

BAVELLONI VB500 CNS

System description and benefits



General

VB500 CNS is a numerical controlled bevelling machine with 12 cup wheels designed and realized to meet high productivity and quality requirements. Fruit of an experience in the field of bevelling of over 40 years, it is the peak of the range.

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, VB500 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 VB500 is able to grant optimal performances for a long time with no need of overhauling. The use of the conveyor allowed increasing 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. Cup resin bonded diamond wheel for bevel Ø 150 mm*
- 6. Cup resin bonded diamond wheel for bevel Ø 150 mm*
- 7. Polishing cup wheel for front arris Ø 100 mm.*
- 8. Felt to polish bevel Ø 150 mm with Cerium oxide*
- 9. Felt to polish bevel Ø 150 mm with Cerium oxide.*
- 10. Felt to polish bevel Ø 150 mm with Cerium oxide.*
- 11. Peripheral cup metal bonded diamond wheel for pencil edge Ø 175 mm.*
- 12. Peripheral polishing cup wheel for pencil edge Ø 200 mm.*



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 changes.

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 an electronic equipment 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 NC.*
- 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.

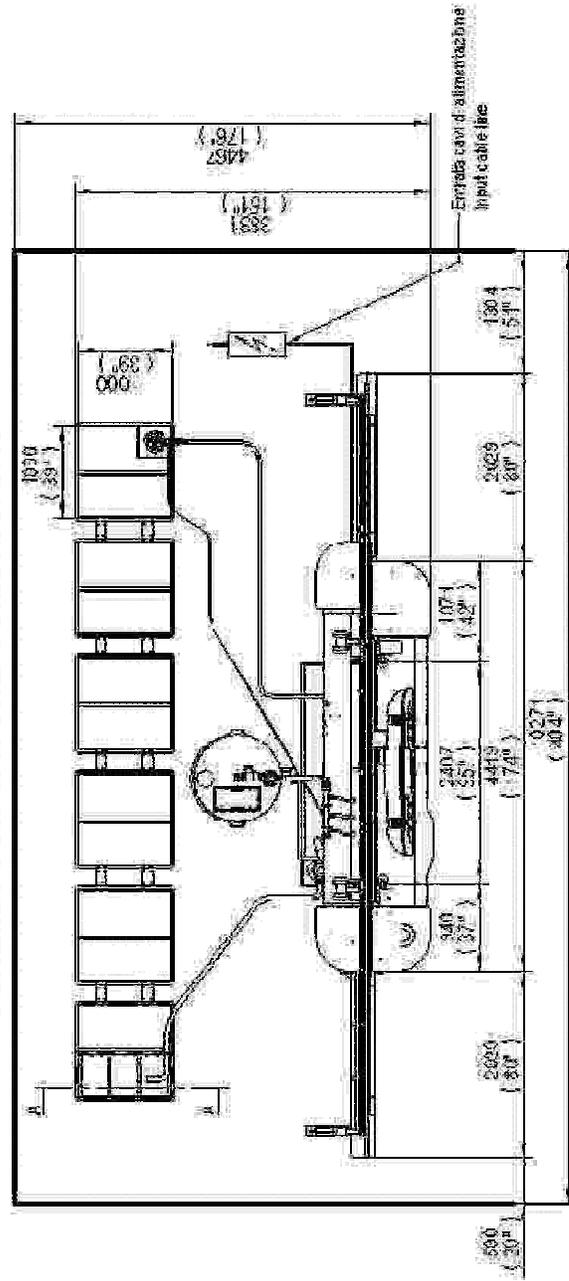
Coolant plant

Because of the high production capacity and working speed, it is necessary to have a closed water system for wheels cooling that will hold approx. 6000 litres. Arrangements for this water plant have to be made by the customer, since THE MACHINE IS SUPPLIED WITHOUT WATER TANKS, while water pump and connecting pipes (4400 mm length) are included.

Hereunder please find two possible and indicative solutions for water tanks plant we advice.

