

KUNZMANN®

FRÄSMASCHINEN

WF 410 D
WF 610 D

UNIVERSAL MILLING AND DRILLING MACHINE



KUNZMANN-FRAESMASCHINEN.DE

UNIVERSALITY

The primary fields of application for KUNZMANN's WF 410 D and WF 610 D are training facilities and workshops, but also the precise manufacturing of individual parts and small batches. The vertical milling head has an extendible quill and can be swiveled by up to $\pm 90^\circ$. Our state-of-the-art milling and drilling machines are outstanding in terms of high performance, perfect precision, and easy handling.

HIGH PERFORMANCE

Modern, high-torque drives and solid machine axes with hardened flat guideways allow for processing of even difficult-to-cut materials.

PERFECT PRECISION

Infinitely variable single feed drives and backlash-free ball screws guarantee exact positioning and convenient up- and down-milling. For consistently high geometric accuracy

and repeatability, our machines have linear encoders in all axes. Automatic axis clamping via the feed motor brakes ensures maximum operational safety.

EASY HANDLING

Due to optimum accessibility and ergonomically arranged operating elements, the WF 410 D and WF 610 D are flexible, compact, and easy-to-handle machines. The 3-axis digital readout is centrally mounted on a rotary control desk and a pivoting arm. The operator can thus equally reach working area and control elements in a convenient manner. Our machine standard includes automatic mechanical tool clamping, an automatic central lubrication system, and a separate coolant system.



↑ WF 410 D side view with manual handwheels in all axis

3-AXIS DIGITAL READOUT

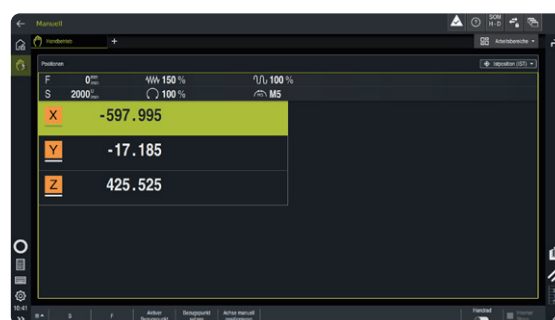


HEIDENHAIN 3-AXIS DIGITAL READOUT

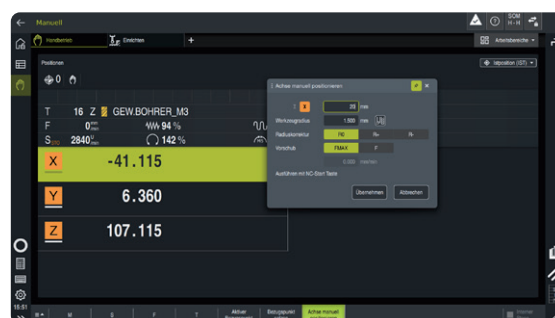
The WF 410 D and WF 610 D are manual machines equipped with an easy-to-use active digital display and a 16-inch touchscreen for position value indication. Thanks to their user-oriented operation, smart range of functions, and intuitive user interface, you can quickly achieve the desired results.

Functions:

- ▶ Manual axis movement via directional keys
- ▶ Step increment function
- ▶ Definition of feed rates and spindle speeds
- ▶ Automatic feed without target value input
- ▶ Input and execution of target positioning commands using absolute or incremental/chain dimensions, including radius compensation
- ▶ Visual display of remaining travel distance
- ▶ Graphical positioning interface
- ▶ Display of spindle and axis load
- ▶ Tool and reference point tables
- ▶ Probing functions for setting reference points (edge, centerline, circle center)
- ▶ Electronic handwheel (optional)



