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.

Hannsa Precision

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14608.09.101.E

VERTICAL MACHINING CENTER

Box Way Series

ISO-9001 CE YLM Group

MACHINE-BOX-WAY

HANNSA PRECISION

YH850-A / 1000-A / 1200-A / 1461-A
(4 Slideways)

Helping You to Boost Your Productivity!

X,Y,Z-axis travel
850 x 610 x 610 mm (YH850-A)
1020 x 610 x 610 mm (YH1000-A)
1200 x 610 x 610 mm (YH1200-A)
1400 x 610 x 610 mm (YH1461-A)

- Four box ways on beas
- Box ways on three axes
- 8000 rpm belt-drive spindle
- BT40 spindle taper
- 16 tool carousel type magazine (YH850-A)
- 24 tool arm type magazine (YH1000-A, YH1200-A, YH1461-A)
- Fully enclosed splash guard

Hannsa Precision

YH1400-A / 1600-A / 1800-A
(4 Slideways)

Designed to perform Amazing Heavy Cutting Capacity

X,Y,Z-axis travel
1400 x 810 x 810 mm (YH1400-A)
1600 x 810 x 810 mm (YH1600-A)
1800 x 810 x 810 mm (YH1800-A)

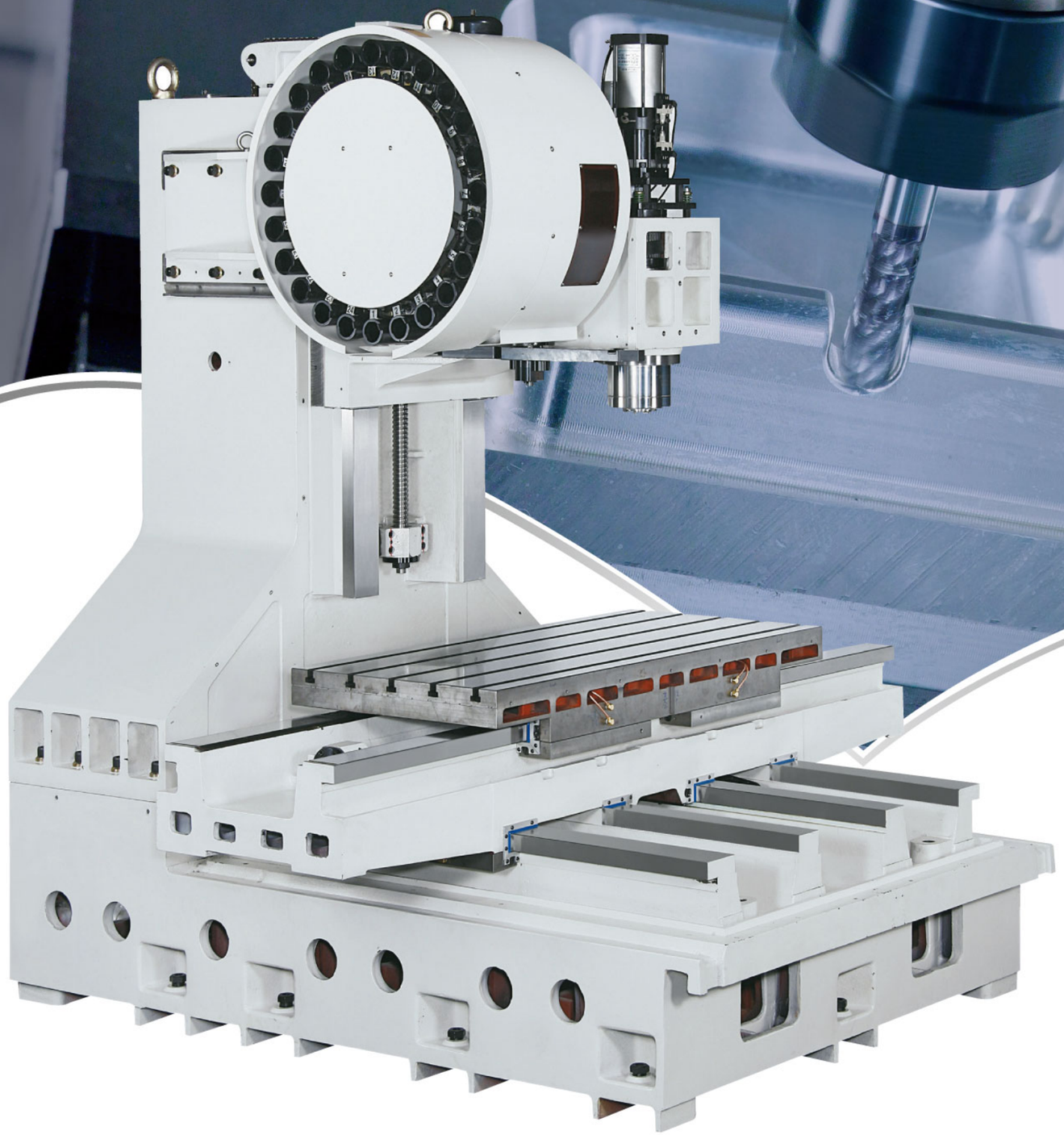
- Four box ways on base
- Box ways on three axes
- 6000 rpm gear-drive spindle
- BT50 spindle taper
- 24 tool arm type magazine
- Semi-enclosed splash guard is standard
- Fully enclosed splash guard is optional

