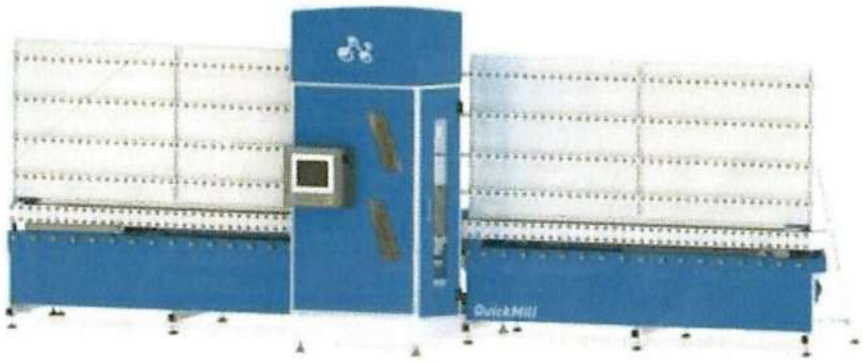
2015

Off. Nr.

Quickmill 160-30 NC



Quickmill 160-30 NC is the new vertical working center with numerical control, with three axes, for a fast and precise execution of milled and ground notches on float glass.

Conceived with avant-garde solutions, on the basis of Neptun's strong experience in this technology, this working tool is made for those who require quality and a long lifetime for their investment.

The milling and seaming of the notches can be done on all sides: upper, lower, left and right, up to a height of 1600mm.

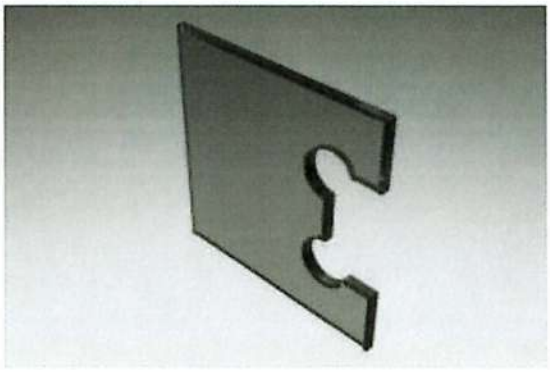
Quickmill can also be integrated with the machine Quickdrill, in order to be placed in-line and execute, before the milling operations, also drilling jobs.

All the machines of the series Quick can be customized with a series of options, to make it the ideal tool for your own production context.

MACHINE CONFIGURATION

Possible processing types

- Milling of notches on flat glass sheets with dimensions up to 200x200mm.
- Seaming of milled profiles
- Drilling for the execution of portholes (only with frontal head)



Structure

The series Quick has been built according to the principles of highest robustness and low wear of the mechanical parts, with a large use of stainless steel in the areas with water presence.

These solutions, which are unique in the category of these machines, take it up to an incomparable level of performances and reliability.

The Open Top structure allows the work glass sheets with an indefinite height.

Conveying elements

The inlet and outlet conveying elements are equipped with rollers in cut-resistant material, with axes in stainless steel, and they can carry a load up to 150 kg/lm.

The inlet and outlet modules have a transmission system which allows the motorization for integration with other machines, to receive glass sheets from other machines or send them to the washing machine.

The transmission, made completely with stainless steel axes, is synchronized by means of inverter.

Inlet element

The inlet element has a length of 3000mm.

Outlet element

The outlet element holds the system for the moving and measuring of the glass sheets managed by a controlled axis for the processing positioning with a precision of ±0,3mm. The operator loads the glass sheet that has to be processed in this section; if the inlet module is provided with motorization, the glass sheet can also be fed from another machine.

Once the glass sheet has been taken, the moving and measuring group grips the glass and starts the processing cycle with a positioning speed up to 15 m/min.

The outlet element has a length of 3270mm.

Group head and spindle

The solid concept of the spindle group and the water distribution system inside the tool with collector without contact ensure long life features with a high quality of processing at high speed. The spindle, which has a rotation speed of up to 12.000 RPM, does not require any maintenance thanks to the systems with permanent lubrication.

The group of the head is driven by three axes, controlled by brushless motors, gliding on guides with recirculating balls, with speed up to 15 m/min.

