

K Mill Series

Bridge Type Vertical Machining Centers

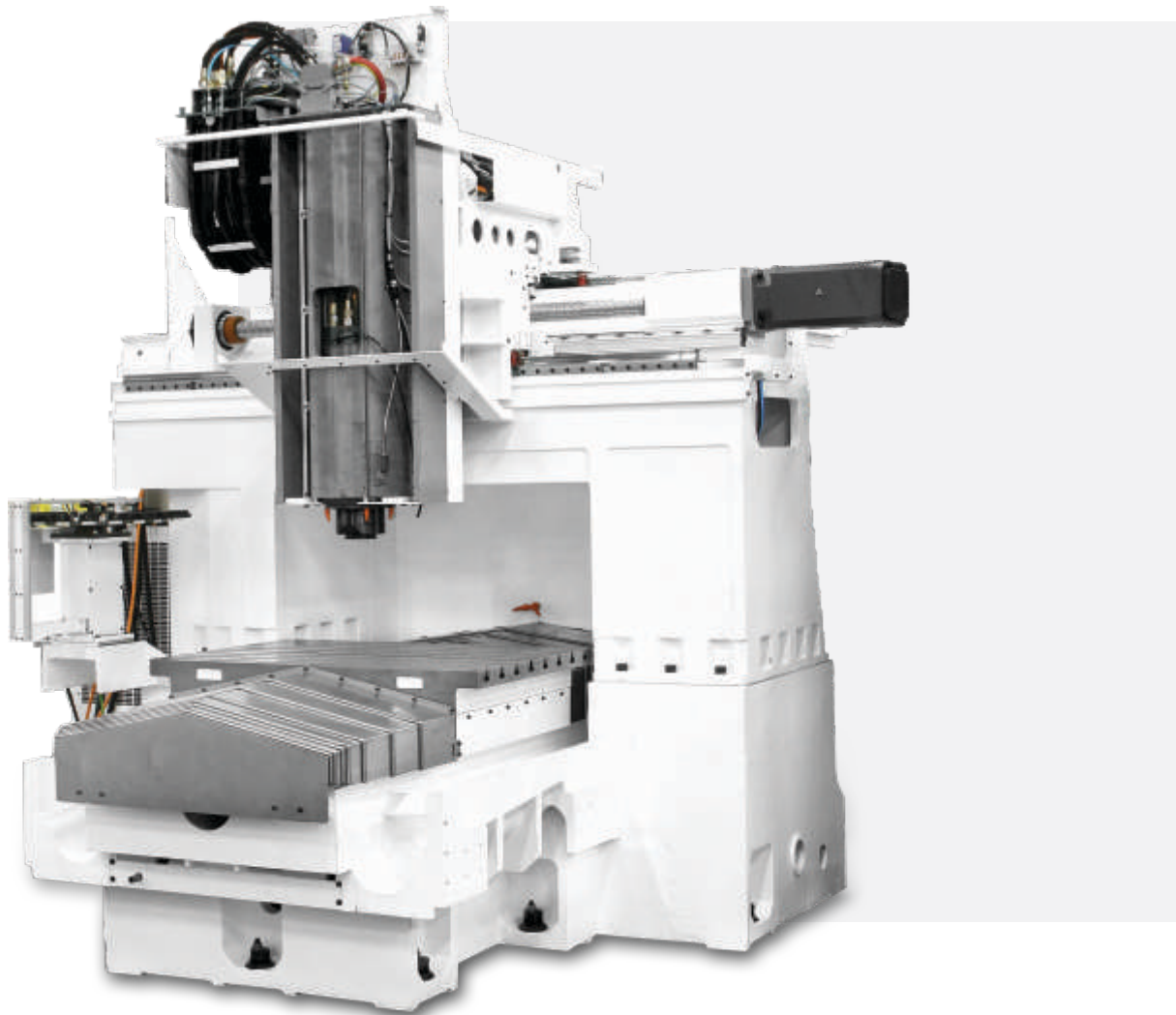


K Mill Series

Bridge Type Vertical Machining Center

OVERVIEW

The machining centers, K Mill enables machining operations in 3 axis, from roughing to finishing, of all kind of complex work pieces such as injection moulds, forging dies, punching dies, cutting tools, aeronautic jobs or pieces for mechanics. These vertical machining centers are projected to be at the highest level in its category. Combination of dynamic and accuracy allows to obtain very high quality surfacing.



- 3 Axis machining for work piece up to 1500 kg
- Hard material machining in a minimal time
- Ability to machine with Higher Dynamics
- HSM (High Speed Machining) capable machine



STRUCTURE : RIGIDITY AND ACCURACY

- Structure with fixed portal in ribbed cast iron with stiffness wall
- Cast iron with a high mechanical performance which maximises structure rigidity and allows optimum harmonic stability and maximum damping during demanding cutting conditions
- 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

PRECISION LINEAR AXIS

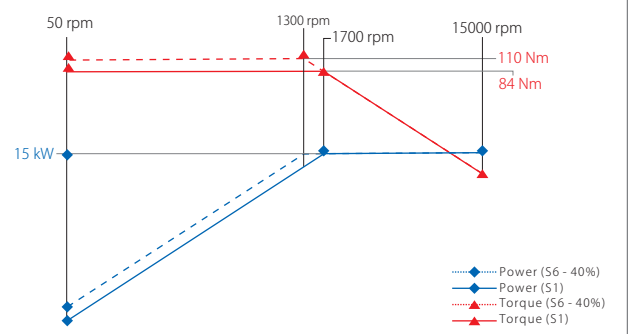
- Preloaded ballscrews with integrated system of compensation or expansion
- Preloaded bearings to remove inversion backlash and axial stress on ballscrews enabling a high quality of surfacing
- On K Mill 8, linear guideways on all axes allowing high feedrates
- On K Mill 10, guiding on Z axis is done by friction with Turcite coating