Massive Construction!
Exceptional Stability!

Hannsa Precision

Rugged Construction Designed to Meet your Heavy Cutting Demand!

- Meehanite cast iron is tempered for stress relief to ensure structural stability without deformation.
- Extra wide 4 box ways are hardened and precision ground. Box way surfaces are coated with Turcite-B for wear resistance.
- Box type oversized column provides an increase in structural rigidity and stability.



4 Box Ways on Base

The massive base is designed with 4 box ways combined with large span between ways. This provides a firm support for heavy loads without deformation of table.

Heavy Column

The box type massive column is scientifically rib reinforced to achieve greater stability when performing heavy cutting.

Hannsa Precision

Belt-drive Spindle (standard)

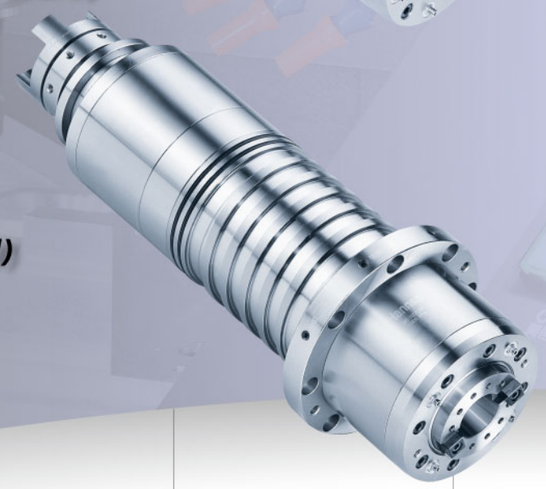
(For all models)

- 8000 rpm spindle speed is standard.
- 10,000 rpm spindle speed is optional.
- Choice of spindle nose tapers—BT40, CAT40 and DIN40.
- The spindle is dynamically balanced for extremely smooth running.

Gear Box-drive Spindle (standard)

(For models / YH 1400-A, YH 1600-A, YH 1800-A)

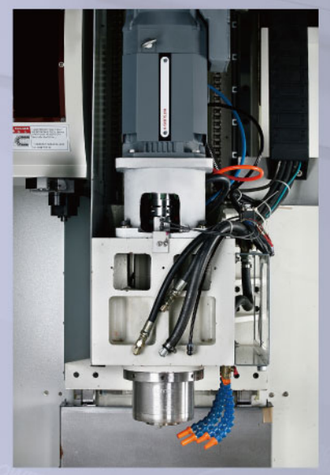
- Choice of spindle speed – 6,000 rpm.
- #50 spindle nose taper.
- The spindle is dynamically balanced for extremely smooth running.



Direct-drive spindle (Optional)

(For all models)

- Choice of spindle speed – 10,000 rpm.
- #50 spindle nose taper.
- The spindle is dynamically balanced for extremely smooth running.



Spindle Head

The spindle head is ruggedly constructed ensuring maximum stability during cutting.

German ZF Gearbox (optional)

The high performance ZF gearbox produces high torque output at low speeds, making the machine suitable for heavy cutting.

