

SM & X SERIES TURRET MILLING MACHINE



BM SERIES BED-TYPE MILLING MACHINE



KM SERIES CNC TURRET MILLING MACHINE



KBM SERIES CNC BED-TYPE MILLING MACHINE



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Add 3: Bi Town, Lufeng County, Yunnan.
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SMARTTECH MACHINERY & EQUIPMENT CO., LTD.
www.zzsmartech.com

SM SERIES TURRET MILLING MACHINE

SPECIFICATION		2S	2SL
Slideways Structure		Y/Z: ▲	Y: ■, Z: ▲
Table Size		1245x230mm(49"x9")	
Travel	X	920mm(36")	
	Y	330mm(13")	360mm(14")
	Z	406mm(16")	
	Quill	127mm(5")	
	Ram	380mm(15")	
Quill Diamenter		86mm(3 3/8")	
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")	
Spindle Motor		2.25kw (3HP)	
Spindle Taper		R8/NT30/NT40 (3 optional choose)	
Spindle Speed	S	16 steps: 80-5440rpm	
	V	Variable: 60-4200rpm	
	F	Infinity: 50-5000rpm	
Milling Head Tilt Angle		Back & Forward: ±45°, Right & Left: ±90°	
Distance from Table to Spindle		0-460mm(0-18")	
Distance from Column to Spindle		107-487mm(4 1/2"-19")	
Machine Weight		1000kg	1100kg
Dimension (LxWxH)		1600x1450x2100mm	1600x1700x2100mm



SM-2S



SM-3S

SPECIFICATION		3S	3SB	3SL	3SLB
Slideways Structure		Y/Z: ▲	Y: ■, Z: ▲	Y/Z: ▲	Y: ■, Z: ▲
Table Size		1272x254mm(50"x10")		1372x305mm(54"x12")	
Travel	X	914mm(36")		1000mm(40")	
	Y	406mm(16")			
	Z	406mm(16")			
	Quill	127mm(5")			
	Ram	520mm(20")			
Quill Diamenter		86mm(3 3/8")			
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")			
Spindle Motor		2.25kw (3HP)			
Spindle Taper		R8/NT30/NT40 (3 optional choose)			
Spindle Speed	S	16 steps: 80-5440rpm			
	V	Variable: 60-4200rpm			
	F	Infinity: 50-5000rpm			
Milling Head Tilt Angle		Back & Forward: ±45°, Right & Left: ±90°			
Distance from Table to Spindle		0-460mm(0-18")			
Distance from Column to Spindle		155-665mm(6"-26")			
Machine Weight		1200kg		1400kg	
Dimension (LxWxH)		1750x1700x2200mm		1850x1700x2200mm	



SM-4S

SPECIFICATION		4S	4SB
Slideways Structure		Y/Z: ■	
Table Size		1372x254mm(54"x10")	
Travel	X	1000mm(40")	
	Y	420mm(16 1/2")	
	Z	420mm(16 1/2")	
	Quill	127mm(5")	
	Ram	520mm(21")	
Quill Diamenter		86mm(3 3/8")	
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")	
Spindle Motor		2.25kw (3HP)	
Spindle Taper		R8/NT30/NT40 (3 optional choose)	
Spindle Speed	S	16 steps: 80-5440rpm	
	V	Variable: 60-4200rpm	
	F	Infinity: 80-5000rpm	
Milling Head Tilt Angle		Back & Forward: ±45°, Right & Left: ±90°	
Distance from Table to Spindle		0-420mm(0-16.5")	
Distance from Column to Spindle		105-685mm(4"-27")	
Machine Weight		1650kg	1720kg
Dimension (LxWxH)		2000x1700x2300mm	2000x1700x2400mm



SM-4SL

SPECIFICATION		4SL	4SLB
Slideways Structure		Y/Z: ■	
Table Size		1370x250mm(54"x10")	
Travel	X	1000mm(40")	
	Y	420mm(16 1/2")	
	Z	420mm(16 1/2")	
	Quill	127mm(5")	
	Ram	580mm(22.8")	
Quill Diamenter		105mm(4")	
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")	
Spindle Motor		3.75kw (5HP),option: 5kw(7.5HP)	
Spindle Taper		NT40	
Spindle Speed	S	16 steps: 80-5540rpm	
	V	Variable: 50-3750rpm	
	F	Infinity: 50-5000rpm	
Milling Head Tilt Angle		Back & Forward: ±45° or fixed, Right & Left: ±90°	
Distance from Table to Spindle		0-420mm(0-16.5")	100-520mm(4"-21")
Distance from Column to Spindle		105-685mm(4"-27")	
Machine Weight		1680kg	1750kg
Dimension (LxWxH)		2000x1700x2350mm	2000x1700x2450mm

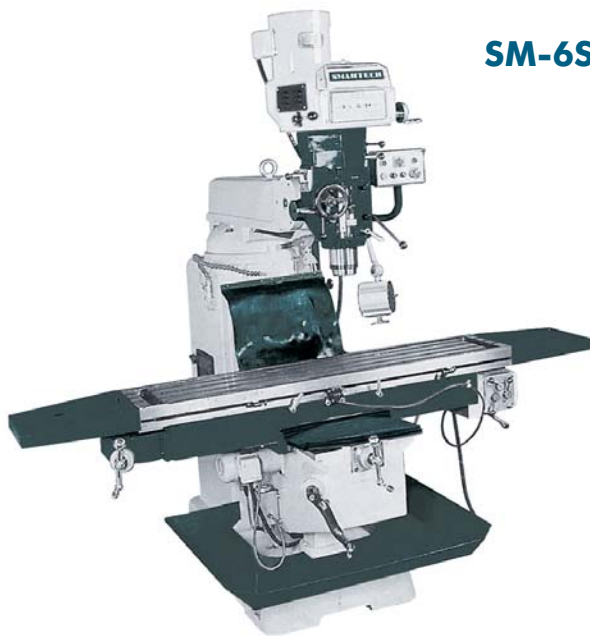
SM SERIES TURRET MILLING MACHINE

SPECIFICATION		5S	5SB
Slideways Structure		Y/Z: ■, X axis wide saddle	
Table Size		1370x330mm(54"x13")	
Travel	X	850mm(33")	1014mm(40")
	Y	380mm(15")	420mm(16 1/2")
	Z		360mm(14.2")
	Quill		127mm(5")
	Ram		600mm(24")
Quill Diamenter		105mm(4")	
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")	
Spindle Motor		3.75kw (5HP)	
Spindle Taper		NT40	
Spindle Speed	S	10 steps: 60-3600rpm	
	V	Variable: 50-3750rpm	
	F	Infinity: 80-5000rpm	
Milling Head Tilt Angle		Back & Forward: ±45° or fixed, Right & Left: ±90°	
Distance from Table to Spindle		0-420mm(0-16.5")	
Distance from Column to Spindle		172-756mm(6.8"-30")	
Machine Weight		2000kg	2100kg
Dimension (LxWxH)		2200x1800x2350mm	2350x1840x2350mm



SM-5S

SPECIFICATION		6S	6SB
Slideways Structure		Y/Z: ■, X axis wide saddle	
Table Size		1370x330mm(54"x13")	
Travel	X	850mm(33")	1014mm(40")
	Y	380mm(15")	420mm(16 1/2")
	Z		460mm(18")
	Quill		127mm(5")
	Ram		600mm(23 3/4")
Quill Diamenter		105mm(4")	
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")	
Spindle Motor		3.75kw (5HP),option: 5kw(7.5HP)	
Spindle Taper		NT40	
Spindle Speed	S	16 steps: 80-5540rpm	
	V	Variable: 50-3750rpm	
	F	Infinity: 50-5000rpm	
Milling Head Tilt Angle		Back & Forward: ±45° or fixed, Right & Left: ±90°	
Distance from Table to Spindle		100-560mm(4"-22")	
Distance from Column to Spindle		172-772mm(6.8"-30.4")	
Machine Weight		2200kg	2300kg
Dimension (LxWxH)		2200x1800x2550mm	2350x1840x2550mm



