

# Advanced technology for flexible production

*Keraglass Engineering provides complete lines for screen printing and tempering, from aligners at the exit of the glass, from the washing machine to stacking, loading and packing machines. The Keraglass line which has recently been installed at the glass decorating company VAM Elettrodomestico, for instance, offers important advantages in terms of versatility, such as the facility to carry out different decorating processes simultaneously on separate sheets of glass.*

**KERAGLASS ENGINEERING**



**Keraglass  
printing line**

## TURNKEY SOLUTIONS

Keraglass Engineering is therefore well placed to supply complete turnkey plants for screen printing and tempering. An "all-in-one" completely automatized printing line with adjoining tempering furnace has been supplied, for instance, to VAM *Elettrodomestico*. The company is one of the largest belonging to the Italian Matesco group and produces three colour decorated glass panels.



PRODUCTION RATE OF THE TEMPERING FURNACE (for glass of 4 mm thickness)			
SIZE	PIECES/HOUR	SO.M./HOUR	MODE
400 x 300 mm	1,900	228	without "speed-up" neutral glass
400 x 300 mm	1,600	192	without "speed-up" screen-printed glass
2,000 x 300 mm	345	207	with "speed-up"

700 x 1,000 mm. The whole line is controlled by a panel with PLC and by a panel-view positioned at the centre of the line for setting the various operating parameters: set-point temperature of the drier, loading and unloading frequency of the compensators, speed of the line, etc.). Each printing machine has its own operating panel for setting the printing parameters.

The line can be operated to carry out just one or two decorating processes, leaving the stations which are not relevant to the process in semi-automatic mode, so that the glass sheets simply pass through them.

It is also possible to use part of the line to carry out two decorations on one sheet while the rest of the line is used to decorate a separate glass sheet. This is possible thanks to special sections distributed along the line for the insertion and extraction of the glass.

## THE DECORATING PROCESS

After being loaded at the entrance to a washing machine, the glass sheet is transported through various "stations", the first being a Keraglass *Deco-Glass 70/100* printing machine. Once decorated, the glass sheet is placed on an illuminated table for quality control, where the operator can check whether there are any imperfections without interrupting the production flow.

The glass then proceeds to the first dryer, the *Dry-Glass*, where it is dried, then immediately cooled by means of a cooling unit mounted directly on the dryer.

Before reaching the following printing stations, the glass passes through a compensator, which stacks the sheets vertically whenever the flow is interrupted for cleaning of the screens. The glass then passes through two further printing and drying cycles.

## VERSATILITY

For medium elaborated decoration or whole surface decoration, the production capacity of the line is 15 pieces per minute maximum, with sheets measuring from 280 x 280 mm to

Keraglass  
tempering  
furnace

## NON-STOP TEMPERING

Situated beside the printing line is a Keraglass continuous-cycle tempering furnace, for glass thicknesses of 2.8 to 10 mm. This means that all the different types of decorated glass, whether they be panels for household electrical appliances, glass doors for furniture or low-E and reflective glasses, can be treated. In addition, thanks to the installed "speed-up" facility, glass doors and panels for shower cubicles up to 2,200 mm in length can be by tempered with a machine no longer than 37 metres.

The success of Keraglass' machines is due above all to their great flexibility, to the speed with which parameters can be reset and to their high precision and repeatability.

KERAGLASS ENGINEERING  
ITALY