

MCH-630

MCV-720

DAHLI MACHINING CENTER HORIZONTAL

MCV-1020A

DMH-500

MCV-1020BA

MCV-1250

MCV-1450

MCV-1700

MCV-2100

MCV-2600

DCM-2213



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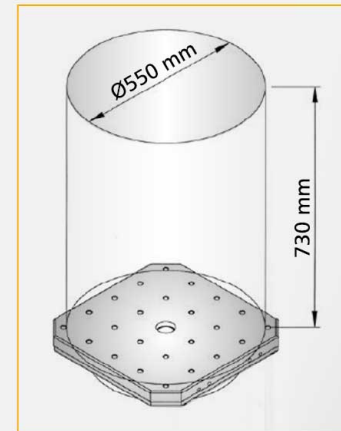
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The Latest and Best Quality Machinery.
DAHLIH®

A New Generation of DMH Machine. Brings Increased Stability, Rigidity and Accuracy.

- » Advanced box-in-box structural design features optimum rigidity and minimum thermal deformation.
- » Comprehensive thermal deformation control features assure maximum dependability of structural stability.
- » The major castings are designed and analyzed by advanced 'Finite Element Analysis' for optimum structural rigidity and accuracy.
- » High spindle speed up to 15,000 rpm makes the DMH ideal for high speed machining. (Option)
- » Cutting feed rate up to 10,000 mm/min.
- » Rapid traverse rates on X, Y and Z axes are 40 M/min.

All New Design
All New Performance



DMH-500



All NEW Structural Design Concepts

SPECIALLY DESIGNED X,Y AND Z AXES MOVEMENT

The X and Y axes structure is designed with overlap loading and the Z-axis is independent. This is combined with a shortened spindle length to achieve the best possible cutting rigidity, stability and accuracy.

3 AXES LINEAR SCALES

- » The X,Y, Z-axis are all equipped with precision linear scales, providing close-loop feedback control. With these linear scales, high positioning accuracy on 3 axes is guaranteed.

3 AXES LINEAR GUIDEWAYS

- » The X,Y, Z-axis slideways are mounted with heavy duty roller type linear guideways that feature exceptionally high stability.
- » Perpendicular slideways enhance both cutting force and gravity load to maximize machining performance as well as the entire structural rigidity.
(Patent No. M273416)

TRAVELING SPINDLE HEAD

- » The rigidly constructed spindle head moves on linear guideway that features high stability during cutting.
- » The traveling spindle head is specially designed for increasing efficiency.

PRETENSIONED BALL SCREWS

- » The ball screws are pretensioned to reduce thermal deformation to a minimum while ensuring lifetime accuracy.

Box-in-Box Structure

- » The box-in-box structure features excellent force distribution that increases structural rigidity while reducing moving mechanism weight.

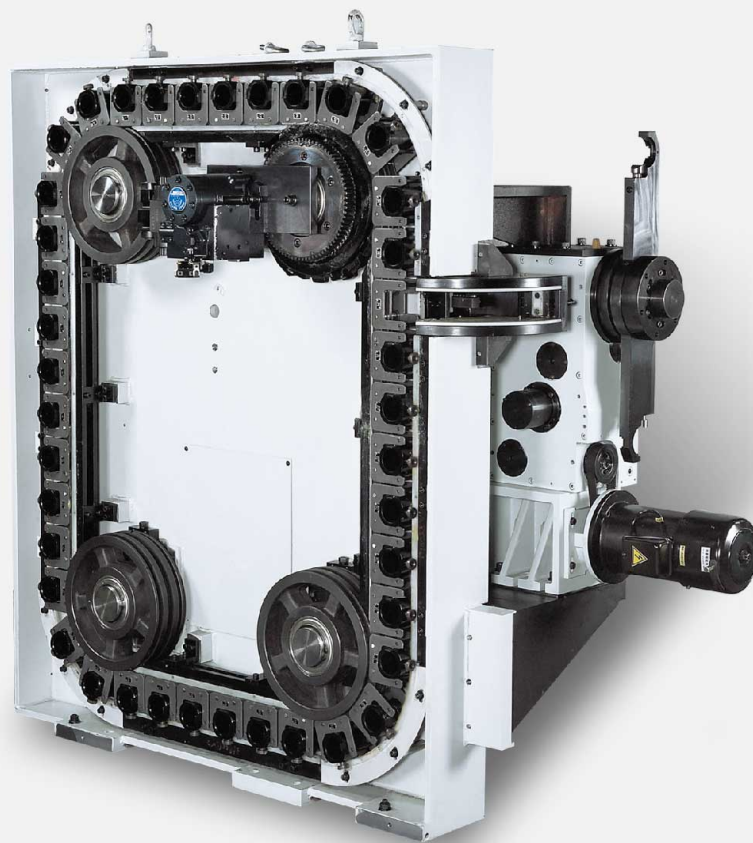
COOLANT THROUGH BALL SCREWS (OPTIONAL)

- » The coolant through ball screws on the three axes provides constant temperature on the ball screws and supporting bearings. This eliminates ball screw thermal deformation.

