

topDRILL MRX G5

Vertical double-sided CNC Drilling and Milling Center



The fully automatic milling and drilling machine topDRILL MRX makes a convincing argument with its high performance and its easy use. Drilling and countersinking processes are as easily accomplished as complex milling and grinding operations for corner, edge and inner cutouts. The vacuum belt system enables a flexible and continuous production. The drilling and milling center works fully automated and supports a data connection to external systems. The graphical input of the processing program as well as the automatic selection of all parameters for the drilling and milling processes support an easy, error-free operation.

Machine configurations for any requirement

The topDRILL MRX can be configured according to customer requirements. The linear-8 tool changer allows a very easy operation, the Roto-10 changers help increase the processing speed. Modular extensions of the machine length, the choice between two machine heights as well as the freely definable direction of movement give a range of customizing options. The intelligent machine design allows mounting the machine directly against a wall. Combine the MRX with a GLX outer edge grinding and polishing machine to form a combiFIN processing centre.



Technical Data

MRX G5	
Glass height	Open at the top (MRX 130) / 2,600 mm (MRX 200)
Max. processing height of tools	1,300 mm (MRX 130) / 2,000 mm (M-RX 200)
Glass thickness	4 - 20 mm
Minimum glass size	600 x 160 mm
Maximum glass size	approx. 3,200 mm, can be increased with extension modules
Transport height	600 mm
Angle of inclination	7° (+/- 1°)
Max. bore diameter	80 mm
Spindle speed	0 - 12,000 rpm
Spindle power (rating)	2 x 5.5 kW
Number of tools	8 + 8 in case of Linear 8 / 10 + 10 in case of Roto 10
Max. load	150 kg/lm

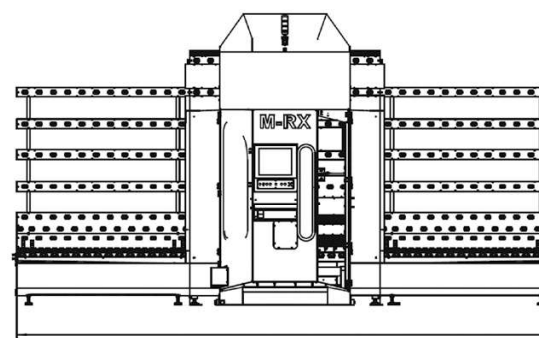
Highlights

- Milling and drilling in one work step
- Two types of tool changers available
- Modular design
- Continuous production without loading times
- Flexible product change
- Highly dynamic vacuum system for secure hold
- Easy operation and programming
- Fits perfectly with a topCLEAR washing machines
- Extension with a GLX to a combiFIN processing line

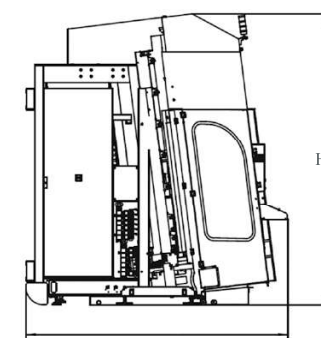


Options

- Automatic drill dressing unit
- Vacuum system
- Air-conditioning unit for the switch cabinet
- Software interface and drawing programs
- PC-Link



L



B

	L (mm)	B (mm)	H (mm)	Power consumption (kW)	Operating air pressure (bar)	Air consumption (l/min)	Operating water pressure (bar)	Water consumption (l/min) *
topDRILL M-RX 130 linear-8	6,200	2,755	2,695	19	7	200	2-3	3.5
topDRILL M-RX 130 roto-10	6,200	2,755	2,695	19	7	200	2-3	3.5
topDRILL M-RX 200 linear-8	6,200	3,027	3,364	19	7	200	2-3	3.5
topDRILL M-RX 200 roto-10	6,200	3,027	3,364	19	7	200	2-3	3.5

* Water consumption if used with a water treatment system

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Cycle times and scope of processing

The M-RX is the ideal solution for all drilling, sinking and milling processes. All machine configurations support fast, flexible and high-quality processing. The use of the Roto-10 tool changer on both processing spindles optimizes the cycle time when different tools are used on one glass sheet.



