

Flat glass processing machinery moves on

Already with a wide range of grinding and polishing machines, Fratelli Lovati, one of the oldest glass processing machine manufacturers in Italy, has taken grinding technology another step further. This article takes a look at the company's recent innovation - the Zenedge.

Lory Lovati*

FRATELLI LOVATI SRL

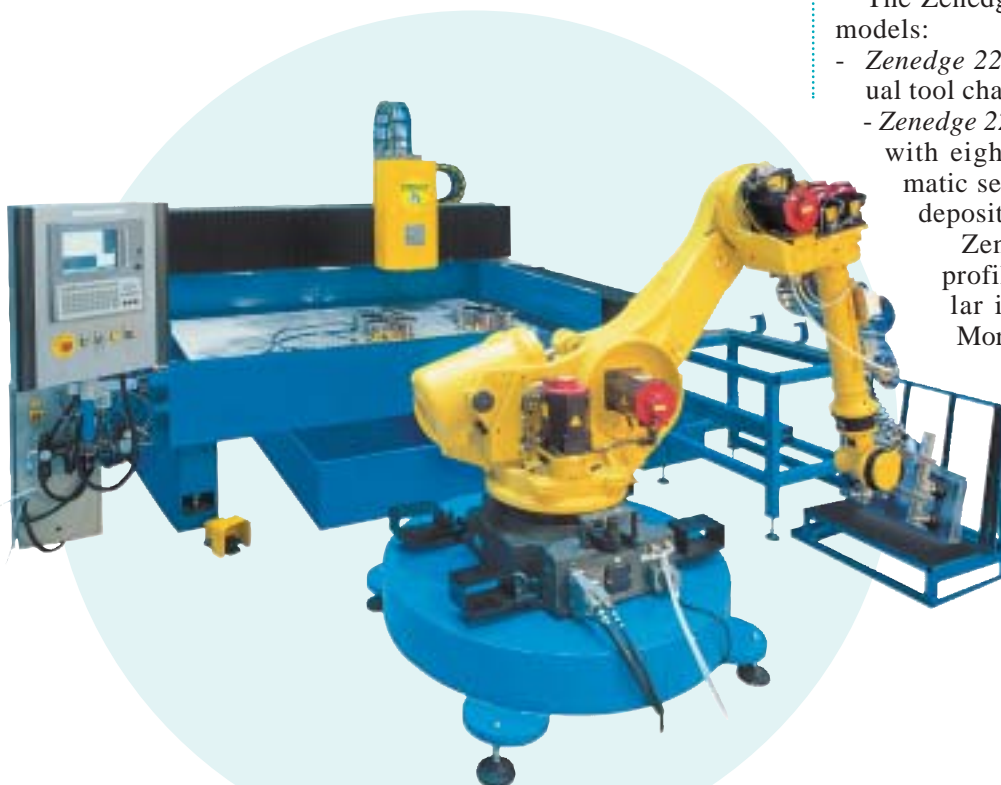
Based in the outskirts of Milan, northern Italy, Fratelli Lovati's range of machinery covers bevelling, edging, cornering and polishing machines as well as glass handling machines, and special lines. The company's continuous search for developments and improvements has led to the development of the *Zenedge*, a numerical control machine to grind and polish the edge on shaped glasses with internal curves, external curves, straight-line sides, mitred corners, as well as grinding and polishing of internal shapes.

NUMERICAL CONTROLLED GRINDING AND POLISHING

The Zenedge is produced in two different models:

- *Zenedge 22* with 5.5 Kw spindle and manual tool change system; and
- *Zenedge 22/8* with 8 Kw spindle, equipped with eight position tool crib and automatic selection for tool withdrawal and deposit.

Zenedge can work any shape and profile by means of linear and circular interpolation on X, Y, Z axis. Moreover, in addition to the grinding



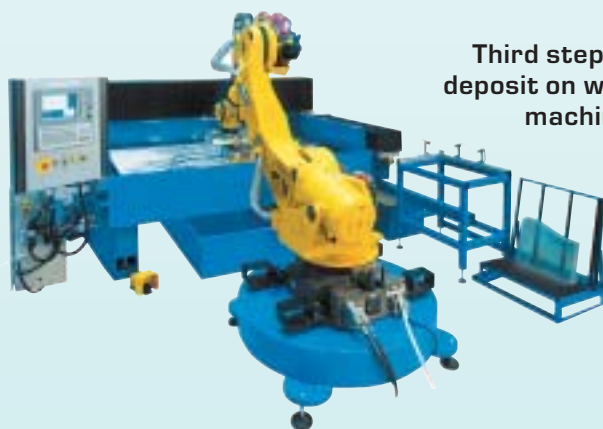
Fist step: glass withdrawal from pallet

TECHNICAL DATA

	Zenedge 22	Zenedge 22/8
Working Field Axis X	2,200mm	2,000mm
Working Field Axis Y	1,250mm	1,250mm
Glass thickness	2mm min. 20mm max.	2mm min. 50mm max.
Diameter of the wheel	150mm max.	150mm max.
Programmable spindle rounds	0 - 7,500 r.p.m.	0 - 15,000 r.p.m.
Spindle power	7.5 HP - 5.5 KW	11 HP - 8 KW
Total installed power	24 HP - 18 KW	28 HP - 21 KW
Overall dimensions	3,400 x 2,300 x 2,100mm	3,400 x 2,300 x 2,100mm
Weight	4,000 Kg.	4,000 Kg.



**Second step:
electronic
measuring
and centring
of glass**



**Third step: glass
deposit on working
machine bed**



**Fourth step: unloading
of worked glass
and deposit
on pallet**

and polishing of edges, the machine can also perform the following operations (having a spindle with internal water jet):

- holes;
- pin and screw inserts;
- internal and external millings and routings.

FURTHER FEATURES

The desired profile is carried out means of a CAD-CAM automatic design station. Up to three wheels (two diamond and one polishing) can be stacked on the spindle in order to grind and polish the glass without any tool holder change. More than one glass sheet can be positioned on the working table.

Loading/unloading operations are carried manually by the operator. On request, the machine can be equipped with a loading/unloading robot (optional). The table has special stops to centre the glass and special suckers to fix it. Zenedge is programmed by means of CAD-CAM system (included), using a personal computer (not included).

The machine is supplied complete with:

- CAD-CAM software with the possibility of using parametric figures;
- ethernet card for connection between CN and PC;
- tele-assistance by modem (optional);
- software for routing bit and diamond wheel oscillation during grinding;
- software for decorating on glass surface;
- DXF software to import or export drawing from/to other systems;
- software for suckers and centring stops positioning;
- automatic lubrication plant with timer;
- 150mm ø suckers;
- 95mm ø suckers;
- pneumatic centring stops;
- conic ISO40 tool-holders (8 pieces) - (only for Zenedge 22/8);
- dressing device for polishing wheel (optional). ■

***Export Manager**

FRATELLI LOVATI - ITALY

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