

HO CHUN

BED-TYPE UNIVERSAL MILLING MACHINE

High Efficiency, High Precision



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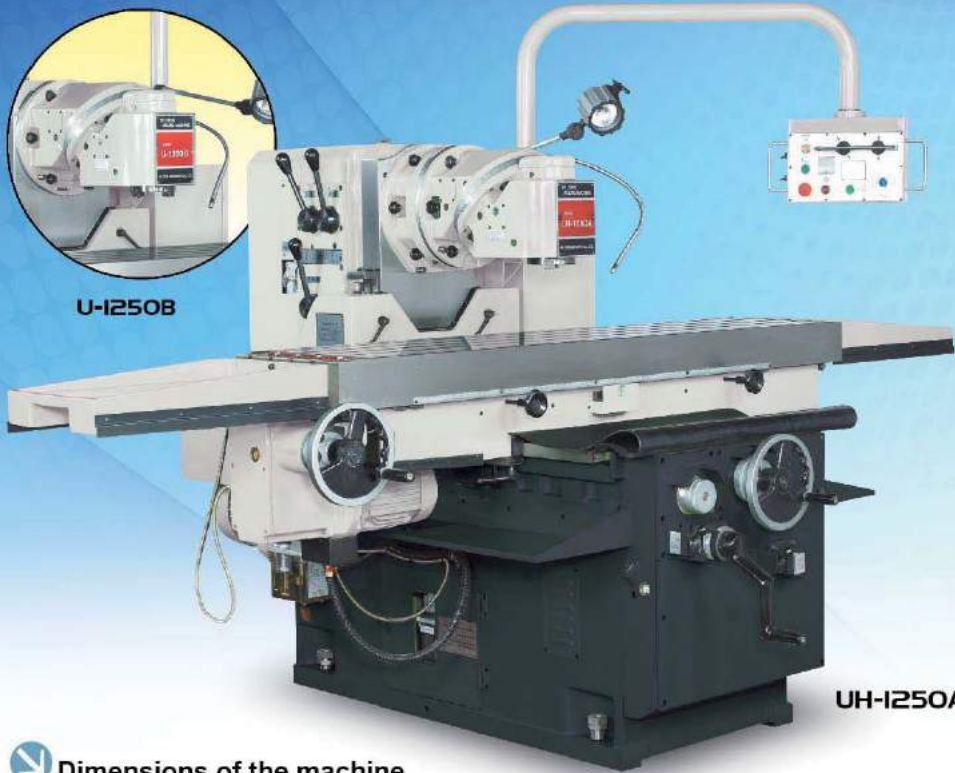


HO CHUN MACHINERY CO., LTD.