16-tool Carousel Type Magazine

- Bi-directional, random tool selection.
- Tool change can be quickly accomplished in only 7 seconds (tool to tool).
- The magazine accepts a BT40 tool shank.

24-tool Arm Type Magazine

- Bi-directional, random tool selection.
- Tool change can be quickly accomplished in only 2.5 seconds (tool to tool).
- The magazine accepts a BT40 tool shank.

Air Conditioner For Electrical Cabinet (optional)

Offering even better cooling to the electrical cabinet, prolonging electrical components' life time.

Spindle Oil Cooler

The spindle oil cooler is used to ensure a constant temperature of the spindle, even during long running times. This helps maintain spindle accuracy at all times.

Oil Skimmer (optional)

The disc type oil skimmer is used for removing floating oil on coolant, preventing coolant deterioration and odor.

Chip Auger

The chip auger is delivers chips to the chip conveyor for easy removal.

Chain type chip conveyor (optional)

Rear Flushing Device (optional)

The optional rear flushing device provides efficient removal of chips.

Cleaning Spray Gun

The cleaning gun is used for cleaning the workpiece and machine.

Air Gun

The air gun allows the operator to clean the workpiece.

4th Axis Rotary Table (optional)

- The rigidly constructed 4th axis rotary table is excellent in indexing accuracy and repeatability.
- Minimum indexing unit is 0.001°

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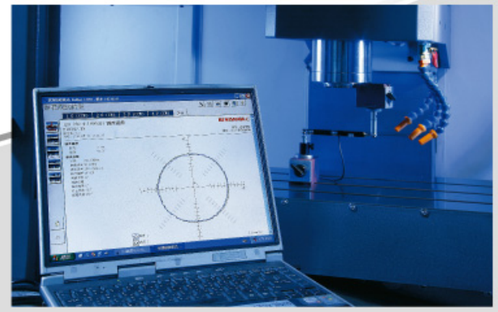
Laser Inspection

A sophisticated laser unit is employed to inspect the three axes' accuracy, including linear positioning, positioning accuracy, pitch error and backlash, etc. With the laser inspection, positioning accuracy and repeatability can be guaranteed.

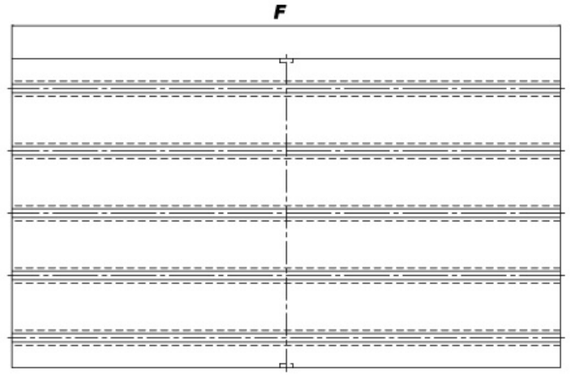
- Positioning accuracy: ±0.005/300 mm
- Repeatability: ±0.003 mm

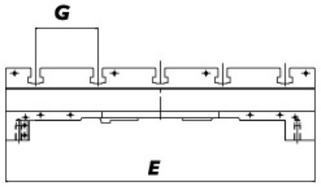


Ball Bar Test

A ball bar tester is employed for inspecting servo accuracy, static and dynamic geometric errors.

Machine Dimensions

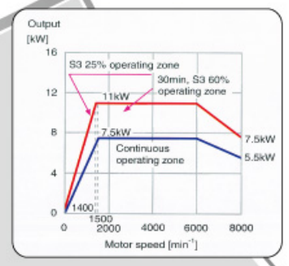


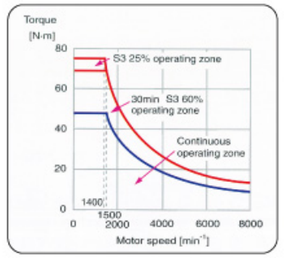


MODEL	E	F	G
YH 850-A	620	950	5 x 18 x 125
YH 1000-A	620	1100	5 x 18 x 125
YH 1200-A	620	1300	5 x 18 x 125
YH 1461-A	620	1400	5 x 18 x 125
YH 1400-A	840	1600	5 x 22 x 150
YH 1600-A	840	1800	5 x 22 x 150
YH 1800-A	840	2000	5 x 22 x 150

