

Quality Assurance

At HANNSA, we ensure that the quality of each machine will meet our customers' requirements. HANNSA machine tools are manufactured by a team of highly skilled technicians. Rigorous inspections and tests are conducted, enabling HANNSA to achieve the highest standards.

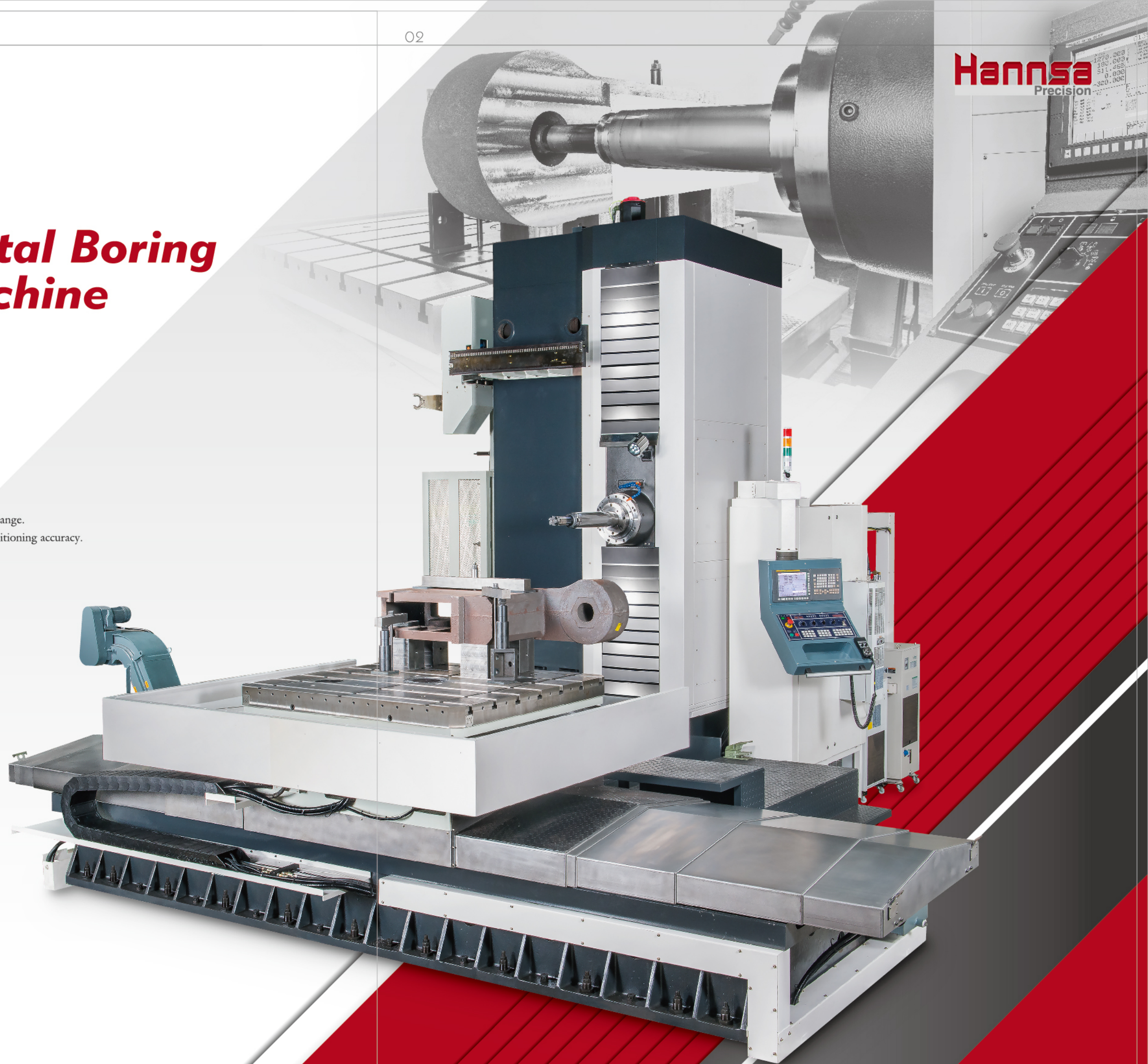
CNC HORIZONTAL BORING & MILLING MACHINE



CNC Horizontal Boring & Milling Machine

Machine Features of YBH 3000

- X, Y, Z-axis travel: 3000 x 1700 x 1700 mm.
- A moving column model for increasing efficiency.
- Linear guideways on X, Z-axis. Box ways on Y-axis.
- W axis extension can reach 500 mm.
- The gearbox on the spindle head allows for two-step speed change.
- X, Y, Z, B-axis are all equipped with linear scales for high positioning accuracy.
- Rotary table with 1° indexing is standard.
- Rotary table with 0,001° indexing is optional.
- Chain type tool magazine with 60 tools.
- Massive base.