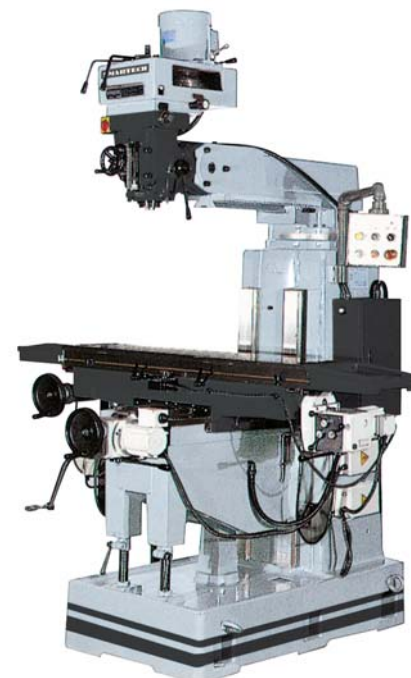
SM-6SL

SPECIFICATION		6SL
Slideways Structure		Y/Z: ■, X axis wide saddle
Table Size		1520x330mm(60"x13")
Travel	X	1200mm(48")
	Y	420mm(16 1/2")
	Z	460mm(18")
	Quill	127mm(5")
	Ram	600mm(24")
Quill Diamenter		105mm(4")
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")
Spindle Motor		3.75kw (5HP)
Spindle Taper		NT40
Spindle Speed	S	10 steps: 60-3600rpm
	V	Variable: 50-3750rpm
	F	Infinity: 80-5000rpm
Milling Head Tilt Angle		Back & Forward: ±45° or fixed, Right & Left: ±90°
Distance from Table to Spindle		100-560mm(4"-22")
Distance from Column to Spindle		100-710mm(4"-28")
Machine Weight		2450kg
Dimension (LxWxH)		2550x1840x2550mm



SM-6S

SPECIFICATION		7S	8S
Slideways Structure		Y/Z: ■, X axis wide saddle	
Table Size		1372x360mm(54"x14")	1524x360mm(60"x14")
Travel	X	1014mm(40")	1200mm(48") Ball Screw
	Y	500mm(20")	500mm(20") Ball Screw
	Z		500mm(18")
	Quill		150mm(6")
	Ram		600mm(24")
Quill Diamenter		105mm(4")	110mm(4.3")
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")	
Spindle Motor		3.75kw (5HP)	5kw (7.5HP)
Spindle Taper		NT40	
Spindle Speed	S	10 steps: 60-3600rpm	
	V	Variable: 50-3750rpm	
	F	Infinity: 50-5000rpm	
Milling Head Tilt Angle		Back & Forward: ±45° or fixed, Right & Left: ±90°	
Distance from Table to Spindle		100-570mm(4"-22.5")	
Distance from Column to Spindle		100-770mm(4"-30")	
Machine Weight		2700kg	2900kg
Dimension (LxWxH)		2400x1900x2650mm	2600x1900x2700mm



SM-7S

X SERIES TURRET MILLING MACHINE

SPECIFICATION		X3	X4
Slideways Structure		Y/Z: ▲	Y/Z: ▲
Table Size		1270x254mm(50"x10")	1470x320mm(58"x12")
Travel	X	800mm(31")	920mm(36")
	Y	400mm(15")	410mm(16")
	Z	350mm(13")	400mm(15")
	Quill	127mm(5")	127mm(5")
	Ram	380mm(15")	360(14")
Quill Diamenter		86mm(3 3/8")	
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")	
Spindle Motor		2.25kw (3HP)	
Spindle Taper		R8/NT30/NT40 (3 optional choose)	
Spindle Speed	S	16 steps: 80-5440rpm	
	V	Variable: 60-4200rpm	
	F	Infinity: 80-5000rpm	
Milling Head Tilt Angle		Back & Forward: ±45°, Right & Left:±90°	
Distance from Table to Spindle		75-405mm(3"-16")	50-455mm(2"-18")
Distance from Column to Spindle		172-756mm(6.8"-30")	
Machine Weight		1200kg	1300kg
Dimension (LxWxH)		1750x1700x2100mm	2050x1700x2200mm



X3



X5

SPECIFICATION		X4L	X5
Slideways Structure		Y/Z: ■	Y/Z: ▲
Table Size		1372x305mm(54"x12")	1470x320mm(58"x12")
Travel	X	1000mm(39")	920mm(36")
	Y	440mm(17")	410mm(16")
	Z	410mm(16")	400mm(15")
	Quill	127mm(5")	127(5")
	Ram	380mm(15")	350(13")
Quill Diamenter		105mm(4")	
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")	
Spindle Motor		3.75kw (5HP)	
Spindle Taper		NT40	
Spindle Speed	S	10 steps: 60-3600rpm	
	V	Variable: 50-3750rpm	
	F	Infinity: 80-5000rpm	
Milling Head Tilt Angle		Back & Forward: ±45° or fixed, Right & Left:±90°	
Distance from Table to Spindle		0-420mm(0-16.5")	100-500mm(4"-20")
Distance from Column to Spindle		172-756mm(6.8"-30")	
Machine Weight		2000kg	2100kg
Dimension (LxWxH)		2200x1800x2350mm	2350x1840x2350mm



VH4



VH SERIES

VERTICAL & HORIZOZTAL TURRET MILLING MACHINE.

SPECIFICATION		VH-4	VH-5	VH-6
Slideways Structure		Y: ■■Z: ▲	Y: ■■, Z: ▲	Y: ■■Z: ▲
Table Size		1270x254mm(50"x10")	1372x305mm(54"x12")	1370x330mm(54"x13")
Travel	X	760mm(30")	1000mm(39")	1000mm(39")
	Y	350mm(14")	380mm(15")	420mm(16")
	Z	310mm(12")	360mm(14")	380mm(15")
	Quill	127mm(5")	127mm(5")	127mm(5")
	Ram	520mm(21")	520mm(21")	600mm(24")
Quill Diamenter		86mm(3 3/8")		105mm(4")
Quill Feed rate		0.04,0.08,0.15mm (0.0015",0.003",0.006")	0.04,0.08,0.15mm (0.0015",0.003",0.006")	0.04,0.08,0.15mm (0.0015",0.003",0.006")
Spindle Motor		2.25kw (3HP)		3.75kw (5HP)
Spindle Taper		R8/NT30/NT40 (3 optional choose)		NT40
Spindle Speed	S	16 steps: 80-5440rpm		10 steps: 60-3600rpm
	V	Variable: 60-4200rpm		Variable: 50-3750rpm
	F	Infinity: 80-5000rpm		Infinity: 80-5000rpm
Milling Head Tilt Angle		Back & Forward: ±45°, Right & Left:±90°		Back & Forward: ±45° or fixed, Right & Left:±90°
Distance from Table to Spindle		75-405mm(3"-16")	150-530mm(6"-21")	150-530mm(6"-21")
Horizontal Spindle Power		2.2kw		
Horizontal Spindle Speed (9-step)		60, 110, 200, 275, 400, 500, 735, 900, 1320		
Horizontal Quill Travel		152.5-270mm (6"-10")		
Horizontal Spindle Taper		NT-30		NT40
Center Height of Bracket		200		365
Machine Weight		1500x1700x2100mm	1600x2000x2400mm	1650x2000x2450mm
Dimension		1500kg	2400kg	2600kg

OPTIONAL MILLING HEADS



3S (3HP) Step-pulley.



3J (3HP) Rigid Step-pulley.



3V (3HP) Variable.



