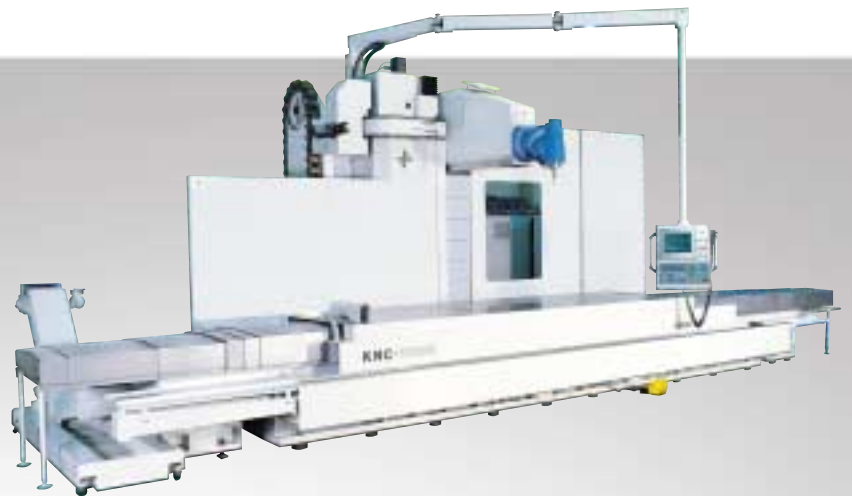


# U1000 U1000 SUPER

CNC BED TYPE MILLING MACHINE

# RT1000

CNC BED TYPE MILLING MACHINE WITH ROTARY TABLE



# U1000

## CNC Bed Type Milling Machine

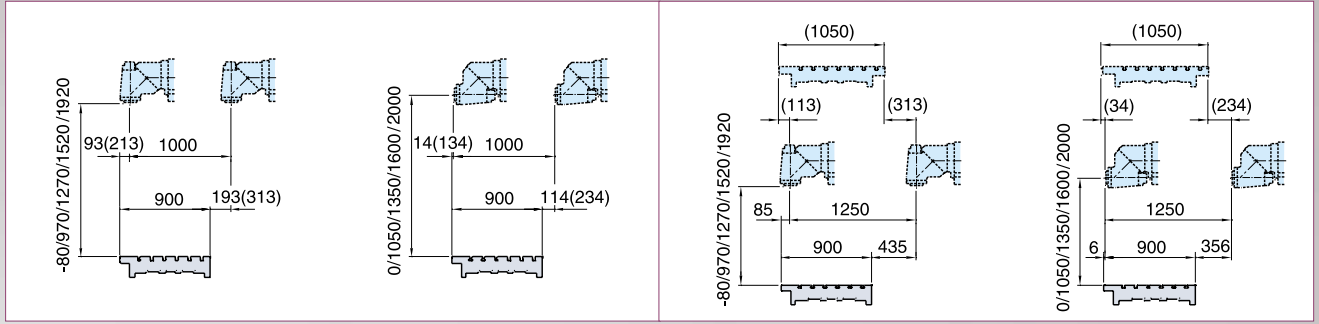


Machine Specification		U1000	
TABLE	Surface	2500 / 3100 / 3600 × 900(1050)mm	4100 / 4500 / 5000 × 900(1050)mm
	T-slots	No.6 × 22H7 (No.7 × 22H7)	
	Distance between T-slots	125 mm	
	Max. permissible load	8000kg (13000kg)	
TRAVEL	Longitudinal travel	2100 / 2600 / 3100mm	3600 / 4100 / 4500 / 5000mm
	Cross travel	1000mm (1250mm)	
	Vertical travel	1050mm (1350 / 1600 / 2000mm)	
FEED	Axis feedrate	5000mm/min	
	Rapid feedrate	X, Y : 12000, Z : 10000mm/min	10000mm/min
SPINDLE	Taper	50	
	Speed	4000rpm	
		2 steps : 0~1000, 1001~4000	
MOTOR	Spindle drive motor	28 / 38kw : Rated speed 1000rpm	
	Feed drive motor	X : 27, Y : 27, Z : 27Nm	X : 50 / 70 / 70 / 70, Y : 27, Z : 27Nm
WEIGHT	Approx. machine net weight	21~24 / 23~26 / 24~27ton	26 ~ 35ton

The contents of the catalogue are subject to change without prior notice.

