



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.

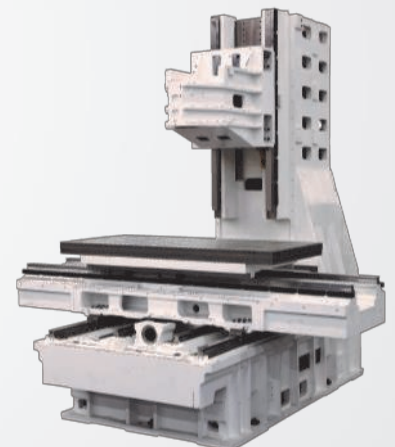
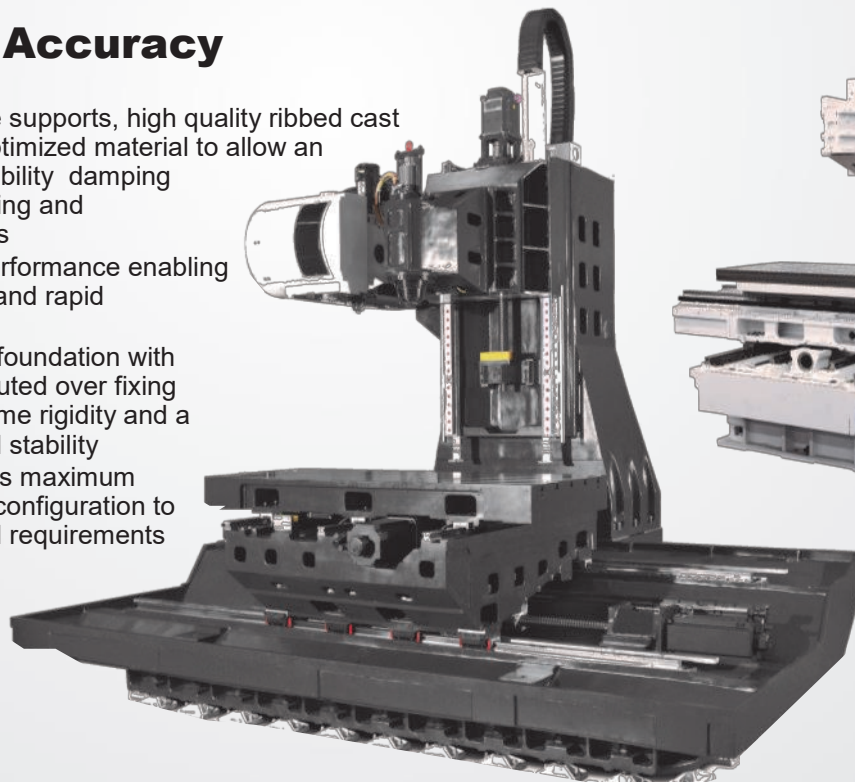
Fast and evidenced return on investment.

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

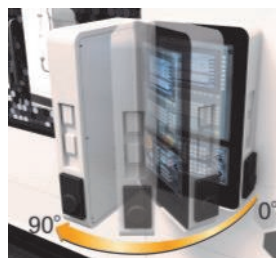
- Driven by an asynchronous AC spindle motor.
- Equipped with ceramic roller bearings to ensure temperature stability
- The rotary shaft is of large dimensions to absorb cutting stress.
- Versatility and performance of machining operations : milling, boring, threading, tapping
- Allows any roughing operation 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

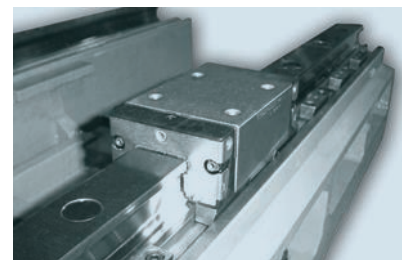
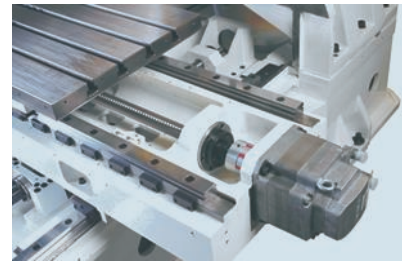
Environment - Ergonomics

- 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 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 40 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

