



KX/K2X Series

**3 Axes
Portal Milling Center with High Performances**

**Performance
Technology
Power
Accuracy**





KX K2X Series

Powerfull, Rapid, Accurate

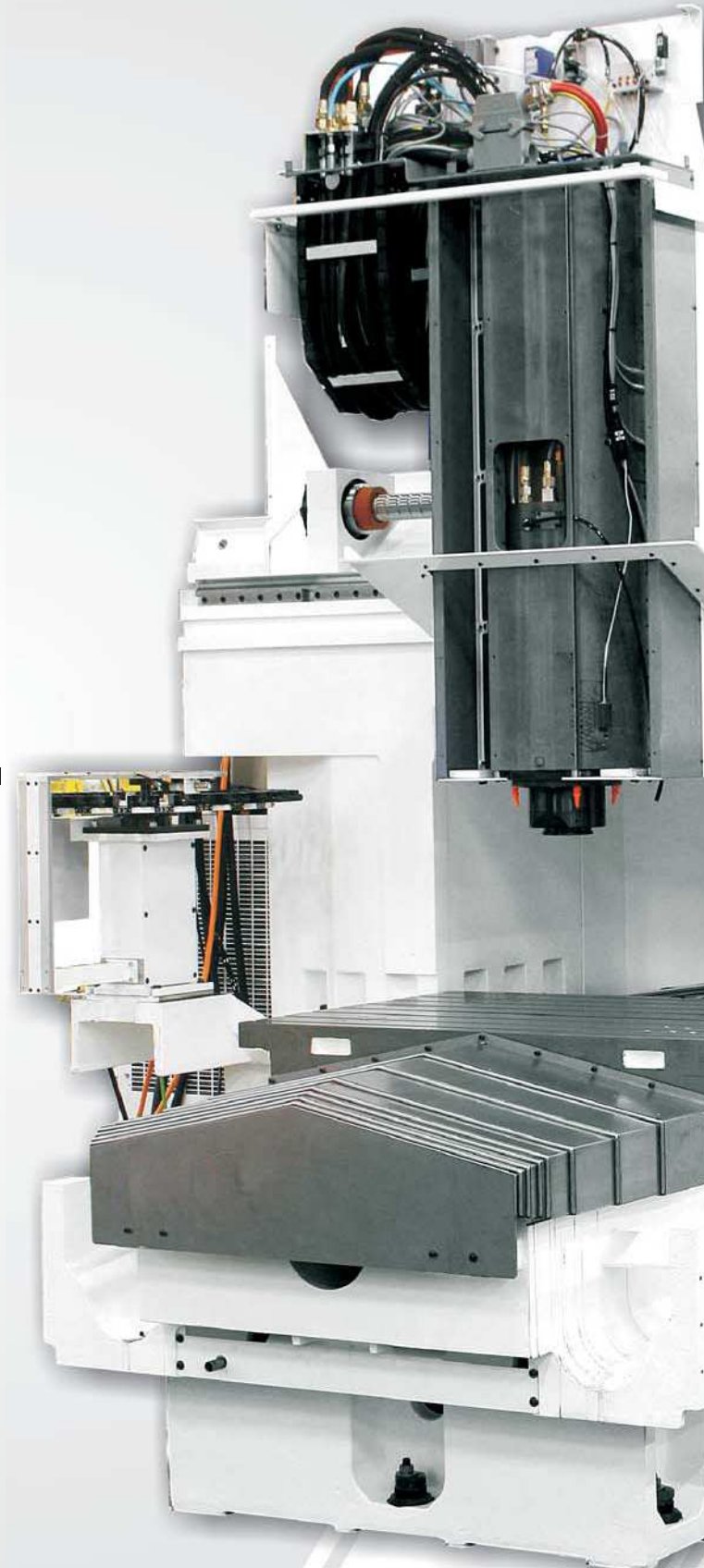
3 Axis Portal High Performance Machining Center

The machining centers, HURON KX and K2X, enable machining operations in 3 axes, from roughing to finishing, of all kind of complex work pieces such as injection molds, forging dies, punching dies, cutting tools, aeronautic jobs or pieces for mechanics. These vertical machining centers are projected to be at the highest level in its category. Combination between dynamic and accuracy allows to obtain very high quality surfacing

- 3 axes machining for work piece up to 2.500 kg
- Hard material machining in a minimal time
- Very high accuracy in contouring and profiles
- Complete automation of the la machine

