KIHEUNG

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U1050N

BED TYPE MILLING CENTER

KIHEUNG MACHINERY CO., LTD

MILLING MACHINE / MACHINING CENTER / COLUMN TRAVEL

KIHEUNG ENDEAVOURS TO OFFER THE ULTIMATE TO CUSTOMERS THROUGHOUT THE WORLD.

Since founded in 1968, KIHEUNG has become one of the most advanced and leading machine tool manufacturers with an effort to supply high quality product to customers.

KIHEUNG specialized in CNC bed type milling machine, travelling column boring and milling center, Double column machining center, Simultaneous five axis machining center, Double column 5 axis and vertical turning machine, is determined to enhance the quality by respecting the customer's requirements with the philosophy of

"FULL SATISFACTION TO THE CUSTOMER AND ENDLESS SERVICE TO THE CUSTOMER"

Through the spirit of mutual co-operation, KIHEUNG is able to ensure the continuous distribution with high quality machine tools designed to satisfy customer's requirements all over the world. Thanking and trusting in your continuous support.

KIHEUNG History

1968	KiHEUNG machinery works founded
1978	Developed conventional bed type milling machine
1989	KiHEUNG foundry Co. established Start to exhibit EMO exhibition
1990	Developed CNC bed type milling machine
1995	The current plant (20,000㎡) established in Daejeon, Korea
1996	CE certicate from TUV, Germany
2002	KiHEUNG USA established
2003	Awarded ISO 9001 certificate
2004	Developed double column machining center, MiMAX
2005	Developed simultaneous 5 axis machining center, FTV 500
2006	Developed column travel boring and milling center, HiTRAX
2007	Developed double column 5 axis and vertical turning machine, FTU 1200
2008	KiHEUNG German established Developed fixed bed column travel boring and milling center, RiGiTRAX
2009	Awarded 20 million dollar export prize from Korea government
2010	Developed column travel boring and milling center, WiNGTRAX New ultra-modern foundry with double induction furnaces on 15,000㎡ established
2012	Developed Orthogonal Head (2.5° x2.5° , 1° x1°)
2014	Developed Continuous universal head
2015	Developed Linear guide type U1050N and U1250N, and traveling milling machine TRAX
2016	Developed Universal Head K5, K6 and T4 with the spindle rpm 5000/6000
2017	Developed Universal Head S5 and S6 (0.001° x0.001°)

BED TYPE MILLING CENTER

U1050N

U1050N Video

Machine Specification		U1050N
TABLE	Surface	2200 / 2700 / 3200 × 900 mm
	T-slot	No.7 × 22 mm
	Distance between T-slot	125 mm
	Max. permissible load	8000 / 9000 / 10000 kg
TRAVEL	Longitudinal travel	2000 / 2500 / 3000 mm
	Cross travel	1050 mm
	Vertical travel	1300 / 1600 mm
FEED	Axis feed rate	10000 mm / min
	Rapid feed rate	X, Y, Z : 16000 mm / min
SPINDLE	Taper	50
	Speed	4000 rpm, 2 steps (0~1000, 1001~4000)
MOTOR	Spindle drive motor	24 / 38 kw
	Feed drive motor	X : 28 Nm, Y : 21.6 Nm, Z : 28 Nm
WEIGHT	Approx. machine net weight	19 / 21 / 23 ton

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

Universal Head

Universal head consisting of upper head and lower head can be turned to desired angle, which is suitable for combined angle milling.

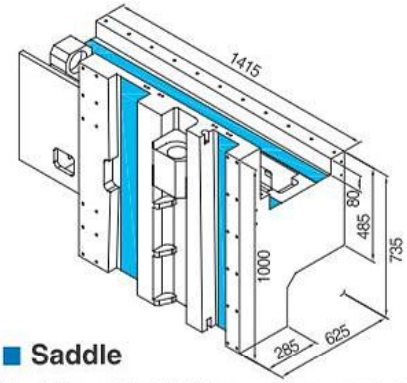
Flat-Ram design

Flat-Ram design can not be disturbed with "inside-works", because all the transmission equipments (ZF gear box, Belt / Pulley) are located at the rear of the ram.

