



KX K2X Series

3 axes vertical milling and machining centres with high performances

Performance
Technology
Power
Accuracy





KX/K2X Series

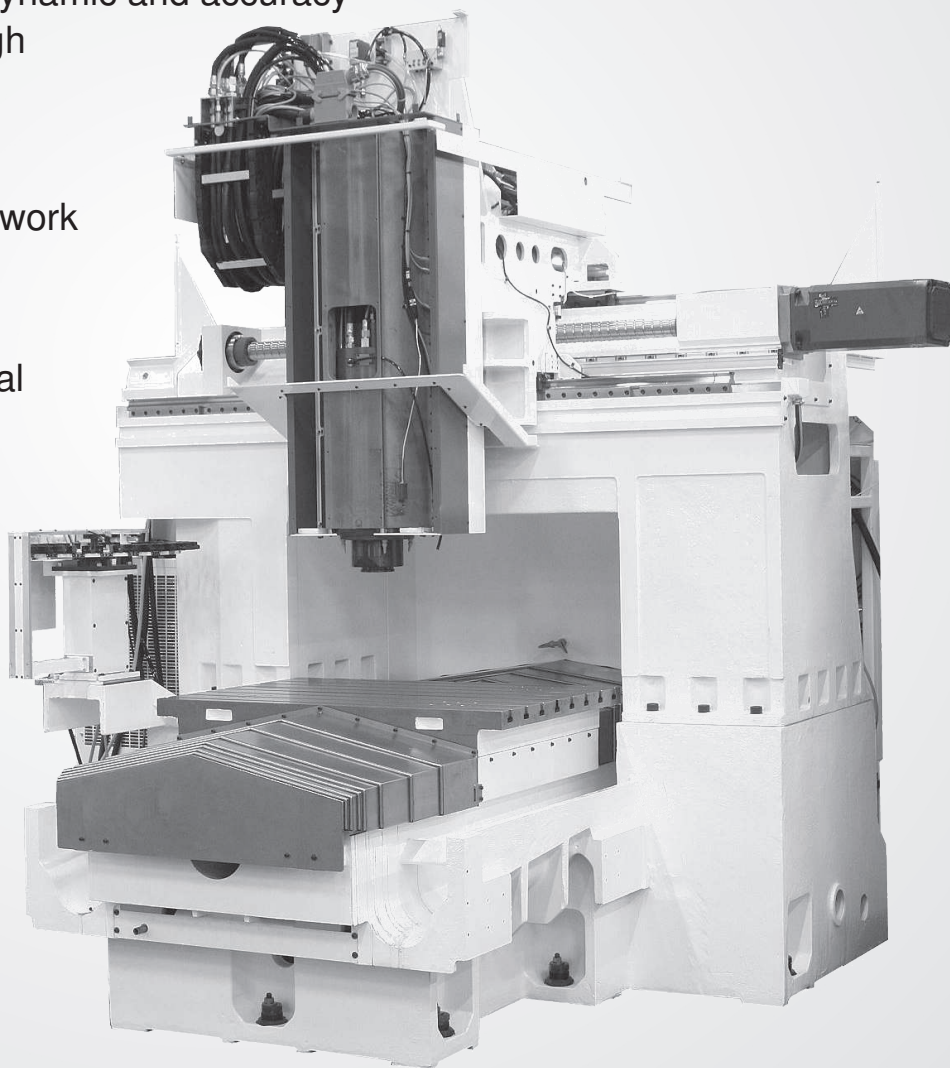
Powerful, Rapid, Accurate **3 axis portal high performance machining centre**

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, aeronautical 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 4.000 kg
- Hard material machining in a minimal time
- Very high accuracy in contouring and profiles





Structure: rigidity and accuracy

- Structure with fixed portal in ribbed cast iron
- Cast iron with a high mechanical performance which maximizes structure rigidity
- Optimum harmonic stability and maximum damping during demanding cutting condition
- 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 KX : guiding on Z axis is done by friction with Turcite coating
- On K2X : linear guideways on all axes allowing high feedrates
- Automatic grease lubrication of ballscrews and bearings minimizing the pollution of coolant
- Absolute measurement by optical encoders in conformity with norm VDI/DGQ 3441

Numerical controller

- 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
- 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
- Chips evacuation by coolant liquid
- Tool magazine outside of working area and protected from machining area. Tools can be changed as a background task.