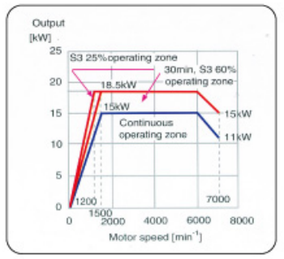
Spindle Motor Torque Diagrams

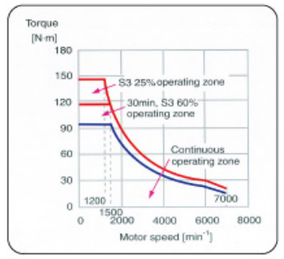
YH 850-A / 1000-A / 1200-A / 1461-A
MODEL αi 8 / 8000



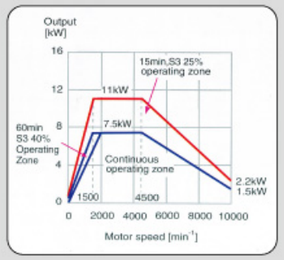


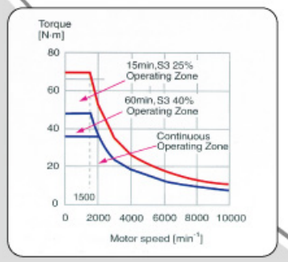
YH 1400-A / 1600-A / 1800-A
MODEL αi 15 / 7000