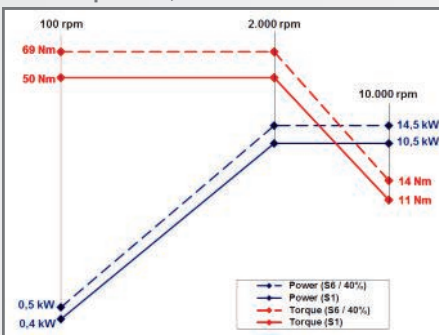
Standard spindle - 10.000 rpm

(*) with additional cost

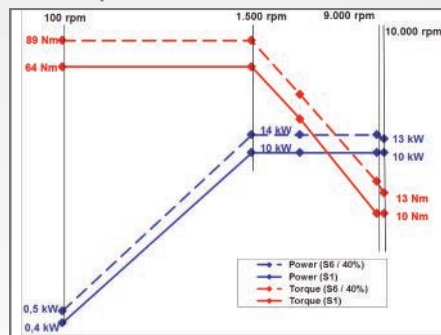
	with NC Siemens	with NC Heidenhain
Belt driven		
Taper	ISO 40 / BT 40 (*)	ISO 40 / BT 40 (*)
Rotation Speed	100 - 10.000 rpm	100 - 10.000 rpm
Power (S6/S1)	14,5 / 10,5 kW	13 / 10 kW
Torque (S6/S1)	69 / 50 Nm	89 / 64 Nm
Characteristic speed	2.000 rpm	1.500 rpm



10.000 rpm - 10,5 kW / Siemens



10.000 rpm - 10 kW / Heidenhain



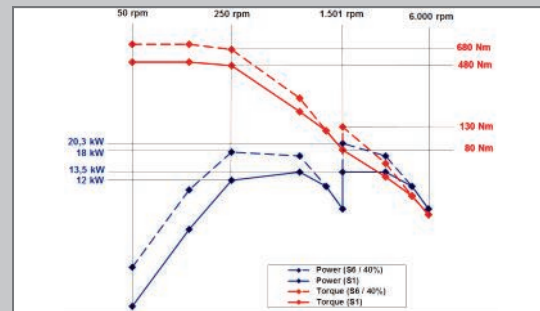
Alternative spindles with gear box

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 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	Range 2
Torque (S6/S1)	130 / 80 Nm	680 / 480 Nm
Characteristic speed	1.501 rpm	250 rpm