BED-TYPE UNIVERSAL MILLING MACHINE



U-1250B



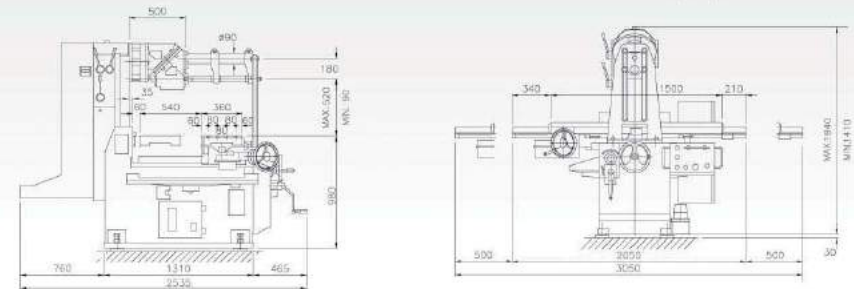
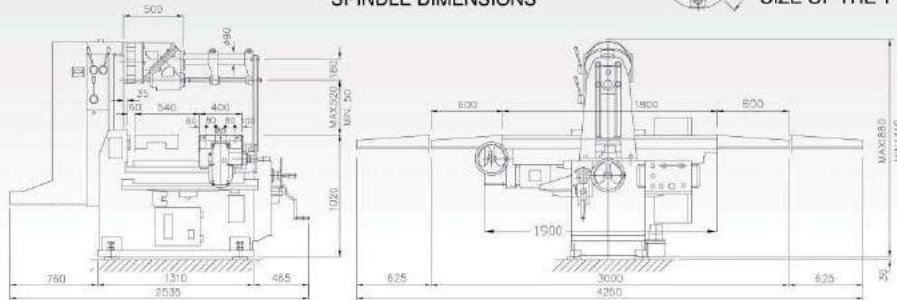
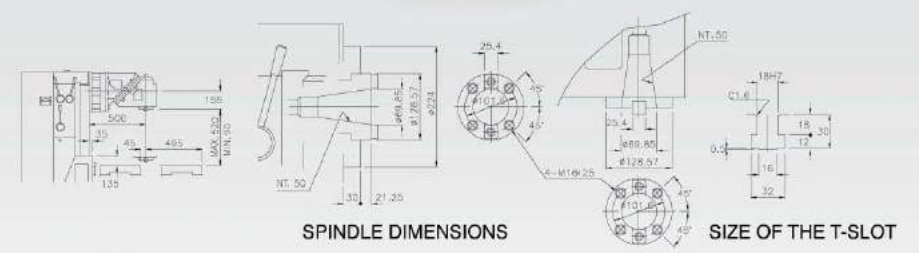
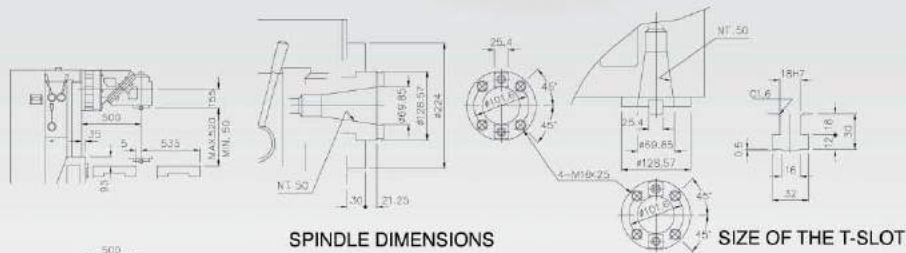
UH-1250A

Dimensions of the machine



UH-1000A

Dimensions of the machine



BED-TYPE UNIVERSAL MILLING MACHINE

BED-TYPE HORIZONTAL MILLING MACHINE



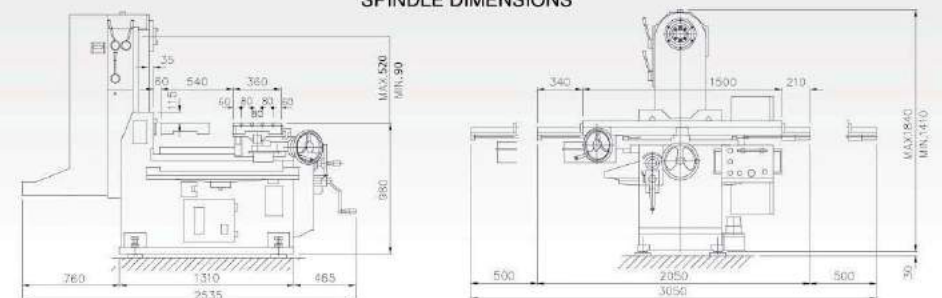
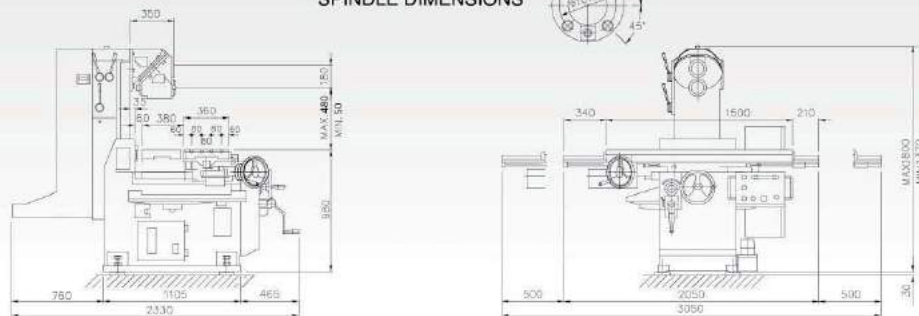
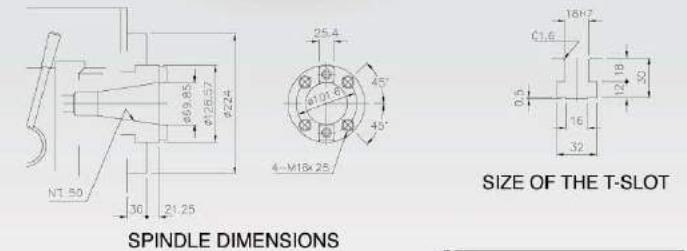
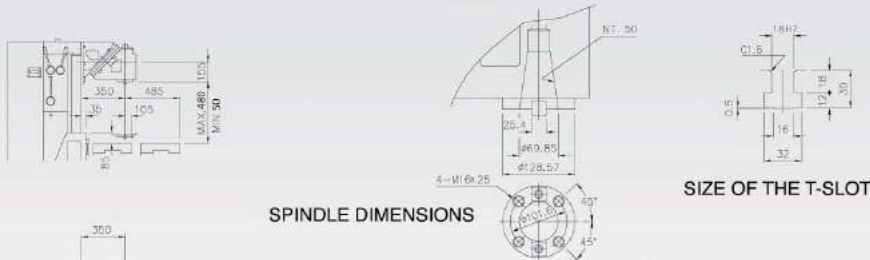
U-1000



