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KM WEB



SAVING NATURE IS TECHNOLOGY INNOVATING.



KM C SR-H/SR

KAO MING SCIENTIFIC AND TECHNOLOGICAL GIANT OF THE MOST HUMANE INTENTION!

KAO MING MACHINERY INDUSTRIAL CO., LTD



Penguins possess an extraordinary capability-which make them live in polar region unrestrained.

Penguins are not afraid of trekking hundreds miles to nest, and hatch their children by their warm feather whenever breeding season comes.

KAO MING machinery industrial devoted in producing high quality machine tool, and take pride in being customer's best partner of progress.

Meanwhile, based on the conscious for the environment, KAO MING machinery industrial develop innovative technology actively to minimize waste and pollution: to share the glorious environment with people and animals around the world.

SR-H SERIES

Double-Column Multi-Center

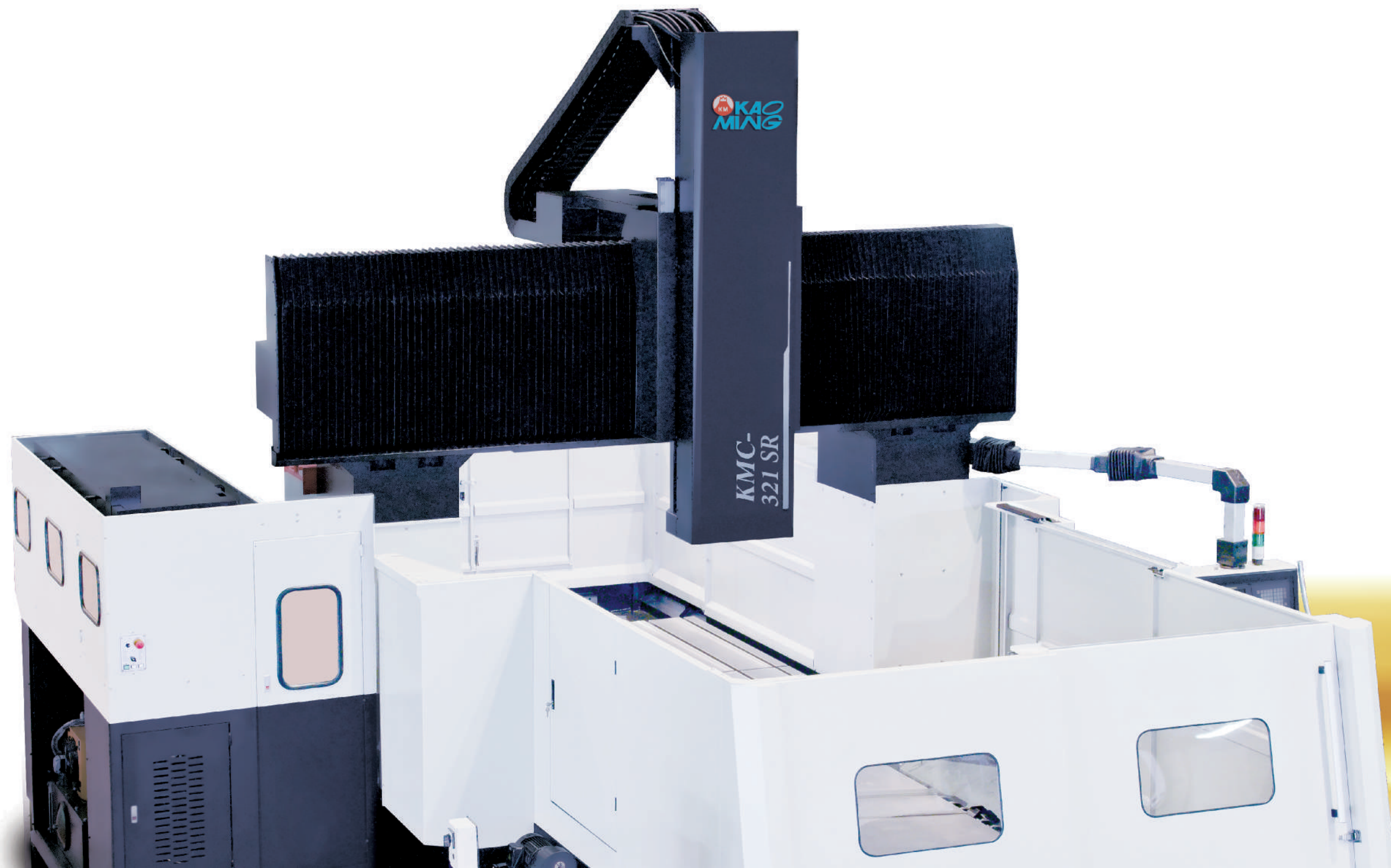
KMC-SR-H series are designed to meet the needs of multi-face machining the molds and machine constructions in one set-up. That increases productivity and makes the cost down.

KMC-SR-H Main Features:

1. 5-face machining capability is applied for one setting.
2. Horizontal spindle employed high-precision hardened and ground spiral bevel gears that could reduce shocks and noises effectively to ensure running stability.
3. Standard automatic horizontal head (index accuracy ± 3 sec), with automatic V/H tool changer reduces the cost of tools and machining, enhance manufacturing efficiency.
4. Standard 2-station AAC (Angular Attachment Changer) is designed for improving productivity. 30° angle head, extension head are optionally available for versatile applications.
5. Angular attachment and vertical head cap are put in AAC magazine which has upper and lower seat and moves back and forth-separately or together. The unique design of AAC magazine can be allowed to extend more stations for application.
6. More details about SR-H series, please turn to page six of instructions.
7. Optional Coolant/Air through spindle can be applied; Coolant spindle is available for automatic horizontal head.
8. More details about SR-H series, please refer to SR series features.

Creating eternal vitality.





SR SERIES

Double-Column Multi-Center

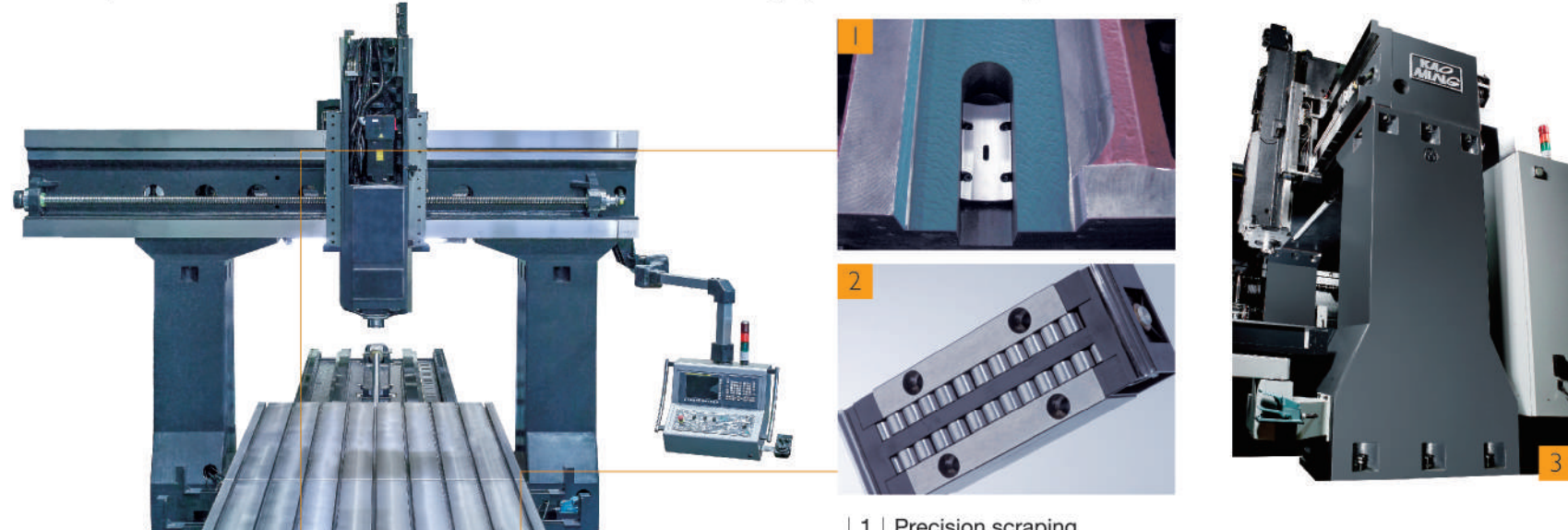
KMC-SR Series is specially designed for machining larger work piece, The travel of z-axis could be reached 1100mm(43.3").