Tools exchange

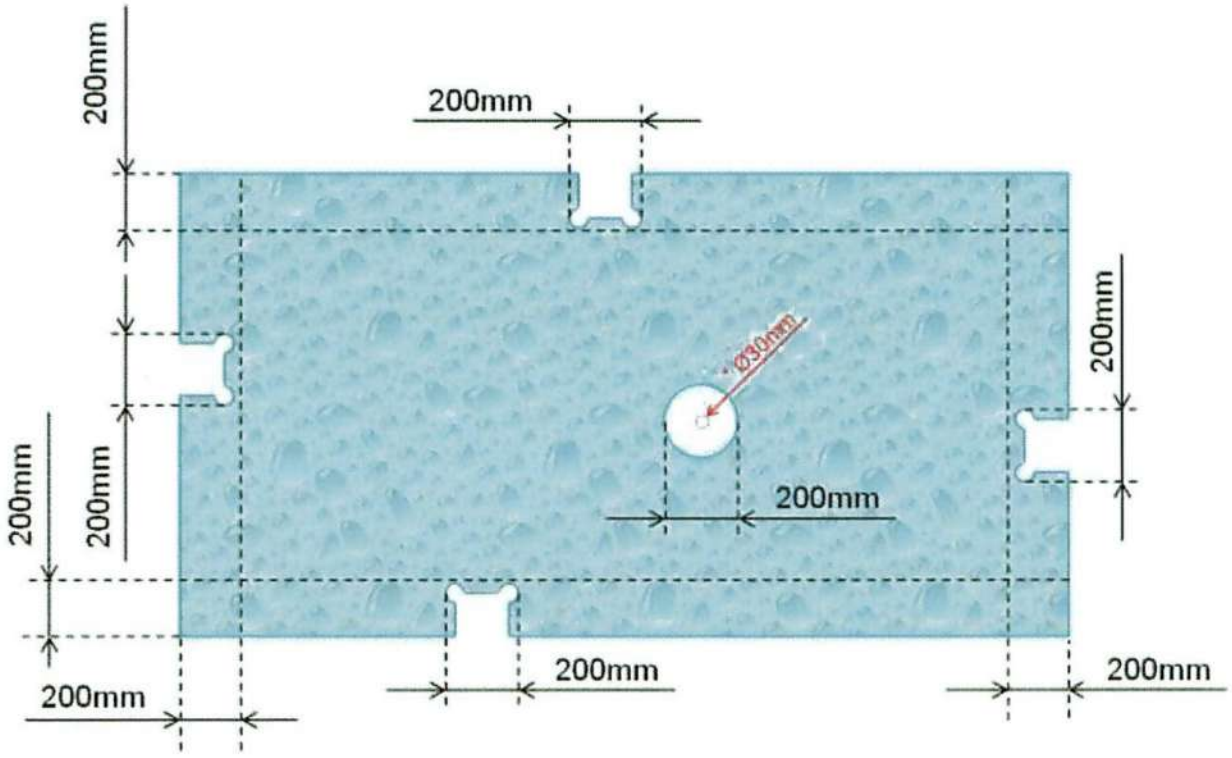
QuickMill uses standard tools with length 75mm and connection 1/2 GAS.

The tool exchange is manual, and made easy by an automatic device that blocks the spindle, guaranteeing safety, facilitates the activity of the operator and reduces the time required for the tool exchange to 20÷30 seconds.

It is recommended to use combined tools mill/wheel in order to complete the whole cycle of milling and seaming of the notches without requiring any tools exchange.

Workable areas

The structure with open top allows to introduce glass sheets with an undefined height, the total workable area measures 1600x3000mm, with dimensions and position of the processed holes as indicated on the scheme.



Cooling circuit

QuickMill has an internal and external cooling system for the tool, ensuring a good processing also in case of countersinks. The external lubrication can be fed with water coming from the recirculating circuit, the internal lubrication of the tool is fed with clean water, with a cleanliness degree of suspended particles <25µm.

Complete with a valve for the management of the cooling water flow towards the head, one for water coming from the recycling systems and one for clean water coming from the network.

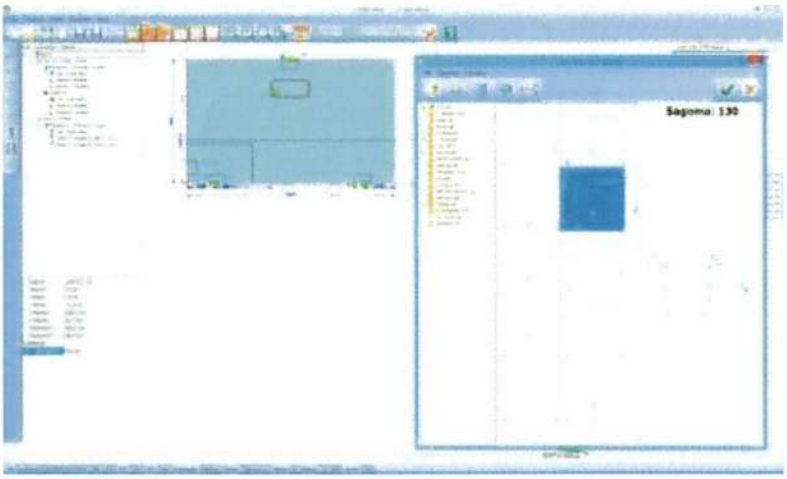
Equipment

Included in the supply, as equipment of the machine:

- Nr. 1 combined tool for milling and seaming of glass sheets with thickness 10mm
- Key for assembling and disassembling tools
- Manual for use and maintenance

Systems and controls

QuickMill is equipped with a powerful CNC with user interface through a touch screen monitor 15" active TFT, which allows to control all the functions of the machine and make all settings. The programming is quick and easy thanks to the parametric notches which can be dimensioned and inserted by the operator



The control panel is cabled at low tension (24V).