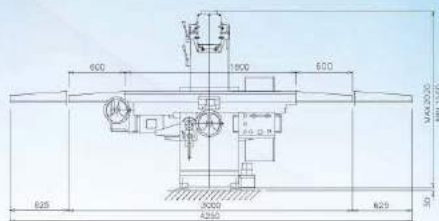
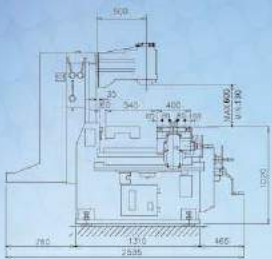
H-1000

Dimensions of the machine

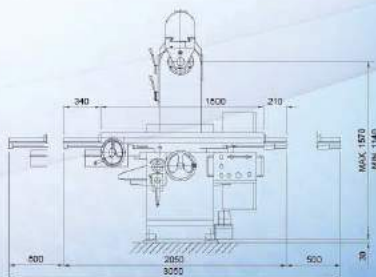
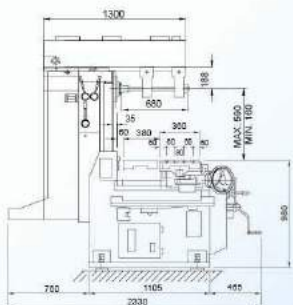
Dimensions of the machine



BED-TYPE VERTICAL / HORIZONTAL MILLING MACHINE



Model: **HV-1250A**
Series: HV-1000A



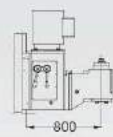
Model: **HS-1000**
Series: HS-1250

BED-TYPE MILLING MACHINE



U-1600

Dimensions of the machine



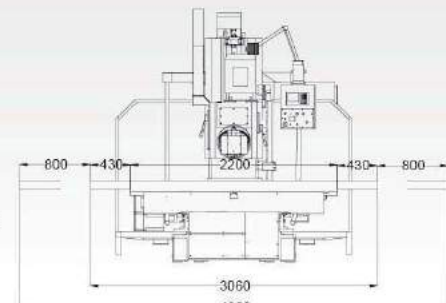
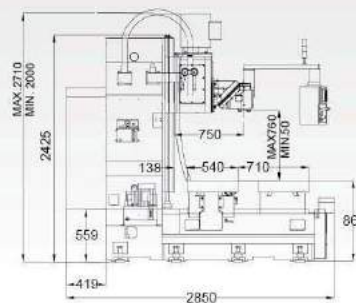
VERTICAL HEAD