Superb Machine Structure

to Exhibit Optimal Rigidity without Deformation

High Quality Cast Iron Stress Relieved

The major structural parts of the machine are manufactured from high quality cast iron, with internal stress relieved to achieve deformation free structure.

Moving Column

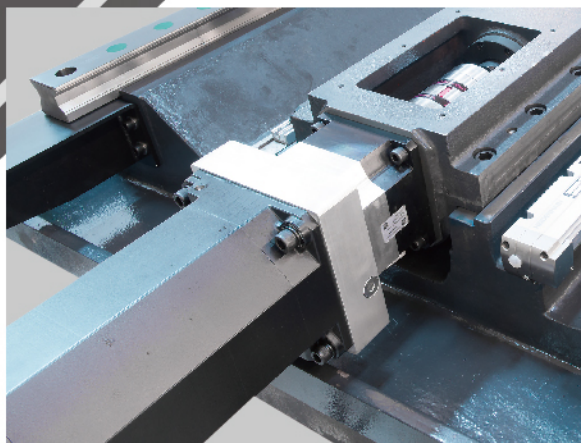
The column is a moving type that provides an increase in efficiency.

Massive Base

With a special design on the base structure, it helps to increase the structural rigidity.

Slideway Type

Linear guideways on X, Z-axis while Y-axis is designed with box ways. The combination design of slideways not only features higher feed rate, but also ensures increased stability in heavy cutting.



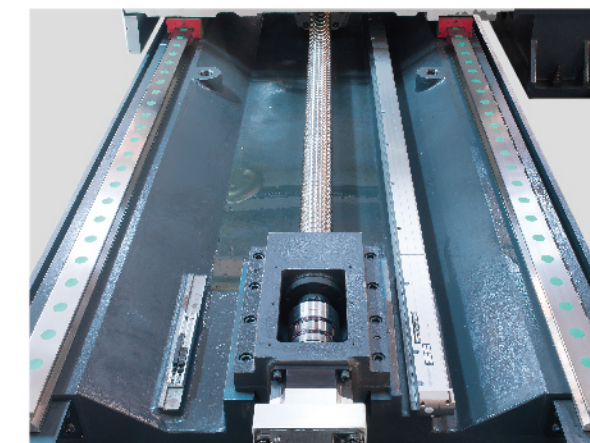
Transmission Through Speed Reducer

X, Z- axis feeds are driven by independent servo motor that drives the ball screw. This combined with the use of speed reducer for transmission to increase transmission torque. It ensures smooth feed on X, Z-axis even working on a heavy work piece.



Hydraulic Cylinder For Counter-balance

A hydraulic cylinder is used for counter-balance when the spindle head moves up / down, which makes spindle head moving motions more effortless and smoother.



Linear Scales On Four Axes

The X, Y, Z, B-axis are all equipped with linear scale, that provides closed loop, feedback control to ensure high positioning accuracy.

Rigid Gear Box for Precision & Heavy Duty Cutting

Gearbox of Spindle Head

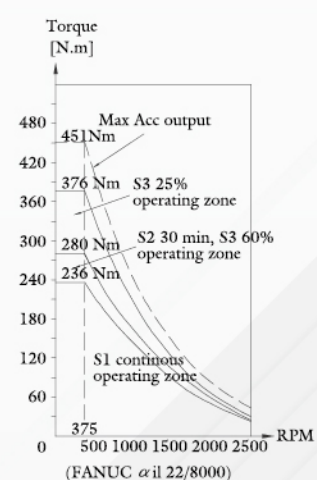
- The spindle rotation is transmitted through a powerful gearbox, providing high / low two step speed change. The high-speed range is ideal for fine machining, while the low speed range is applicable for heavy cutting.
- The gearbox is designed with a combination of spray type and semi-oil bath cooling and lubrication system.

