



# VX Series

High performances  
Vertical machining centre

Performance  
Technology  
Power  
Accuracy





# VX Series

## Powerful, Rapid, Accurate

## High Performance Vertical Machining Centre

The VX range of vertical machining centres have been specially developed to meet customers requirements in accuracy and reliability. This range offers a high comfort in use and ensure an excellent profitability.

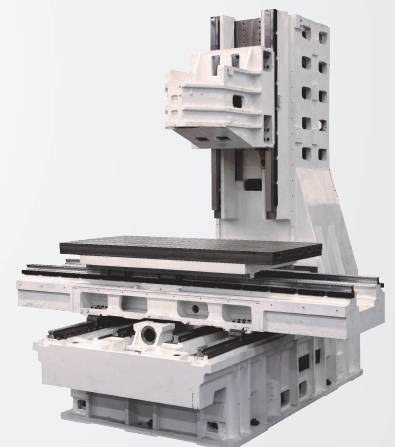
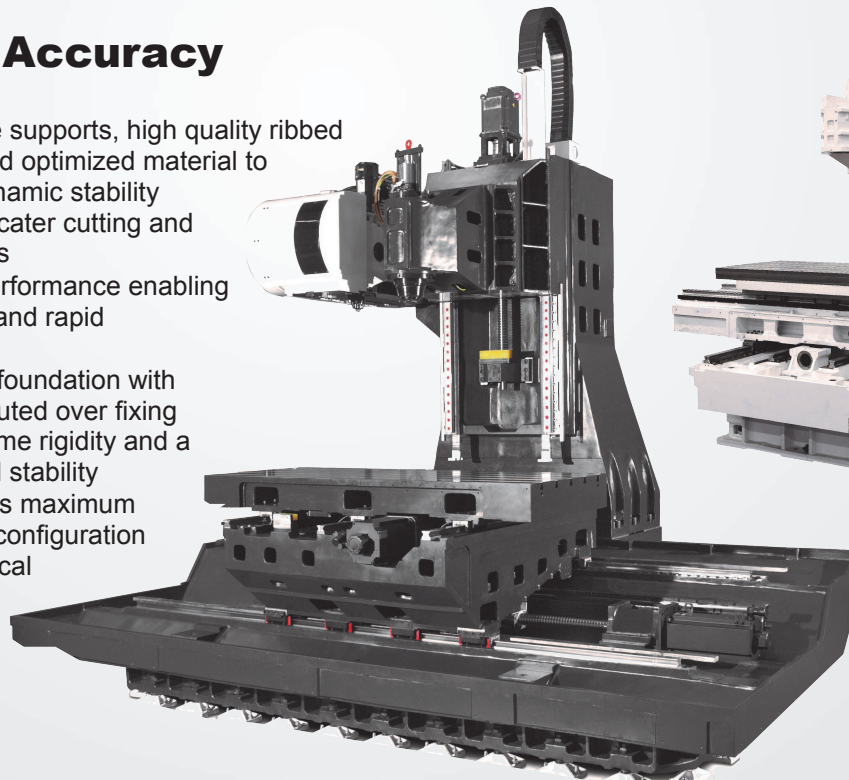
Fast and evidenced return on investment.

Compact, Ergonomic, Powerful and Accurate, the VX is the ideal investment for milling, drilling, boring and tapping in sectors like tooling and production in small and medium series.

- 3 axes machining for workpiece up to 2.500 kg
- Hard material machining in a minimal time
- High chip removal capacity
- Very high accuracy in contouring and profiles

## Rigidity and Accuracy

- C frame structure
- Architecture with side supports, high quality ribbed cast-iron structure and optimized material to allow an optimum dynamic stability damping vibration to cater cutting and acceleration demands
- Excellent dynamic performance enabling changes in direction and rapid accelerations
- 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



VX 10 / VX 12 structure

VX 15 / VX 18



## Spindle

- Driven by an asynchronous AC spindle motor.
- Equipped with ceramic roller bearings to ensure temperature stability
- The rotary shaft is of large dimensions to absorb cutting stress.
- Versatility and performance of machining operations : milling, boring, threading, tapping
- Allows any roughing operation thanks to the high torque as well as the finishing operations thanks to its rotation speed
- High chip removal capacity thanks to machine rigidity and to a high torque spindle