SPINDLE DIMENSIONS



SIZE OF THE T-SLOT

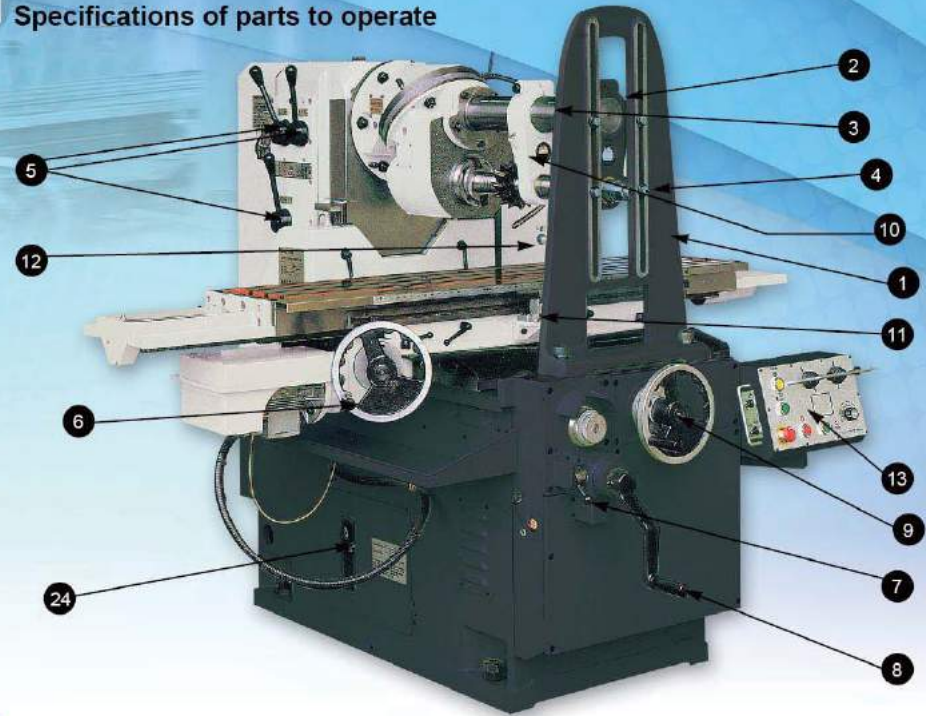


BED-TYPE MILLING MACHINE

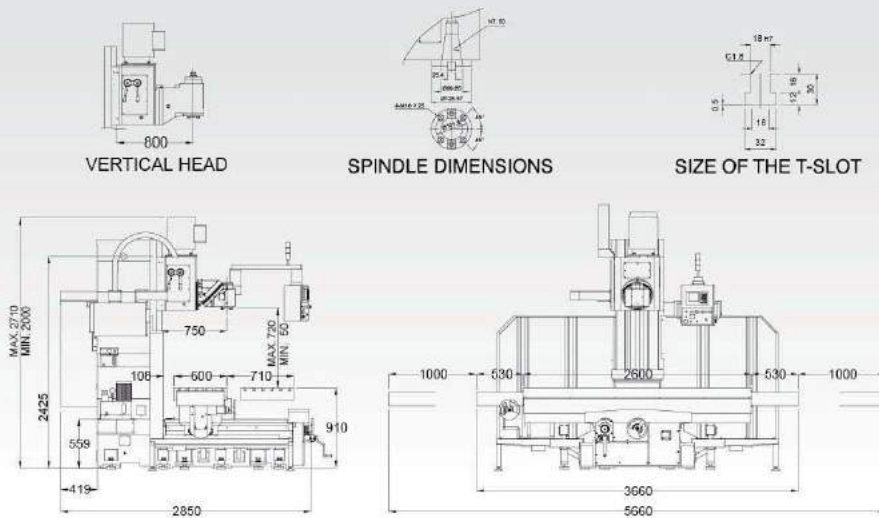


U-2000

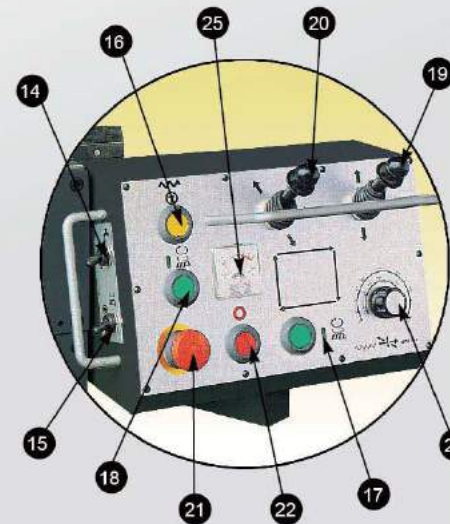
Specifications of parts to operate



Dimensions of the machine



Control panel



- | | |
|---|--|
| 1. Arbor support | 14. Coolant pump switch |
| 2. Arbor block (front block) | 15. Spindle inching switch |
| 3. Arbor arm | 16. Rapid feed switch |
| 4. Arbor | 17. Spindle rev switch |
| 5. Speed changing level | 18. Spindle fer switch |
| 6. Longit feed handwheel | 19. Elevating automatic feed switch |
| 7. Elevating selection handle (auto/manual) | 20. Longit & cross automatic feed switch |
| 8. Elevating handle | 21. Emergency stop |
| 9. Cross feed handwheel | 22. Spindle stop switch |
| 10. Arbor block (back block) | 23. Feed speeds selection button |
| 11. Longit safety switch | 24. Automatic lubricating system |
| 12. Electric cabinet | 25. Ampere meter (optional) |
| 13. Control panel | |

THE FUNCTIONS OF THE MACHINE AND ITS MERITS

1. The spindle heads, upper and lower part of head, can match and revolve in angle so that the machine can mill the working pieces in any direction, vertical, horizontal, tilting, helical, etc.

Horizontal position:

The upper and lower head are both fixed at 0° to mill the working piece, as shown in picture A. When the upper head is fixed at 180° and the lower head is fixed at 0°, it can mill the higher working piece, as shown in picture B.

Vertical position:

When the upper head is fixed at 0°, and the lower head is fixed at 180°, the standing miller can work on the working piece in the way as shown in picture C. Besides, because the spindle head can be revolved to any angle, it can do tilting milling and helical milling easily.