Furthermore, all the chips and coolant water can be protected perfectly and conveyed to the chip reservoir and coolant tank effectively.

Column

Strong column with wide slide way(125, 175mm) guarantees heavy duty miling, driling without vibration.

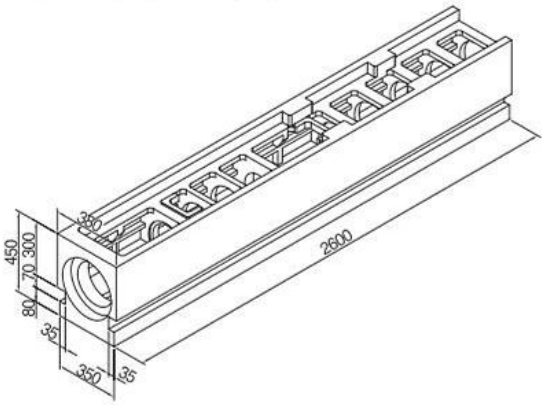


Saddle

Saddle with 1415mm cross and 1000mm vertical guide way length, which is long enough to prevent "ram drooping", guarantees geometric accuacy during critical maximum Y cross travel.

Ram

Strong ram with 2600mm guarantees high milling performance and geometric accuracy during critical maximum Y cross travel



Hydraulic Balance

Hydraulic balance with Nitogen gas accumulator guarantees smooth movement and high accuracy of vertical Z axis

Hand Scrapping

The accuracy of is guaranteed by the craft man's art of scrapping measured in micron

M Head (Manual positioning)

- ISO50, DIN69871 / DIN 2080
- 4000 spindle rpm with cooling the head (2 step: 0~1000, 1001~4000)

Vertical Head (Manual positioning)

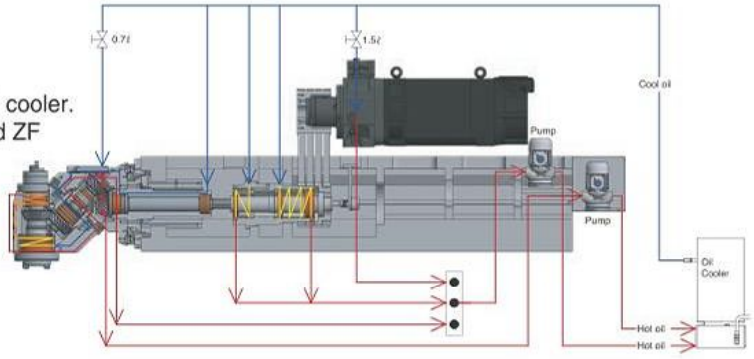
- ISO50, DIN69871
- 4000 spindle rpm with cooling the head (2 step: 0~1000, 1001~4000)

Horizontal Head

- ISO50, DIN69871
- 6000 spindle rpm with cooling the head (2 step: 0~1500, 1501~6000)

Head cooling

Head and ZF gear box is cooled by oil cooler. Hot oil inside the upper head (90°) and ZF gear box is delivered quickly to the oil cooler through 2 (two) pumps on the ram.



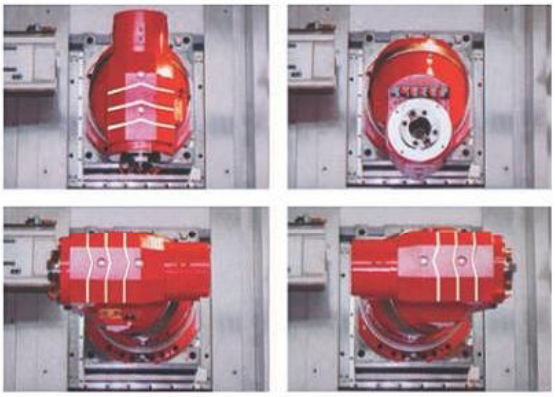
Option

A2 Head

- **Automatic 2 positioning, Vertical / Horizontal**
- ISO50 DIN69871
- 4000 spindle rpm with cooling the head (2 step : 0~1000, 1001~4000)