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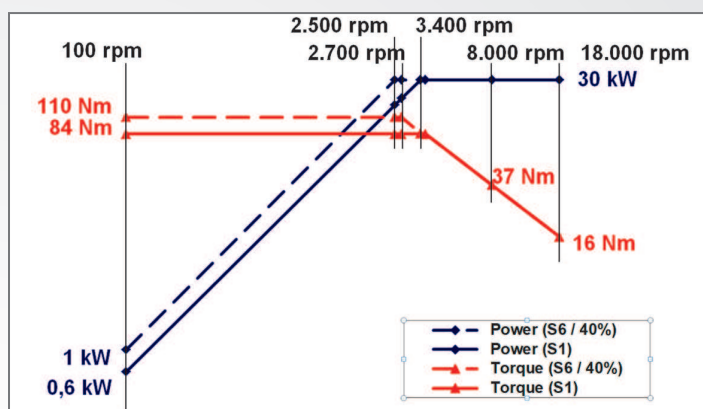
Spindle

- Powerful spindle allowing high metal removal rate
- Finishing operations allowed thanks to the high rotation speed
- Spindle vibration monitoring allowing a very high level of harmonic stability. It consists of a vibration captor and an electronic box for signal treatment.

Electrospindle equipment:

- Coolant through nozzles
- Air wall for spindle sealing
- Control sensor for angular positioning
- Coolant circuit
- Tool mechanical clamping
- Tool hydraulic unclamping
- Air/oil lubrication of bearings
- Taper cleaning by compressed air

K2X 10 / K2X 20 / KX 30	
Taper	HSK 63-A
Rotation speed	18.000 rpm
Power (S6/S1)	30 / 30 kW
Torque (S6/S1)	110 / 84 Nm
Characteristic speed	3.400 rpm



Tools changer

Automatic loading/unloading of the tool is made vertically

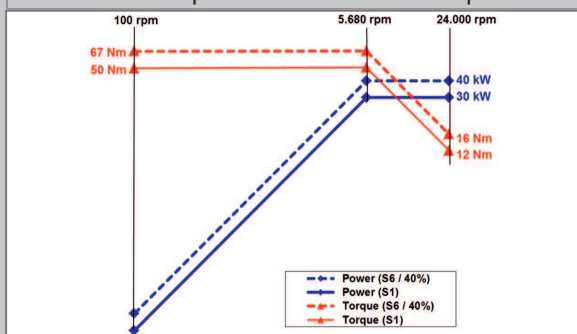
K2X 10 / K2X 20 / KX 30	
Type - Loading/Unloading	Chain - Pick Up
Pockets qty - Taper	36 - HSK 63-A
Tool dimension: Ø - length - weight	100 mm - 300 mm - 10 kg
Tool changing time : tool/tool - chip/chip	5 - 15 sec



Spindle alternatives

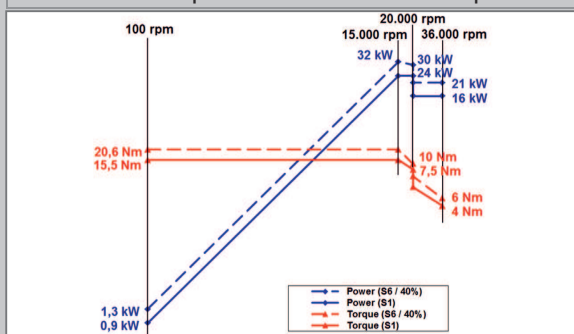
K2X 10 / K2X 20 / KX30

Taper	HSK 63-A
Rotation speed	24.000 rpm
Power (S6/S1)	30 / 40 kW
Torque (S6/S1)	50 / 67 Nm
Characteristic speed	5.680 rpm



