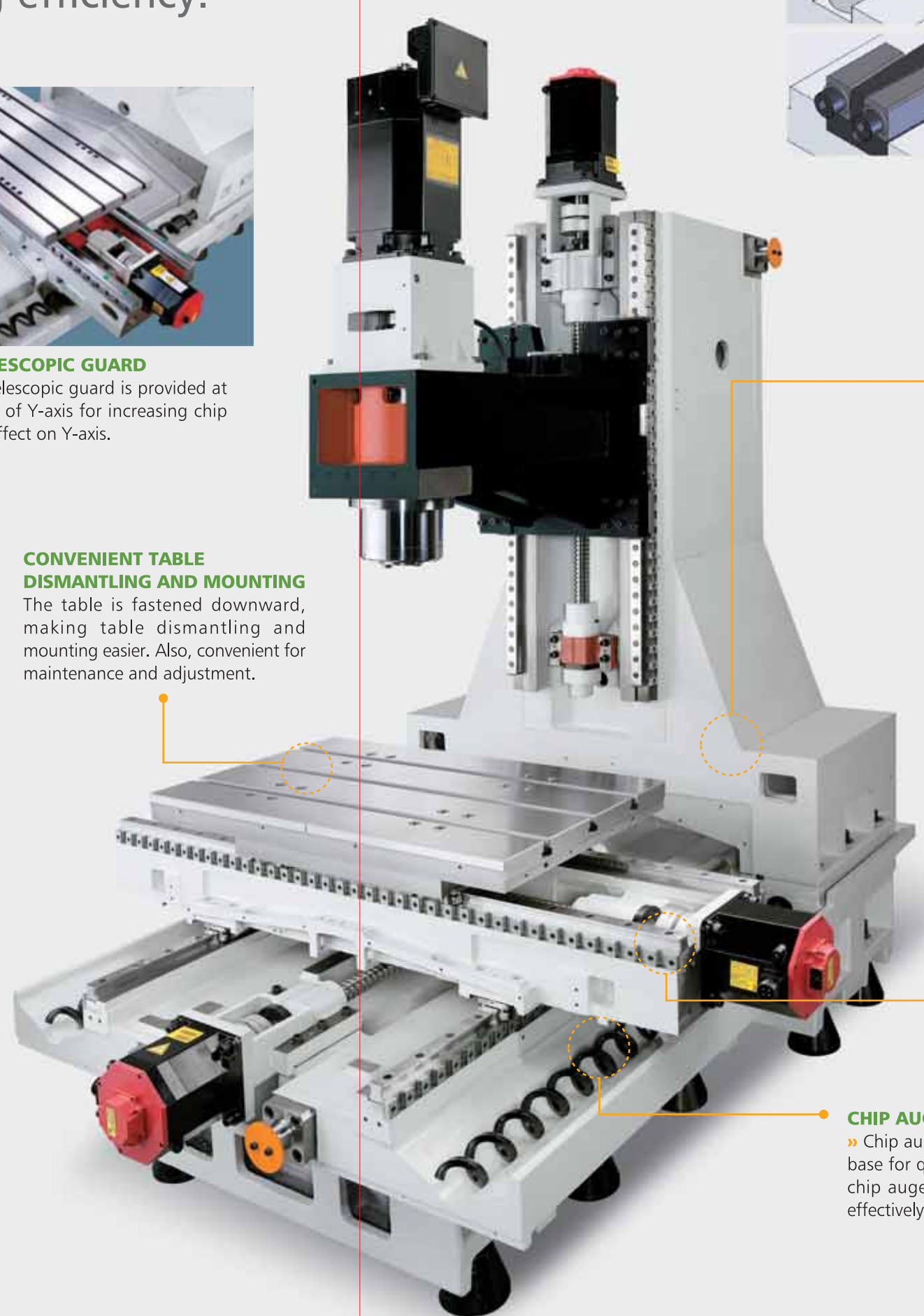