5S (5HP) Step-pulley



5J (5HP) Rigid Step-pulley



5V (5HP) Variable



3FS, 5FS & 7FS(7.5HP)
Inverter Controlled



5FV(5HP) & 7.5FV(7.5HP)
Inverter Controlled

STANDARD COMPONENTS & ACCESSORIES

- 1) Draw bar;
- 2) Luxury Electric control box;
- 3) Way rubber cover (front & back);
- 4) Halogen Working Lamp
- 5) Rapid Power Table Elevating System (For Model: 4L, 5, 6, 7,8, X4 & X5)
- 6) Tools & Tool box;
- 7) Operation manual.



1



2



3



5



6



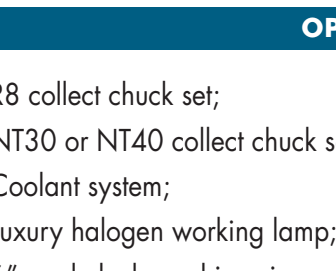
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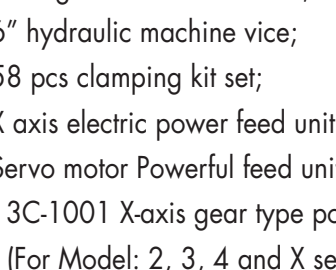
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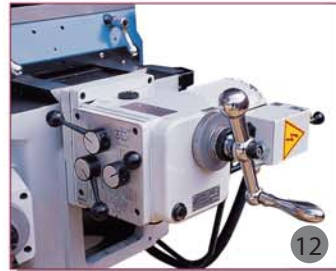
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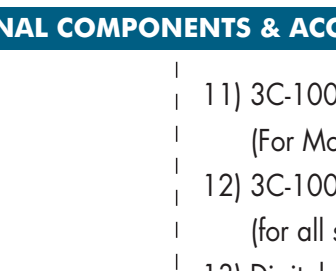
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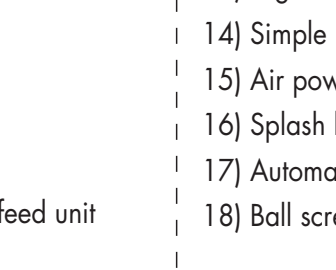
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12



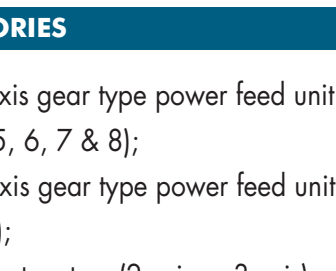
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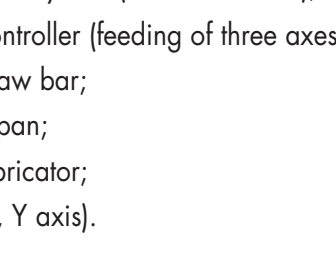
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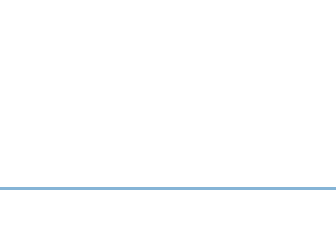
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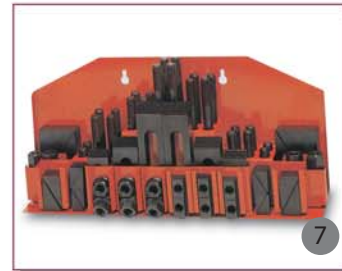
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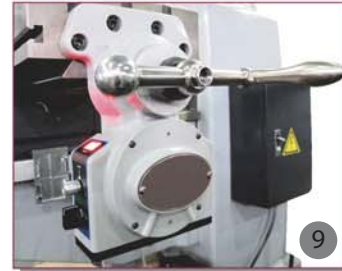
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17



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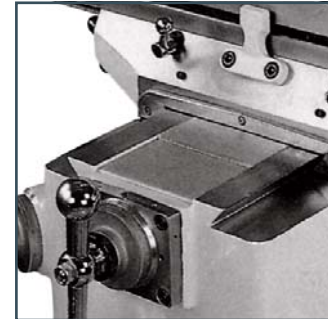
OPTIONAL COMPONENTS & ACCESSORIES

- 1) R8 collect chuck set;
- 2) NT30 or NT40 collect chuck set;
- 3) Coolant system;
- 4) Luxury halogen working lamp;
- 5) 6" angle lock machine vice;
- 6) 6" hydraulic machine vice;
- 7) 58 pcs clamping kit set;
- 8) X axis electric power feed unit;
- 9) Servo motor Powerful feed unit;
- 10) 3C-1001 X-axis gear type power feed unit (For Model: 2, 3, 4 and X series);
- 11) 3C-1005 X-axis gear type power feed unit (For Model: 5, 6, 7 & 8);
- 12) 3C-1002 Y-axis gear type power feed unit (for all series);
- 13) Digital read out system (2-axis or 3-axis);
- 14) Simple PC controller (feeding of three axes);
- 15) Air power draw bar;
- 16) Splash base pan;
- 17) Automatic lubricator;
- 18) Ball screw (X, Y axis).

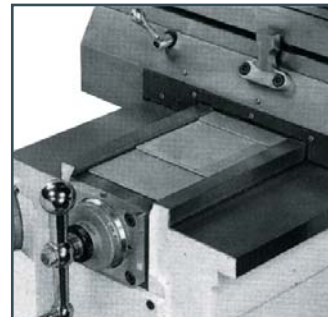
MAJOR FEATURES OF TURRET MILLING MACHINE



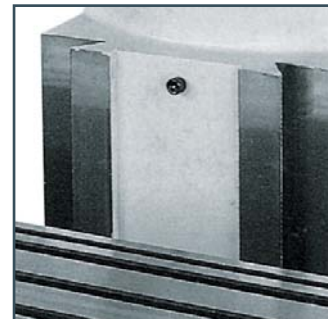
Double ▲ shape cross slideways (For Model X)



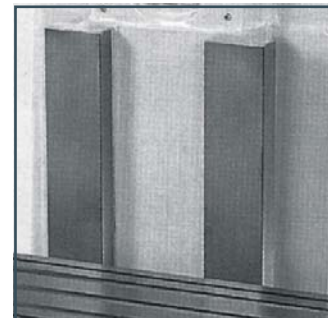
▲ shape cross slide ways (For Model: 2 & 3)



■ shape cross slide ways (For Model: 2B, 3B, 3LB, 4, 4L, 5, 6, 7 & 8)



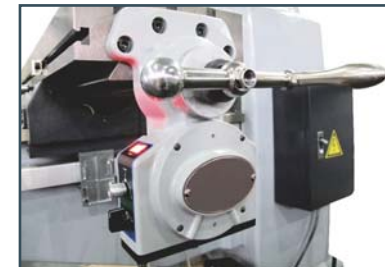
▲ shape column slide ways (For Model: 2 & 3)



■ shape column slide ways (For Model: 4, 4L, 5, 6, 7 & 8)

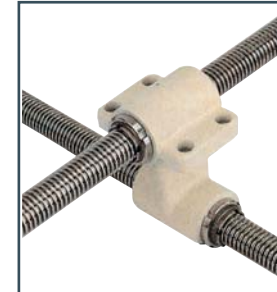


Wide saddle with screws inside with better table supporting (For Model: 5, 6, 7 & 8)

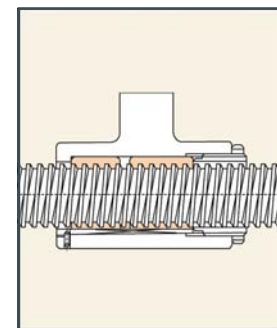


New Servo Motor Power Feed Unit.