K2X 10 / K2X 20

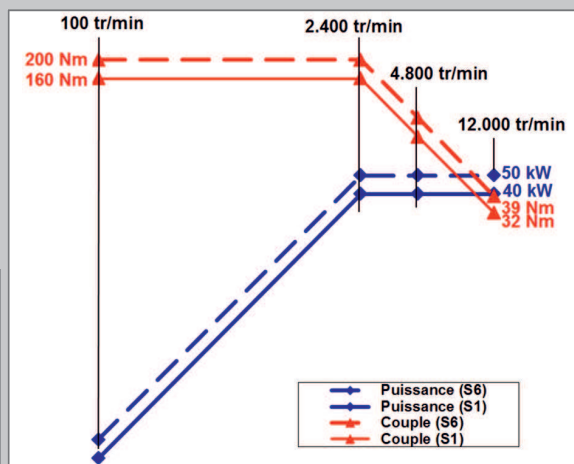
Taper	HSK 50E
Rotation speed	36.000 rpm
Power (S6/S1)	24 / 32 kW
Torque (S6/S1)	15,5 / 20,5 Nm
Characteristic speed	15.000 rpm



Spindle alternative for KX 30 with basis tool changer replacement

12.000 rpm

Taper	HSK 100-A
Rotation speed	12.000 rpm
Power (S6/S1)	40 / 50 kW
Torque (S6/S1)	160 / 200 Nm
Characteristic speed	2.400 rpm



with tool changer 40 pockets

Storage type	Chain
Loading / Unloading	Automatic by transfer arm
Pockets qty	40
Taper	HSK 100-A
Tool dimension : Ø - length - weight	90 mm - 300 mm - kg
Tool changing time : tool/tool - chip/chip	2,4 - 7 sec



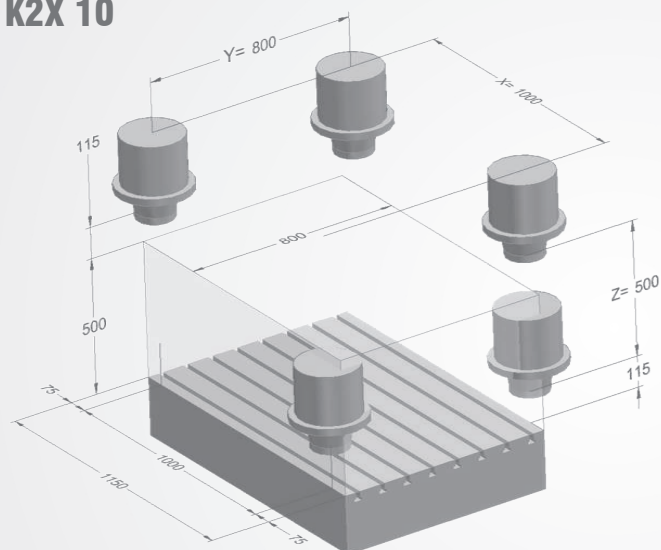
KX/K2X Series

Table

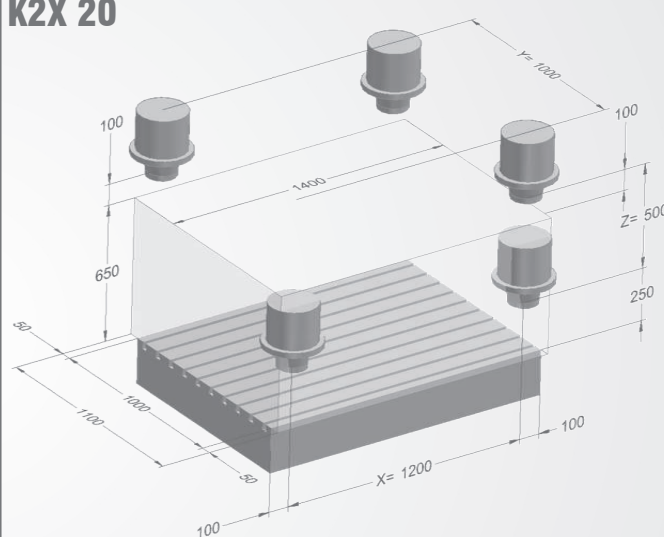
		K2X 10	K2X 20	KX 30
Table area	mm	1.150 x 800	1.400 x 1.000	2.000 x 1.000
Part max. dimensions – length x width x height	mm	1.150 x 800 x 500	1.400 x 1.100 x 650	2.000 x 1.160 x 730
Distance spindle / table top	mm	115 / 615	250 / 750	225 / 925
Distance under portal	mm	525	653	770
Admissible load	kg	1.000	2.000	2.500 4.000 to 2,5 m/s ²
Number of slots		8	7	10
Reference slot	mm	18H7	18H7	18H7
Other slots	mm	18H12	18H12	18H12
Distance between slots	mm	100	125	100

