KGP Series
Double Column Surface Grinder

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KENT

50th Anniversary KENT 50 since 1956 KENT INDUSTRIAL CO.,LTD.

KENT Kent Industrial Co., Ltd.

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Surface & Angular
Grinding Done In One Set Up

- Massive Worktable Capability
- Moving Beam Option

201708/1000

However large your workpiece, we can build the perfect machine to grind it for you.

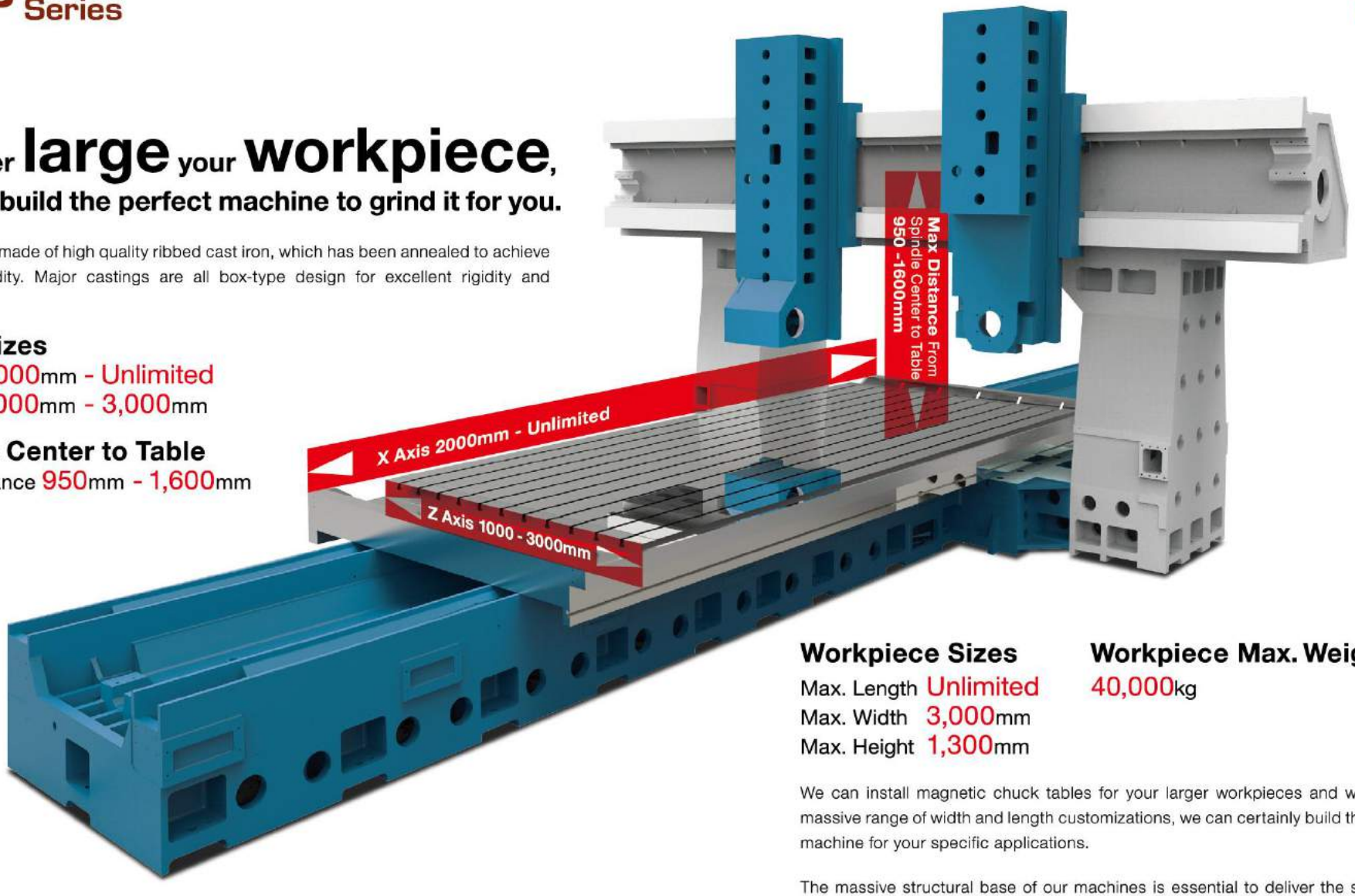
Castings are made of high quality ribbed cast iron, which has been annealed to achieve extreme rigidity. Major castings are all box-type design for excellent rigidity and strength.

