

HO CHUN

BED-TYPE UNIVEERSAL MILLING MACHINE

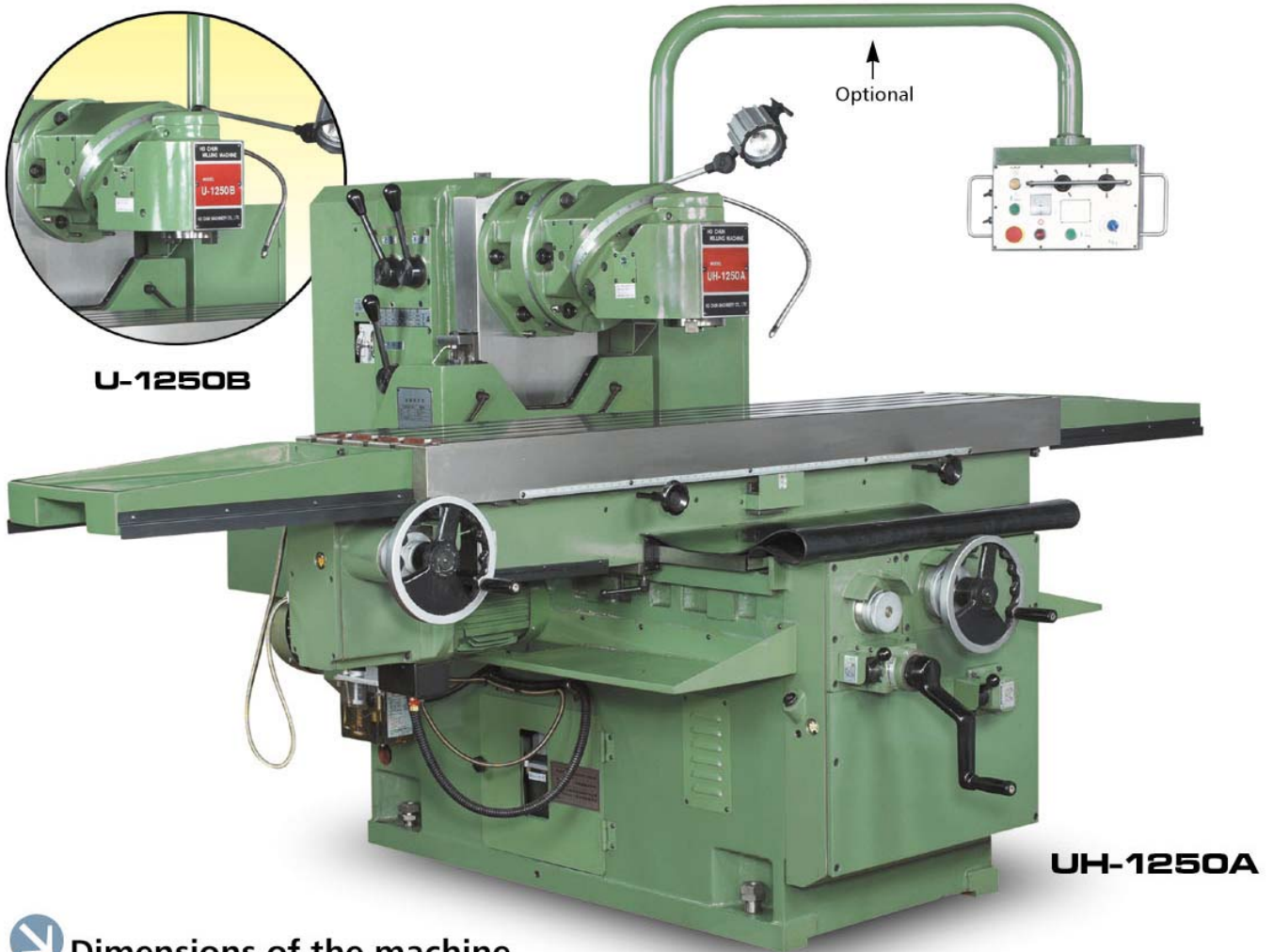
High Efficiency, High Precision



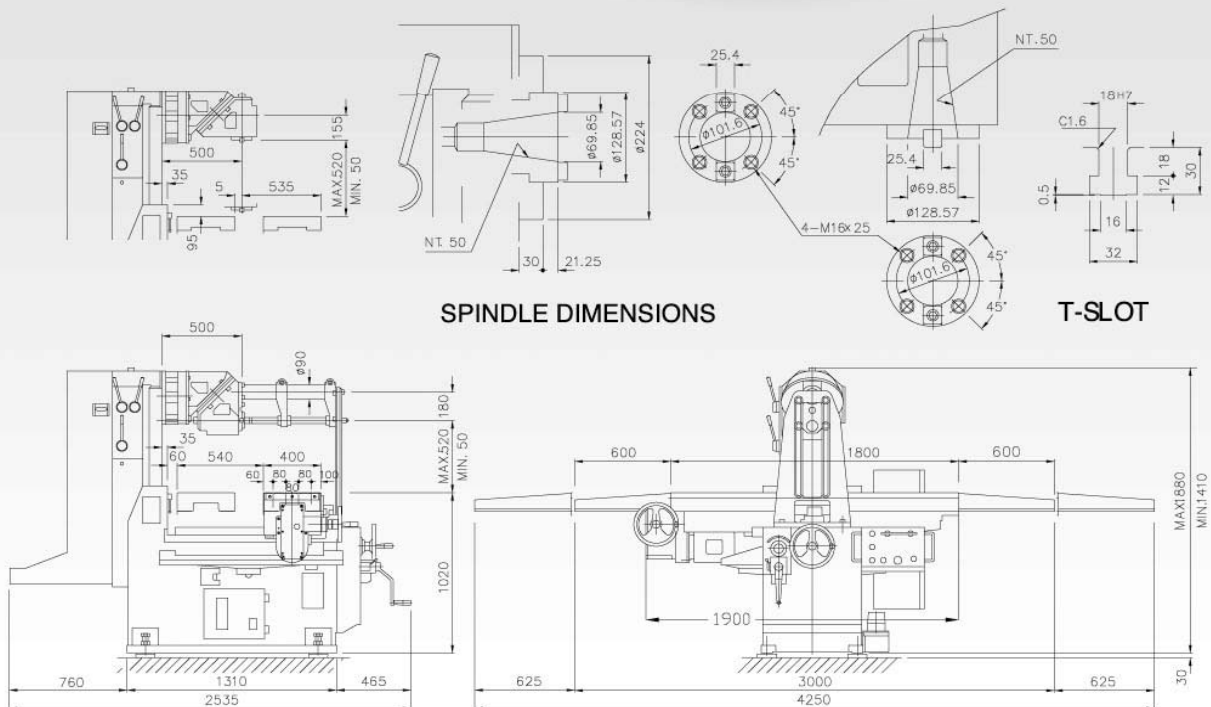
UH-1000A

HO CHUN MACHINERY CO., LTD.