A Perfected DMH for Various Industries:

- » The Automotive and Motorcycle Industries
- » Precision Parts Machining
- » General Machining

Efficient ATC System

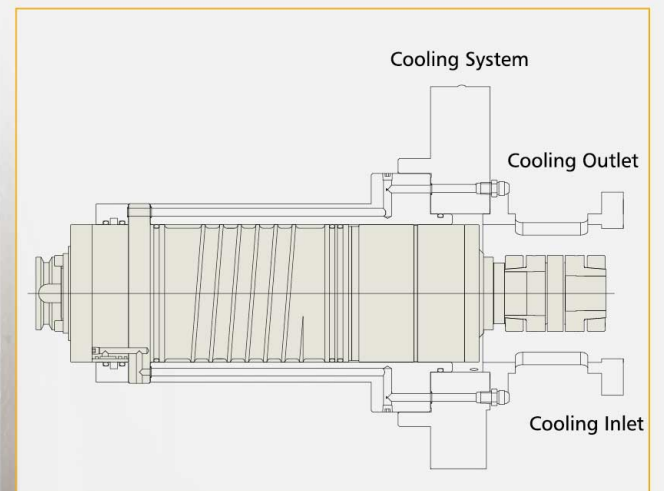
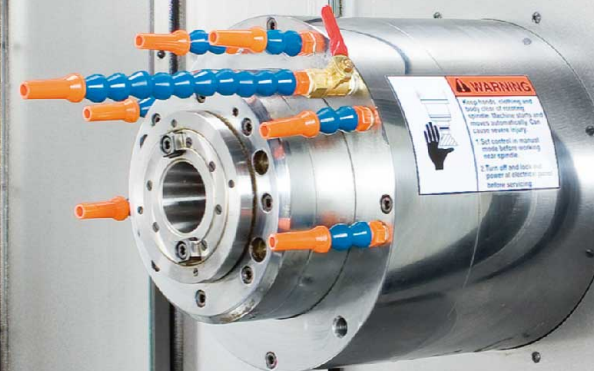


CHAIN-TYPE MAGAZINE

40-tool Standard / 60, 90-tool Optional

- » Driven by the hydraulic indexing motor, the magazine and cam-type ATC allow driving and positioning to be accomplished simultaneously.
- » The ATC is built on the magazine body for easy control of tool change accuracy. There is no need to calibrate tool change accuracy in case the magazine is dismantled or remounted.

Direct Drive Spindle

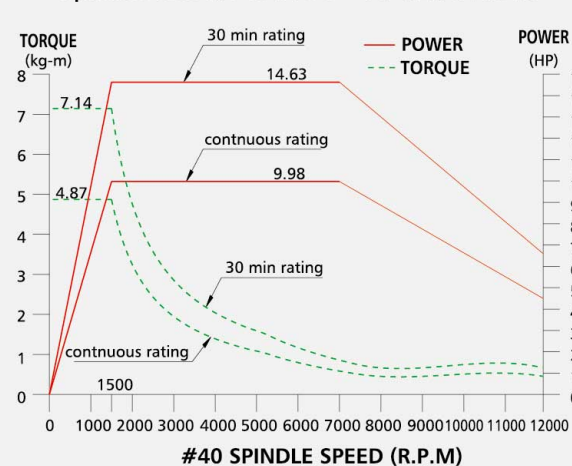


RIGID, PRECISION SPINDLE - DIRECT DRIVE SPINDLE

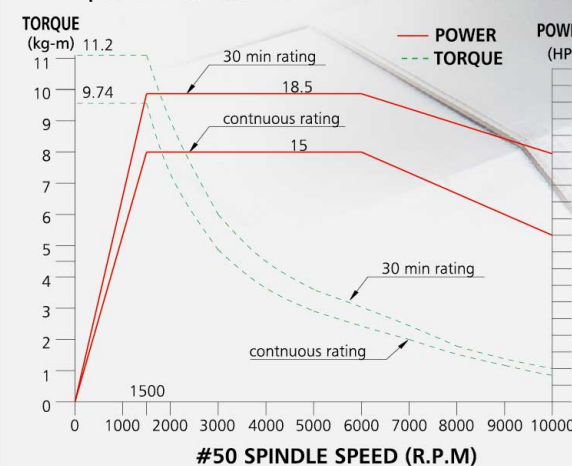
- » The high-speed spindle provides maximum speed up to 15,000 rpm for high-speed machining with outstanding on all machining surface.
- » High torque output of spindle reaches 46N-m allowing for heavy-duty machining.