KMC-SR Main Features:

1. All 3-axes travels are fully supported by boxway hereby ensuring the rigidity and stability.
2. The superior, hardened , ground double guide way constructed bed is designed for a distance between columns of under 82"(2100mm).
3. The bridge machine with Y-axis step design and strong rigidity structure.
4. Specially designed tool unclamp cylinder which totally eliminates any outside forces from being applied to the spindle bearings when releasing the tool. A high stability, rigidity gear type 2-step spindle has the ability to refine boring large size holes in 6 rpm.
5. 3-axes have larger travel range; extraordinarily Z-axis stroke is 1100mm(43.3").
6. Strong columns and crossbeam are like La Grande Arche, giving the best rigid structure.
7. For big parts machining will need heavy loading capacity, so our "D" model up (distance between two columns 90.55"(2300mm)), machine base has four box way to support – a slide and rolling combined design, center box way for main support is hardened and ground, with Turcite-B which have strong absorb ability can keep dynamic rigidity during heavy cutting, and 2 sides box way the same as center only have extra roller-type recirculating bearing to strengthen support.
8. The table with strong ribs layout provides optimum bending and torsional stress. Not only ensure cutting dynamic accuracy, but also boost efficiency and mitigate transmission loading.
9. A properly preloaded and pretension, large diameter ballscrew is used for three axes. X-axis has a hollow ballscrew with oil cooled and is equipped with a special design to cool the ballscrew bearings by air for getting the better positioning accuracy.
10. The mounting brackets for the Y and Z axis ballscrews are integrated with the saddle and crossbeam casting to maximize the rigidity further.
11. All 3-axes utilize an external feedback pulse coder for positioning. The pulse coder is coupled to the opposite end of the ballscrew and feedback to servo system directly. This allows for high positioning accuracy.
12. Mechanical safety couplings are used where the drive motors adapt to the ballscrews. These devices greatly minimize damage that may occur during a collision or overload condition.
13. Y-axis mechanical safety coupling design is used to minimize damaged that may occure during a collision or human operating negligence, Achieve long life for mechanical parts.
14. Coolant through spindle system (Optional) can cool the tool tips during high speed cutting process and get the better machining accuracy.
15. Linear guideways is designed for a distance of x-axis of over 314.9"(8000mm), center linear guideways for main support, and 2 sides box way the same as center only have extra roller-type recirculating bearing to strengthen support.
16. With optional FANUC Data server, AICC II and Hi-speed processor to achieve Hi-speed and Hi-accuracy Die/Mold machining.
17. Available for mass data pre-processing (look ahead) system.

Four guideway high rigidity structure

For big parts machining will need heavy loading capacity, distance between two columns of over 90.55”(2300mm) , machine base has four box way to support – a slide and rolling combined design, center box way for main support is hardened and ground, with Turcite-B which have strong absorb ability can keep dynamic rigidity during heavy cutting, and 2 sides box way the same as center only have extra roller-type recirculating bearing to strengthen support. This design can less loading during movement and get more tolerance, And table’s 2 end-front and rear of sliding surface also have roller-type recirculating bearing for precisely adjust the geometry accuracy to use. To assembly with recirculating bearing, hardness of box way surface must be more than HRC58°. Therefore we make box way tightened on the casting base or welded on the fabricated base.



- 1 | Precision scraping
- 2 | Roller-type recirculating bearing
- 3 | Thanks to the design of enlarging the dimensions of the column-down, following reinforced foundation make the machine more stable.

Highly rigid, double box way construction

The heavy duty, ground double guide way constructed bed is designed for a distance between columns of under 82”(2100mm), hardened and ground with Turcite-B which have strong absorb ability can keep dynamic rigidity during heavy cutting, box way construction is of Meehanite cast iron and is designed and inspected by FEA (Finite Element Analysis) to ensure excellent rigidity, suitable for both high speed and heavy duty cutting for many years.

1 | Integral Ballscrew Mounting Brackets

The ballscrews are supported by a double anchor system, which greatly improves the rigidity of the axis by minimizing vibration during feeding. The mounting brackets for the Y and Z-axis ballscrews are integrated with the saddle and crossbeam castings to maximize the rigidity further.

2 | Axis Safety Protection

Safety couplings are used where the drive motors adapt to the ballscrews. These devices greatly minimize damage that may occur during a collision or overload condition.

3 | External Axis Position Feedback

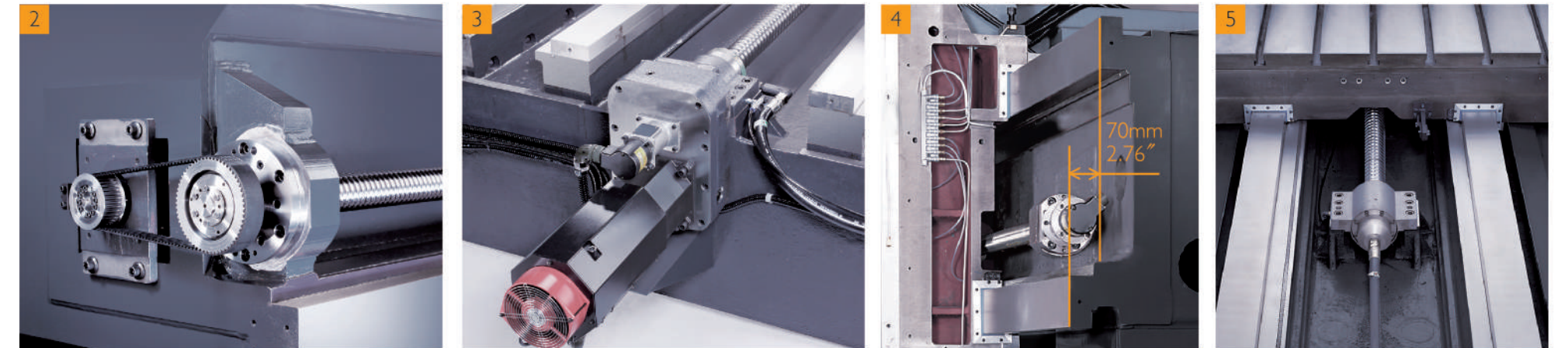
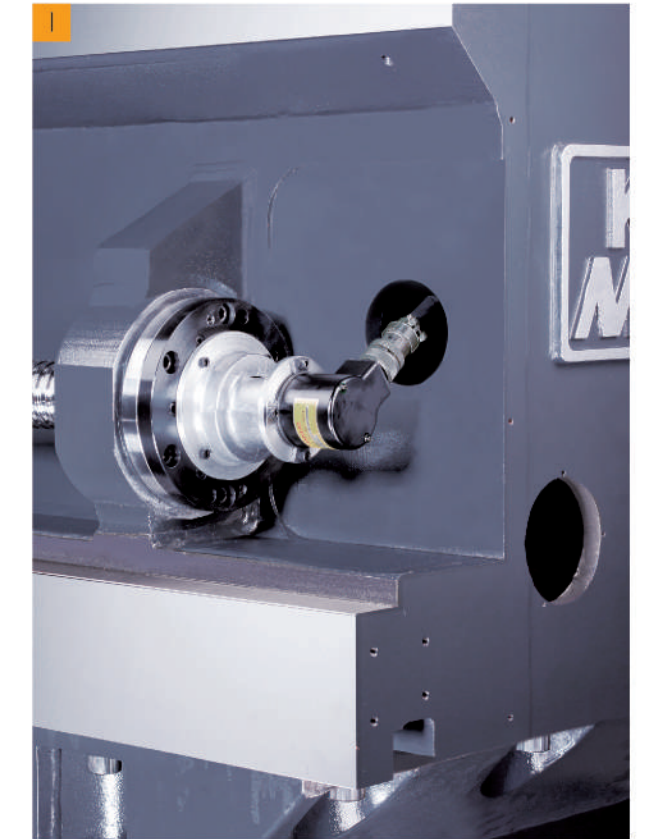
All 3 axes utilize an external feedback pulse coder for positioning. For machine models over 3000, the ballscrew is driven by a motor and gear box for added strength to the axis feed system. The external position feedback pulse coder is coupled directly to the opposite end of the ballscrew. This allows for high positioning accuracy to be maintained by measuring the true rotation of the ballscrew.

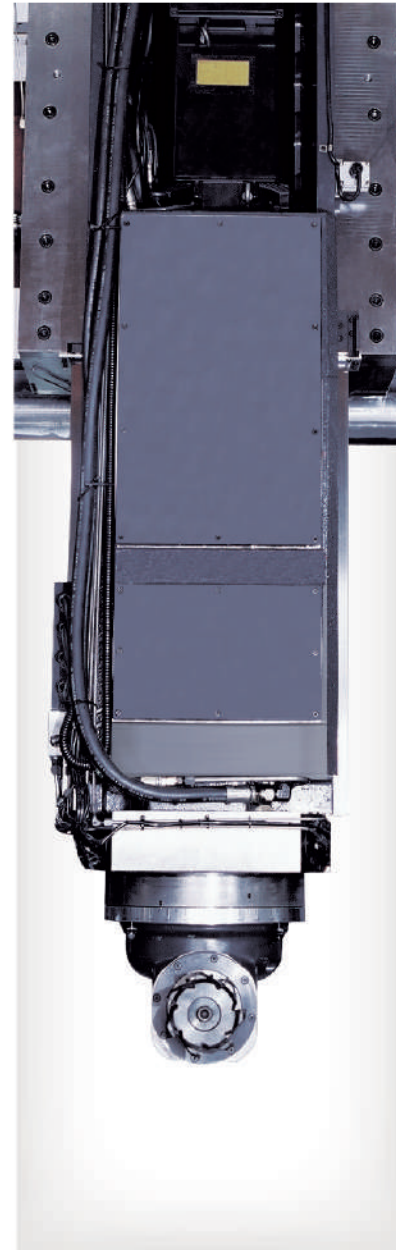
4 | Y-Axis Step Design

The Y-axis utilizes a superior design whereby the lower slideway is offset a full 2.76”(70mm) from the upper slideway. This greatly enhances the rigidity of the headstock by bringing the center of gravity back into the upper support which rests a top the massive columns. This design provides an extremely stable foundation for the spindle head to travel on further enhancing the machines performance when doing heavy cutting.

