



# *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.

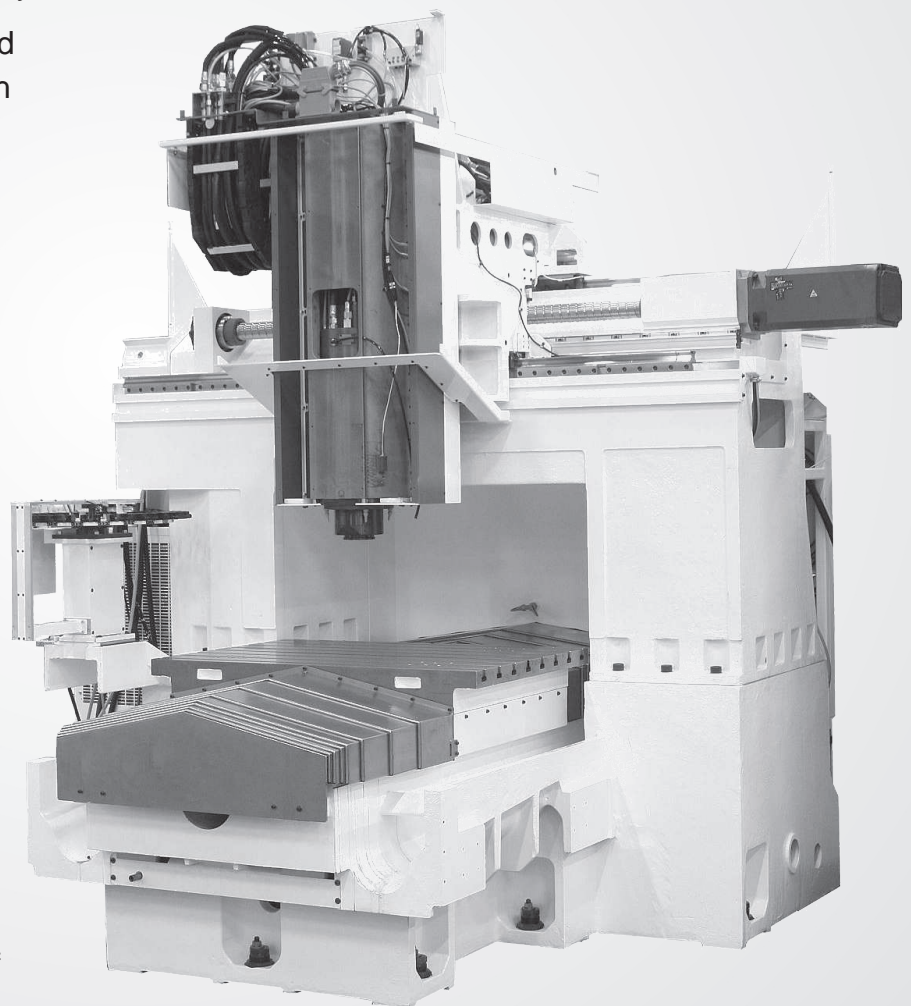
These vertical machining centers are projected to be at the highest level in its category.

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

## Spindle

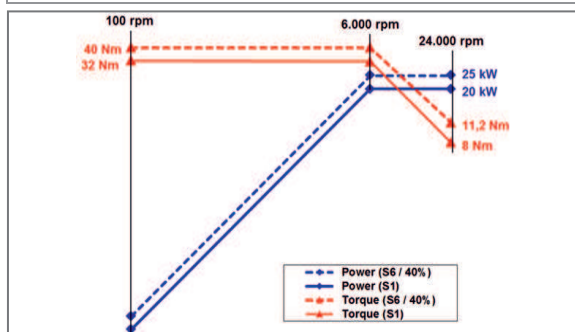
- Powerful spindle allowing high metal removal rate
- Finishing operations allowed thanks to the high rotation speed
- Spindle vibration monitoring allowing a very high level of harmonic stability. It consists of a vibration captor and an electronic box for signal treatment.

