

KNC-U1000 **KNC-U1000 SUPER**

CNC Bed Type Milling Machine

KNC-RT1000

CNC Bed Type Milling Machine
with Rotary Table

KNC-U1000 SUPER



KNC-U1000

CNC Bed Type Milling Machine

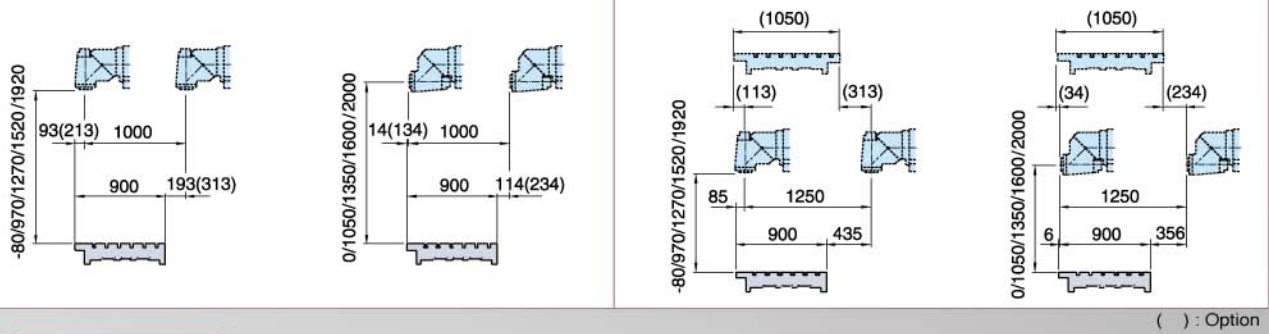


Machine Specification		KNC-U1000	
TABLE	Surface	2500 / 3100 / 3600 × 900(1050)mm	4100/4500/5000 × 900(1050)mm
	T-slots	No.6 × 22H7 (No.7 × 22H7)	
	Distance between T-slots	125 mm	
	Max. permissible load	8000kg (13000kg)	
TRAVEL	Longitudinal travel	2100 / 2600 / 3100mm	3600/4100/4500mm
	Cross travel	1000mm (1250mm)	
	Vertical travel	1050mm (1350 / 1600 / 2000mm)	
FEED	Axis feedrate	5000mm/min	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	22/30kw : Rated speed 1000rpm	
	Feed drive motor	X : 27, Y : 20(27), Z : 27Nm	X : 50, Y : 20(27), Z : 27Nm
WEIGHT	Approx. machine net weight	21~24 / 22.5~25.5 / 24~27ton	25.5~31.5ton

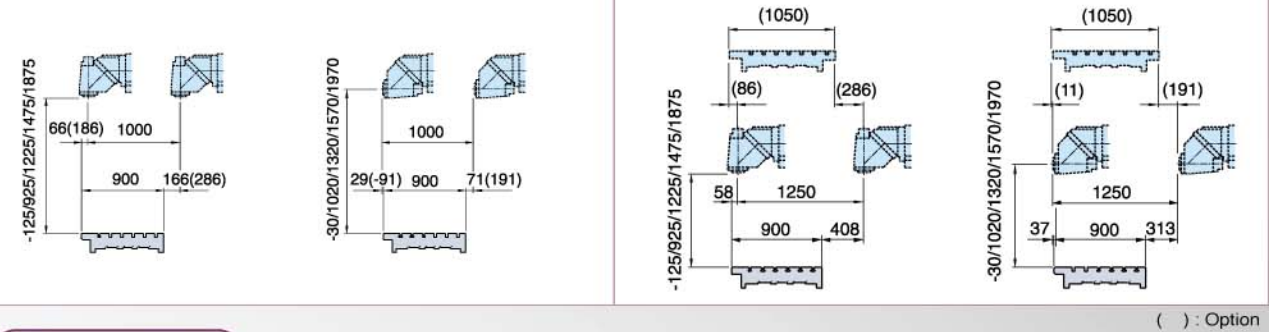
The contents of the catalogue are subject to change without prior notice.