Interference diagram

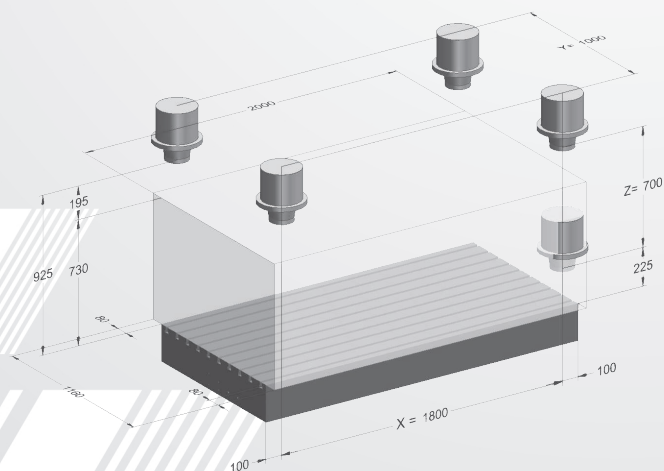
K2X 10



K2X 20



KX 30





Technical features

Linear axes X / Y / Z		K2X 10	K2X 20	KX 30
X travel	mm	1.000	1.200	1.800
Y travel	mm	800	1.000	1.000
Z travel	mm	500	500	700
Rapid feedrates	m/min	60	X : 50 Y - Z : 60	X - Y : 30 Z : 18
Acceleration per axis	m/s ²	6	X : 4 Y - Z : 6	3
Table		K2X 10	K2X 20	KX 30
Dimension	mm	1.150 x 800	1.400 x 1.000	2.000 x 1.000
Admissible load	kg	1.000	2.000	4.000
Number of slots		8	7	10
Reference slot	mm	18H7	18H7	18H7
Other slots	mm	18H12	18H12	18H12
Distance between slots	mm	100	125	100
Spindle		K2X 10 / K2X 20 / KX 30		
Rotation speed	rpm	18.000		
Taper		HSK 63-A		
Power - Torque	kW - Nm	30 / 110		
Characteristic speed	rpm	3.400		
Accuracies (VDI DGQ 3441)		K2X 10	K2X 20	KX 30
Linear axes (X/Y/Z)				X : 0,009
– Positioning (P)	mm	0,004	0,005	Y - Z : 0,007
– Repeatability (Ps medium)	mm	0,002	0,003	0,005
Tools changer		K2X 10 / K2X 20 / KX 30		
Pockets qty		36		
Tool length	mm	300		
Tool Ø	mm	100		
Tool weight	kg	10		
Tool changing time: tool/tool - chip/chip	sec	5 - 15		
Coolant		K2X 10	K2X 20	KX 30
Flow - Pressure	l/min - bar	30 - 3	30 - 3	30 - 3
Tank	liters	250	330	600
Overall measurements (Doors opened + conveyor)		K2X 10	K2X 20	KX 30
Width	mm	5.930	5.490	5.770
Depth	mm	3.520	5.460	6.420
Height	mm	3.400	3.560	3.430
Machine weight	kg	12.500	14.400	17.000

Optional equipments

Various spindles - Various tool changers - Medium pressure coolant 20 bar - High pressure coolant 50/70bar
 - Micro spraying coolant - Air blast - Part probe - Tool probe - 4th axis dividing plate - Oil extraction system - Oil separator - Pressurization of measuring scales - Air conditioning of electrical cabinet - Sight glass



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