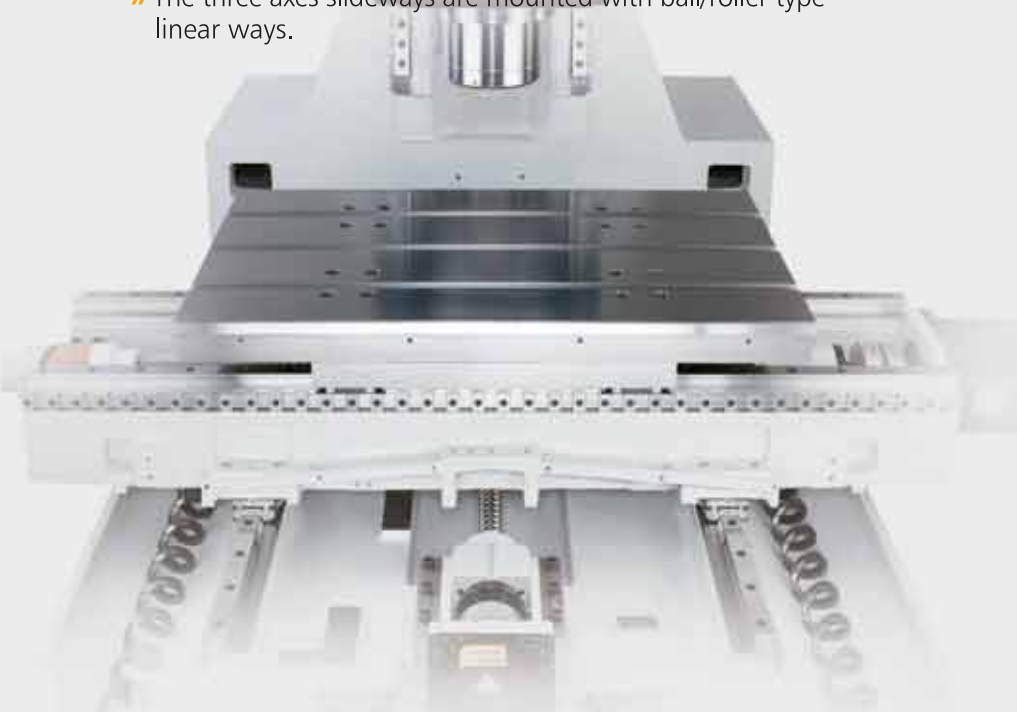