Shower Door

- Dimensions: 800 x 1,800 mm
- 2 Mickey Mouse edge cutouts
- 1 handle drilling

Cycle time for the entire processing: 210 seconds



Swing Door

- Dimensions: 1,000 x 2,000 mm
- 2 pieces PT fittings
- 2 handle drilling

Cycle time for the entire processing: 240 seconds



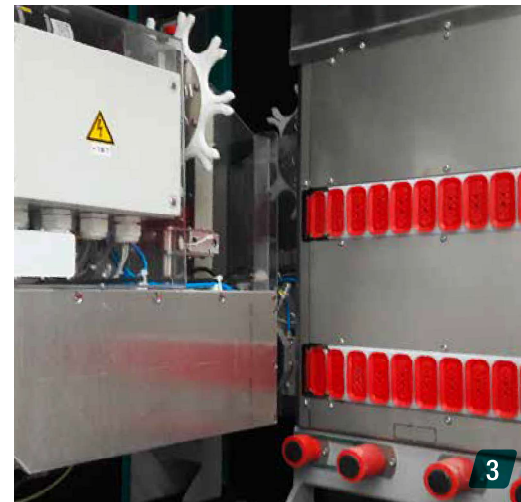
Single-action Door

- Dimensions: 800 x 2,000 mm
- 6 drillings, all countersink drilling

Cycle time for the entire processing: 360 seconds

State-of-the-art machine technology

- Control of all movements by servo drives
- Solid ball screw for stroke and drill axes
- Fully automatic central lubrication of all essential machine components
- Network connection resp. remote maintenance option via remote access



HIGHLIGHTS M-RX

1 Fast and flexible processing

- Dynamic vacuum system without set-up time and also for shapes
- Roto-10 tool magazine directly on the spindle for anticipatory tool changes
- Drilling, (deep) countersinking, milling and grinding finished in one single cycle
- Perfectly adapted milling feed due to automatic parameter data

2 Fast glass handling

- No set-up times for positioning the suction cups
- Different glass sizes, shapes and thicknesses without changeover
- Loading of the next glass sheet during the processing
- Trouble-free combination with previous or following module (e.g. washing machine)

3 Fast and simple operation

- Graphical input of all processing operations
- Program generation for the next glass sheet during the processing
- Automatic selection of all processing parameters by the machine
- Autonomous setting of all auxiliary holes and puncture operations
- Program generation at the machine via network or USB

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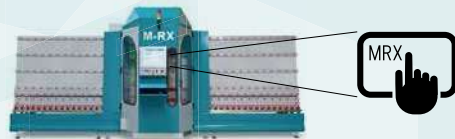
Software interfaces

The machine can be operated directly on the large 19" touch screen as standard. The program is very simple and can be operated without CNC programming knowledge. All tool settings and axle movements are pre-configured. Maintenance intervals and service messages are computed and displayed online. Remote maintenance access for programs and parameters is available as standard*.

Standard scope of delivery

Operation directly on the machine. Maintenance instructions and spare parts lists available online on the machine. Shapes can be processed if these are listed in the shape catalogue.

- Library selection for cut-outs and fixtures
- Remote maintenance access via TeamViewer*

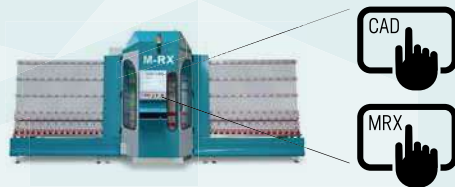


PRODUCTION

MRX + optional CAD import

Operation directly on the machine, comprehensive library for cut-outs and fixtures. Maintenance instructions and spare parts lists available online on the machine.

- CAD interface for importing, editing or creating .dxf drawings
- In-house cut-outs or drawings can be saved and added to the library
- Remote maintenance access via TeamViewer



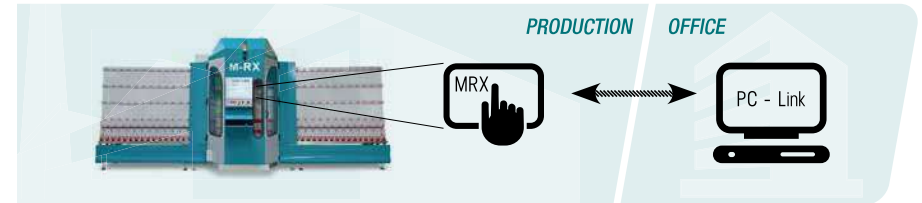
PRODUCTION

* The use of the remote services requires the installation of an internet access
 ** The use of the ERP interface usually requires a license of the ERP supplier

