MCH-630

MCV-720

HORIZONTAL MACHINING CENTER

MCV-1020A

MCH-630

MCV-1020BA

MCV-1250

MCV-1450

MCV-1700

MCV-2100

MCV-2600

DCM-2213

The Latest and Best Quality Machinery.

DAHLIH®

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Rugged! Stable!
Precision-built for Years of Accurate Machining Work!

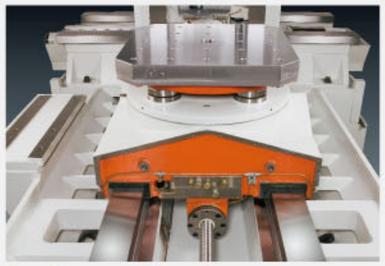
The Dah Lih MCH-630 Horizontal Machining Center will add speed and efficiency to your machining operations. With its outstanding features, the MCH-630 will help you get higher productivity.

- Traveling column structure for increasing efficiency.
- T-Shaped base features outstanding structural stability.
- Extra wide box ways on three axes upgrades machining stability.
- Swing type APC permits fast workpiece change.
- Choice of 60 or 90 tool chain-type magazine.
- Gear-drive spindle makes the machine ideal for heavy cutting.
- Linear scales on 3 axes are standard.

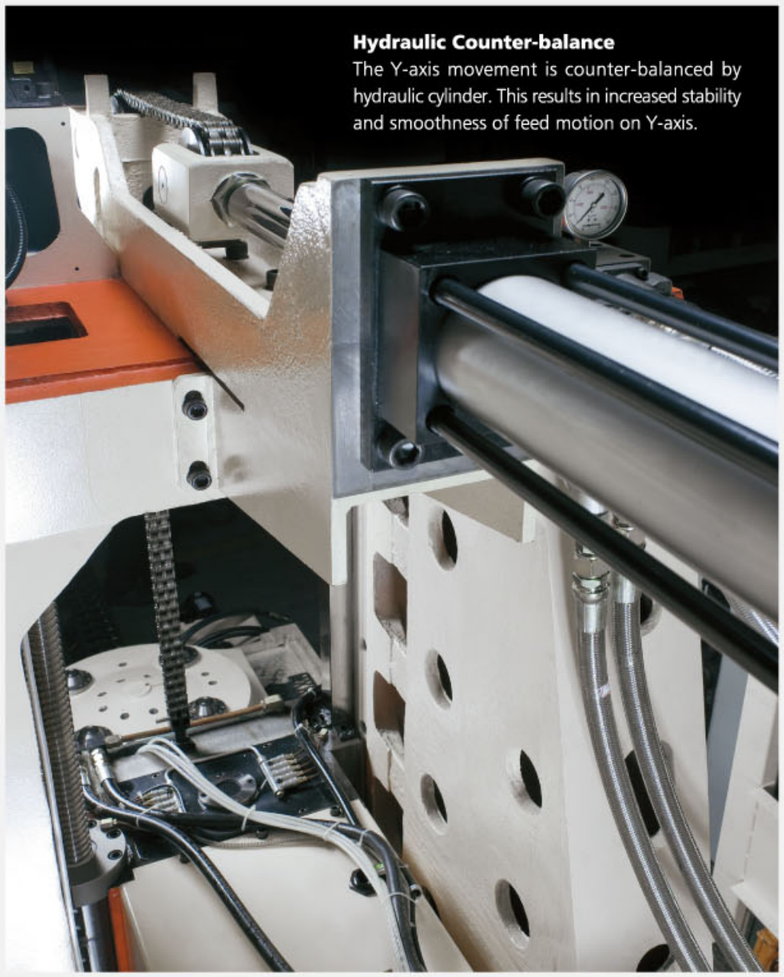
MCH-630

Rugged Design, Precision Performance.