THREE AXES LINEAR WAYS

Three axes linear ways are fixed by clamping pieces, which tighten linear ways securely by means of bolts. This results in stable tightening force without instability problem caused by friction force from tapered gib.

CHIP AUGERS

» Chip augers are equipped at both sides of base for quickly removing chips. With these chip augers, chip heat will be removed to effectively prevent structural deformation.





24 Tools CAM TYPE MAGAZINE

The cam type magazine rotation is driven by a cylindrical cam for fast and dependable tool change. Tool loading capacity is 24 tools. Random tool selection provides efficient tool changing.

- Cam Mechanism ATC (24 Tools)

Max. Tool Dia. x Length	Ø x mm Ø x inch	Ø90 x 300 Ø3.54 x 11.81
Max. Tool Weight	kg lbs	7 15
Max. Tool Dia. of Adjacent Pots are Empty	Ømm	Ø140

- 10,000 / 12,000 / 15,000 rpm Spindle Speed Options.



Direct Drive Spindle

Designed and Engineering with Speed and Precision in Mind!

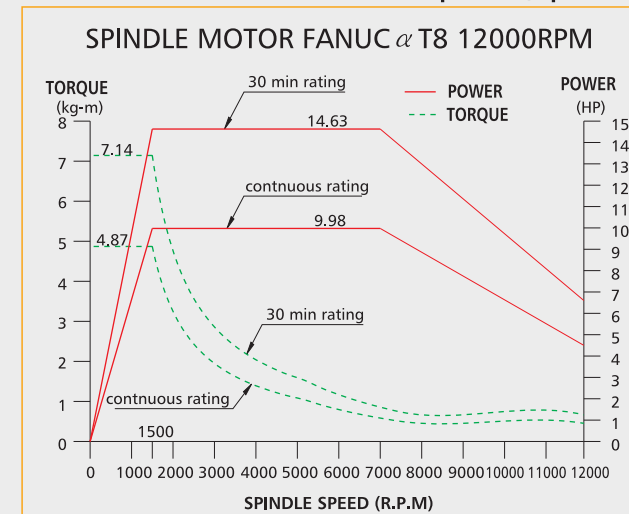
A Precise Performer with Advanced Control.

High Speed / High Precision

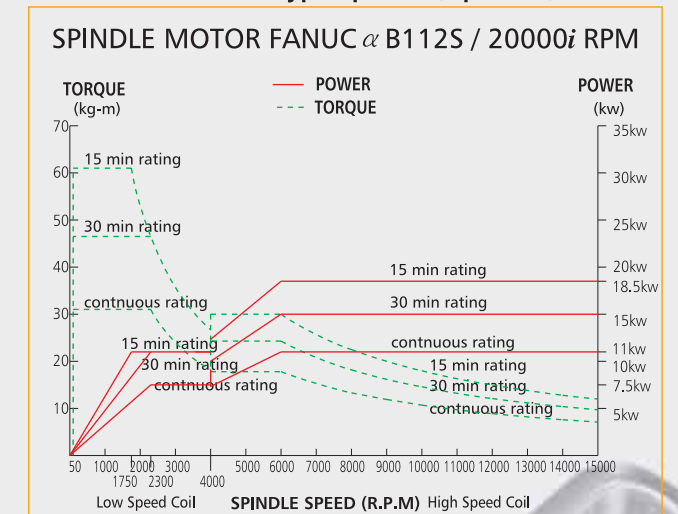
- » ACC / DECC Speed Control
- » Quadrant Change Offset
- » Data Server
- » Vibration Dampening
- » Nurbs Interpolation
- » High Speed Spindle
- » High Precision Contour Control
- » High Torque Servo Drive System
- » Extremely Rigid Structure



10,000 / 15,000 RPM Direct Drive Spindle (Optional)



15,000 RPM Built-in Type Spindle (Optional)





LATEST ADVANCED CNC CONTROLLER
Equipped with Fanuc, Heidenhain and other CNC controllers.



SPINDLE COOLER
Spindle & Ballscrew Cooling Unit

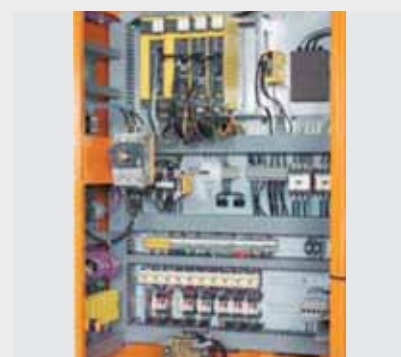
HEAT EXCHANGER FOR CONTROL CABINET
The high performance heat exchanger ensures a constant temperature inside the control cabinet. It provides protection for electronic components, controller and motor driver.



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



CONVENIENT AIR AND LUBRICATION SYSTEM MAINTENANCE
The air lubrication systems are centralized at the back of the machine for convenient maintenance and inspection.



WELL-PLANNED ELECTRICAL CABINET
» The centralized electrical cabinet saves wiring time and permits convenient maintenance.
» The electrical cabinet is equipped with a heat exchanger to ensure constant temperature in electrical cabinet. It also provides protection for electronic components, control and motor driver.