Table Sizes

X Axis 2,000mm - Unlimited
Z Axis 1,000mm - 3,000mm

Spindle Center to Table

Max. Distance 950mm - 1,600mm



Workpiece Sizes

Max. Length Unlimited
Max. Width 3,000mm
Max. Height 1,300mm

Workpiece Max. Weights

40,000kg

We can install magnetic chuck tables for your larger workpieces and with the massive range of width and length customizations, we can certainly build the right machine for your specific applications.

The massive structural base of our machines is essential to deliver the surface accuracy you demand right across the length and width of very large workpieces. With the heavily reinforced structure of the base and worktable, we can guarantee the precision of our machines and avoid deflection or deformation issues impacting your accuracy.

Precision Spindle

Assembled and Tested by KENT Expert

Cartridge and flange type designed, equipped with powerful motor and supported by 3 pairs of super precision angular contact ball bearings, can be equipped with spindle frequency inverter (optional for boxway series; standard for linear series) to ensure a programmable speed.

Capability Table

Smooth Precision Movement

Large Hydraulic Cylinder

Large and Powerful hydraulic cylinders ensure the smooth movement of the massive worktable even under loading. The hydraulic motor is oversized to ensure that we have the capacity to move, stop and then move the worktable with smooth precision during the grinding process.

Precision Double V Ways

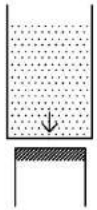
We use precision ground double V Ways on the base of our larger KGP series machines to accommodate the very heaviest or largest workpieces with ease. The V ways are also hand scraped and Turcite B coated to ensure precise smooth movement.

Grinding Capabilities

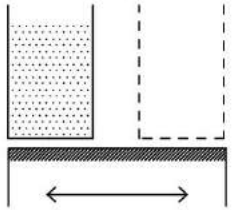
With both the horizontal and vertical head on this machine, the KGP series delivers a range of grinding options for various applications:

Horizontal

Plunge

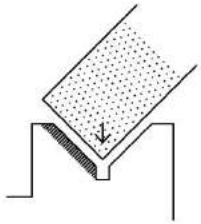


Traverse Grinding

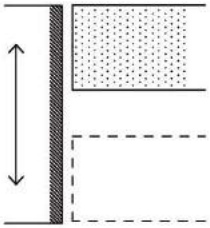


Vertical

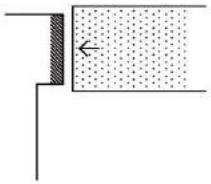
Plunge Y-Axis



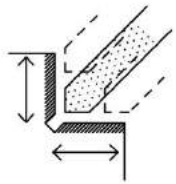
Traverse Grinding



Plunge Z-Axis



Side Grinding



With the combination of the Horizontal and Vertical head on this machine you can easily complete a range of large workpiece complex grinding cycles in a single set up to guarantee the stable accuracy of your products.

