

HS SERIES

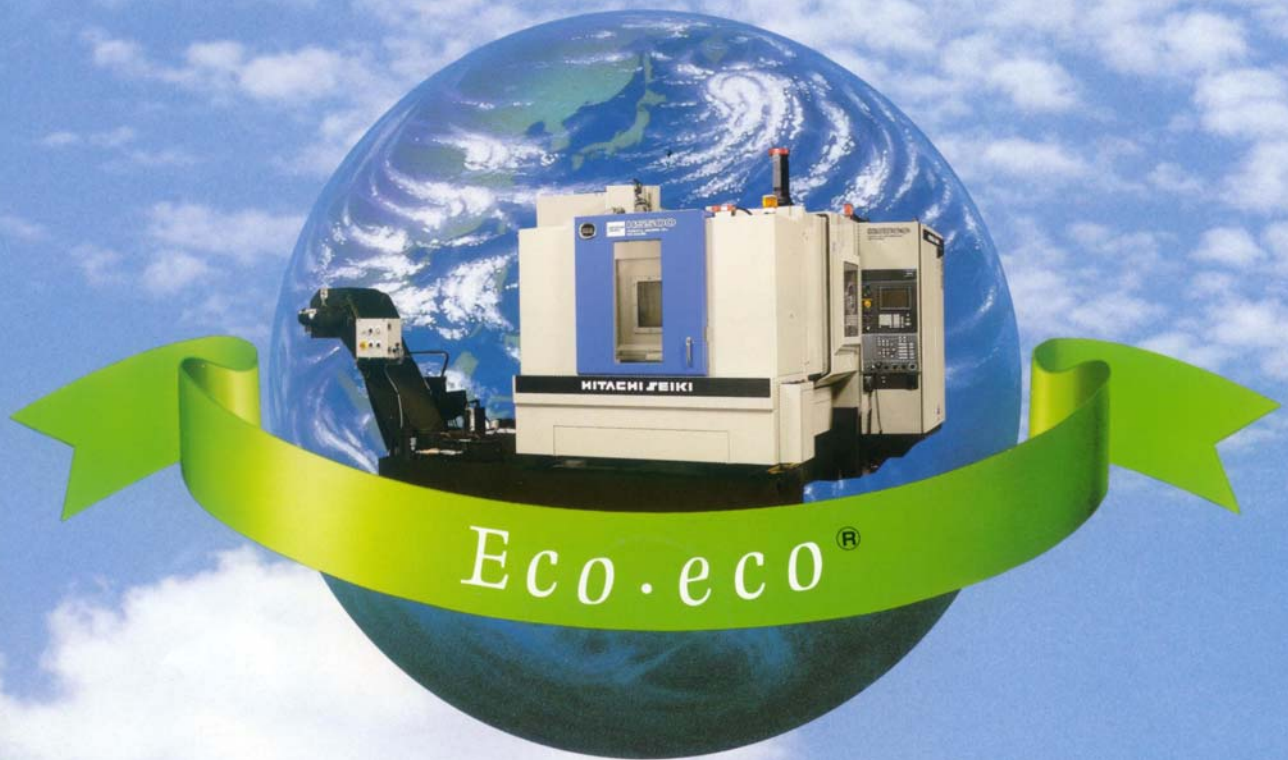
S-SERIES



HS series

"Eco·eco[®]"
Super Productive
Horizontal Machining Center

HS500 · HS630



*High Level Advanced Machine
Featuring High Productivity and*



HS500

500mm
(20")

(Photo includes optional equipment)

High speed

- Spindle speed 12000min⁻¹(rpm)
- Rapid traverse 45m/min.(1772ipm)
- Cutting feed rate 45m/min.(1772ipm)
w/SHG-1

Specifications

- X-axis travel 680mm(26.8")
- Y-axis travel 680mm(26.8")
- Z-axis travel 680mm(26.8")
- Spindle speed 35~12000min⁻¹(rpm)
- Spindle taper 7/24 taper No.40
- Spindle motor 25/22kW(33/30HP)

Accuracy

- Positioning accuracy ±0.002mm(0.00008")^{full stroke}
- Repeatability ±0.001mm(0.00004")
- Table index accuracy ±1 sec.