5 | Inner Cooled Ballscrew

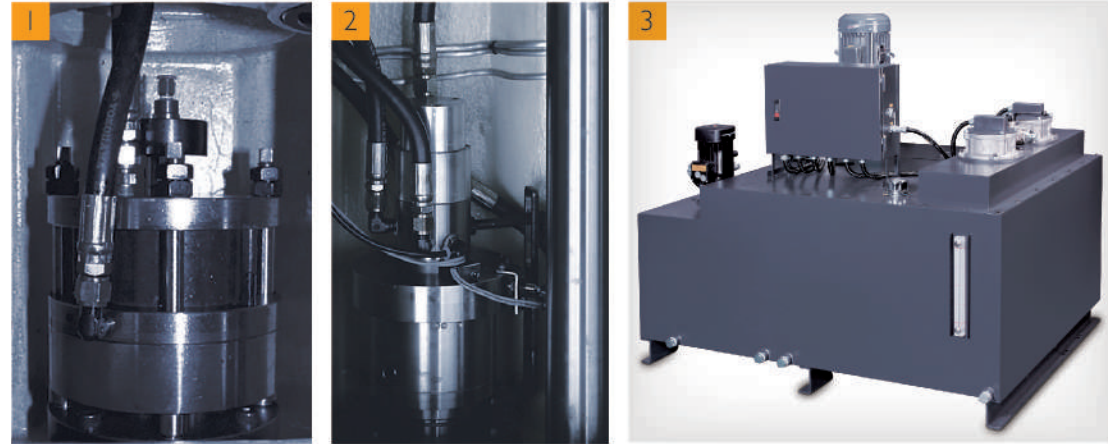
A properly preloaded and pretension, large diameter ballscrew with a double re-circulating ball nut is used for each axis throughout the entire machine series. For the machine models KMC-2000~KMC-6000 with the longer X-axis travels, a hollow state-of-the-art ballscrew is used. Cooled oil continuously flows through the center of the ballscrew. The temperature of the oil is cooled, circulating through an external heat exchanger. This greatly enhances the machine’s performance and accuracy by practically eliminating thermal growth of the axis especially when using the full traverse. Both support ends of the X-axis ballscrew are equipped with a special design to cool the bearings by air. This superior design is unique to Kao Ming.





Superior Arrangement for Z-axis Space & Spindle

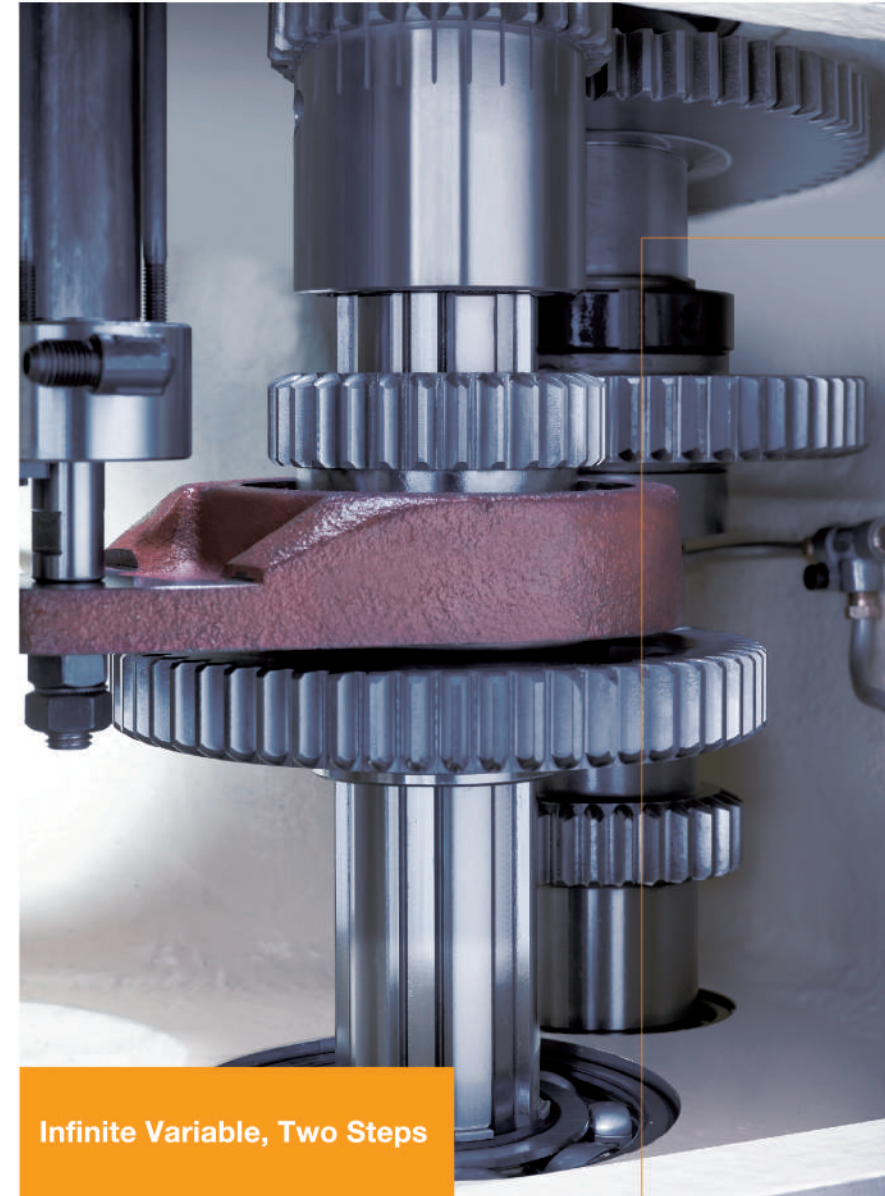
- 1.Thanks to the Z-axis space saving design for the extra long strokes 1100mm (43.3"). The machine height is only 5080mm (200").
- 2.The center of spindle and motor are symmetrically designed to against Y-axis thermal displacement.
- 3.The spindle is driven by a powerful 26KW (35HP) spindle motor and through two-speed transmission by gears, the maximum spindle torque is 1018Nm (104kg-m), allowing heavy-duty cutting.
- 4.Three various range of spindle speeds — 4000, 6500, 8000rpm are integrated commonly using the same spindle motor. KMTCS—Kao Ming Thermal Compensation System(Optional) is beneficial to 8000rpm high speed spindle for large Die/Mold workpieces machining to control the thermal elongation and get stability.



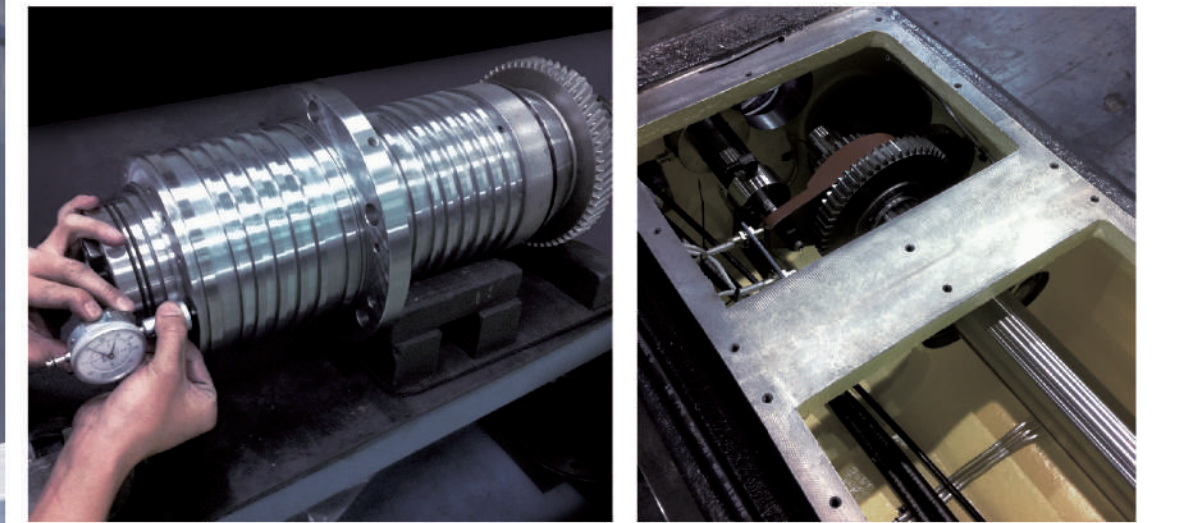
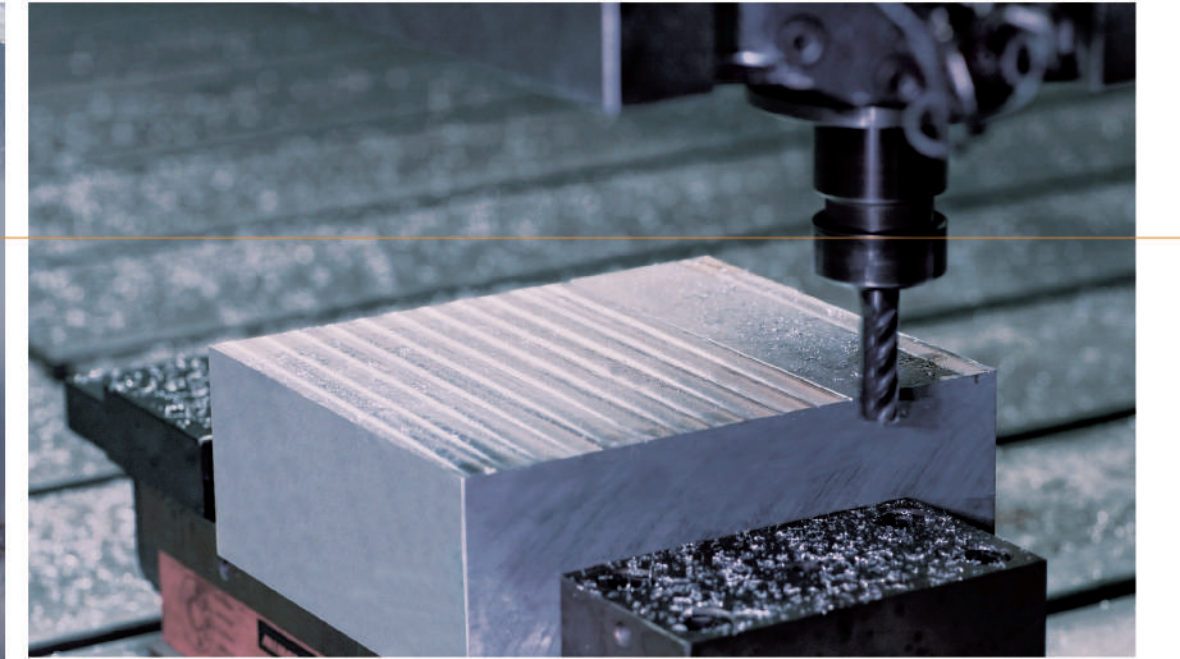
Coolant Through Spindle System

