



VX Series

High Performances Vertical Machining Centre

Performance
Technology
Power
Accuracy





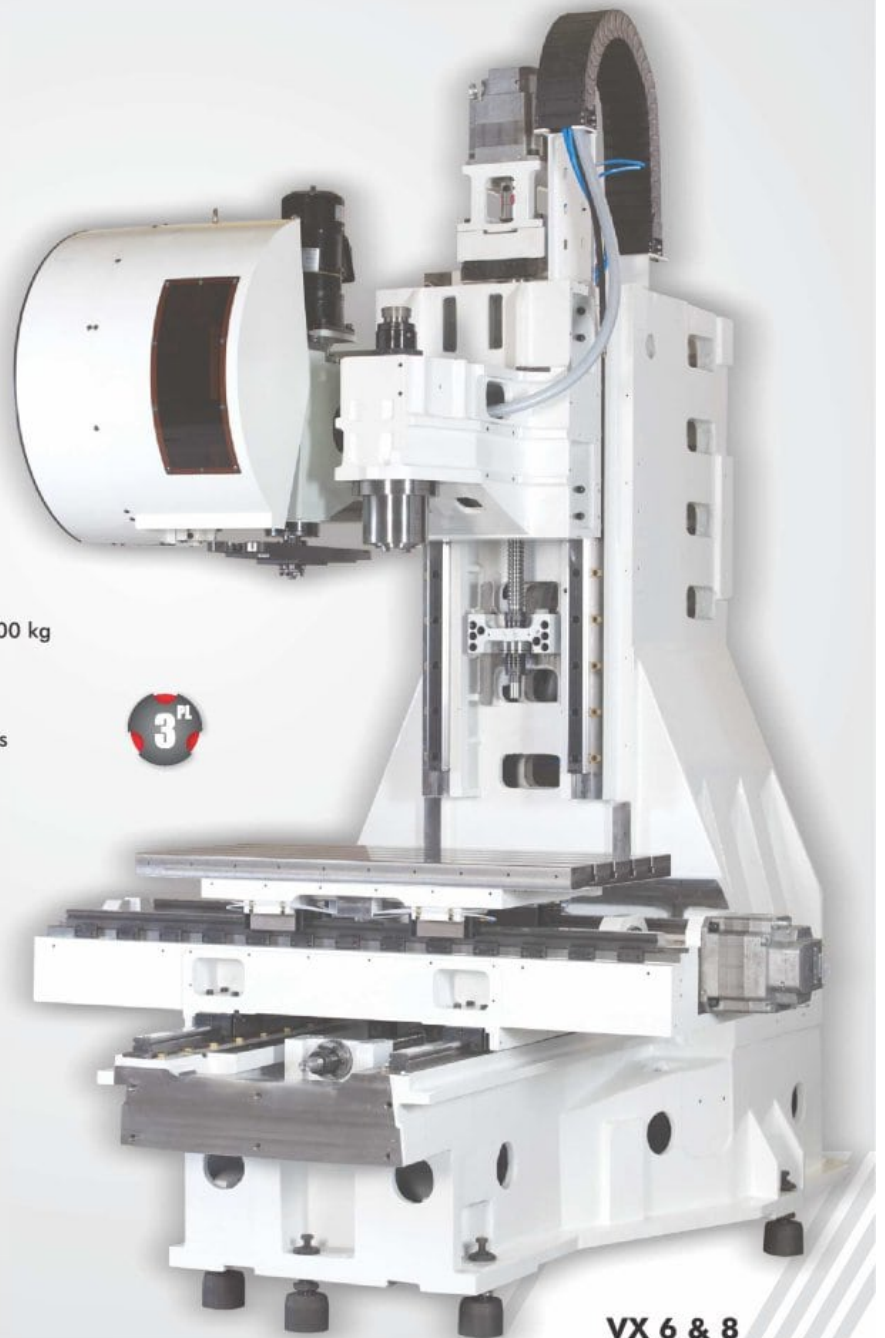
VX Series

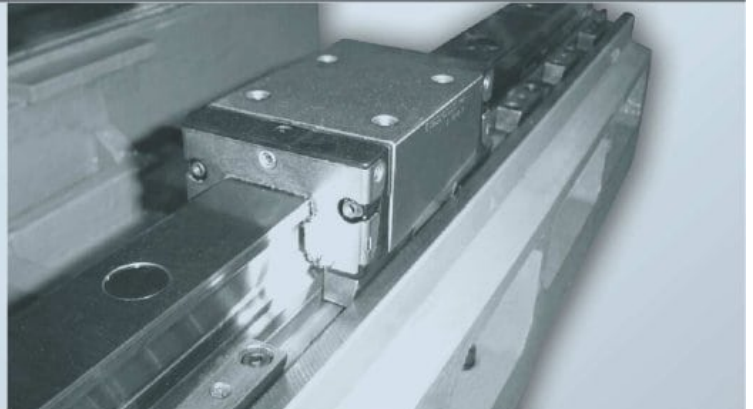
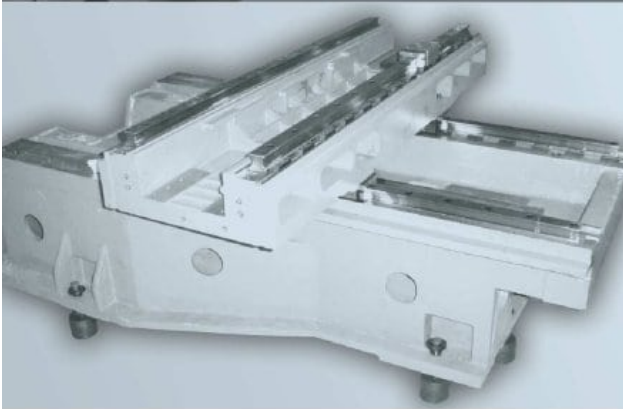
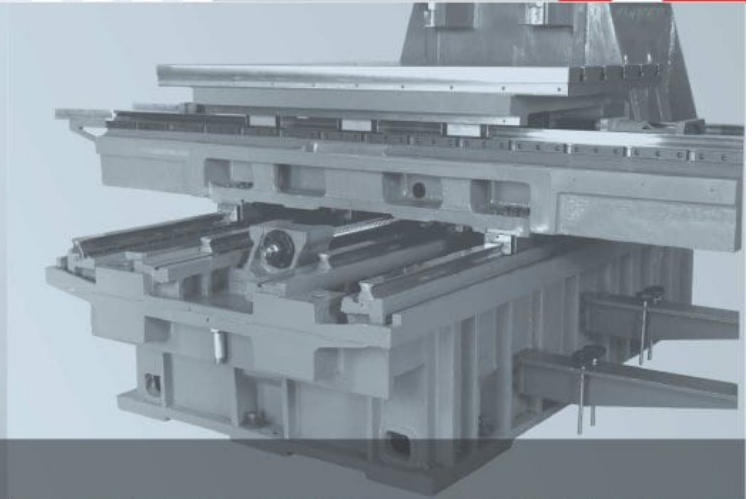
Powerfull, Rapid, Accurate

High Performance Vertical Machining Center

The VX range of vertical machining centres have been specially developed to meet customers requirements in accuracy and reliability. The concept is simple and performances very high : compact, ergonomic, powerful and accurate. This range of machines offer an excellent profitability for operations such as milling, drilling, boring and tapping in sectors like tooling and production in small and medium series. Thanks to its machining performance, this range of machines ensure a very fast return on investment.

- 3 axes machining for work piece up to 1.200 kg
- Hard material machining in a minimal time
- High chip removal capacity
- Very high accuracy in contouring and profiles
- Complete automation of the machine





Structure : Rigidity and Accuracy

- C frame structure
- Architecture, structure and material are optimized to allow an optimum static and dynamic stability damping vibration to cater cutting and acceleration demands
- 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

Numerical Controller

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

Linear Axes

- Moving guide rails
- Direct drive axes
- Linear guide rails with lubricated recirculating roller bearings
- **VX4 - VX6 - VX8** : 2 linear guide rails on Y axis and 2 slides on each guide rail on X axis
- **VX10 - VX12** : 4 linear guide rails on Y axis and 3 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 which reduces the pollution of the coolant liquid
- Chip Conveyor

Environment - Ergonomics

- Complete safeguard ensuring a safety of the machine, the operator and environment
- Very large accessibility to the table and the work piece
- Tilting operator panel