Ø110
mm

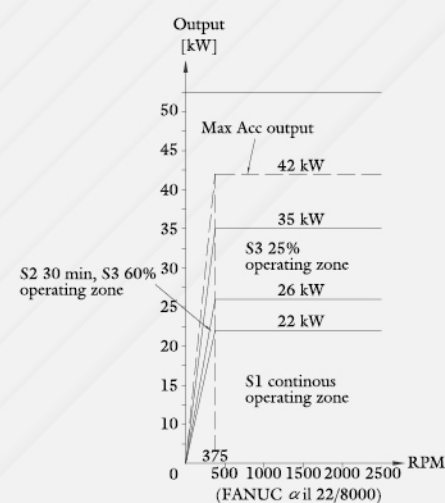
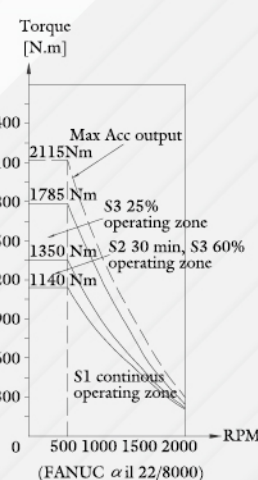
500 mm

Spindle Motor Torque Diagrams

High Gear-1:1.69



Low Gear-1:9



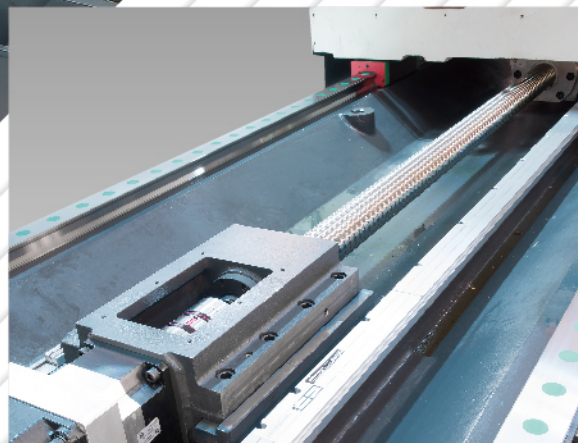
On W-axis

- Diameter of W-axis: Ø110 mm.
- Max. travel of W-axis: 500 mm.
- The spindle features high rigidity.
- Deflection is controlled to within <0.02 mm.



0.001° Rotary Table (Optional)

- Standard table indexing accuracy: 1° Indexing accuracy 0.001° (optional)
- Table rotation is driven by a servo motor.
- Max. table load: 10 tons
- Max. speed is 1.5 rpm for continuous running.
- With linear scale.

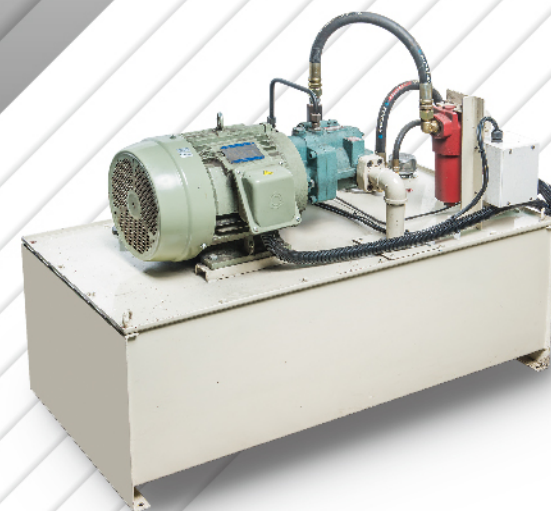


Ball Screw Cooler (Optional)

The cooler delivers coolant through ball screws on 3 axes, ensuring high feeding accuracy on 3 axes.

Spindle Oil Cooler

The cooler enables the spindle to rotate at a constant temperature that may avoid influence on machining accuracy due to thermal growth of spindle.



