



Hannsa
Precision

VERTICAL MACHINING CENTER

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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Linear Way

YL Series



ISO-9001



Group

SMALL HIGH-SPEED PRECISION MACHINING SERIES

2 SLIDE WAY

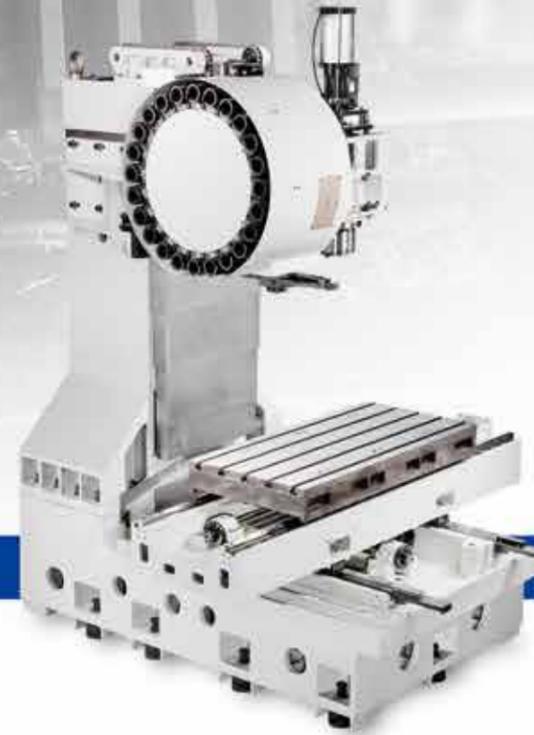


▲ YL 850-B

INDUSTRY HIGH-SPEED PRECISION MACHINING SERIES

X, Y, Z-axis travel :
1020 x 600 x 610 mm

- Roller type linear ways on three axes
- 10000 rpm belt-drive spindle
- BBT40 spindle taper
- 24 arm type ATC
- Fully enclosed splash guard



▲ YL 1000-B



X, Y, Z-axis travel :
850 x 510 x 530 mm

- Roller type linear ways on three axes
- 10000 rpm belt-drive spindle
- BBT40 spindle taper
- 24 arm type
- Fully enclosed splash guard

HIGH SPEED, HIGH PRECISION SERIES

LARGE HIGH-SPEED PRECISION MACHINING SERIES

4 SLIDEWAYS



▲ YL 1200-A
YL 1400-A

X, Y, Z-axis travel :

1200 x 650 x 610 mm (YL1200-A)

1400 x 650 x 610 mm (YL1400-A)

- Four linear ways on base
- Roller type linear ways on three axes
- 10000 rpm belt-drive spindle
- BBT40 spindle taper
- 24 arm type ATC
- Fully enclosed splash guard
- Y=700mm (opt)



▲ YL 1600-A / YL 1690-A
YL 1800-A / YL 1890-A
YL 2000-A / YL 2090-A

- Four linear ways on base
- Roller type linear guide on three axes
- 24 arm type ATC
- Fully enclosed splash guard

X, Y, Z-axis travel :

1600 x 650 x 645 mm (YL1600-A)

1800 x 650 x 645 mm (YL1800-A)

2000 x 650 x 645 mm (YL2000-A)

- 10000 rpm belt-drive spindle
- BBT40 spindle taper
- Y=700mm (opt)

X, Y, Z-axis travel :

1650 x 900 x 900 mm (YL1690-A)

1850 x 900 x 900 mm (YL1890-A)

2050 x 900 x 900 mm (YL2090-A)

- 8000 rpm belt-drive spindle
- BT50 spindle taper

YL SERIES

HIGH PRODUCTIVITY APC SERIES

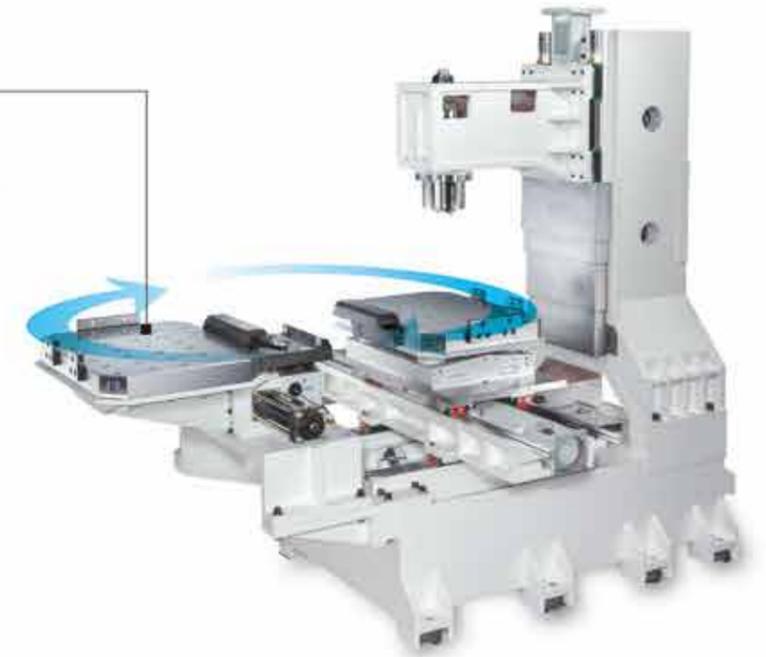
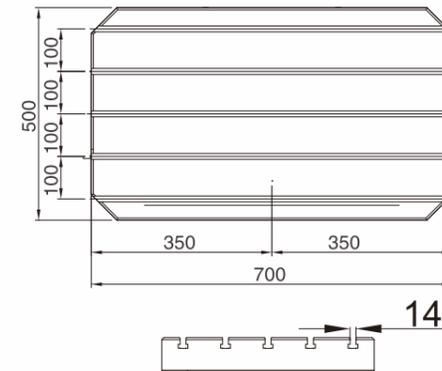
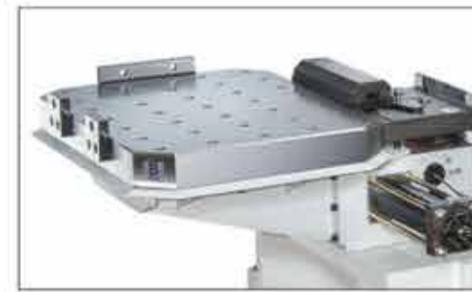
High Speed with Automatic Pallet Changer
Excellent for Mass Production Lines !