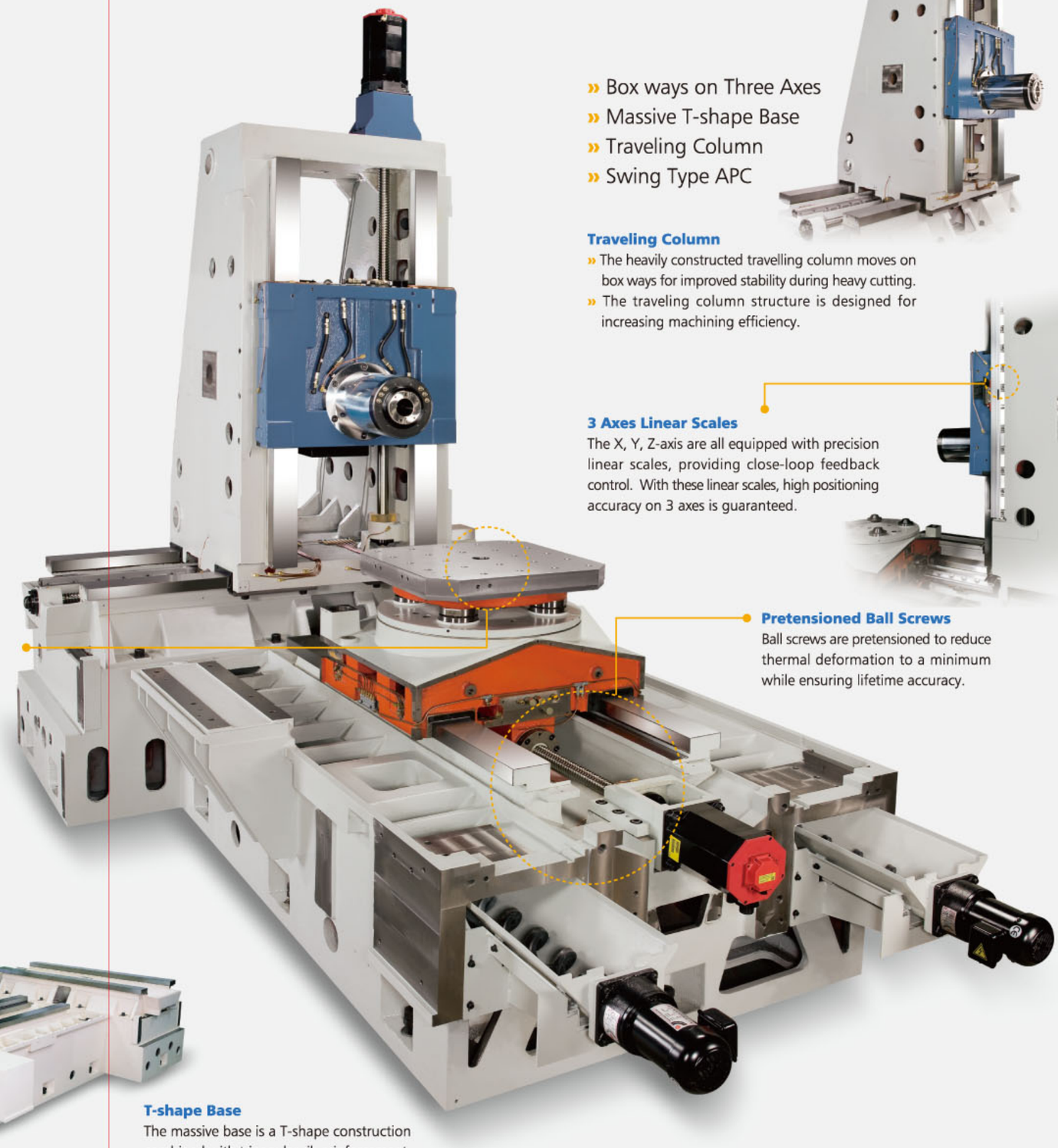
Alloy Steel Covered Three Axes Slideways
All 3 axes slideways are encased in alloy steel for increased long term machine performance. Benefits include Improved hardness, wear resistance and slideway dampening. (Optional)



Box Ways on Three Axes
Extra wide box ways on three axes are designed for firm support and reducing vibration to a minimum. This makes the machine ideal for heavy cutting.



Hydraulic Counter-balance
The Y-axis movement is counter-balanced by hydraulic cylinder. This results in increased stability and smoothness of feed motion on Y-axis.