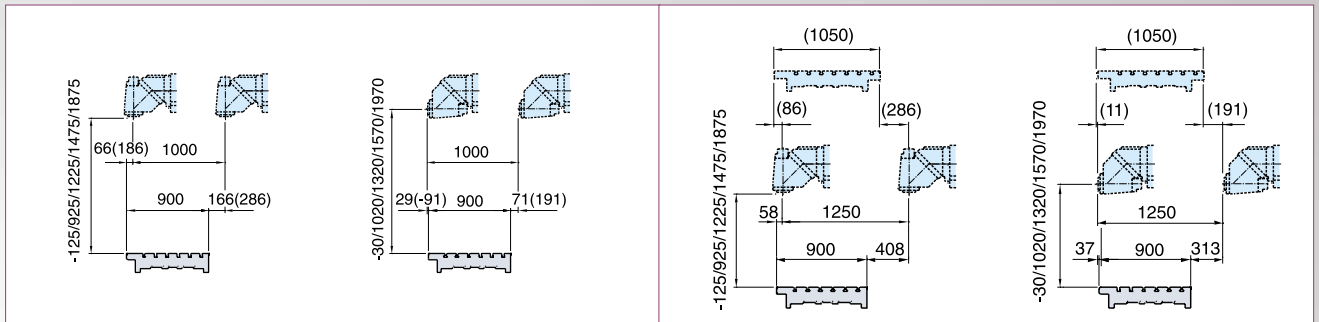
( ) : Option

### M Head



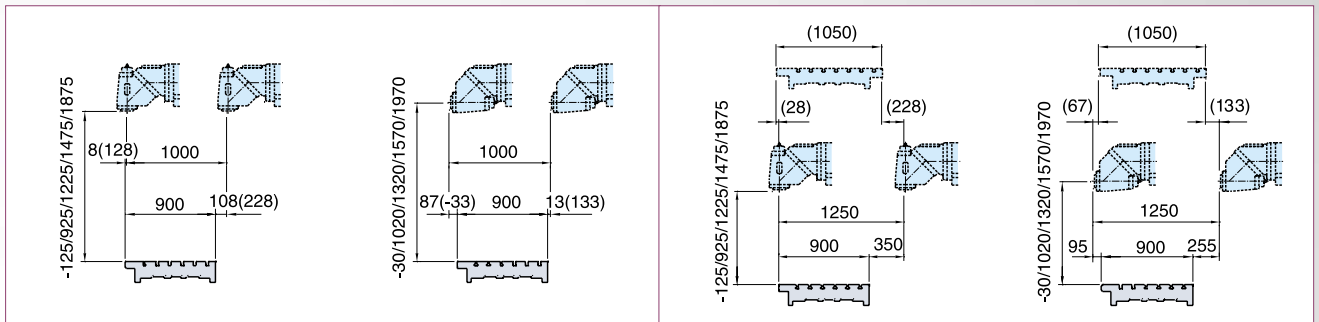
( ) : Option

### A2 Head



( ) : Option

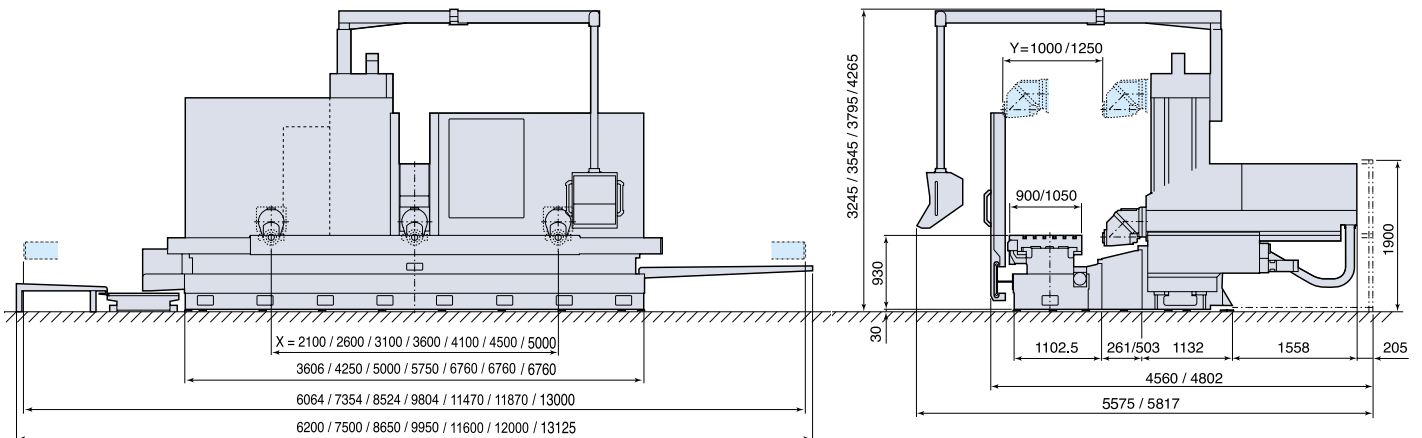