Structural Excellence – Excellent Performance

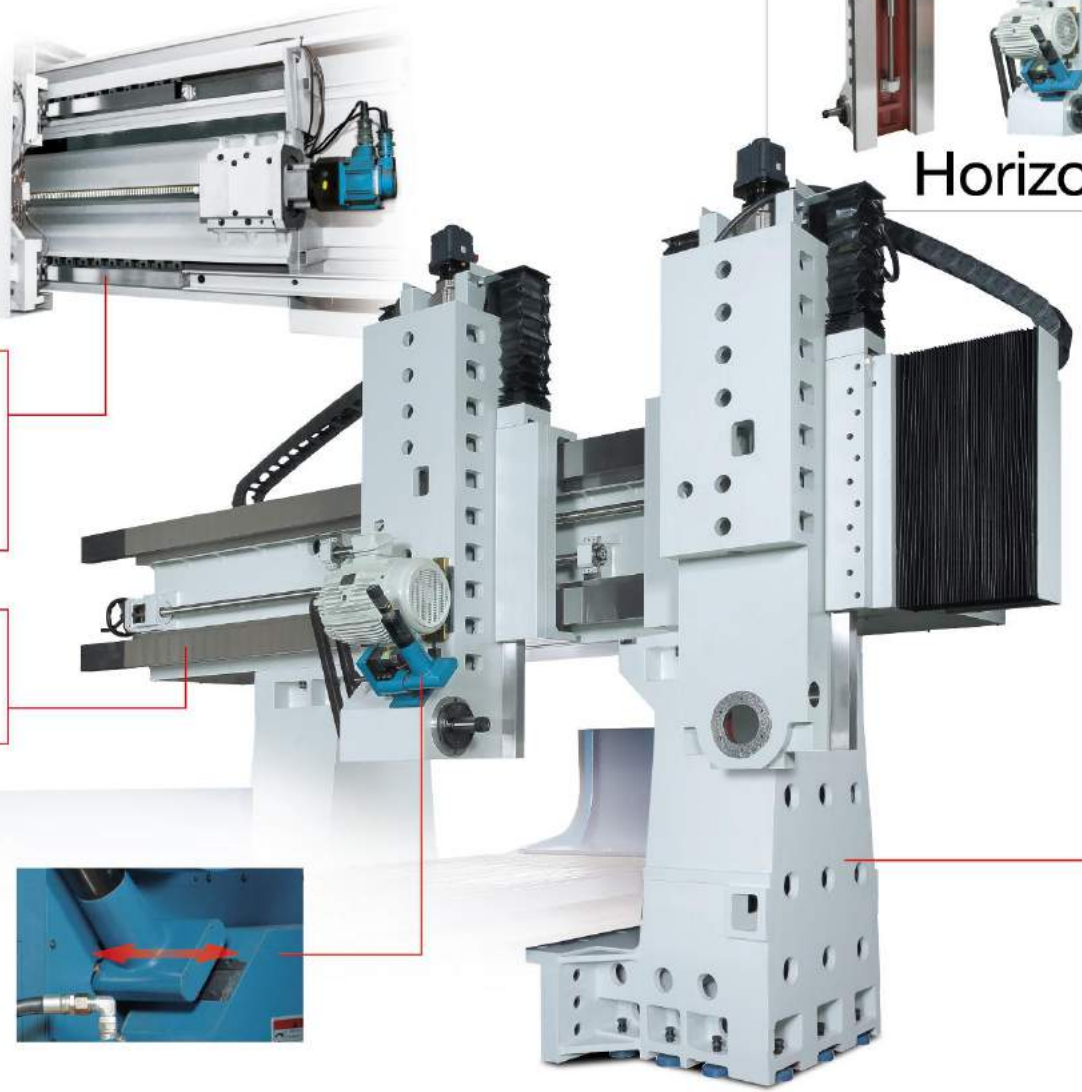
The double head grinding requirements of the KGP series demand structural excellence to deliver the results that customers need. All of the key machine structural components are box design to deliver excellent rigidity and resistance to deformation.

Horizontal & Vertical

Precision Cross Feed

Horizontal Z Axis and Vertical Y Axis feeding is through high grade linear guide ways with 6 roller blocks on each axis to ensure smooth movement under loading. These deliver 0.001mm downfeed and crossfeed increments for precise grinding.

The cross slide system consists of the steel boxway fixed on the crossrail and the roller units and gibs on saddles. This combination delivers high rigidity without stick slip issues.



Wheel Dressing

In the KGP Boxway Series machines, the wheel dresser is mounted overhead and is servo feed with ballscrew as standard. This is automatically integrated into the grinding cycle. Auto surface grinding cycles and dressing cycles with compensation are standard.

Grinding Heads

The horizontal and vertical grinding heads on this machine operate vertically on two large widely spaced boxways and are driven by AC servo motors. The boxways are precision ground to deliver excellent accuracy during machining.