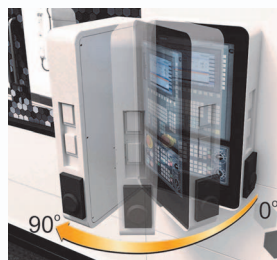
## Numerical Controller

- Up to 5 axes drive
- Ergonomic design, colour screen and full alphanumeric keypad
- Integrated and easy accessible connections and communication interfaces
- Very high capacity of memory and calculation
- Interactive programming
- Graphic simulation before machining for optimal safety

## Environment -

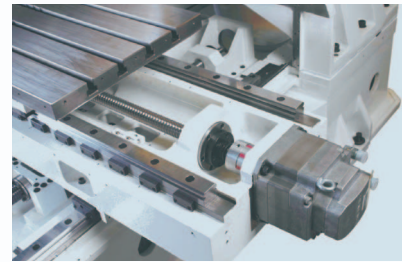
### Ergonomics

- Chip evacuation channel with washing system
- Machine full guarding ensuring safety of the machine, the operator and environment
- Very large accessibility to the table and the work piece
- Tilting operator panel from 0° to 90° for a perfect visibility during machining



## Linear Axes

- Moving guide rails
- Direct drive axes
- Linear guide rails with lubricated recirculating roller bearings
- **VX 6 - VX 8** : 2 linear guide rails on Y axis and 2 slides on each guide rail on X axis
- **VX 10 - VX 12** : 4 linear guide rails on Y axis, and 3 slides on each guide rail on X axis
- **VX 15 - VX 18** : 3 linear guide rails on Y axis, and 4 slides on each guide rail on X axis
- Slide rails and ballscrews are protected by telescopic protectors
- Ballscrews with preloaded bearings to remove inversion backlash and increase axes rigidity.
- Automatic grease lubrication of ballscrews and sliding guides



## A standard tool ready to produce

- Vertical milling centre
- 10.000 rpm spindle with ceramic roller bearings
- ISO 40 taper and set of pull studs ISO 40 - DIN 69872
- Tool changer 24 housings
- Coolant through nozzles, 2 bar, 40 l/min
- Preparation for coolant through tool centre
- Centralized lubrication of linear axes
- Air blast through nozzles
- Chips conveyor
- Portable handwheel
- Air-conditioned electrical cabinet
- Washing gun
- Trolley tank
- First fill-up oil
- 12 months warranty
- Installation

**To increase productivity, additional options are available such as linear scales, 20 bar coolant, part and tool probes...**