Hydraulic Power Unit

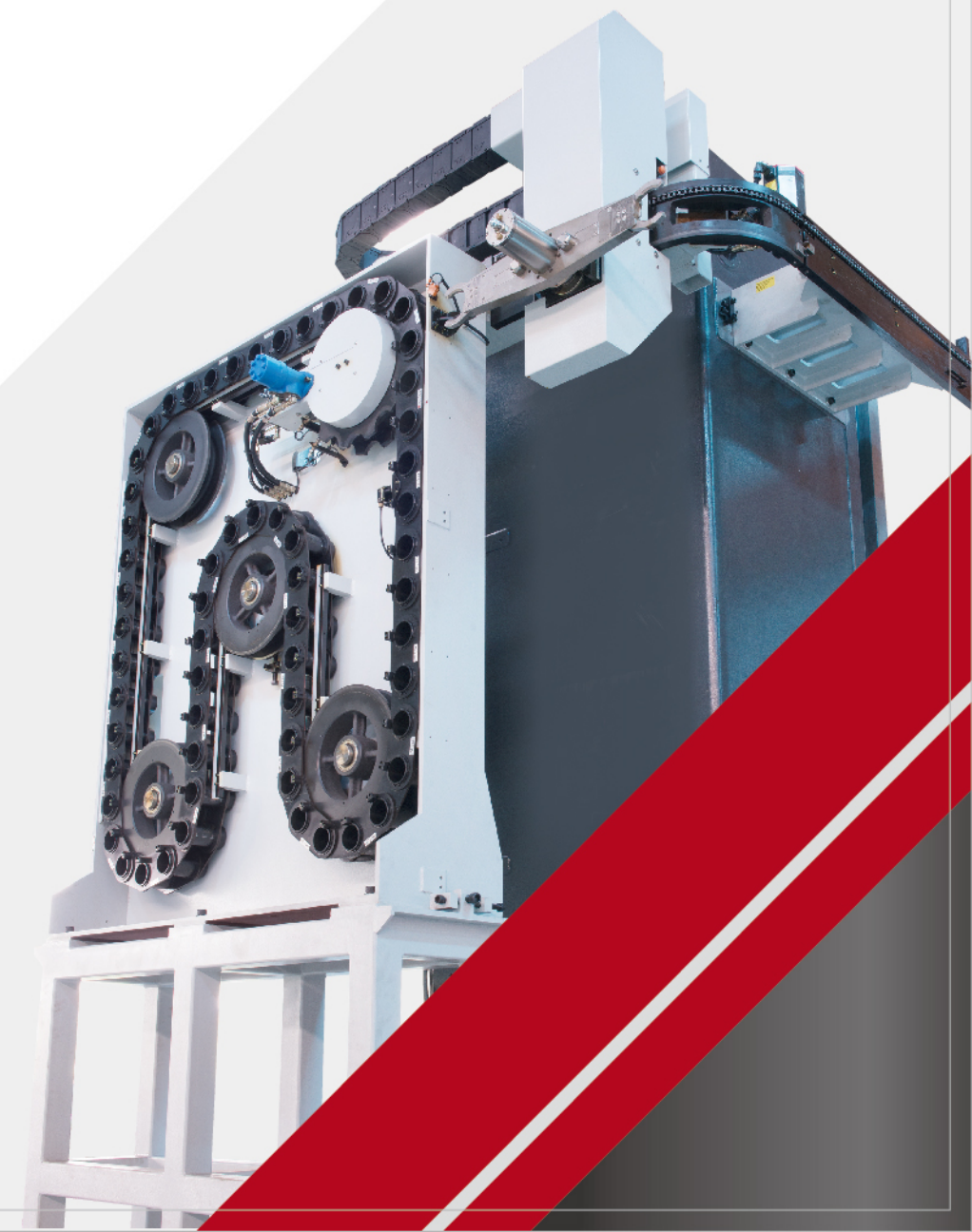
- The hydraulic power unit provides hydraulic power to the counter-balanced cylinder and B-axis clamping.
- The hydraulic power unit is air-cooled.

Coolant Through Ball Screws On 3 Axes (Optional)

With coolant through ball screws on X, Y, Z-axis, thermal displacement on the ball screws can be reduced to a minimum. This in turn ensures high feeding accuracy and smooth feeding motions on three axes.

Chain Type Tool Magazine

- Tool loading capacity: 60 tools
- The tool magazine is installed outside of the machine so that the machine accuracy is not influenced by the magazine and tool movement.
- The magazine position is away from the cutting area that prevents tools from being polluted by chips or cutting fluid.