VX 10 / 12 / 15 / 18

8.000 rpm - Belt-driven

ISO 40 taper

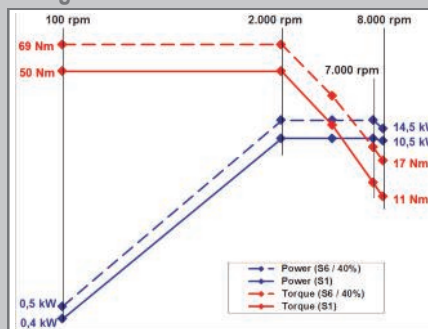
Range 1

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

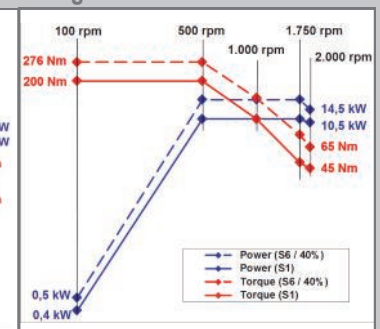
Range 2

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

Range 1

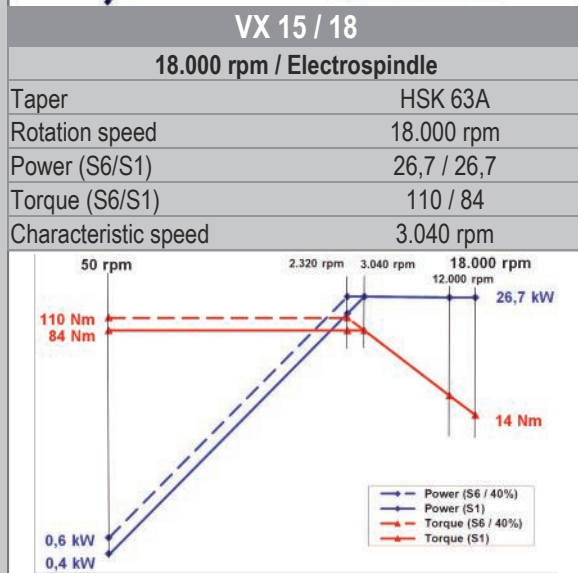
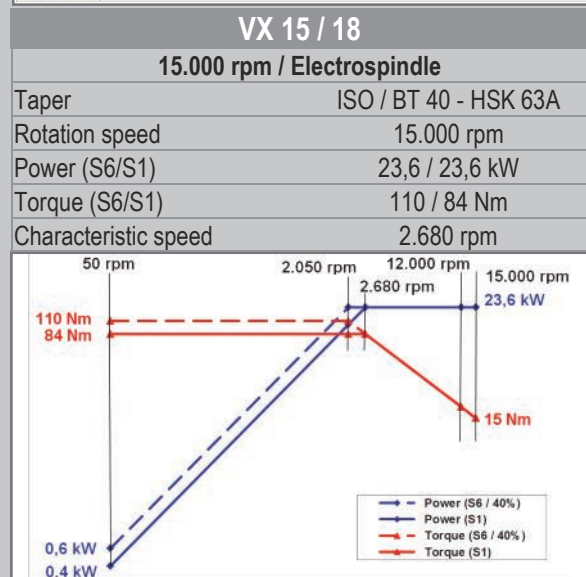
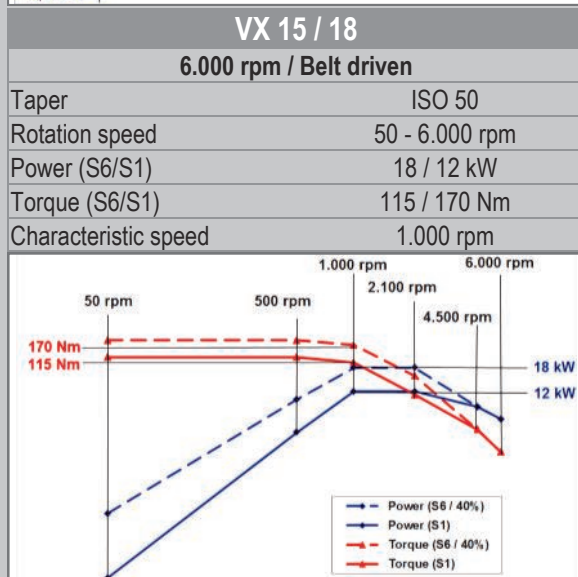
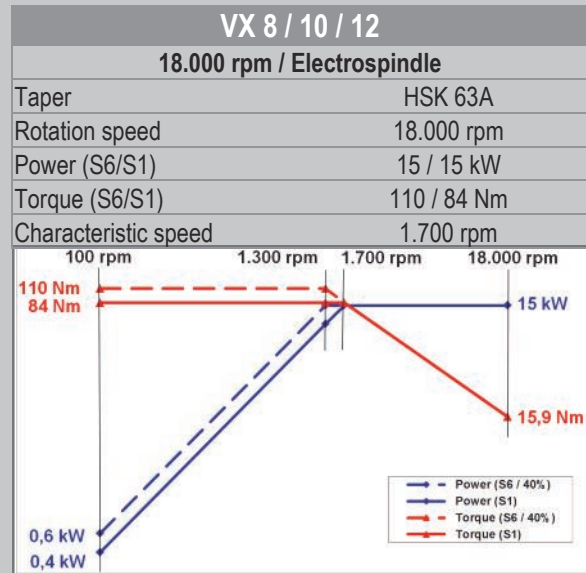
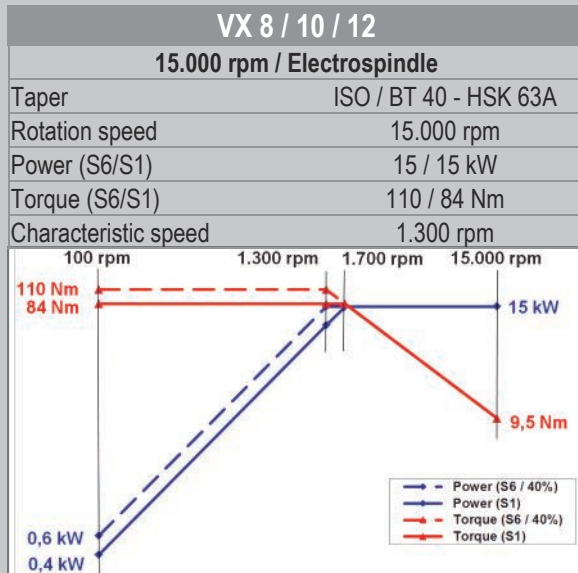