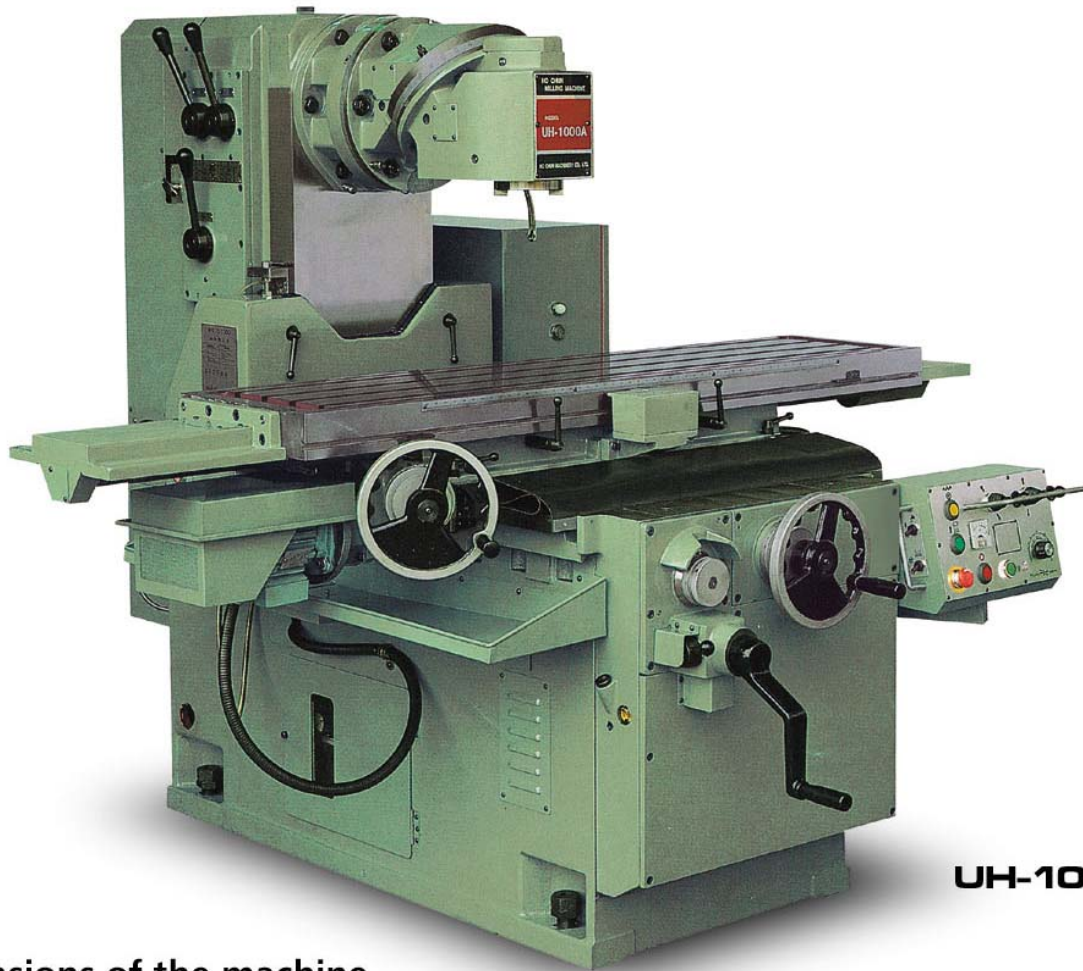
BED-TYPE UNIVERSAL



Dimensions of the machine

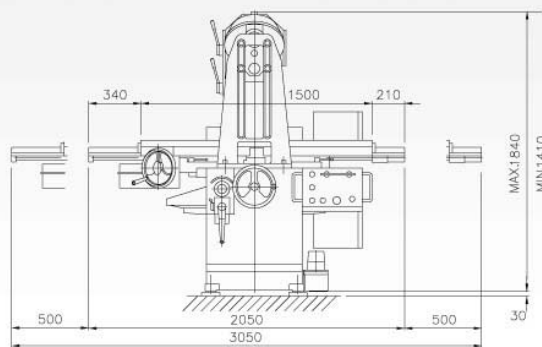
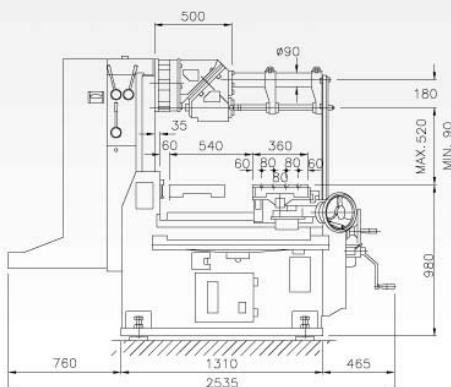
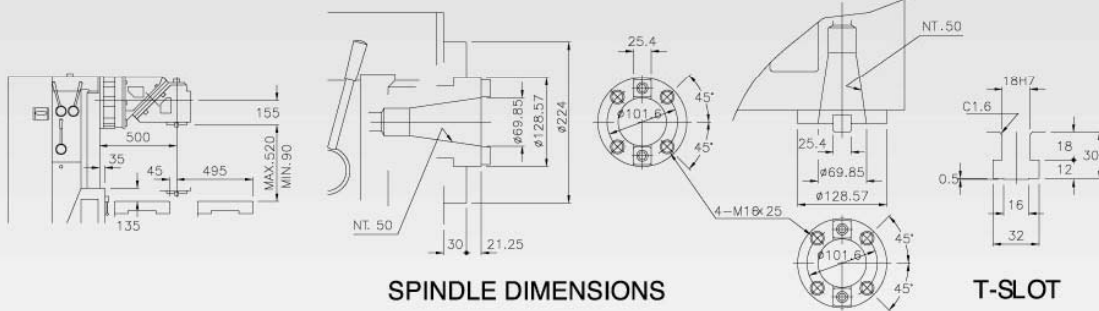