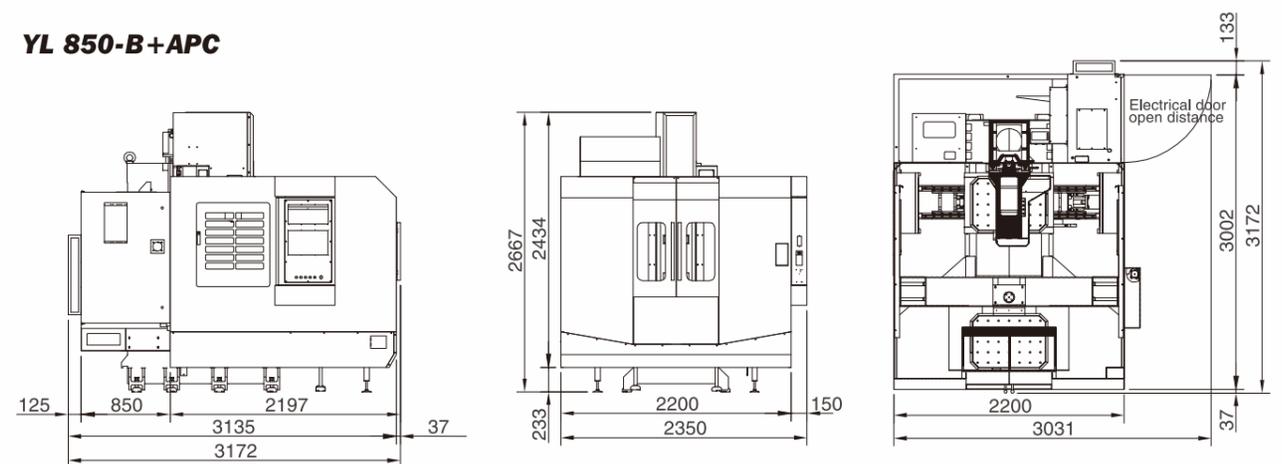
X, Y, Z-axis travel :
850 x 500 x 530 mm
(YL 850-B+APC)

- Roller type linear ways on three axes
- 10000 rpm belt-drive spindle
- BBT40 spindle taper
- 24 arm type ATC
- Fully enclosed splash guard

▲ YL 850-B+APC



YL 850-B+APC



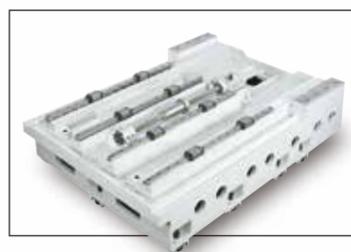
PERFECTLY DESIGNED MACHINE STRUCTURE THROUGHOUT

- Meehanite cast iron is tempered for stress relief to ensure structural stability without deformation.
- The base is mounted with high precision linear ways with high feed rate, allowing the machine to perform high speed cutting.
- Reinforced column base greatly increases structural strength.



▲ Rugged Spindle Head

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



◀ Linear Ways on Base

The box type constructed base is mounted with linear ways, making the machine capable of resisting heavy loads. Additional benefits are its increased feed rate and higher positioning accuracy.

▶ Specially Designed Column, Stable! Rigid!

- The column on the Hannsa machining center is carefully analyzed and designed for increased rigidity.
- The column base is reinforced to increase structural strength and rigidity. With this special design, the machine will exhibit ultra-high stability during high speed operations.



