

K SERIES

VK-1060 VERTICAL MACHINING CENTER



VK-1060

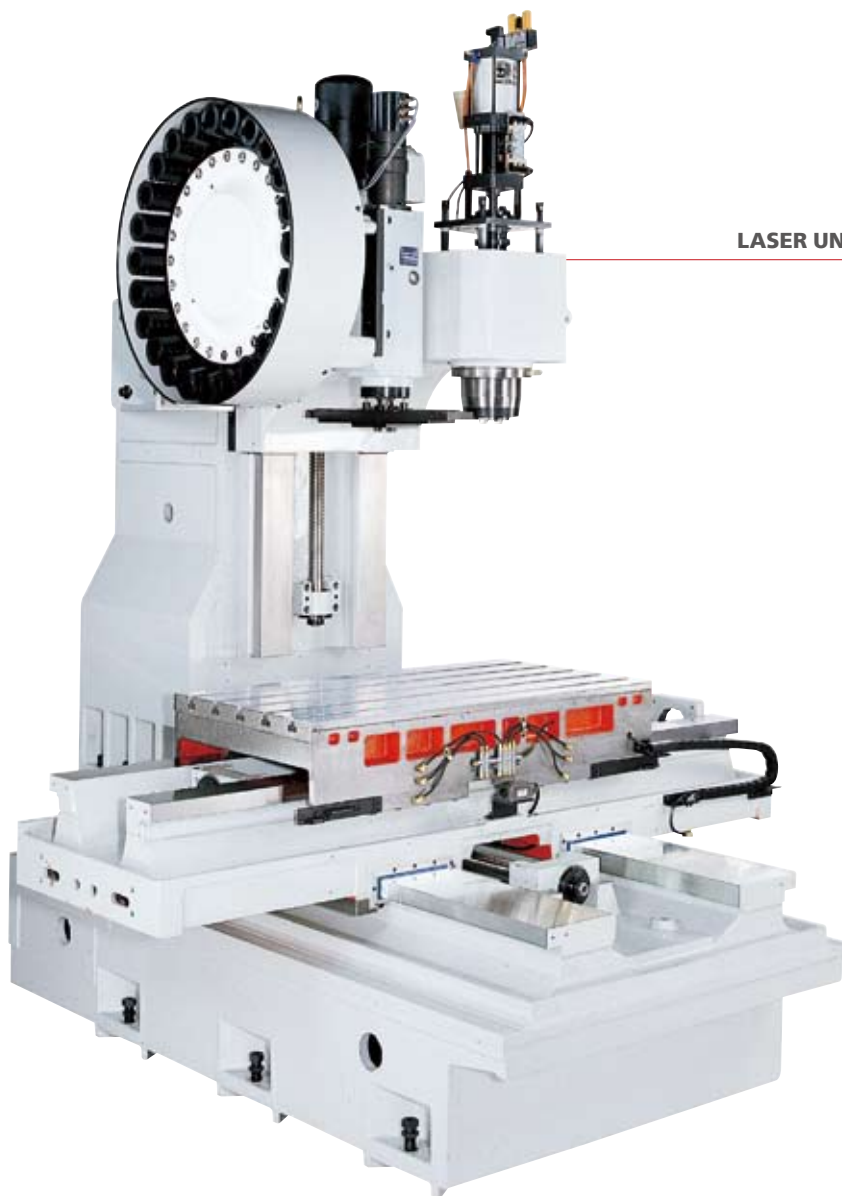
VERTICAL MACHINING CENTER

Bringing the most flexible & most competitive advantage of TWINHORN to a broader range of machining applications.

From prototype to production . . .

From entry level to complicated applications . . .

Most flexible & affordable machining solution . . .



LASER UNIT INSPECTION

LASER UNIT INSPECTION

Both superior positioning & repeatability accuracy are ensured by laser unit inspection & compensation.

Innovative Design
High Productivity...
Superior Accuracy

Chip Conveyor and Cart

- Provides a convenient and time saving chips removing.



CIRCULAR INSPECITON

Each machine is subject to rigorous ball bar accuracy, square and circular positioning.