Specifications

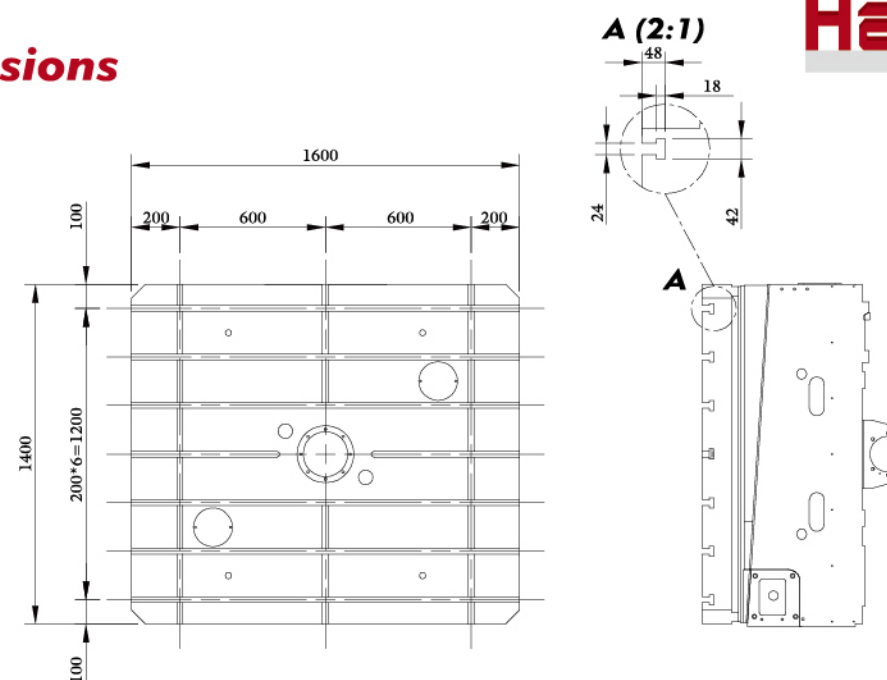
MODEL	UNITS	YBH 3000A	YBH 3000B
WORKTABLE			
Table size	mm (inch)	1400 x 1600 (55.11 x 62.99)	1400 x 1600 (55.11 x 62.99)
Worktable T siot (Size x Distance x Number)	mm (inch)	24 x 200 x 7 (0.94 x 7.87 x 7)	24 x 200 x 7 (0.94 x 7.87 x 7)
Max. table loading capacity	T	10	10
Table rotation speed	rpm	1.5	1.5
Rotary table indexing degree		1° (0.001° opt.)	1° (0.001° opt.)
TRAVEL			
X axis headstock vertical	mm (inch)	3000 (118.11)	3000 (118.11)
Y axis headstock vertical	mm (inch)	1700 (66.92)	1700 (66.92)
Z axis column long travel	mm (inch)	1700 (66.92)	1700 (66.92)
W axis (quill) travel	mm (inch)	500 (19.68)	700 (27.55)
X, Z GuideWays		Linear Way	Linear Way
Y GuideWays		Box Way	Box Way
FEED			
Rapid feed X, Y, Z axes	M/min (inch/min)	12 (472.43)	12 (472.43)
Rapid feed W axes	M/min (inch/min)	6 (236.21)	6 (236.21)
Cutting feed X, Y, Z, W axes	M/min (inch/min)	6 (236.21)	6 (236.21)
SPINDLE			
Spindle gear range		2 step	2 step
Spindle power	kw	22 / 26 (35 HP)	22 / 26 (35 HP)
Spindle Tool Shank		NO.50 MAS2	NO.50 MAS2
Max. spindle speed	rpm	2500	2500
Quill diameter	mm (inch)	110 (4.33)	130 (5.11)
Quill Extend	mm (inch)	500 (19.68)	700 (27.55)
Spindle torque	N.m	1500	1500
Spindle tool pull force	kg (lbs)	1900-2100 (4180-4620)	1900-2100 (4180-4620)
Spindle cooling system		Oil cooling	Oil cooling
Spindle lubrication		Grease	Grease
A.T.C			
ATC tool number		60	60
ATC Max tool weight	kg (lbs)	25 (55)	25 (55)
ATC Max tool length	mm (inch)	400 (15.74)	400 (15.74)
ATC Max tool diameter	mm (inch)	125 (250) [4.92 (9.84)]	125 (250) [4.92 (9.84)]
MISCELLANEOUS			
Power Consumption	KVA	55	55
Minimum pneumatic pressure	kg (lbs)	6	6
Machine weight	kg (lbs)	28000 (61600)	30000 (66000)

● The above specifications are subject to change without prior notice.