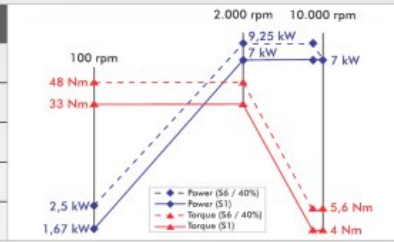


VX Series

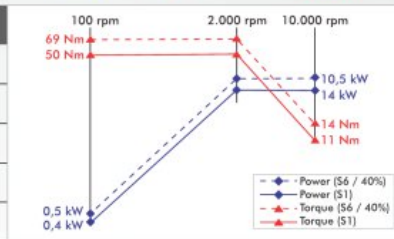
The Spindle 10.000 rpm

The spindle is driven by lifetime lubricated contact. The size of the rotating shaft allows to maximize damping of large cutting forces. The spindle allows all roughing operations thanks to the high torque as well as the finishing operations thanks to its rotating speed. The milling spindle is driven by an asynchronous AC spindle motor.

NC Siemens	VX4
Taper	ISO 40
Rotating speed	10.000 rpm
Power (S6 / S1)	9,25 kW / 7 kW
Torque (S6 / S1)	48 Nm / 33 Nm
Characteristic speed	2.000 rpm

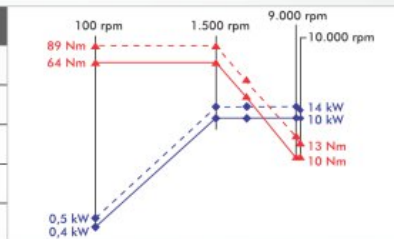


NC Siemens	VX6 / VX8 / VX10 / VX12
Taper	ISO 40
Rotating speed	10.000 rpm
Power (S6 / S1)	10,5 kW / 14 kW
Torque (S6 / S1)	69 Nm / 50 Nm
Characteristic speed	2.000 rpm



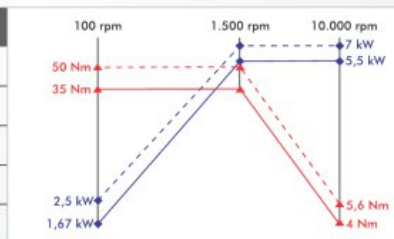
For VX6 / VX8 / VX10 / VX12 Belt Drive
For VX4 Spindle Directly Coupled to Motor

NC Heidenhain	VX6 / VX8 / VX10 / VX12
Taper	ISO 40
Rotating speed	10.000 rpm
Power (S6 / S1)	14 kW / 10 kW
Torque (S6 / S1)	89 Nm / 64 Nm
Characteristic speed	1.500 rpm



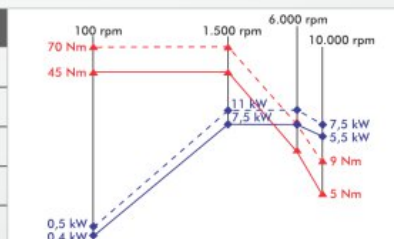
Power (S6 / 40%)
Power (S1)
Torque (S6 / 40%)
Torque (S1)

NC Fanuc	VX4
Taper	ISO 40
Rotating speed	10.000 rpm
Power (S6 / S1)	7 kW / 5,5 kW
Torque (S6 / S1)	50 Nm / 35 Nm
Characteristic speed	1.500 rpm



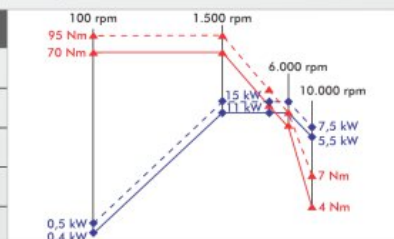
Power (S6 / 40%)
Power (S1)
Torque (S6 / 40%)
Torque (S1)

NC Fanuc	VX6 / VX8 / VX10
Taper	ISO 40
Rotating speed	10.000 rpm
Power (S6 / S1)	11 kW / 7,5 kW
Torque (S6 / S1)	70 Nm / 45 Nm
Characteristic speed	1.500 rpm



Power (S6 / 40%)
Power (S1)
Torque (S6 / 40%)
Torque (S1)

