



CNC MACHINE TYPE BEM 31



□ **Numerical control machine type BEM 31** to grind and polish the edge on shaped glasses with internal curves, external curves, straightline sides, mitred corners.

This machine is particularly suitable for processing “low-emissivity glasses” as the surface of the coated glass sheet never comes into contact neither with suction pads nor transport rollers.

Any kind of geometric profile is possible by means of linear and circular interpolation on the X, Y, Z axes. Other than the grinding and polishing of glass edges, further processes are possible such as:

- Holes
- Notches
- Pin and screw inserts
- Internal and external routings, etc.

The machine is equipped with a unique system for edge polishing, which allows to keep a constant pressure on the entire perimeter of the glass. This allows a perfect polishing on all types of edge shapes.

The machine is equipped with 15 position tool crib with automatic selection for tool withdrawal and deposit and electronic system to check the tool crib state.

A tool crib with an increased number of positions can be supplied on request.

The machine is also equipped with a double system for automatic compensation of polishing wheel consumption and, upon request, with an electronic measuring system for diamond wheel consumption (optional).

In addition to the grinding section, the machine, upon request, can be equipped with a tilting table for loading the glass sheets.



The working sequence is as follows:

- the operator positions the glass vertically on the tilting table;
- the tilting table moves to the horizontal position;
- the glass is transported, by means of rollers, to the grinding area of the machine;
- square and rectangular glass sheets are automatically centred on the grinding table by means of a pneumatic system. Shaped glasses are, on the other hand, centred by means of an electronic gauging system.;
- an electronic measuring system can be activated to automatically control the dimensions of square and rectangular glass sheets;
- after processing, the glass is transferred to the washing machine conveyor by means of rollers (the washing machine is not included).
- the operator can then unload the glass from the tilting table.

It is possible to memorize many different processing programs according to the size and shape of the glass sheets.

BEM-31 is equipped with high precision spindle, with internal water cooling system, with 8 Kw power.

All guides and ball screws are produced by BOSCH/STAR, Germany or by NSK, Japan, in H Class (highest precision class).

All Brushless motors and drives are Yaskawa/Omron, Japan, with full digital technology.

BEM 31 is programmed using a CAD-CAM system (included) to be installed on a Personal Computer (not included).

The machine is equipped with an automatic programmable lubrication system. This insures that the machine can always be properly lubricated.

BEM-31 is also equipped with a teleassistance system by modem.

This system allows LOVATI technicians to directly connect to the machine installed at customer's factory and to help operators in problem solving.

The machine is equipped with :

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- Ethernet card for connection between CNC and PC
- Teleassistance by modem
- Software for the decoration of glass surfaces

- DXF software to import or export drawings from/to other systems
- Automatic lubricating plant with timer
- Automatic suckers' positioning and activation
- Automatic rinse system for suckers and working table
- Conic ISO40 tool-holders (15 items)
- Water cooling system inside and outside the wheel to get faster working speed and higher quality
- Alarm system and self-diagnostic functions to provide safe and efficient operations
- Water recirculating tank for wheels cooling system, complete with high pressure pump
- User & maintenance manual
- CE Certification

TECHNICAL DATA

MINIMUM GLASS SIZE	480 x 300 mm
MAXIMUM GLASS SIZE	3200 x 1650 mm
GLASS THICKNESS	3 mm min. - 20 mm max.
DIAMETER OF THE WHEEL	150 mm max
PROGRAMMABLE SPINDLE ROTATIONS	0 to 14.000 r.p.m.
SPINDLE POWER	8 KW
TOTAL INSTALLED POWER	40 KW
COMPRESSED AIR PRESSURE	7 Bar
MACHINE DIMENSIONS	5420x3070x2100 mm