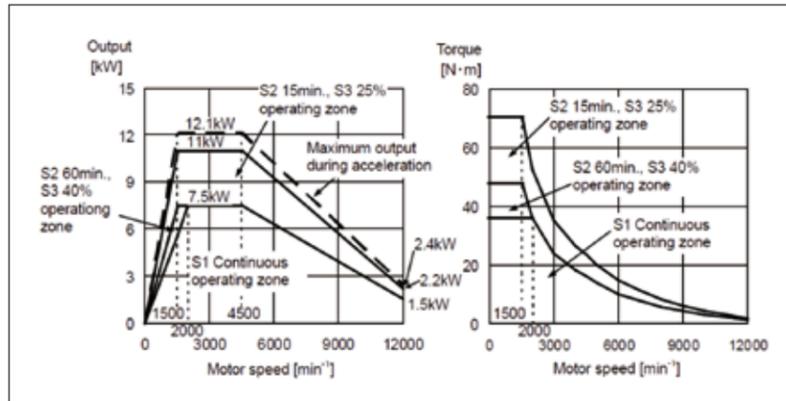
SPINDLE HEAD

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

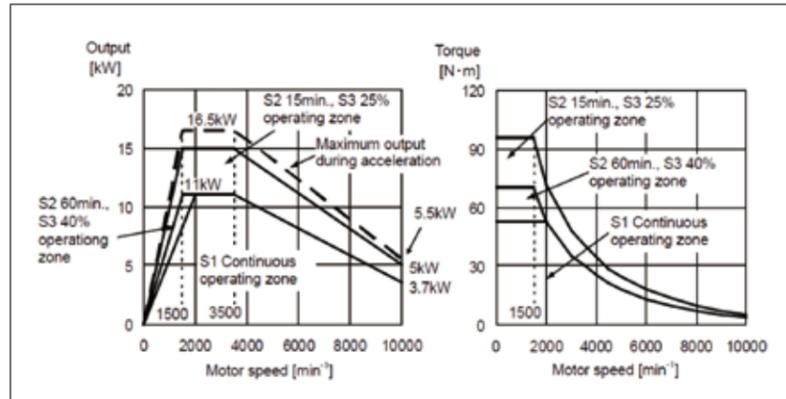


SPINDLE MOTOR TORQUE DIAGRAMS

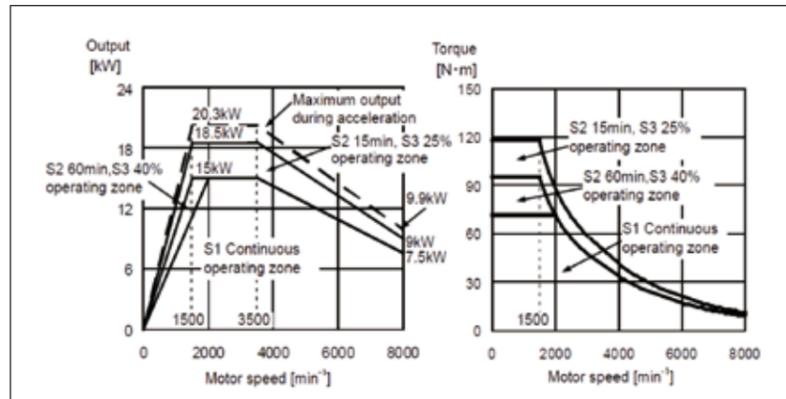
MODEL 7.5/11KW



MODEL 11/15KW



MODEL 15/18KW



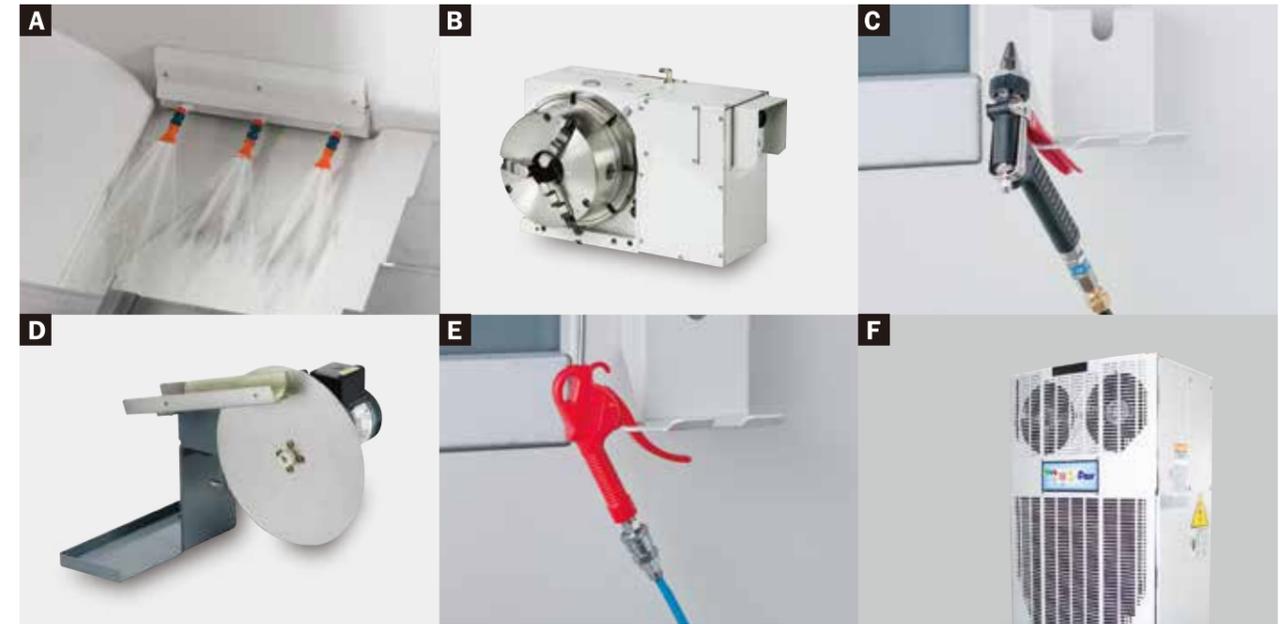
▲ Belt-drive Spindle (standard)

- 10,000 rpm spindle speed is standard. (BBT40)
- 12,000 rpm spindle speed is optional. (BBT40)
- 8,000 rpm spindle speed is standard. (BT50)
- Choice of spindle nose tapers, CAT and DIN.
- The spindle is dynamically balanced for extremely smooth running.