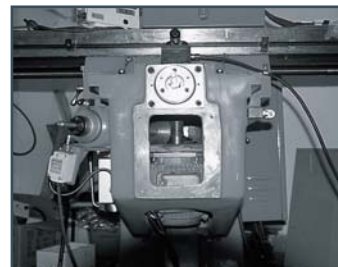
- Full range voltage.
- PC controlled variable feed control with speed read-out.
- Accelerator & Speed control integrated in one button.
- Intelligent over-load protection with Auto Zero speed reset when power re-powered on.
- Super Powerful Servo Motor with max torque 20Nm.



High class precision screws



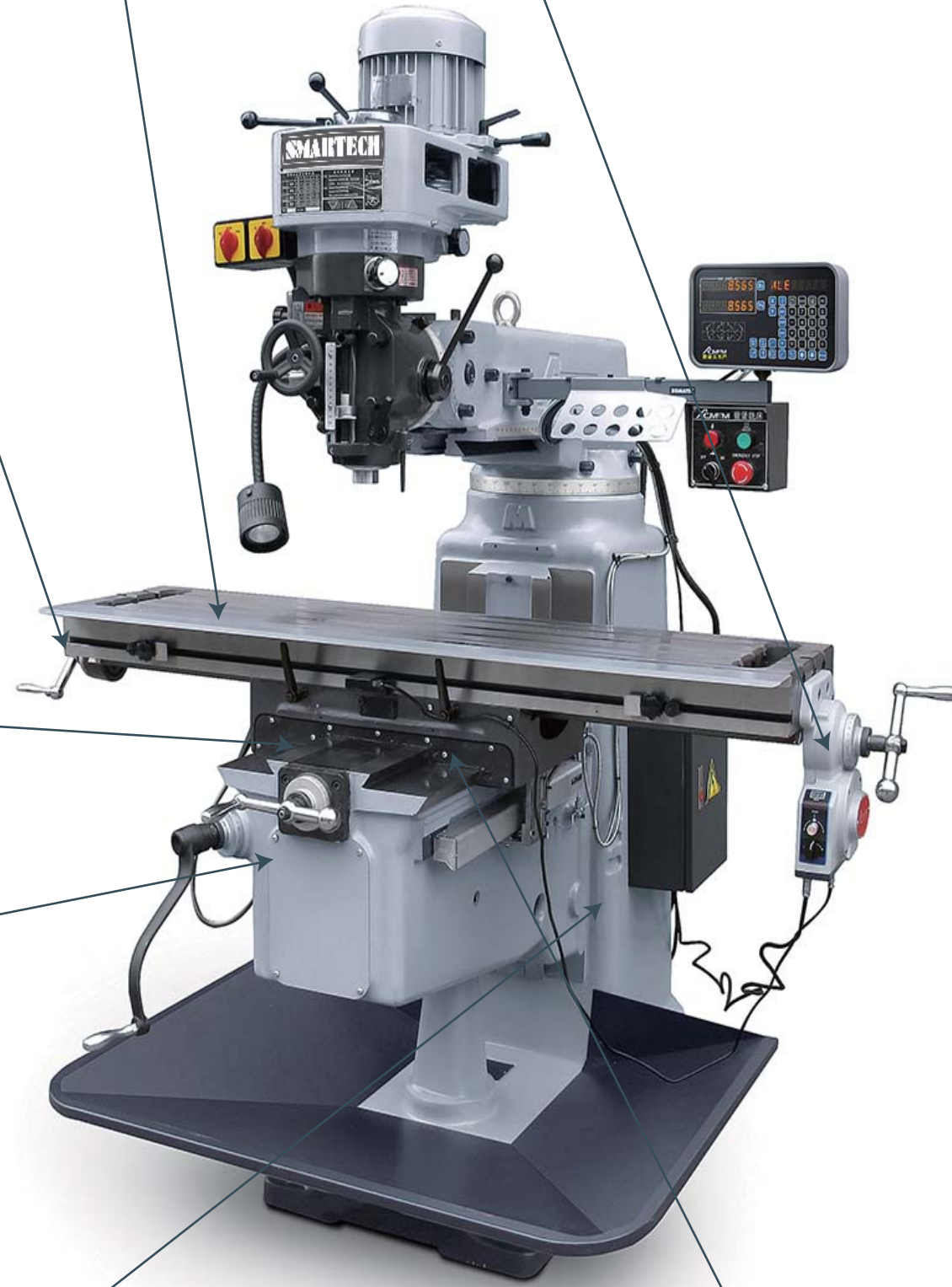
Double Nuts compensation with less backlash



Inner Motor driven Knee Table Rapid elevating system (For Model: 4, 4L and X series)



Outside motor driven Table Rapid elevating system (For Model: 5, 6, 7 & 8)



Rapid Power Table Elevating System

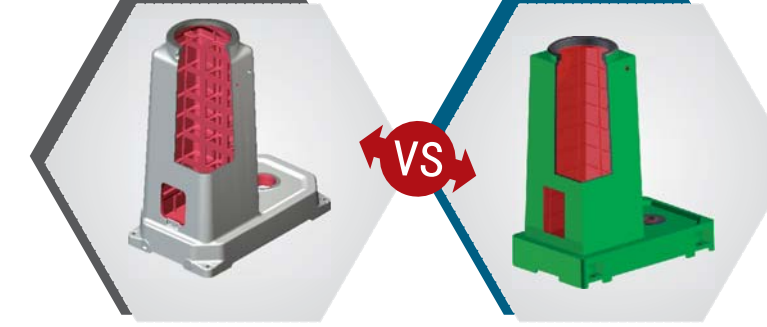


Superior Turcite-B coated on the adjunction surfaces to the slideways and with precise scraping.

- High quality meehanite cast iron by resin mould then with annealing treatment to release stress, well designed inner structure, all for high strength and minimal deformation. Table and all slideways surface are harden and ground.

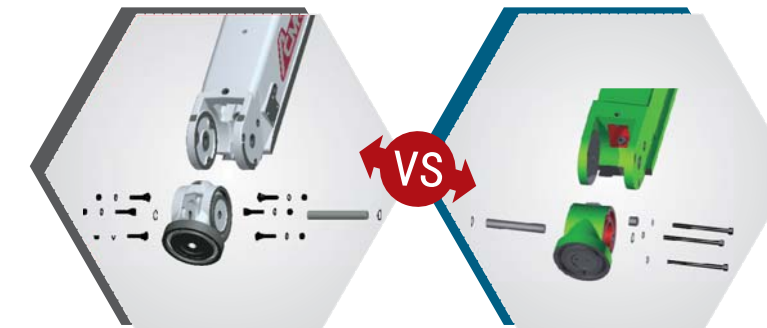
X SERIES SPECIAL FEATURE

Column



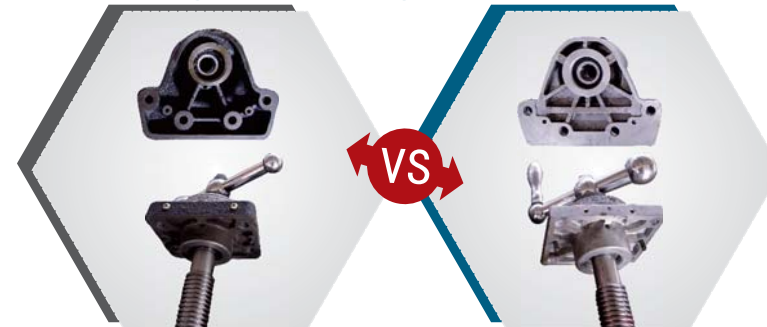
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| X Series
Additional inner ribs stiffeners design to improve the rigidity of column | VS | Traditional Series
Single inner ribs stiffeners |
|---|----|--|