2. There is equipment to eliminate backlash on the left-right as well as back-forth lead screw lever.

3. The handwheels, handles, etc., which are to be handled, are set at the front of the machine to facilitate operation. A hanging and movable control panel is set to keep the operator safe and to facilitate operation.

4. Lubricating and cooling system:

■ The speed changing gears and bearings are oil-bathing lubricated.

■ Automatic lubricating system is to make sure that each sliding face, driving part, and lead screw levers can operate smoothly, to work precisely and to lengthen the working life of the machine.

■ The coolant pump is set at the right side of the base block; the flow quantity can be adjusted.

5. The high quality cast iron is used to form the column, the working table, the saddle and the base. The sliding faces are specially ground and treated. The sliding face of the base seat is specially treated with alloy steel. Therefore, the whole machine structure is suitable for heavy milling load and high precision requirement.

6. The gears in speed changing box of the column are made of chrome molybdenum alloy steel and are heat treated and ground.

7. Safety equipments are attached to the automatic back-forth and left-right feed and the elevating feed to make the operation safe.

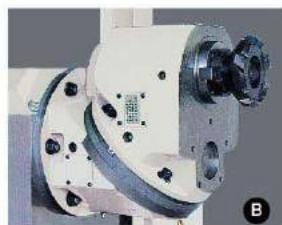
8. The horizontal milling arbor accessories can be set, the arbor support and horizontal arm of which are made of high quality strong graphite cast iron so that the arbor can work precisely.

9. Automatic circulatory accessories can be set: During the operation process, from start to stop, the work piece can be united with left-right feed, back-forth feed, elevating feed, and rapid feed, so that the production can be higher. The damper rigging set can be adjusted.