▲ Direct-drive spindle (optional)

- Choice of spindle speeds - 12,000 and 15,000 rpm. (BBT40)
- Choice of spindle speeds - 8,000, 10,000 rpm. (BT50)
- Choice of spindle nose tapers - CAT and DIN.
- The spindle is dynamically balanced for extremely smooth running.



A Rear Flushing Device (optional)

The optional rear flushing device provides efficient removal of chips.

B 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°

C Cleaning Spray Gun

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

D Oil Skimmer (optional)

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

E Air Gun

The air gun allows the operator to clean the workpiece.

F 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.



Chain Type Chip Conveyor (optional)



Chip Auger

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

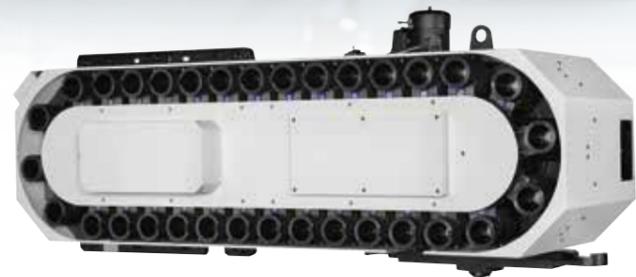
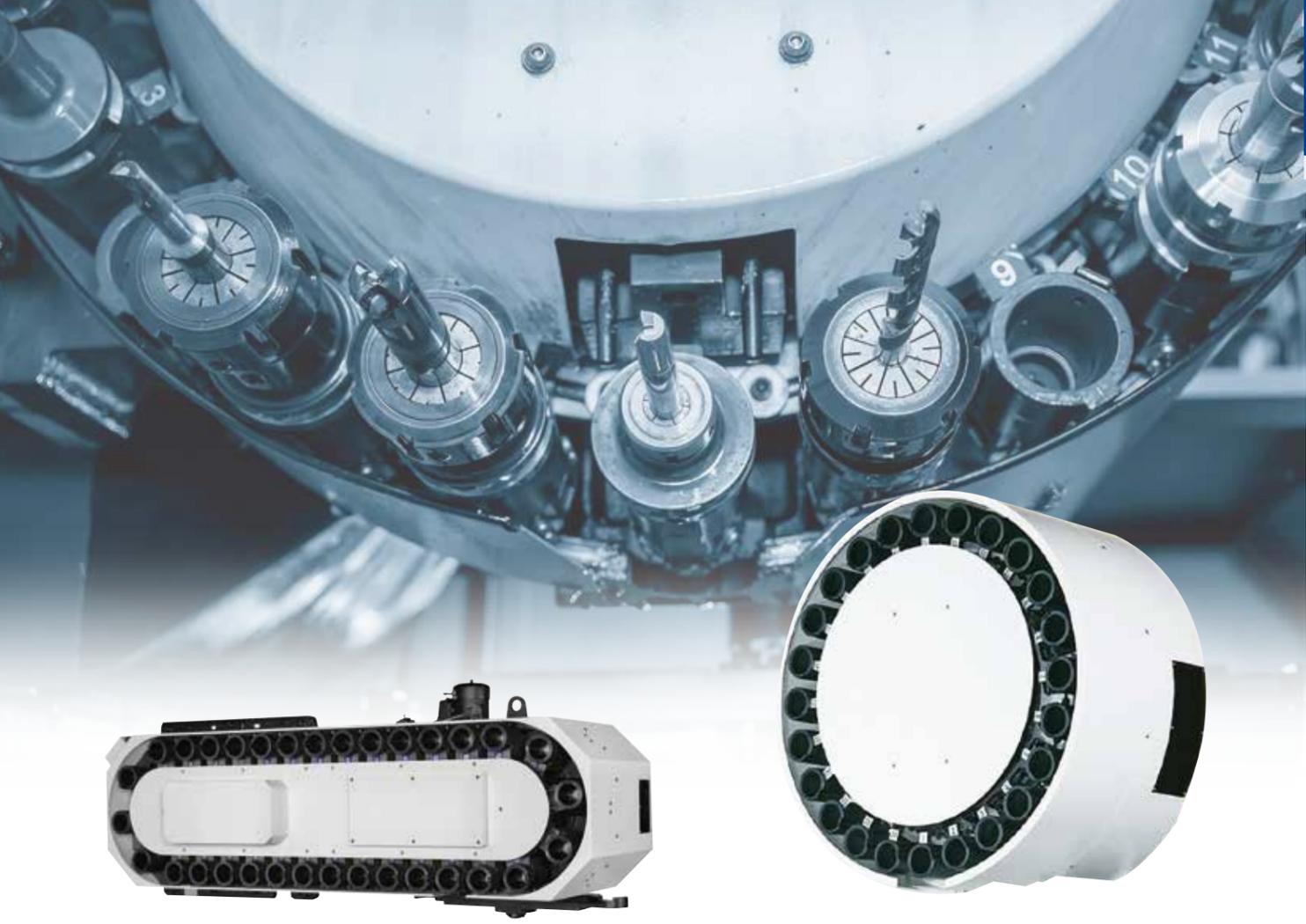