↑ Standard Screen View



↑ Manual Positioning Function View

MANUAL HANDWHEELS

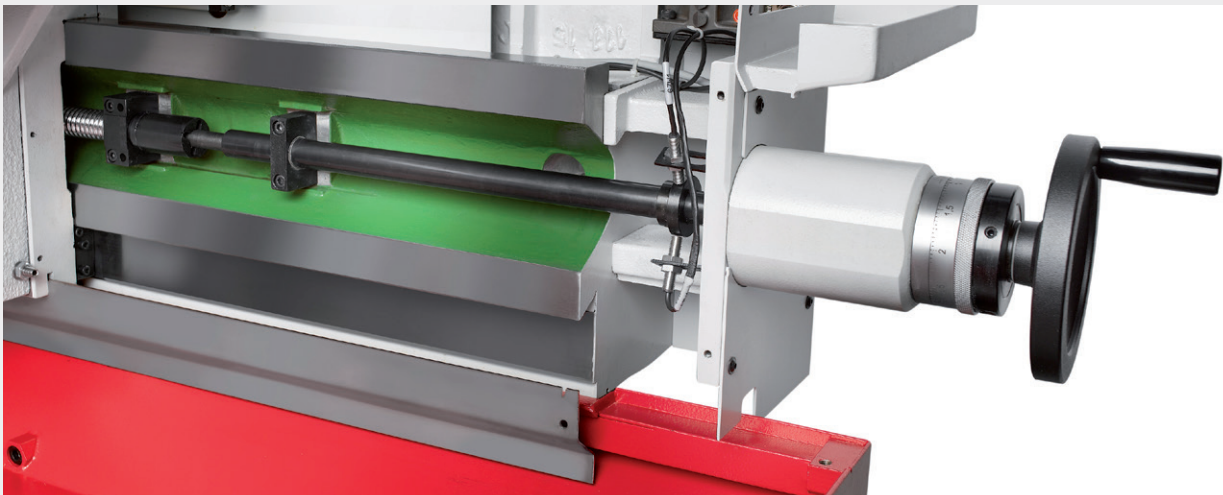
Our machines are equipped with safety handwheels for manual operations. The ergonomic position of the handwheels guarantees optimum access to the working area and a direct view on the workpiece.

MECHANICAL COLLISION PROTECTION COUPLINGS

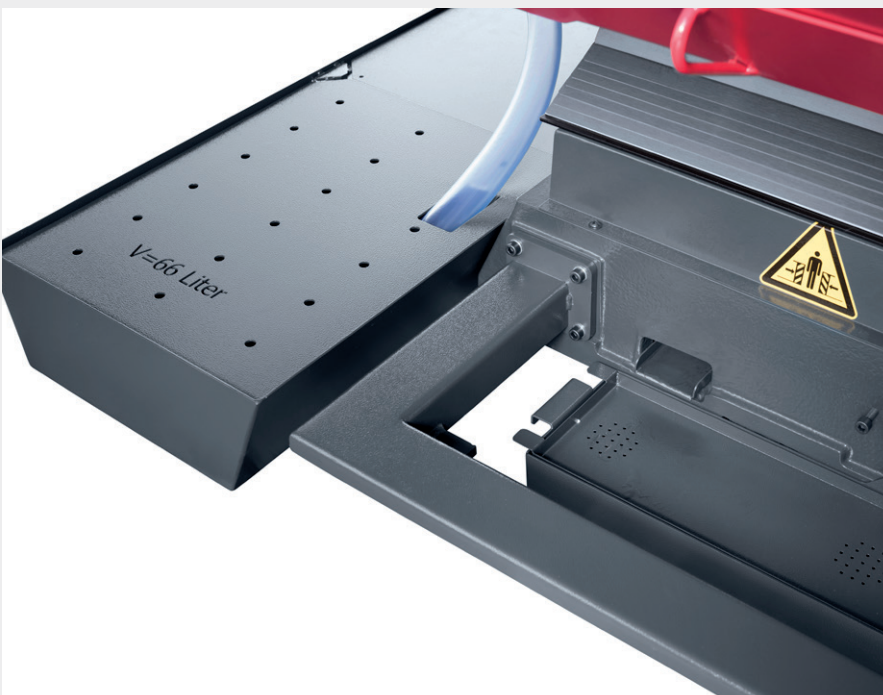
Significantly contribute to increasing machine protection while effectively reducing the extent of potential damage in the event of a collision.

CENTRAL LUBRICATION SYSTEM

With our lubrication system, track oil is transported directly to the guideways and afterwards centrally recollected. This prolongs the life of coolants as the contamination with track oil is reduced to a minimum. You can conveniently dispose of the collected oil with the removable oil dripping pan.



↑ Manual handwheel
of X axis



← Oil dripping pan and
coolant tank

MORE OPTIONS

HORIZONTAL SPINDLE WITH GEAR UNIT

For horizontal milling, you can conveniently swivel the vertical milling head on a support arm. A further option is working with an arbor holder for additional stability.