Moving Beam Option

The specially designed pressure block of the crossrail clamping unit provides a larger contact area and uniformly distributed load to increase clamping stability.

The crossrail positioning racks are fixed on both columns, with positioning planes pitched every 250mm. This ensures the crossrail is at the same height along its length.

Vertical Columns

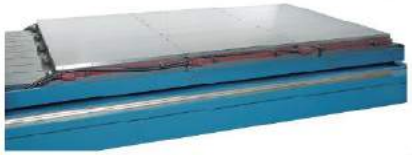
The vertical columns supporting the beam are very heavily ribbed and have been heat treated to guarantee their rigidity and performance under heavy loading. The vertical beams can offer a maximum width of 3,000mm to accommodate the largest of your work pieces.

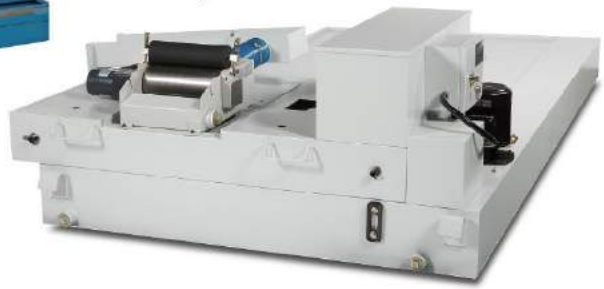
Controls & Options

Kent offers a range of additional optional features for the KGP series machines to ensure that every machine can be customized to suit your exact requirements.

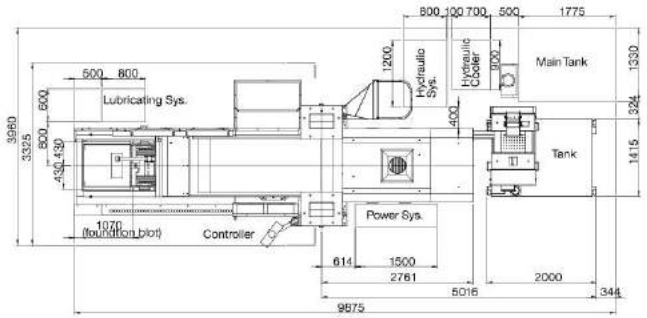
KGP Machine Options

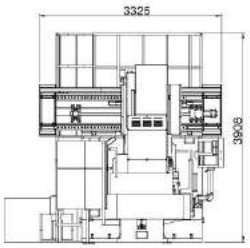
- Vertical Grinding Attachment
- Overhead Arm for Controller
- Electro Magnetic Chuck
- Coolant System With Magnetic Separator & Paper Filter