() : Option

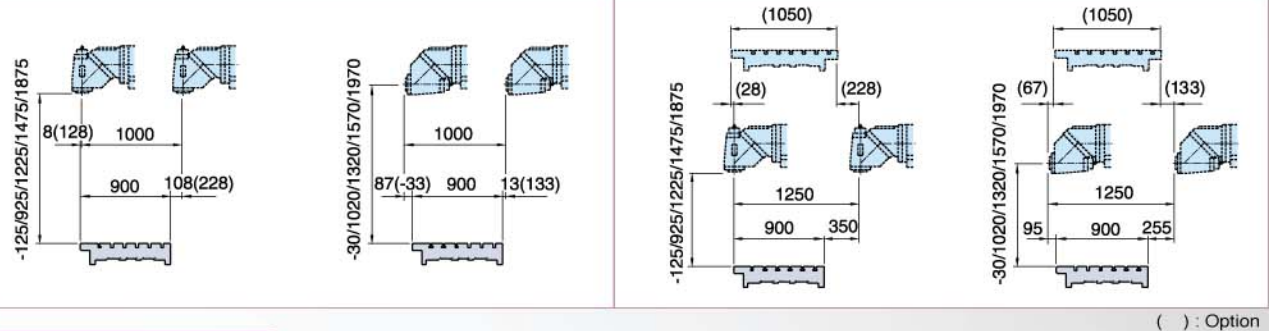
M Head



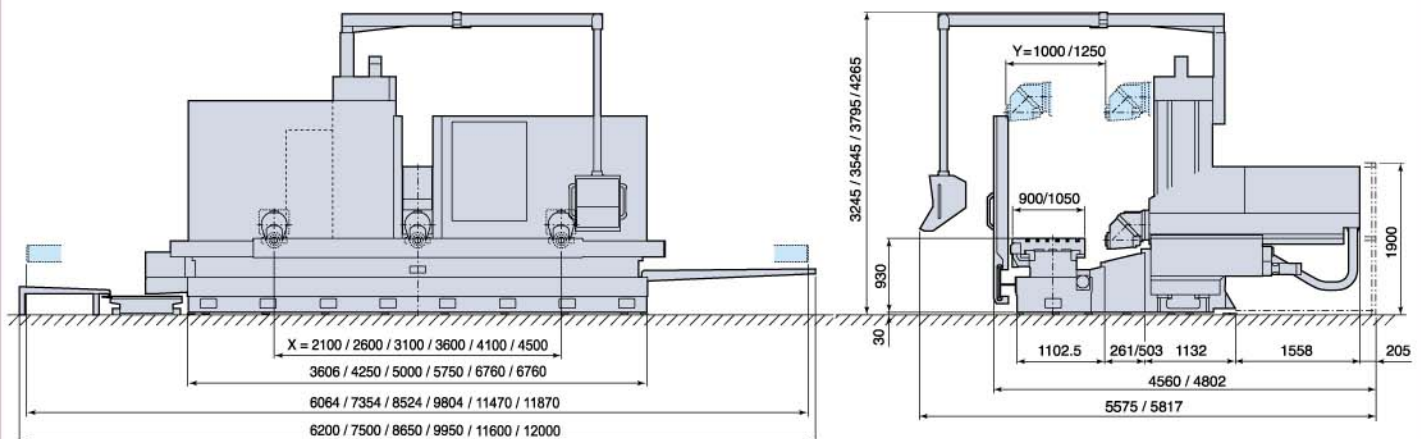
A2 Head



A4 Head

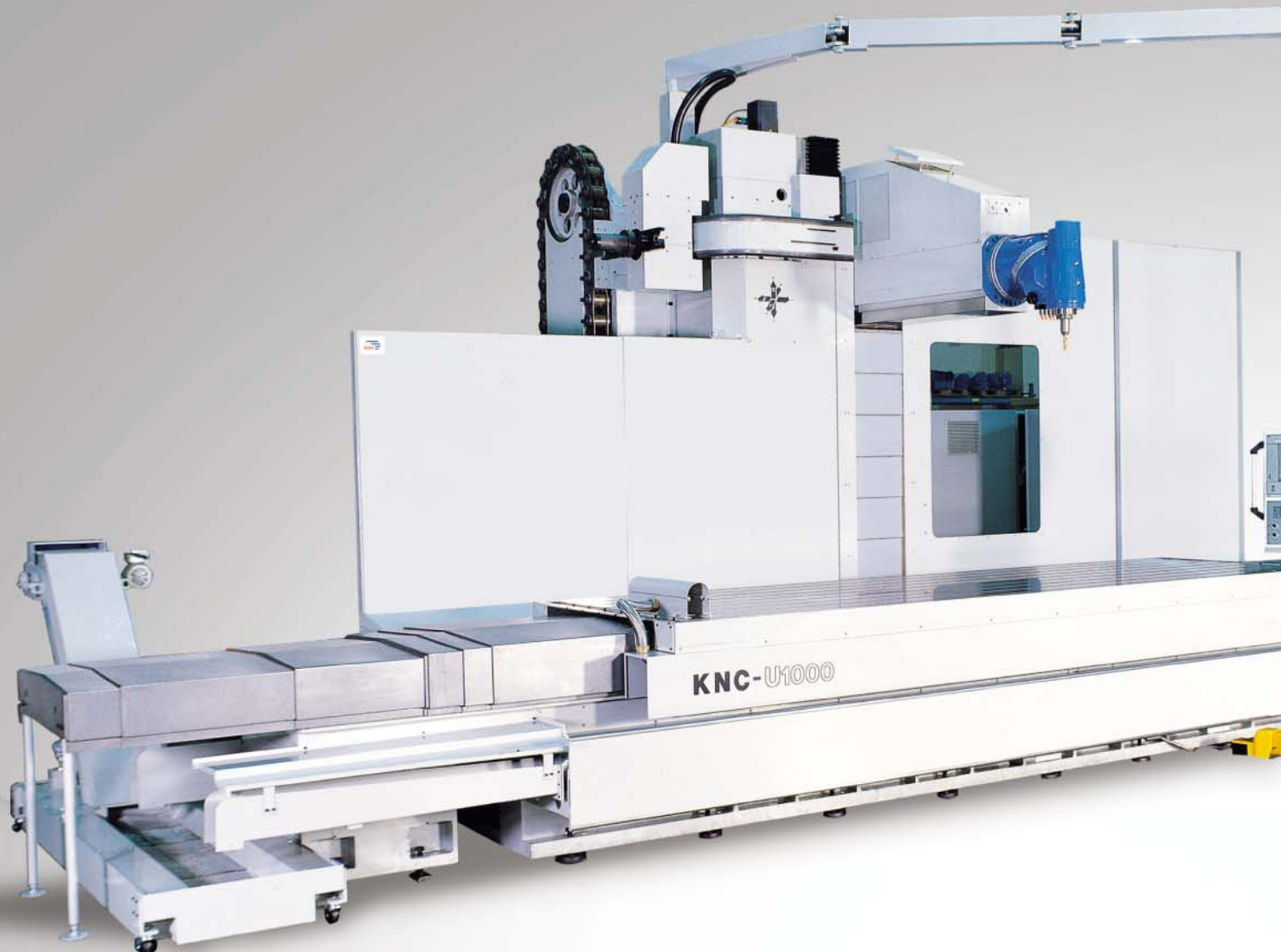


Machine Dimension



KNC-U1000 SUPER

CNC Bed Type Milling Machine

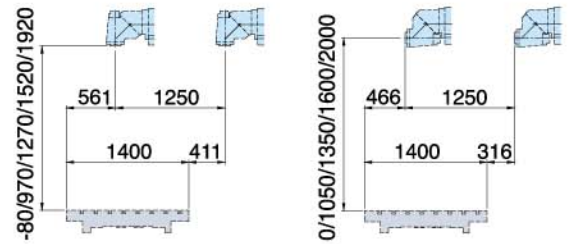


Machine Specification		KNC-U1000 SUPER
TABLE	Surface	4500/5000 × 1400mm
	T-slots	9 × 22H7mm
	Distance between T-slots	160mm
	Max. permissible load	13000kg
TRAVEL	Longitudinal travel	4100/4500mm
	Cross travel	1250mm
	Vertical travel	1050/1350/1600/2000mm
FEED	Axis feedrate	5000mm/min
	Rapid feedrate	10000mm/min
SPINDLE	Taper	50
	Speed	4000rpm
		2 steps : 0~1000, 1001~4000
MOTOR	Spindle drive motor	22/30kw : Rated speed 1000rpm
	Feed drive motor	X : 75, Y : 27, Z : 27Nm
WEIGHT	Approx. machine net weight	33~38ton