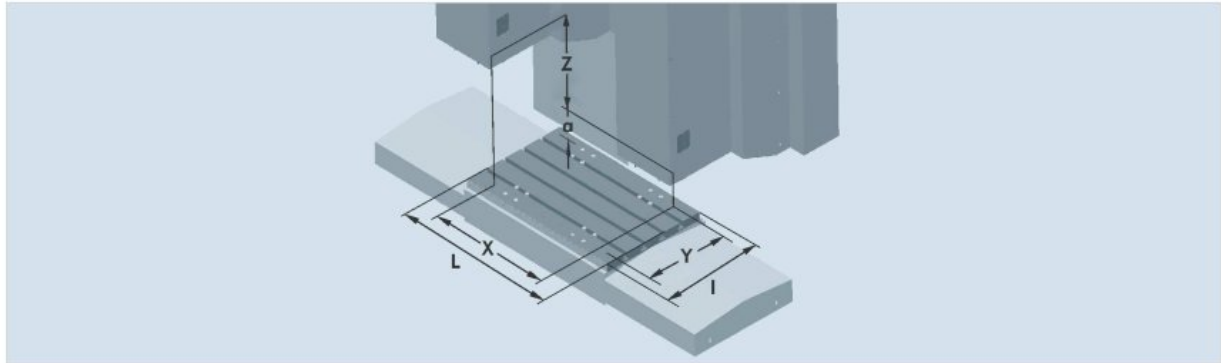
NC Fanuc	VX12
Taper	ISO 40
Rotating speed	10.000 rpm
Power (S6 / S1)	15 kW / 11 kW
Torque (S6 / S1)	95 Nm / 70 Nm
Characteristic speed	1.500 rpm



Power (S6 / 40%)
Power (S1)
Torque (S6 / 40%)
Torque (S1)





The Table



			VX4	VX6	VX8	VX10	VX12
Table area	L x l	mm	600 x 300	800 x 500	1.000 x 530	1.200 x 530	1.400 x 630
Axes	X x Y x Z	mm	400 x 300 x 350	600 x 400 x 460	820 x 510 x 510	1.020 x 510 x 510	1.220 x 600 x 610
Admissible load		kg	200	400	500	800	1.200
Qty of T slots		nb	3	4	4	4	5
Width of slot		mm	14	18	18	18	18
Distance between slots		mm	100	100	100	100	125
Distance min spindle nose to table face	a	mm	200	150	150	150	150

The Tool Changer

		VX4	VX6, VX8, VX10, VX12
			
Typ of magazine		Disc	Drum
Loading/Unloading		Automatic with transversal displacement of the magazine	Automatic with transfer arm
Qty of housings	qty	12	20
Tool taper		ISO 40 (In option : BT 40)	ISO 40 (In option : BT 40)
Tool diameter	mm	80	80
Tool length	mm	200	250
Tool Weight	kg	7	7
Tool changing time tool to tool – chip to chip	sec	3,5 – 5,5	2,4 - 7



VX Series

Table Alternative : APC Version (Automatic Pallet Changer)



	VX6 ^{APC}
Qty of pallets	2
Dimension of pallet	600 x 400 mm
Admissible load	400 kg (200 kg on each pallet)
Pallet changing time	10 sec
Positioning repeatability	15 μm
Distance Max. spindle nose \ table area	620



Tool Changers Alternative

		VX6 / VX8 / VX10 / VX12	VX12
Type of magazine		Drum	Drum
Loading/Unloading		Automatic with transfert arm	Automatic with transfert arm
Qty of housings	qty	24	30
Tool taper		ISO 40 (In option : BT 40)	ISO 40 (In option : BT 40)
Tool diameter	mm	80	80
Tool length	mm	250	250
Tool weight	kg	7	7
Tool changing time tool to tool – chip to chip	sec	2,4 - 7	2,4 - 7