	Medium pressure	High pressure	
Pressure	20bar(284psi)	40bar(568psi)	70bar(994psi)
Quantity	30L/min (7.92gal/min)	30L/min (7.92gal/min)	30L/min (7.92gal/min)

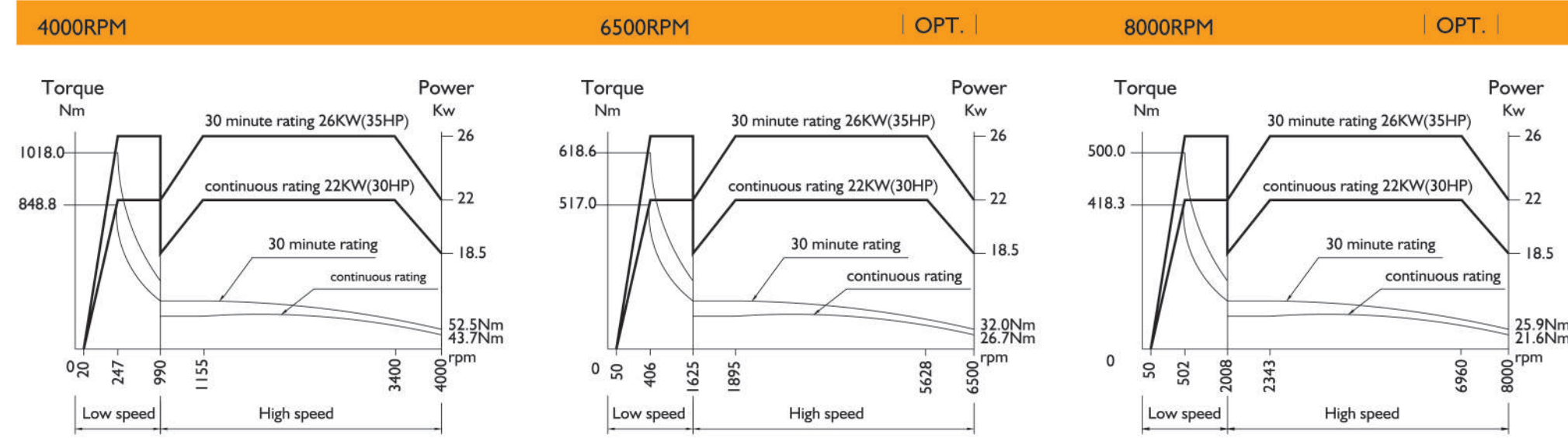
- || The spindle also utilizes a “state-of-the-art” design hydraulic cylinder, this special design allows the cylinder to slightly float thereby eliminating any outside forces from being applied to the spindle bearings when changing tools.
- ||2.3| The optional, coolant through the spindle feature utilizes a complete pump/filtration system, rather than a single auxiliary pump as commonly used by our competition. This system is equipped with a large 600L capacity reservoir, high pressure pump, and duplex filter unit, with a choice of various output pressures.



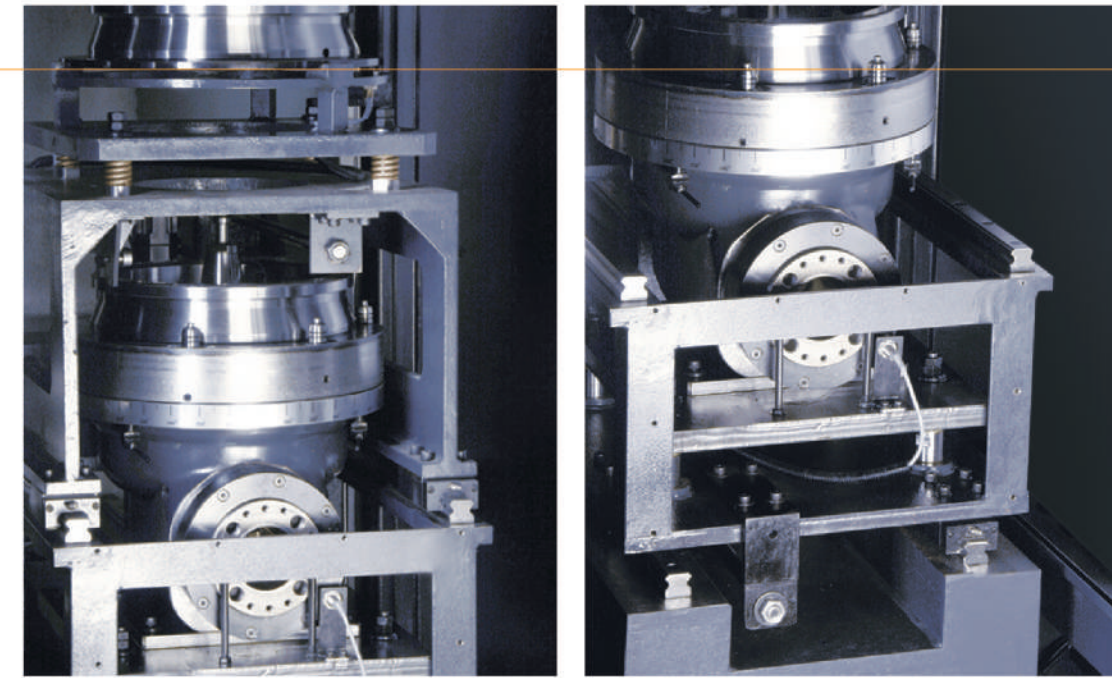
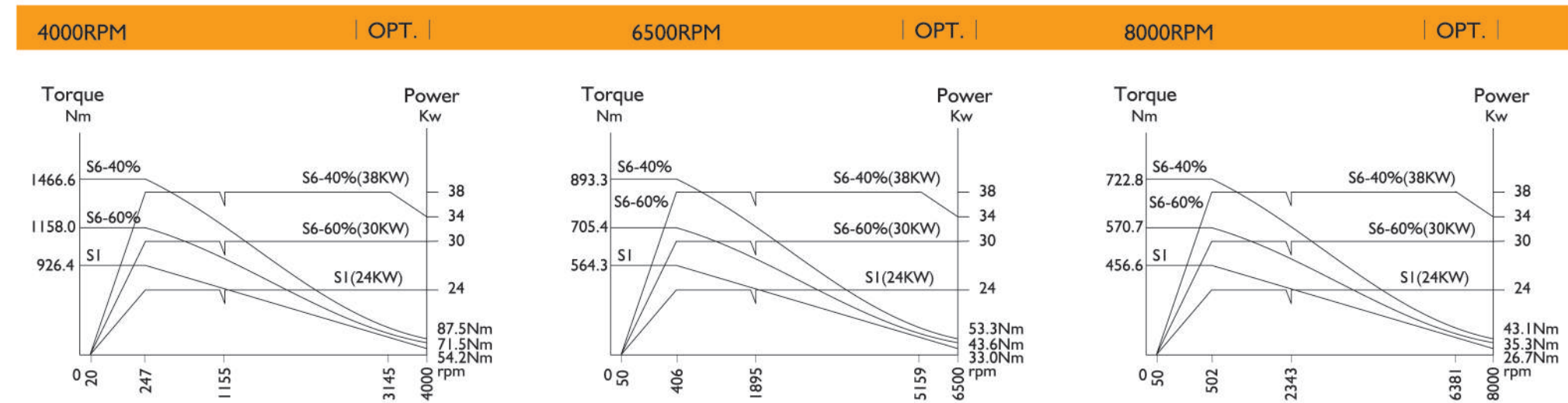
Infinite Variable, Two Steps



FANUC Spindle Motor | α 22i, 22/26KW(30/35HP)



HEIDENHAIN Spindle Motor | QAN260U, 24/30/38KW



Automatic Attachment Changer

1. ATC-H (Horizontal) is integrated into original ATC-V (vertical) which features simple construction and innovative design.
2. 2-position AAC (Automatic Attachment Changer) is designed for improving productivity.
3. Angular attachment and vertical head cap are put in AAC magazine which has upper and lower seat and moves back and forth—separately or together. The unique design of AAC magazine can be allowed to extend more stations for application.