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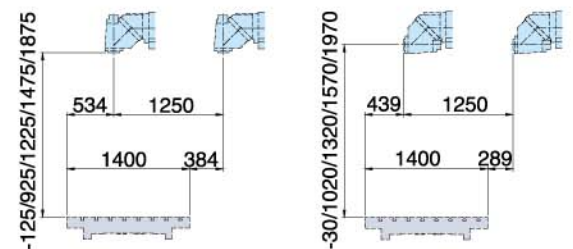
M Head

Cross travel 1250mm



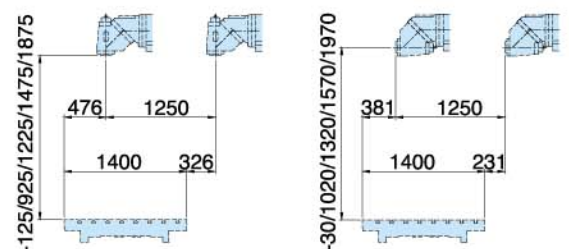
A2 Head

Cross travel 1250mm

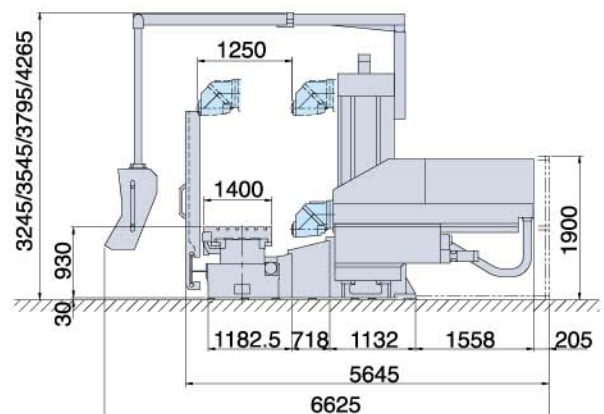
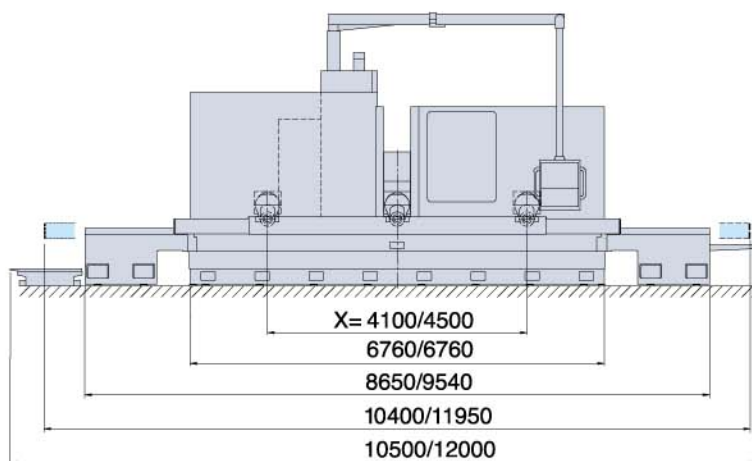


A4 Head

Cross travel 1250mm



Machine Dimension



KNC-RT1000

CNC Bed Type Milling Machine with Rotary Table



Machine Specification		KNC-RT1000
TABLE	Surface	1400 × 1200mm
	T-slots	9 × 22H7mm
	Distance between T-slots	125mm
	Max. permissible load	8000kg
	Table auto indexing	0.001°
TRAVEL	Longitudinal travel	2500mm
	Cross travel	1000mm
	Vertical travel	1600/2000mm
FEED	Axis feedrate	5000mm/min
	Rapid feedrate	X, Y : 12000, Z : 10000mm/min
SPINDLE	Taper	50
	Speed	4000rpm
MOTOR	Spindle drive motor	22/30kw : Rated speed 1000rpm
	Feed drive motor	X : 50, Y : 20, Z : 27, B : 36Nm
WEIGHT	Approx. machine net weight	22~25ton