# VX Series

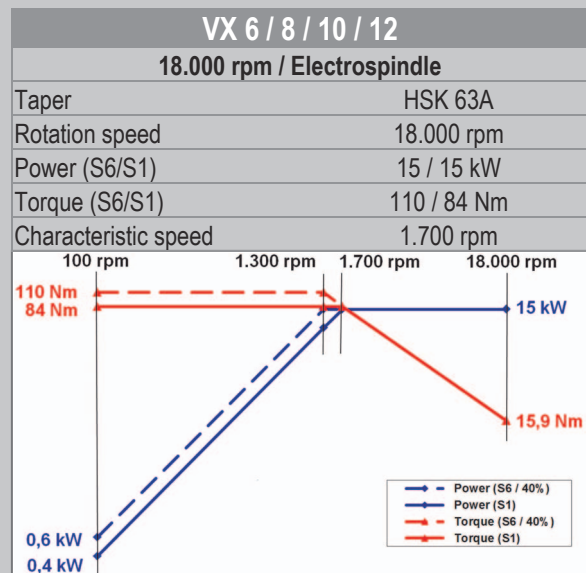
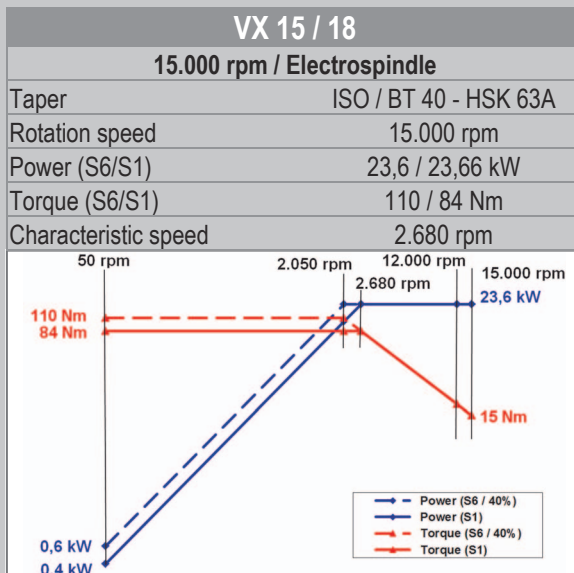
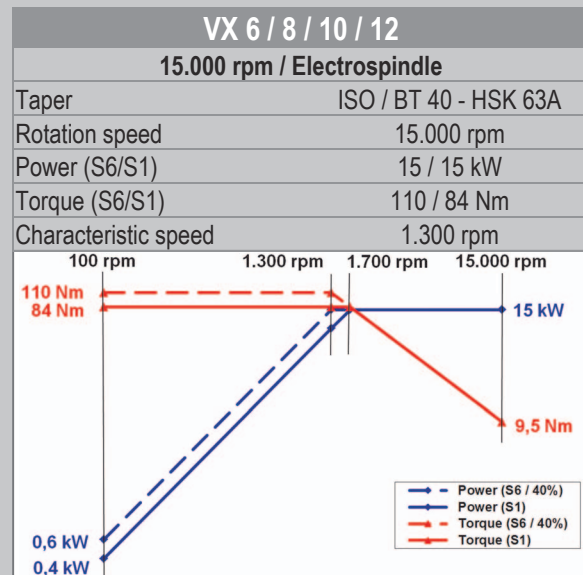
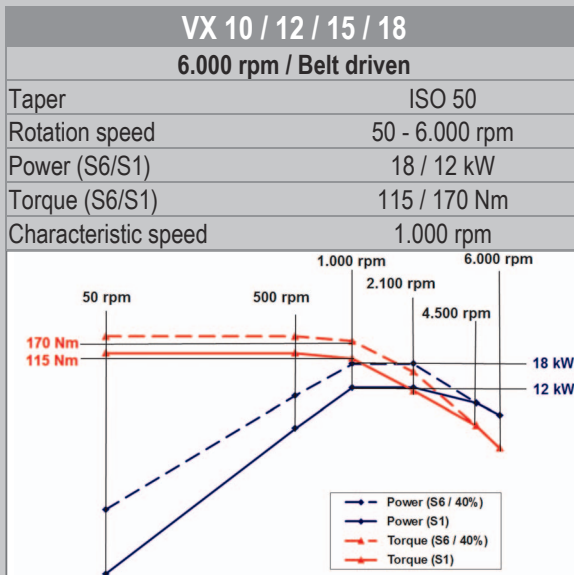
## Standard spindle - 10.000 rpm

(\*\*) with additional cost

	with NC Siemens	with NC Heidenhain
<b>Belt driven</b>		
Taper	ISO 40 / BT 40 (*)	ISO 40 / BT 40 (*)
Rotation Speed	100 - 10.000 rpm	100 - 10.000 rpm
Power(S6/S1)	14,5 / 10,5 kW	13 / 10 kW
Torque (S6/S1)	69 / 50 Nm	89 / 64 Nm
Characteristic speed	2.000 rpm	1.500 rpm



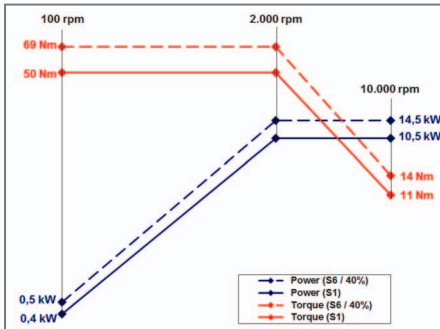
## Alternative spindles



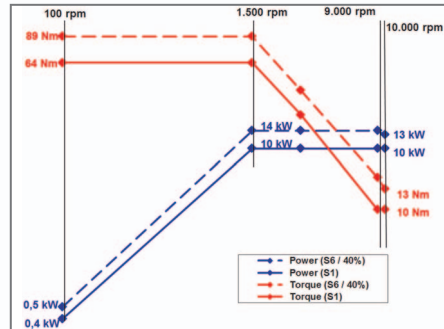


## Standard spindle : Power / Torque

10.000 rpm - 10,5 kW / Siemens



10.000 rpm - 10 kW / Heidenhain



## Alternative spindles with gear box

The spindle with gear box is belt driven. It is particularly suited for special applications in hard material requiring roughing operations thanks to its high torque, and finishing operations thanks to its rotation speed..