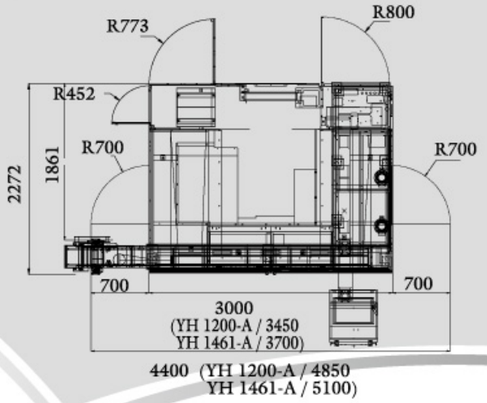
MODEL βi 8 / 8000

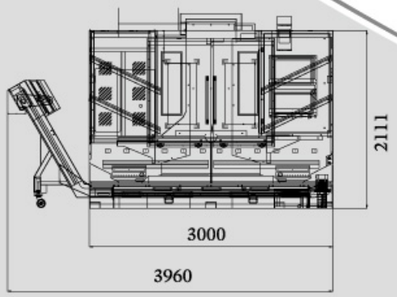


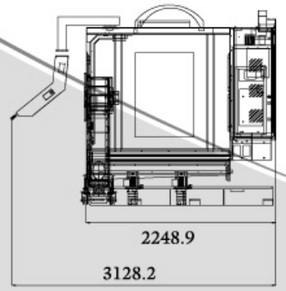


Machine Dimensions

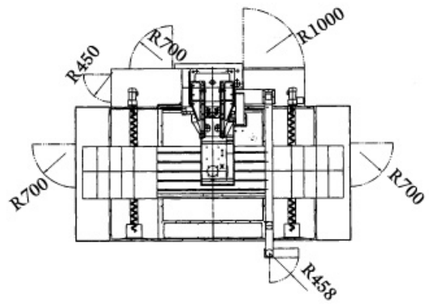
YH 850-A / 1000-A / 1200-A / 1461-A

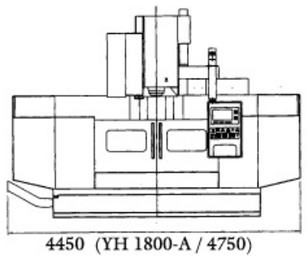


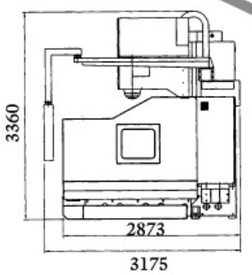




YH 1400-A / 1600-A / 1800-A







Specifications

MODEL	UNITS	YH 850-A	YH 1000-A	YH 1200-A	YH 1461-A	YH 1400-A	YH 1600-A	YH 1800-A
TABLE								
Working Surface	mm (inch)	950 x 620 (37.4 x 24.41)	1100 x 620 (37.4 x 24.41)	1300 x 620 (51.81 x 24.41)	1400 x 620 (55.11 x 24.41)	1600 x 840 (62.99 x 3307)	1800 x 840 (70.87 x 33.07)	2000 x 84 0 (78.74 x 33.07)
T-Slots (Number x Size x distance)	mm (inch)	5 x 18 x 125 (5 x 0.70 x 5)	5 x 18 x 125 (5 x 0.70 x 5)	5 x 18 x 125 (5 x 0.70 x 5)	5 x 18 x 125 (5 x 0.7 x 5)	5 x 22 x 150 (5 x 0.86 x 5.9)	5.22 x 150 (5 x 0.86 x 5.90)	5 x 22 x 150 (5 x 0.86 x 5.90)
Max. Table Load	kg (lbs)	750 (1650)	900 (1980)	1000 (2200)	1000 (2200)	2000 (4400)	2200 (4840)	2500 (5500)
TRAVEL								
Longitudinal Travel (X)	mm (inch)	850 (33.5)	1020 (40)	1200 (47.2)	1400 (55.1)	1400 (55)	1600 (63)	1800 (70.8)
Cross Travel (Y)	mm (inch)	610 (24.01)	610 (24.01)	610 (24.01)	610 (24.01)	810 (31.89)	810 (31.89)	810 (31.89)
Headstock Travel (Z)	mm (inch)	610 (24.01)	610 (24.01)	610 (24.01)	610 (24.01)	810 (31.89)	810 (31.89)	810 (31.89)
Distance Between Spindle End and Table Top	mm (inch)	150-760 (5.9-29.9)	150-760 (5.9-29.9)	150-760 (5.9-29.9)	150-760 (5.9-29.9)	200-1010 (7.9-39.8)	200-1010 (7.9-39.7)	200-1010 (7.9-39.7)
Distance Between Spindle Center and Column Surface	mm (inch)	690 (27.17)	690 (27.17)	690 (27.17)	690 (27.17)	870 (34.2)	870 (34.2)	870 (34.2)
SPINDLE								
Spindle Nose	type	BT 40 / CAT 40 / DIN 40	BT 40 / CAT 40 / DIN 40	BT 40 / CAT 40 / DIN 40	BT 40 / CAT 40 / DIN 40	BT 50	BT 50	BT 50
Spindle Speeds	r.p.m	8000	8000	8000	8000	6000	6000	6000
Mechanism of Transmission	type	Belt	Belt	Belt	Belt	Gear Box	Gear Box	Gear Box
FEED								
Cutting Feed	mm / min (inch / min)	10000 (393.7)	10000 (393.7)	10000 (393.7)	10000 (393.7)	10000 (393.7)	10000 (393.7)	10000(393.7)
Rapid Traverse (X / Y / Z)	M / min (inch / min)	20 / 20 / 16 (787/787/630)	20 / 20 / 16 (787 / 787 / 630)	20 / 20 /1 6 (787 / 787 / 630)	20 / 20 /1 6 (787 / 787 / 630)	15 / 15 / 12 (590 / 590 / 472)	15 / 15 / 12 (590 / 590 / 472)	15/15/12 (590/590/472)
AUTO TOOL CHANGER (ATC)								
Tool Holder	type	BT40	BT40	BT40	BT40	BT50	BT50	BT 50
Tool Storage Capacity	set	Carousel 16 / 16刀(斗笠式)	Arm 24	Arm 24	Arm 24	Arm24	Arm 24	Arm24
Max. Tool Diameter	mm (inch)	70 (2.75)	80 (3.1)	80 (3.1)	80 (3.1)	125 (5)	125 (5)	125 (5)
Max. Tool Length	mm (inch)	300 (11.8)	300 (11.8)	300 (11.8)	300 (11.8)	300 (11.8)	300 (11.8)	300 (11.8)
Max. Tool Weight	kg (lbs)	6 (13.2)	6 (13.2)	6 (13.2)	6 (13.2)	15 (33)	15 (33)	15 (33)
Tool to Tool	sec	7	2.5	2.5	2.5	4	4	4
MOTORS								
Spindle Motor Output (Cont. / 30 min.)	kw	FANUC (7.5 / 11) (15HP)	FANUC (7.5 / 11) (15HP)	FANUC (7.5 / 11) (15HP)	FANUC (7.5 / 11) (15HP)	FANUC (15 / 18.5) (25HP)	FANUC (15 / 18.5) (25HP)	FANUC (15 / 18.5) (25HP)
Drive Motors X, Y, Z axis	(kw / hp)	0iMD (8.4")	0iMD (8.4")	0iMD (8.4")	0iMD (8.4")	0iMD (8.4")	0iMD (8.4")	0iMD (8.4")
		(2.5/3.4) (2.5/3.4) (2.5/3.4)	(2.5/3.4) (2.5/3.4) (2.5/3.4)	(2.5/3.4) (2.5/3.4) (2.5/3.4)	(2.5/3.4) (2.5/3.4) (2.5/3.4)	(4/5.4) (4/5.4) (4/5.4)	(4/5.4) (4/5.4) (4/5.4)	(4/5.4) (4/5.4) (4/5.4)
		option	option	option	option	option	option	option
		31iMB (10.4") (3/4) (3/4) (3/4)	31iMB (10.4") (3/4) (3/4) (3/4)	31iMB (10.4") (3/4) (3/4) (3/4)	31iMB (10.4") (3/4) (3/4) (3/4)	31iMB (10.4") (4/5.4) (4/5.4) (4/5.4)	31iMB (10.4") (4/5.4) (4/5.4) (4/5.4)	31iMB (10.4") (4/5.4) (4/5.4) (4/5.4)
MACHINE SPACE & WEIGHT								
Floor Space	mm (inch)	3000 x 2250 x 2675	3000 x 2250 x 2675	3450 x 2250 x 2675	3700 x 2250 x 2675	4450 x 2875 x 3360	4450 x 2875 x 3360	4750 x 2875 x 3360
		(118.1 x 88.6 x 105.3)	(118.1 x 88.6 x 105.3)	(135.8 x 88.6 x 105.3)	(145.6 x 88.6 x 105.3)	(175.2 x 113.2 x 132.3)	(175.2 x 113.2 x 132.3)	(187 x 113.2 x 132.3)
Net Weight	kg (lbs)	7900 (17380)	8000 (17600)	8200 (18040)	8600 (18920)	14000 (30800)	15000 x (33000)	16000 (33000)