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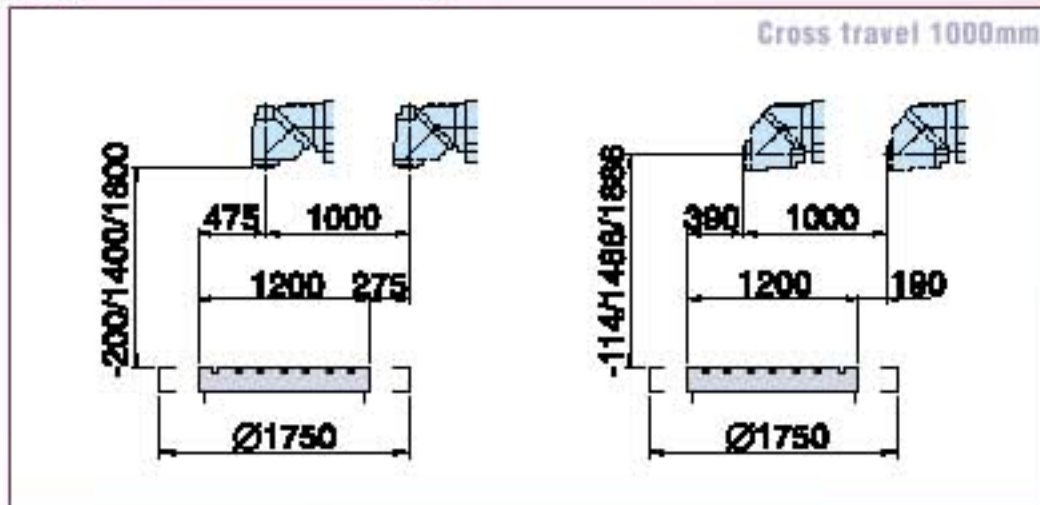


KNC-RT1000 with Rotary table and Kiheung A2, A4 head enables machining every angle including 5 faces.

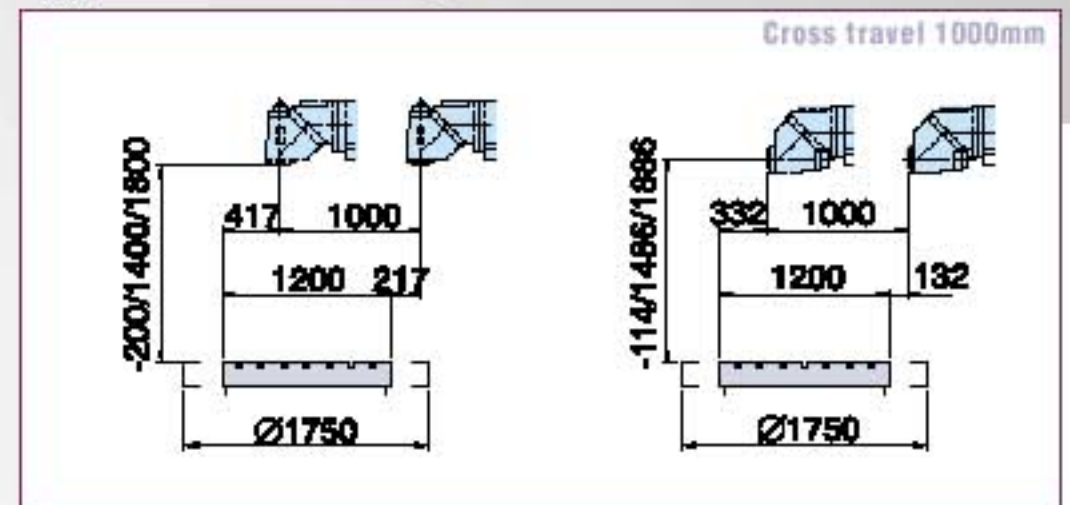
수직, 수평 및 임의의 각도로 자동 회전되는 A2, A4헤드와
최소 분할 각도 0.001°의 로타리 테이블 장착

오면 가공 실현!
다면 다각 가공 실현!