Ram & ram adapter



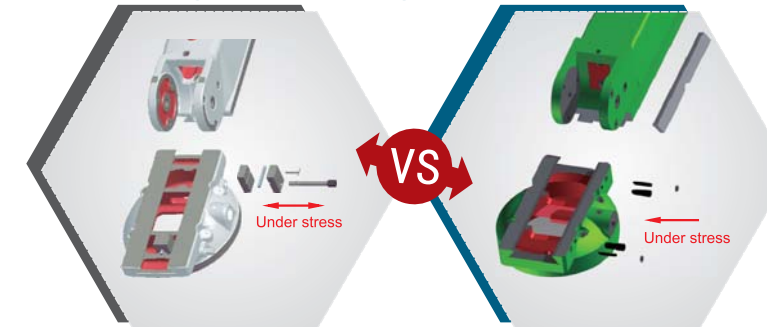
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|--|----|---|
| X Series
Double side 6 pcs lock screws (8 pcs for X5) between ram and adapter provide double lock force | VS | Traditional
Only single side 3 pcs lock screws |
|--|----|---|

Bearing Housing



- | | | |
|--|----|--|
| X Series
Casting Iron Bearing Housing with better rigidity and less deformation | VS | Traditional
Aluminum Bearing Housing with more deformation due to temperature change. |
|--|----|--|

Bearing Housing



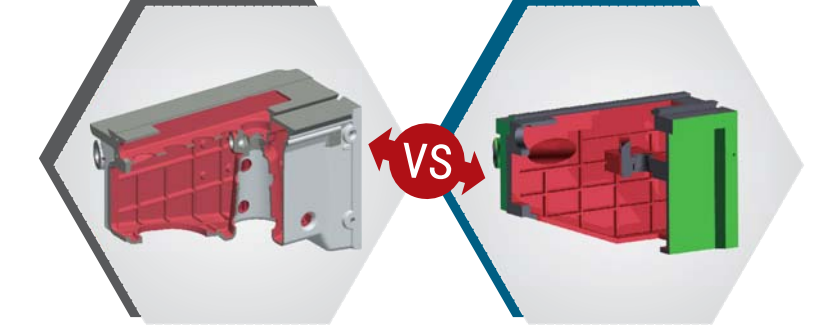
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| X Series
Inner Turret twin-sides expending type locking device with less deformation | VS | Traditional
One-side screws Locking from outside of turret. |
|---|----|--|

Slideways structure between Saddle and Knee



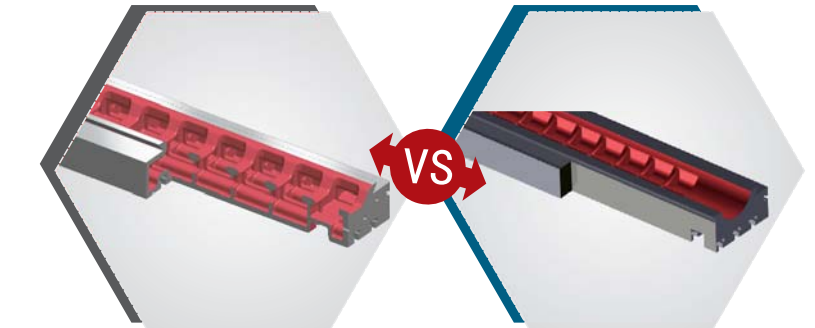
- | | | |
|--|----|--|
| X Series
Double V type with 4 slideways and 4 faces surrounding between saddle and Knee provide provides much better accuracy and machine life than other type. | VS | Traditional
Single V type slideways or double square type slideways with less surrounding and less accuracy |
|--|----|--|

Knee



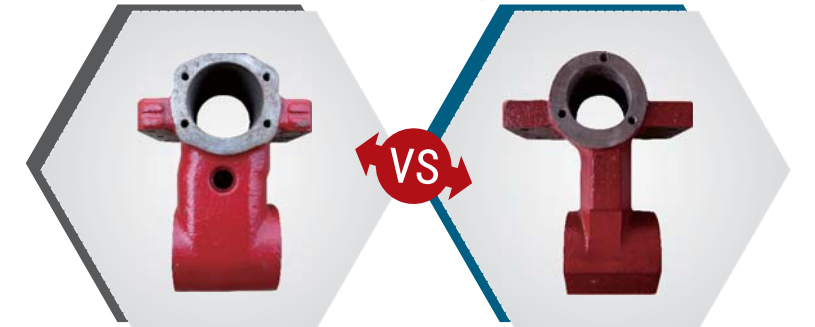
- | | | |
|---|----|---|
| X Series
Y axis and Z axis device integrated strengthened design to increase the knee rigidity | VS | Traditional Series
Z axis Elevating device separated |
|---|----|---|

Working table



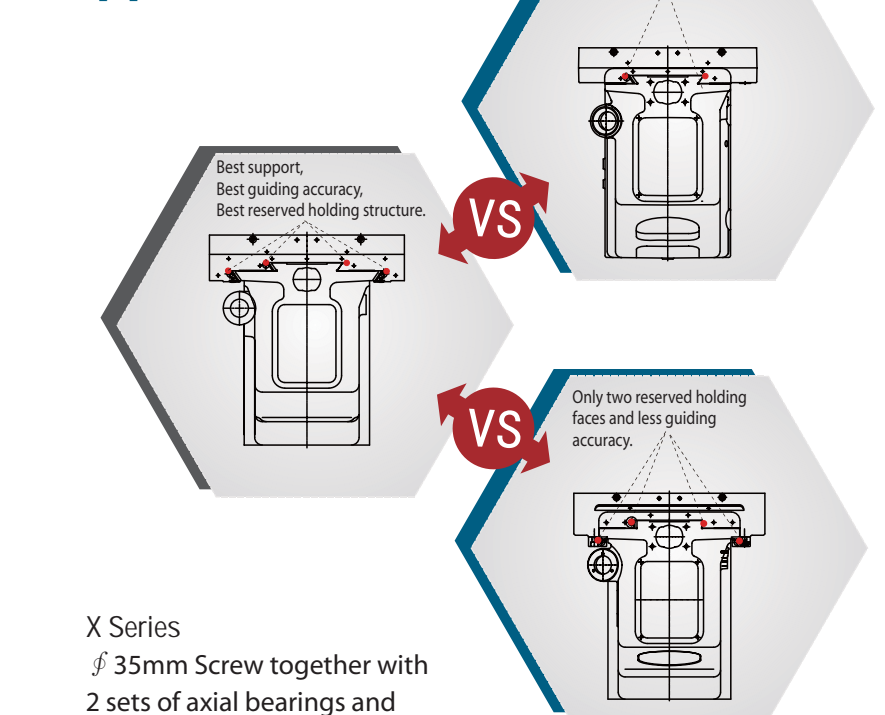
- | | | |
|--|----|--|
| X Series
Better rib stiffeners inside provide the better rigidity with less weight, also less error in long travel. | VS | Traditional
No well rib design with heavier weight and easier shape change due to inner stress release. |
|--|----|--|

X & Y axis Feed Angle Nut Bracket



- | | | |
|---|----|----------------------------------|
| X Series
Improved Stronger structure with 5 times strength than before | VS | Traditional
Thinner structure |
|---|----|----------------------------------|

Support Pedestal



- | | | |
|--|----|---|
| X Series
Best support, Best guiding accuracy, Best reserved holding structure. | VS | Traditional
Only two reserved holding faces and less guiding accuracy. |
| X Series
φ 35mm Screw together with 2 sets of axial bearings and one radial bearing provide much better support capacity. | VS | Traditional
φ 32mm screw with only one set bearing. |

Spindle Lock Nuts



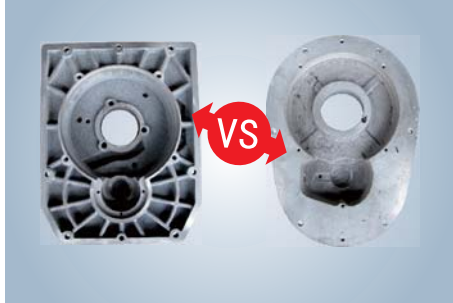
Precision nut assembled with Japanese torque spanner
Vs.
Nut and shower assembled with ordinary spanner

Small Gear inside Gear Box (For J series Head)



Small gear made of 20 CrMoTi, carburizing deep with 0.5~0.8 mm, high-frequency induction hardening to HRC 52~56. Drive shaft and gear in one piece design to strengthen rigidity with less noise and longer lifetime.
Vs.
Small gear made of S45C, high-frequency induction hardening to HRC 48~52. Drive shaft and gear separated.