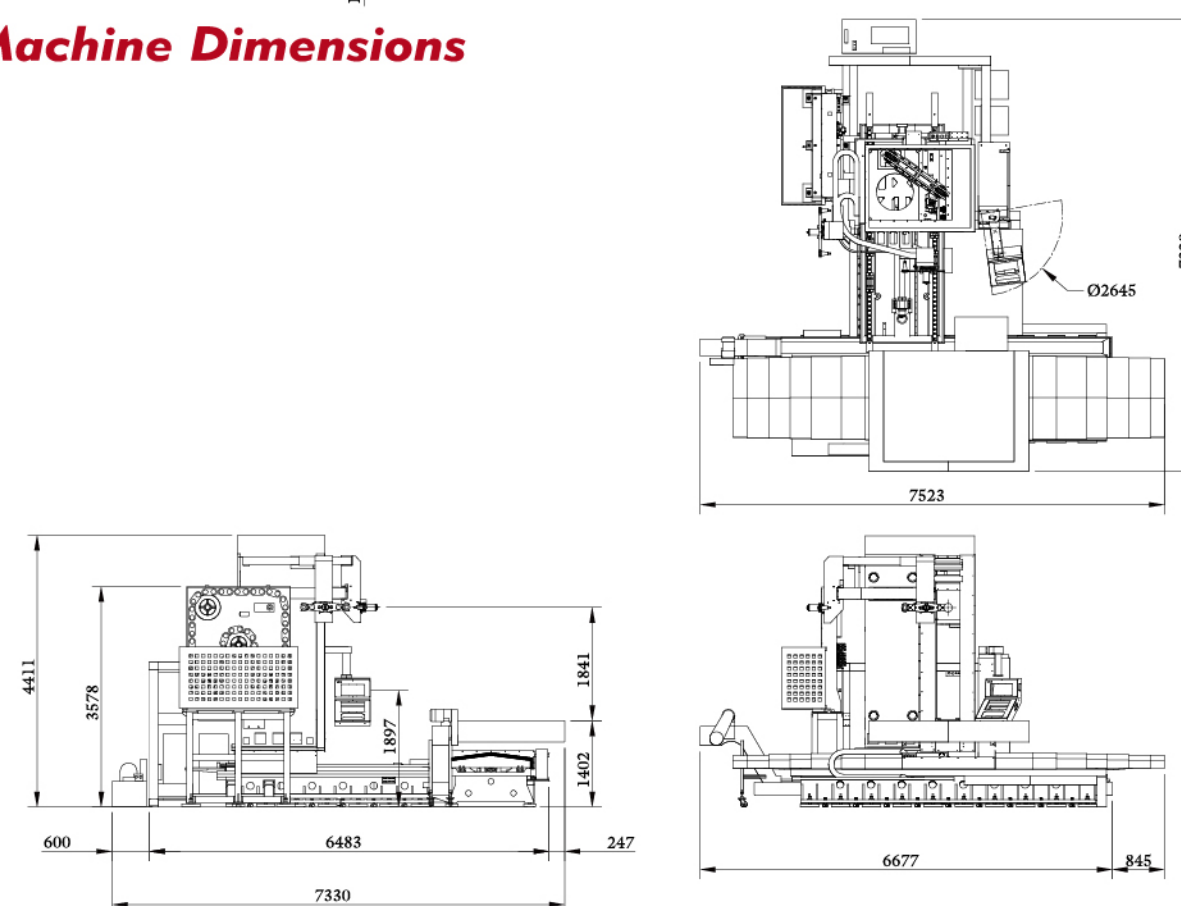
Standard Accessories

- Fanuc 0i-MF controller
- Spindle speed: 2500 rpm
- Spindle oil cooling
- Automatic lubrication system
- 2 step gear box
- Leveling bolts and pads
- Chip conveyor + chip bucket
- Hydraulic unit
- Auto power off function
- Work lamp
- Index table 1 degree
- X, Y, Z, B with scales
- 60-tool magazine
- Rigid tapping
- Electrical box heat exchanger

Table Dimensions



Machine Dimensions



Optional Accessories

- 90-tool magazine
- Fanuc 32i-MB controller
- Automatic tool measurement
- Automatic workpiece measurement
- Coolant tank
- Index table 0.001 degree
- Air conditioner for electrical box
- Splash guard for working tabl
- Spindle CTS system (20 bar)
- Spindle CTS system (70 bar)
- X, Y, Z-axis ball screw cooler