### A4 Head



( ) : Option

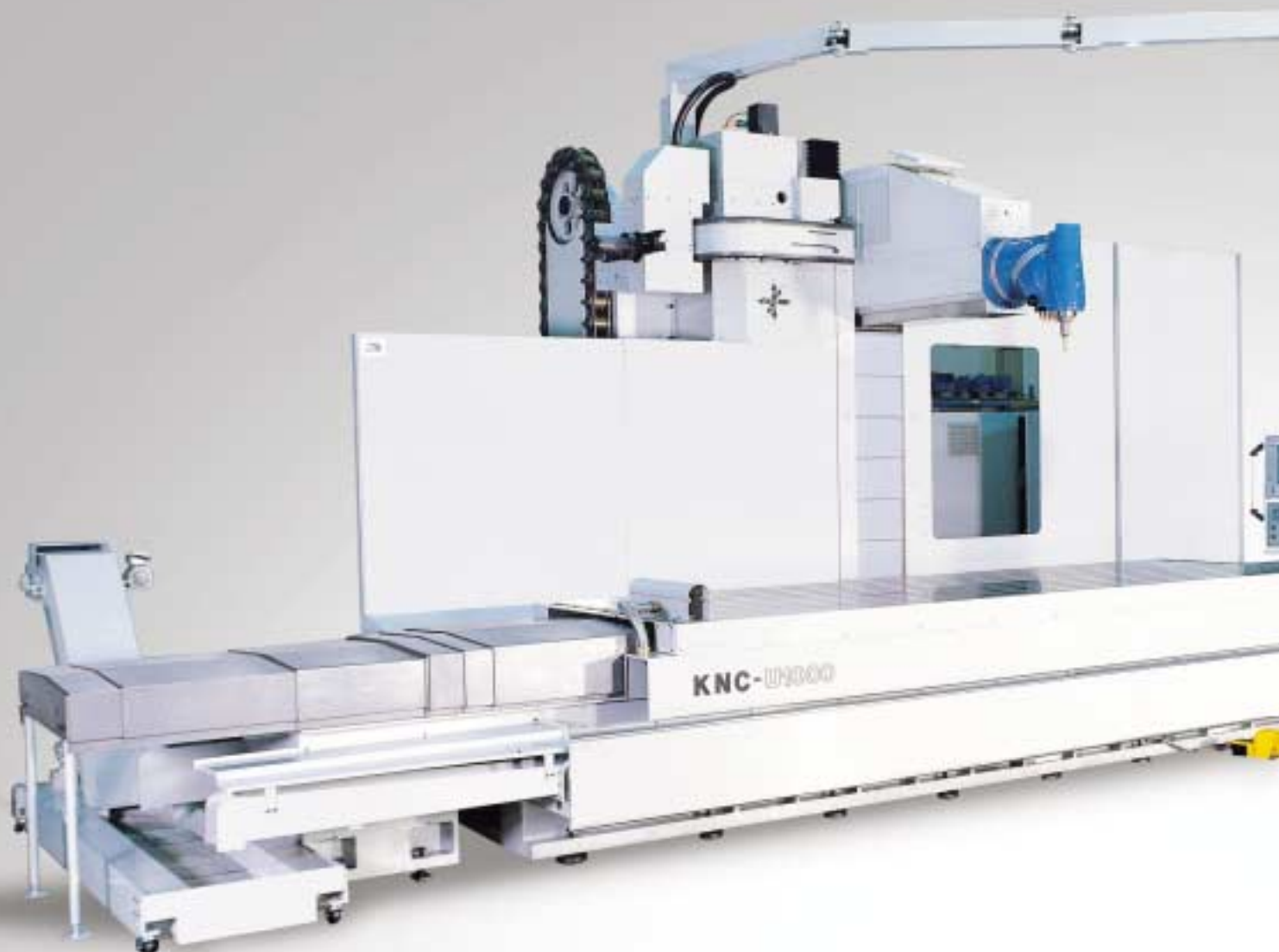
### Machine Dimension

X : 2100 / 2600 / 3100 / 3600 / 4100 / 4500 / 5000mm  
 Y : 1000 / 1250mm  
 Z : 1050 / 1350 / 1600 / 2000mm