Gear Box Body (For J series Head)



Casted Body made of GG25 casting iron by Resin model with metal pattern and with well- designed inner ribs
Vs.
Casted Body made of casting Aluminum without ribs.

Main Motor Lock device



Locking motor with handle, easy to use
Vs.
Locking motor with nuts.



Main Motor
Copper coil with enough power output and lower heat increase
Vs.
Aluminum coil



Variable Speed Control Plate (For V series Head)
With 360° flexible shaft support with smooth speed change with better balancing.

Belt Slide Shaft Structure (For V series Head)



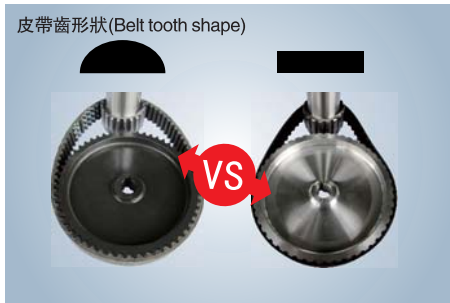
Shaft for Belt slide wheels with both ends supported to ensure belt up & down moving smoothly.

Milling Head Motor



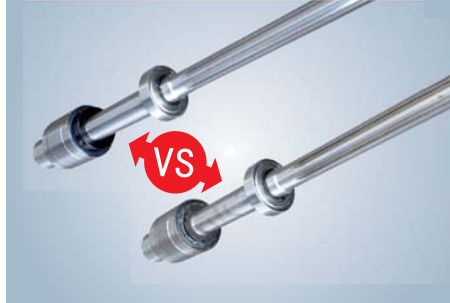
Spindle assembling use Austrian SKF brand bearing oil

Teeth Gear Belt (For J series Head)



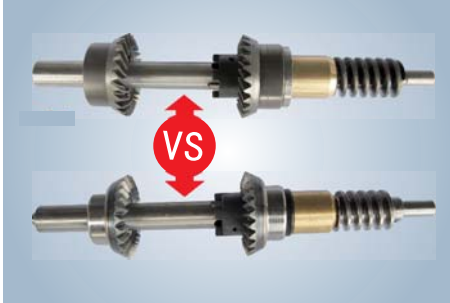
Round teeth type belt: more powerful trasfering and less noise
Vs.
Square teeth type belt: unsmooth and higher noise.

Spindle



Whole Spindle made of 40 Cr with high frequency induction hardened and 20-24°C conditioning treated to HRC52~56. 6 multiple keys groove well grinded.
Vs.
Spindle made of S45C, high-frequency induction hardening to HRC48~52 only.

Feed Worm Gear



Feeding worm gear and shaft in one-piece structure, spiral bevel type gear with better running and less noise
Vs.
Feeding worm gear and shaft separated structure, straight bevel gear

Spindle Body



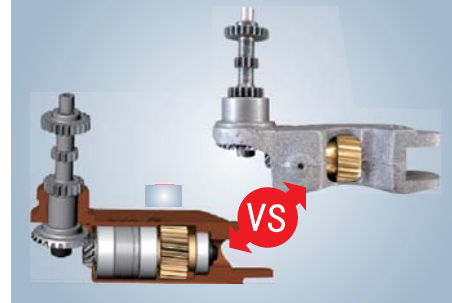
Casted Body made of GG25 by Resin model with metal pattern and with well- designed inner ribs
Vs.
Casted Body made of GG20 with wooden pattern

Brake Seat (For J series Head)



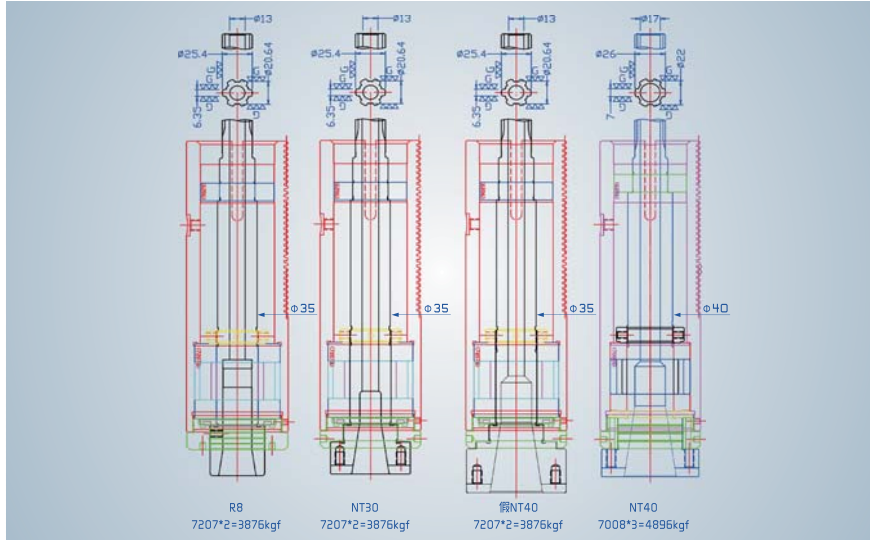
Brake pulley made of casting Iron with precise machined, locked by precise nut, bearing cap prepressed without gaps with more rigidity. Drive Pulley made of casting Iron with more stable.
Vs.
Brake pulley made of casting Aluminum, locked by nut and washer without prepressed. Drive Pulley made of casting Aluminum.

Auto-Feed Drive Seat



With three bearings supported, worm gear made of phosphor bronze. Drive spiral bevel type gear with carburizing treatment with less noise and better wear resisting.
Vs.
With Bronze sleeves supported only

Spindle Structure Diagram



Upgrade board NT40 spindle: spindle outer diameter ø35mm upgrade ø40mm, rod M12
Upgrade M16, bearing by 3876kgf upgrade 4896gf.