HIGH SPEED ELECTRO SPINDLE

- Powerful electro spindle with high torque allowing high metal removal rate
- Air wall for spindle protection
- Control captor for angular positioning of the spindle
- Electro spindle cooling system
- Mechanical clamping with spring rings
- Tool unclamping with hydraulic control
- Air/Oil greasing of bearings
- Taper cleaning by compressed air

	K Mill 8 / K Mill 10
Taper	BT 40
Rotating Speed	15000 rpm
Power	15 kW
Torque	110 Nm / 84 Nm
Characteristic Speed	1700 / 1300 rpm



ERGONOMIC DESIGN

DISC TYPE AUTOMATIC TOOL CHANGER

Tool magazine outside working area.

EASY ACCESSIBILITY OF JOB LOADING

Heavy components can be easily loaded/unloaded from wide front & side door entry as well as from top of the machine with the help of crane.



EFFICIENT CHIP FLOW

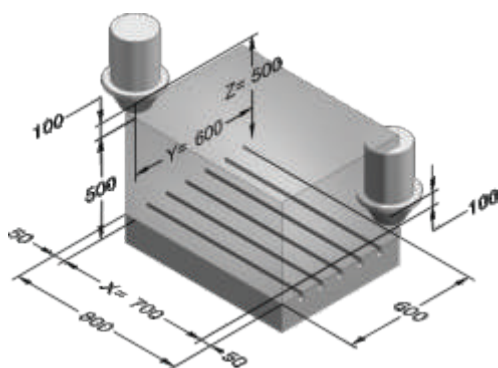
Two side evacuation channels discharge the chips to a third cross conveyor located at the front of the machine with the help of flush coolant.

OPERATOR PANEL POSITION

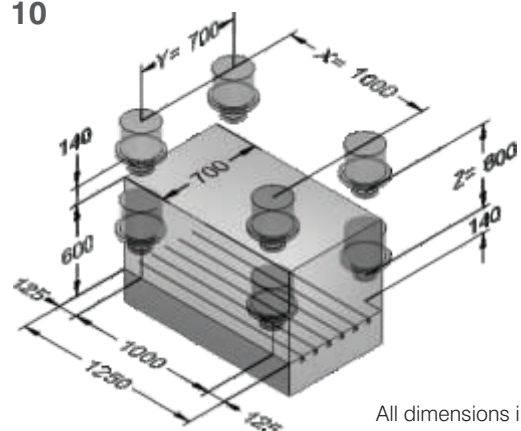
A operating panel position help the operator to view the machining area while operating.

INTERFERENCE DIAGRAM

K Mill 8



K Mill 10



All dimensions in mm



TECHNICAL SPECIFICATION

		K Mill 8	K Mill 10
Table			
Table Size	mm	800 x 600	1250 x 700
T-Slot-Dimension	mm	5 x 18 x 100	6 x 18 x 100
Distance from Floor to Table	mm	965	965
Max. Load on Table	kgf	500	1500
Capacity			
X-Axis Travel	mm	700	1000
Y-Axis Travel	mm	600	700
Z-Axis Travel	mm	500	600
Dist. From Spindle Face to Table Top (Min.-Max.)	mm	100 - 600	140 - 740
Feed			
Rapid Traverse (X, Y & Z Axis)	m/min	40 / 40 / 40	30 / 30 / 18
Cutting Feed	m/min	10	10
Main Spindle			
Spindle Motor Speed	rpm	15000	15000
Spindle Motor Power - Siemens	kW	15	15
Front Bearing Bore	mm	70	70
Spindle Nose		BT 40	BT 40
Automatic Tool Changer			
Number of Tools	mm	24	24
Max. Tool Dia. Pockets (All/Adj. Empty)	kg	90/120	90/120
Max. Tool Weight	mm	8	8
Max. Tool Length		300	300
Accuracy (as per VDI/DGQ 3441)			
Positioning Uncertainty (P)	mm	0.010	0.015
Repeatability (Ps Medium)	mm	0.005	0.007
Other Data			
Machine Weight (Approx.)	kg	7000	10500
Machine Dimension (Approx.) :	Length	mm	4480
	Width	mm	2570
	Height	mm	3060

CONTROL SYSTEM

The CNC System SIEMENS 828D offered with the K Mill Series machine.

STANDARD FEATURES

- AC Spindle Drive
- AC SERVO Axis Drive
- L.M. Guideways
- Auto & Manual Coolant System
- Centralized & Programmable Lubrication
- Laser Calibrated Axis for High Precise Positioning Accuracy and Repeatability
- Chip Conveyor
- Flush Coolant System
- Electrical with Quality Devices & Panel with A.C.
- Work Light

PRODUCTIVITY IMPROVING OPTIONS

- Micro Spraying Coolant
- Coolant Through Spindle
- Air Blast by Nozzle
- Job Probe & Tool Probe
- Spin Window
- Oil Separator
- Linear Glass Scale
- Tool Tip Air Nozzle (For Dry Cutting)
- Tool Life Management
- 4th & 5th Axis Option
- Easy SMS System (Siemens)
- Fully Tooled up Solutions to Meet the Customer Needs

Note : • All above information is subject to change arising out of continuous product improvement without notice.

• The description 'standard accessories / feature' conforms to its list; not the photo of machine shown in the catalogue.

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ISO 9001 : 2008