

efi Cretaprint SOL

Digital Inkjet Printers

EFI digital inkjet solutions
for the **Technical Porcelain**
tile production

Go over the limits

The advantages of the modern inkjet technology are now at reach of TECHNICAL PORCELAIN tile producers, who can go over the limits of designs and productivity.

Digitally printed Technical Porcelain. A growing high value market.

Technical Porcelain has particular characteristics that no other ceramic product can match. Its superior hardness and high wear resistance makes it ideal for high transit applications, where glazed porcelain is not recommended, and is a good alternative to high value natural stone such as marble or granite.

Traditional analog printing methods for technical porcelain decorations are limited in quality and product versatility. Digital printing breaks these past limits and enables a new horizon of design and customization, providing additional value to producers of technical porcelain tiles and large slabs.

Unleash new design and customization possibilities with EFI Cretaprint SOL digital printing solutions:

Digitally printing for technical porcelain tiles offers substantial advantages over traditional methods, now at reach for innovative tile producers:

- Unique and non-repeating singular designs. High variety of graphics.
- Increased production flexibility to adapt to customer demands and respond faster to market trends.
- Superior graphics and designs. High intensity, high detailed designs.
- Digital processed colors for more and richer colors. Smooth gradients and transitions. Subtle design detail reproduction.
- Productivity and reliability. Non-contact printing technology eliminates tile breakage due to printing contact and analog-related printing defects.
- Product formats. Can print on non-flat surfaces.
- Water free process. Eliminating usual defects caused by water such as micro cracking and superficial porosity.
- Using a high quality porcelain top charge, increases design quality, optimizes the consumption of inks and reduces grinding costs.

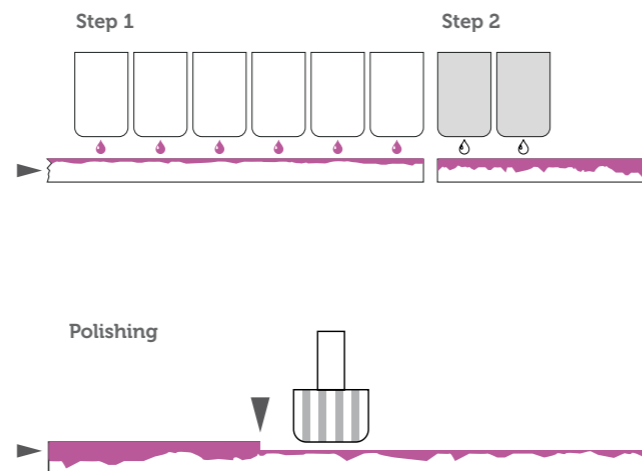
The EFI Cretaprint SOL printing process.

The printing process consists of two consecutive steps:

1. Porcelain Dyes inkjet inks are jetted directly onto the dry pressed porcelain body creating a colored image on the surface of the tile.
2. A special diffusion colorless ink is jetted on top and forces the Porcelain Dyes to diffuse into the top layer of the green porcelain body.

- polishing for glossy finish is possible after firing.
- also ensures long lasting image permanence even under high transit conditions.

To improve performance even further, double-charge with a high quality porcelain top layer is recommended, providing additional wear resistance, image sharpness, color intensity and glossy finish.



EFI Cretaprint SOL: A portfolio of digital solutions.