# U1000 SUPER

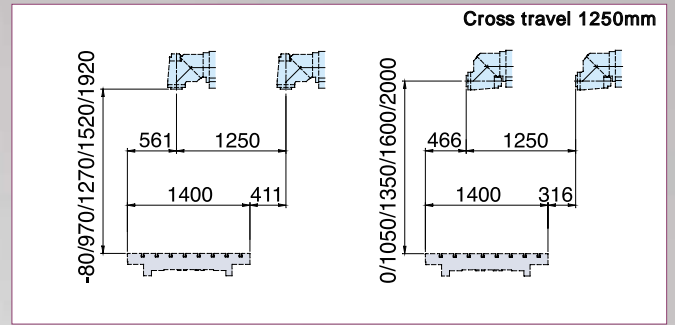
## CNC Bed Type Milling Machine



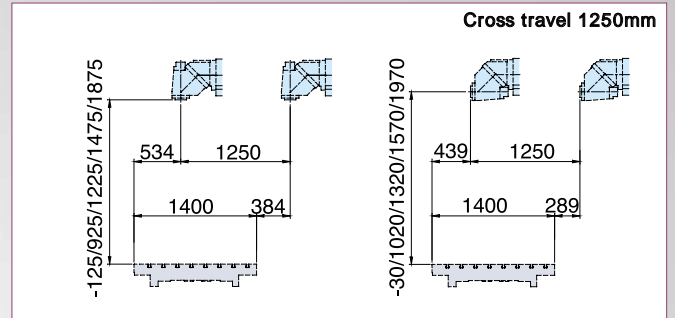
Machine Specification		U1000 SUPER
TABLE	Surface	4500 / 5000 × 1400mm
	T-slots	9 × 22H7mm
	Distance between T-slots	160mm
	Max. permissible load	13000kg
TRAVEL	Longitudinal travel	4100 / 4500 / 5000mm
	Cross travel	1250mm
	Vertical travel	1050 / 1350 / 1600 / 2000mm
FEED	Axis feedrate	5000mm/min
	Rapid feedrate	10000mm/min
SPINDLE	Taper	50
	Speed	4000rpm
		2 steps : 0~1000, 1001~4000
MOTOR	Spindle drive motor	28 / 38kw : Rated speed 1000rpm
	Feed drive motor	X : 70, Y : 27, Z : 27Nm
WEIGHT	Approx. machine net weight	33 ~ 40ton

The contents of the catalogue are subject to change without prior notice.

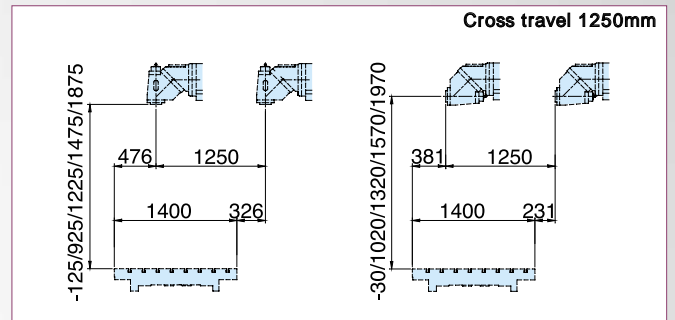
### M Head



### A2 Head

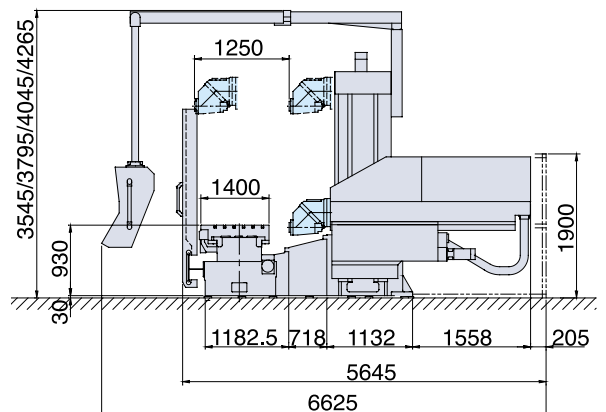
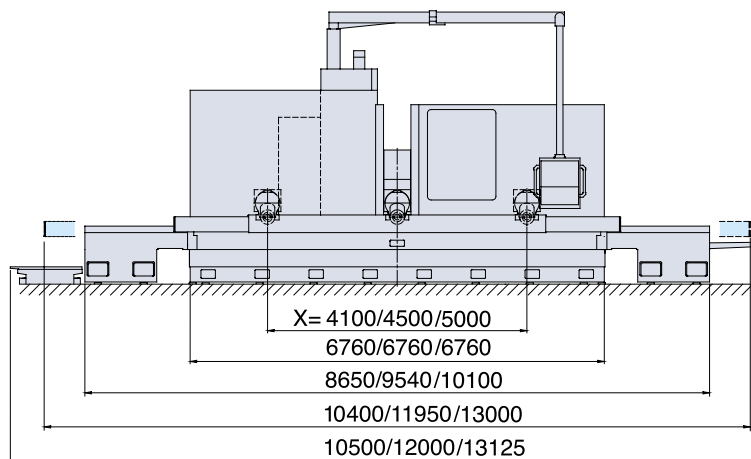