### VX 10 / 12 / 15 / 18

#### 6.000 rpm - Belt-driven

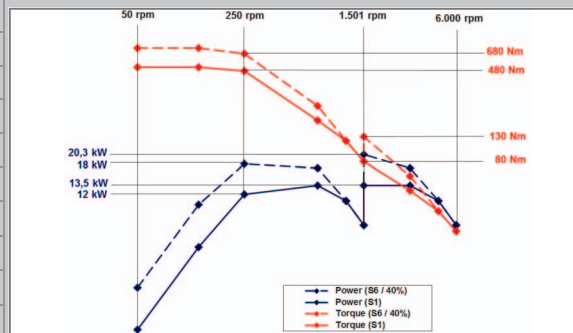
Taper	ISO 40
Rotation speed	50 - 6.000 rpm
Power (S6/S1)	20,3 / 13,5 kW

#### Range 1

Torque (S6/S1)	130 / 80 Nm
Characteristic speed	1.501 rpm

#### Range 2

Torque (S6/S1)	680 / 480 Nm
Characteristic speed	250 rpm



### VX 6 / 8 / 10 / 12 / 15 / 18

#### 8.000 rpm - Belt-driven

#### ISO 40 taper

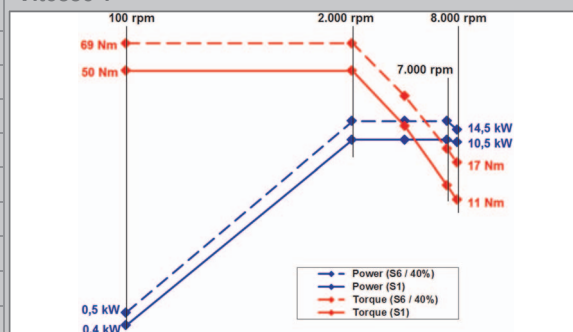
#### Range 1

Rotation speed	100 - 8.000 rpm
Power (S6/S1)	14,5 / 10,5 kW
Torque (S6/S1)	69 / 50 Nm
Characteristic speed	2.000 rpm

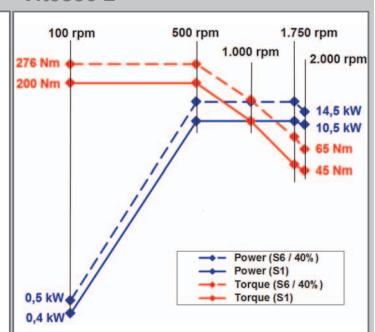
#### Range 2

Rotation speed	100 - 2.000 rpm
Power (S6/S1)	14,5 / 10,5 kW
Torque (S6/S1)	276 / 200 Nm
Characteristic speed	500 rpm

#### Vitesse 1



#### Vitesse 2





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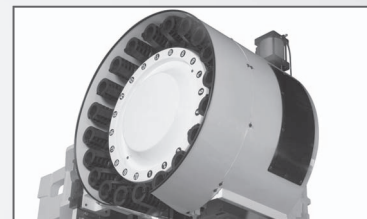
## Standard table

			VX 6	VX 8	VX 10	VX 12	VX 15	VX 18
Travels X			600	820	1.020	1.220	1.510	1.810
	Y	mm	400	510	510	600	810	810
	Z		460	510	510	610	810	810
Table dimensions		mm	800 x 500	1.000 x 530	1.200 x 530	1.400 x 630	1.700 x 810	2.000 x 810
Min/max distance Spindle nose / table surface		mm	150 / 610	150 / 660	150 / 660	150 / 760	150 / 960	150 / 960
Admissible load		kg	400	500	800	1.200	2.000	2.500
Nber of T slots			4	4	4	5	5	5
Distance between T slots		mm	100	100	100	125	125	125
Width of slots		mm	18	18	18	18	18	18