The functions of the control system are:

- Parametric programming of the notches, with possibility to store the created notches thanks to the software CAM-WAY. CAM-WAY contains more than 1000 parametric notches among which, along with the generic shapes, also the notches of the catalogues of the main manufacturers of accessories like: ADLER, BOCAL, CASMA, COLCOM, CRL, DORMA, GALBUSERA, GLASPECAS, LM, LONGONI, METALGLASS, MINUSCO, OXIDAL, STREDLER
- Generation of work programs with possibility to store them
- Management of tools parameters
- Possibility to import stored programs by means of USB key
- Possibility to import undefined shapes in format .DXF
- Automatic management rotation speed spindles (2000÷12.000 RPM) in function of the used tool

- Table tools magazine to handle automatically the data concerning: length, diameter, rotation speed spindle
- Partial and total counter of the worked hours
- Diagnosis and history of the alarms of eventual problems

The machine is also equipped with the following communication ports:

- Ethernet port for connection of QuickMill to the company network
- USB port to load programs

Quick-Service

This service offered by Neptun includes a specific hardware which allows Neptun's service to connect to the machine for remote assistance.

This is not a simple modem, but a real interface allowing the access and the control of all the components of the machine, like:

- CN
- PLC
- Drivers
- Motors
- I/O

The kit Quick-Service includes the hardware and a service fee for the first 12 months, after which this service can be renewed at an annual cost of € 800.

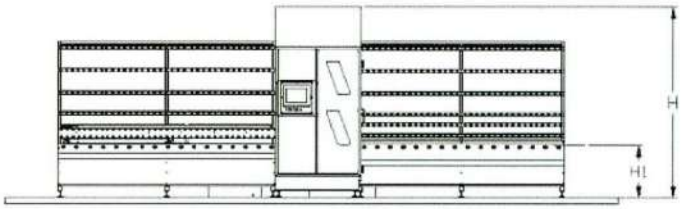
The **electrical cabinet**, which is placed outside the machine, avoids all kind of oxidation/contamination of the electrical components with water steam coming from the wheels and allows an easy and quick maintenance when necessary. The electrical plant is made conform to the EC norms and with electromechanical components Siemens.

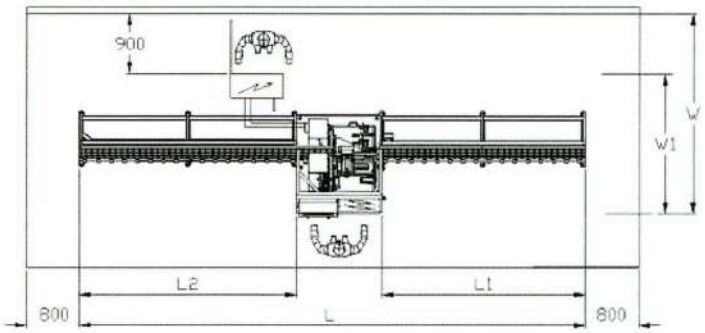
The working centers of the series Quick are conform with the Directive of Machines 2006/42/CE.

For a complete list of all the other norms related to safety, use and environmental compatibility, see the "Declaration of Conformity".

Layout

L	7520 mm
L1	3000 mm
L2	3270 mm
H	2800 mm
H1	780 mm
W	3000 mm
W1	2100 mm





neptun
ADVANCED PROCESSING SYSTEMS

Technical specifications Quickmill 160-30 NC	
Maximum length machine	7520 mm
Maximum width machine	2100 mm
Maximum height machine	2800 mm
Height working plane	780 ±30mm
Minimum workable dimensions (WxH)	800 x 340 mm
Maximum workable dimensions	1600x3000 mm
Workable thicknesses	5÷12 mm
Maximum dimensions notches	200x200 mm
Maximum load per linear meter	150 Kg/ml
Working tolerances	±0.3mm
Speed spindle	2000÷12000 RPM
Speed positioning axis	15 m/min
Speed axes X, Y, Z	15 m/min
Weight	1950 Kg
Installed power	7 Kw
Minimum pressure water	2 Bar
Water consumption	7 lt/min
Minimum pressure compressed air	7 Bar
Consumption compressed air	15 Nlt/min
Standard tension	400V 50Hz ±10%
Temperature of exercise	5°÷ 40°C
Relative humidity working environment (without condensation)	30% a 40°C 95% a 20°C