



### SKU : 181420

The Vector series is the compact all-in-one machining solution, designed and preconfigured for complex manufacturing challenges. The machines are designed using the latest FEM analysis software. The production takes place under strict quality control in order to guarantee perfect execution. Both the tried and tested Meehanite cast and the delta construction of the column ensure additional stability of the machine frame. The consistently high-quality components guarantee smooth operation during multiple shifts.

- Available with Siemens or Heidenhain controller
- Extra-wide Y-shaped Meehanite column for maximum stability
- 30-bar CTS to ensure optimum machining quality
- Designed for multi-shift operation
- Many customization and automation possibilities
- 2-year standard warranty

## TECHNICAL SPECS

### WORKING AREA

Table dimensions	1100 mm x 550 mm
Table load capacity	800 kg
Spindle nose-to-table surface distance	150 mm - 700 mm
Spindle center - column	520 mm

### TRAVELS

Travel X-axis	1000 mm
Travel Y-axis	550 mm
Travel Z-axis	550 mm
Guideway	Roller

### HEADSTOCK

Spindle speed	10000 1/min
Spindle mount	SK 40
Torque, constant	63.7 Nm
Spindle drive method	Riemenantrieb
Spindle bearing	7012 x 4

### RAPID FEED

Rapid feed X-/ Y-axis	36000 mm/min
Rapid feed Z-axis	15000 mm/min

### FEED

Work feed X-axis	10000 mm/min
Work feed Y-axis	10000 mm/min
Work feed Z-axis	10000 mm/min

### TOOLING

Tool changer type	Doppelarm
Number of tool stations	24 positions
Tool selection	Memory random
Tool size Ø x L (max.)	80 mm x 350 mm
Tool weight max.	7 kg
Tool-change time tool/tool	1.8 sec
Tool-changing time chip/chip	3.9 sec

### ACCURACIES

Repeatabilities	± 0,003 / ± 0.00012" mm
Positioning accuracies	± 0,005/ 0.0002" mm

### DRIVE CAPACITY

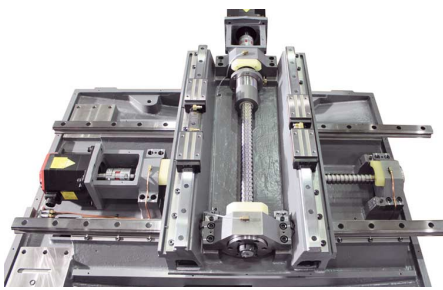
Main drive, continuous load	7.5 kW
Total power consumption	15 kVA
Voltage	400 V
Mains frequency	50 Hz

### CONTROL

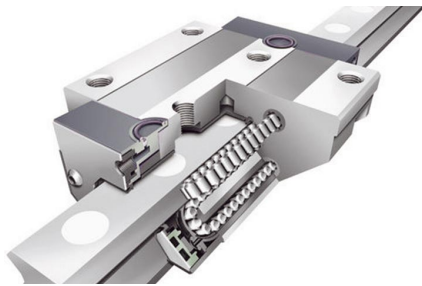
Control	Heidenhain
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### MEASURES AND WEIGHTS

Overall dimensions (length x width x height)	2.62 m x 2.2 m x 2.7 m
Weight	4600 kg



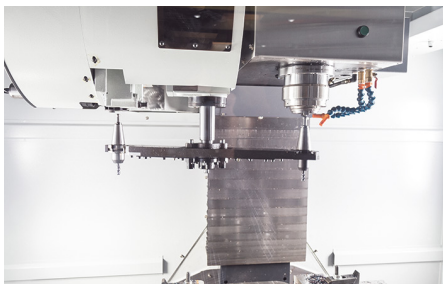
Linear guides and preloaded ball screws



Linear-roller guides for super quiet operation



Heidenhain TNC 620 control



Tool changer with double-arm and BT40 spindle



## PRODUCT DETAILS

### Highlights

- Rigid machine structure with extra deep center of gravity and small footprint

### Machine Design

- 30 mm preloaded ball screws combined with a digital drive package provide a rigid table guide and high torque
- A major focus during development of this machine was a space-saving design
- Dual-arm tool changer with 24 stations ensures adequate flexibility and capacity for every day production needs
- The Vector Series features linear guides on X, Y and Z to ensure high accuracy made possible by lower friction
- 30-Bar internal cooling for optimum machining quality