[Horizontal machine]

A: Upper head 0°, Lower head 0°



[Horizontal machine]

B: Upper head 180°, Lower head 0°



[Vertical machine]

C: Upper head 0°, Lower head 180°



[Vertical machine]

D: Upper head 45°, Lower head 180°



[Universal machine]

E: Upper head 7.8°, Lower head 22°



[Universal machine]

F: Upper head 65.5°, Lower head 65.5°

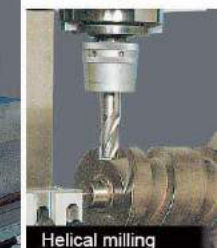
Example to show milling processing



Tilting plain milling



Vertical plain milling



Helical milling



Horizontal plain milling (downward)



Horizontal plain milling



Slot milling

Note: The cutter for the horizontal plain milling can be upward and downward. The functions of the two are different: the downward type is suitable for milling lower working pieces; the upward type is suitable for milling higher working pieces.



Horizontal milling arbor accessory

MILLING PERFORMANCE

SPECIFICATIONS

Vertical plain milling



Vertical plain milling

Material of work piece

Material S45C, Hardness HS28
Size (L)300x(W)100x(H)175 mm

Tool used

Plain milling cutter
Diameter 150 mm
No. of teeth 8 pieces
Material K21

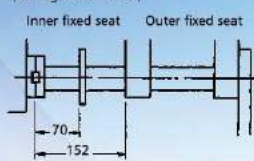
Milling data

Revolution of the spindle 315 rpm
Depth of cutting 5.0 mm
Feed speed 200-300 mm/min

Precision

Processing surface permitted (L)300mmx(W)100 mm
Surface roughness 0.02 mm
Surface roughness tested 0.015 mm

Horizontal slot milling
(Milling cutter inside)



Horizontal slot milling

Material of work piece

Material S45C, Hardness HS28
Size (L)300x(W)100x(H)175 mm

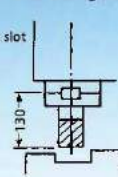
Tool used

Slotting milling cutter
Diameter 100 mm
No. of teeth 26 pieces
Material SKH9
Tool width 12 mm
Diameter of bore 25.4 mm

Milling data

(1)Milling shank
Revolution of the spindle 160 rpm
Depth of milling 15 mm
Feed speed 50 mm/min
(2)Horizontal milling arbor accessories; the internal side of the milling cutter
Revolution of the spindle 160 rpm
Depth of milling 15 mm
Feed speed 50 mm/min

End milling slot



End milling slot

Material of work piece

Material S45C, Hardness HS28
Size (L)300x(W)100x(H)175 mm

Tool used

End milling cutter
Diameter 25 mm
No. of teeth 4 pieces
Material SKH2

Milling data

Contents of milling milling slot
Revolution of the spindle 440 rpm
Depth of milling 15 mm
Feed speed 50 mm/min
Feed rate per tooth 0.06 mm/tooth

Standard accessories (1000/1250 type)

- Coolant pump / 1 pc
- Tool box / 1 pc
- Eye bolt / 2 pcs
- Mounting pad / 1 set
- L-shaped spanner / 1 set
- Socket spanner 1 set
- Grease gun / 1 pc
- Spindle drawing bar / 1 pc
- Screw drive(+) / 1 pc
- Screw drive(-) / 1 pc
- Head rotary stick / 1 pc

Optional accessories (1000/1250 type)

- Horizontal arbor accessories
- Milling cutter shank
- Universal dividing head
- Rotary vise 150mm
- Milling cutter 6", 8", 10"
- Magnetic chuck
- Digital readout with linear scales
- Ballscrew for X,Y,Z axes
- Electric auto spindle brake system
- Hydraulic tool clamping system