Performance

Super Productive Horizontal Machining Center HS series

Presenting total high efficiency machining by reducing the cutting time and reduction of non-cutting time. Productivity-oriented high level advanced machine.



HS630

□
630mm
(25")

(Photo includes optional equipment)

High speed

- Spindle speed 10000min⁻¹(rpm)
- Rapid traverse 45m/min.(1772ipm)
- Cutting feed rate 45m/min.(1772ipm)

w/SHG-1

Specifications

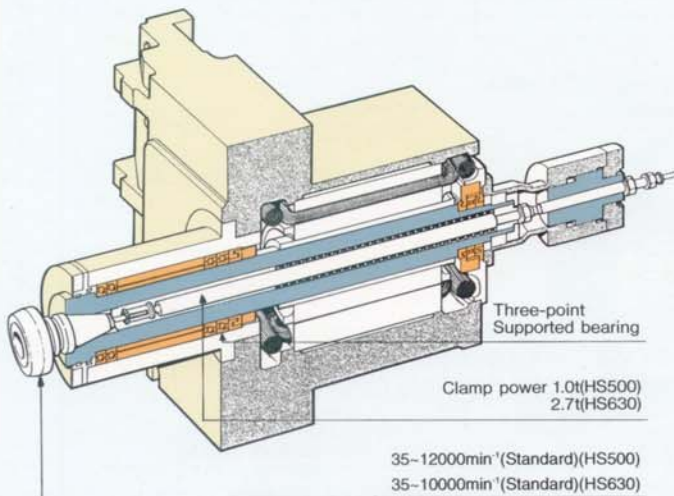
- X-axis travel 850mm(33.5")
- Y-axis travel 800mm(31.5")
- Z-axis travel 850mm(33.5")
- Spindle speed 35 ~ 10000min⁻¹(rpm)
- Spindle taper 7/24 taper No.50
- Spindle motor 30/25kW(40/33HP)

Accuracy

- Positioning accuracy ±0.003mm(0.00012")/full stroke
- Repeatability ±0.001mm(0.00004")
- Table index accuracy ±1 sec.

*Accuracy data are the actual results obtained under static testing conditions in a temperature controlled environment per JIS-Standards.

Hardware Features Supporting Powerful Cutting and High Reliability



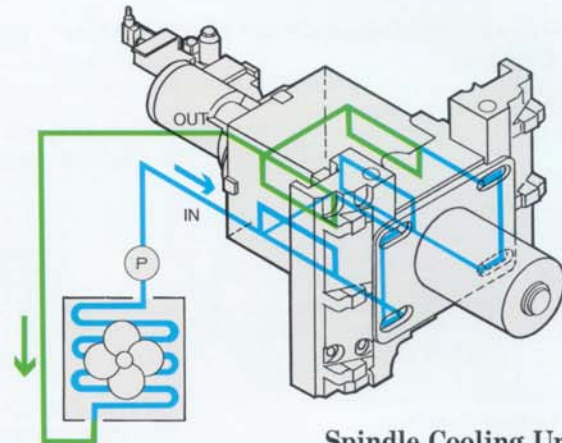
Built-in motor provides high rigidity and high accuracy.

Use of a large diameter spindle and built-in motor provides high rigidity, free from vibration for high accuracy. (Ambient temperature tuning type spindle cooling unit is built in as standard equipment.)



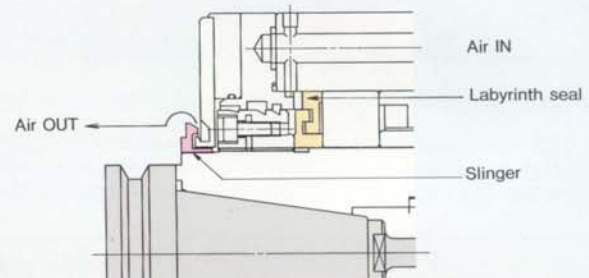
Comfortable work environment and wide space

The top and front integrated door on the operator side prevents water drips from falling during a checking, and keeps the machining area light.