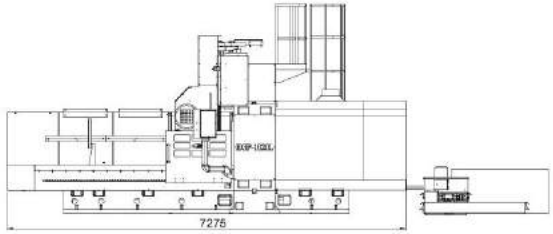




KGP-1020

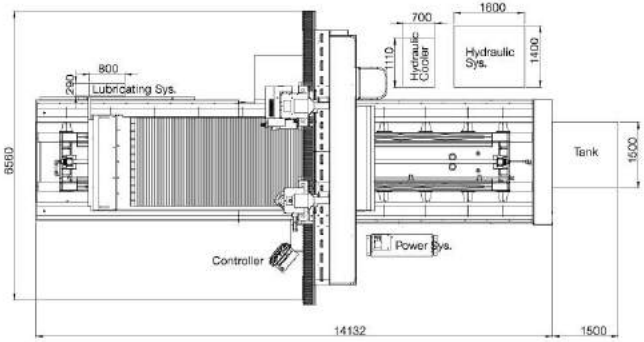


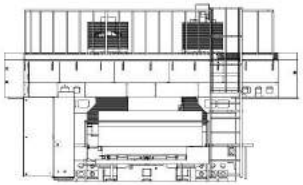


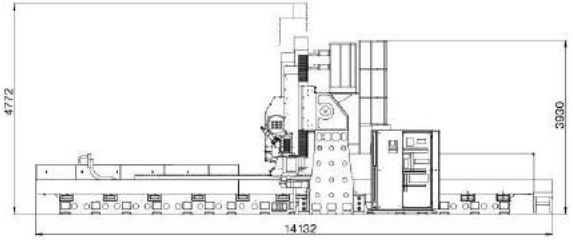


Unit: mm

KGP-2040







KGP Series Technical Data

Boxway Series			Unit	1524	1532	1542	2032	2042	2050	2560BM	2580BM	3060BM	3080BM
Capacity	Table Working Area		mm	1500 × 2400	1500 × 3200	1500 × 4200	2000 × 3200	2000 × 4200	2000 × 5000	2500 × 6000	2500 × 8000	3000 × 6000	3000 × 8000
	Longitudinal Travel		mm	2500	3300	4300	3500	4500	5500	6500	8500	6500	8500
	Distance Between Columns		mm	2000	2000	2000	2500	2500	2500	3000	3000	3500	3500
	Table Load (Includes Chuck)		kg	6000	8000	10000	9000	12000	15000	20000	25000	24000	30000
Table & Cross Feed	Table Speed		m/min	5-25	5-25	5-25	5-25	5-25	5-25	5-25	5-25	5-25	5-25
	Rapid Crossfeed		mm/min	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
	Min. Crossfeed Increment		mm/time	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Beam	Crossrail Vertical Travel		mm	—	—	—	—	—	—	1250	1250	1250	1250
	Elevation Jogging		mm/min	—	—	—	—	—	—	250	250	250	250
Horizontal Head	Spindle Center to Table		mm	1150	1150	1150	1150	1150	1150	1550	1550	1550	1550
	Elevation Travel		mm	—	—	—	—	—	—	300	300	300	300
	Elevation Speed		mm/min	2-500	2-500	2-500	2-500	2-500	2-500	2-500	2-500	2-500	2-500
	Auto Downfeed Increment		mm/time	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099
	Wheel Dimensions (OD x ID x T)		mm	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø610 × 100 × Ø254	Ø610 × 100 × Ø254	Ø610 × 100 × Ø254	Ø610 × 100 × Ø254
	Spindle Speed	50HZ	r.p.m	950	950	950	950	950	950	870	870	870	870
		60HZ	r.p.m	1150	1150	1150	1150	1150	1150	1040	1040	22	1040
	Spindle Motor (OP)		kW	15 (22.5/32.25)	15 (22.5/32.25)	15 (22.5/32.25)	15 (22.5/32.25)	15 (22.5/32.25)	15 (22.5/32.25)	15 (22.5/32.25)	15 (22.5/32.25)	15 (22.5/32.25)	15 (22.5/32.25)
	Cross Travel		mm	1600	1600	22	2100	2100	2100	2800	2800	3300	3300
Vertical Head	Distance Grinding Wheel to Table		mm	840	840	840	840	840	840	1450	1450	1450	1450
	Elevation Travel		mm	—	—	—	—	—	—	300	300	300	300
	Elevation Speed		mm/min	2-500	2-500	2-500	2-500	2-500	2-500	2-500	2-500	2-500	2-500
	Auto Downfeed Increment		mm/min	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099
	Swivel (Left. Right)		Deg.	L60°/R60°	L60°/R60°	L60°/R60°	L60°/R60°	L60°/R60°	L60°/R60°	L60°/R60°	L60°/R60°	L60°/R60°	L60°/R60°
	Wheel Dimensions (OD x ID x T)		mm	Ø355 × 50 × 127	Ø355 × 50 × 127	Ø355 × 50 × 127	Ø355 × 50 × 127	Ø355 × 50 × 127	Ø355 × 50 × 127	Ø355 × 50 × Ø127	Ø355 × 50 × Ø127	Ø355 × 50 × Ø127	Ø355 × 50 × Ø127
	Spindle Speed	50HZ	r.p.m	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
		60HZ	r.p.m	1740	1740	1740	1740	1740	1740	1740	1740	1740	1740
	Spindle Motor (OP)		kW	7.5 (11)	7.5 (11)	7.5 (11)	7.5 (11)	7.5 (11)	7.5 (11)	7.5 (11)	7.5 (11)	7.5 (11)	7.5 (11)
	Cross Travel		mm	1600	1600	1600	2100	2100	2100	2800	2800	3300	3300
Dimension & Weight	Net Weight		kg	31000	33000	35000	42000	45000	48000	85000	95000	91000	103000
	Gross Weight		kg	35000	37000	39000	46000	49000	52000	90000	100000	97000	109000
	Space Occupied	Single Wheel Head	mm	10500 × 4600 × 4500	12100 × 4600 × 4500	14100 × 4600 × 4500	11500 × 5375 × 4500	13500 × 5375 × 4500	16100 × 5375 × 4500	—	—	—	—
		Double Wheel Head	mm	10500 × 5900 × 4500	12100 × 5900 × 4500	14100 × 5900 × 4500	11500 × 6775 × 4500	13500 × 6775 × 4500	15500 × 5375 × 4500	16600 × 7140 × 5380	20600 × 7140 × 5380	16600 × 7640 × 5380	20600 × 7640 × 5380