SPLASH GUARD

Mounted on the machine's angle table. The foldable panels allow exible adjustment to various working requirements. (Not compatible with the universal tilting and swiveling table)

MINIMUM QUANTITY LUBRICATION MQL

Controlled spray and dosing system for precise cooling of tools in the working area using an oil/air mixture.

UNIVERSAL TILTING AND SWIVELING TABLE

The universal tilting and swiveling table allows the operator to position the workpiece in different angular positions. Adjustment is done manually with the rotation angle of the clamping plate being indicated on a digital readout.

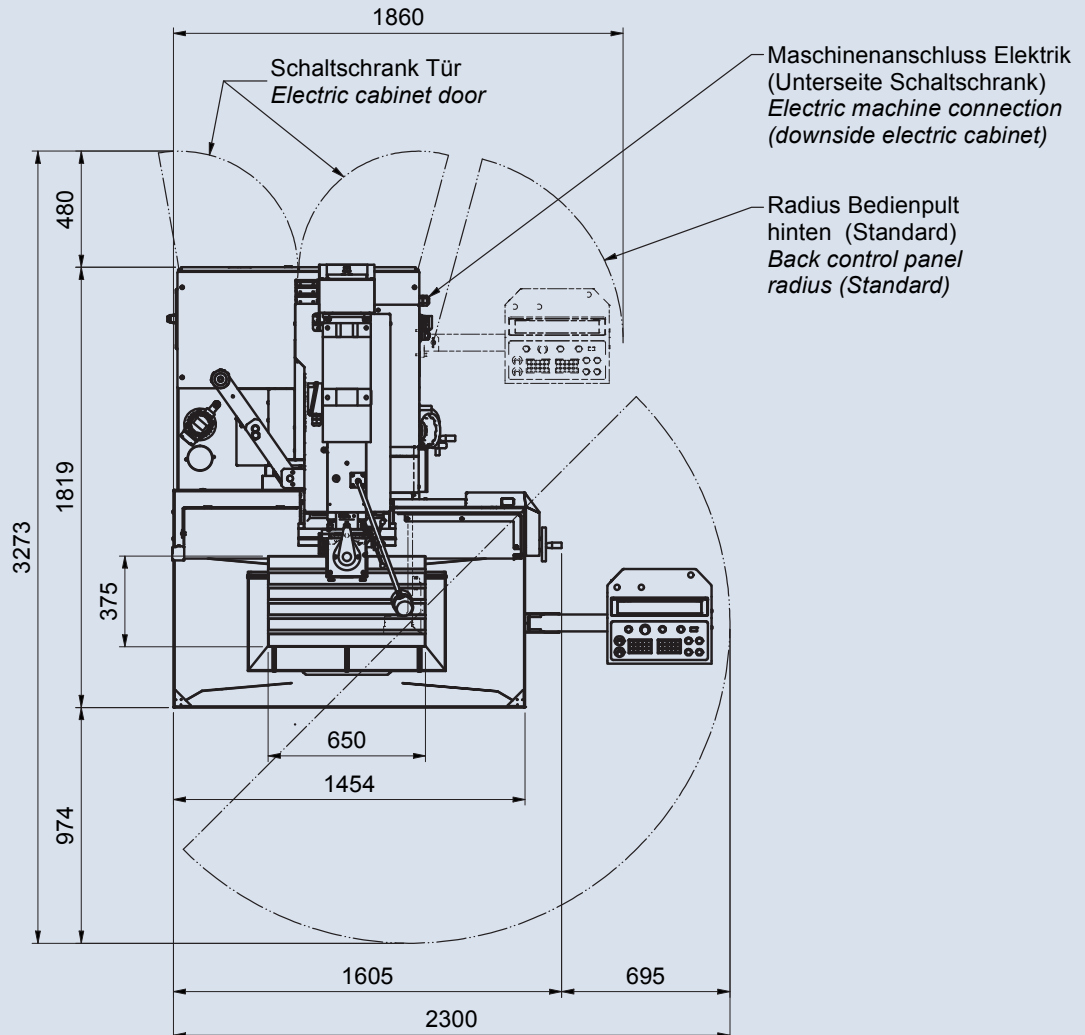
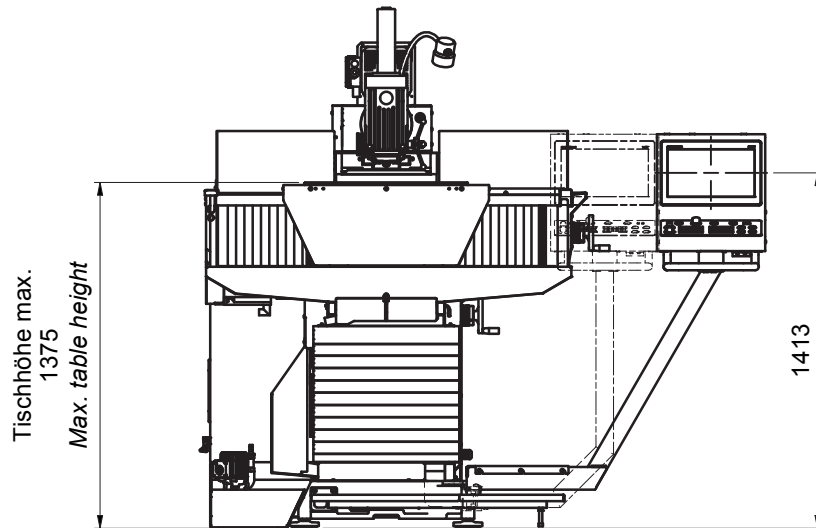
DIGITAL READOUT FOR QUILL STROKE