1250A/UH-1000A MILLING MACHINE



UH-1000A

Dimensions of the machine

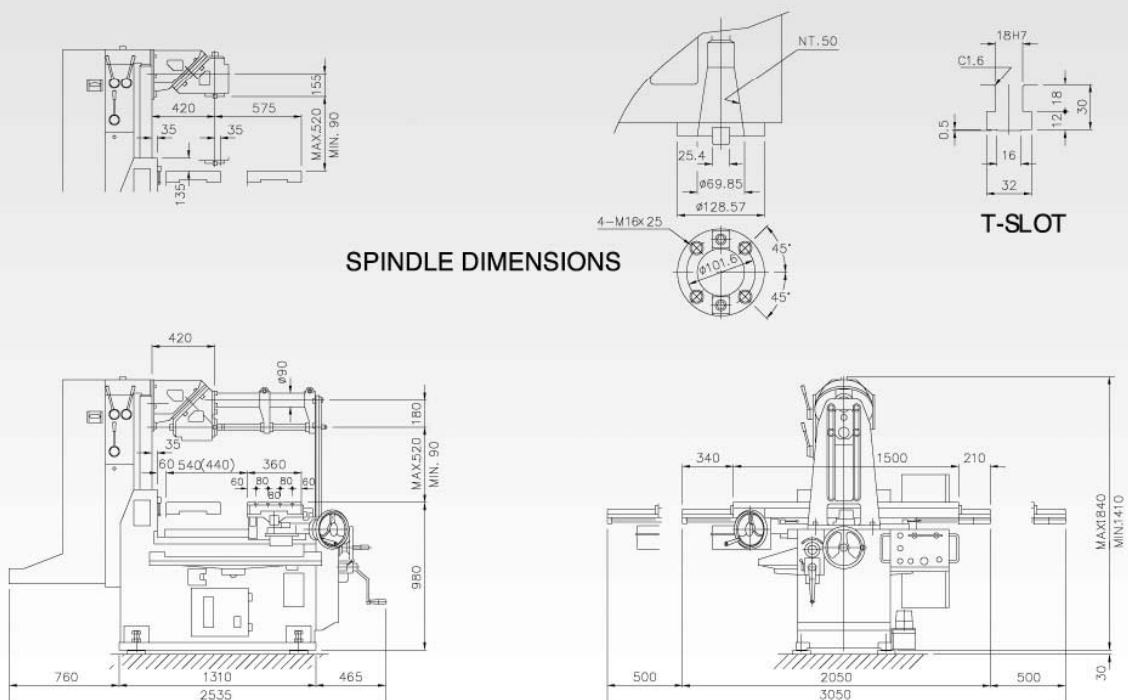


BED-TYPE UNIVERSAL



U-1000B

Dimensions of the machine



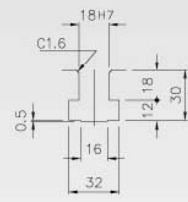
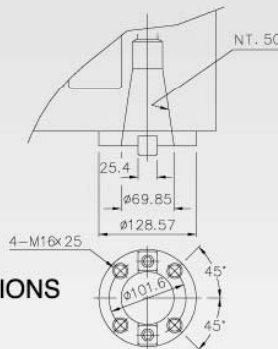
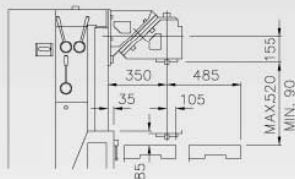
0003/U-1000

MILLING MACHINE



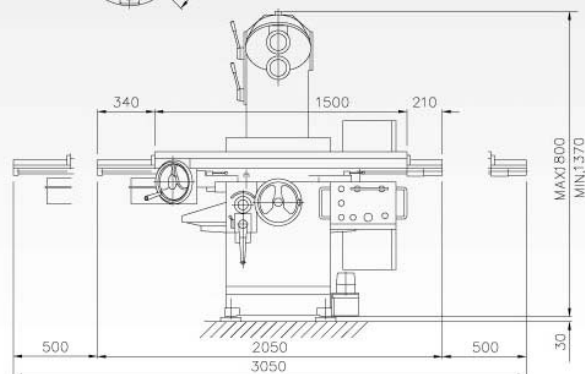
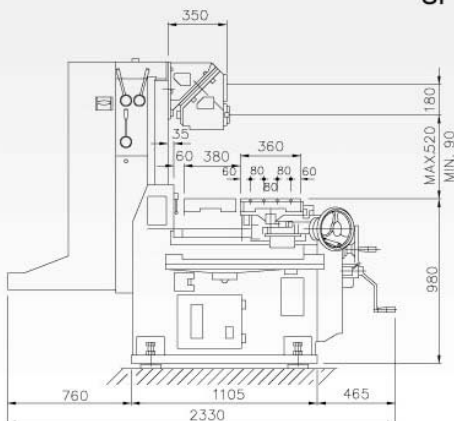
U-1000

