

BAVELLONI REV 372 SR

System description and benefits



General

The totally new and also revolutionary conception of the **REV** tables' series breaks the traditional schemes of the cutting machines, placing this range at the top in technology, performances and design. For a dynamic response of the axes the operational and control system of the machine is completely "digital", thus enabling a high control of the cutting speed and the cutting accuracy. Thanks to the technical solutions adopted, the **REV** models do really occupy a very limited room but this is in no way a limitation to their cutting possibilities, besides they can be shipped and delivered with no assembling/disassembling necessities. Their possible displacement inside your factory will be a very simple operation needing no aid of a technician.

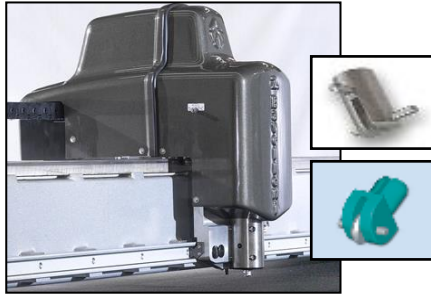
Structure and working plane

The extremely solid and reliable structure, as in the tradition of Bavelloni, is consisting of a fixed plane in tubular steel and covered with an anti-friction felt. Under this plane there is the fan for the creation of the air cushion. The loading of the glass sheets is by means of tilting forks, driven by electrical cylinders that can be also used to unload the cut glasses or to turn the sheet when cutting laminated glasses. Thanks to the elimination of the hydraulic components (oil pump, pipes, gaskets, solenoid valves,) the electric drive guarantees the smoothness of the upward and downward movements besides needing no servicing.

Cutting bridge

The cutting bridge, sliding on guides and high-section racks (50x50mm), is driven by an electric axis (Gantry axis) to ensure an absolute cutting accuracy. The two brushless motors are placed inside the same bridge to the benefit of a greater mechanical cover and of a sobriety in the design. The specific and carefully designed structure of the bridge is the best compromise between lightness, for higher speeds and accelerations, and sturdiness, for constant cutting accuracy with any thickness.

Cutting head



The cutting head specifically designed to grant the utmost smoothness is equipped with the following devices:

- potentiometer
- for the control of the head axis in order to avoid cuts outside the glass sheet or on broken sheet thus avoiding any possible damage to the head
- for the automatic reading of the glass thickness and consequent adjustment of the cutting pressure
- laser device enabling the following operations:
 - automatic reading of the templates of any material (wood, paper, glass,...) even if positioned on the working plane at the same time
 - electronic squaring of the glass sheet. It is also possible to cut laminated glass thanks to the loading/unloading forks and the specific software for specular cutting.
- exclusive universal adapter (available as spare part) to enable the operator to mount the coloured plastic wheel holder, easily recognizable and fit for low thickness instead of the steel wheel holder, which is more solid and precise and fit for high thickness
- exclusive “no-drop” system to have an uniform trickle of oil along the whole cutting path
- vinyl cutting blades

REV 372 SR is equipped with a controlled rotating axis head (C axis), driven by a BRUSHLESS motor for the execution both of straight and shaped cuts.

Control panel

The control console, featuring a modern and ergonomic design, combines the might of a professional numerical control with the convenience of an industrial PC working in Windows® (Microsoft) environment: the PC will be the only handy and easy interface between the operator and the machine.

The main features of the system are:

- Programming on board the machine, while the control is managing the movements of the machine, the operator can easily work on the PC
- Simple and direct graphic interface
- USB port for data storage and transmission
- CD-Rom only for data reading
- Keyboard and mouse
- Possibility to network with other PCs
- Ethernet port included as standard
- Possibility to connect via internet for remote assistance
- Graphic and colour display

The main possible functions are the following:

- Visualized control of the cutting pressure
- Display of partial and total working times
- Graphic display of the cutting path
- Storage of 254 pressure values
- Diagnostics display with language messages
- Inlet/outlet diagnostics with language comments and utility
- CAD/CAM programs execution in hidden time while the machine is processing
- Access to the machine production statistics
- Guided and improved access to the machine parameters
- Electronic double zero (to cut laminated glass)

Electrical plant

Electric installation carried out according to CE rules with power panel separated from the machine, to be installed in any positions around the machine thanks to its rotating base (sheathing entrance).

Standard voltage 400/50 Hz.

The electric photocell barrier around the machine ensures high operator safety upon cutting.