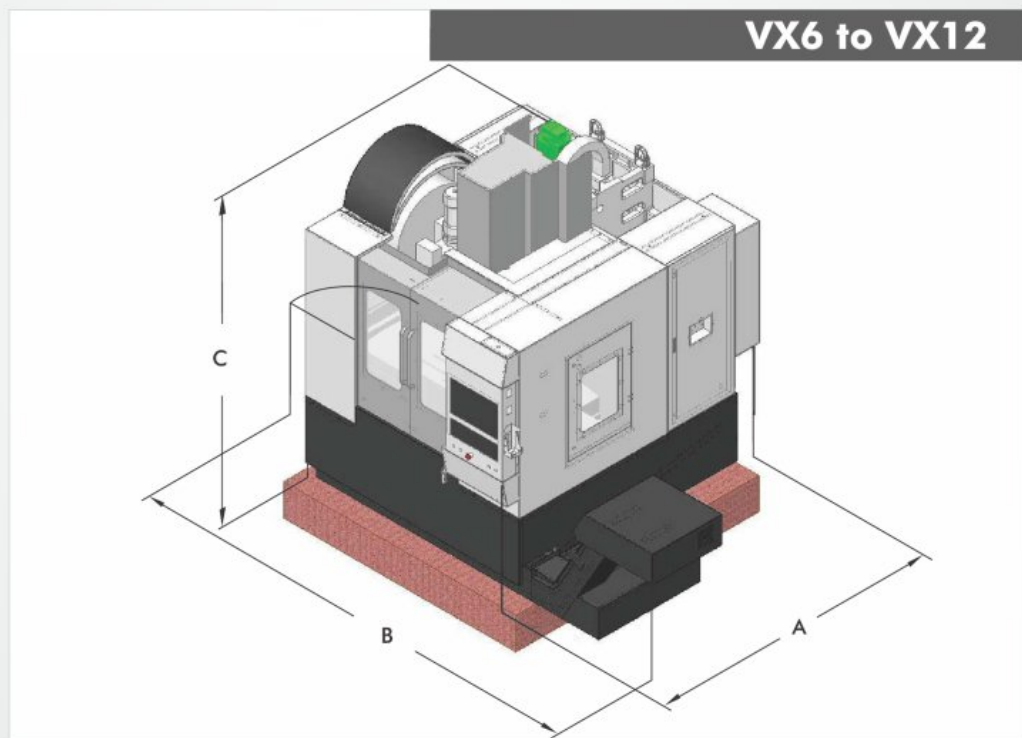
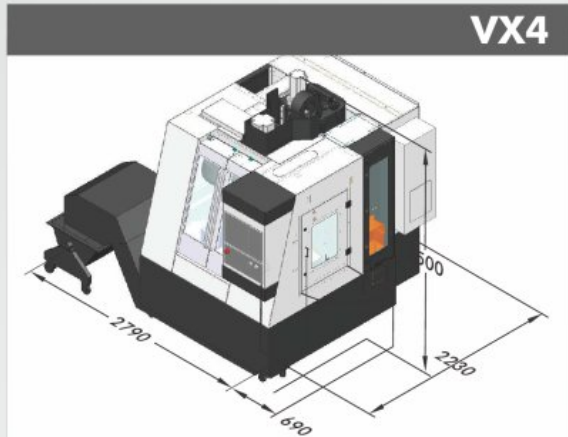


Spindles Alternative

Gear box for spindle 10.000 rpm (Siemens)		VX6	VX8	VX10	VX12
Standard spindle can be equipped with a 2 speeds gear box. The increasing rate is 1:4, which allows to increase the available torque and decrease the characteristic speed.					
Speed 1			Speed 2		
6.000 rpm Driven by Belt	VX10 / VX12				
Taper	ISO 50				
Rotating speed	6.000 rpm				
Power S1 / S6	11 kW / 16,5 kW				
Torque S1 / S6	70 Nm / 105 Nm				
Characteristic speed	1.500 rpm				
12.000 rpm Electro Spindle	VX6 / VX8 / VX10 / VX12				
Taper	ISO 40				
Rotating speed	12.000 rpm				
Power S1 / S6	26 kW / 26 kW				
Torque S1 / S6	84 Nm / 110 Nm				
Characteristic speed	3.000 rpm				
18.000 rpm Electro Spindle	VX8 / VX10 / VX12				
Taper	HSK 63A				
Rotating speed	18.000 rpm				
Power S1 / S6	25 kW / 35 kW				
Torque S1 / S6	86 Nm / 120 Nm				
Characteristic speed	2.800 rpm				
24.000 rpm Electro Spindle	VX6 / VX8 / VX10 / VX12				
Taper	HSK 63A				
Rotating speed	24.000 rpm				
Power S1 / S6	20 kW / 25 kW				
Torque S1 / S6	32 Nm / 40 Nm				
Characteristic speed	6.000 rpm				