ITEM	MODEL	UH-1250A	U-1250B	UH-1000A	U-1000B	U-1000
Working table						
Area(WxL)		400x1800mm	400x1800mm	360x1500mm	360x1500mm	360x1500mm
Longitudinal travel		1250mm	1250mm	1000mm	1000mm	1000mm
Spindle center to table(Horizontal)						
Arbor arm is used		50-520mm	50-520mm	90-520mm	90-520mm	50-480mm
Spindle nose to table (Vertical)		50-520mm	50-520mm	90-520mm	90-520mm	50-480mm
Cross travel		540mm	540mm	540mm	540mm	380mm
Feed speed changing (X,Y)		Variable	Variable	Variable	Variable	Variable
Longitudinal & cross feed speed		16-1200mm/min	16-1200mm/min	16-1200mm/min	16-1200mm/min	16-1200mm/min
Longitudinal & cross rapid speed		2000mm/min	2000mm/min	2000mm/min	2000mm/min	2000mm/min
T-slot (W-number x L)		18x4x80mm	18x4x80mm	18x4x80mm	18x4x80mm	18x4x80mm
Table load max.		1000 kg	1000 kg	800 kg	800 kg	800 kg
Spindle						
Spindle taper		NT#50	NT#50	NT#50	NT#50	NT#50
Number of steps to change speed		12	12	12	12	12
Spindle speeds (R.P.M.)		40,55,80,115,160, 225,315,440,620, 880,1240,1750	40,55,80,115,160, 225,315,440,620, 880,1240,1750	40,55,80,115,160, 225,315,440,620, 880,1240,1750	40,55,80,115,160, 225,315,440,620, 880,1240,1750	40,55,80,115,160, 225,315,440,620, 880,1240,1750
Column						
Vertical travel		470mm	470mm	430mm	430mm	430mm
Number of steps to change vertical feed speed		Variable	Variable	Variable	Variable	Variable
Vertical feed speed		8-450mm/min	8-450mm/min	8-450mm/min	8-450mm/min	8-450mm/min
Vertical rapid speed		700mm/min	700mm/min	700mm/min	700mm/min	700mm/min
Spindle center to column (Vertical)		500mm	420mm	500mm	420mm	350mm
Spindle nose to column front (Horizontal)		500mm	420mm	500mm	420mm	350mm
Motor						
Spindle motor		4P-5.5kw(7.5HP)	4P-5.5kw(7.5HP)	4P-5.5kw(7.5HP)	4P-5.5kw(7.5HP)	4P-5.5kw(7.5HP)
Feed motor	Longitudinal feed	1.50kw(2HP)	1.50kw(2HP)	1.50kw(2HP)	1.50kw(2HP)	1.50kw(2HP)
	Cross feed	1.50kw(2HP)	1.50kw(2HP)	1.50kw(2HP)	1.50kw(2HP)	1.50kw(2HP)
	Vertical feed	1.50kw(2HP)	1.50kw(2HP)	1.50kw(2HP)	1.50kw(2HP)	1.50kw(2HP)
Note:When feed motor has specified servo motor, it is a special attachment.						
Coolant pump		2P-0.12kw(1/8HP)	2P-0.12kw(1/8HP)	2P-0.12kw(1/8HP)	2P-0.12kw(1/8HP)	2P-0.12kw(1/8HP)
Lubricating oil pump		3L-4W	3L-4W	3L-4W	3L-4W	3L-4W
Dimensions of the machine						
Machine size (L x W x H)		3000x2535x1830mm	3000x2535x1830mm	2050x2535x1800mm	2050x2535x1800mm	2050x2535x1800mm
Floor space		4250x2535mm	4250x2535mm	3050x2535mm	3050x2535mm	3050x2535mm
Net weight		About 3200kgs	About 3200kgs	About 2900kgs	About 2900kgs	About 2600kgs

Note:Based on the necessity of improving the machine, the company reserve the rights to revise specifications and dimensions.