SR-H

Standard Head



Horizontal Head Max.Speed:3500rpm
Max. Power:18.5/22kw

Optional Head



Extension Head Max.Speed:4000rpm
Max. Power: 22/26kw

Optional Head



30-Degree Angle Head Max.Speed:3500rpm
Max. Power:18.5/22kw
(Manual Tool Release)

SR

Optional Head



Angle Head (Manual) Max.Speed:1500rpm
(Manual Tool Release)

Optional Head



Universal Head (Manual) Max.Speed:1500rpm
(Manual Tool Release)

Horizontal Head

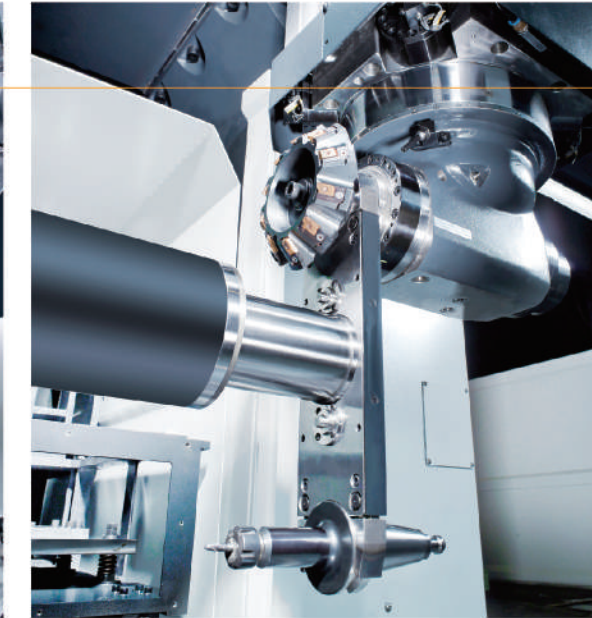
Horizontal head can be indexed to 4 positions in 90° increments. It is indexed by the shortest path. For complex workpieces, indexing to 72 positions in 5° increments is optionally available. Horizontal head employed high-precision hardened and ground spiral bevel gears that could reduce shocks and noises effectively to ensure running stability.

Extension Head

Narrow deep machining.

30-Degree Angle Head

Deep vertical wall machining and die/mold machining.



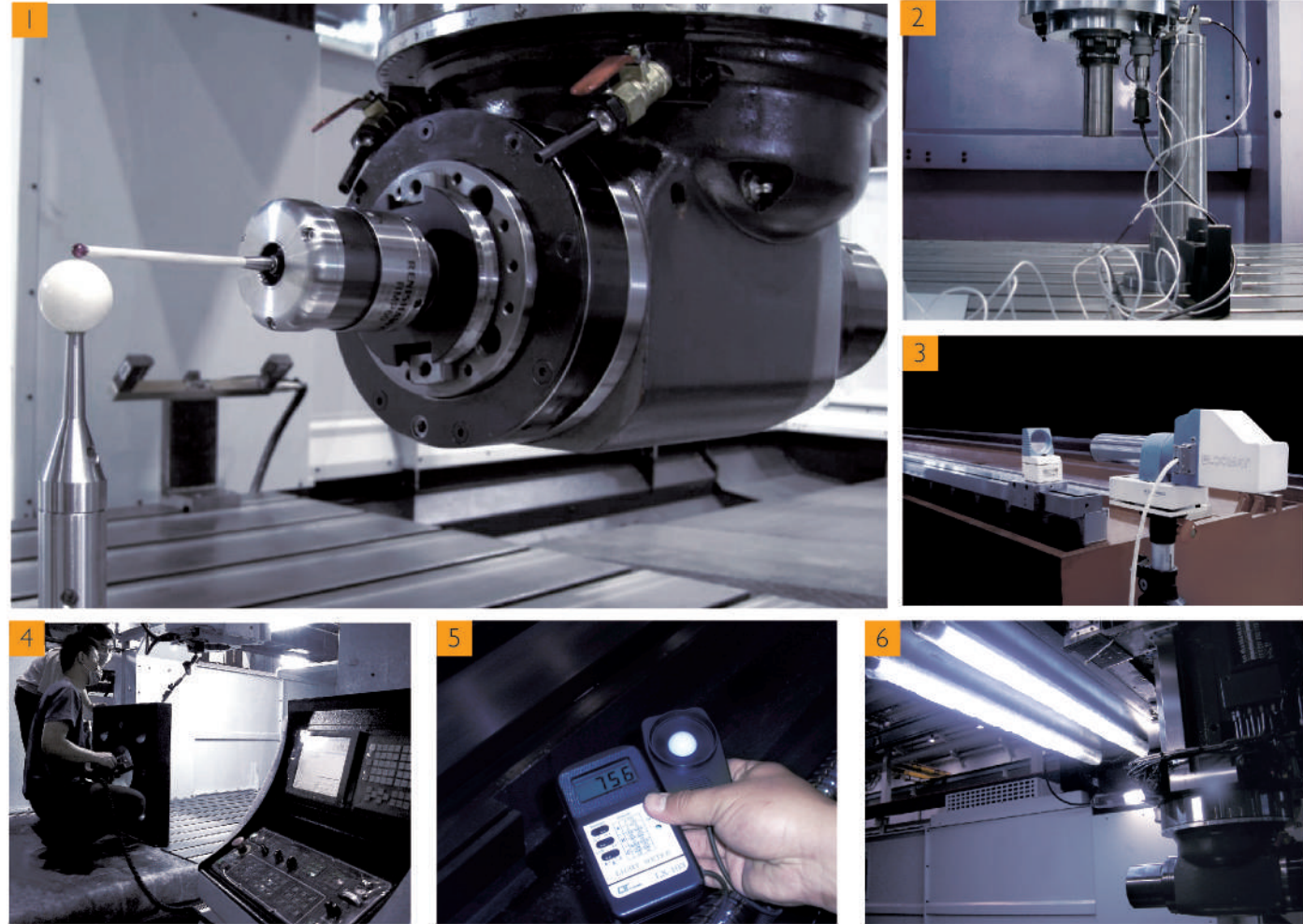
Powerful, High speed ATC

The standard tool magazine is equipped with 30 tool capacity, and can be upgraded to a 40, 50, 60, or 90 tool capacity. The unique double-arm tool change design, powered by a durable, high speed motor, greatly reduces tool change time to less than 6 sec.(T to T). the tool change storage and retrieval system is accomplished by a high quality, high performance, bi-directional hydraulic index motor which further enhances the ATC.

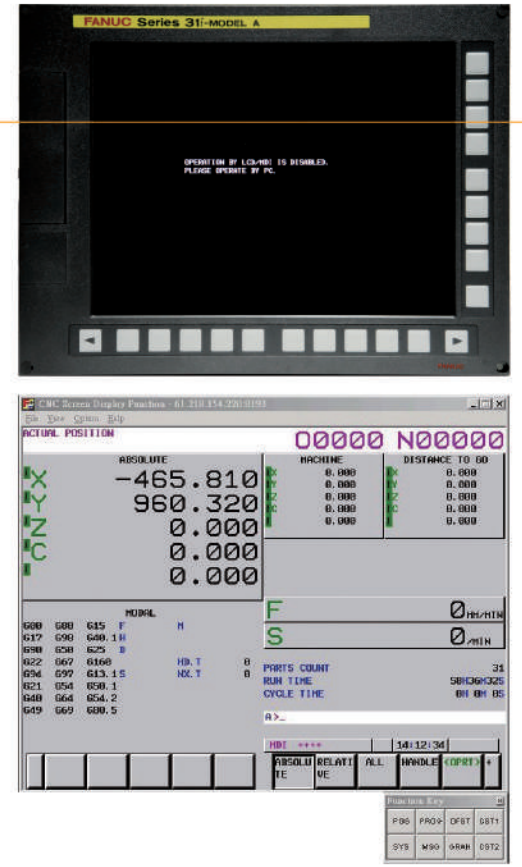
Convenient tool loading system.

Tool loading and unloading can be performed at either the spindle or tool storage magazine A foot pedal is provided at both locations allowing for easy handling of even larger tools.

(SR series provide ATC-V only)



- | 1 | Kinematic Measurement
- | 2 | Rigidity Test
- | 3 | Straightness Measurement
- | 4 | Geometric Accuracy Inspection
- | 5.6 | Lighting Measurement



CNC SCREEN MACHINE REMOTE DIAGNOSIS FUNCTION (Optional)

Our company can confirm the machine through the IP address of PC when machine is breakdown. We will shift directly the user's screen from the far-end, and the controller can provide the connection of software to send "NC program", "PLC program", "Machine parameter", and "Cutting tool data table", etc. It can not only diagnose, operate, and detect data, but also revise data to subscriber's premises from the far-end. This function ONLY uses through the PC (with network), it can NOT operate in MDI pattern.

Standard Accessorie

- | 1 | Electrical cabinet cooling system.
- | 2 | Spindle cooling system.