### A4 Head



### Machine Dimension

X : 4100 / 4500 / 5000mm  
 Y : 1250mm  
 Z : 1050 / 1350 / 1600 / 2000mm



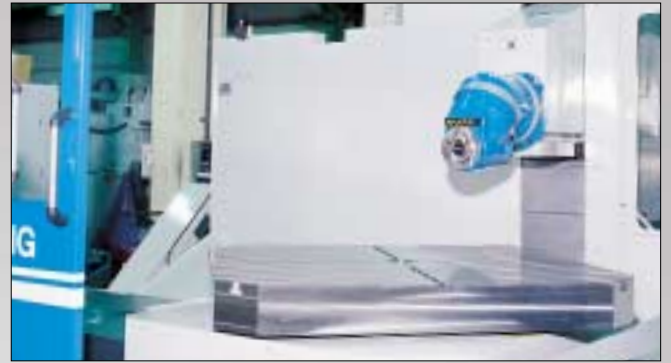
# RT1000

## CNC Bed Type Milling Machine with Rotary Table

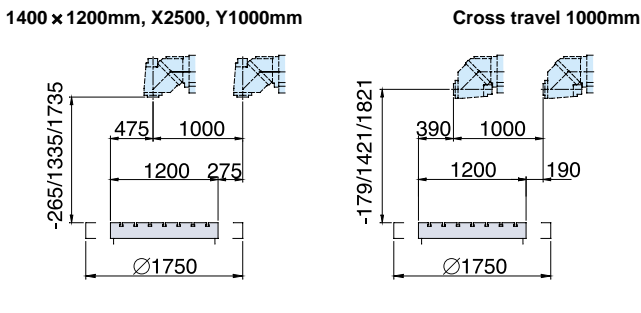


Machine Specification		RT1000	
<b>ROTARY TABLE</b>	Surface	1400 × 1200mm	1600 × 1400mm
	T-slots	9 × 22H7mm	11 × 22H7mm
	Distance between T-slots	125mm	
	Max. permissible load	8000kg	
	Table auto indexing	0.001°	
<b>TRAVEL</b>	Longitudinal travel	2500mm	3000mm
	Cross travel	1000mm	1250mm
	Vertical travel	1600, 2000mm	1600, 2000mm
<b>FEED</b>	Axis feedrate	5000mm/min	
	Rapid feedrate	X, Y : 12000, Z : 10000mm/min, B : 6rpm	
<b>SPINDLE</b>	Taper	50	
	Speed	4000rpm	
<b>MOTOR</b>	Spindle drive motor	28 / 38kw : Rated speed 1000rpm	
	Feed drive motor	X : 50, Y : 27, Z : 27, B : 50Nm	X : 70, Y : 27, Z : 27, B : 70Nm
<b>WEIGHT</b>	Approx. machine net weight	25 ~ 30ton	32 ~ 36ton

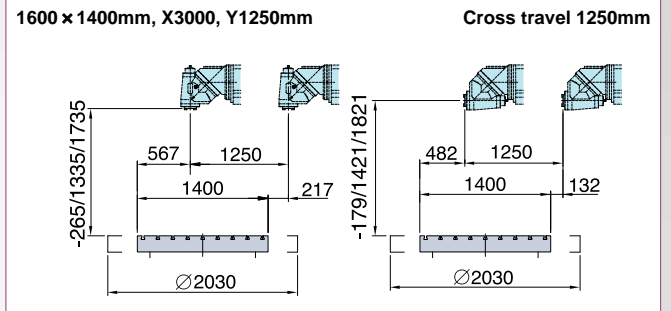
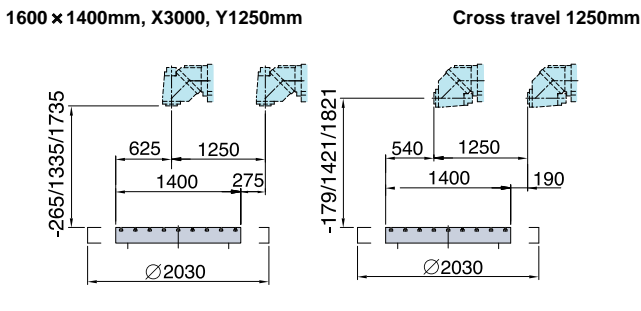
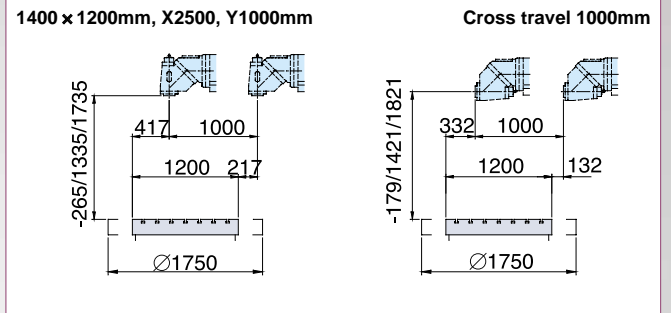
The contents of the catalogue are subject to change without prior notice.