Structure : Rigidity and Accuracy

- Structure with fixed portal in ribbed cast iron with stiffness wall
- Cast iron with a high mechanical performance which maximises structure rigidity and allows optimum harmonic stability and maximum damping during demanding cutting conditions
- Machine secured on foundation with weight equally distributed over fixing points enabling extreme rigidity and a very high geometrical stability
- Modular design allows maximum flexibility in machine configuration to adapt to the technical requirements of customer
- Electrical cabinet protected IP54





Linear Axes

- Preloaded ballscrews with integrated system of compensation for expansion
- Preloaded bearings to remove inversion backlash and axial stress on ballscrews enabling a high quality of surfacing
- On K2X, linear guideways on all axes allowing high feedrates
- On KX, guiding on Z axis is done by friction with Turcite coating
- Automatic grease lubrication of ballscrews and bearings minimising the pollution of coolant
- Absolute measurement by optical encoders in conformity with norm VDI/DGQ 3441

Spindle

- Powerful spindle with high torque allowing high metal removal rate
- Spindle vibration monitoring allowing a very high level of harmonic stability

Numerical Controller

- Ergonomic design
- Very high capacity of memory and calculation
- Interactive programming
- Graphic simulation before machining for optimal safety

Environment - Ergonomics

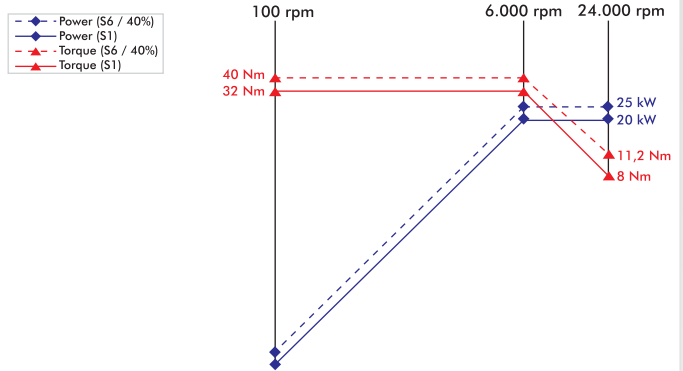
- Evacuation channels for chips equipped with washing device
- Tool magazine outside of working area
- Complete safeguard ensuring a safety of the machine, the operator and environment
- Very large accessibility from the top and the side thanks to a very big opening of the doors allowing loading of work piece with crane
- Operator panel



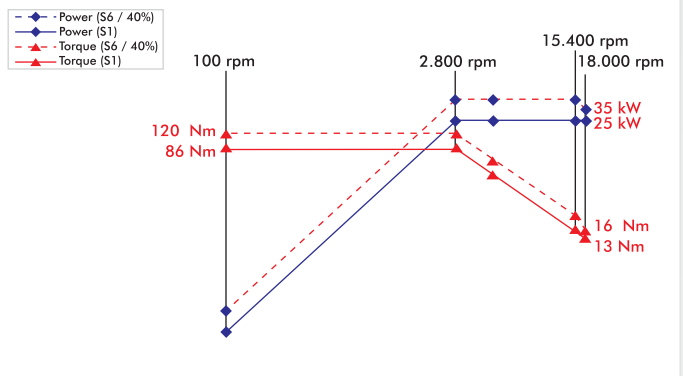
KX / K2X Series

The Spindle

	K2X 8
Taper	HSK 63-A
Rotating speed	100 - 24.000 rpm
Power S1 / S6	20 kW / 25 kW
Torque S1 / S6	32 Nm / 40 Nm
Characteristic speed	6.000 rpm



	KX 10 / KX 30 / K2X 10 / K2X 20
Taper	HSK 63-A
Rotating speed	100 - 18.000 rpm
Power S1 / S6	25 kW / 35 kW
Torque S1 / S6	86 Nm / 120 Nm
Characteristic speed	2.800 rpm



Equipment

- Air wall for spindle protection
- Control captor for angular positioning of the spindle
- Electro spindle cooling system
- Mechanical clamping with spring rings
- Tool unclamping with hydraulic control
- Air/Oil greasing of bearings
- Taper cleaning by compressed air