ATC

- 20-TOOL CAROUSEL TYPE ATC (STANDARD)
- 24-TOOL ARM TYPE ATC (OPTION)

AVAILABLE MAGAZINE

Tool Magazine Capacity	20 tool	24 tool
ATC Type	Umbrella	Disk
Max. Tool Dia	80 mm	80 mm
	125 mm	125 mm
Max. Tool Weight	7 kg	7 kg
Max. Tool Length	300 mm	300mm

RIGID CONSTRUCTION

- All major parts are built with Meehanite cast irons, featuring high tensile strength and long term wearing resistance.
- The ruggedly constructed base features uniform load distribution and maximum stability, which machine accuracy is not affected by floor foundation or any minor leveling variation.
- Square hardened and precision-grounded slide way on all three axes.
- All mating surfaces of guide ways are precision scraped and coated with Turcite B combined with forced automatic lubrication system to ensure maximum accuracy and long service life.
- Z-axis is counter-weight balanced for extremely smooth movement.
- Pre-tensioned, dual supported high precision ball screws on all three axes are driven by direct-couple servo motors to provide stiffness, rigidity for all kinds of machining applications.
- All slide ways are completely covered to prevent coolant and chips damaging and to extend machine service life.



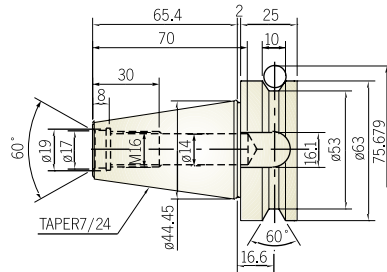
SPECIFICATIONS OF PULL STUD AND TOOL SHANK

OPTIONAL FEATURE

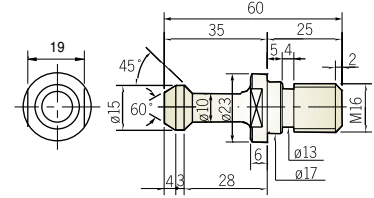
- POWERFUL CHIP FLUSH NOZZLE
Flush nozzles provide at both sides of splashguard, efficiently remove chips during operation.



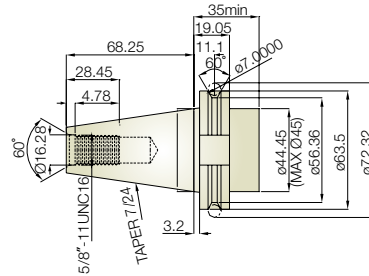
Tool shank BT40



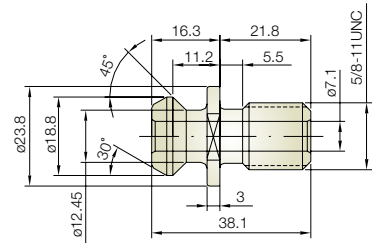
MAS-P40T-1



CAT40

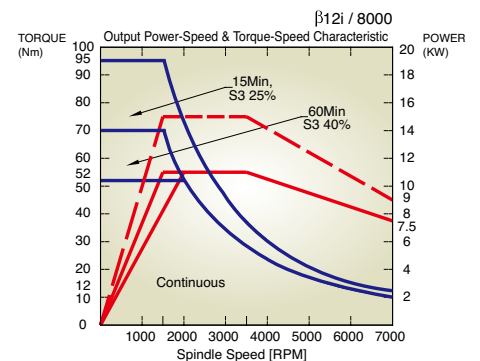
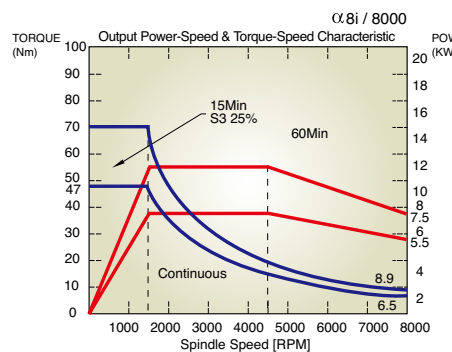