### A2 Head

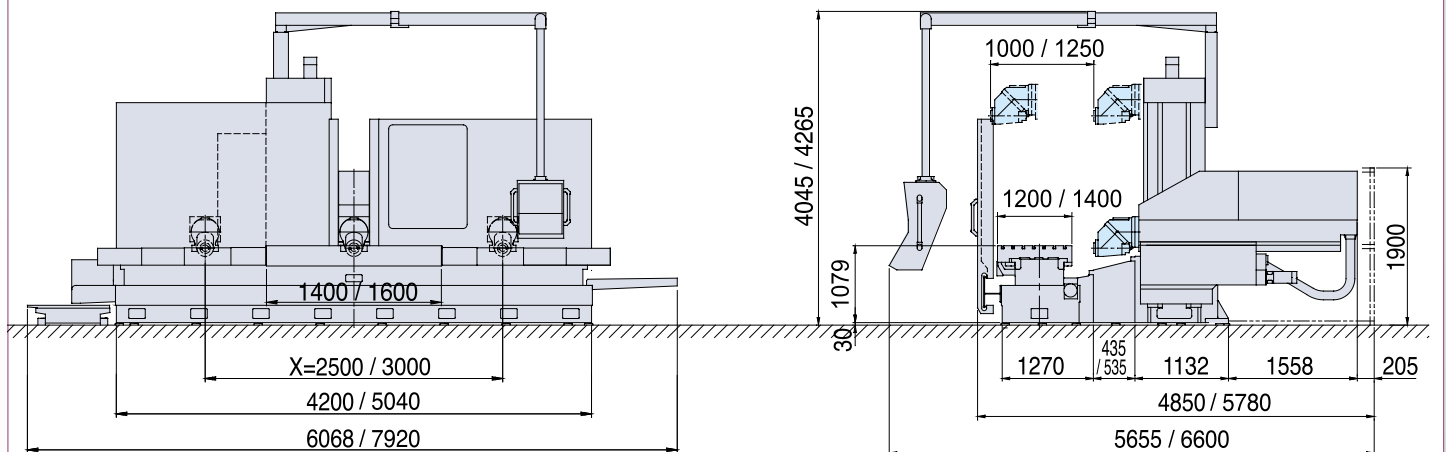


### A4 Head



### Machine Dimension

TABLE : 1400 x 1200 / 1600 x 1400mm  
 X : 2500 / 3000mm  
 Y : 1000 / 1250mm  
 Z : 1600, 2000 / 1600, 2000mm



# Quality Machine

Total quality control always aiming for higher quality!

## Hand Scrapping

The accuracy of U1000 is guaranteed by the craftsman's art of scraping measured in micron.



## INA Roller shoes and INA Steel way : Only for Cross travel 1250mm

INA Roller shoes on the saddle and INA Steel way on the column guarantee the long life geometric accuracy.



## Meehanite cast

Critical parts, such as base, column, saddle, table and head etc., are made of Meehanite cast iron.



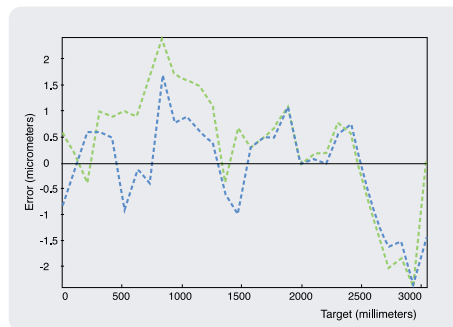


### Positioning accuracy by laser

In order to guarantee positioning and repeatability accuracy, every U1000 is inspected with laser, while backlash and pitch error is compensated. Also, every axis is equipped with linear scale.

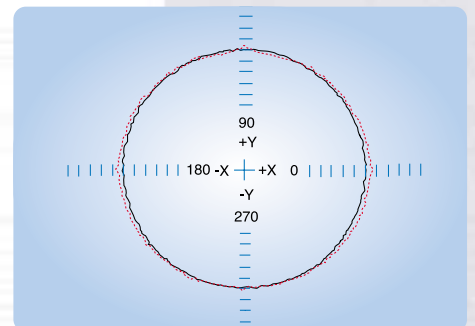


### Linear scale



### Roundness by ball bar test

In order to guarantee the machine geometry and roundness accuracy, every U1000 is inspected with Renishaw QC10 ball bar test. The following is the result from Kiheung's German customer, which was checked in customer's factory.



