

Conventional Vertical Milling Machines

Servomill® UWF 1400

SKU : 301292

The versatile Servomill UWF with servo-conventional feed technology and on two levels swiveling cutter head is the top model of the Universal Milling Machine series. This series features an extra large work area and more powerful main spindle drives. Electronic stops, electronic hand wheels and additional milling functions give the Servomill many of the advantages of the CNC series production technology even without programming. These machines are mainly used in tool making, manufacturing and training.

- Large work area
- Servo-conventional feed technology
- Preloaded ball screws on all axes
- Electronic hand-wheels
- Universal cutter head with 2 swivel axes
- Infinitely variable spindle speed



TECHNICAL SPECS

WORKING AREA

Table dimensions	79 in x 20 in
Table load capacity	3960 lbs
Number of T-slots	5 positions
T-slots, width	0.7 in
T-slots, spacing	3.1 in

TRAVELS

Travel X-axis	55.1 in
Travel Y-axis	28 in
Travel Z-axis	20 in

MILLING HEAD

Speed range (2)	30-390 / 390-2050 rpm
Spindle mount	SK 50 DIN 2080
Swivel angle	360°
Spindle center-to-table distance	2 in - 22 in

RAPID FEED

Rapid feed X-axis	86.61 in/min
Rapid feed Y-axis	86.61 in/min
Rapid feed Z-axis	43.31 in/min

FEED

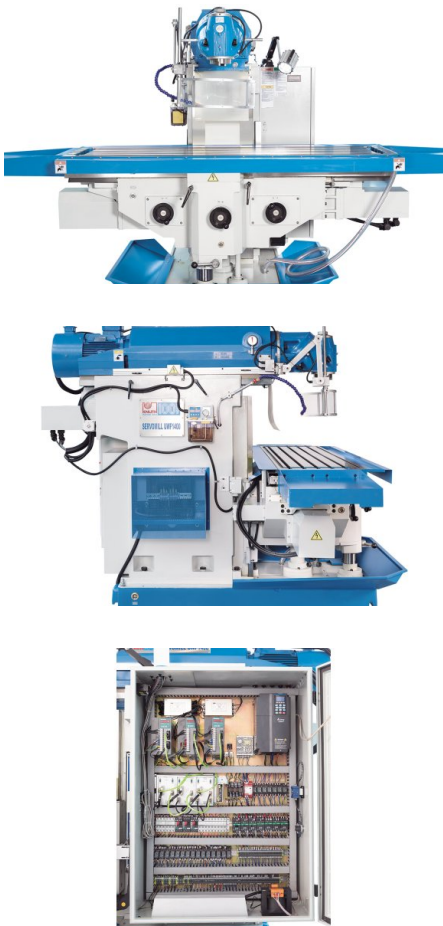
Feed speed X-axis	0.3937 in/min - 39.37 in/min
Feed speed Y-axis	0 in/min - 39 in/min
Feed speed Z-axis	0.1969 in/min - 19.685 in/min

DRIVE CAPACITY

Motor rating main drive	14.8 Hp
Motor rating X axis feed	4.8 Hp
Motor rating Y axis feed	4.8 Hp
Motor rating Z axis feed	7.4 Hp
Motor rating coolant pump	0.2 Hp

MEASURES AND WEIGHTS

Overall dimensions (length x width x height)	128 in x 99 in x 87 in
Weight	9900 lbs



PRODUCT DETAILS

Integrated electronics allow for easier, more precise and more efficient conventional milling

- Servomill machines represent a new generation of conventional milling machines
- All Servomill models feature a user-friendly design, significantly higher precision and increased productivity
- Very high reliability and long service life of all components ensure drastically reduced maintenance and increased reliability
- The Servomill UWF series machine frame features a very sturdy and torsionally rigid construction with knee-and-column design
- A large setup area and long travels result in a large work area despite the compact overall dimensions
- The console is supported by an additional guide system for increased table load capacity
- The work table moves on the X axis in a large dimensioned dovetail guide, which features excellent damping properties and can be adjusted with very high precision
- The box ways have wide support bases for increased load capacity and maximum dimensional stability while guiding console and top beam
- All guides are hardened and ground, and lubricated via a central lubrication system
- The complete drive is integrated in the heavy top beam that positions the cutter head
- This design ensures efficient power transmission with quiet, low vibration operation and features a very long Y axis travel
- Another highlight of this series is the universal cutter head that swivels on 2 axes
- Cutter spindle can be moved to virtually any spatial angle and quickly moved to the horizontal plane
- The robust 2-step gears are hardened and ground and feature an infinitely variable wide speed range, high load capacity, and quiet operation
- Powerful servo motors allow infinitely variable feed speeds and rapid feeds on all axes
- Preloaded ball screws on all axes ensure precise, jolt- and backlash-free positioning with minimal wear for a long tool life
- The machines' standard equipment includes extensive accessories, including a powerful coolant system, LED work lamps, and a wide selection of operating tools

Servomill - Highlights

- Electronics developed and built in Germany
- Positioning control for traveling pre-selected paths on all axes
- 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 axes can be controlled via joystick
- Integrated position indicator with glass scale
- Feed can be synchronized with the spindle speed
- Powerful servo motors allow infinitely variable feed speeds and rapid feeds on all axes

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 197 in/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 looseness (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 positioning 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 significantly more positions can be set up than on conventional machines
- 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

Position indicator X.pos 3.2

- The new generation of displays is more powerful, robust, and reliable
- For additional information, see manuals included with the standard equipment

STANDARD EQUIPMENT

control panel with X.Pos 3.2 and extended functions
 preloaded ball screws and direct servo drives on all axes
 automatic feed with electric limit switch on all axes
 electronic hand-wheels
 milling accessories
 automatic central lubrication
 heat exchanger for electric control cabinet
 height-adjustable protective cover
 coolant System
 LED work lights
 operating tools
 Operator instructions