Dimensions of the machine



T-SLOT

SPINDLE DIMENSIONS

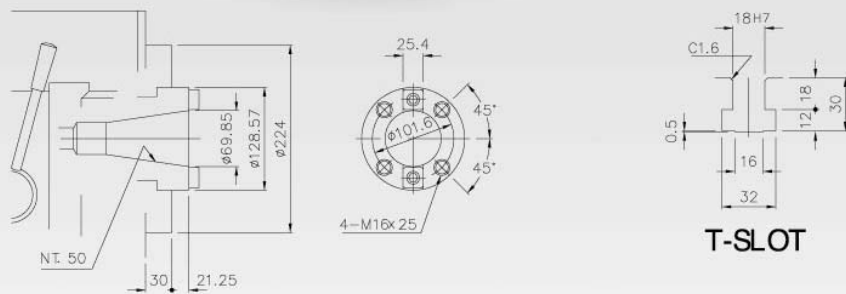


BED-TYPE HORIZONTAL MILLING MACHINE



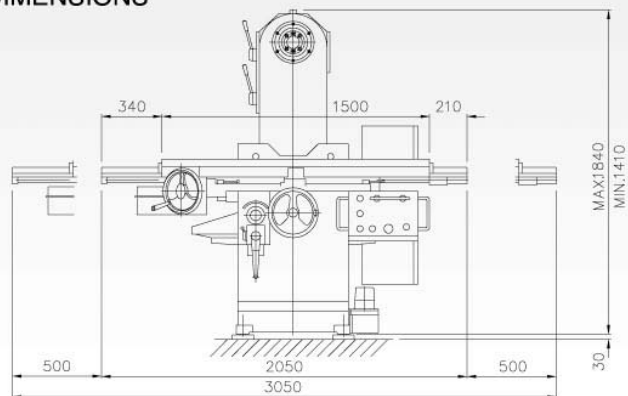
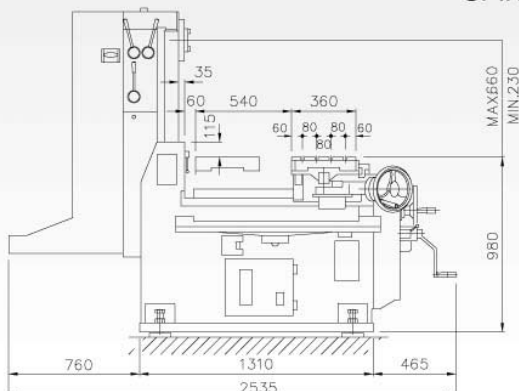
H-1000

Dimensions of the machine

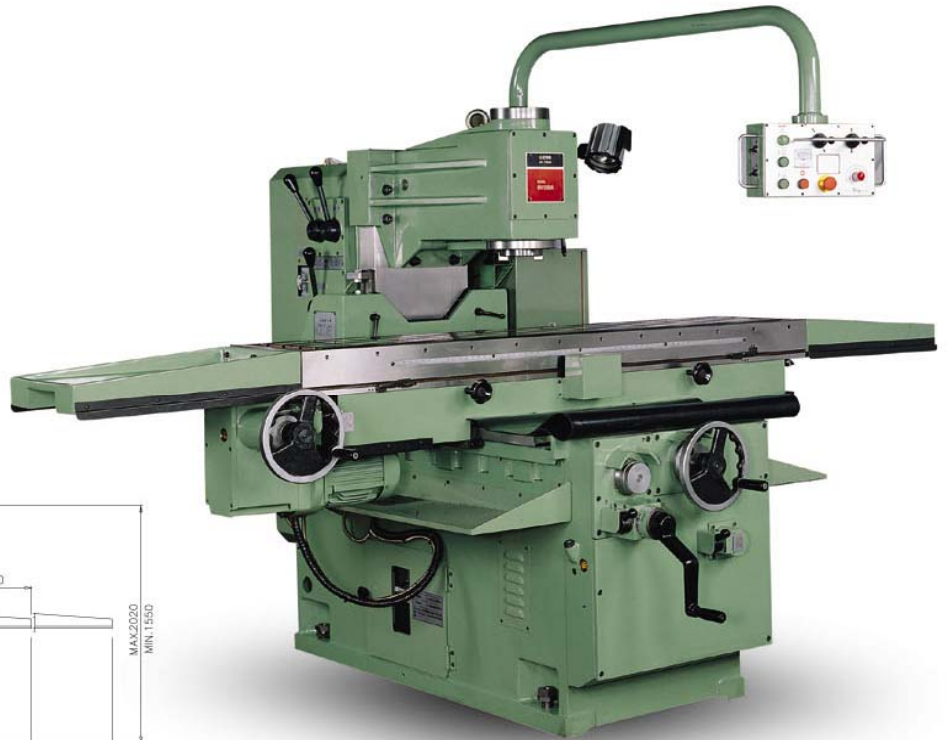
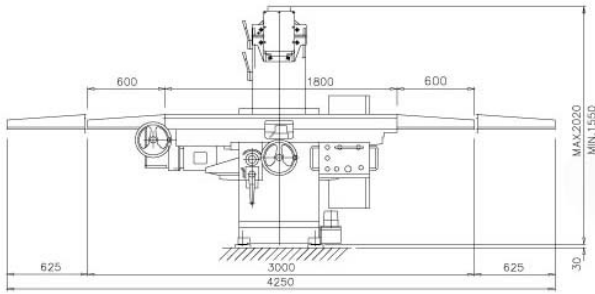
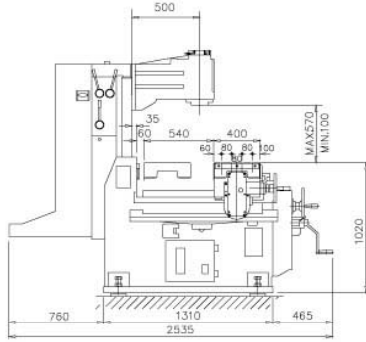


