




SYSTEM DIGITAL

CREAGLASS,
THE INNOVATIVE DIGITAL
GLASS PRINTING SYSTEM



System Digital is the business unit dedicated exclusively to the application of digital printing on glass and other materials. It is a division of the Italian company System Ceramics that is an international leader in industrial automation for the ceramic sector especially in digital decoration. The deep experience and know-how of the company has led to the development of high-end glass technology.

Creaglass is a high-performance single-pass drop-on-demand inkjet digital printing system that allows to print on the substrate, offering important applicative solutions in the field of glass for architecture/construction, automotive, household appliances and means of transport. With the development of this innovative glass digital printing process, System Digital has opened up new possibilities for glass printing, ensuring speed, flexibility

and a high level of quality and repeatability.

HIGH DEFINITION PRINT HEADS

Creaglass is fitted with advanced print heads, which are managed by newly-developed technologies, since one of the objectives of the printing process is to carry out specific functions for industry.

Every SG777 head houses rows of parallel nozzles, staggered and arranged angularly. This patented positioning system allows



to eliminate possible printing defects, such as banding, uniformity of coating near a number of heads and the risk of missing nozzles.

With regards to the computing power, Creaglass is equipped with the CoreXpress platform, developed inside the System Electronics (the company department devoted to industrial electronics). CoreXpress is the processing unit that oversees all the operations to be performed in order to reproduce the image on the surface. It is a latest-generation processor that can make use of a fast

and immediately available memory.

CREAVISION

The internal development of the electronics has enabled the design of innovative functionalities which are unique on the market. Creaglass is also equipped with a powerful full-view vision system, Creavision, fitted with latest-generation video cameras which frame the entire printing area and analyse, control and process the exact position and inclination of the substrate, transmitting the data to the print module which, in real time, carries out a perfect centring of the graphics on

the glass, ensuring perfect coverage of the edges.

This 'operating logic' solution has made it possible to overcome the complexities of mechanical centring systems, reducing line set-up times and achieving enhanced production performances thanks to the 'real-time' printing of the substrate. In addition, the full-view Creavision makes it possible to read the entire printing area upon input into the machine, so as to be able to print also different glass surfaces on a number of rows.

The maximum printing width of 2000mm allows to convey a number

of production lines into Creaglass system and print up to four rows of product simultaneously.

Last but not least, the process enables to read the real position of the glass on the rollerway, and the possibility of adjusting the ink drop to up to eight pl guaranteeing an absolute edge-to-edge print.

CREAGLASS: A COMPLETE PROCESS

From the point of view of its structure, Creaglass is made up of different frames corresponding to the different phases of the printing process. Every frame can be configured and imple-



mented at any time on the basis of particular production and space requirements, thereby ensuring a high level of customisation. System Digital guarantees the quality of the printing, offering all the phases necessary in the decoration process in a compact solution composed of independent two point five metre modules.

The Creaglass printing system is made up of:

- Loading – the material is introduced into the printing process via a loading rollerway;
- Pre-heating – the substrate is transported inside the heater where it reaches

the appropriate surface temperature for printing;

- Image scan – having reached the necessary temperature, the substrate is scanned by the Creavision full-view vision system, which identifies the precise position of the material and passes the coordinates to the printer;
- Digital printing – on the basis of the correct coordinates of the substrate, Creaglass's nozzles come into operation for the high definition printing;
- Drying – after the printing phase the ink is fixed and dried on the glass substrate;

- Cooling and unloading – once the printing process has finished, the substrate is ready for tempering. The cooling module can be inserted in the event that the substrate has to be handled by technical personnel following the drying phase.

Through its System Digital business unit specialising in research and development of high-end digital printing processes, System Ceramics has sought to offer a printing system on glass of great potential, which makes it possible to use approved temperable glass inks and guarantee high definition

(777dpi) edge-to-edge printing, while enabling the printing of a number of glass surfaces simultaneously up to a speed of ten linear metres per minute.

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