

For complete information on the VECTOR M with Heidenhain TNC 620 control, please visit: [www.knuth.com](http://www.knuth.com)



Actual machine may vary slightly



See this machine  
in action on  
YouTube



- Available with Siemens or Heidenhain control
- Tapping without compensating chuck (rigid tapping)
- Quick-action tool changer
- Powerful BT 40 spindle with speeds up to 10,000 rpm

**Compact All-in-One machining center  
for powerful 3-axis machining**

### Highlights

- Powerful BT 40 spindle with speeds up to 10,000 rpm
- Rigid machine structure with extra deep center of gravity and small footprint
- Siemens 828D control with ShopMill and Siemens drives guarantee maximum process reliability and efficient programming



- 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
- 435 psi internal cooling for optimum machining quality

## Standard Equipment

control Siemens 828D with Shopmill, coolant flow through spindle, 30 bar with double filter, 24-station tool changer with dual-arm, main spindle motor 12 HP, BT 40 mount, spindle oil cooler, chain-type conveyor with chip container, electronic hand-wheel, oil skimmer, automatic central lubrication, coolant gun, chip flushing 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

## Options

## Part No.

• Chip flush-out system	253384
• Spindle oil cooler	253440
• 10,000 rpm direct drive spindle WITH CTS	252818
• 4th axis DR-250H for VECTOR with incl. motor, amplifier, fully assembled	252886
• Arm Type BT40 upg. from 24 to 30 tools	252967

For additional options for this machine, visit our website.

## Specifications VECTOR

### 650 M SI

### 850 M SI

### 1000 M SI

Working Area		650 M SI	850 M SI	1000 M SI
Table dimensions	in	31x22	39x22	43x22
Table load capacity	lbs	1,320	1,760	1,764
Spindle nose-to-table surface distance	in	6 - 28	6 - 28	6 - 28
Spindle center - column	in	20	20	20
Travels		650 M SI	850 M SI	1000 M SI
Travel X-axis	in	25.6	33.5	39.4
Travel Y-axis	in	22	22	22
Travel Z-axis	in	22	22	22
Guideway		Roller	Roller	Roller
Headstock		650 M SI	850 M SI	1000 M SI
Spindle speed	rpm	10,000	10,000	10,000
Spindle mount		BT 40	BT 40	BT 40
Torque, constant	ft.lb.	398	398	398
Spindle bearing		7012 x 4	7012 x 4	7012 x 4
Draw bolts		MAS407	MAS407	MAS407
Rapid Feed		650 M SI	850 M SI	1000 M SI
Rapid feed X-/ Y-axis	in/min	1,417	1,417	1,417
Rapid Feed Z-axis	in/min	590.55	590.55	590.55
Feed		650 M SI	850 M SI	1000 M SI
Work feed X-axis	in/min	394	394	394
Work feed Y-axis	in/min	394	394	394
Work feed Z-axis	in/min	394	394	394
Tool Head		650 M SI	850 M SI	1000 M SI
Tool change type		Twin arm	Twin arm	Twin arm
Number of tool stations	positions	24	24	24
Tool selection		Memory random	Memory random	Memory random
Tool size Ø x L (max.)	in	3.15x11.81	3.15x11.81	3.15x13.78
Tool weight max.	lbs	15	15	15
Tool-change time tool/tool	sec	1.8	1.8	1.8
Tool-changing time chip/chip	sec	3.9	3.9	3.9
Accuracies		650 M SI	850 M SI	1000 M SI
Repeatability	in	± 0.00012	± 0.00012	± 0.00012
Positioning accuracy	in	± 0.0002	± 0.0002	± 0.0002
Drive Capacity		650 M SI	850 M SI	1000 M SI
Main drive, continuous load	Hp	12.07	12.07	12.07
Total power consumption	kVA	15	15	15
Mains frequency		50	50	50
Measures and Weights		650 M SI	850 M SI	1000 M SI
Overall dimensions (length x width x height)	in	96x87x107	96x87x107	104x87x107
Weight	lbs	8,800	9,460	10,120
Part No.		181272	181271	181270