### Spindle

- Spindle runs on multiple bearings to ensure excellent absorption and dissipation of forces during machining

### Tool Changer

- Quick changing times of only 1.8 seconds tool-to-tool, and 3.9 seconds chip-to-chip increase spindle run times and maximize the machine output

## CONTROLS & SOFTWARE

### Control Heidenhain TNC-620 'with 19" Touchscreen-Display

#### TNC 620 - Compact motion control for milling machines and drill presses

The compact TNC 620 is very versatile and accommodates up to five controlled axes. The flexible control concept with workshop-oriented programmability via HEIDENHAIN plain text dialogs, the possibility of external programming, its capacity and specifications make it ideal for use in universal milling machine and drill press applications, such as:

- Single part and series production
- Toolmaking
- Mechanical engineering
- Research and development
- Prototype construction and testing
- Repair shops and training facilities

Plus, it features all necessary and additional helpful functions for:

#### Universal Milling Machines

- Free contour programming
- Milling cycles for complex contours
- Quick referencing via HEIDENHAIN scanning systems

#### Drill Presses

- Cycles for drilling and reaming
- Cycles for dot patterns on circles and lines

#### Five-axis machining with swivel head and rotary table

- External, machine-independent programming – the TNC 620 automatically considers the machine's geometry
- Swiveling work surface
- Machining of cylindrical surfaces
- 3D tool correction
- Quick completion due to short block processing times

## STANDARD EQUIPMENT

Preparation for Renishaw TS 27 R  
Control Heidenhain TNC-620 with 19" Touchscreen-Display  
Coolant through spindle 30 bar with double filter  
24-station tool changer with dual-arm  
Aufnahme SK 40  
Spindle oil cooler  
Chain-type conveyor with chip container  
Electronic hand-wheel  
Oil skimmer  
Automatic central lubrication  
Coolant system flush gun  
Chip wash system  
Heat Exchanger for electric control cabinet  
Telescoping axis cover  
RS-232 interface  
USB port  
CF card reader  
Totally enclosed work space  
Work lamp  
3-color signal lamp  
Coolant system  
Adjustable machine feet  
Operating tools  
Operator instructions

## OPTIONAL EQUIPMENT

- Top cover for X.Mill/Vector 650-1000, SKU : 252819
- Renishaw OMP 40 Workpiece Measuring, SKU : 252820
- Connection for 4th axis (wiring only and axis chart), SKU : 253019
- Renishaw Tool Setter TS27R, SKU : 253386
- Renishaw OTS wireless tool setter (OTS), SKU : 253598
- preparation for Renishaw OMP40, SKU : 253613
- manual tailstock ST-170T for rotary table for X.mill, SKU : 253618
- manual tailstock ST-255T for rotary table for X.mill, SKU : 253620
- manual 6" chuck for rotary table for X.mill, SKU : 253622
- manual 9" chuck for rotary table for X.mill, SKU : 253624
- Z axis travel upgrade from 550 to 800 mm for X.mill, SKU : 253625
- 170 mm diam. 4th axis (4th axis, servo motor, driver, air brakes)(H), SKU : 253644
- 210 mm diam. 4th axis (4th axis, servo motor, driver, air brakes)(H), SKU : 253645
- 250 mm diam. 4th axis (4th axis, servo motor, driver, air brakes)(H), SKU : 253646
- Renishaw OMP 60 workpiece measuring system (BT40), SKU : 253681
- 200 mm diam. 4th & 5th axis for Vector 650/850/1000 (HDH), SKU : 253683
- Spindle speed upgrade to 12000 rpm, belt-type, SKU : 253781
- Air through spindle for Vector, SKU : 253782
- Upgrade Spindle Taper from SK40 to BBT 40, SKU : 253951