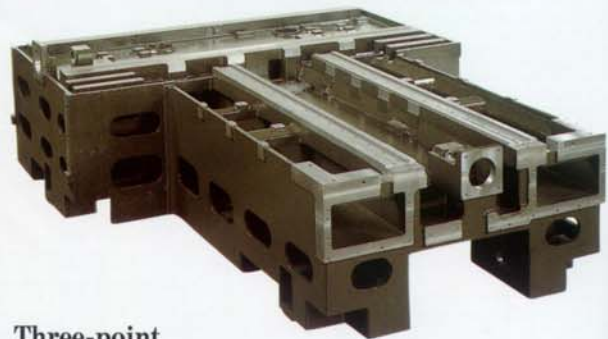
Spindle Cooling Unit

The spindle head is lubricated by an oil-air lubrication system. A large capacity spindle lubricant cooling unit, helps to minimize thermal distortion in spite of a large diameter spindle.



Spindle Bearing Protection

A slinger and a labyrinth seal are used to prevent fine chips and coolant from entering the spindle bearing. Further, a pneumatic dust preventive mechanism provides dual protection.



Three-point supported bed to ensure heavy-duty cutting
T-shaped box structure bed provides high rigidity.

SEIKI-ATAC10 *
New Y, Z Axis Thermal Distortion Compensator
 <PAT P.>

This AI (Artificial Intelligence) thermal distortion compensating function eliminates thermal influence caused during operation and maintains the machining conditions to high accuracy.

- It judges totally the thermal distortion of mechanical sections affected by a temperature change, and compensates the Y axis and Z axis respectively.
- In cooperation with the spindle cooling unit, it maintains high accuracy.
- The compensating function works immediately after power on, thus shortening warm up time substantially.
- Operates in Manual or Automatic, without operator intervention.
- The AI control with the know-how attained through conventional thermal distortion compensator further improves the reliability.

* A : Artificial Intelligence
 T : Thermal Distortion
 A : Accuracy
 C : Control
 10 : within $\pm 10\mu\text{m}(\pm 0.0004")$



High Accuracy High Rigidity Double Anchor Support
 The use of large diameter pretensioned ball screw prevents thermal distortion. Furthermore, the double anchor support and direct coupled ball screw and servomotor ensure high rigidity.

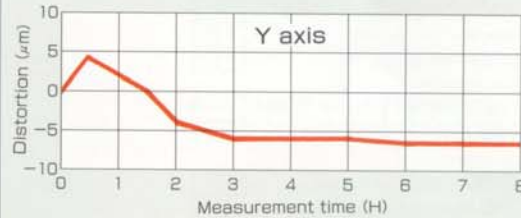


Improved Reliability
 (Endurance test equivalent to over 10 years of operation)

- 1 million times ATC endurance test
- 1 million times tool lock endurance test
- 1 million times table indexing test
- 70 thousand times APC endurance test

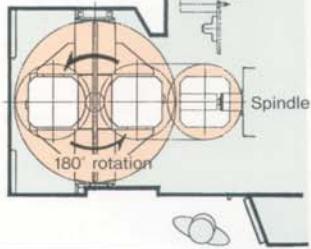
HS500 Spindle Thermal Distortion

Test conditions Test bar : 150mm(6") end
 Coolant : None
 Spindle speed : 12000min⁻¹(rpm)
 Spindle cooling unit: ON
 Y, Z Thermal distortion compensator : ON



* Accuracy data are the actual results obtained under static testing conditions in a temperature controlled environment per JIS-Standards.

Direct change type APC.
 Speed up by simultaneous turn of shutter.



Rotary type APC

Floor space saving rotary type APC with smooth mechanical operation, allows pallet change in a moment.