- Box ways on Three Axes
- Massive T-shape Base
- Traveling Column
- Swing Type APC

Traveling Column
- The heavily constructed travelling column moves on box ways for improved stability during heavy cutting.
- The traveling column structure is designed for increasing machining efficiency.

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.

Pretensioned Ball Screws
Ball screws are pretensioned to reduce thermal deformation to a minimum while ensuring lifetime accuracy.

0.001° Extra High Accuracy Rotary Table (optional)
Designed for extra high machining requirement, the 0.001° Continuous rotary table features minimum backlash and high positioning accuracy.

T-shape Base
The massive base is a T-shape construction combined with triangular rib reinforcement, exhibiting exceptionally high rigidity.

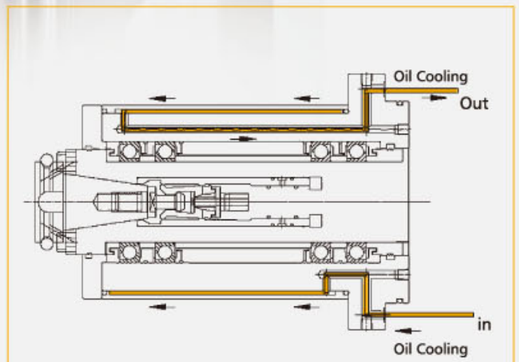
Gearbox Driven Spindle

Rigid Spindle Head

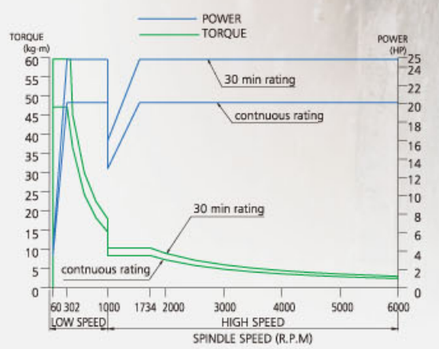
» The spindle head is specially designed with 8 faces that contract with the column slideways. The result is improved stability during heavy cutting.
» The spindle head is a symmetrical design. This keeps thermal deformation to a minimum.

6000 RPM, Gearbox Driven Spindle

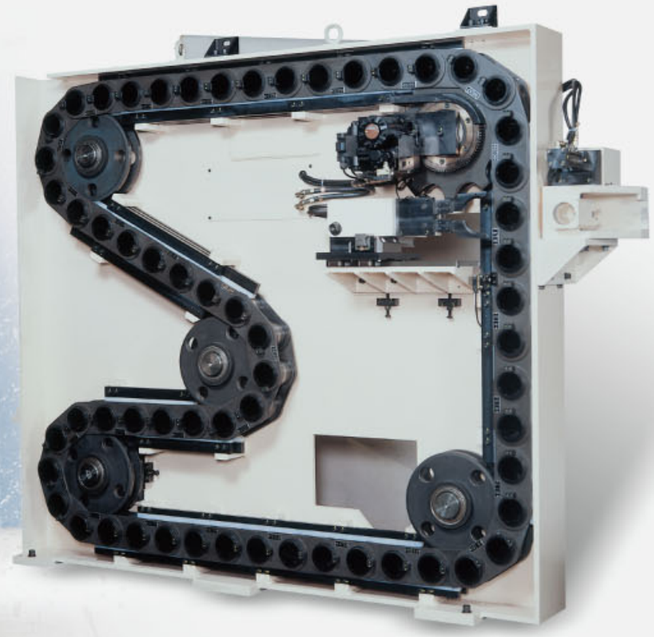
» Spindle speeds are transmitted through a 2 speed gearbox. The gearbox provides full power from 302 rpm.
» The spindle and gears are forced cooling to reduce thermal growth while ensuring accuracy.
» The spindle runs in NN type double-row roller bearings, making the machine excellent for heavy cutting. (Optional)