Optional Accessorie

- | 3 | Link-type chip conveyor
- | 4 | NC rotary table
- | 5 | Automatic tool length measuring system
- | 6 | Automatic touch probe centering system



How to select a suitable conveyor according to different types of chips

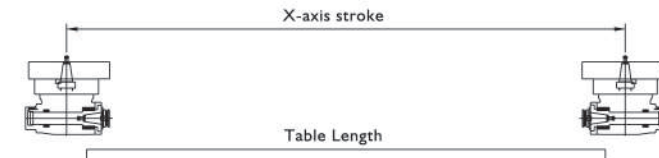
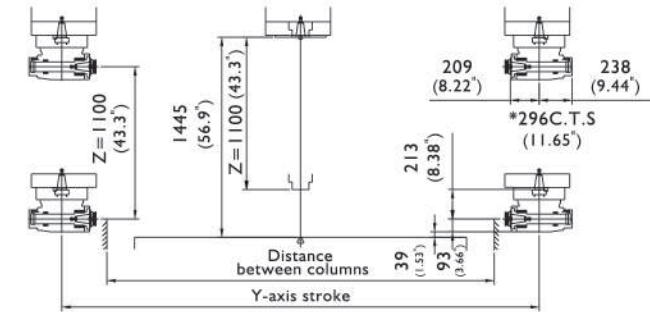
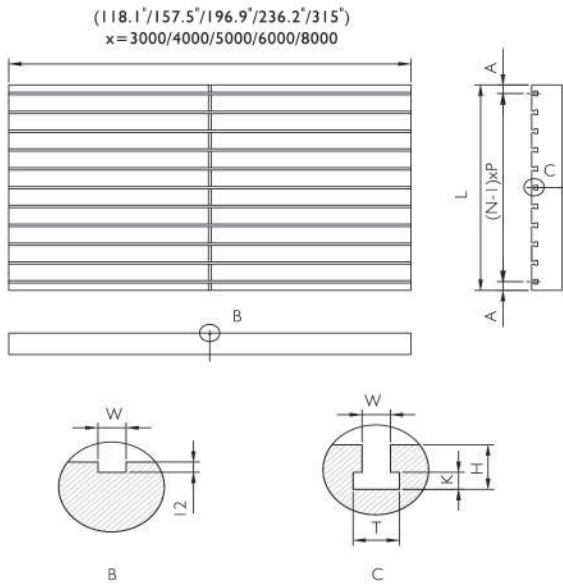
Steelbelt Chip Conveyor	✓	✓		
Scrapper type Chip Conveyor (Suitable for dry Chips under 60mm)		✓	✓	✓



SR-H/SR Series Table Dimensions

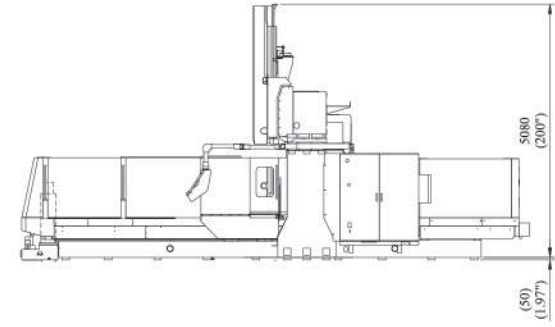
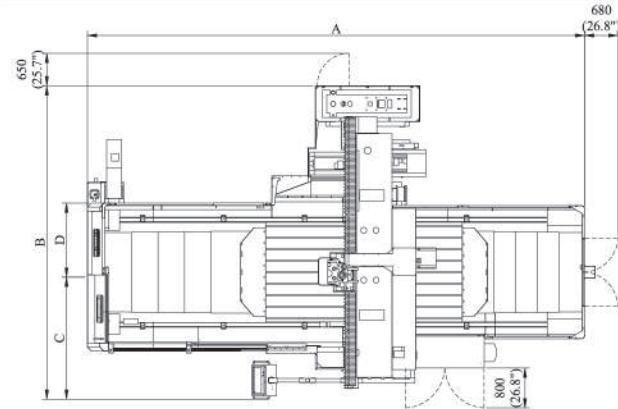
SR-H Series Machining Range & Floor Space

Unit : mm(inch)



Distance between columns	1800 (70.8")	2100 (82.6")	2300 (90.5")	2500 (98.4")
Y-axis stroke	2450 (96.4")	2750 (108.2")	2950 (116.1")	3150 (124")

Table Length	3000 (118.1")	4000 (157.4")	5000 (196.8")	6000 (236.2")	8000 (314.9")
X-axis stroke	3230 (127.1")	4230 (166.5")	5230 (205.9")	6230 (245.2")	8230 (324")



	318SR-H	321SR-H	323SR-H	325SR-H	418SR-H	421SR-H	423SR-H	425SR-H	518SR-H	521SR-H	523SR-H	525SR-H	618SR-H	621SR-H	623SR-H	625SR-H	818SR-H	821SR-H	823SR-H	825SR-H
A	8130(320.1")				10325(406.4")				12325(485.2")				14525(571.8")				19650(773.6")			
B	5715 (225")	6015 (236.8")	6215 (244.7")	6415 (252.5")	5715 (225")	6015 (236.8")	6215 (244.7")	6415 (252.5")	5715 (225")	6015 (236.8")	6215 (244.7")	6415 (252.5")	5715 (225")	6015 (236.8")	6215 (244.7")	6415 (252.5")	5715 (225")	6015 (236.8")	6215 (244.7")	6415 (252.5")
C	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")
D	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")

SR Series Machining Range & Floor Space

Unit : mm(inch)

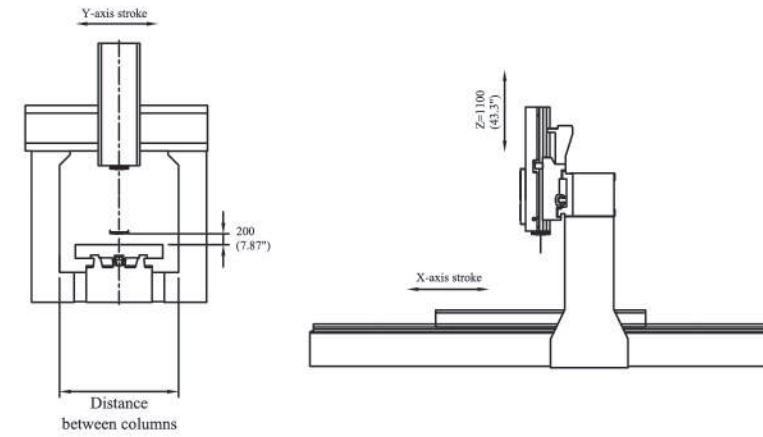
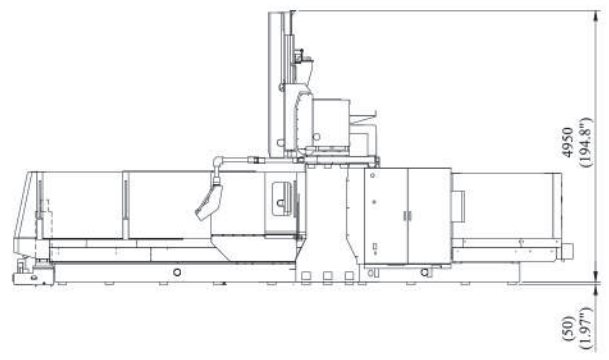
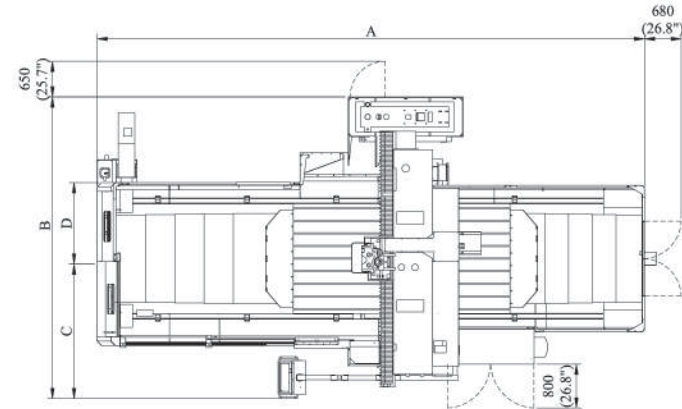


Table Length	2000 (78.7")	3000 (118.1")	4000 (157.4")	5000 (196.8")	6000 (236.2")	8000 (314.9")
X-axis stroke	2230 (87.7")	3230 (127.1")	4230 (166.5")	5230 (205.9")	6230 (245.2")	8230 (324")

Distance between columns	1800 (70.8")	2100 (82.6")	2300 (90.5")	2500 (98.4")	2800 (110.2")
Y-axis stroke	1700 (66.9")	2000 (78.7")	2200 (86.6")	2400 (94.4")	2700 (106.2")



	218SR	221SR	318SR	321SR	323SR	325SR	328SR	418SR	421SR	423SR	425SR	428SR	518SR	521SR	523SR	525SR	528SR	618SR	621SR	623SR	625SR	628SR	818SR	821SR	823SR	825SR	828SR
A	6130(241.3")		8130(320.1")				10325(406.4")				12325(485.2")				14525(571.8")				19650(773.6")								
B	4930 (194")	5230 (205.9")	4930 (194")	5230 (205.9")	5430 (213.8")	5630 (221.7")	5930 (233.5")	4930 (194")	5230 (205.9")	5430 (213.8")	5630 (221.7")	5930 (233.5")	4930 (194")	5230 (205.9")	5430 (213.8")	5630 (221.7")	5930 (233.5")	4930 (194")	5230 (205.9")	5430 (213.8")	5630 (221.7")	5930 (233.5")	4930 (194")	5230 (205.9")	5430 (213.8")	5630 (221.7")	5930 (233.5")
C	2272 (89.4")	2372 (93.4")	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")	2672 (105.2")	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")	2672 (105.2")	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")	2672 (105.2")	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")	2672 (105.2")	2272 (89.4")	2372 (93.4")	2472 (97.3")	2572 (101.3")	2672 (105.2")
D	1185 (46.7")	1285 (50.6")	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")	1585 (62.4")	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")	1585 (62.4")	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")	1585 (62.4")	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")	1585 (62.4")	1185 (46.7")	1285 (50.6")	1385 (54.5")	1485 (58.5")	1585 (62.4")