Gearbox (YLA Optional)

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



MACHINE DIMENSIONS



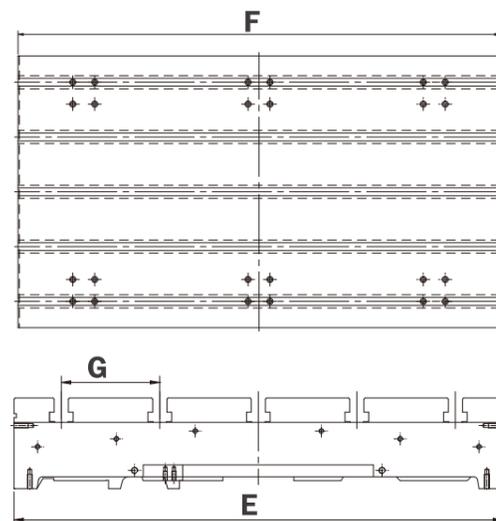
Chain Type Magazine (YLA Optional)

- Bi-directional, random tool selection.
- Tool change can be quickly accomplished in only 3 seconds (tool to tool).

Arm Type Magazine

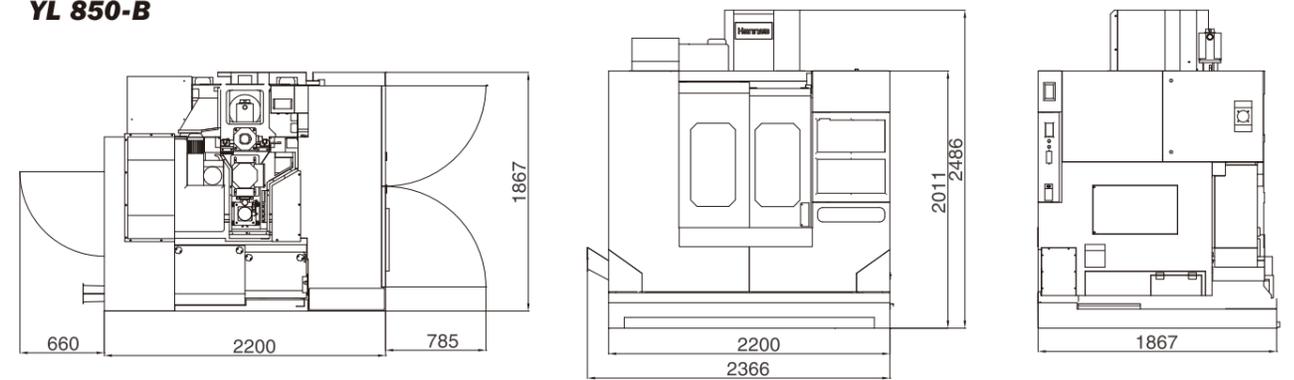
- Bi-directional, random tool selection.
- Tool change can be quickly accomplished in only 2.5 seconds (tool to tool). (30 tool Opt.)

TABLE

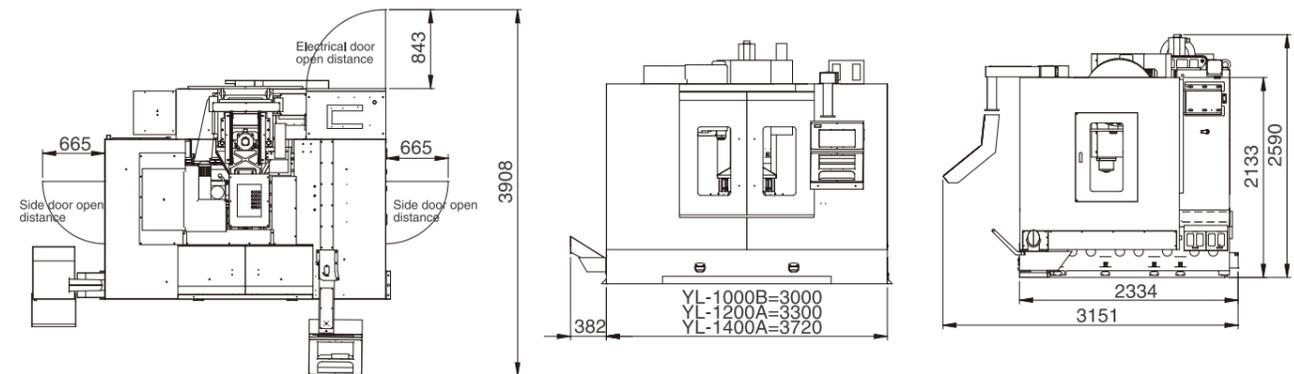


MODEL	E	F	G
YL 850-B	500	850	5 x 18 x 100
YL 1000-B	560	1100	5 x 18 x 115
YL 1200-A	620	1300	5 x 18 x 125
YL 1400-A	620	1400	5 x 18 x 125
YL 1600-A	620	1600	5 x 18 x 125
YL 1800-A	620	1800	5 x 18 x 125
YL 2000-A	620	2000	5 x 18 x 125
YL 1690-A	800	1600	5 x 22 x 150
YL 1890-A	800	1800	5 x 22 x 150
YL 2090-A	800	2000	5 x 22 x 150

