

BAVELLONI VB350 CNS

System description and benefits

General



VB350 CNS is an automatic, numerical controlled, straight-line bevelling machine, with 7 cup wheels realized to meet high productivity and quality requirements. Fruit of an experience in the field of bevelling of over 40 years, it has been realized with the same technology of the superior models.

Structure

The machine is consisting of a strong electro-welded steel structure and iron castings supporting the spindles and the conveyor of the glass sheets.

Inlet and outlet arms

Loading and unloading operations of the glass sheets are performed by means of two arms with transport chain realized in anti-friction material and rubber pads to support the glass, which are easily replaceable with low maintenance cost.

Conveyor

The glass conveyor of a bevelling machine is a fundamental element of the machine. To minimize servicing costs, B 75 uses a (patented) conveyor realized with iron pads and anti-friction material, sliding, without the aid of ball bearings, on tempered and ground guides. Besides it is provided with a totally automatic lubrication plant.

The conveyor of VB350 can to grant optimal performances for a long time with no need of overhauling. The use of the conveyor allowed to increase the performances of the machines above all with respect to accuracy and processing of small pieces.



A special system of extensible pads (patented), which is automatically operated by the NC, when necessary, allows the working of small pieces up to a dimension of 40 mm or strips having a minimum height of 35 mm.

Spindles

The machine is equipped with the following spindles:

- 1. Cup metal bonded diamond wheel for bevel Ø 150 mm.*
- 2. Cup metal bonded diamond wheel for bevel Ø 150 mm.*
- 3. Cup resin bonded diamond wheel for bevel Ø 150 mm.*
- 4. Cup resin bonded diamond wheel for bevel Ø 150 mm.*
- 5. Peripheral diamond wheel Ø 175 mm. (for the edge on the glass remaining after bevelling)*
- 6. Felt to polish bevel Ø 150 mm with Cerium oxide*
- 7. Felt to polish bevel Ø 150 mm with Cerium oxide.*

High-precision spindles, lubricated by for life special grease (free from periodical maintenance). The machine is equipped with a tilting unit supporting the spindles for the processing of the bevel. The rotation of this device is by worm screw. This mechanical solution (we have always used) avoid the manual re-positioning of the wheels each time the angle or the width of the bevel change.

Belt transmission between motor and spindle *in order to eliminate any possible vibrations and for a better adjustment of the tools rev per minute.*

The spindles for polishing wheels are equipped with a completely pneumatic self-adjustment system to compensate for the wheel wear. This system increases the position of the wheel, while it is wearing. In this way a perfect edge finishing is always guaranteed. In conformity with the required finishing and the glass thickness the pressure intensity is adjustable by means of a regulator.

Control equipment

The control panel is placed on the machine inside the ABS control board. All the operations are managed by a HMI-PLC that executes both machine functions and user interface functions. It integrates a touch screen TFT 10.4 colour monitor, which represents the most complete and user-friendly equipment now existing on the market due to its innovative characteristics and its clear and immediate graphics:

- Display of the drawing of the working to be processed.*
- Possibility to store 99 different working conditions*
- Processing of simple, double, triple bevels automatically calculated and performed by the machine after the setting of the data in the HMI.*
- Display of maintenance intervention according to the operation time of the machine.*
- Display of partial and total working hours*
- Display of partial and total worked meters.*
- Display of motor absorption, helping the operator to adjust the tools in the optimal way, maximizing productivity, end product quality and tools life.*

Electrical plant

Electric installation is carried out in accordance with CE rules with power panel separated from the machine and waterproof connectors. The control panel on the machine is of insulating ABS and includes ammeters, manometers and the electronic control equipment. Standard voltage 400/50 Hz, other available upon request.

Cerium polishing plant

Cerium plant consisting of tank, cerium pump, mixer, filter and connecting pipes.

Coolant plant

Closed circuit coolant plant for wheels cooling, consisting of two tanks with a total capacity of 720 litres, water distribution and recovery circuit with recycle pump.

Technical specifications

<i>Workable glass thickness</i>	<i>3÷20 mm</i>
<i>Min. workable height (strips)</i>	<i>35 mm</i>
<i>Minimum workable size</i>	<i>40 x 40 mm</i>
<i>Maximum width of bevel</i>	<i>50 mm</i>
<i>Inclination of bevel</i>	<i>3° - 45°</i>
<i>Installed power</i>	<i>22,5 kW</i>
<i>Min. pressure of compressed air</i>	<i>6 bar</i>
<i>Max. consumption of compressed air</i>	<i>25 Nlt/min.</i>
<i>Length</i>	<i>7300 mm</i>
<i>Width</i>	<i>1800 mm.</i>
<i>Height</i>	<i>2300 mm.</i>
<i>Weight</i>	<i>4200 kg.</i>
<i>Working speed</i>	<i>0,5÷4,1 m/min.</i>
<i>Water tanks capacity</i>	<i>720 litres</i>