SPECIFICATIONS

ITEM	MODEL	HV-1250A	HV-1000A	H-1250	H-1000	HS-1250	HS-1000
Working table							
Table size		400x1800mm	360x1500mm	400x1800mm	360x1500mm	400x1800mm	360x1500mm
Longitudinal travel		1250mm	1000mm	1250mm	1000mm	1250mm	1000mm
Spindle nose to table (Vertical)		100-570mm	140-570mm	—			
Spindle center to table (Horizontal)		—		90-560mm	90-520mm	—	
Cross travel		540mm					380/540(Select)
Variable traverse rates (X, Y)		Variable					
Longitudinal & cross traverse rates		16-1200mm/min					
Longitudinal & cross rapid traverse rates		2000mm/min					
T-slot (W-number x L)		18mmx4x80mm					
Max. table load		1000kgs	800kgs	1000kgs	800kgs	1000kgs	800kgs
Spindle							
Spindle taper		NT#50					
Number of speed		8	8 / 12 (Select)			8	8 / 12 (Select)
Spindle speed (R.P.M.)		95,140,200,300,380,560,820,1200	8 steps: 95,140,200,300,380,560,820,1200 12 steps: (40-1750) x 1.33			95,140,200,300,380,560,820,1200	
Column							
Vertical travel		470mm	430mm	470mm	430mm	470mm	430mm
Vertical traverse rates (variable)		Variable					
Vertical traverse rates		8-450mm					
Vertical rapid traverse rates		700mm/min					
Spindle center to column surface		500mm	—				
Motor Details							
Spindle motor		4P-7.5KW (10HP)					
Feed motor	Longitudinal feed	1.50KW (2HP)					
	Cross feed	1.50KW (2HP)					
	Vertical feed	1.50KW (2HP)					
Coolant pump		2P-0.12KW (1/8HP)					
Lubrication pump		3L-4W					
Dimensions of the machine							
Machine size (L x W x H)		3000x2535x2020mm	2050x2535x1980mm	3000x2535x1920mm	2050x2535x1840mm	3000x2535x2160mm	2050x2535x2100mm
Floor space		4250x2535mm	3050x2535mm	4250x2535mm	3050x2535mm	4250x2535mm	3050x2535mm
Net weight		Approx 3200kgs	Approx 2900kgs	Approx 3000kgs	Approx 2700kgs	Approx 3200kgs	Approx 2900kgs

*Specification subject to change without prior notice.

ITEM	MODEL	U-1600	U-2000
Working table			
Table size		540 x 2200mm	600 x 2800mm
Longitudinal travel		1600mm	2000mm
Spindle nose to table		50~760mm	50~720mm
Spindle center to table (Horizontal)		50~760mm	50~720mm
Cross travel		710 (Opt.:760)mm	
Variable traverse rates (X, Y)		Variable	
Longitudinal & cross traverse rates		16~1200mm/min	16~1200mm/min
Longitudinal & cross rapid traverse rates		2000mm/min	2000mm/min
T-slot (W-number x L)		18 x 6 x 80mm	18 x 6 x 100mm
Max. table load		1500kgs	
Spindle			
Spindle taper		NT 50	
Number of speed		8 steps	
Spindle speed (R.P.M.)		110, 165, 240, 360, 470, 700, 1020, 1500	
Spindle speed with inverter (Optional)		120~1500	120~1500
Column			
Vertical travel		710mm	670mm
Vertical traverse rates (variable)		Variable	
Vertical traverse rates		8~450mm/min	8~450mm/min
Vertical rapid traverse rates		700mm/min	700mm/min
Spindle center to column surface		750mm	750mm
Spindle nose to column surface		750mm	750mm
Motor Details			
Spindle motor		15HP	
Feed motor	Longitudinal feed	5HP	5HP
	Cross feed	5HP	5HP
	Vertical feed	5HP	5HP
Coolant pump		0.18kW	
Lubrication pump		3L-4W	
Dimensions of the machine			
Length x width x height (Frame)		2850 x 2200 x 2425mm	2850 x 2600 x 2425mm
Length x width x height (Standard)		2850 x 3060 x 2710mm	2850 x 3660 x 2710mm
Floor space		2850 x 5100mm	2850 x 6100mm
Net weight (approx)		6500kgs	8100kgs
Packing			
Length x Width x Height		3800 x 2300 x 2400mm (Iron pallet)	4400 x 3300 x 2850mm (Iron case)

*Specification subject to change without prior notice.