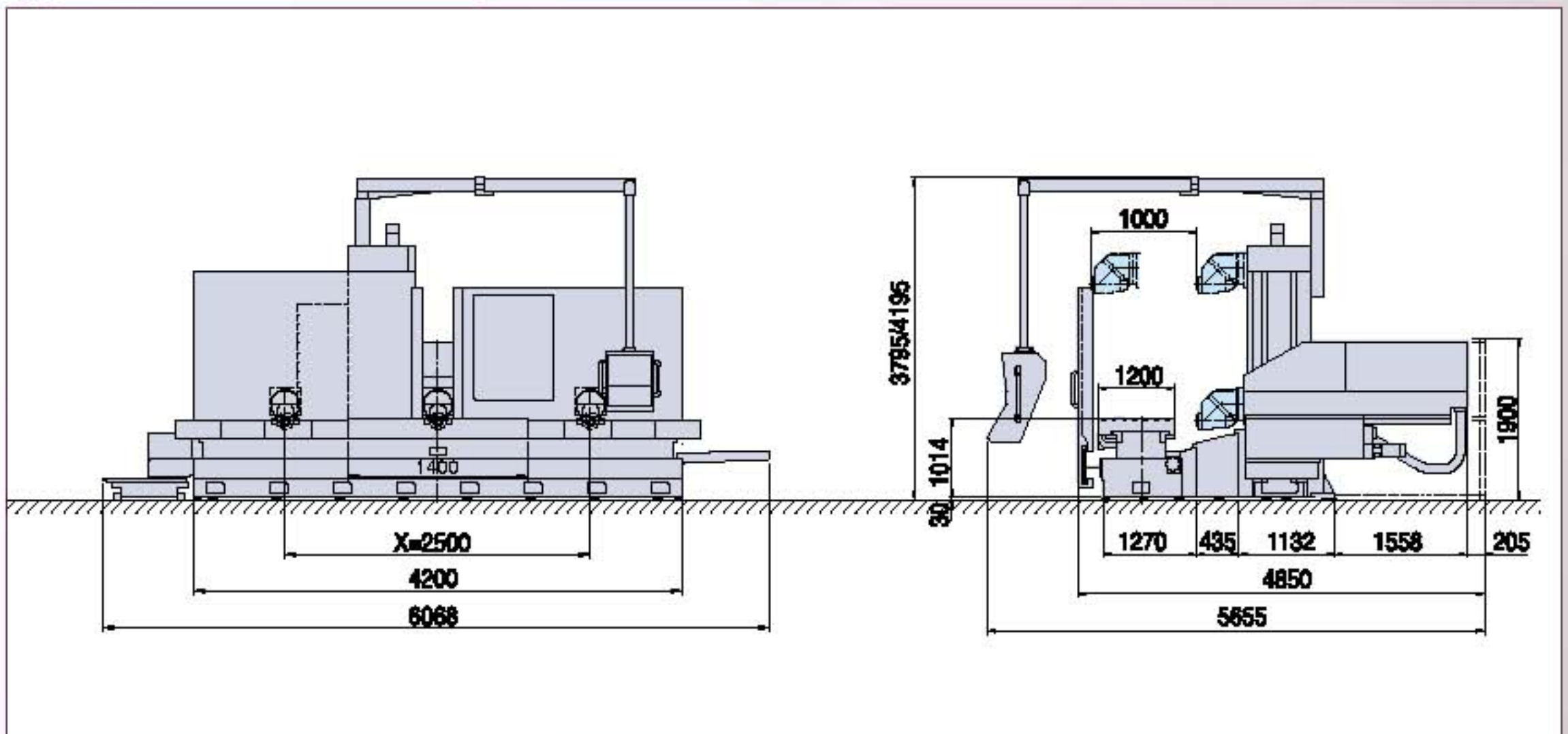
A2 Head



A4 Head



Machine Dimension



Quality Machine

Total quality control always aiming for higher quality!



Hand Scrapping

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



Meehanite cast

Critical parts of KNC-U1000, such as base, column, saddle, table and head etc., are made of Meehanite cast iron.