Manual pallet rotation

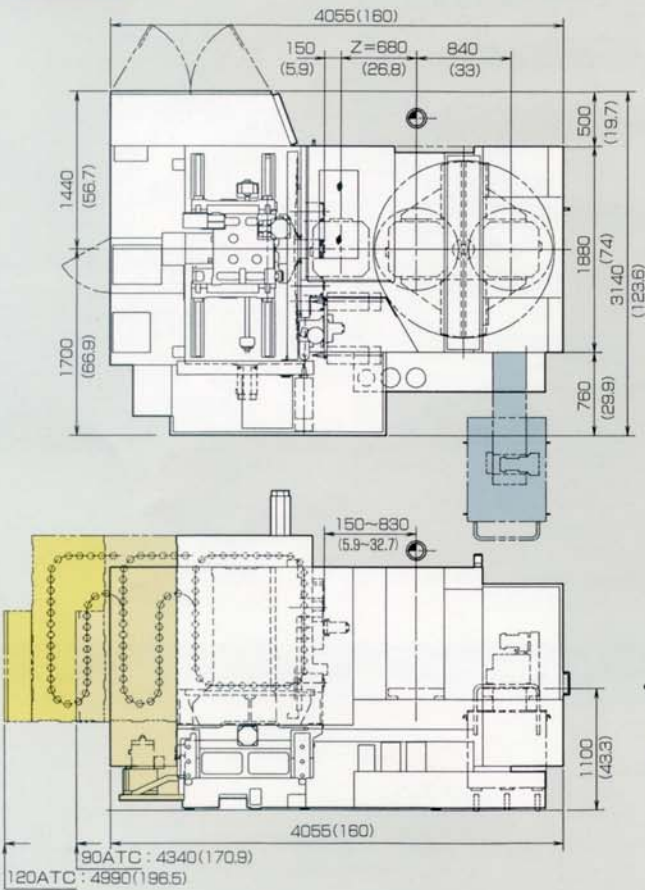
360° manual pallet rotation for easy set-up and access to all pallet faces.

360° manual pallet rotation

External Dimensions, Floor Plan, and Table Dimensions

HS500

unit: mm(inch)



Machining capacity

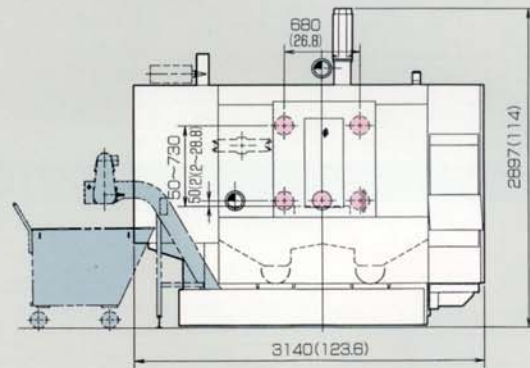
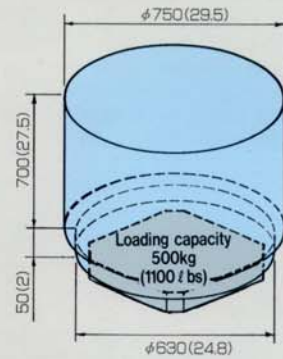
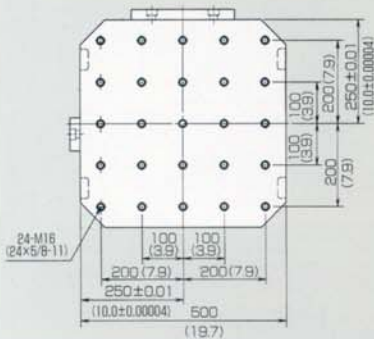
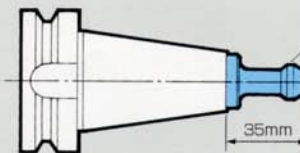