Linear Series			Unit	1015L	1020L	1030L	1520L	1530L	1540L	2030L	2040L	2050L
Capacity	Table Working Area		mm	1000 × 1500	1000 × 2000	1000 × 3000	1500 × 2000	1500 × 3000	1500 × 4000	2000 × 3000	2000 × 4000	2000 × 5000
	Longitudinal Travel		mm	2100	2600	3100	2500	3600	4600	3600	4600	5600
	Distance Between Columns		mm	1250	1250	1250	2000	2000	2000	2500	2500	2500
	Table Load (Includes Chuck)		kg	3000	4000	6000	6000	8000	10000	9000	12000	15000
Table	Table Speed		m/min	5-25	5-25	5-25	5-25	5-25	5-25	5-25	5-25	5-25
	Rapid Crossfeed		mm/min	4000	4000	4000	4000	4000	4000	4000	4000	4000
	Min. Crossfeed Increment		mm/time	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Spindle Head	Spindle Center to Table		mm	950	950	950	1150	1150	1150	1150	1150	1150
	Min. Downfeed Increment		mm/time	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	Elevation Speed		mm/min	10-2000	10-2000	10-2000	10-2000	10-2000	10-2000	10-2000	10-2000	10-2000
	Auto Downfeed Increment		mm/time	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099	0.001-0.099
	Auto Downfeed Times		time	0-9999	0-9999	0-9999	0-9999	0-9999	0-9999	0-9999	0-9999	0-9999
	Wheel Dimensions (OD x ID x T)		mm	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2	Ø510 × 100 × 203.2
	Spindle Speed	50HZ	r.p.m	950	950	950	950	950	950	950	950	950
		60HZ	r.p.m	1050	1050	1050	1050	1050	1050	1050	1050	1050
	Spindle Motor (OP)		kW	22.5	22.5	22.5	22.5 (32.25)	22.5 (32.25)	22.5 (32.25)	22.5 (32.25)	22.5 (32.25)	22.5 (32.25)
	Cross Travel		mm	1100	1100	1100	1600	1600	1600	2100	2100	2100
Dimension & Weight	Net Weight		kg	18000	20000	23000	32000	35000	38000	41000	44000	47000
	Gross Weight		kg	21000	23000	26000	36000	39000	42000	45000	48000	51000
	Floor Space		mm	9300 × 4200 × 4050	10300 × 4200 × 4050	12300 × 4200 × 4050	10500 × 4600 × 4500	12100 × 4600 × 4500	14100 × 4600 × 4500	11500 × 5375 × 4500	13500 × 5375 × 4500	16100 × 5375 × 4500

Remark: The data listed above are only for reference, and the manufacturer retains the right to change the machine design, mechanical specifications and mechanical structure.