Gear Oil



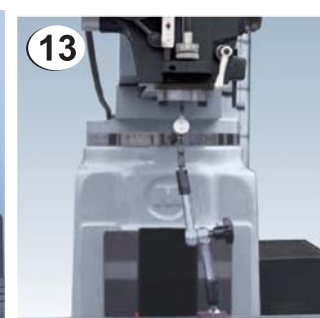
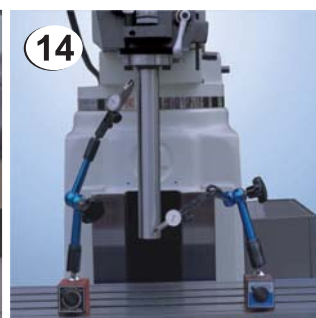
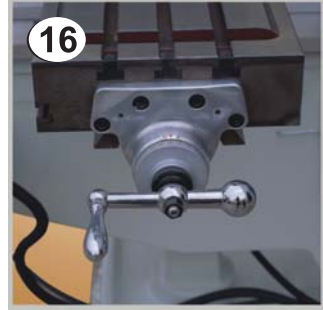
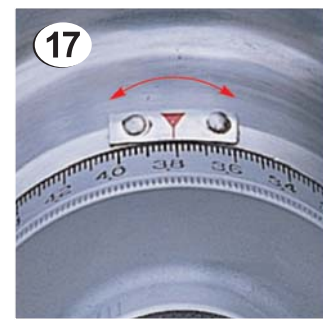
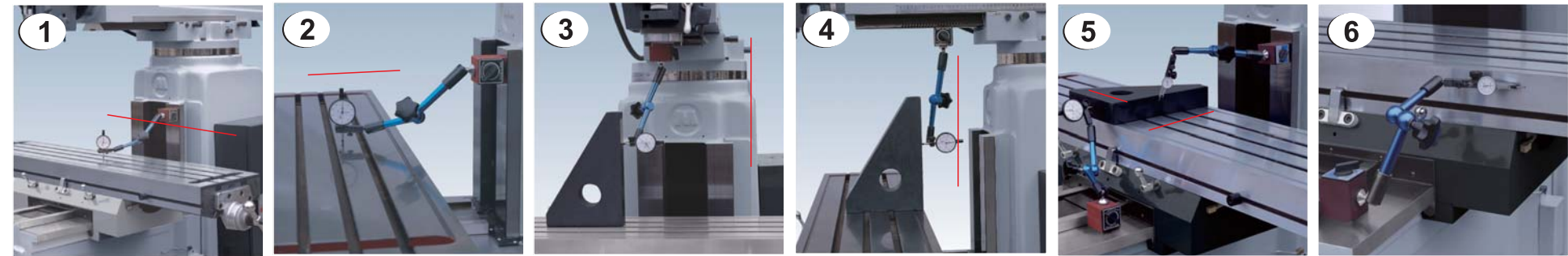
Gear assembling use American LE brand gear oil.

Test Room

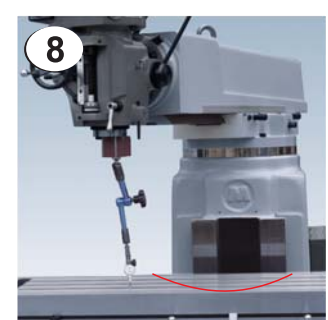
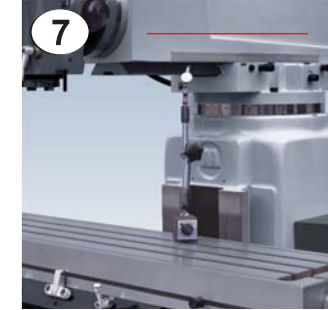


Under 41 dB environment enclosed room for milling head running testing

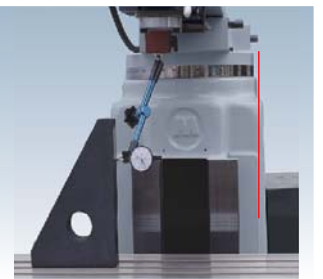
Inspection Items & Standard



NO.	ITEMS	SM & X SERIES
1	Parallelism of worktable	X axis 0.02/300mm
2		Y axis 0.02/300mm
3	Perpendicularity between Table and Column Slideway	X axis 0.02/300mm
4		Y axis 0.02/300mm
5	Perpendicularity between Cross travel (Y axis) and longitudinal Travel (X axis) of table	0.02/300mm
6	Backlash on X and Y by gibs.	≤ 0.12mm
7	Parallelism between ram moving and table	0.035/300mm
8	Parallelism between turret rotating and worktable	0.035mm/30°
9	Noise of milling head	≤ 70dB
10-12	Hardness of table and slideways	≥ 48HRC
13	Radial skip of the spindle bore	On the nose ≤ 0.01mm
14	Radial skip of the spindle bore	300mm to the nose ≤ 0.02mm
15-16	Manual feeding force	Model: X axis ≤ 1.5kg
		2,3,4 Y axis ≤ 2.0kg
		Z axis ≤ 5.0kg
		Model: X axis ≤ 1.5kg
17	Scale error by screws backlash (Cross and Longitudinal)	Y axis ≤ 2.5kg
		Z axis ≤ 5.0kg
		≤ 0.09mm
18	Max Thermo Increase of spindle	≤ 60°
		of environment temperature change ≤ 30°



Inspection Tools



▲ USA Covina:
The Right Angle Gange



▲ Japan Mitutoyo:
Dial indicator



▲ Switzerland GIROD-TAS:
Micrometer



▲ Japan Nttonic:
Weight Detector



▲ Japan TES:
The Noise Decibels



▲ Leeb
Hardness tester



BM-1000



BM-1300

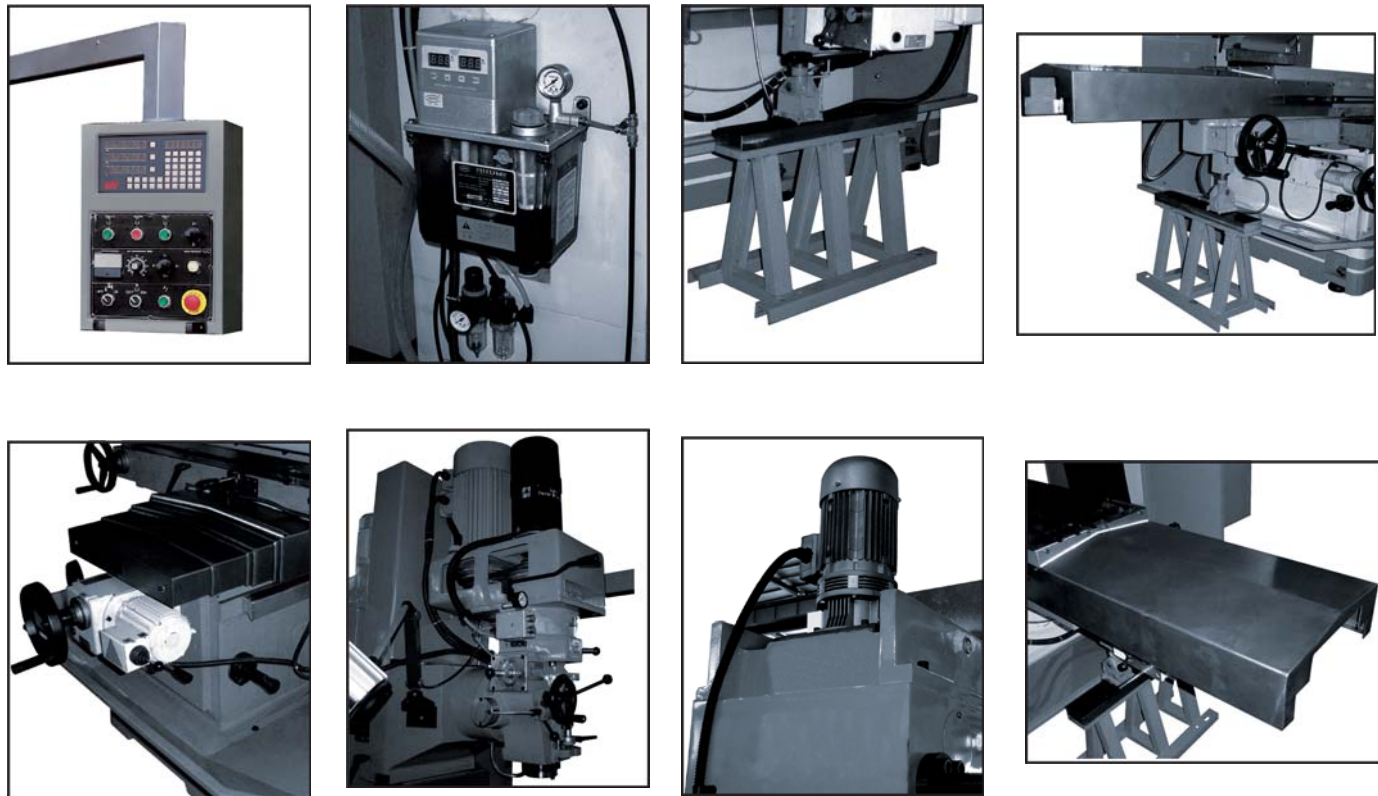
SPECIFICATION	BM-800	BM-1000	BM-1300
Table Size	1370x330mm(54"x13")	1372x405mm(54"x16")	1570x405mm(62"x16")
T-slot(No.-size×distance)	3-16x68mm	5-16x60mm	5-16x60mm
Travel			
X	800mm (31")	1050mm (42")	1300mm (51")
Y	420mm (16.5")	508mm (20")	508mm (20")
Z	570mm (22.5")	630mm (25")	630mm (25")
Quill		127mm (5")	
Quill Diameter		105mm (4")	
Quill Feed Rate		0.04, 0.08, 0.15mm (0.0015", 0.003", 0.006")	
Spindle Motor Power		5HP/7.5HP	
Spindle Taper		NT40	
Spindle Speed	S	10 step: 60-3600 rpm	
Spindle Speed	V	Variable: 50-3750 rpm	
Spindle Speed	F	Infinity: 50-5000 rpm	
Milling Head Tilt Angle		Right & Left: ±45°	
Distance from Table to Spindle	110-680mm(4"-27")	110-740mm(4"-29")	
Distance from Column to Spindle	460mm(18")	480mm(19")	
X/Y/Z Rapid Feed Rate		4000mm/min	
Cutting Feed Rate		0-2000mm/min	
X/Y/Z Servo Motor		1KW/1.36HP	
Machine Weight	2250kg	3000kg	3100kg
Dimension (L×W×H)	2250x2000x2400mm	2300x2000x2400mm	3050x2000x2355mm