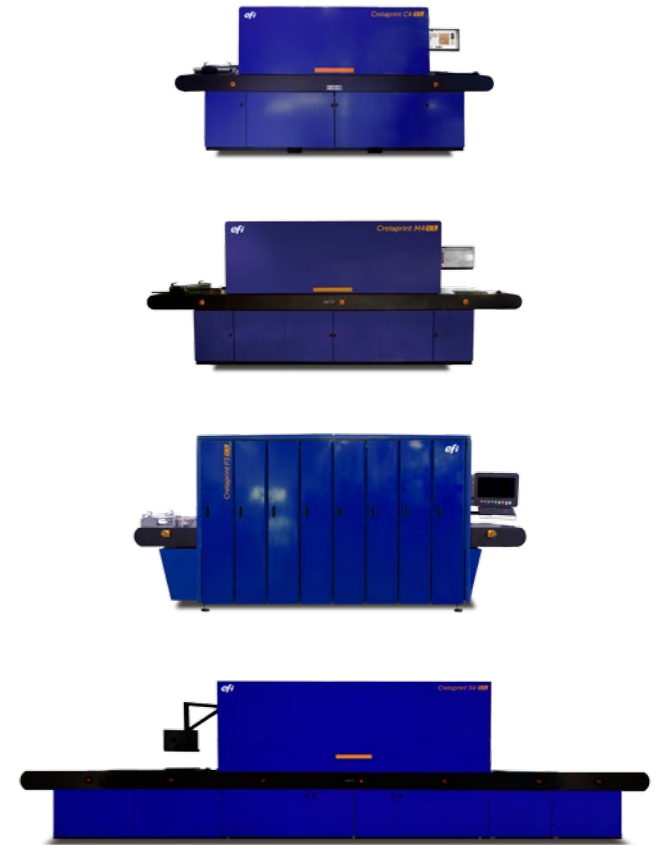
EFI is offering a portfolio of digital inkjet solutions designed specifically for the Technical Porcelain tile production:

1. The EFI Cretaprint SOL range of printers:

- With a capacity of eight bars, the inkjet Porcelain Dyes and diffusion inks can be applied with a single machine.
- Using high ink laydown printheads in every single bar, best solution to obtain maximum color intensity at the surface or in depth.
- Developed for a reliable and sustainable performance on the production line:
 - Special materials and parts: rigorously tested to be chemically compatible with any of the approved Porcelain Dyes inkjet inks.
 - Optimized ink system for a reliable printer performance under maximum ink laydown requirements, avoiding aging the Porcelain Dyes inks, and eliminating any possible risk of electrostatic issues.

2. EFI Fiery proServer for accurate design and color reproduction.

3. A choice of EFI Cretaprint approved inkjet Porcelain Dyes inkjet inks.



EFI Cretaprint SOL Printers outstanding features:

- Solutions from 700mm to 1800mm Printing width
 - C4 SOL, M4 SOL, P3 SOL, X4 SOL
- 8 printing bars for inks and diffusion additive
- High ink laydown printheads.
 - Up to 30g/m² at 25m/min
 - Toshiba TEC CF1 XL
 - XAAR 1002/1003/GS40
- Uses oil based inkjet soluble salt inks
- Up to 6 greyscale levels, optimized waveforms.
- DTP 2.0

EFI Cretaprint SOL machines features:

- EFI Electronics
- Ink system with automatic reverse flow
- Friendly User Interface
- Advanced contactless nozzle cleaning system
- Vacuum system in between the bars
- Laser detector of tile thickness
- Double Tile Printing
- Tone Adjustment System (TAS) and UPS

Technical Data

PRINTHEAD MODEL	TTEC CF1XL	XAAR 1002/1003/GS40
Printheads width (mm)	53,5	70,05
Number of nozzles	636	1000
Native resolution (dpi)	300	360
Drop size range (pl)	36 - 180	40 - 160
Greyscale levels	Up to 6	Up to 5
Firing frequency (kHz) jetting max drop volume	4,8	6
g/m ² (0.9 g/ml; at 25m/min)	30	40

MACHINE SPECS	C4 SOL-M4 SOL-P3 SOL-X4 SOL
Number of inks	up to 8
Print direction	right / left
Min. tile thickness (mm)	3
Max. tile thickness (mm)	30
Max. tile length (mm)	3000
Print speed (m/min)	up to 70 m / min
Centering printing precision	< 0,3 mm

Information according to the print-head manufacturer

EFI fuels success.

Used by tens of millions of professionals around the world, EFI is the only technology company that creates products and services exclusively focused on helping businesses and enterprises be more successful.

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