Tool Changer

	K2X 8	KX 10 / KX 30 / K2X 10 / K2X 20
Pockets qty	20	20
Type	Disk	Disk
Tool taper	HSK 63-A	HSK 63-A
Tool dimensions :		
max. Ø contiguous/non contiguous	90 mm	90 mm
max. length	300 mm	300 mm
max. weight	8 kg	5 kg
max. weight admissible in magazine	80 kg	50 kg
Tool changing time :		
tool to tool	5 sec	5 sec
chip to chip	11,5 sec	9 sec

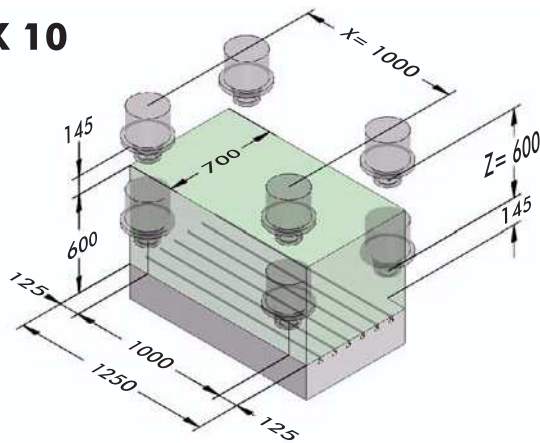


The Table

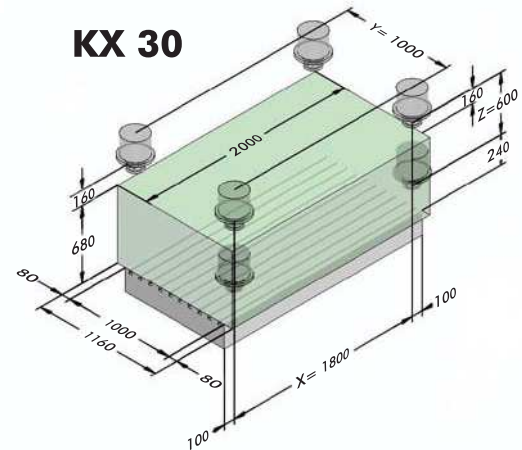
	KX 10	KX 30
Table area (lxw)	1.250 x 700 mm	2.000 x 1.000 mm
Admissible load	1.500 kg	2.500 kg
Slots		
- Qty	6	10
- Width reference slot	18 H7	18 H7
- Width other slots	18H12	18H12
- Distance between slots	100	100

Distances and Positioning Table/Head

KX 10



KX 30

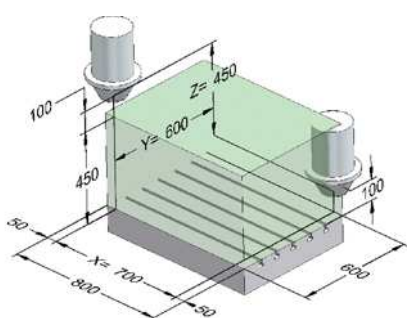


All dimensions in mm

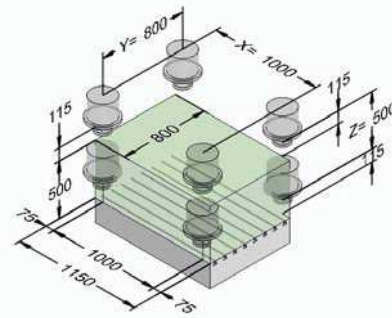
	K2X 8	K2X 10	K2X 20
Table area (lxw)	800 x 600 mm	1.150 x 800 mm	1.400 x 1.000 mm
Admissible load	500 kg	1.000 kg	2.000 kg
Slots			
- Qty	5	8	7
- Width reference slot	18 H7	18 H7	18 H7
- Width other slots	18H12	18H12	18H12
- Distance between slots	100	100	125