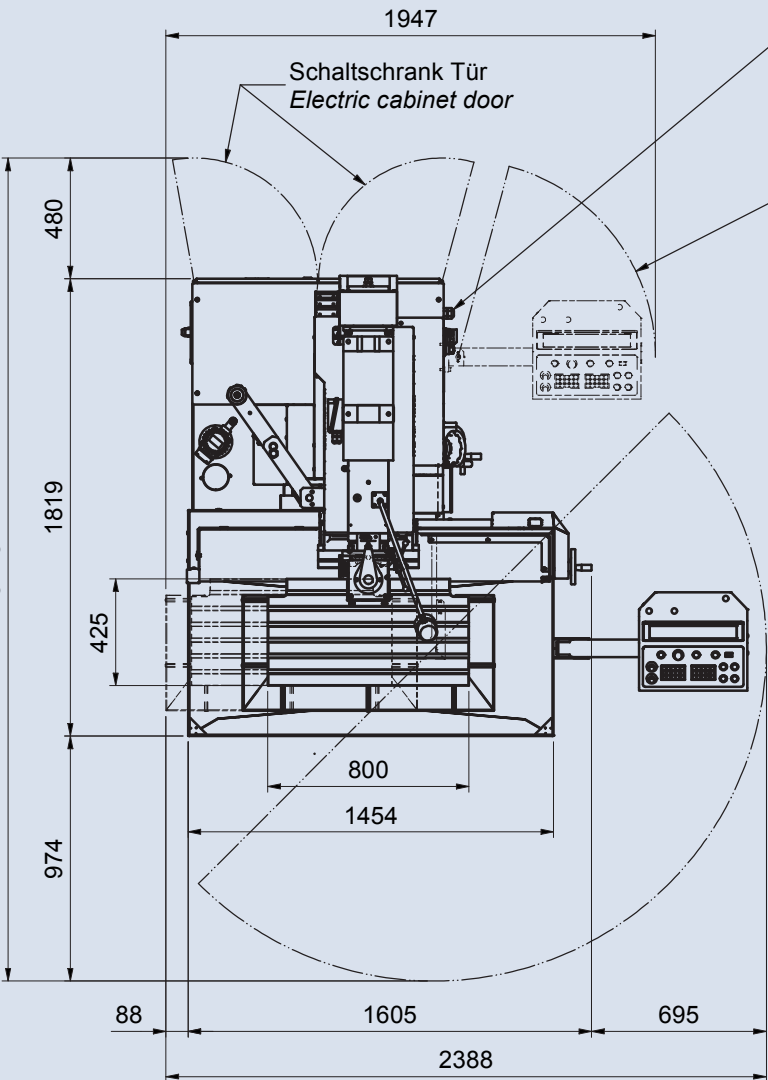
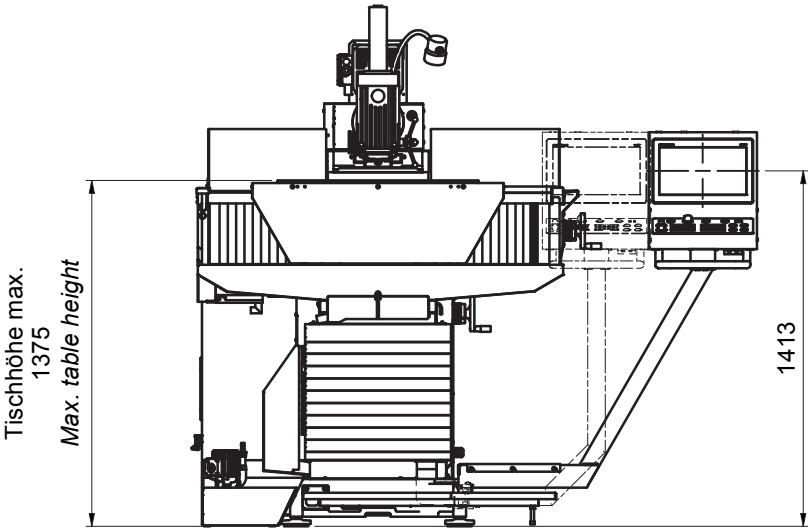
The quill stroke is comfortably displayed on the milling head display.