ANSI CAT40

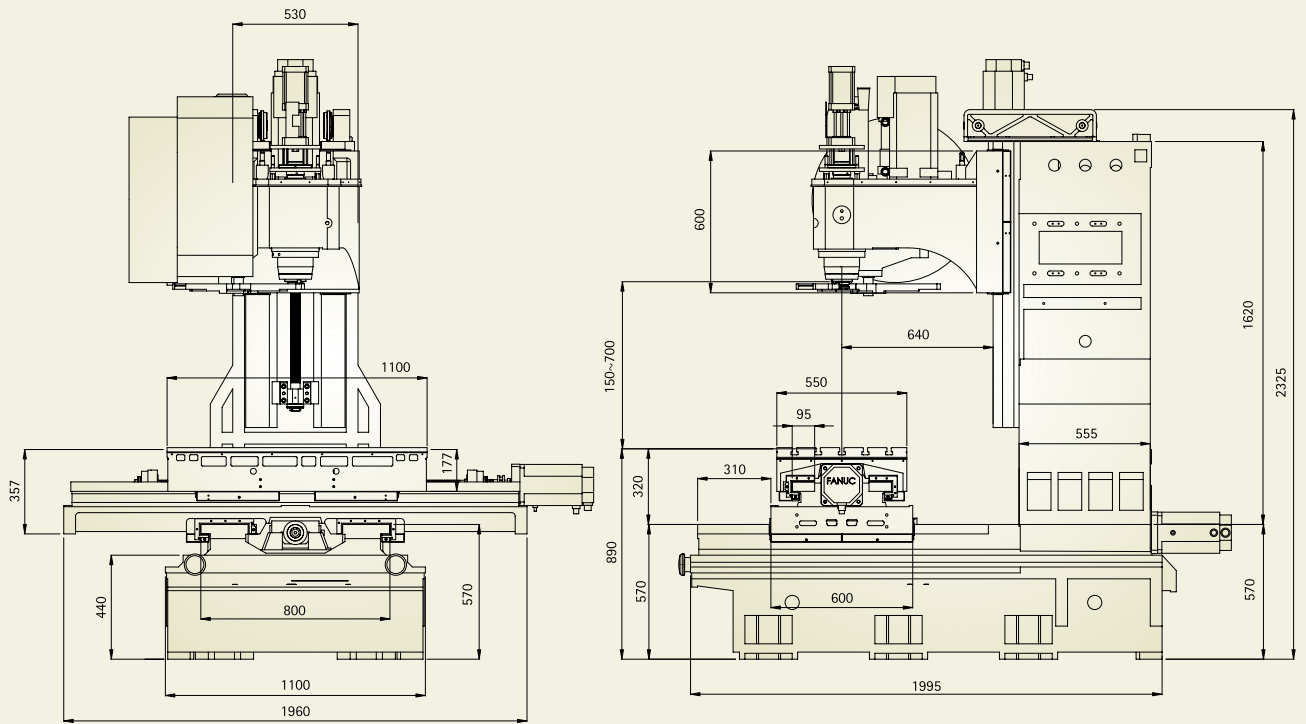


HIGH PRECISION, HIGH RIGIDITY SPINDLE

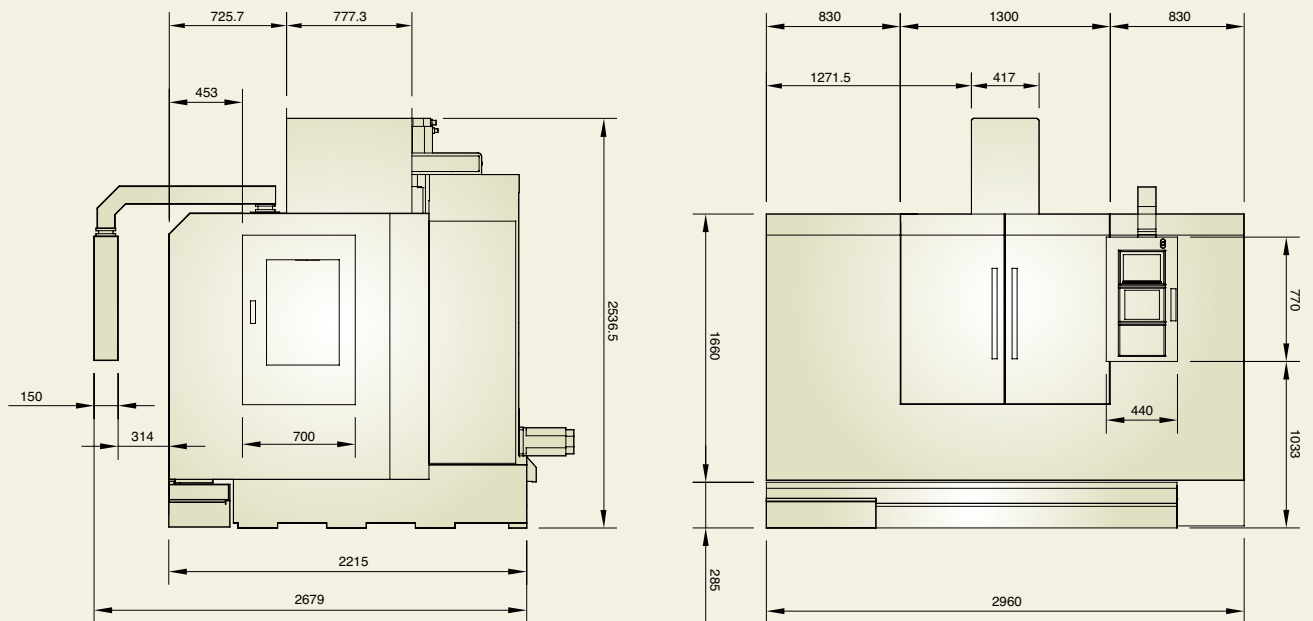
- The advanced spindle is designed for durability and easy maintenance, providing high axial thrust capacity, generating minimum thermal growth.
- P4 class pre-load angular contact high precision spindle bearings provide standard spindle speed 8000R.P.M.
- Powerful spindle is driven through high torque slip-free timing belt.
- Optional 10000R.P.M. & 12000R.P.M. spindle employs high precision bearings for high speed machining.
- The labyrinth packing design on front end of spindle to prevent coolant or fine particle contamination during machining. It also ensures spindle accuracy and service life.