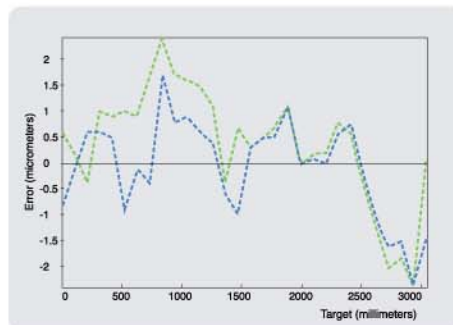
Positioning accuracy by laser

In order to guarantee positioning and repeatability accuracy, every KNC-U1000 is inspected with laser, while backlash and pitch error is compensated.

Also, every axis is equipped with linear scale.

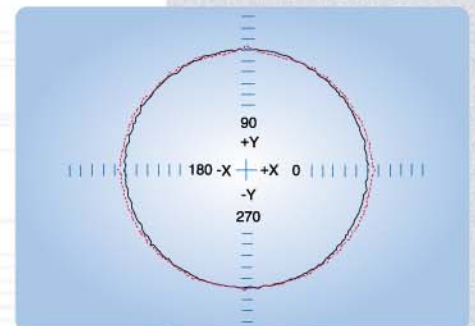


Linear scale



Roundness by ball bar test

In order to guarantee the machine geometry and roundness accuracy, every KNC-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

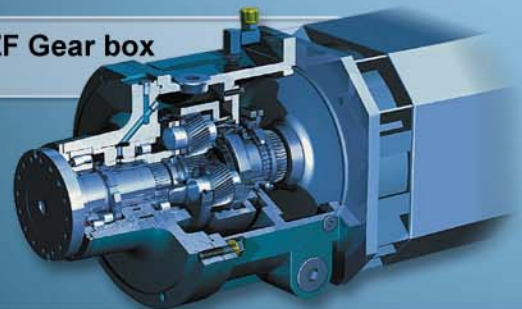


Column



Ram

ZF Gear box



Table



Bed



Optional

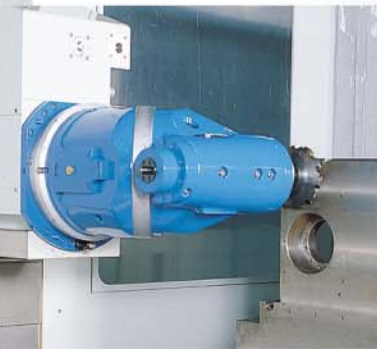


A2 Head (Automatic 2 Positioning Head)

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

Direct Horizontal spindle with 6,000rpm
: 2 step gear change



Coolant Through Spindle

Two tanks(Dirty tank 200ℓ+Clean tank 1,000ℓ)

Paper band filtering system(10μm)

16 bar coolant through spindle

8 bar coolant through nozzle





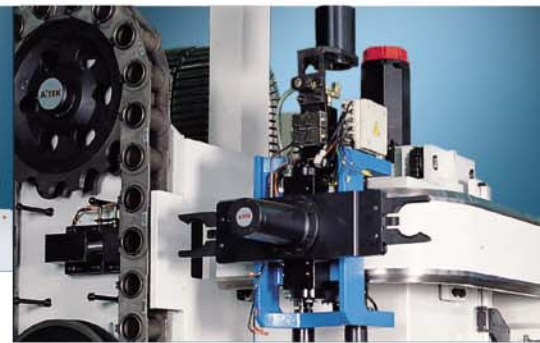
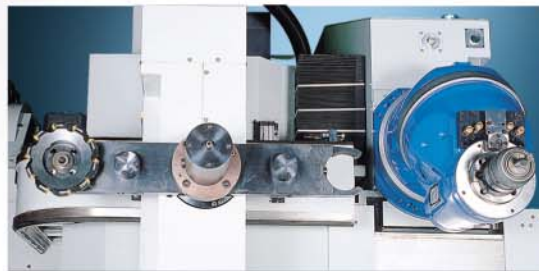
20 Tools Vertical ATC

Cam and cam follower 20 tools automatic tool changer driven by geared motor.