T-SLOT

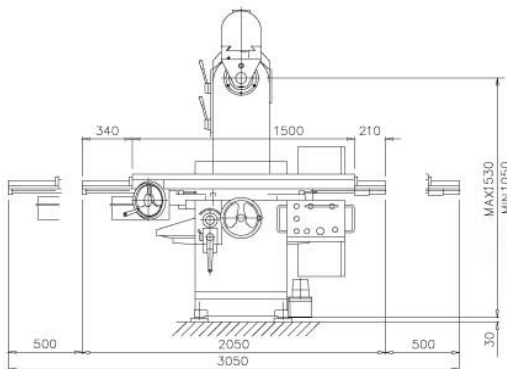
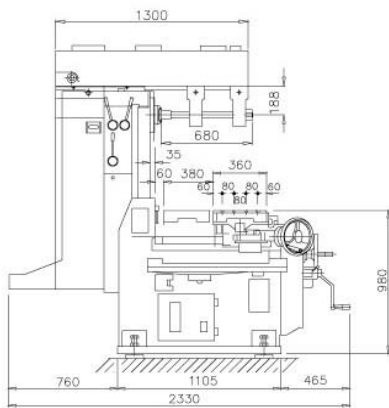
SPINDLE DIMENSIONS



BED-TYPE VERTICAL / HORIZONTAL MILLING MACHINE



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



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

U-1600

BED-TYPE MILLING MACHINE

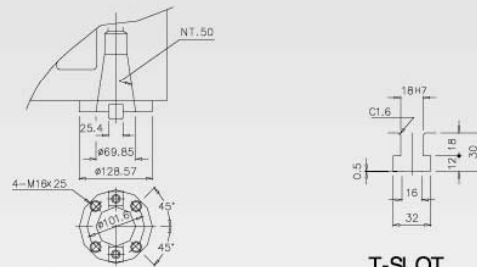
Model: ●U-1600 Universal Milling Head
 ●H-1600 Horizontal Milling Head
 ●V-1600 Vertical Milling Head

●U-1600CNC Universal Milling Head with CNC controller
 ●CNC-1600G BT50 Gear Head with CNC controller



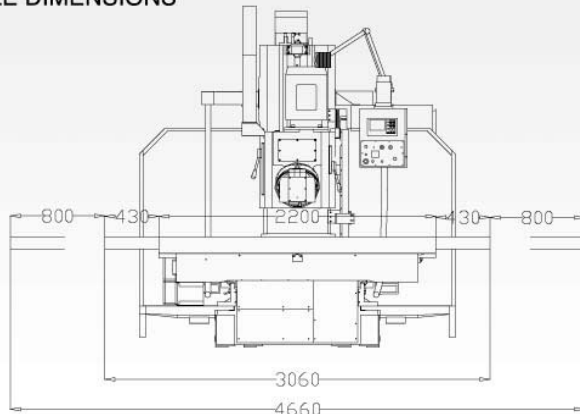
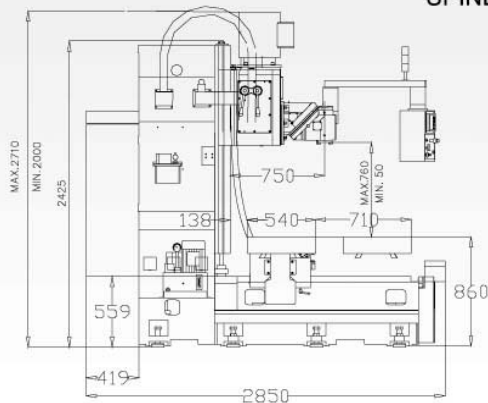
U-1600