Spindle Power Output and Torque



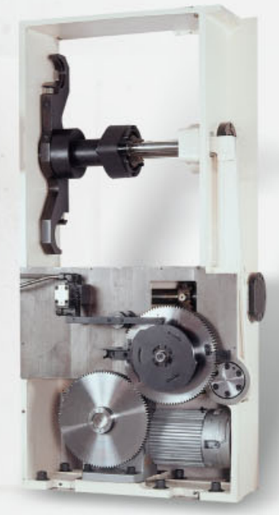
Separately Mounted Chain-type Magazine



Separately Mounted Chain-type Magazine

60 Tool Standard
90 Tool Optional

» The magazine is driven by a hydraulic indexing motor for fast rotation and high positioning accuracy.
» A waiting position of the magazine tool pot allows pre-selection of the next tool to save time.
» The tool magazine is separately mounted from the machining area to prevent contamination from chips or coolant.



Fast Tool Change

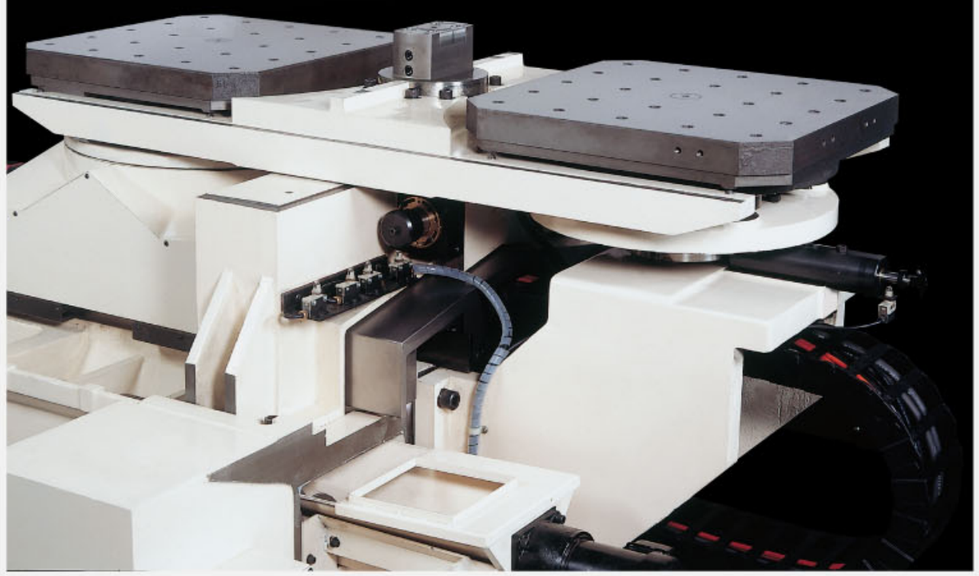
» The cam-drive tool change arm is supported on both sides.
» The tool changer permits synchronized tool clamping between the spindle and slave pot resulting in an efficient, fast, smooth operation.
» An auto door is equipped on the tool changer to protect tools from chips and coolant.

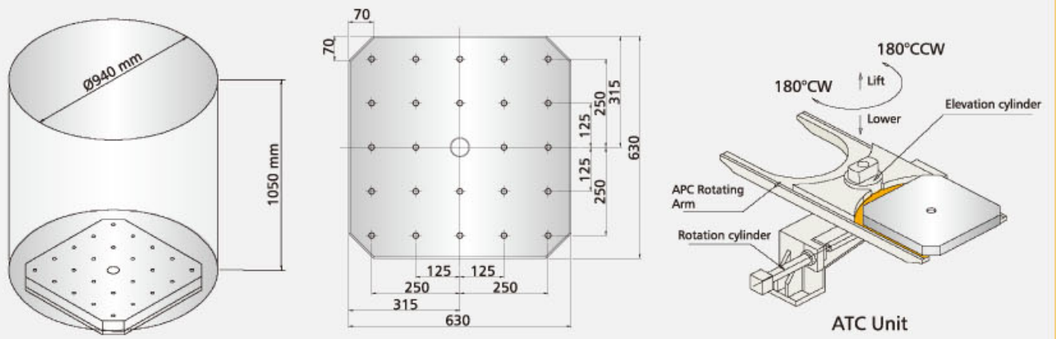
Swing-type Pallet Change

High Pallet Positioning Accuracy
The pallet is accurately positioned on 4 tapered cones for high positioning accuracy and repeatability.