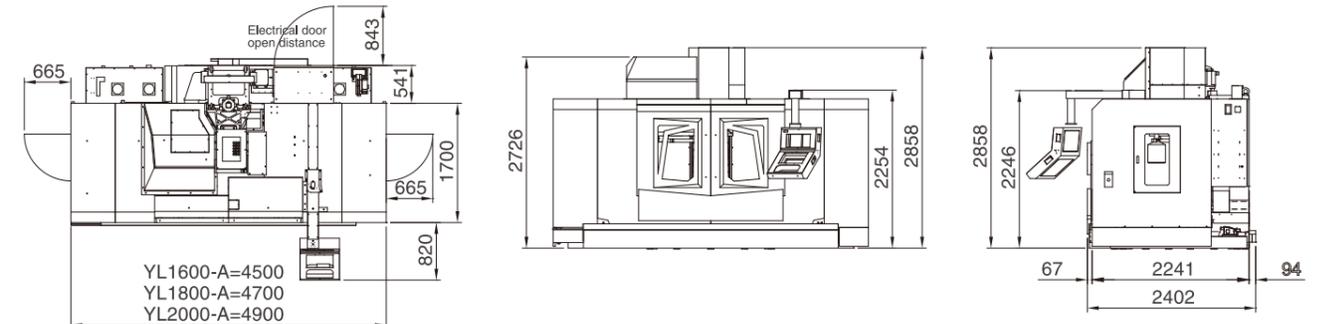
YL 850-B



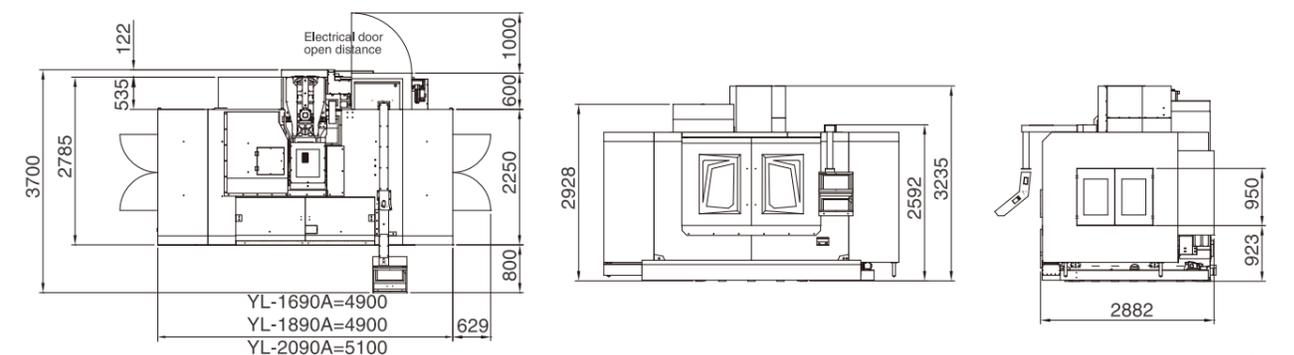
YL 1000-B / YL 1200-A / 1400A



YL 1600-A / 1800-A / 2000-A



YL 1690-A / 1890-A / 2090-A



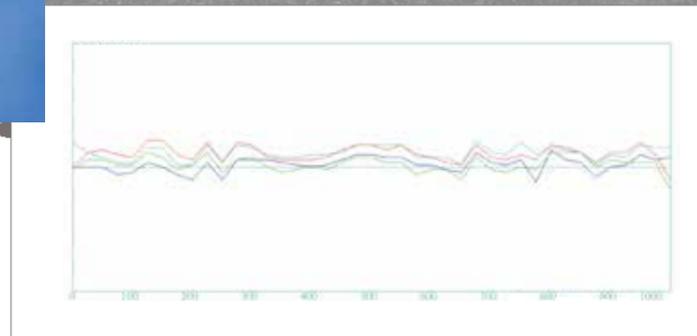
QUALITY ASSURANCE

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.



▲ 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.