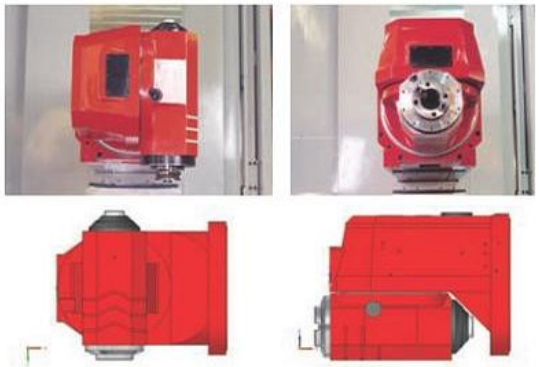
A4 Head

- **Automatic 2.5° ×2.5° , 2.5° ×1°**
- ISO50 DIN69871
- 3000 spindle rpm with cooling the head (2 step : 0~1000, 1001~3000)



Orthogonal Head

- **Automatic 2.5° ×2.5° , 1° ×1°**
- ISO50 DIN69871
- 3000 spindle rpm with cooling the head (2 step : 0~1000, 1001~3000)



Coolant through Spindle

1. Dual cartridge filter

- 16 bar (20ℓ /min) coolant through spindle (Adjustable 5~16 bar)
- 9 bar coolant through nozzle (Adjustable 0~9 bar)
- 1 tank (600ℓ)
- Dual cartridge filter (20㎛) to switch over when one filter is dirty.

2. Paper filter

- 16, 30 bar (20ℓ /min, 25ℓ /min) coolant through spindle (Adjustable 5~16 bar)
- 9 bar coolant through nozzle (Adjustable 0~9 bar)
- 2 tank (400ℓ + 700ℓ)
- Paper band filtering (20㎛) system with drive and paper transport unit

Heidenhain probes

HEIDENHAIN TT160

- Tool touch probe
- Signal transmission : Cable

HEIDENHAIN TS260

- Work piece touch probe
- Signal transmission : Cable

HEIDENHAIN SE 660 / TT460 / TS 460

- TT460 : Tool touch probe
- TS460 : Work piece touch probe
- SE660 : Receiver
- Signal transmission : Radio / Infrared

Work piece touch probe RENISHAW RMP 60

with radio signal transmission

24 Tools Vertical ATC

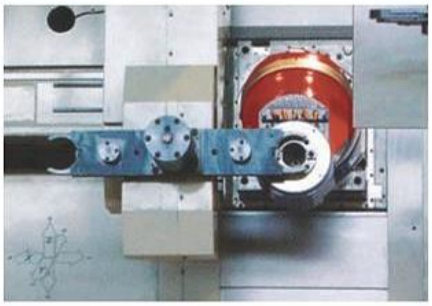
Cam and cam follower automatic tool changer
driven by geared motor

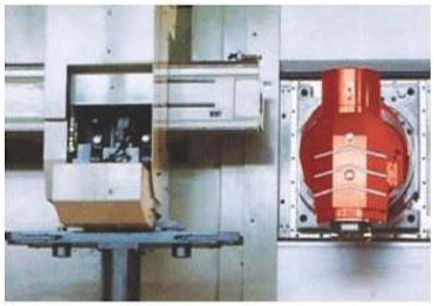
Max. tool weight	kg	20
Max. tool length	mm	350
Max. tool diameter Ø		
- when adjacent tool present	mm	110
- when adjacent tool absent	mm	200

30 / 40 Tools Horizontal, Vertical / Horizontal ATC

Chain type tool magazine driven by servo motor.
Carriage and gripper is operated by hydraulic system.