Dimensions of the machine

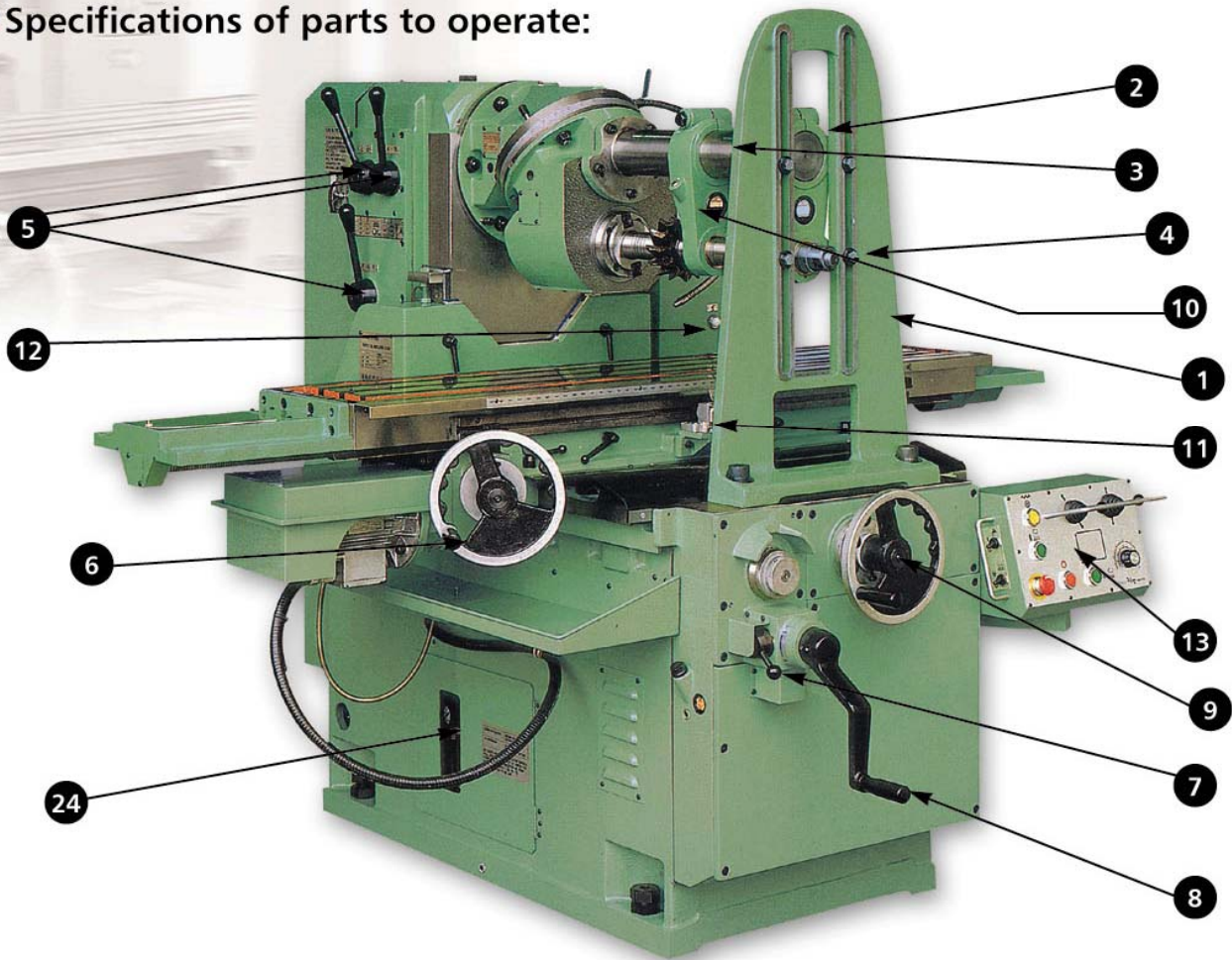


SPINDLE DIMENSIONS

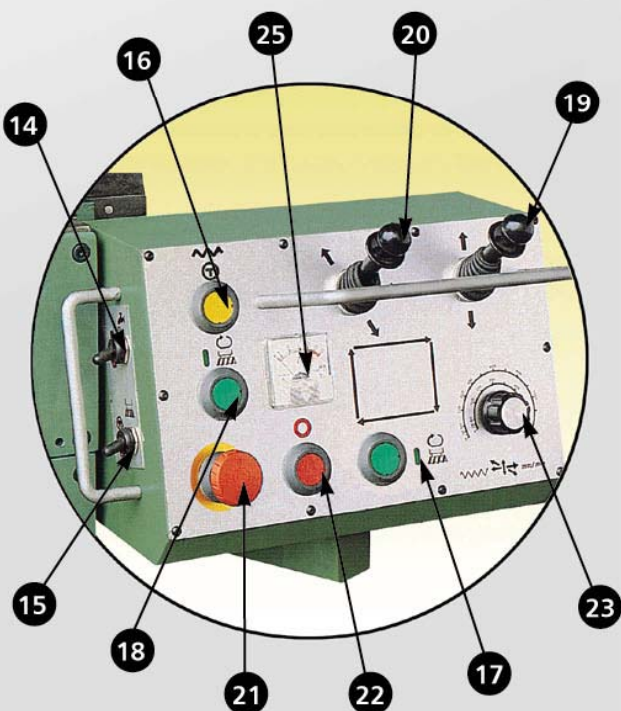
T-SLOT



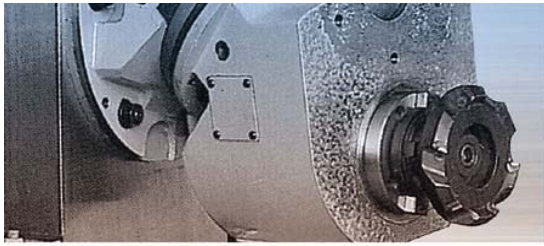
Specifications of parts to operate:



Control panel

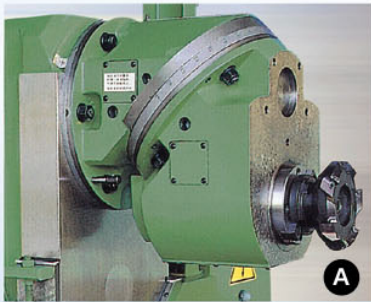


- | | |
|---|---|
| 1.Arbor support | 14.Coolant pump switch |
| 2.Arbor block(front block) | 15.Spindle inching switch |
| 3.Arbor arm | 16.Rapid feed switch |
| 4.Arbor | 17.Spindle rev switch |
| 5.Speed changing level | 18.Spindle fer switch |
| 6.Longit feed handwheel | 19.Elevating automatic feed 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 | |

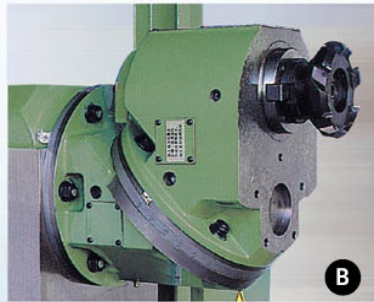


THE FUNCTIONS OF THE

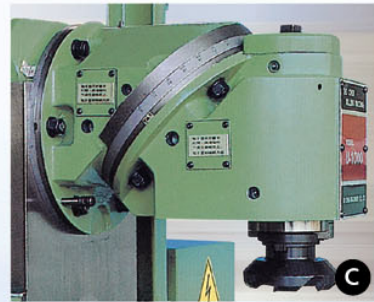
- The spindle heads, upper and lower part of head, can match and revolve in angle so that the machine can mill the working pieces in any direction, vertical, horizontal, tilting, helical, etc.
 - Horizontal position :
The upper and lower head are both fixed at 0° to mill the working piece, as shown in 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.
- There is equipment to eliminate backlash on the left-right as well as backforth lead screw lever.
- 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.
- Lubricating and cooling system :
 - The speed changing gears and bearings are oil-bathing lubricated.



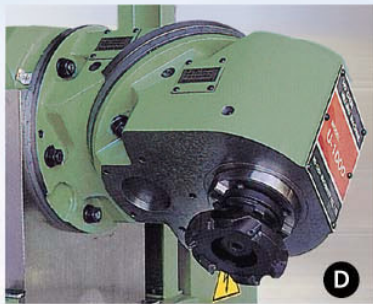
[Horizontal machine]
A: Upper head 0° , Lower head 0°



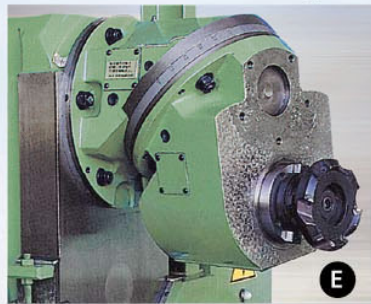
[Horizontal machine]
B: Upper head 180° , Lower head 0°



