

BAVELLONI VE350 8

System description and benefits



General

Automatic vertical straight-line machine with 8 cup wheels to perform flat edge with arrises on glass sheets and/or on mirrors, having a thickness from 3 to 40 mm.

VE350 8 has been conceived and realized according to the most modern technologies and it is a novelty in the field both for its look, for the adopted technical solutions and for the performances it can assure.



Structure

By using modern systems of three-dimensional modeling, Bavelloni optimized VE350's structure, composed of a strong electro-welded modular basement supporting the spindles and the glass sheets conveyor for better quality of the final product.

Inlet and outlet arms

The inlet and outlet arms, for the loading/unloading of the glass sheets, have conveying chains in anti-friction material. The inlet arm is equipped with a device to change the glass removal without the necessity to operate on the position of the diamond wheels. Said removal can be read on a proper mechanical indicator.





Conveyor

To make the conveyor fit to the different thicknesses of glasses; it is composed by two parts: a fixed and a mobile one.

The opening of the conveyor (according to the glass thickness) is operated by a motorized mechanical device, which is controlled by NC.

VE350 machines have a **patented** conveyor sliding on high precision steel guides without the aid of ball bearings.

The speed variation is performed by inverter controlled by NC.

The machine is equipped with a centralized lubrication plant controller by the NC.

Spindles

The machine is equipped with the following spindles:

- diamond metal bonded cup wheel for edge grinding - \varnothing 150 mm.
- diamond metal bonded cup wheel for fine edge grinding - \varnothing 150 mm.
- diamond cup wheel for rear arris - \varnothing 150 mm.
- diamond cup wheel for front arris - \varnothing 150 mm.
- polishing cup wheel for front arris - \varnothing 150 mm.
- polishing cup wheel for rear arris - \varnothing 150 mm.
- rubber polishing cup wheel for edge polishing - \varnothing 150 mm.
- rubber polishing cup wheel with cerium oxide for bright polishing - \varnothing 150 mm.



The spindles for the processing of the flat edge are **separated from the electric motor** and the transmission is by means of belt and pulleys to eliminate any possible vibrations.



The spindles body is in iron casting and slides on high-precision adjustable guides. The spindle shaft is in tempered and ground steel, lubricated by for life special grease (free from periodical maintenance).

The wheels compartments are completely **in stainless steel** to avoid any possible corrosion caused by the grinding water.

Polishing spindles are equipped with a pneumatic automatic adjustment system to compensate the wheel wear: this device raises the wheel position, while it is wearing, always ensuring, in this way, a perfect edge polishing. The polishing pressure intensity is adjustable by means of a regulator according to glass thickness and to the required finishing.

The manual adjustments of the wheels are all carried out from the frontal side of the machine.



Control equipment

The control panel is integrated in the control equipment.

All the operations are managed by a HMI-PLC that executes both machine functions and user interface functions. It integrates a touch screen color monitor which represents the most complete and user-friendly equipment now existing in the market due to its innovative characteristics and its clear and immediate graphics.

By means of the control equipment it is possible:

- Activating a program automatically setting the machine for the selected working
- Displaying maintenance intervention according to the operation time of the machine
- Switching on/off machine conveyor forward gear and backward gear
- Opening & closing machine conveyor
- Changing conveyor speed
- Visualizing graphically spindles absorption
- Displaying partial and total working hours
- Displaying partial and total worked meters
- Displaying meters processed by each wheel
- Graphically displaying motor absorption, helping the operator to adjust the tools in the optimal way, maximizing productivity, and product quality and tools life



- Importing and exporting working programs by **USB port (optional)**
- Interfacing with the local network by **LAN port (optional)** activated on the control panel



- Using the **Ecofriendly pack (option)** for optimizing energy consumption. The Ecofriendly pack includes **GRIND&STOP** function to stand-by spindles feeding and close pneumatic and cooling circuits after a preset time from the last ground sheet; selection and and exclusion of the spindles that are not used during the selected working cycle.

The panel also contains the pressure regulators and the ammeters for polishing spindles.



Thanks to a purposely developed application, the control panel view can be remoted via **wifi** on tablet or compatible devices (**optional**).

Electrical plant

The **new electrical cabinet fully integrated in the machine body**, easy to service, carried out according to latest CE standard, contains all electrical components and it includes the control panel (HMI), the ammeters/regulators for a comfortable handling during working process. Standard voltage 400V - 50Hz, others upon request.



Hydraulic plant

Closed circuit hydraulic plant for the wheels cooling consisting of two tanks (total capacity 720 litres), water distributing/return circuit and recycle pump.



HiWash washing machine (optional)

The new washing machine is integrated mechanically and electronically in the machine outlet arm and it does not need a separated electrical box. It is totally managed by VE350 touch-screen control. Max washable height 400 mm, minimum 150 x 100 mm. Glass thickness control and energy saving function (HiWash will start only when glass gets close) in the standard supply.

Technical specifications

Workable thickness	3÷40 mm.
Min. workable height	50 mm.
Min. workable height (using the specially provided kit in standard scope)	35 mm.
Installed power	20 kW
Min. pressure of compressed air	6 bar
Max. consumption of compressed air	25 Nlt/min.
Length	7043 mm
Width	1890 mm.
Height	2300 mm.
Weight	2700 kg.
Working speed	0,5 ÷ 5 m/min.
Water tanks capacity	720 litres

VE350 8 layout

This lay-out is indicative: a definitive lay-out will be delivered with the sales agreement