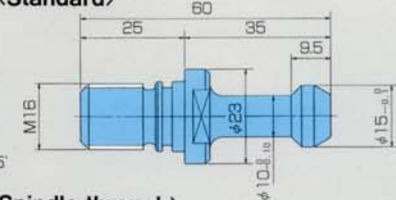
Table dimensions



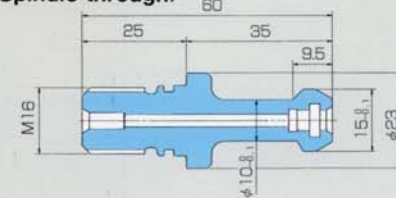
Type of pull-stud
MAS BT40 45°



<Standard>

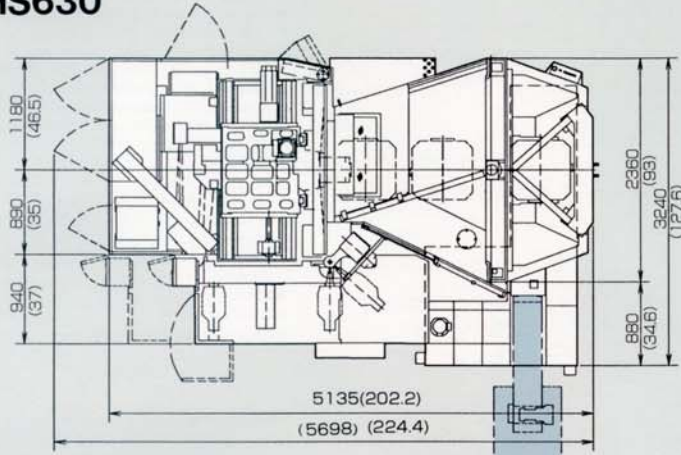


<Spindle-through>



HS630

Unit : mm(inch)



Machining capacity

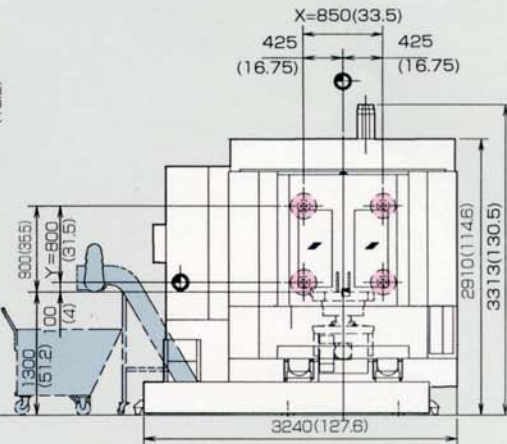
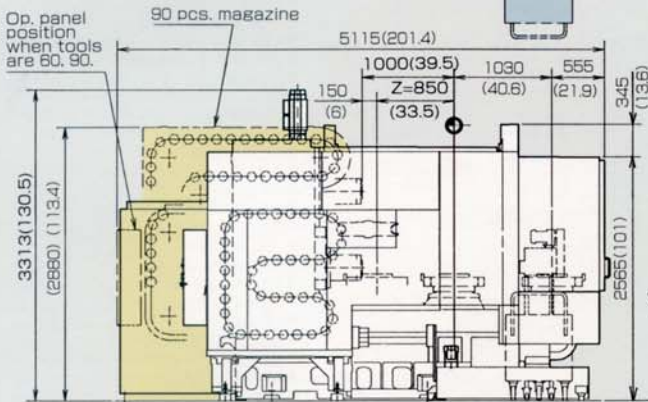
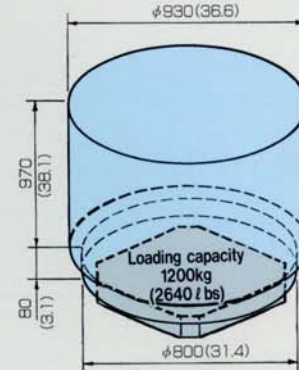
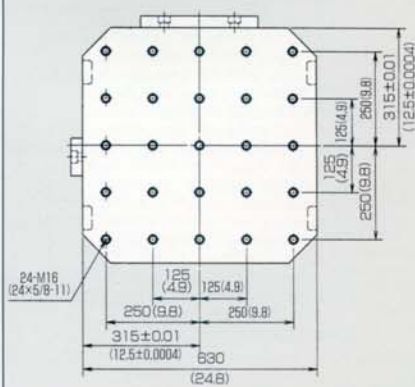
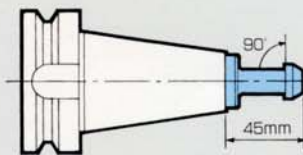


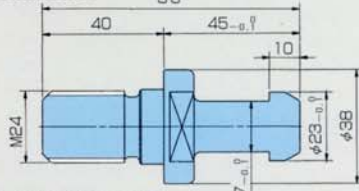
Table dimensions



Type of pull-stud No. 50 taper 90° (ISO 0°)



<Standard>



<Spindle-through>