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

STANDARD ACCESSORIES

- Fully enclosed splash guard
- High semi-enclosed splash gurad (YH 1400-A / 1600-A / 1800-A)
- Central automatic lubrication system
- Tools and tool box
- Work lamp (YH 850-A / 1000-A / 1200-A / 1461-A)
- Work lamp (lengthening stick type) (YH 1400-A / 1600-A / 1800-A)
- Gearbox set (YH 1400-A / 1600-A / 1800-A)
- Tri-colored lamp guard (end-of-work lamp guard)
- Spindle air curtain
  Spindle oil cooler (spindle oil temperature cooler)
- Cleaning spray gun
- Air gun
- Chip auger
- Chip collector
- Cooling liquid tank
- X / Y / Z slide way extension protecting cover
- Horizontal adjustment block and screw
- Wire-control hand wheel
- Electrical box heat exchanger
- Rigid tapping
- Automatic shutdown function
- RS232 transmission interface
- Mechanical and electrical instructions
- Spindle spray ring

OPTIONAL ACCESSORIES

- Mitsubishi controller
- Siemens controller
- Belt drive spindle 10000 rpm (YH 850-A / 1000-A / 1200-A / 1461-A)
- Direct-drive spindle#40 10000 / 12000 / 15000 rpm (YH 850-A / 1000-A / 1200-A / 1461-A)
- Fully enclosed splash guard (YH 1400-A / 1600-A / 1800-A)
- Direct-drive spindle#50 10000 rpm (YH 1400-A / 1600-A / 1800-A)
- Gearbox set (YH 850-A / 1000-A / 1200-A / 1461-A)
- Chain type chip conveyor
- Rear flushing device
- ARM 32 / (YH 1400-A / 1600-A / 1800-A)
- Optical scale
- Oil mist lubrication device
- Spindle CTS system(20 bar)
- CTS filter type 30 bar
- CTS filter type 70 bar
- Air conditioner for electrical box (3000 BTU)
- Automatic centering device (Renishaw OMP-60)
- NC rotary table
- The 4th axis interface
- Transformer
- Rear Cover
- Oil skimmer