## Environment -

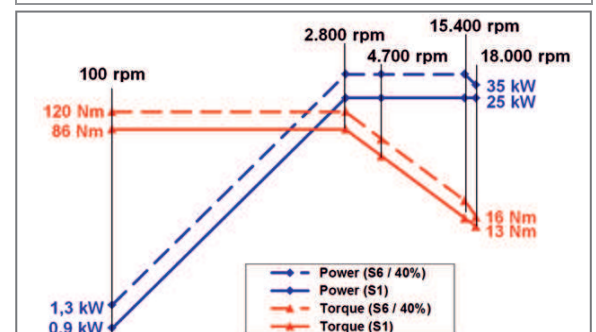
### Ergonomics

- 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.

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



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

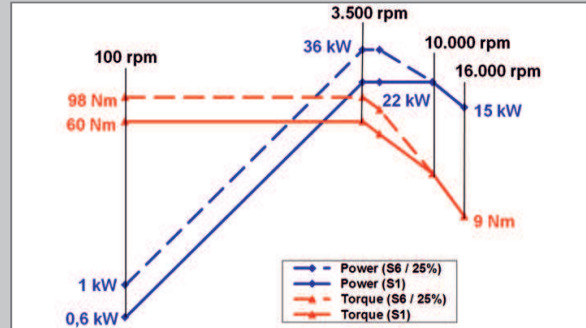




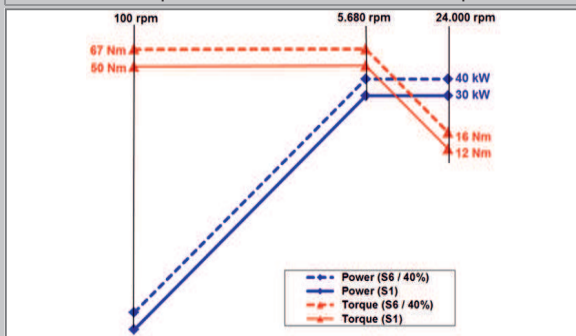
# KX/K2X Series

## Spindle alternatives

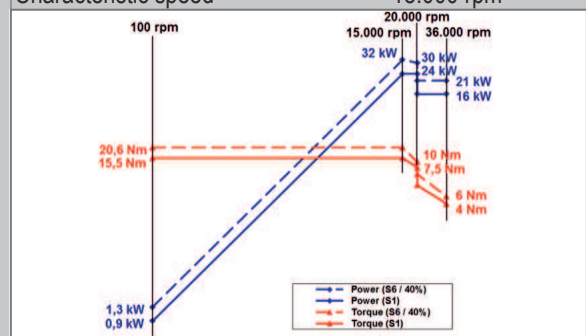
K2X 8	
Taper	HSK 63-A
Rotation speed	16.000 rpm
Power (S6/S1)	22 / 36 kW
Torque (S6/S1)	60 / 98 Nm
Characteristic speed	3.500 rpm



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 8 / 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



## Tool changer

Automatic loading/unloading of the tool is made vertically

K2X 8 / K2X 10 / K2X 20 / KX 30

Type - Loading /Unloading	Disk - Pick Up
Pockets qty - Taper	24 - HSK 63-A
Tool dimension : Ø - length - weight	90 - 300 - 7
Tool changing time : tool/tool - chip/chip	5 - 15

## Alternatives

Alternatives	K2X 8	K2X 10 / K2X 20	K2X 8	K2X 10 / K2X 20	K2X 8
	K2X 10 / K2X 20 KX 30	KX 30	K2X 8	KX 30	K2X 8
Type	Chain	Chain	1 plate	Chain	2 plates
Loading / Unloading	Pick-Up	Pick-Up	Transfer arm with grippers	Pick-Up	Transfer arm with grippers
Pockets qty	30	40	45	60	90
Tool taper	HSK 63-A	HSK 63-A	HSK 63-A	HSK 63-A	HSK 63-A
Tool dimension : Ø - length - weight	90 - 300 - 8	90 - 300 - 8	90 / 300 / 8	90 - 300 - 8	90 / 300 / 8
Tool changing time : Tool/tool - chip/chip	5 - 15	5 - 15	5 - 11,5	5 - 15	5 - 11,5