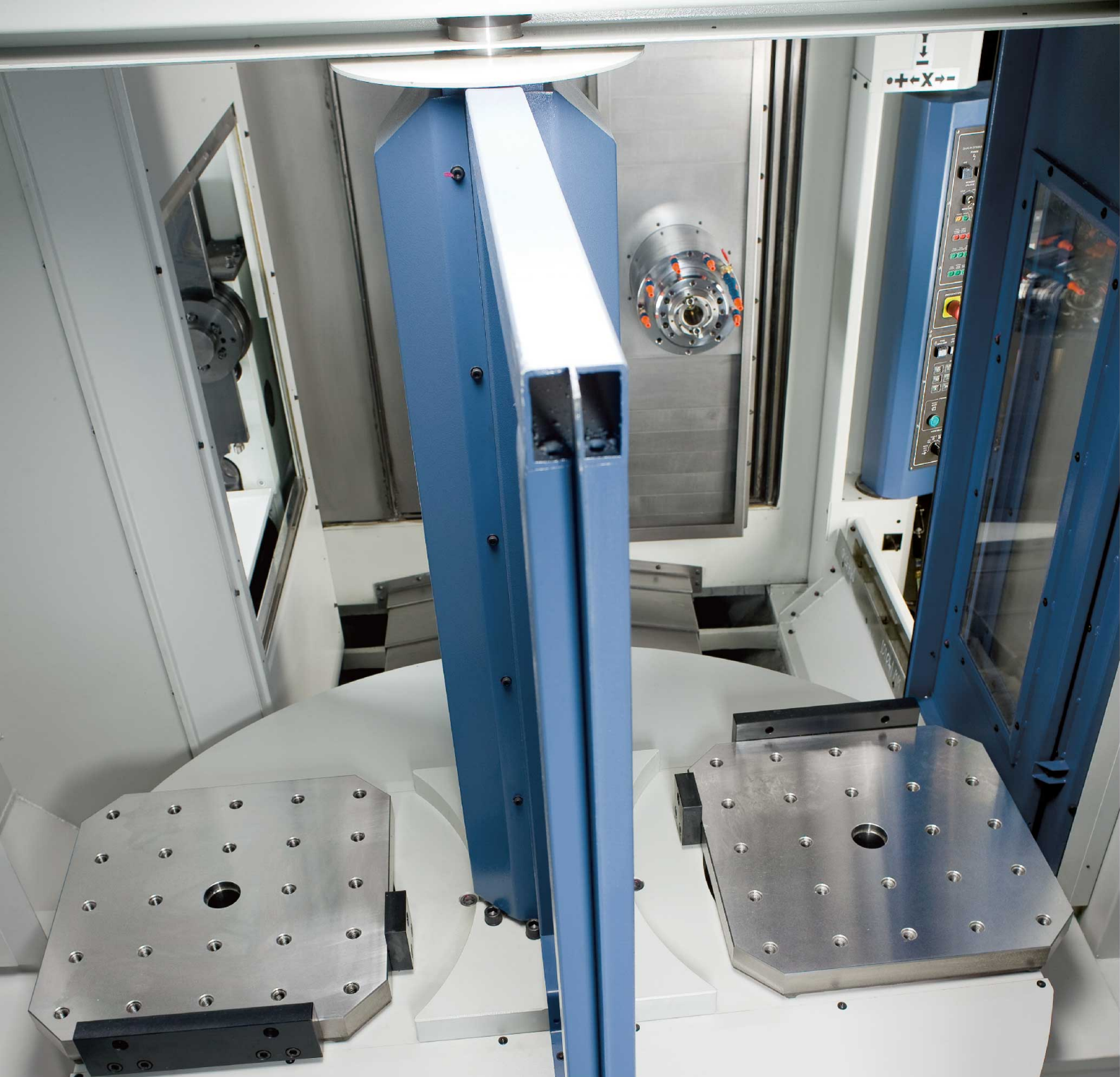


Spindle Motor FANUC α T8 12000RPM



Spindle Motor FANUC α 15 10000RPM

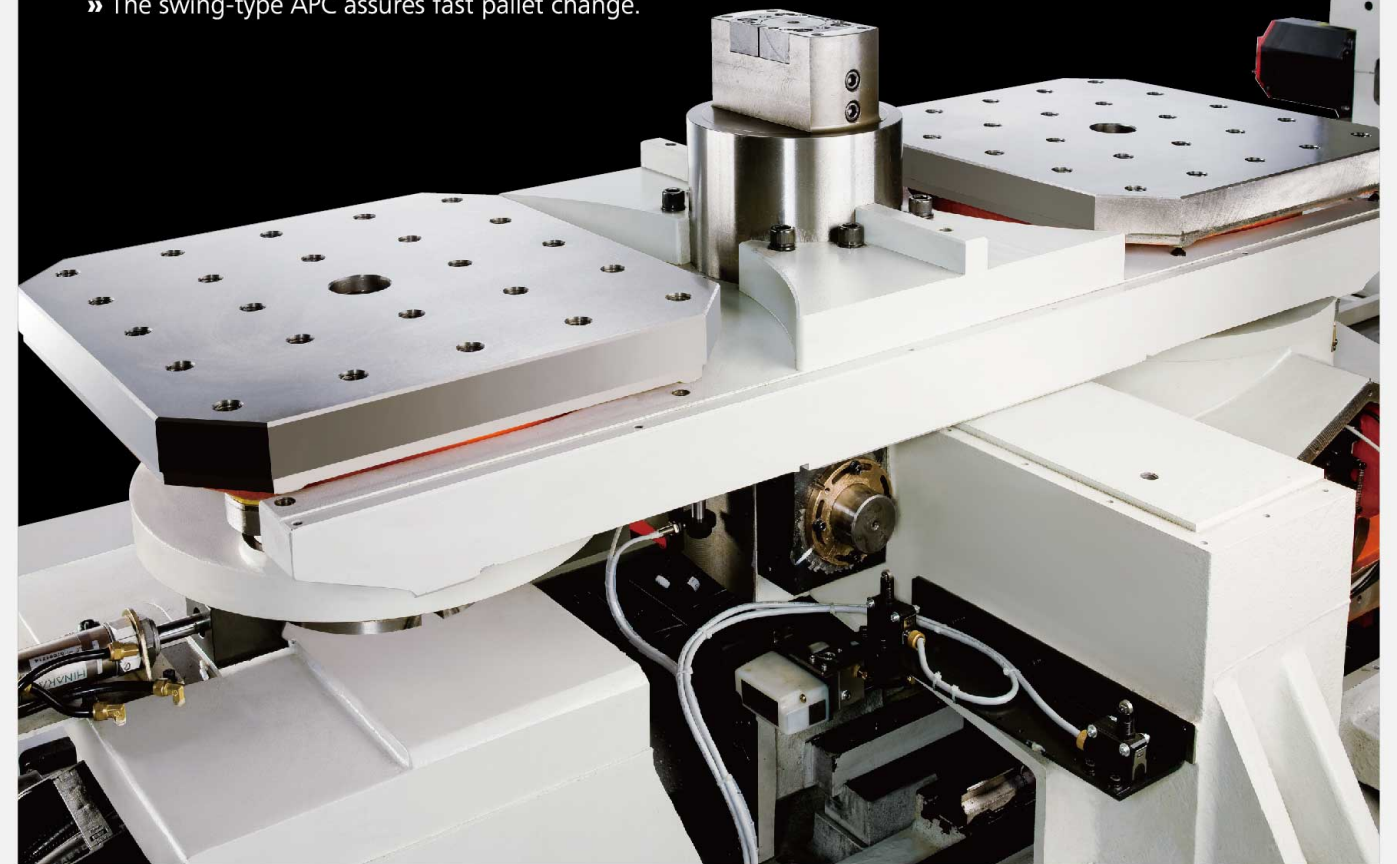




Swing-type Pallet Change

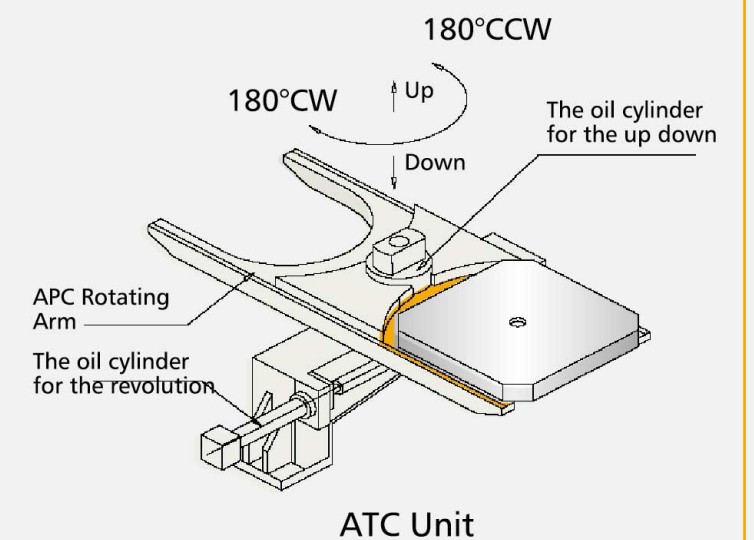
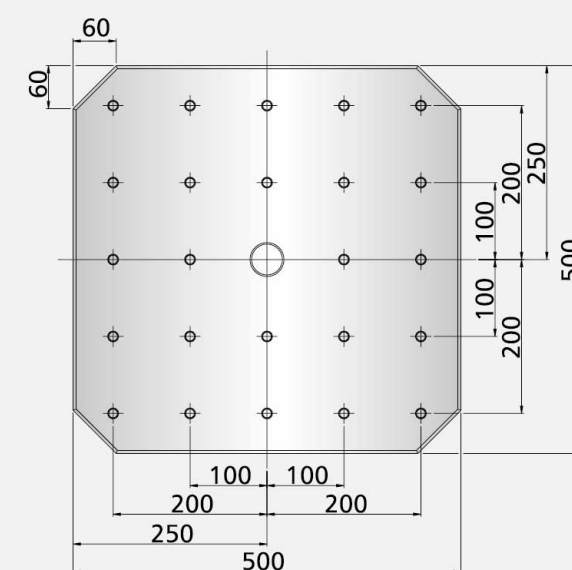
SWING-TYPE PALLET CHANGE

- » The index table is driven by a high precision servomotor and positioned by coupling.
- » Standard indexing unit is 1°.
- » Indexing unit 0.001° is available as optional equipment.
- » The swing-type APC assures fast pallet change.



HIGH PALLET POSITIONING ACCURACY

- » The pallet is accurately positioned on 4 tapered cones for high positioning accuracy and repeatability.



Ultimate Accuracy Through Rigorous Inspections



» Laser interferometer angular dividing accuracy measurement.