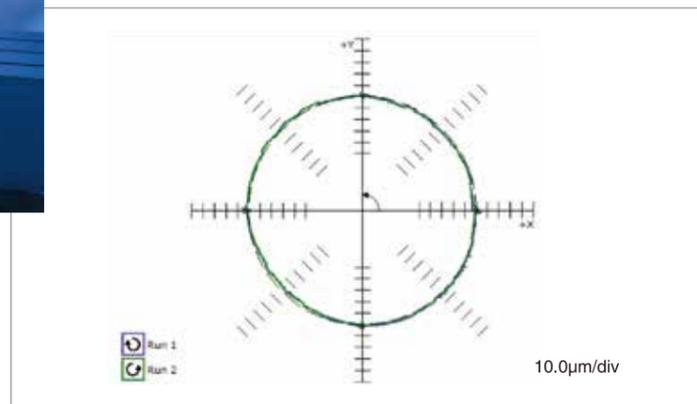


Positioning accuracy: $\pm 0.005/300$ mm
Repeatability: ± 0.003 mm



◀ Ball Bar Test

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



SPECIFICATIONS

MODEL	UNITS	YL 850-B	YL 850-B + APC	YL 1000-B
TABLE				
Working Surface	mm (inch)	850 x 500 (33.4 x 19.68)	700 x 500 (27.55 x 19.68)	1100 x 560 (43.3 x 22.04)
T-Slots (Number x Size x Distance)	mm (inch)	5 x 18 x 100 (5 x 0.7 x 3.93)	5 x 14 x 100 (5 x 0.55 x 3.93)	5 x 18 x 115 (5 x 0.70 x 4.52)
Max. Table Load	kg (lbs)	500 (1100)	250 x 2 (550 x 2)	900 (1980)
TRAVEL				
Longitudinal Travel (X)	mm (inch)	850 (33.4)	850 (33.4)	1020 (40)
Cross Travel (Y)	mm (inch)	510 (20)	500 (19.68)	600 (23.62)
Headstock Travel (Z)	mm (inch)	530 (20.8)	530 (20.86)	610 (24.01)
Distance Between Spindle End and Table Top	mm (inch)	100 - 630 (3.93 - 24.8)	80 - 610 (3.15 - 24)	150 - 760 (5.9 - 29.9)
Distance Between Spindle Center and Column Surface	mm (inch)	550 (21.6)	550 (21.6)	660 (25.98)
SPINDLE				
Spindle Nose	type	BBT 40 / CAT 40 / DIN40	BBT 40 / CAT 40 / DIN40	BBT 40 / CAT 40 / DIN 40
Spindle Speeds	r.p.m.	10000	10000	10000
Mechanism of Transmission	type	Belt	Belt	Belt
FEED				
Cutting Feed	mm/min (inch min)	10000 (393.7)	10000 (393.7)	10000 (393.7)
Rapid Traverse (X / Y / Z)	M/min (inch min)	36 / 36 / 30 (1416 / 1416 / 1180)	36 / 36 / 30 (1416 / 1416 / 1180)	36 / 36 / 30 (1416 / 1416 / 1180)
AUTO TOOL CHANGER (ATC)				
Tool Holder Dia.	type	40	40	40
Tool Storage Capacity	set	24 / 30 (opt)	24 / 30 (opt)	24 / 30 (opt)
Max. Tool Diameter	mm (inch)	70 (2.75)	70 (2.75)	70 (2.75)
Max. Tool Length	mm (inch)	250 (9.8)	250 (9.8)	300 (11.8)
Max. Tool Weight	kg (lbs)	7 (15.4)	7 (15.4)	7 (15.4)
Tool to Tool (60Hz)	sec	2.5	2.5	2.5
MOTORS				
Spindle Motor Output (Cont. / 30 min.)	kw	FANUC (7.5/11) (15 HP)	FANUC (7.5/11) (15 HP)	FANUC (7.5 / 11) (15 HP)
Drive Motors X, Y, Z axis	(kw / hp)	0iMF(10") (1.8/2.4) (1.8/2.4) (2.5/3.4)	0iMF(10") (1.8/2.4) (1.8/2.4) (2.5/3.4)	0iMF (10") (1.8/2.4) (1.8/2.4) (2.5/3.4)
MACHINE SPACE & WEIGHT				
Floor Space	mm (inch)	(2200 x 1867 x 2486) (86.6 x 73.5 x 97.8)	(3172 x 2350 x 2667) (124.8 x 92.5 x 105)	(3000 x 2334 x 2590) (118.1 x 91.8 x 101.9)
Net Weight	kg (lbs)	4100 (9020)	5300 (11660)	6300 (13860)
Air Source	kg/cm ²	6	6	6
Electrical Power Supply	kva	20	20	20

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

STANDARD ACCESSORIES

- Fully enclosed splash guard
- Central automatic lubrication system
- Tools and tool box
- Work lamp
- Tri-colored lamp guard
- Spindle air curtain
- Spindle oil 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
- Mechanical and electrical instructions
- Spindle spray ring