VX Series

Overall Measurements – Standard Machine



		VX6	VX8	VX10	VX12
A	mm	2.460	2.460	2.580	2.520
B	mm	3.960	3.960	4.120	4.600
C	mm	2.900	2.900	2.900	2.990



Overall Measurements – APC Version

VX6 APC



		VX6 apc
A	mm	3.000
B	mm	3.440
C	mm	2.900



VX Series

Technical Features

Linear Axes X / Y / Z		VX4	VX6	VX8	VX10	VX12
Travels : X	mm	400	600	820	1.020	1.220
Y	mm	300	400	510	510	600
Z	mm	350	460	510	510	610
Rapid feedrates	m/min	40	24	24	24	24
Accuracies						
Uncertainty P	mm	0,015	0,015	0,015	0,015	0,015
Repeatability : Ps medium	mm	0,003	0,003	0,003	0,003	0,003
Table						
Table area	mm	600 x 300	800 x 500	1.000 x 530	1.200 x 530	1.400 x 630
Admissible load	kg	200	400	500	800	1.200
T-Slots : Qty		3	4	4	4	5
Width	mm	14	18	18	18	18
Distance	mm	100	100	100	100	125
Distance min/max spindle nose / table area	mm	200 – 550	150 – 610	150 – 660	150 – 660	150 – 760
Spindle (Siemens)						
Rotating speed	rpm	10.000	10.000	10.000	10.000	10.000
Tool taper		ISO 40	ISO 40	ISO 40	ISO 40	ISO 40
Power (S1 / S6)	kW	7 / 9	10,5 / 14,5	10,5 / 14,5	10,5 / 14,5	10,5 / 14,5
Torque (S1 / S6)	Nm	33 / 48	50 / 69	50 / 69	50 / 69	50 / 69
Characteristic speed	rpm	2.000	2.000	2.000	2.000	2.000
Tool Magazines						
Qty of housings		12	20	20	20	20
Tool taper		ISO 40	ISO 40	ISO 40	ISO 40	ISO 40
Tool length	mm	200	250	250	250	250
Tool diameter	Ø mm	80	80	80	80	80
Tool weight	kg	7	7	7	7	7
Tool changing time : tool to tool – chip to chip	sec	3,5 – 5,5	2,4 – 7	2,4 – 7	2,4 – 7	2,4 – 7
Coolant						
Flow – Pressure	l/min – bar	25 – 2	25 – 2	25 – 2	25 – 2	25 – 2
Tank	Litres	125	125	125	125	125



Alternatives

APC (Automatic Pallet Changer)		VX6 ^{APC}
Pallet dimension	mm	600 x 400
Admissible load	kg	400 (200 kg on each pallet)
T-Slots : Qty		4
Width	mm	18
Distance	mm	100

Spindles		VX10 / VX12	VX6 / VX8 / VX10 / VX12	VX8 / VX10 / VX12	VX6 / VX8 / VX10 / VX12
Spindle rotation	rpm	6.000	12.000	18.000	24.000
Tool taper		ISO 50	ISO 40	HSK 63A	HSK 63A
Power – Torque (S1 / S6)	kW	11/16,5 – 70/105	26/26 – 84/110	25/35 – 86/120	20/25 – 32/40
Characteristic speed	rpm	1.500	3.000	2.800	6.000

Tool Magazine		VX6 / VX8 / VX10 / VX12	VX12
Qty of housings		24	30
Tool taper		ISO 40 (In option : BT 40)	ISO 40 (In option : BT 40)
Tool length	mm	250	250
Tool diameter	Ø mm	80	80
Tool weight	kg	7	7

Equipment as Options

- Gear box for spindle
- Micro spraying coolant
- Coolant through tool centre 20 / 40 bar
- Air blast
- Component probe
- Tool probe
- Table with 4th and 5th axes
- Oil extraction system
- Graphite + Carbon extraction system
- Measuring scales on linear axes
- Measuring scales pressurization
- Protectors washing
- Chips trays

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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