Max. tool weight	kg	25
Max. tool length	mm	350
Max. tool diameter Ø		
- when adjacent tool present	mm	125
- when adjacent tool absent	mm	250



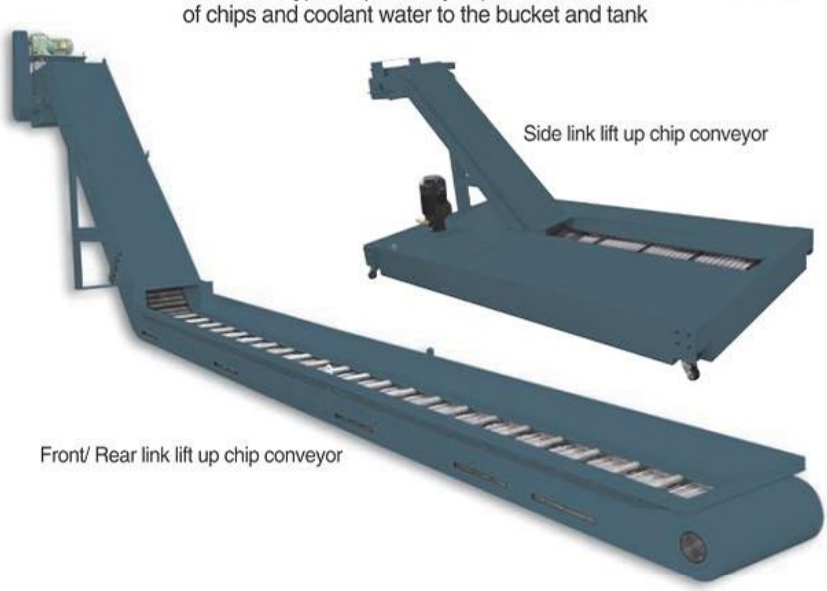


Sub. Angle Table

1300(H)×1100(W)mm

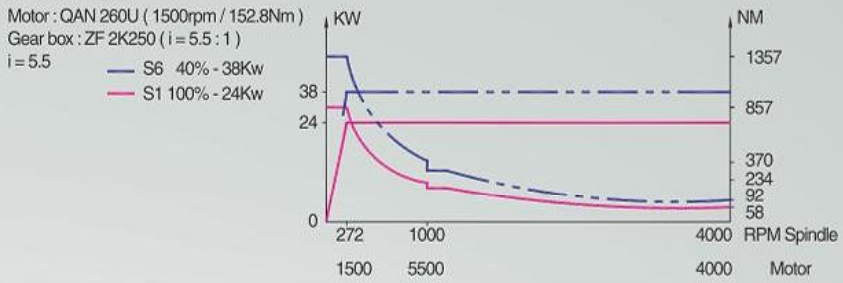
Chip Coneyor

Wider link type chip conveyor performs : "QUICK EXTRACTION" of chips and coolant water to the bucket and tank



Standard

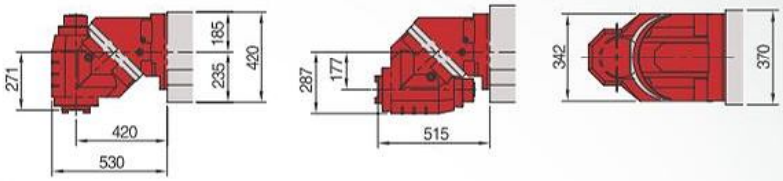
- Heidenhain iTNC530, HSCI Software option 1
- Heidenhain linear scale
- Heidenhain HR410 electronic handwheel
- Preparation of Heidenhain TS220
- 4000 (2step:0~1000, 1001~4000) spindle rpm
- Ram with ZF gear box
- Spindle orientation for rigid tapping
- Spindle Motor



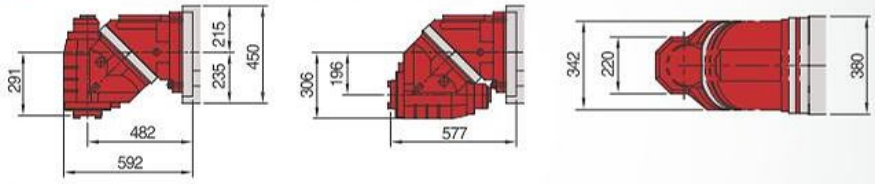
- Oil cooler
- Flood coolant system with tank and 2.5 bar coolant pump
- Axes with Siemens / Heidenhain digital servo motor
- Automatic power off with M function
- Link lift up chip conveyor at rear
- Air thru spindle, Air blow, Spindle air blast during auto tool change
- Link lift up chip conveyor at the rear of the bed
- Heidenhain DA400