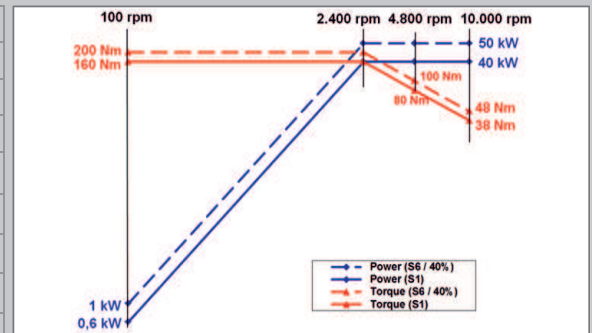


## Spindle alternatives with basis tool changer replacement

KX 30

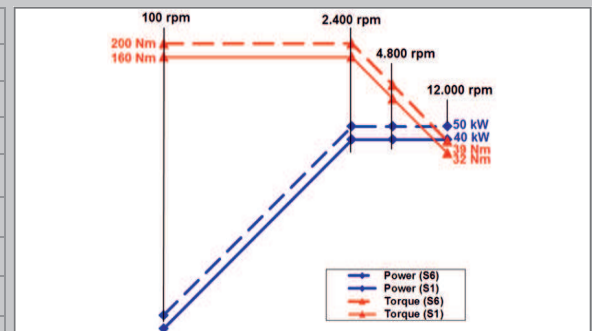
### 10.000 rpm

Taper	ISO 50
Rotation speed	10.000 rpm
Power (S6/S1) - Torque (S6/S1)	40 / 50 kW - 160 / 200 Nm
Characteristic speed	2.400 rpm
<b>With tool changer 32 pockets</b>	
Storage type	Chain
Loading/Unloading	Automatic by transfer arm
Pockets qty	32
Taper	ISO 50
Tool dimension : Ø - length - weight	125 - 300 - 20
Tool changing time : tool/tool - chip/chip	2,4 - 7



### 12.000 rpm

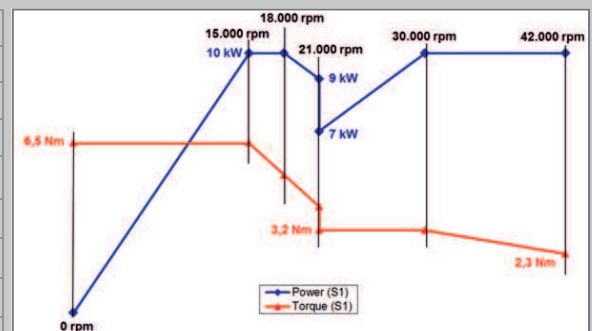
Taper	HSK 100-A
Rotation speed	12.000 rpm
Power (S6/S1) - Torque (S6/S1)	40 / 50 kW - 160 / 200 Nm
Characteristic speed	2.400 rpm
<b>With tool changer 40 pockets</b>	
Storage type	Chain
Loading / Unloading	Automatic by transfer arm
Pockets qty	40
Taper	HSK 100-A
Tool dimension : Ø - length - weight	90 - 300 -
Tool changing time : Tool/tool - chip/chip	2,4 - 7



K2X 8

### 42.000 rpm

Taper	HSK 40-E
Rotation speed	42.000 rpm
Power (S6/S1) - Torque (S6/S1)	10 / 12 kW - 6,54 / 9 Nm
Characteristic speed	15.000 rpm
<b>With tool changer 32 pockets</b>	
Storage type	Disc
Loading / Unloading	Automatic by Pick-up
Pockets qty	28
Taper	HSK 40-E
Tool dimension : Ø - length - weight	70 - 300 - 8
Tool loading time : tool/tool - chip/chip	5 - 15