Standard Accessories

- 1) X/Y/Z axis servo motor feed system or Gear Type Power Feed Unite
- 2) X/Y/Z axis Ball Screws
- 3) Built-in 3-axis Digital Dead Out System.
- 4) Pneumatic Power Draw Bar System
- 5) Y-axis Telescopic Protection Cover
- 6) Z-axis Chip Protection Cover
- 7) Coolant System
- 8) Central AutomaticLubrication System
- 9) Compact Control Panel with all key on.
- 10) Extension tables on each end of working table or stainless steel cover.
- 11) Sub-support Slideways for the Saddle(For Model: BM-1300)
- 12) Working Lamp.
- 13) Base Chip Pan and Side Gurad
- 14) Tool Box
- 15) Operation Manuel

Optional Accessories

- 1) Collect Chuck sets (NT40 OZ or NT40 ASC).
- 2) Machine vise
- 3) Hydraulic Machine Vise
- 4) 58 pcs Clamping Kit set
- 5) Table Splash Guard.



KM Series CNC Turret-type Milling Machine

SPECIFICATION	KM-3NC	KM-4NC	KM-5NC
Slideways Structure	Y/Z: ■	Y: Double▲ Z: ▲	Y/Z: ■ X axis wide saddle
Table Size	1270x254mm(50"x10")	1370x320mm(54"x12.5")	1372x330mm(54"x13")
Travel			
X	800mm (31.5")	780mm (30.7")	800mm (31.4")
Y	380(15")	380(15")	360(14")
Z (Quill)	125mm(5")	125mm(5")	125mm(5")
Knee	360mm(14")	400mm(15.7")	400mm(15.7")
Ram	380mm(15") or Fixed		
Spindle Nose to Table	50-435mm(2"-18")	50-465mm(2"-18")	50-465mm(2"-18")
Quill Diamenter		86mm(3 3/8")	105mm(4")
Spindle Motor		2.25kw (3HP)	3.75kw (5HP) or 5kw (7.5HP)*
Spindle Taper		R8/NT30/NT40 (3 optional choose)	NT40
Spindle Speed			
S	16 steps: 80-5440rpm		10 steps: 60-3600rpm
V	Variable: 60-4200rpm		Variable: 50-3750rpm
F	Infinity: 50-5000rpm		Infinity: 50-5000rpm
Spindle Speed	16 steps 80-5440 rpm (frequency conversion 300-5000rpm)		
Rapid Feed Rate		5000mm/min	
Cutting Feed Rate		0-1000mm/min	
X/Y/Z Motor		1.5kw/2HP	
Positioning Accuracy		0.02mm	
Repeatability		0.01mm	
Machine Weight	1750kg	1800kg	2400kg
Dimension	1950x2150x2200mm	1950x2150x2200mm	2350x1840x2350mm

Standard Accessories

- 1) X/Y/Z axis servo motor
- 2) X/Y/Z axis Ball Screws
- 3) CNC System with options: GSK, Siemens, Fanuc etc.
- 4) Pneumatic Power Draw Bar System
- 5) Front and Back rubber Chip Protection Cover
- 6) Coolant System
- 7) Central AutomaticLubrication System
- 8) Power table elevating system
- 9) Working Lamp.
- 10) Base Chip Pan and Side Gurad
- 11) Tool Box
- 12) Operation Manuel

Optional Accessories

- 1) Milling Head lower body in one piece box type (as per picture)
- 2) Collect Chuck sets (R8, NT30 or NT40).
- 3) Machine vise
- 4) Hydraulic Machine Vise
- 5) 58 pcs Clamping Kit set
- 6) Table Splash Guard.



Optional Structure



KBM CNC Bed-type Milling Machine



SPECIFICATION	KBM-800NC	KBM-1000NC	KBM-1300NC
Table Size	1370x330mm(54"x13")	1372x405mm(54"x16")	1570x405mm(62"x16")
T-slot(No.-size×distance)	3-16x68	5-16x60	5-16x60
Travel			
X	800mm (31")	1050mm (42")	1300mm (51")
Y	405mm (16")	410mm (16")	410mm (16")
Z	510mm (20")	560mm (22")	560mm (22")
Quill	127mm (5")		
Quill Feed Rate		0.04, 0.08, 0.15mm (0.0015", 0.003", 0.006")	
Spindle Motor Power		5HP/7.5HP	
Spindle Taper		NT40	
Spindle Speed	S	10 steps: 60-3600rpm	
	V	Variable: 50-3750rpm	
	F	Infinity: 50-5000rpm	
Milling Head Tilt Angle		Right & Left: ±45°	
Distance from Table to Spindle	110-680mm(4"-27")	110-740mm(4"-29")	
Distance from Column to Spindle	460mm(18")	480mm(19")	
X/Y/Z Rapid Feed Rate		4000mm/min	
Cutting Feed Rate		0-2000mm/min	
X/Y/Z Servo Motor		1.5KW/2HP	
Positioning Accuracy		0.02mm	
Repeatability		0.01mm	
Machine Weight	2100kg	3000kg	3100kg
Dimension (L×W×H)	2250x2000x2400mm	2300x2000x2400mm	3050x2000x2355mm

Standard Accessories

- 1Standard Accessories:
- 1) X/Y/Z axis servo motor
 - 2) X/Y/Z axis Ball Screws
 - 3) CNC System with options: GSK, Siemens, Fanuc etc.
 - 4) Pneumatic Power Draw Bar System
 - 5) Y-axis Telescopic Protection Cover
 - 6) Z-axis Chip Protection Cover
 - 7) Coolant System

Optional Accessories

- 1) Collect Chuck sets (NT40 OZ or NT40 ASC).
- 2) Machine vise
- 3) Hydraulic Machine Vise

- 8) Central AutomaticLubrication System
- 9) Extension tables on each end of working table or stainless steel cover.
- 10) Sub-support Slideways for the Saddle (For Model: KBM-1300)
- 11) Working Lamp.
- 12) Base Chip Pan and Side Gurad
- 13) Tool Box
- 14) Operation Manuel

- 4) 58 pcs Clamping Kit set
- 5) Table Splash Guard.