Option

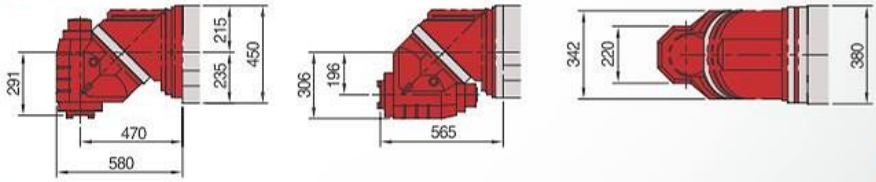
- Other CNC
- Vertical travel 1600mm
- One T-slot 22H7 in front of the table
- Sub. Angle table 1300(H) x 1100 x 625mm
- High pressure Coolant through tool
- CTS (Coolant through spindle)
- Coolant washing gun with separate pump
- Vertical tool changer, 24 tools
- Horizontal tool changer, 30 / 40 tools
- M Head
  Manual positioning
  Spindle nose DIN 69871



- A2 Head (Automatic 2 positioning, Vertical/Horizontal)

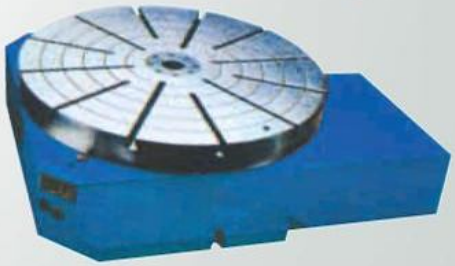


- A4 Head (2.5° x 2.5°, 2.5° x 1°)

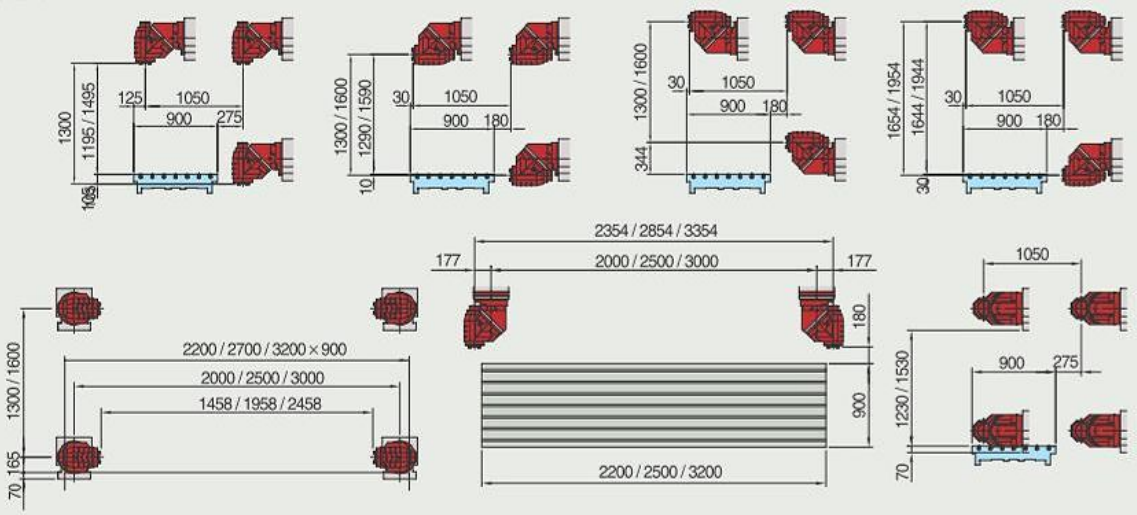


- Orthogonal Head(2.5° x 2.5°, 1° x 1°)
- Option for Heidenhain iTNC 530, HSCi
  Software option 2
  DCM collision
  DXF converter + Smart CNC with mouse pad
  Adaptive Feed Control (AFC)