More Powerful and Efficient Operations with Extra Optional Accessories

» OPTIONS



AUTOMATIC TOOL LENGTH MEASURING DEVICE (DAHLI)



AUTOMATIC TOOL LENGTH MEASURING DEVICE (RENISHAW or BLUM)



AUTOMATIC WORKPIECE MEASURING DEVICE



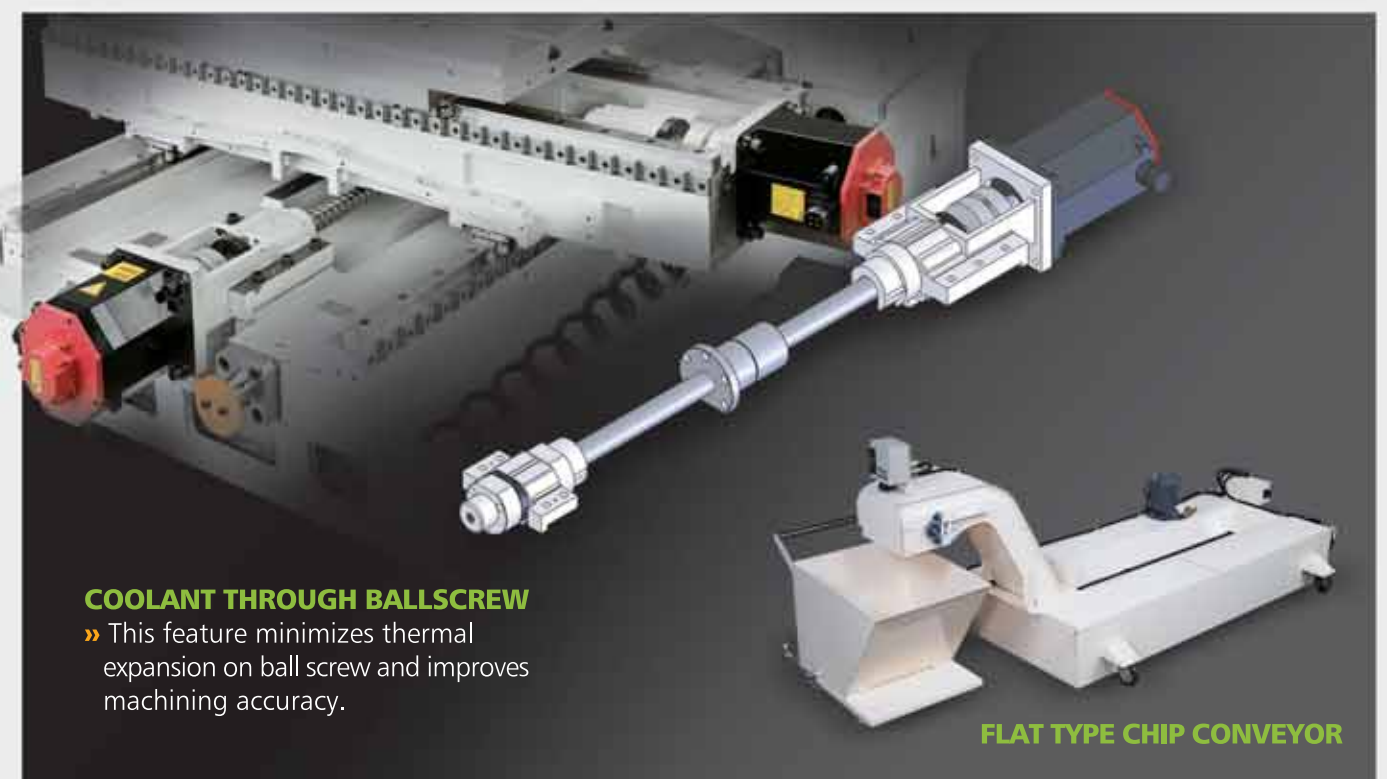
COOLANT WASH



COOLANT THROUGH SPINDLE DEVICE



4TH AXIS CONTROL AND ROTARY TABLE



COOLANT THROUGH BALLSCREW
» This feature minimizes thermal expansion on ball screw and improves machining accuracy.