Distances and Positioning Table/Head

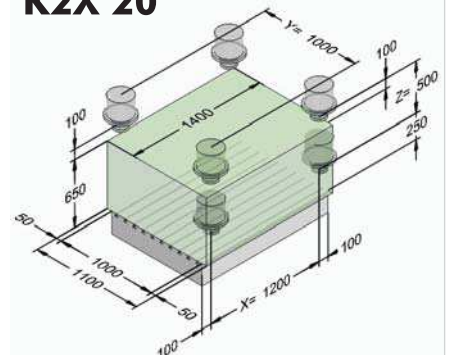
K2X 8



K2X 10



K2X 20



All dimensions in mm



KX / K2X Series

Alternative Tool Changers

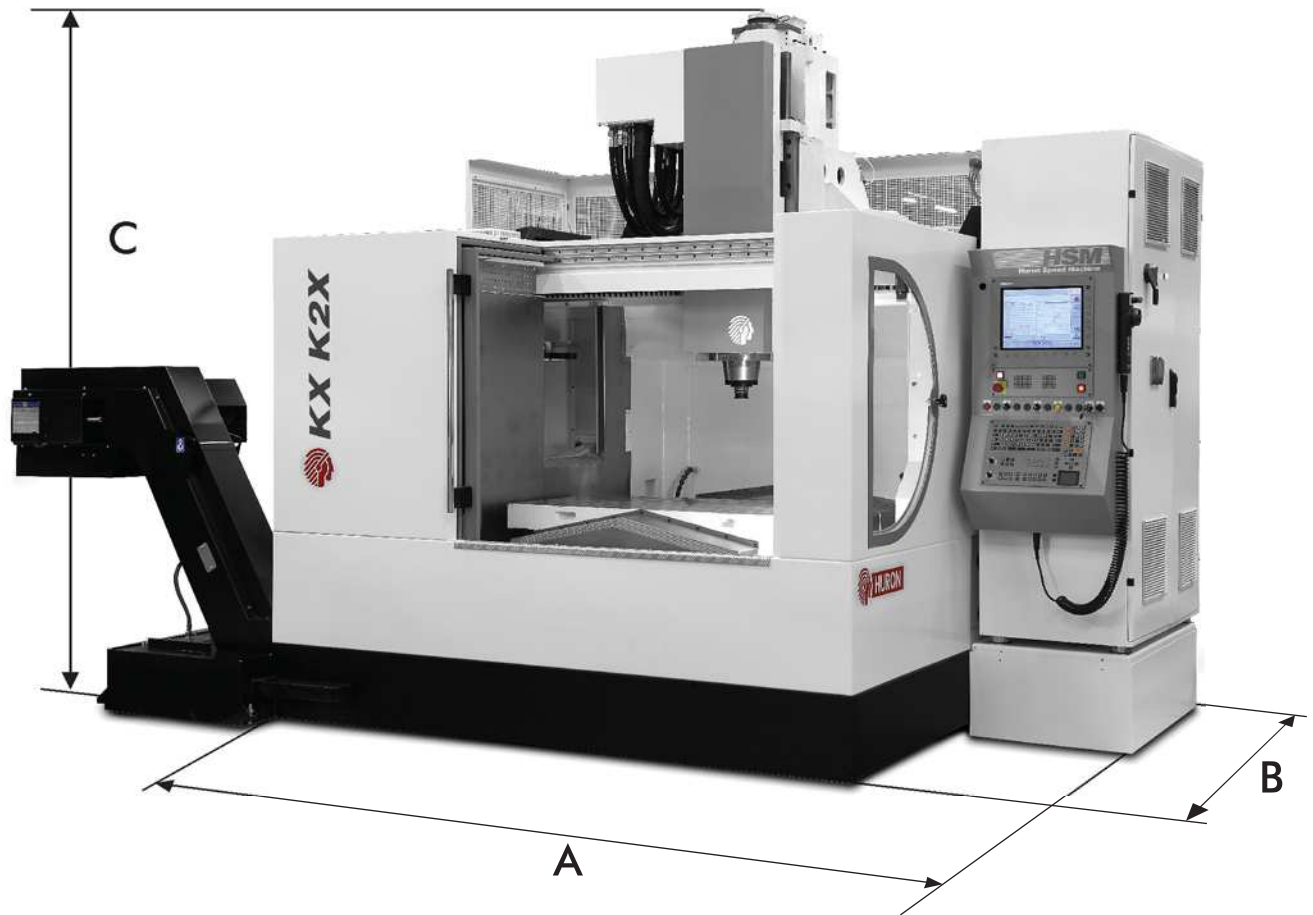
	K2X 8 / K2X 10 / K2X 20 / KX 30			
Pockets qty	30	40	60	100
Type	Pick-Up	Pick-Up	Pick-Up	Arm transfer
	Chain	Chain with 2 plates	Chain with 2 plates	Bi-directional vertical chain
Tool taper	HSK 63-A	HSK 63-A	HSK 63-A	HSK 63-A
Tool Dimensions :				
max. Ø contiguous/non contiguous	90 mm	90 mm	90 mm	90 mm
max. length	300 mm	300 mm	300 mm	300 mm
max. weight	8 kg	8 kg	8 kg	8 kg
max. weight admissible in magazine	120 kg	160 kg	240 kg	400 kg
Tool Changing Time :				
tool to tool	5 sec	5 sec	5 sec	5 sec
chip to chip	8,5 sec	15 sec	15 sec	30 sec