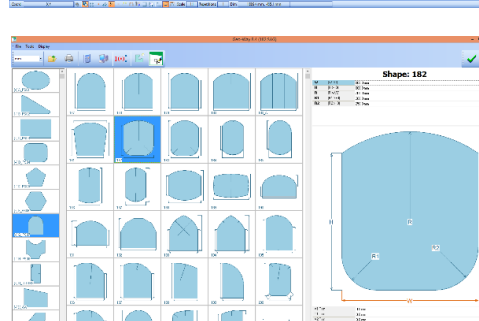
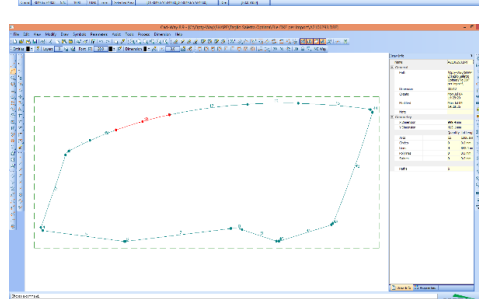
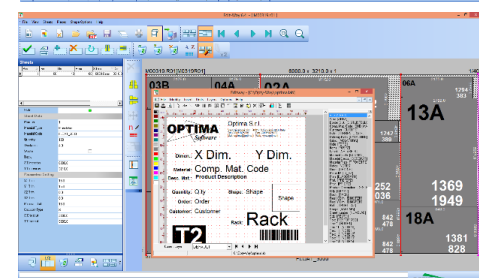
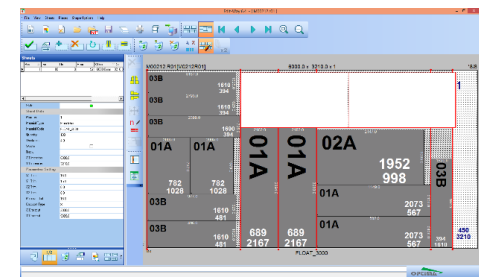
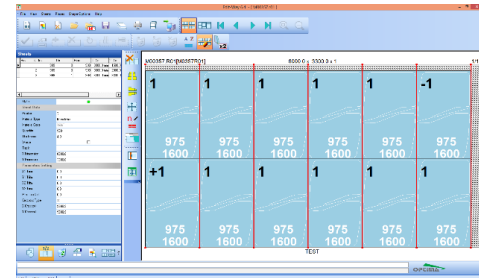
Software for optimization

SC-PRO

Package consisting of different integrated software, specific for the operation on board of the machine allowing to optimize, to visualize and if necessary to modify the glass sheets directly on the PC positioned at the side of the cutting table. Said operations can be quickly and easily performed since it is not necessary to “pass through” the management of the glass storage, of orders and of the customer personal data. The optimization is based on a high-efficiency mathematical algorithm always ensuring a reduced gap: it can be visualized on the colour monitor of the PC that can be easily looked through by the operator during the break-out.

SC-PRO includes:

- Program for the creation and modification of the optimizations:
 - Entering of pieces dimensions and optimization from board of the machine using a single glass format
 - Possibility to manually modify the optimizations
 - Manual creation of a cutting plan
 - Loading and editing of the optimizations done in the office through SC-OFFICE if purchased (via net, USB key,...)
 - **XYZ cuts:** possibility to create manually and in an easy and fast way straight cutting plans, by using the X-Y-Z cutting scheme. All through a very direct graphical method, enabling each moment the view of the different working operations and the control of their correctness
 - **Managing of the sheets sizes:** input and storage of the different glass sheet sizes that can be selected from a list, thus avoiding the need to write each time the dimensions. Besides, the software can automatically choose the different measures to reduce to the minimum the possible waste.
 - **Label printing**
- CAD: “basic” but complete CAD program with the following functions:
 - Automatic reconstruction (and modification) of the shape surveyed by laser
 - creation of geometrical drawings thanks to the function to create lines, circles, arches, arches tangent to a straight line, simple quoting
 - editing functions: resizing, rotation and images zooming
 - import of format of other manufacturers (text, excel, csv, dxf, dwg)
- SC-GEO: library of more than 350 parametric shapes, management of holes and off-cuts, nesting X/Y, symmetry X/Y, resizing X/Y, rotation and offset. Automatic management of the squares for shape cutting.



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Technical specifications

Overall dimensions	See lay-out
Max. workable dimensions of the glass sheet	3710x2600 mm
Workable thickness	3-19 mm
Min. thickness (for laminated glass cutting)	2+0.38+2 mm
Max. thickness (for laminated glass cutting)	8+4.56+8 mm
Weight	1900 kg
Installed power	19 kW
Absorbed power	10 kW
Max. speed	130 m/min
Max. acceleration	8 m\ s ²
Cutting accuracy	± 0.25 mm
Straightness accuracy	0.3 mm
Breaking bars	2
Squaring accuracy (area less than 1 sqm)	1 mm
Squaring accuracy (area more than 1 sqm)	1.5mm
Storage ambient conditions (temperature/humidity)	from -20°C to +60°C - max 80% without condensate
Operational ambient conditions (temperature/humidity)	from +5°C to +45°C - max 80% without condensate