- ***Table 991: a plant with 6 tanks in line not underground. The water passage sections to the tanks should not be lower than 50 sq.cm and not smaller than 80 mm diameter.***
- ***Table 990: a plant with 1 underground tank.***

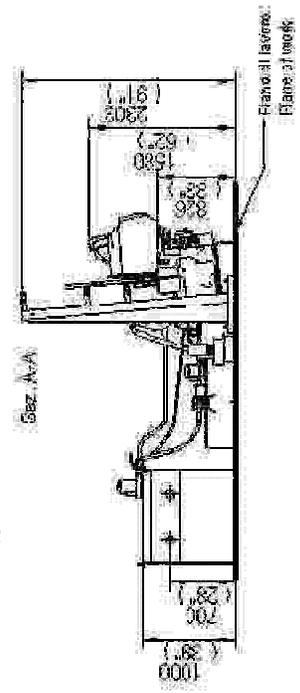
SCHEMA CON VASCHE COMUNICANTI



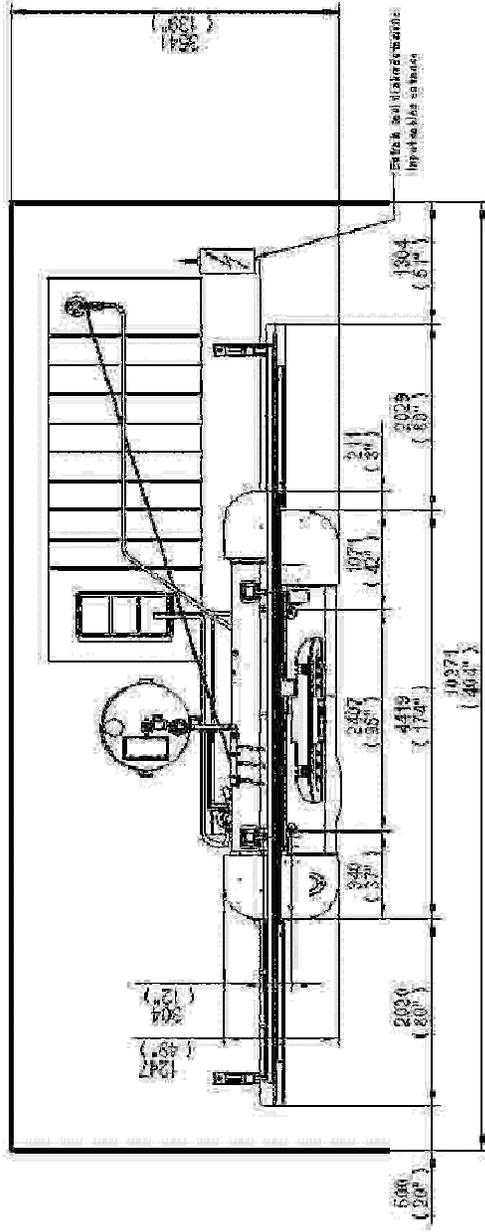
La disposizione è definitiva.
L'esecuzione si fa in base all'opera sopra indicata del
cliente.
Capacità totale vasche 6000 litri

Rif. Dis.
Ref. Drawg

Z BAVELLONI S.p.A.
BREGNANCO (Como) ITALY
TAV. 991-REV001



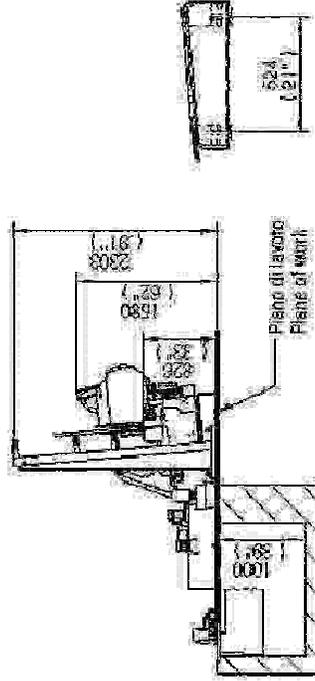
SCHEMA CON VASCA INTERRATA



La disavazione di Milano è in via
L'associazione e la ricerca in ogni caso a carico
del cliente.
Capacità vasca 800 liti

Rit. Die.
Ref. 0wg

Z. BAVELLONI S.p.A.
BREGNANO (Como) ITALY
TAV. 980-REV001



Technical specifications

Workable thicknesses	3÷ 25 mm
Min. workable height (strips)	35 mm
Min. workable dimensions	40 x 40 mm
Max. width of the bevel	60 mm
Bevel inclination	3° - 45°
Installed power	31 kW
Min. pressure of compressed air	8 bar
Max. consumption of compressed air	25 Nlt/min.
Length	8400 mm
Width	1700 mm.
Height	2300 mm.
Weight	5300 kg.
Working speed	0,5 ÷ 4,1 m/min.