Rotary Pallet Change

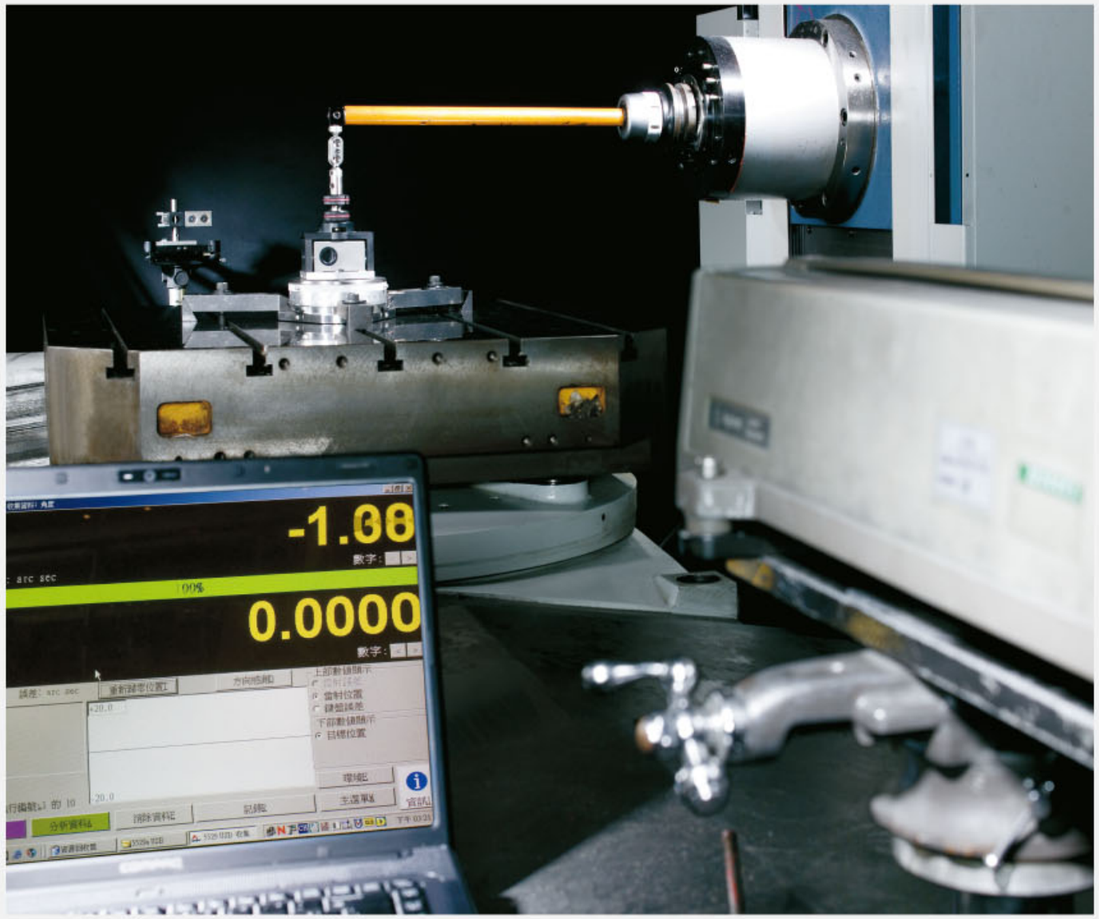
» The rotation of the table index is driven by a powerful servo motor positioned by curvic coupling enabling a high indexing accuracy.
» Standard indexing unit is 1°.
» The swing type APC features fast pallet change.