[Vertical machine]
C: Upper head 0° , Lower head 180°



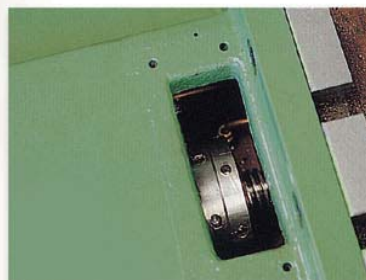
[Vertical machine]
D: Upper head 45° , Lower head 180°



[Universal machine]
E: Upper head 7.8° , Lower head 22°



[Universal machine]
F: Upper head 65.5° , Lower head 65.5°



Adjust nut of longitudinal



Adjust nut of cross

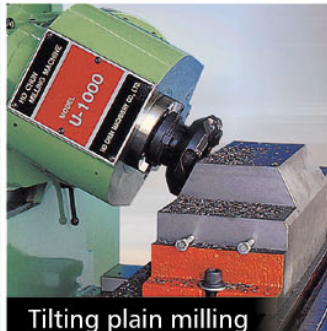
S OF THE MACHINE AND ITS MERITS

MACHINE AND ITS MERITS

- 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.



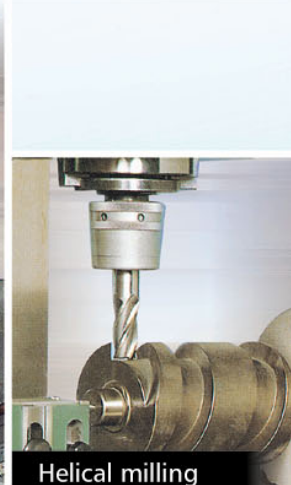
Example to show milling processing



Tilting plain milling



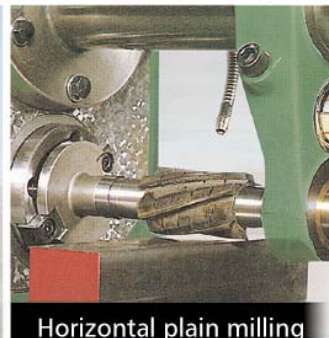
Vertical plain milling



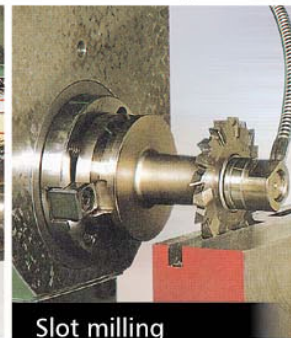
Helical milling



Horizontal plain milling (downward)



Horizontal plain milling

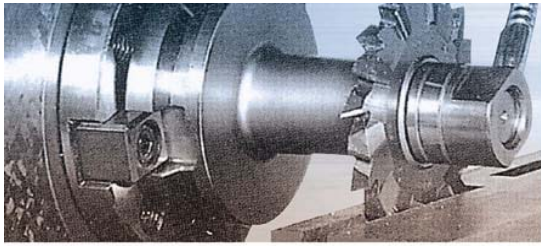


Slot milling

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.

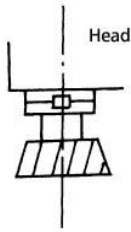


Horizontal milling arbor accessory



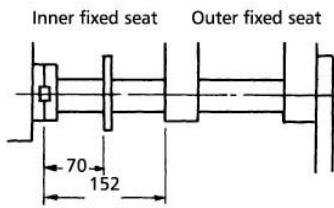
MILLING PERFORMANCE

Vertical plain milling

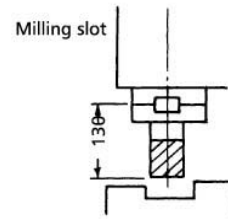


Horizontal slot milling

(Milling cutter inside)



End milling slot



Vertical plain milling

Material of work piece	
Material	FC20, Hardness HS30
Size	(L)300x(W)100x(H)175(mm)
Tool used	
plain milling cutter	
Diameter	150(mm)
No. of teeth	12 pieces
Material	K20
Milling data	
Revolution of the spindle	160(rpm)
Speed of milling	75(m/min)
Depth of cutting	5.5, 3.5(mm)
Feed speed	315, 500(mm/min)
Feed rate per tooth	0.16, 0.26(mn/tooth)
Milling capacity	173, 175(cm ³ /min)
Milling quantity for 1 kw	32.6, 35.0(cm ³ /min)
Precision	
Processing surface permitted	(L)300mmx(W)100mm
Surface roughness	0.02(mm)
Surface roughness tested	0.015

Horizontal slot milling

Material of work piece	
Material	S45C, Hardness HS28
Size	(L)300x(W)175x(H)160(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	80(rpm)
Speed of milling	25(m/min)
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	80(rpm)
Speed of milling	25(m/min)
Depth of milling	15(mm)
Feed speed	200(mm/min)

End milling slot

Material of work piece	
Material	S45C, Hardness HS28
Size	(L)500x(W)100x(H)285(mm)
Tool used	
End milling cutter	
Diameter	30(mm)
No. of teeth	4 pieces
Material	SKH2
Milling data	
Contents of milling	milling slot
Revolution of the spindle	225(rpm)
Speed of milling	21(m/min)
Depth of milling	15(mm)
Milling width	30(mm)
Feed speed	50(mm/min)
Feed rate per tooth	0.06(mm/tooth)
Milling capacity	22.5(cm ³ /min)

Standard accessories

■ Coolant pump /	1piece	■ Shifting spanner46mm /	1piece
■ Tool box /	1piece	■ Spindle drawing bar /	1piece
■ Heavy duty eye bolt /	2pieces	■ Adjusting pin φ8 /	1piece
■ Standard screw washer /	4pieces	φ6 /	2pieces
■ L-shaped spanner /	1set	■ Automatic lubricating	
■ Socket spanner 24 /	1pieces	system /	1set
30 /	1piece	■ Cross screw drive(+)/	1piece
■ Grease gun /	1piece	■ Cross screw drive(-)/	1piece
		■ Head rotary round stick /	1piece