MRX + optional PC link

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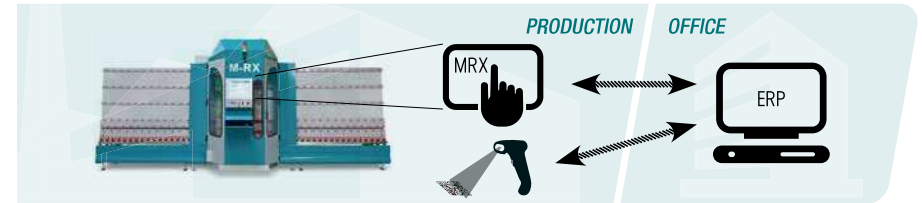
- Network connection to external computer, MRX user interface for external parametrising
- Remote maintenance access via TeamViewer*



MRX + optional ERP interface

Operation directly on the machine, comprehensive library for cut-outs and fixtures. Maintenance instructions and spare parts lists available online on the machine.

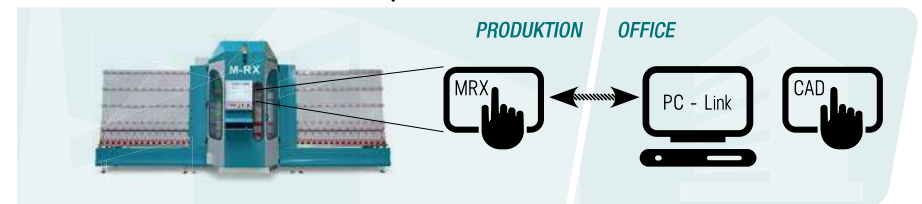
- Network connection to customer's installed ERP (e.g. A+W, FeneVision, Hanic, LiSEC, etc.)**
- Handshake (data OK) for bidirectional use of the interface
- Scanner for processing barcodes and direct import into the machine
 Import as finished job (without re-work options, very fast)
 Import as editable program, confirmation on the machine required
- Remote maintenance access via TeamViewer*



MRX + optional PC link + optional CAD import

Operation directly on the machine, comprehensive library for cut-outs and fixtures. Maintenance instructions and spare parts lists available online on the machine.

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Advantages

You can find an overview of the most important benefits here along with the superb product characteristics of topDRILL M-RX.

1 RAPID PROCESSING

topDRILL M-RX is optimised for the rapid and flexible processing of individual glass lites – even with small batch sizes:

- No restriction in equipping the drilling/milling head with tools
- Drilling, (deep) countersinking, milling and grinding completed in a single pass
- Optimum milling feed through automated parameter data
- Maximum milling speed through dynamic vacuum checking
- Tool changing carried out during the processing of the opposite side
- Automatic measurement of all tool types

2 FAST GLASS HANDLING

You will be astonished by the benefits arising in your daily work thanks to our innovative concept and the ingenious vacuum system:

- No maintenance time or equipping time due to the use of suction plates
- The next sheet can be loaded during processing
- Different glass sizes, shapes or thicknesses without changeovers
- The low loading edge enables the system to be loaded manually or with a crane
- Problem-free combination with washing machines or other devices
- Job sorting through continuous automatic tool checking

3 RAPID PROGRAMMING

A very important part of our development is not noticeable at first sight! The software has been specially developed for this machine:

- No CNC knowledge is required for operation
- There is only ONE programming interface for the whole control system
- A CAD program is integrated but (if preferred) is barely visible
- Auxiliary bores and plunge movements are set automatically
- Program creation on the machine, via network or USB
- Uncomplicated changes can be made to programs that have already been created

4 LATEST MACHINE TECHNOLOGY

Expect the latest machinery construction and the incorporation of our many years of experience in the construction of vertical processing systems:

- All movements are controlled through servo drives
- Solid recirculating ball spindles for the lifting and drilling axes
- Fully automatic central lubrication of all important components
- Usage-dependent maintenance interval display for important components
- Synchronously controlled waste conveyor for easy removal of glass waste (option)
- Network connection and remote maintenance facility or remote access