SPECIFICATIONS

MODEL	UNITS	YL 1200-A	YL 1400-A	YL 1600-A	YL 1800-A	YL 2000-A	YL 1690-A	YL 1890-A	YL 2090-A
TABLE									
Working Surface	mm (inch)	1300 x 620 (51.18 x 24.41)	1400 x 620 (55.11 x 24.41)	1600 x 620 (62.99 x 24.41)	1800 x 620 (70.86 x 24.40)	2000 x 620 (78.74 x 24.40)	1600 x 800 (62.99 x 31.49)	1800 x 800 (70.86 x 31.49)	2000 x 800 (78.74 x 31.49)
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 0.70 x 5)	5 x 18 x 125 (5 x 0.70 x 5)	5 x 22 x 150 (5 x 0.86 x 5.9)	5 x 22 x 150 (5 x 0.86 x 5.9)	5 x 22 x 150 (5 x 0.86 x 5.9)
Max. Table Load	kg (lbs)	1000 (2200)	1000 (2200)	1200 (2643)	1200 (2643)	1200 (2643)	1500 (3303)	1500 (3303)	1500 (3303)
TRAVEL									
Longitudinal Travel (X)	mm (inch)	1200 (47.2)	1400 (55.1)	1600 (62.99)	1800 (70.86)	2000 (78.74)	1650 (64.96)	1850	2050
Cross Travel (Y)	mm (inch)	650 (25.6) / Opt 700 (27.5)	650 (25.6) / Opt 700 (27.5)	650 (25.6) / Opt 700 (27.5)	650 (25.6) / Opt 700 (27.5)	650 (25.6) / Opt 700 (27.5)	900 (35.43)	900 (35.43)	900 (35.43)
Headstock Travel (Z)	mm (inch)	610 (24.01)	610 (24.01)	645 (25.39)	645 (25.39)	645 (25.39)	900 (35.43)	900 (35.43)	900 (35.43)
Distance Between Spindle End and Table Top	mm (inch)	150 - 760 (5.9 - 29.9)	150 - 760 (5.9 - 29.9)	100 - 745 (3.9 - 29.33)	100 - 745 (3.9 - 29.33)	100 - 745 (3.9 - 29.33)	100 - 1000 (3.9 x 39.37)	100 - 1000 (3.9 x 39.37)	100 - 1000 (3.9 x 39.37)
Distance Between Spindle Center and Column Surface	mm (inch)	690 (27.17)	690 (27.17)	690 (27.17)	690 (27.17)	690 (27.17)	850 (33.46)	850 (33.46)	850 (33.46)
SPINDLE									
Spindle Nose	type	BBT 40 / CAT 40 / DIN 40	BBT 40 / CAT 40 / DIN 40	BBT40 / CAT40 / DIN 40	BBT40 / CAT40 / DIN 40	BBT40 / CAT40 / DIN 40	BT50 / CAT50 / DIN 50	BT50 / CAT50 / DIN 50	BT50 / CAT50 / DIN 50
Spindle Speeds	r.p.m.	10000	10000	10000	10000	10000	8000	8000	8000
Mechanism of Transmission	type	Belt	Belt	Belt	Belt	Belt	Belt	Belt	Belt
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)	10000 (393.7)
Rapid Traverse (X / Y / Z)	M/min (inch min)	36 / 36 / 24 (1416 / 1416 / 945)	36 / 36 / 24 (1416 / 1416 / 945)	36 / 36 / 24 (1416 / 1416 / 945)	36 / 36 / 24 (1416 / 1416 / 945)	36 / 36 / 24 (1416 / 1416 / 945)	20 / 20 / 20 (787 / 787 / 787)	20 / 20 / 20 (787 / 787 / 787)	20 / 20 / 20 (787 / 787 / 787)
AUTO TOOL CHANGER (ATC)									
Tool Holder Dia.	type	40	40	40	40	40	50	50	50
Tool Storage Capacity	set	24 / 30 (opt)	24 / 30 (opt)	24 / 30 (opt)	24 / 30 (opt)	24 / 30 (opt)	24 / 30 (opt)	24 / 30 (opt)	24 / 30 (opt)
Max. Tool Diameter	mm (inch)	70 (2.75)	70 (2.75)	70 (2.75)	70 (2.75)	70 (2.75)	125 (4.9)	125 (4.9)	125 (4.9)
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)	300 (11.8)
Max. Tool Weight	kg (lbs)	7 (15.4)	7 (15.4)	7 (15.4)	7 (15.4)	7 (15.4)	15 (33)	15 (33)	15 (33)
Tool to Tool (60Hz)	sec	2.5	2.5	2.5	2.5	2.5	4	4	4
MOTORS									
Spindle Motor Output (Cont. / 30 min.)	kw	FANUC (11 / 15) (20 HP)	FANUC (11 / 15) (20 HP)	FANUC (11 / 15) (20 HP)	FANUC (11 / 15) (20 HP)	FANUC (11 / 15) (20 HP)	FANUC (15 / 18.5) (25 HP)	FANUC (15 / 18.5) (25 HP)	FANUC (15 / 18.5) (25 HP)
Drive Motors X, Y, Z axis	(kw / hp)	0iMF (10") (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (10") (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (10") (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (10") (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (10") (2.5/3.4) (2.5/3.4) (2.5/3.4)	0iMF (10") (3/4) (3/4) (3/4)	0iMF (10") (3/4) (3/4) (3/4)	0iMF (10") (3/4) (3/4) (3/4)
MACHINE SPACE & WEIGHT									
Floor Space	mm (inch)	3300 x 2334 x 2590 (129.9 x 91.8 x 101.9)	3720 x 2334 x 2590 (146.4 x 91.8 x 101.9)	4500 x 2241 x 2858 (177.1 x 88.2 x 112.5)	4700 x 2241 x 2858 (185 x 88.2 x 112.5)	4900 x 2241 x 2858 (192.9 x 88.2 x 112.5)	4900 x 2882 x 3235 (192.9 x 113.4 x 127.3)	4900 x 2882 x 3235 (192.9 x 113.4 x 127.3)	5100 x 2882 x 3235 (200.7 x 113.4 x 127.3)
Net Weight	kg (lbs)	7600 (16760)	8500 (18700)	10000 (22000)	10500 (23100)	11000 (24200)	14000 (30800)	15000 (33000)	16000 (35200)
Air Source	kg/cm ²	6	6	6	6	6	8	8	8
Electrical Power Supply	kva	25	25	25	25	25	30	30	30

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

STANDARD ACCESSORIES

- Fully enclosed splash guard
- Central automatic lubrication system
- Tools and tool box
- Work lamp
- Tri-colored lamp guard
- Spindle air curtain
- Spindle oil 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
- Mechanical and electrical instructions
- Spindle spray ring

OPTIONAL ACCESSORIES

- Mitsubishi controller
- Siemens controller
- Belt drive spindle 12000 rpm
- Direct-drive spindle#40 / 12000 / 15000 rpm
- Direct-drive spindle#50 8000 / 10000 rpm
- Gearbox set (YLA)
- Chain type chip conveyor
- Rear flushing device
- Optical scale

- 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 wire prepared
- Transformer
- Rear Cover
- Oil skimmer