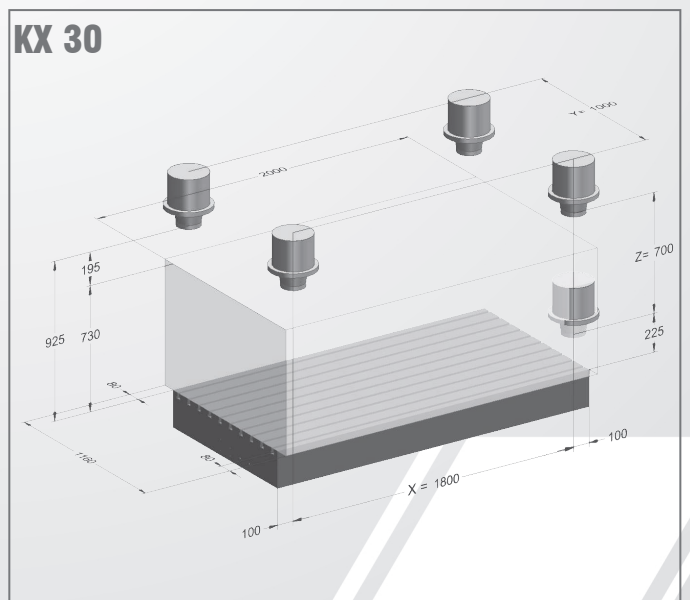
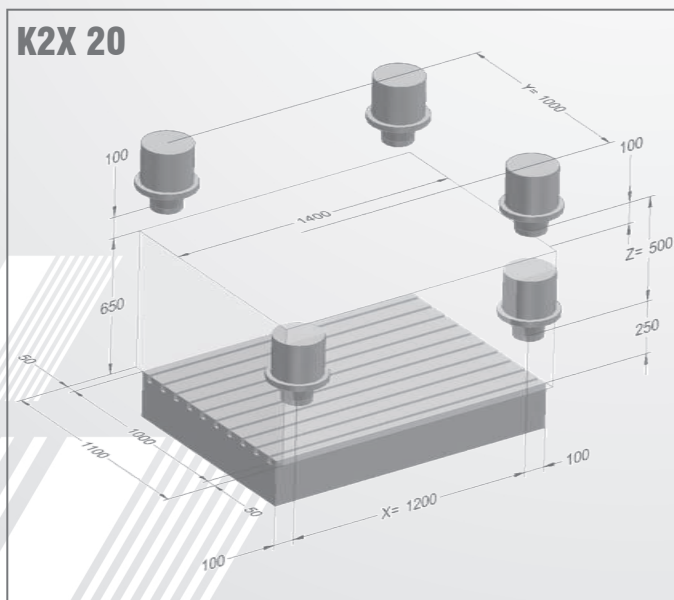
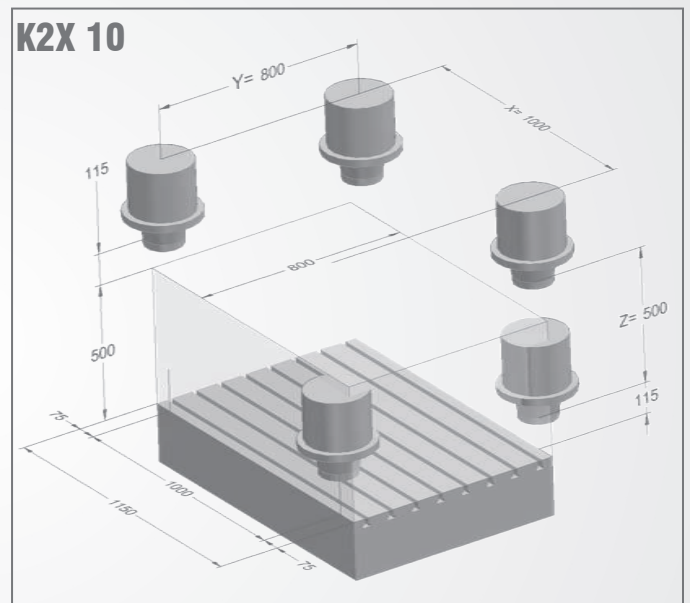
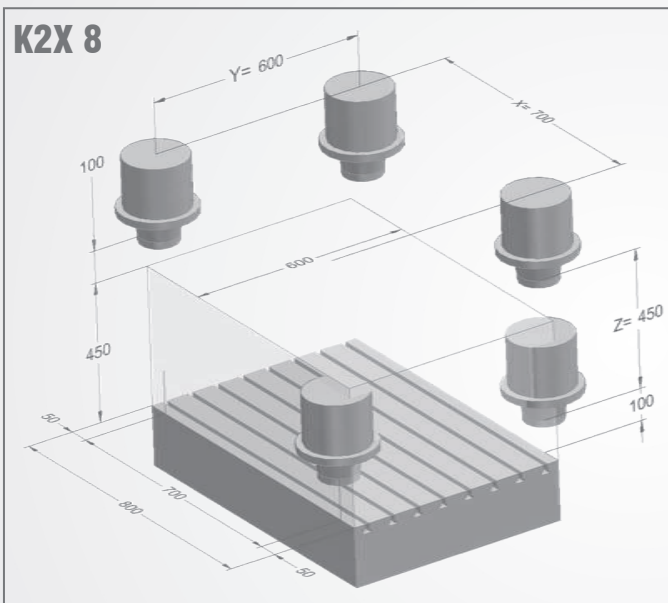