V K-1060 DIMENSIONAL DRAWING



V K-1060 OUTLINE DRAWING



MODEL	VK-1060	
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Travel

X Axis	1020 mm	40.2 inch
Y Axis	600 mm	23.6 inch
Z Axis	550 mm	21.6 inch
Spindle Nose to Table	150-700 mm	5.9-27.5 inch
Spindle Center to Column Front	640 mm	25 inch
Column Rail Face to Table Center	340-940 mm	14.3-36 inch

Axis Feed

Rapid Feedrate X & Y Axis	20000 mm/min	787.4 inch/min
Rapid Feedrate Z Axis	20000 mm	787.4 inch/min
Cutting Feed	8000 mm	314.9 inch/min

Table

Table Size	1100 X 550 mm	43 X 21.6 inch
Max. Load Permissible	800 kg	1762 lb
T-Slot Number	5	
T-Slot Pitch	100 mm	3.9 inch
T-Slot Wide	18 mm	0.7 inch

Head Stock

Spindle Speed	8000 rpm	
Spindle Diameter	Ø65 mm	Ø2.55 inch
Spindle Taper	BT-40 / CT-40	
Spindle Motor	15 HP	

ATC

Max. Tool Diameter	Ø80 mm	3.1 inch
Max. Tool Length	300 mm	11.8 inch
Max. Tool Weight	7 kg	15.4 lb

General Information

Machine Weight (approx.)	6000 kg	13215.8 lb
Floor Space (W X D)	2960 X 3000 mm	1116.5 X 1118.1 inch
Size (W X DX H)	3000 X 2600 X 2650 mm	118 X 102.1 X 104 inch
Positioning	0.005/300 mm	0.00019 X 11.8 inch
Repeatability	±0.003 mm	0.00011 inch
Air Pressure Required	6kg/cm ²	85 psi

*Specification and design characteristics subject to change without prior notice.

Standard Features

- Coolant system
- Work lamp
- Carousel type ATC system (20 Tools)
- Enclosed splash guard
- Leveling bolts and pads
- Automatic power off (M30)
- Rigid tapping
- Floating tool unclamp
- Automatic lubrication system
- Tool box with adjustment tools
- RS-232 interface
- Remote MPG
- Heat exchanger for electrical cabinet

Optional Features

- 10000 R.P.M. spindle
- 12000 R.P.M. spindle
- Arm type ATC (24 tools)
- Spindle oil cooler
- Gear box
- Coolant through spindle with filter system
- Coolant through tool holder
- 4th axis rotary table
- Chain type chip conveyor with cart
- Powerful chip flush nozzle
- 20HP Spindle motor
- Transformer
- CE Certified equipment & finish
- CNC controller
Fanuc 18i-MB / 21i-MB
Mitsubishi 64S/65S
- Siemens 802DE/810DE/840DE