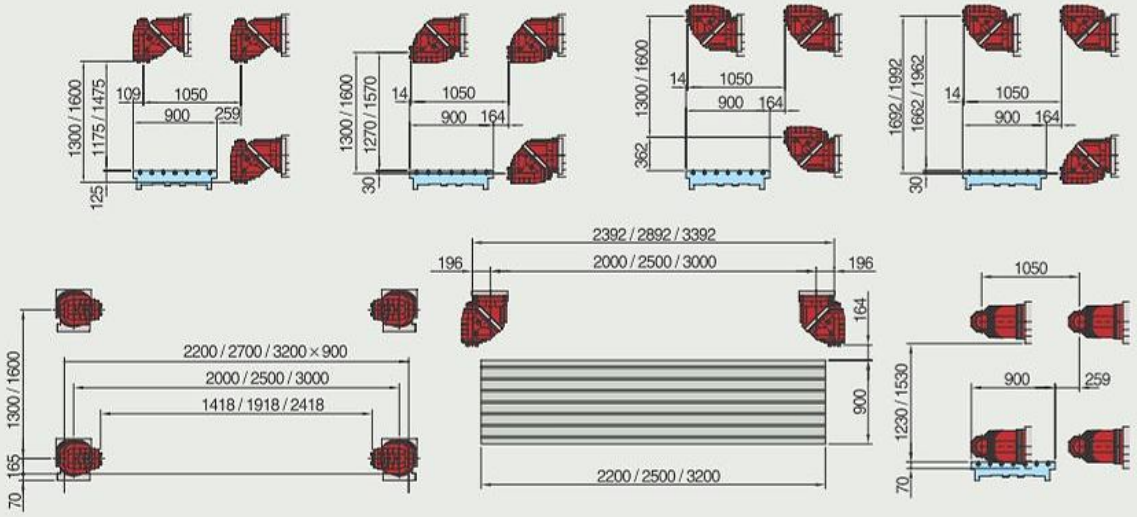
- Vertical/Horizontal tool changer, 30 / 40 tools
- Link lift up chip conveyor in front of the bed
- Link lift up chip conveyor at side
- Preparation of the continuous 4th axis
- Heidenhain Tool Touch Probe TT160 + Air operated cover
- Heidenhain wireless Tool Touch Probe TT460
- Heidenhain Work piece Touch probe TS260
- Heidenhain Work piece touch probe TS460 (infrared transmission)
- Renishaw Work piece touch probe RMP60 (radio signal transmission)
- Electronic handwheel HR520 (Heidenhain CNC only) instead of HR410
- Air conditioner for electric cabinet
- One additional foot switch at the rear of the bed
- Rotary table