» Laser interferometer linear position accuracy measurement.

Specifications, Accessories and Dimensions

SPECIFICATIONS	
MODEL	DMH-500
TABLE	
Pallet Dimensions	500 x 500 mm
Min. Indexing Angle	1°
Max. Table Load	600 kgS
TRAVEL	
Longitudinal Travel (X)	750 mm
Vertical Travel (Y)	680 mm
Cross Travel (Z)	650 mm
Distance of Spindle End to Table Center	150 - 800 mm
Distance of Spindle Center to Table Surface	50 - 730 mm
SPINDLE	
Spindle Nose	N.T.40 / N.T.50
Spindle Speeds	120-12000 (#40) / 100-10000 (#50)
FEED	
Cutting Feed	1-10000 mm/min
Rapid Traverse	40 m/min
Min. Input Increment	0.001 mm
ATC (Automatic Tool Changer)	
Tool Shank	B.T.40 / B.T.50
Tool Storage Capacity	40 Tool
Max. Tool (Diam. x Length)	Ø100 x 400 mm
Max. Tool Weight	8 kgS
Tool Selection	Random
MOTORS	
Spindle Motor (Rated Output for 30 Minutes)	#40 11kw (15HP) / #50 18.5kw (25HP)
Drive Motors	X-axis 4.0kw (5.4HP)
	Y-axis 4.0kw (5.4HP)
	Z-axis 4.0kw (5.4HP)
MACHINE SPACE AND WEIGHT	
Floor Space	2650 x 5000 mm
Machine Weight	15000 kgS

■ Design and specifications are subject to change without prior notice.

- » **STANDARD**
1. Spindle cooling device
 2. Heat exchanger
 3. Automatic pallet changer with manual rotation
 4. Removable manual pulse generator
 5. X, Y, Z linear guide ways
 6. Flood coolant device
 7. Coolant tank
 8. Spiral type chip auger
 9. Automatic power cut-off device
 10. Call light
 11. Work light
 12. Tool kit
 13. Flat type chip conveyor
- » **OPTIONS**
1. ATC tool storage: 60/90
 2. Coolant through spindle
 3. BT40/15,000rpm direct drive spindle
 4. Continuous rotation B-axis 0.001°
 5. Laser auto tool measuring device (Non-contact)
 6. Automatic centering device