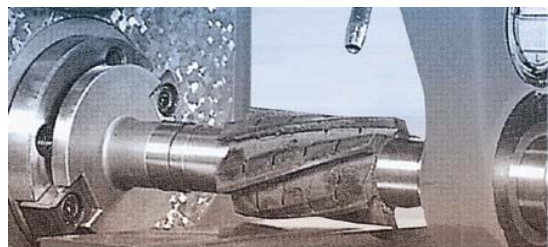
Optional accessories

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

SPECIFICATIONS

ITEM	MODEL	UH-1250A	H-1250	U-1250B	UH-1000A	H-1000	U-1000B	U-1000
Working table								
Area(WxL)		400x1800mm	400x1800mm	400x1800mm	360x1500mm	360x1500mm	360x1500mm	360x1500mm
Longitudinal travel		1250mm	1250mm	1250mm	1000mm	1000mm	1000mm	1000mm
Spindle center to table(Horizontal)								
Arbor arm is used		50-520mm	230-700mm	50-520mm	90-520mm	230-660mm	90-520mm	90-520mm
Arbor arm isn't used		360-790mm		360-790mm	400-830mm		400-830mm	400-830mm
Spindle nose to table (Vertical)		50-520mm		50-520mm	90-520mm		90-520mm	90-520mm
Cross travel		540mm	540mm	540mm	540mm	540mm	540mm	380mm
Feed speed changing (X,Y)		Variable	Variable	Variable	Variable	Variable	Variable	Variable
Longitudinal & cross fee speed		16-1200mm/min	16-1200mm/min	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	2000mm/min	2000mm/min
T-slot (W-number x L)		18x4x80mm	18x4x80mm	18x4x80mm	18x4x80mm	18x4x80mm	18x4x80mm	18x4x80mm
Table load max.		1000 kg	1000 kg	1000 kg	800 kg	800 kg	800 kg	800 kg
Spindle								
Spindle taper		NT#50	NT#50	NT#50	NT#50	NT#50	NT#50	NT#50
Number of steps to change speed		12	12/8	12	12	12/8	12	12
Spindle speeds (R.P.M.)		40,55,80,115,160, 225,315,440,620, 880,1240,1750	12 (40~1750) x1.33 95-1200	40,55,80,115,160, 225,315,440,620, 880,1240,1750	40,55,80,115,160, 225,315,440,620, 880,1240,1750	12 (40~1750) x1.33 95-1200	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	470mm	430mm	430mm	430mm	430mm
Number of steps to change vertical feed speed		Variable	Variable	Variable	Variable	Variable	Variable	Variable
Vertical feed speed		8-450mm/min	8-450mm/min	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	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(2HP)	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)	4P-5.5kw(7.5HP)
Feed motor	Longitudinal feed	1.50kw(2HP)	1.50kw(2HP)	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)	1.50kw(2HP)	1.50kw(2HP)
	Vertical feed	1.50kw(2HP)	1.50kw(2HP)	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)	2P-0.12kw(1/8HP)	2P-0.12kw(1/8HP)
Lubricating oil pump		6P-4W	6P-4W	6P-4W	6P-4W	6P-4W	6P-4W	6P-4W
Dimensions of the machine								
L x W x H		3000x2535x1830mm	3000x2535x1830mm	3000x2535x1830mm	2050x2535x1800mm	2050x2535x1800mm	2050x2535x1800mm	2050x2535x1800mm
Floor space		4250x2535mm	4250x2535mm	4250x2535mm	3050x2535mm	3050x2535mm	3050x2535mm	3050x2535mm
Net weight		About 3200kg	About 3000kg	About 3200kg	About 2900kg	About 2700kg	About 2900kg	About 2600kg

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		130-600mm	170-600mm	—				
Cross travel		540mm					380mm	
Variable traverse rates (X, Y)		Variable 無段變速						
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 speeds		8		8 / 12 (Select 可選擇)		8		
Spindle speeds (R.P.M.)		95,140,200,300,380,560,820,1200		8段: 95,140,200,300,380,560,820,1200 12段: (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 無段變速						
Vertical traverse rates		8-450mm						
Vertical rapid traverse rates		700mm/min						
Spindle centre to column surface		500mm		—				
Motor Details								
Spindle motor		4P-5.5KW (7.5HP)						
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		6P-4W						
Dimensions								
Length x width x height		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	H-1600	V-1600	U-1600 CNC	CNC-1600G	
Working table							
Table size		540 x 2200					
Longitudinal travel		1600					
Spindle nose to table		50~760	—	150~860	50~760	150~860	
Spindle centre to table (Horizontal)		50~760	90~800	—	50~760	—	
Cross travel		710 (Opt.:760)					
Variable traverse rates (X, Y)		Variable					
Longitudinal & cross traverse rates		16~1200			1~4000		
Longitudinal & cross rapid traverse rates		2000			4000		
T-slot (W-number x L)		18 x 6 x 80					
Max. table load		1500					
Spindle							
Spindle taper		NT 50				BT 50 / ATC 24 tools	
Number of speeds		8				2 steps L/H	
Spindle speeds (R.P.M.)		120~1500	125~1650	120~1500	120~1500	0~4500	
Column							
Vertical travel		710					
Vertical traverse rates (variable)		Variable 無段變速					
Vertical traverse rates		8~450			1~2000		
Vertical rapid traverse rates		700			2000		
Spindle centre to column surface		750	—	750	750	680	
Spindle nose to column surface		750	450	—	750	—	
CNC							
CNC controller		—			FANUC, HEIDENHAIN, and more		
Motor Details							
Spindle motor		15 HP				s.v 11 ~15 kW	
Feed motor	Longitudinal feed	3 HP (option: 5 HP)			s.v 2.5 kW		
	Cross feed	3 HP (option: 5 HP)			s.v 2.5 kW		
	Vertical feed	3 HP (option: 5 HP)			s.v 2.5 kW		
Coolant pump		0.18 kW				1.2 kW	
Lubrication pump		3L - 4W					
Dimensions							
Length x width x height		2850 x 3100 x 2650					
Floor space		2850 x 5100					
Net weight (approx)		6500				7200	
Packing							
Length x With x Height		3700 x 2300 x 2400					

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