

Kunzmann WF 610 MA/M



KUNZMANN[®]
FRÄSMASCHINEN

The KUNZMANN WF 610 MA/M is the latest conventional milling machine on the market, well suited for workshops in production and vocational training centers. It is perfect for production-oriented users, manufactures of high quality single parts and small-batch products at tool and jig makers. The machine is characterized by its high quality, performance, the highest level of precision and simple handling procedures.

Major characteristics are:

- Stable multi-ripped cast iron construction with horizontal-/vertical spindle and manual quill
- Hardened and ground flat guideways in all axes for highest rigidity
- Backlash-free ballscrews for up- and down milling
- Automatic axis clamping for operational safety
- Stepless feed rate and spindle speed rate
- High-torque main spindle drive with gear box (automatically changed)
- Hydraulic tool clamping
- Mechanical hand wheels in all axes
- Coolant fluid tank free-standing, capacity 66 liters
- Overall ergonomic and user-friendly machine design
- WF 610 MA - with 3 axis-active digital readout Heidenhain
- WF 610 M - with positioning control Heidenhain TNC 128 including processing cycles and 3-axis-digital readout

Control:

The standard version of the WF 610 MA is fitted with a Heidenhain 3-axis-active digital readout.

A positioning control system Heidenhain TNC 128 is already included in the WF 610 M.

HEIDENHAIN DIGITAL READOUT

3-axis DRO. Paraxial axes movement of minimal position, jog increments

Operation modes:

- Manual mode
- Positioning with MDI
- Jog increment positioning

HEIDENHAIN TNC 128 POSITIONING CONTROL

Combination of a DRO and a control system for the efficient machining of individual parts and small series.

Operation modes:

- Manual operation
- Positioning with MDI
- Program run (block by block / in full sequence*)
- Programming

Simple, dialogue-guided data input and simulation with following cycles:

- different drilling cycles

- Tapping with compensation chuck
- Circles hole patterns
- Linear hole patterns
- Rectangular pocket milling further:
- Tool table and datum points
- Cutting data calculator
- On-Screen operating instructions
- Data interface V24 / RS-232-C, Fast-Ethernet, USB

Display:

- 12,1"-TFT-Flatscreen
 - Topview
 - Display in 3 layers
 - 3D-Display
- Detail magnification

* Program run in a full sequence is only available in combination with a splash-guard cabin (reason:CE-rules)

WF 610 MA *Technical Data*

TECHNICAL DATA		WF 610 MA	STANDARD EQUIPMENT:
Working range	longitudinal cross vertical X-axis Y-axis Z-axis	610 mm 400 mm 450 mm	<ul style="list-style-type: none"> ▶ Vertical milling head with extending quill ▶ Horizontal spindle ▶ Stable cast iron column with flat guideways in all axes (hardened) ▶ Ball screws
Main spindle drive	A.C. motor	10,0 kW	<ul style="list-style-type: none"> ▶ Automatic axis clamping ▶ Hydraulic tool clamping ▶ Automatically shifted gear stage ▶ Anti-collision coupling in Z-axis
Spindle speed range	horizontal and vertical spindle infinitely variable 1 mechanical gear stage	1 – 4500 rpm	<ul style="list-style-type: none"> ▶ Distance-coded linear measuring systems ▶ Mechanical hand wheels ▶ Automatic central lubrication system ▶ Chip tray ▶ Coolant fluid tank, free-standing, 66 litres ▶ Machine light ▶ Leveling elements ▶ 3 axis digital readout Heidenhain
Feed drives		AC single drives	
Feed rate	infinitely variable	0 – 2000 mm / min	
Rapid traverse	X- and Y-axis Z-axis	5000 mm/min 4000 mm/min	
Swivel range vertical milling head		+/- 90°	
Extending quill, vertical		stroke 70 mm	
Tool taper		SK 40 DIN 69871 / 2080 / 7388	
Linear measuring systems	direct, distance-coded	resolution 0,001 mm	<ul style="list-style-type: none"> ▶ Angular table: WF 410 MA: 650 x 375 mm WF 610 MA: 800 x 425 mm ▶ Universal table 650 x 395 mm (rotating angle digital indicated) ▶ Star handle for quill ▶ Digital readout for quill stroke ▶ Plexiglass splash protection ▶ Minimum-quantity lubrication system ▶ Arbor holder ▶ Dividing unit
Machine accuracy		0,005 mm	
Operating voltage		400 Volt, 50 Hz	
Power consumption		approx. 12 kVA	
Weight		approx. 1.800 kg	