FLAT TYPE CHIP CONVEYOR

SPECIFICATIONS, ACCESSORIES AND DIMENSIONS

SPECIFICATIONS

MODEL		MCV-860
TABLE		
Table work surface area (X axis x Y axis)		950 x 550 mm
T-Slots (Size x Number x Centres)		18 x 3 x 150 mm
Max. workpiece weight		800 kg
TRAVEL		
X x X axis / Y x Y axis / Z x Z axis		860 mm / 550 mm / 550 mm
Table top surface to spindle nose		150~700 mm
Distance between spindle center and column surface		600 mm
Hollow ballscrew with cooling system		-
Slideway type (X, Y & Z axis)		Linear Guideway
FEED		
Rapid traverse rate	X axis	40 m/min
	Y axis	40 m/min
	Z axis	30 m/min
Cutting feed rate		10000 mm/min
Minimum Input Increment		0.001mm
SPINDLE		
Spindle holder		Belt-type
Spindle motor (30 min.rating/continuous rating)		11kW (14.7HP) / 7.5kW (10HP)
Type of tool shank		N.T.40
Spindle speed		8000 rpm
Spindle bearing bore diameter		Ø70 mm
Spindle max. torque		47.7N-m
Cooling / Lubrication		Oil / Grease
A.T.C		
Tool magazine capacity		24T
Tool holder		BT40
Pull stud		Jaw Type 45° Pull Head
Max. tool weight		7 kg
Max. tool length		300 mm
Max. tool Dia.		Ø90 (140) mm
Tool selection		Random
MOTORS		
X axis drive motors		3kW (4HP)
Y axis drive motors		3kW (4HP)
Z axis drive motors		4kW (5.3HP)
OTHER		
Power		36KVA
Pneumatic pressure		6 kg/cm ²
Cutting pump		3/4HP
Coolant tank capacity		300L
Net weight		5400kgf
Floor space		2260x2900mm

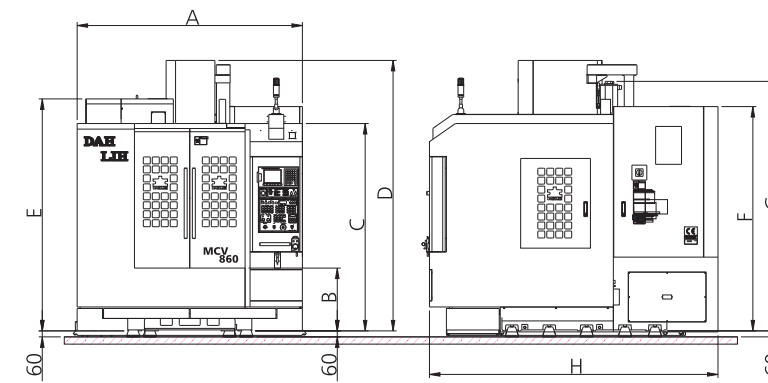
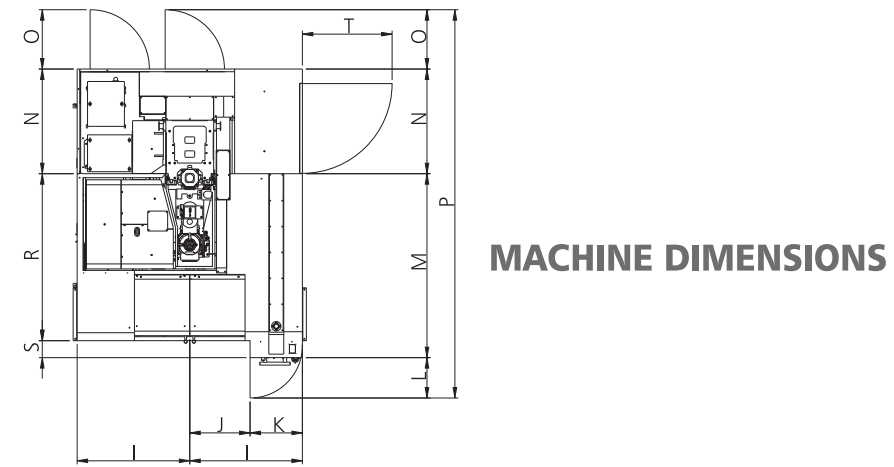
Specifications are subject to change without prior notice.