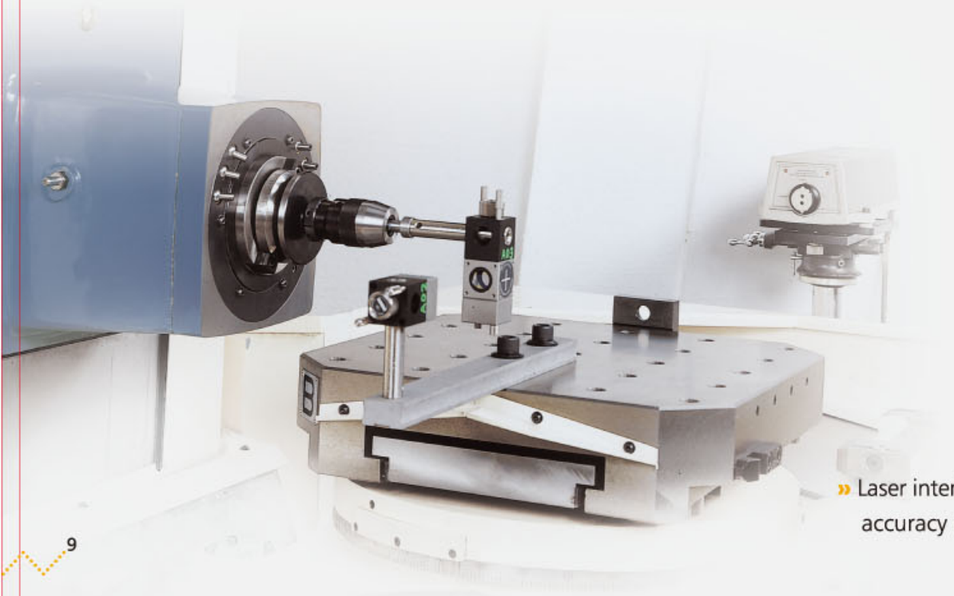


ATC Unit

Ultimate Accuracy Through Rigorous Inspections



» Laser interferometer angular dividing accuracy measurement.



» Laser interferometer linear position accuracy measurement.

SPECIFICATIONS, ACCESSORIES AND DIMENSIONS

SPECIFICATIONS

MODEL	MCH-630
TABLE	
Pallet dimensions	630 x 630 mm
Min. indexing angle	1° (0.001°)
Max. table load	1000 kg
TRAVEL	
Longitudinal travel (X)	1000 mm
Vertical travel (Y)	800 mm
Cross travel (Z)	800 mm
Distance of spindle end to table center	160-960 mm
Distance from spindle center to table surface	100-900 mm
SPINDLE	
Spindle nose	BT50
Spindle speeds	60-6000 rpm
Spindle speed range	Two gears variable
FEED	
Cutting feed	1-8000 mm/min
Rapid traverse	24 m/min
Min. input increment	0.001 mm
ATC (Automatic Tool Changer)	
Tool storage capacity	60
Max. tool (dia. x length)	Ø110 x 400 mm
Max. tool weight	20 KG
Tool selection	Random
MOTORS	
Spindle motor (rated output for 30 minutes)	18.5 kw (25 HP)
Drive motors	
X axis	4 kw (5.3 HP)
Y axis	7 kw (9.3 HP)
Z axis	4 kw (5.3 HP)
MACHINE SPACE AND WEIGHT	
Floor space	4500 x 6230 mm
Machine weight	18000 kg

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 TYPE MANUAL PULSE GENERATOR
5. X.Y.Z. LINEAR SCALE
6. FLOOD COOLANT DEVICE
7. COOLANT TANK
8. SPIRAL TYPE CHIP CONVEYORS
9. SPINDLE LOAD METER
10. AUTOMATIC POWER CUT-OFF DEVICE
11. CALL LIGHT
12. WORL LIGHT
13. TOOL KIT
14. FLAT TYPE CHIP CONVEYOR

» OPTIONS

1. ATC TOOL STORAGE: 90
2. COOLANT SYSTEM: SHOWER COOLANT, COOLANT GUN
3. CHIP WAGON
4. AUTOMATIC CENTERING DEVICE
5. TOOL BREAKAGE DETECTION DEVICE
6. TOOL LENGTH MEASURING DEVICE
7. TOOL PRESETTER
8. ADDITIONAL CALL LIGHT
9. BUZZER DEVICE

MACHINE DIMENSIONS