Range 2





Alternative spindles





VX Series

Standard table

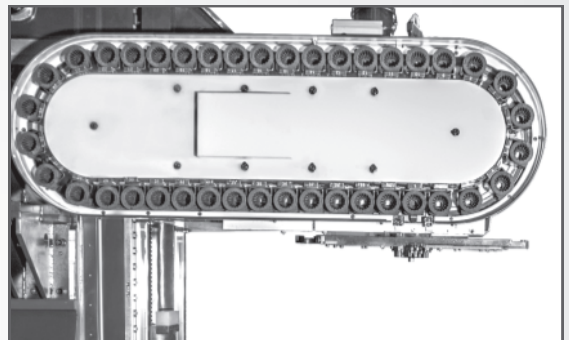
			VX 8	VX 10	VX 12	VX 15	VX 18
Travels	X		820	1.020	1.220	1.510	1.810
	Y	mm	510	510	600	810	810
	Z		510	510	610	810	810
Table dimensions	mm	1.000 x 530	1.200 x 530	1.400 x 630	1.700 x 810	2.000 x 810	
Min/max distance Spindle nose / table surface	mm	150 / 660	150 / 660	150 / 760	150 / 960	150 / 960	
Admissible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

Tool changers

The automatic loading/unloading of the tools is made vertically

VX 8 / 10 / 12 / 15 / 18

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



Alternatives

VX 8 / 10 / 12 / 15 / 18

VX 15 / 18

Type	Chain	Chain
Loading / Unloading	Automatic with twin arm	Automatic with twin arm
Number of pockets	40	40
Taper	HSK 63-A	ISO 50
Tool dimensions	\varnothing : VX 8 / 10 / 12 = 80 mm \varnothing : VX 15 / 18 = 76 mm Length = 250 mm Weight = 7 kg	\varnothing = 125 / 250 mm Length = 350 mm Weight = 15 kg
Tool changing time : tool/tool - chip/chip	2,4 - 7 sec	2,4 - 7 sec



Technical Features

Linear axes X / Y / Z		VX 8	VX 10	VX 12	VX 15	VX 18
X travel	mm	820	1.020	1.220	1.510	1.810
Y travel	mm	510	510	600	810	810
Z travel	mm	510	510	610	810	810
Rapid feedrate	m/min	24	24	24	20	20
Acceleration per axis	m/s ²	2,5	2,5	2,5	2,5	2,5
Table		VX 8	VX 10	VX 12	VX 15	VX 18
Dimension	mm	1.000 x 530	1.200 x 530	1.400 x 630	1.700 x 810	2.000 x 810
Admissible load	kg	500	800	1.200	2.000	2.500
Slots		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	kW - Nm	14,5 - 69		13 - 89		
Characteristic speed	rpm	2.000		1.500		
Accuracies (VDI DGQ 3441)		VX 8 / 10 / 12		VX 15 / 18		
- Uncertainty : P		X - Y - Z = 15 µ		X - Y - Z = 15 µ		
- Repeatability: Ps medium		X - Y - Z = 3 µ		X - Y - Z = 8 µ		
		<i>with linear scales (option)</i>				
- Uncertainty : P		X - Y - Z = 10 µ		X - Y - Z = 10 µ		
- Repeatability: Ps medium		X - Y - Z = 3 µ		X - Y - Z = 3 µ		
Tool changer		VX 8 / 10 / 12		VX 15 / 18		
Number of pockets		40		40		
Taper		ISO 40		ISO 40		
Tool dimensions :	mm	250 - 80		250 - 76		
Length- Ø - Weight	kg	7		7		
Coolant		VX 8 / 10 / 12		VX 15 / 18		
Flow - Pressure	l/min - bar	50 - 1,5		50 - 2		
Tank	litres	125		125		
Over-all measurements (Doors opened + conveyor)		VX 8	VX 10	VX 12	VX 15	VX 18
Width	mm	4.390	4.440	4.440	6.600	6.680
Depth	mm	4.220	2.592	3.230	4.560	4.660
Height	mm	2.900	2.900	3.150	4.000	4.000
Weight of the machine	kg	5.800	6.800	8.200	14.500	16.000

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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