» STANDARD

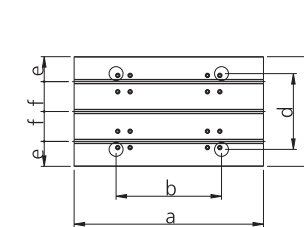
- Heat exchanger
- Removable manual pulse generator
- Enclosed splash guard
- Rs-232 interface
- Automatic power off
- Call light
- Automatic lubrication equipment
- Work light
- Tool kit
- Spare fuses
- Swing type operator panel
- Spindle oil cooler
- 24 tools cam type ATC
- Rigid tapping
- Chip augers on base

» OPTIONS

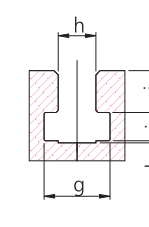
- Screw type chip conveyor with chip bins
- Flat type chip conveyor and chip bin
- 4th axis control and rotary table
- Coolant through spindle with filter
- Bed coolant wash
- Automatic tool length measuring device
- Automatic workpiece measuring device
- Linear scale
- 30, 32, 40 tools cam type ATC
- 12,000 rpm/15,000 rpm direct drive spindle
- 15,000 rpm built-in spindle



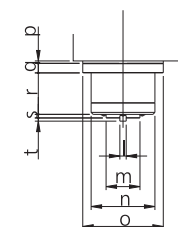
TABLE



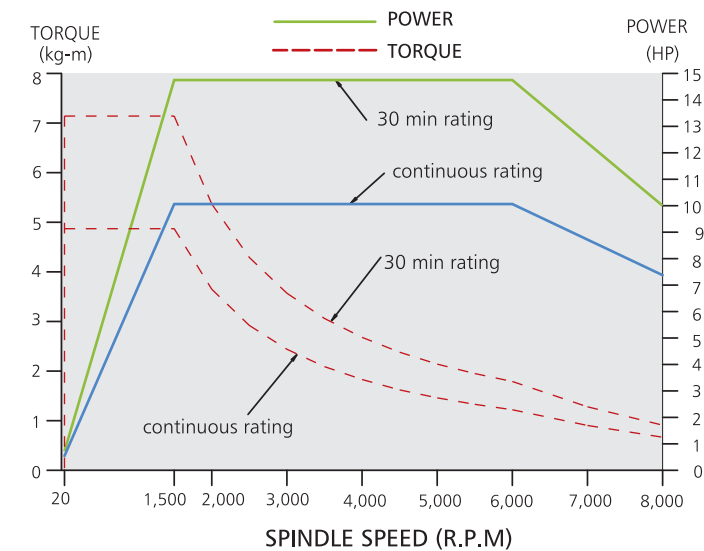
T-SLOT



SPINDLE



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



EXTERNAL DIMENSIONS

Model	Unit	mm	inch
A		2260	88.98
B		630	24.80
C		2080	81.89
D		2713	106.81
E		2327	91.61
F		2250	88.58
G		2503	98.54
H		2895	113.98
I		1130	44.49
J		605	23.82
K		525	20.67
L		405	15.94
M		1845	72.64
N		1050	41.34
O		595	23.43
P		3895	153.35
R		1675	65.94
S		170	6.69
T		900	35.43

TABLE & T-SLOT

Model	Unit	mm	inch
a		950	37.40
b		529	20.83
c		550	21.65
d		380	14.96
e		125	4.92
f		150	5.91
g		31.5	1.24
h		18	0.71
i		20	0.79
j		13.5	0.53
k		1	0.04
l		15.9	0.63
m		85	3.35
n		160	6.30
o		202	7.95
p		5	0.20
q		24	0.94
r		104	4.09
s		9	0.35
t		8	0.31