# KX/K2X Series

## The table

		K2X 8	K2X 10	K2X 20	KX 30
Table area	mm	800 x 600	1.150 x 800	1.400 x 1.000	2.000 x 1.000
Part max. dimensions					
— length x width	mm	800 x 600	1.150 x 800	1.400 x 1.100	2.000 x 1.160
— height	mm	450	500	650	730
Distance spindle / table top	mm	100 / 550	115 / 615	250 / 750	225 / 925
Distance under portal	mm	450	525	653	770
Admissible load	kg	500	1.000	2.000	2.500 4.000 to 2,5 m/s <sup>2</sup>
Number of slots		5	8	7	10
Reference slot	mm	18H7	18H7	18H7	18H7
Other slots	mm	18H12	18H12	18H12	18H12
Distance between slots	mm	100	100	125	100

## Interference diagram





## Technical features

Linear axes X / Y / Z		K2X 8	K2X 10	K2X 20	KX 30
X Travel	mm	700	1.000	1.200	1.800
Y Travel	mm	600	800	1.000	1.000
Z Travel	mm	450	500	500	700
Rapid feedrates	m/min	40	60	X : 50 Y - Z : 60	X - Y : 30 Z : 18
Acceleration per axis	m/s <sup>2</sup>	4	6	X : 4 Y - Z : 6	3
Table		K2X 8	K2X 10	K2X 20	KX 30
Dimension	mm	800 x 600	1.150 x 800	1.400 x 1.000	2.000 x 1.000
Admissible load	kg	500	1.000	2.000	4.000
Number of slots		5	8	7	10
Reference slot	mm	18H7	18H7	18H7	18H7
Other slots	mm	18H12	18H12	18H12	18H12
Distance between slots	mm	100	100	125	100
Spindle		K2X 8		K2X 10 / K2X 20 / KX 30	
Rotation speed	rpm	24.000		18.000	
Taper		HSK 63-A		HSK 63-A	
Power (S6/S1)	kW	20 / 25		25 / 35	
Torque (S6/S1)	Nm	32 / 45		86 / 120	
Characteristic speed	rpm	6.000		2.800	
Accuracies (VDI DGQ 3441)		K2X 8	K2X 10	K2X 20	KX 30
Linear axes (X/Y/Z)					X : 0,009
– Positioning (P)	mm	0,004	0,004	0,005	Y - Z : 0,007
– Repeatability (Ps medium)	mm	0,002	0,002	0,003	0,005
Tool Magazine		K2X 8 / K2X 10 / K2X 20 / KX 30			
Pockets qty		24			
Tool length	mm	300			
Tool Ø	mm	90			
Tool weight	kg	7			
Tool changing time :					
Tool/tool - chip/chip	sec	5 - 15			
Coolant		K2X 8	K2X 10	K2X 20	KX 30
Flow- Pressure	l/min - bar	30 - 3	30 - 3	30 - 3	30 - 3
Tank	liters	200	250	330	600
Dimensions		K2X 8	K2X 10	K2X 20	KX 30
Machine weight	kg	7.000	12.500	14.400	17.000
Depth	mm	2.050	3.100	4.510	6.310
Width	mm	4.380	4.690	4.690	4.340
Height	mm	3.060	3.400	3.560	3.425

## 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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