WF 410 D with arbor holder, horizontal spindle (1),
universal tilting and swiveling table (2), splash guard (3)



WF 410 D





Maschinenanschluss Elektrik
(Unterseite Schaltschrank)
Electric machine connection
(downside electric cabinet)

Radius Bedienpult
hinten (Standard)
Back control panel
radius (Standard)

STANDARD EQUIPMENT

- Rigid angular table
- Vertical milling head with quill
- Flat guideways in all axes (hardened)
- Ball screws
- Automatic axis clamping
- Automatic mechanical tool clamping
- Linear encoders
- Manual handwheels
- Automatic central lubrication
- Chip tray
- Coolant tank, free-standing, 66 liters
- LED machine light
- Leveling elements
- KUNZMANN AFR (Automatic Feed Reduction)

OPTIONS

- Universal tilting-swiveling table
- Digital readout for quill stroke
- Electronic handwheel HR 510 FS
- Splash guard, foldable
- Splash guard cabin
- Minimum-quantity lubrication system
- Horizontal spindle
- Collision protection coupling
- Arbor holder
- KUNZMANN StateViewer Premium



Visit our
Website

KUNZMANN®
FRÄSMASCHINEN

KUNZMANN Maschinenbau GmbH
Tullastraße 29-31, 75196 Remchingen
Phone: +49 (0) 7232 / 36 74-0
Fax: +49 (0) 7232 / 36 74-74
E-mail: info@kunzmann-fraesmaschinen.de
www.kunzmann-fraesmaschinen.de

Working range 410 D / 610 D	longitudinal, X axis	410 / 610 mm
	cross, Y axis	350 / 400 mm
	vertical, Z axis	450 mm
Main drive		
* at 1,000 rpm	perf. at 100% of duty cycle*	7.5
	perf. at 25% of duty cycle*	13
	torque at 100% of duty cycle*	75 Nm
	torque at 25% of duty cycle*	129 Nm
Spindle speed		1-4,500 rpm
Feed drives		AC single drives
Feed	X and Y axis	5 m/min
	Z axis	5 m/min
Swiveling range of vertical milling head		+/- 90°
Vertical quill	stroke	70 mm
Tool taper		SK 40 DIN 7388-1 HSK 63 DIN 6989-1
Angular table	WF 410 D	650 x 375 mm
	WF 610 D	800 x 425 mm
Universal tilting-swiveling table	rotational angle digitally indicated	650 x 395 mm
Operating voltage		400 V / 50 Hz
Readout	HEIDENHAIN	3-Axis digital readout
Power consumption		12 kVA
Installation weight	WF 410 D	approx. 1,950 kg
	WF 610 D	approx. 2,000 kg

- Manufacturer of universal milling machines and vertical machining centers
- Expert technology consulting
- Customized application technology
- Individual programming trainings
- Fast and convenient after-sales support

Our strong partner