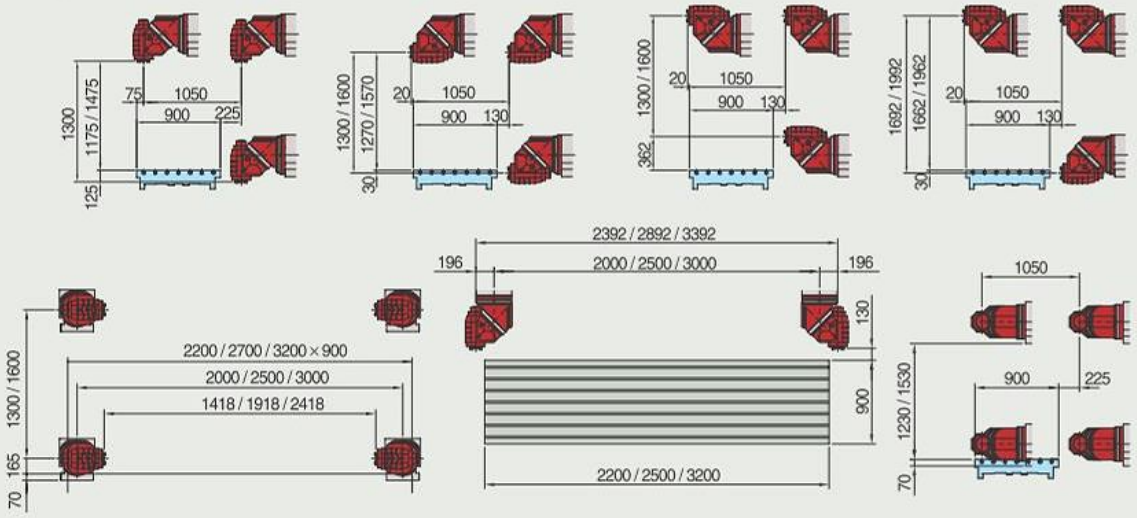
M Head

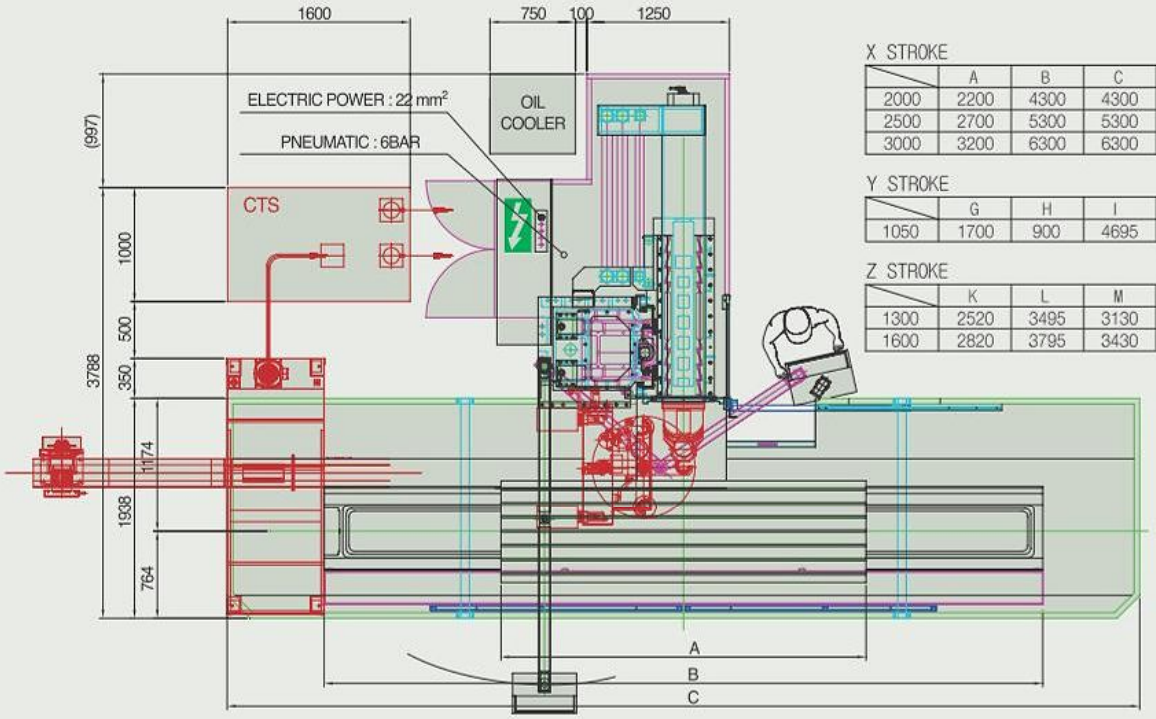


A2 Head



A4 Head





X STROKE

	A	B	C	D	E	F
2000	2200	4300	4300	1730	850	7730
2500	2700	5300	5300			8730
3000	3200	6300	6300			9730

Y STROKE

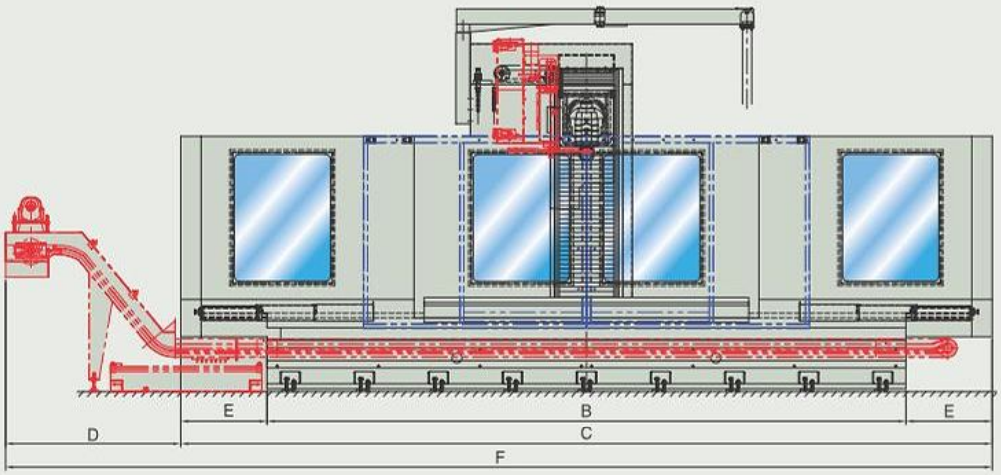
	G	H	I	J
1050	1700	900	4695	5610