ITEM	KMC-318SR-H	KMC-321SR-H	KMC-323SR-H	KMC-325SR-H	KMC-418SR-H	KMC-421SR-H	KMC-423SR-H	KMC-425SR-H	KMC-518SR-H	KMC-521SR-H	KMC-523SR-H	KMC-525SR-H	KMC-618SR-H	KMC-621SR-H	KMC-623SR-H	KMC-625SR-H	KMC-818SR-H	KMC-821SR-H	KMC-823SR-H	KMC-825SR-H
Table	Distance between columns																			
	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")
	Table working surface																			
	1650X3000 (65"x118.1")	1650X3000 (65"x118.1")	2000X3000 (78.7"x118.1")	2000X3000 (78.7"x118.1")	1650X4000 (65"x157.5")	1650X4000 (65"x157.5")	2000X4000 (78.7"x157.5")	2000X4000 (78.7"x157.5")	1650X5000 (65"x196.9")	1650X5000 (65"x196.9")	2000X5000 (78.7"x196.9")	2000X5000 (78.7"x196.9")	1650X6000 (65"x236.2")	1650X6000 (65"x236.2")	2000X6000 (78.7"x236.2")	2000X6000 (78.7"x236.2")	1650X8000 (65"x315")	1650X8000 (65"x315")	2000X8000 (78.7"x315")	2000X8000 (78.7"x315")
	Max. table load																			
	11000kg (24200lb)	12000kg (26400lb)	14000kg (30800lb)	14000kg (30800lb)	13000kg (28600lb)	14000kg (30800lb)	15000kg (33000lb)	15000kg (33000lb)	14000kg (30800lb)	14000kg (30800lb)	17000kg (37400lb)	17000kg (37400lb)	16000kg (35200lb)	16000kg (35200lb)	19000kg (41800lb)	19000kg (41800lb)	18000kg (39600lb)	18000kg (39600lb)	21000kg (46200lb)	21000kg (46200lb)
Travels	X-axis(table longitudinal)																			
	3230(127.2")				4230(166.5")				5230(205.9")				6230(245.3")				8230(324")			
	Y-axis(spindle lateral)																			
	2450(96.5")	2750(108.3")	2950(116.1")	3150(124")	2450(96.5")	2750(108.3")	2950(116.1")	3150(124")	2450(96.5")	2750(108.3")	2950(116.1")	3150(124")	2450(96.5")	2750(108.3")	2950(116.1")	3150(124")	2450(96.5")	2750(108.3")	2950(116.1")	3150(124")
	Z-axis(spindle vertical)																			
	1100(43.3")										1100(43.3")									
	Distance from table surface to spindle nose																			
	345-1445(13.6"-56.9")										345-1445(13.6"-56.9")									
	Distance from table surface to horizontal spindle center																			
	132-1232(5.2"-48.5")										132-1232(5.2"-48.5")									
Spindle	spindle speed																			
	Vertical				4000(*6500,*8000)rpm				4000(*6500,*8000)rpm				4000(*6500,*8000)rpm				4000(*6500,*8000)rpm			
	Horizontal				3500rpm				3500rpm				3500rpm				3500rpm			
	No. of spindle speed																			
	infinite variable,2-steps										infinite variable,2-steps									
	Spindle taper																			
	ISO 50										ISO 50									
	Spindle motor(cont./30min)																			
	AC 22/26KW(30/35HP)										AC 22/26KW(30/35HP)									
	Max. spindle torque																			
	1018Nm(104kg-m)										1018Nm(104kg-m)									
Feed rate	Rapid traverse(X,Y,Z)																			
	(m/min)																			
	15,12,12	15,12,12	15,12,12	15,12,12	12,12,12	12,12,12	12,12,12	12,12,12	8,12,12	8,12,12	8,12,12	8,12,12	8,12,12	8,12,12	8,12,12	8,12,12	7,12,12	7,12,12	7,12,12	7,12,12
	(ipm)																			
	590,472,472	590,472,472	590,472,472	590,472,472	472,472,472	472,472,472	472,472,472	472,472,472	315,472,472	315,472,472	315,472,472	315,472,472	315,472,472	315,472,472	315,472,472	315,472,472	276,472,472	276,472,472	276,472,472	276,472,472
	1-8000 mm/min(0.1-313.7ipm)										1-8000 mm/min(0.1-313.7ipm)									
	1-5000 mm/min(0.1-196ipm)										1-5000 mm/min(0.1-196ipm)									
Automatic tool changer(V/H)	Tool shank shape																			
	MAS403-BT50										MAS403-BT50									
	Pull stud																			
	MAS-P50T-I										MAS-P50T-I									
	Tool magazine capacity																			
	30(*40,*50,*60,*90)										30(*40,*50,*60,*90)									
	Max. tool diameter (without adjacent tools)																			
	Ø130(5.12"), ((Ø200/7.87"))										Ø130(5.12"), ((Ø200/7.87"))									
	Max. tool length																			
	350(13.8")										350(13.8")									
	Max. tool weight																			
	20kg(44lb)										20kg(44lb)									
Power sources	Electrical power supply																			
	70 KVA(*80K VA)										70 KVA(*80K VA)									
	Compressed air supply																			
	5-7 kg/cm ² (71-99.4psi)										5-7 kg/cm ² (71-99.4psi)									
Accuracy	Positioning accuracy																			
	±0.005/300, ±0.010/Full Travel				±0.005/300, ±0.015/Full Travel				±0.005/300, ±0.015/Full Travel				±0.005/300, ±0.015/Full Travel				±0.005/300, ±0.015/Full Travel			
	±0.0002/11.8", ±0.0004/Full Travel				±0.0002/11.8", ±0.0006/Full Travel				±0.0002/11.8", ±0.0006/Full Travel				±0.0002/11.8", ±0.0006/Full Travel				±0.0002/11.8", ±0.0006/Full Travel			
	Repeatability																			
	±0.003(±0.0001")										±0.003(±0.0001")									
Angular attachment	Indexing																			
	90° x4(*5° x72)										90° x4(*5° x72)									
	Index repeatability																			
	±3sec										±3sec									
Machine size	Machine height																			
	5080(200")										5080(200")									
	Floor space(LxW)																			
	8130x5715 (320.1"x225")	8130x6015 (320.1"x236.8")	8130x6215 (320.1"x244.7")	8130x6415 (320.1"x252.5")	10325x5715 (406.4"x225")	10325x6015 (406.4"x236.8")	10325x6215 (406.4"x244.7")	10325x6415 (406.4"x252.5")	12325x5715 (485.2"x225")	12325x6015 (485.2"x236.85")	12325x6215 (485.2"x244.7")	12325x6415 (485.2"x252.5")	14525x5715 (571.8"x225")	14525x6015 (571.8"x236.8")	14525x6215 (571.8"x244.7")	14525x6415 (571.8"x252.5")	19650x5715 (773.6"x225")	19650x6015 (773.6"x236.8")	19650x6215 (773.6"x244.7")	19650x6415 (773.6"x252.5")
	Machine net weight																			
	32000kg (70400lb)	34000kg (74800lb)	40000kg (88000lb)	41000kg (90200lb)	38000kg (83600lb)	39000kg (85800lb)	45000kg (99000lb)	46000kg (101200lb)	42000kg (92400lb)	43000kg (94600lb)	52000kg (114400lb)	53000kg (116600lb)	47000kg (103400lb)	48000kg (105600lb)	57000kg (125400lb)	58000kg (127600lb)	60000kg (132200lb)	61500kg (135300lb)	70000kg (154000lb)	71000kg (156200lb)
	CNC controller																			
	FANUC 0i(*31)series,*HEIDENHAIN,*SIEMENS,*MITSUBISHI																			

* Option Design and specifications are subject to change without notice. (())Max. tool diameter(without adjacent tools)
KMC-1000SRH special order model

KMC-SR/SR-H series standard accessories		KMC-SR/SR-H series optional accessories	
1 1	coolant equipment	1 1	link-type chip conveyor
1 2	centralized automatic lubrication system	1 2	mist coolant unit
1 3	rigid tapping	1 3	NC rotary table
1 4	splash guard	1 4	CAT50,DIN50,ISO50,HSK-A100 tool shank
1 5	adjusting tools and box (1 set)	1 5	oil hole drills interface
1 6	manual and electrical drawing (1 set)	1 6	linear scale feedback system
1 7	leveling and foundation fittings	1 7	automatic tool length measuring system
1 8	work light	1 8	automatic touch probe centering system
1 9	spindle cooling system (chiller unit)	1 9	coolant through spindle system (A,B type)
1 10	alarm lamp	1 10	KMTCS- kao ming thermal compensation system
1 11	air blast	1 11	larger capacity coolant tank
1 12	automatic power off	1 12	fully enclosed splash guard
1 13	operation finish lamp	1 13	coolant purifying system
1 14	screw-type chip conveyor	1 14	coolant cooling system
1 15	transformer (except 220v)	1 15	Hydraulic cooling system
1 16	inner cooled ballscrew	1 16	paper(belt) filter system
1 17	slideway covers	1 17	oil skimmer system
1 18	magazine safety guard	1 18	specified sub table, T-slot, machine color
1 19	electrical cabinet light	1 19	extra load capacity
1 20	manual tool change and foot switch	1 20	anchoring alignment system
1 21	reinforced foot-stand at both table-end	1 21	3~7 stations AAC magazine(Only for SR-H Series)
1 22	electrical cabinet cooling system (air conditioner)	1 22	Universal Head (Manual)
		1 23	electrical cabinet cooling system (up to 45°C capacity)
		1 24	Angle Head (Manual)
		1 25	30-Degree Angle Head (Only for SR-H Series)