# Basic Structure



Saddle



Column



Ram



ZF Gear box



Table



Bed

# Optional



## A2 Head (Automatic 2 Positioning Head)

Automatic 2 positioning (Vertical/ Horizontal) and manual positioning through 360° between upper head and ram gear box.

## A4 Head (Automatic 144 × 144 Positioning Head)

Automatic 144 × 144 positioning through curvic coupling both upper head/ram gear box and lower head/upper head.



## Direct Horizontal Spindle Head with 6,000 rpm

: 2 step gear change

## Sub. Angle Table

1300 × 1100 × 625(H)mm



## Coolant Through Spindle

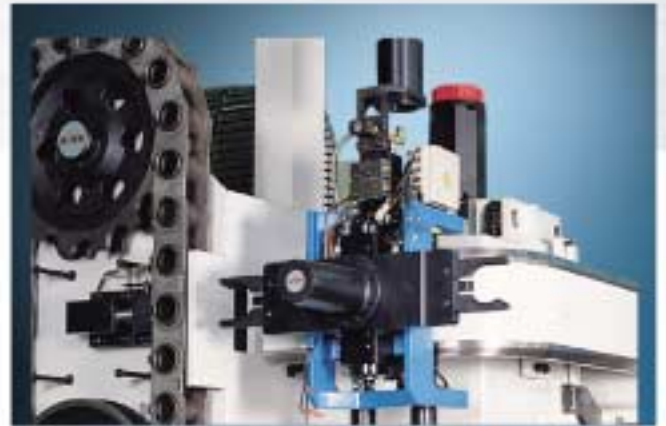
Two tanks(Dirty tank 200 +Clean tank 1,000 )  
Automatic paper band filtering system(10μm)  
16 bar coolant through spindle  
8 bar coolant through nozzle



**20, 30 Tools Vertical ATC**  
 Cam and cam follower 20,30 tools automatic tool changer driven by geared motor.



**30, 40, 50, 60 Tools Horizontal ATC**  
 Chain type 30, 40, 50, 60 tools magazine is driven by servo motor and positioning by Heidenhain rotary encoder. Carriage and gripper is operated by hydraulic system.



**30, 40, 50, 60 Tools Vertical / Horizontal ATC**  
 Vertical / Horizontal ATC reduces tool changing time about 30 seconds compared to Horizontal ATC.



**Complete Enclosure**

**Chip Conveyor**

Chip screw in front and in the rear of the bed removes chips automatically with push button or M function. Lift-up chip conveyor collects chips into chip reservoir and circulates coolant water automatically.



2 Chip Screw



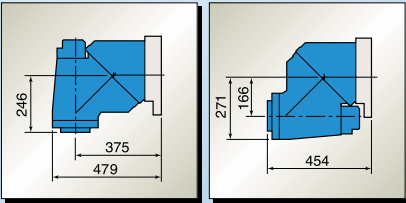
Lift up chip conveyor

# Optional

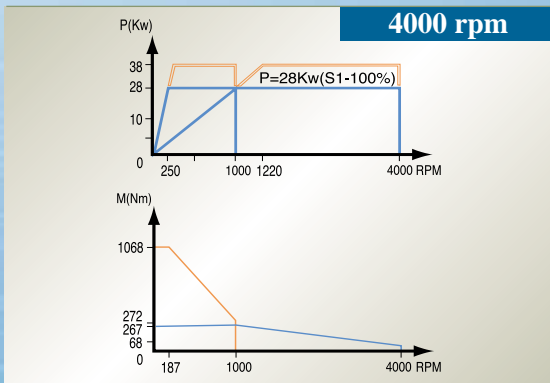
# Standard

- Heidenhain iTNC530
- Heidenhain linear scale
- Heidenhain HR410 electronic handwheel
- Preparation of Heidenhain TS220
- 4000 ( 2step : 0~1000, 1001~4000) spindle rpm
- Ram with ZF gear box
- Bed, column, saddle and head in Meehanite cast
- Oil cooler
- Flood coolant system with tank and 2.5 bar coolant pump
- Axes with Siemens digital servo motor
- Automatic power off with M function
- Air blow
- Spindle air blast for A2, A4 head