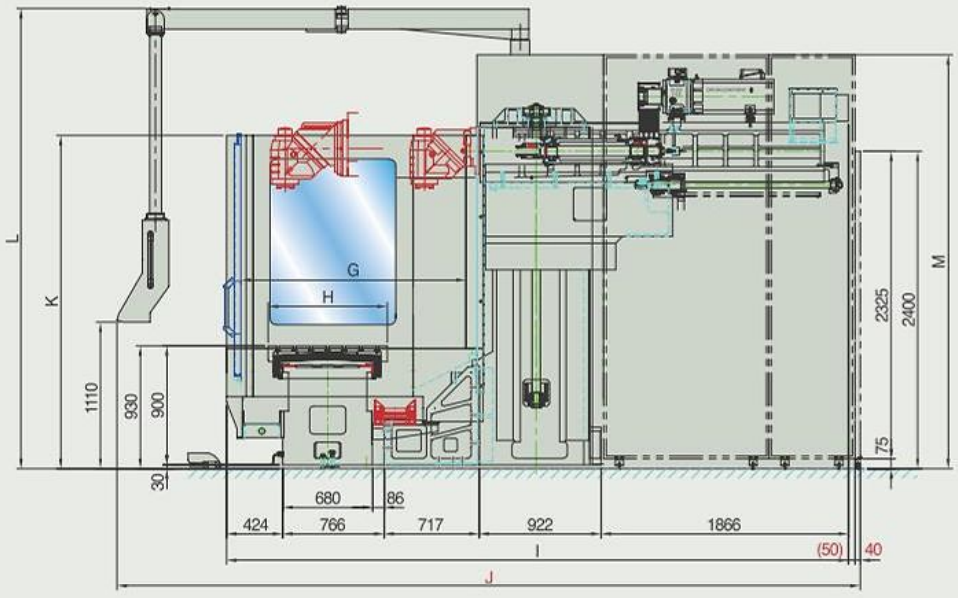
Z STROKE

	K	L	M
1300	2520	3495	3130
1600	2820	3795	3430

DOOR STROKE

	TWO DOOR	ONE DOOR
2000	2200	750
2500	2700	
3000	3200	





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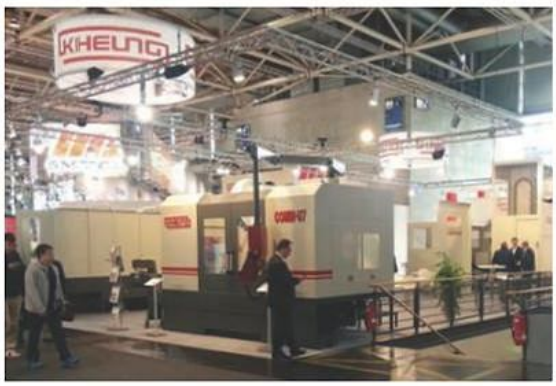

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