30, 40, 50 Tools Horizontal ATC

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



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

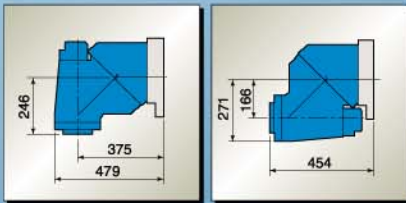


Line up chip conveyor

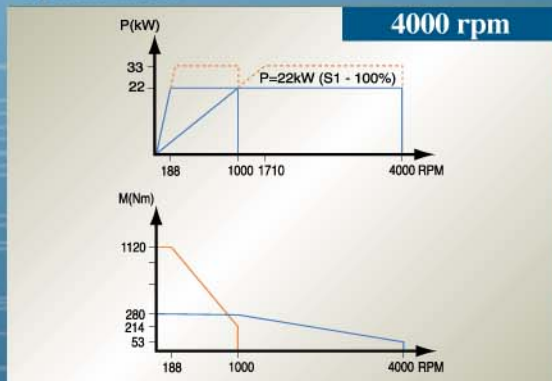
Optional

Standard

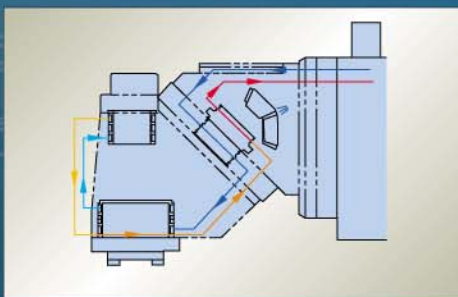
- Heidenhain iTNC530
- Heidenhain linear scale
- Heidenhain HR410 electronic handwheel
- Preparation of Heidenhain TS220
- 4000 (2step : 0~1000, 1001~4000) spindle rpm
- Ram with ZF gear box
- Bed, column, saddle and head in Meehanite cast
- Oil cooler
- Flood coolant system with tank and 2.5 bar coolant pump
- Axes with Siemens digital servo motor
- Automatic power off with M function
- Air blow
- Spindle air blast
- 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
- Heidenhain DA300 compressed air unit for linear scale
- Preparation of Heidenhain TT130
- Spindle orientation for rigid tapping
- 20 tool vertical tool changer : M, A2 head
- 30, 40, 50 tool horizontal tool changer : A2, A4 head
- 30, 40, 50 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
 - 10 μ m 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

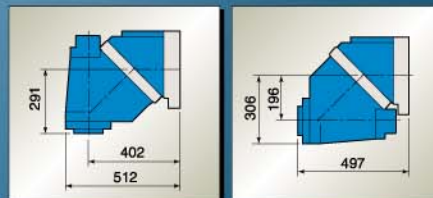
O : Standard

X : Not available

★ : Optional

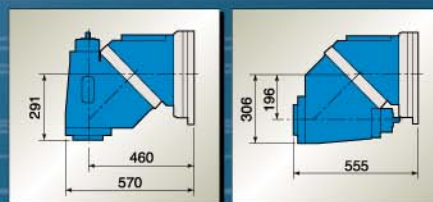
■ A2 Head

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

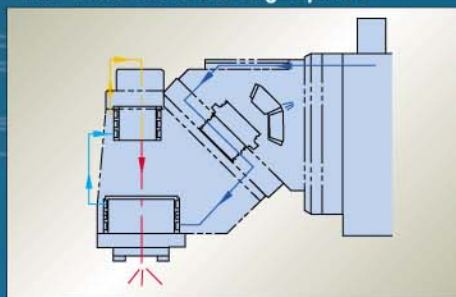


■ A4 Head

Automatic 1442144 positioning in two axes Spindle
nose DIN 69871



■ Head cooling with 16 bar coolant through spindle



	KNC-U1000	KNC-U1000 SUPER	KNC-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
Heidenhain DA300 compressed air unit for linear scale	★	★	★
Preparation of Heidenhain TT130	★	★	★
Spindle orientation for rigid tapping	★	★	O
20 tool vertical tool changer : M, A2 head	★	★	★
30, 40, 50 tool horizontal tool changer : A2, A4 head	★	★	★
30, 40, 50 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	★	★	★
Chip screw in the rear of the bed	★	★	★
Chip screw in front of the bed	★	★	★
Lift up chip conveyor	★	★	★
Preparation of continuous 4th axis	★	★	O
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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