Alternative Spindles

	K2X 8	
Taper	HSK 63-A	<p> - Power (S6 / 40%) - Power (S1) - Torque (S6 / 40%) - Torque (S1) </p>
Rotating speed	16.000 rpm	
Power S1 / S6	22 kW / 36 kW	
Torque S1 / S6	60 Nm / 98 Nm	
Characteristic speed	3.500 rpm	

	KX 30	
Taper	HSK 100-A	<p> - Power (S6 / 40%) - Power (S1) - Torque (S6 / 40%) - Torque (S1) </p>
Rotating speed	12.000 rpm	
Power S1 / S6	40 kW / 50 kW	
Torque S1 / S6	160 Nm / 200 Nm	
Characteristic speed	2.400 rpm	

Overall Measurements – Standard Machine



		K2X 8	KX 10	K2X 10	K2X 20	KX 30
A : Length (Length indicated are for machines which chips conveyor)	mm	4.480	5.750	5.640	4.340	5.100
B : Width	mm	2.570	2.840	3.520	5.050	6.310
C : Height	mm	3.060	3.030	3.400	3.560	3.160
Weight of the machine	kg	7.000	10.500	12.500	14.400	17.000



Technical Features

Linear Axes X / Y / Z		K2X 8	K2X 10	K2X 20	KX 10	KX 30
Travels	mm	700	1.000	1.200	1.000	1.800
		600	800	1.000	700	1.000
		450	500	500	600	600
Rapid feedrates	m/min	40	60	X = 50 Y-Z = 60	X-Y = 30 Z = 18	X-Y = 30 Z = 18
Acceleration on axis	m/s ²	4	6	X = 4 Y-Z = 6	3	3
Table						
Table area	mm	800 X 600	1.150 x 800	1.400 x 1.000	1.250 x 700	2.000 x 1.000
Admissible load	kg	500	1.000	2.000	1.500	2.500
Distance spindle nose / table area	mm	100 / 550	115 / 615	250 / 750	145 / 745	240 / 840
Accuracies on Linear Axes						
Uncertainty P	μm	4	4	5	7	X = 9 Y-Z = 7
Repeatability : Ps medium	μm	2	2	3	5	5
Spindle						
Rotating speed	rpm	24.000	18.000			
Taper		HSK 63A		HSK 63A		
Power – Torque (S1 / S6)	kW - Nm	20 / 25 - 32 / 40		25 / 35 – 86 / 130		
Characteristic speed	rpm	6.000		2.800		
Tools Magazine						
Pockets qty		20		20		
Taper		HSK 63A		HSK 63A		
Tool dimension :						
Length – Diameter – Weight	mm - Ø mm - kg	300 - 90 - 8		300 - 90 - 5		
Coolant						
Flow – Pressure	l/min – bar	30 – 3	30 – 3	30 – 3	30 – 3	30 – 3
Tank	Litres	230	250	330	150	600



Alternatives

Spindles		KX 30	K2X 8
Rotating speed	rpm	12.000	16.000
Taper		HSK 100A	HSK 63-A
Power – Torque (S1 / S6)	kW	40 / 50 – 160 / 200	22 / 36 – 60 / 98
Characteristic speed	rpm	2.400	3.500

Tools Magazine		K2X 8 / K2X 10 / K2X 20 / KX 30			
Pockets qty		30	40	60	100
Taper		HSK 63-A	HSK 63-A	HSK 63-A	HSK 63-A
Tool dimension :					
Length – Diameter – Weight	mm - Ø mm - kg	300 - 90 - 8	300 - 90 - 8	300 - 90 - 8	300 - 90 - 8

Equipment as Options

- Micro spraying coolant
- High pressure coolant 50 bar
- Air blast
- Component probe
- Tool probe
- 4th axis dividing plate
- Oil extraction system
- Graphit extraction system
- Pressurization of measuring scales
- Air conditioning of electrical cabinet
- Sight glass
- Oil separator

ISO : 9001



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Note : *All above information is subject to change arising out of continuous product improvement.
• The description 'standard accessories / 'feature' conforms to its list; not the photo of machine shown in the catalogue.

Jyoti Group



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