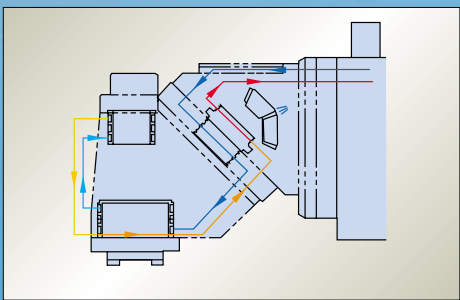
- M Head.  
Manual positioning  
Spindle nose DIN 2080 / DIN 69871



## ■ Spindle Motor



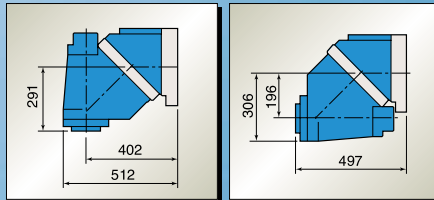
## ■ Head cooling



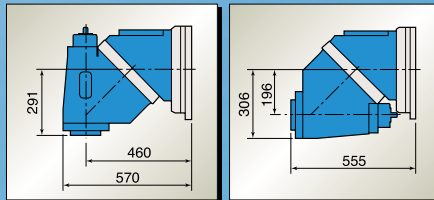
- Other numerical control
- Extended spacer between column & bed for horizontal use
- 1050mm table width for vertical use
- Strong table with one T-slot 22 H7 in front of the table
- Sub, Angle Table 1300 x 1100 x 625(H)mm
- Heidenhain DA300 compressed air unit for linear scale
- Preparation of Heidenhain TT130
- Spindle orientation for rigid tapping
- 20, 30 tool vertical tool changer : M, A2, A4 head
- 30, 40, 50, 60 tool horizontal tool changer : A2, A4 head
- 30, 40, 50, 60 tool verti/horizontal tool changer : M, A2, A4 head
- High pressure flood coolant system with tank & 8 bar pump
- CTT(Coolant through tool)
- CTS(Coolant through spindle) : 2 tanks & paper band filtering
  - 10µm filtering capacity
  - 16 bar coolant pump for through spindle
  - 8 bar coolant pump for through nozzle
- Chip screw in the rear of the bed
- Chip screw in front of the bed
- Lift up chip conveyor
- Preparation of continuous 4th axis
- Two door guard
- Complete enclosure
- Air conditioner for electric cabinet, Roof mounted
- One additional foot switch in the rear of the bed

O : Standard  
X : Not available  
\* : Optional

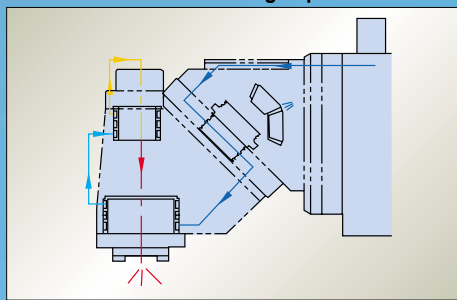
- A2 Head  
Automatic 2 positioning (vertical, horizontal)  
Spindle nose DIN 69871



- A4 Head  
Automatic 144 x 144 positioning in two axes  
Spindle nose DIN 69871



- Head cooling with 16 bar coolant through spindle



	U1000	U1000 SUPER	RT1000
■ Other numerical control	*	*	*
■ Extended spacer between column & bed for horizontal use	*	*	*
■ 1050mm table width for vertical use	*	X	X
■ Strong table with one T-slot 22 H7 in front of the table	*	*	X
■ Sub, Angle Table 1300 x 1100 x 625(H)mm	*	*	*
■ Heidenhain DA300 compressed air unit for linear scale	*	*	*
■ Preparation of Heidenhain TT130	*	*	*
■ Spindle orientation for rigid tapping	*	*	*
■ 20, 30 tool vertical tool changer : M, A2, A4 head	*	*	*
■ 30, 40, 50, 60 tool horizontal tool changer : A2, A4 head	*	*	*
■ 30, 40, 50, 60 tool verti/horizontal tool changer : M, A2, A4 head	*	*	*
■ High pressure flood coolant system with tank & 8 bar pump	*	*	*
■ CTT(Coolant through tool)	*	*	*
■ CTS(Coolant through spindle) : 2 tanks & paper band filtering			
• 10µm filtering capacity			
• 16 bar coolant pump for through spindle	*	*	*
• 8 bar coolant pump for through nozzle	*	*	*
■ Chip screw in the rear of the bed	*	*	*
■ Chip screw in front of the bed	*	*	*
■ Lift up chip conveyor	*	*	O
■ Preparation of continuous 4th axis	*	*	*
■ Two door guard	*	*	*
■ Complete enclosure	*	*	*
■ Air conditioner for electric cabinet, Roof mounted	*	*	*
■ One additional foot switch in the rear of the bed	*	*	*

Agent / Distributor



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43 - 1

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