## Tool changers

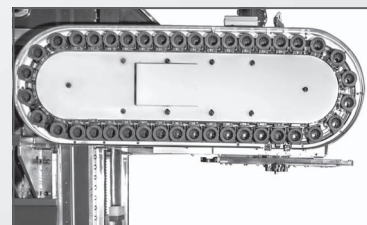
The automatic loading/unloading of the tools is made vertically

	VX 6 / 8 / 10 / 12	VX 15 / VX 18
Type	<b>Drum</b>	<b>Chain</b>
Loading/ Unloading	Automatic with twin arm	Automatic with twin arm
Number of pockets	24	40
Taper	ISO 40 / BT 40	ISO 40 / BT 40
Tool dimensions	Ø = 80 mm Length = 250 mm Weight = 7 kg	Ø = 76 mm Length = 250 mm Weight = 7 kg
Tool changing time : tool/tool - chip/chip	2,4 - 7 sec	2,4 - 7 sec



## Alternatives

	VX 6 / 8 / 10 / 12	
Type	<b>Drum</b>	<b>Chain</b>
Loading / Unloading	Automatic with twin arm	Automatic with twin arm
Number of pockets	24	40
Taper	HSK 63-A	ISO 40 / BT 40 / HSK 63-A
Tool dimensions	Ø = 80 mm Length = 250 mm Weight = 7 kg	Ø = 76 mm Length = 250 mm Weight = 7 kg
Tool changing time : tool/tool - chip/chip	2,4 - 7 sec	2,4 - 7 sec





## Technical Features

Linear axes X / Y / Z		VX 6	VX 8	VX 10	VX 12	VX 15	VX 18
X travel	mm	600	820	1.020	1.220	1.510	1.810
Y travel	mm	400	510	510	600	810	810
Z travel	mm	460	510	510	610	810	810
Rapid feedrate	m/min	24	24	24	24	20	20
Acceleration per axis	m/s <sup>2</sup>	2,5	2,5	2,5	2,5	2,5	2,5
Table		VX 6	VX 8	VX 10	VX 12	VX 15	VX 18
Dimension	mm	800 x 500	1.000 x 530	1.200 x 530	1.400 x 630	1.700 x 810	2.000 x 810
Admissible load	kg	400	500	800	1.200	2.000	2.500
Slots		4 - 100 H18	4 - 100 H18	4 - 100 H18	5 - 125 H18	5 - 125 H18	5 - 125 H18
Spindle		CN Siemens			CN Heidenhain		
Rotation speed	rpm	10.000			10.000		
Taper		ISO 40			ISO 40		
Power - Torque (S6/S1)	kW - Nm	14,5 / 10,5 - 69 / 50			14 / 10 - 89 / 64		
Characteristic speed	rpm	2.000			1.500		
Accuracies (VDI DGQ 3441)		VX 6 / 8 / 10 / 12 <i>(without linear scales)</i>			VX 15 / 18 <i>(without linear scales)</i>		
Uncertainty : P		Linear axes : 15 µ			Linear axes : 15 µ		
Repeatability: Ps medium		Linear axes : 3 µ			Linear axes : 8 µ		
Tool changer		VX 6 / 8 / 10 / 12			VX 15 / 18		
Number of pockets		24			40		
Taper		ISO 40			ISO 40		
Tool dimensions :	mm	250 - 80			250 - 76		
Length- Ø - Weight	kg	7			7		
Coolant		VX 6	VX 8	VX 10	VX 12	VX 15	VX 18
Flow - Pressure	l/min - bar	50 - 1,5	50 - 1,5	50 - 1,5	50 - 1,5	50 - 2	50 - 2
Tank	litres	125	125	125	125	125	125
Over-all measurement		VX 6	VX 8	VX 10	VX 12	VX 15	VX 18
Weight of the machine	kg	5.200	5.300	6.700	7.700	14.200	16.500
Depth	mm	2.470	2.310	2.600	2.520	4.540	4.560
Width	mm	3.960	3.960	4.440	4.595	6.600	6.680
Height	mm	2.900	2.900	2.900	3.150	4.000	4.000

## Optional equipment

Flood coolant system - Medium pressure coolant 20 bar - Part probe - Tool probe - Oil extraction system - Linear scales - Pressurization of measuring scales - « Mould and Die » package - Column raiser 200 mm - 4th axis rotary table - 4th and 5th axis rotary-tilting table



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