Unit : mm

ITEM	KMC-218SR	KMC-221SR	KMC-318SR	KMC-321SR	KMC-323SR	KMC-325SR	KMC-328SR	KMC-418SR	KMC-421SR	KMC-423SR	KMC-425SR	KMC-428SR	KMC-518SR	KMC-521SR	KMC-523SR	KMC-525SR	KMC-528SR	KMC-618SR	KMC-621SR	KMC-623SR	KMC-625SR	KMC-628SR	KMC-818SR	KMC-821SR	KMC-823SR	KMC-825SR	KMC-828SR						
Distance between columns	1800(70.9")	2100(82.7")	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")	2800(110.2")	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")	2800(110.2")	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")	2800(110.2")	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")	2800(110.2")	1800(70.9")	2100(82.7")	2300(90.6")	2500(98.4")	2800(110.2")						
Table	Table working surface	1650X2000 (65"x78.7")	1650X2000 (65"x78.7")	1650X3000 (65"x118.1")	1650X3000 (65"x118.1")	2000X3000 (78.7"x118.1")	2000X3000 (78.7"x118.1")	2400X3000 (94.5"x118.1")	1650X4000 (65"x157.5")	1650X4000 (65"x157.5")	2000X4000 (78.7"x157.5")	2000X4000 (78.7"x157.5")	2400X4000 (94.5"x157.5")	1650X5000 (65"x196.9")	1650X5000 (65"x196.9")	2000X5000 (78.7"x196.9")	2000X5000 (78.7"x196.9")	2400X5000 (94.5"x196.9")	1650X6000 (65"x236.2")	1650X6000 (65"x236.2")	2000X6000 (78.7"x236.2")	2000X6000 (78.7"x236.2")	2400X6000 (94.5"x236.2")	1650X8000 (65"x315")	1650X8000 (65"x315")	2000X8000 (78.7"x315")	2000X8000 (78.7"x315")	2400X8000 (94.5"x315")					
	Max.table load	8000kg (17600lb)	9000kg (19800lb)	11000kg (24200lb)	12000kg (26400lb)	14000kg (30800lb)	14000kg (30800lb)	15000kg (33000lb)	13000kg (28600lb)	14000kg (30800lb)	15000kg (33000lb)	15000kg (33000lb)	16000kg (35200lb)	14000kg (30800lb)	14000kg (30800lb)	17000kg (37400lb)	17000kg (37400lb)	18000kg (39600lb)	16000kg (35200lb)	16000kg (35200lb)	19000kg (41800lb)	19000kg (41800lb)	20000kg (44000lb)	18000kg (39600lb)	18000kg (39600lb)	21000kg (46200lb)	21000kg (46200lb)	22000kg (48400lb)					
Travels	X-axis(table longitudinal)	2230(87.8")		3230(127.2")				4230(166.5")				5230(205.9")				6230(205.9")				8230(324")													
	Y-axis(spindle lateral)	1700(66.9")	2000(78.7")	1700(66.9")	2000(78.7")	2200(86.6")	2400(94.5")	2700(106.3")	1700(66.9")	2000(78.7")	2200(86.6")	2400(94.5")	2700(106.3")	1700(66.9")	2000(78.7")	2200(86.6")	2400(94.5")	2700(106.3")	1700(66.9")	2000(78.7")	2200(86.6")	2400(94.5")	2700(106.3")	1700(66.9")	2000(78.7")	2200(86.6")	2400(94.5")	2700(106.3")					
	Z-axis(spindle vertical)	1100(43.3")												1100(43.3")																			
	Distance from table surface to spindle nose	200-1300(7.87"-51.2")												200-1300(7.87"-51.2")																			
Spindle	spindle speed	4000(*6500,*8000)rpm												4000(*6500,*8000)rpm																			
	No. of spindle speed	infinite variable,2-steps												infinite variable,2-steps																			
	Spindle taper	ISO 50												ISO 50																			
	Spindle motor(cont./30min)	AC 22/26KW(30/35HP)												AC 22/26KW(30/35HP)																			
	Max. spindle torque	1018Nm(104kg-m)												1018Nm(104kg-m)																			
Feed rate	Rapid tavers(X,Y,Z) (m/min) (ipm)	15,15,12 590,590,472	15,15,12 590,590,472	15,15,12 590,590,472	15,15,12 590,590,472	15,12,12 590,472,472	15,12,12 590,472,472	12,15,12 472,590,472	12,15,12 472,590,472	12,12,12 472,472,472	12,12,12 472,472,472	12,12,12 472,472,472	12,12,12 472,472,472	8,15,12 315,590,472	8,15,12 315,590,472	8,12,12 315,472,472	8,12,12 315,472,472	8,12,12 315,472,472	8,15,12 315,590,472	8,15,12 315,590,472	8,12,12 315,472,472	8,12,12 315,472,472	8,12,12 315,472,472	7,15,12 276,590,472	7,15,12 276,590,472	7,12,12 276,472,472	7,12,12 276,472,472	7,12,12 276,472,472					
	Cutting feed rate	1-8000 mm/min(0.1-313.7ipm)												1-8000 mm/min(0.1-313.7ipm)												1-5000 mm/min(0.1-196ipm)				1-5000 mm/min(0.1-196ipm)			
Automatic tool changer(V/H)	Tool shank shape	MAS403-BT50												MAS403-BT50																			
	Pull stud	MAS-P50T-I												MAS-P50T-I																			
	Tool magazine capacity	30(*40,*50,*60,*90)												30(*40,*50,*60,*90)																			
	Max. tool diameter (without adjacent tools)	Ø130(5.12"), ((Ø200/7.87"))												Ø130(5.12"), ((Ø200/7.87"))																			
	Max. tool length	350(13.8")												350(13.8")																			
	Max. tool weight	20kg(44lb)												20kg(44lb)																			
Power sources	Electrical power supply	70 KVA(*80K VA)												70 KVA(*80K VA)																			
	Compressed air supply	5-7 kg/cm ² (71-99.4psi)												5-7 kg/cm ² (71-99.4psi)																			
Accuracy	Positioning accuracy	±0.005/300, ±0.010/Full Travel												±0.005/300, ±0.015/Full Travel												±0.005/300, ±0.015/Full Travel				±0.005/300, ±0.015/Full Travel			
	Repeatability	±0.0002"/11.8", ±0.0004"/Full Travel												±0.0002"/11.8", ±0.0006"/Full Travel												±0.0002"/11.8", ±0.0006"/Full Travel				±0.0002"/11.8", ±0.0006"/Full Travel			
Machine size	Machine height	4950(194.9")												4950(194.9")																			
	Floor space(LxW)	6130×4930 (241.3"×194")	6130×5230 (241.3"×205.9")	8130×4930 (320.1"×194")	8130×5230 (320.1"×205.9")	8130×5430 (320.1"×213.8")	8130×5630 (320.1"×221.7")	8130×5930 (320.1"×233.5")	10325×4930 (406.4"×194")	10325×5230 (406.4"×205.9")	10325×5430 (406.4"×213.8")	10325×5630 (406.4"×221.7")	10325×5930 (406.4"×233.5")	12325×4930 (485.2"×194")	12325×5230 (485.2"×205.9")	12325×5430 (485.2"×213.8")	12325×5630 (485.2"×221.7")	12325×5930 (485.2"×233.5")	14525×4930 (571.8"×194")	14525×5230 (571.8"×205.9")	14525×5430 (571.8"×213.8")	14525×5630 (571.8"×221.7")	14525×5930 (571.8"×233.5")	19650×4930 (773.6"×194")	19650×5230 (773.6"×205.9")	19650×5430 (773.6"×213.8")	19650×5630 (773.6"×221.7")	19650×5930 (773.6"×233.5")					
Machine net weight	24000kg (52800lb)	25500kg (56100lb)	28000kg (61600lb)	30000kg (66000lb)	36000kg (79200lb)	37000kg (81400lb)	38000kg (83600lb)	34000kg (74800lb)	35000kg (77000lb)	41000kg (90200lb)	42000kg (92400lb)	44000kg (96800lb)	39000kg (85800lb)	40000kg (88000lb)	49000kg (107800lb)	50000kg (110000lb)	53000kg (116600lb)	53000kg (116600lb)	44000kg (96800lb)	45000kg (99000lb)	54000kg (118800lb)	55000kg (121000lb)	58000kg (127600lb)	55000kg (121000lb)	56500kg (124300lb)	63000kg (138600lb)	67000kg (147400lb)	69000kg (151800lb)					
CNC controller	FANUC 0i(*31)series,*HEIDENHAIN,*SIEMENS,*MITSUBISHI																																

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KMC-1000SR special order model