Conventional Vertical Milling Machines

Servomill® 700

SKU : 301250

The Servomill 700 multi-purpose milling machine offers a large work area with infinitely variable servomotor feed. With electronic handwheels and additional milling functions, the Servomill offers the advantages of modern CNC technology in conventional machining. It is ideal for manufacturing or repair and training departments. The swiveling vertical milling head has a wide speed range for machining steel and non-ferrous metals. The extensive standard equipment also includes a pneumatic tool clamp.

- Swiveling cutter head with quill feed
- Pneumatic tool tightening system
- Infinitely variable spindle speed
- Servo-conventional feed technology
- Preloaded ball screws for all axes
- Electronic hand-wheels

TECHNICAL SPECS

WORKING AREA

Table set up area	1370 mm x 300 mm
Table load capacity (max.)	350 kg

TRAVELS

Travel X-axis	680 mm
Travel Y-axis	365 mm
Travel Z-axis	370 mm

VERTICAL MILLING HEAD

Speed range (infinitely variable, back gear ranges)	50 1/min - 4000 1/min
Spindle mount	SK 40 DIN 2080
Quill stroke	125 mm
Spindle nose-to-table surface distance	180 mm - 550 mm

RAPID FEED

Rapid feed X-axis	5000 mm/min
Rapid feed Y-axis	3000 mm/min
Rapid feed Z-axis	2000 mm/min

FEED

Feed speed (infinitely variable)	0 mm/min - 1000 mm/min
Feed per spindle revolution	0.01 mm/R - 1 mm/R

DRIVE CAPACITY

Motor rating main drive	3.7 kW

MEASURES AND WEIGHTS

Overall dimensions (length x width x height)	2.54 m x 2.16 m x 2.24 m
Weight	1800 kg

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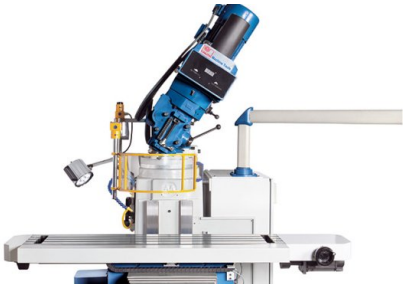

Cutter head swivels

High precision ball-screws

PRODUCT DETAILS

Conventional milling, now easier, more precise and more efficient due to integrated electronics

- The Servomill represents a new generation of advanced milling machines that are operated like a conventional machine
- This machine features a user-friendly design, significantly higher precision and increased machining capacity
- Very high reliability and long service life of all components ensure drastically reduced maintenance and increased availability
- Rigid machine base in a proven design, and meticulous workmanship
- Variability via swiveling and moving top beam
- Perfectly adjustable dovetail guide on the X axis, and wide square guides in Y and Z direction
- High-precision preloaded ball screws on all 3 axes
- All guides are hardened and ground, and are supplied with oil by the central lubrication unit
- Cutter head swivels with pneumatic tool clamping and powerful 3.7 kW motor
- Infinitely variable spindle speed with back gearing and LED speed indicator
- Manual quill feed with micrometer depth stop allows for precise angular bores
- Large, swiveling control panel with integrated position indicator

Servomill - Highlights

- Control developed and built in Germany
- Positioning control for traveling pre-selected paths on all axes
- Constant cutting speed with feed speed based on spindle rpm
- Zero backlash preloaded ball screws
- Servo-motors on all axes, infinitely variable feed, rapid feed, and speed control
- Electronic spindle load indicator
- Electronic hand-wheels on all axes
- X, Y and Z axis movement via joystick technology
- Integrated position indicator with precision glass scale

Your Advantages:

- Easy to use: intuitive operation - practical layout of control elements and streamlined function
- Automatic feed on all axes and infinitely variable rapid feed
- With speeds up to 5000 mm/min
- Set limit stops on any axis with the push of a button - 3 stop positions per axis can be stored
- More precise: operated via electronic hand-wheels - axes are powered by high-quality servo drives that translate your hand movements with the precision and dynamics of modern CNC machines
- More reliable: drives, spindles, and measuring systems are totally enclosed or mounted in protective enclosures and virtually maintenance-free
- Electronics - made in Germany
- More capacity: this machine only uses premium drive components that are designed for continuous operation
- Maintenance-free: no regular maintenance needed for the entire feed drive
- Advanced Feed Technology:
- Axes are powered by high-quality servo drives that translate your hand movements with the precision and dynamics of modern CNC machines
- Reliable, maintenance-free mass production technology
- High rapid feed rate for reduced machine down-times
- Ball screw drive on all axes:
- Considerably less errors due to loseness (backlash), resulting in significantly higher precision
- Significantly reduced friction, no stick-slip effect, reduced heat buildup, minimal wear
- Electronic hand-wheels:
- Micro-control via electronic hand-wheels offering the same handling and postioning as with a conventional machine, just smoother and more precise
- Joystick control:
- Maximum operator comfort for axis movements
- Easy handling during sequential processing
- Electronically controlled fixed stops:
- Set 2 limit stops at 3 positions on each axis by the push of a button - these buttons are grouped around the feed switch for intuitive control
- This ensures high repeatability during coordinate drilling or pocket cutting, and siginificantly more positions can be set up than on conventional machines
- Constant cutting speed:
- The feed rate is infinitely variable and can be coupled with the spindle speed in a

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selectable feed-per-spindle revolution ratio in the range of 0.01 to 1 mm/R
- This ensures a constant feed-per-tooth value and simplifies the operator's task of optimizing the machining operation
- Electronic spindle load indicator:
- Assists the operator in the most efficient utilization of machine and tool capacities
- Reliable indicator helps avoid damages caused by overloads

X.pos Plus - You will gain productivity, quality and comfort

- Default coordinates
- Hole circle pattern calculation
- Vibration filter feature
- Mm/inch conversion
- 8 display languages
- Calculator function
- High-resolution display with excellent legibility
- State-of-the art electronics and a very robust, completely sealed enclosure ensure maximum safety and optimum production conditions
- A major focus during the development and selection of electronic components was the achievement of maximum resistance against external interferences and maintaining low temperature levels
- Background colors of the display can be changed as required or desired
- The keyboard membrane is highly resistant and yet very comfortable to touch
- The display also provides a key to toggle between radius and diameter
- The axis position is maintained when the display is turned off
- Graphical support with residual path display and sketch drawing
- Linear and non-linear length correction is possible
- Easy mounting, easy electric connection, and maintenance-free operation

STANDARD EQUIPMENT

3-axis position indicator X.Pos 3.2
Electronic hand-wheels
Pneumatic tool clamping
Chip tray
LED work lamp
Coolant system
Central lubrication
Horizontal guideway cover
Operating tools
Operator instructions

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