Cretaprint

Digital Inkjet Printing System
for Ceramic Industry

6th Gen Digital Inkjet Printing System

Smart Connectivity | Enable Production Line Collaboration





Integration · Stability · Smart Connectivity
Driving Industry 4.0 Production Efficiency

DPI Cretaprint delivers competitive, end-to-end digital printing solutions and comprehensive services tailored for the ceramics industry. Our solutions are engineered and optimized to align closely with sector-specific needs, driving gains in both production efficiency and product quality.

The 6th Gen digital inkjet printer enhances full-line data connectivity and intelligent coordination, enabling seamless communication between equipment, processes, and management systems. It supports a wide range of printhead models, with custom configurations to suit any production workflow.

Built on core strengths in flexibility, throughput, and reliability, the digital inkjet printer meets the precision demands of high-end custom production while supporting the high-volume, high-speed output required for mass manufacturing. It continuously elevates productivity and quality, while aligning with the industry's growing focus on environmental sustainability.

Cretaprint

6th Gen Digital Inkjet Printer

Smart Connectivity · Enable Producion Line Collaboration

More Printhead Options

Built on proven 5th gen technology, it supports multiple printheads (Dimatix StarFire 1024, Seiko RC536, Ed5) for diverse production scenarios.

Intelligent Line Integration

It seamlessly links upstream and downstream equipment to automate process handoffs, enabling fully automated production workflows.

Full-line Data Connectivity

Seamless integration with production management systems and peripheral equipment breaks down data silos, enabling fully digital factory operations.



Multi-Printhead Compatibility
Adaptable to diverse production processes

Intelligent Ink Recirculation System
Reduces ink sedimentation, supports high-flow printheads

Constant Temperature Control System
Stabilizes ink viscosity, minimizes color deviation

TAS Color Adjustment System
Accurate color control, fast color adjustment

Cretafit AI Vision System
Real-time calibration ensures precise pattern alignment

CretaVision Relief Recognition
Precision alignment for relief tile printing

SYNC Digital Synchronization
Synchronized multi-unit operation for high throughput

Unique ID for Full-process Traceability
Full-process traceability

Full-line Data Connectivity
Seamless data sharing & connectivity

Cretaprint
6th Gen Digital Inkjet Printer

The 6th Generation Cretaprint digital inkjet printer carries forward the brand's modular, multi-functional design philosophy. While retaining its proven durability and core technological advantages, it delivers fully upgraded full-line data connectivity and coordination, providing the ceramic industry with efficient, flexible and sustainable digital printing solutions.



Multi-Printhead Compatibility

Flexible Production, Lower Costs, Higher Efficiency

The 6th Generation Cretaprint digital inkjet printer supports simultaneous integration of diverse printhead types. It enables flexible combinations of printheads with varying capabilities within a single workflow, for seamless, efficient multi-process integration.

For specialized applications, the printer supports flexible multi-printhead configurations,, fully leveraging the technical advantages of each printhead to meet complex production requirements. This enables high-efficiency multi-process output from a single printer, eliminating the need for multiple printer changeovers. The result is reduced downtime and lower operational costs, delivering a highly flexible, cost-effective solution for ceramic digital printing.

Comprehensive Technical Upgrade

Built on the proven foundation of the 5th generation, the 6th generation Cretaprint printer delivers a comprehensive leap forward in technical evolution, with transformative upgrades across multiple core functionalities:

- **Mechanical Precision:** Featuring an advanced printhead assembly process, it enables ultra-precise alignment and ensures long-term operational stability and reliability.
- **TAS AI Color Adjustment System:** Offers synchronized color intensity adjustment across all channels, with targeted single/dual-channel tuning to refine existing jobs. Delivers precise color enhancement and reduction on demand.
- **Ink System:** Delivers closed-loop control for each color channel, enabling full ink recirculation. Equipped with precision thermostatic control to maintain stable ink conditions, ensuring consistent color output.



*Sliding Print Bar

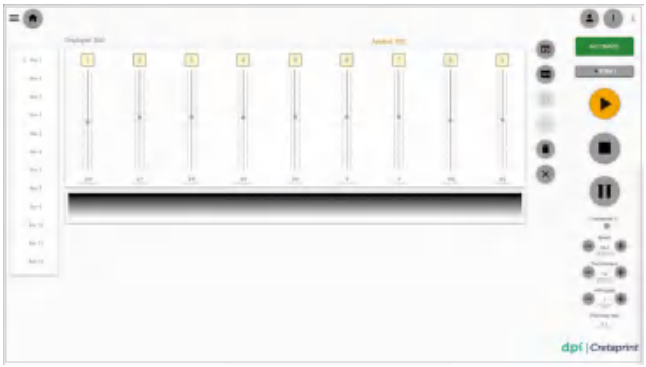


*Constant-Temperature Ink Tank with Agitation System

- **Intelligent Control Software:** Equipped with all-new in-house developed printing software, it supports real-time communication between multiple devices, enabling highly efficient automated operations.



- **Intelligent Density Compensation System:** Accurately controls ink density in printhead overlap zones, using smart parameter matching to eliminate color banding. The result is seamless color transitions and premium-quality finished products.



Industry 4.0 Smart Collaboration Upgrade

The Cretaprint printer is optimized for smart factory environments, delivering enhanced flexibility and reliability in collaborative operations:

Communication 4.0

This streamlines integration into smart production lines during commissioning or upgrades. When paired with compatible equipment, it enables synchronized multi-device collaboration, supporting flexible manufacturing and seamless data interoperability.

*This function requires interoperable equipment support.

TECHNICAL DATA

SPECIFICATIONS	C6	D6	M6	N6	P6	P6+	P6 L	P6+ L
Max. printing width	27.72 in (704 mm)	27.72 in (704 mm)	45.35 in (1152 mm)	45.35 in (1152 mm)	55.43 in (1408 mm)	55.43 in (1408 mm)	78.54 in (1995 mm)	78.54 in (1995 mm)
No. of inks	Up to 8	Up to 12	Up to 8	Up to 12	Up to 8	Up to 12	Up to 8	Up to 12
Print direction	Right / Left							
Min. tile thickness	From 0.12 in (3 mm)							
Max. tile thickness	1.18 in (30 mm)				2.36 in (60 mm)			
Print speed	Up to 196.85 ft/min (60 m/min)							
Centering printing precision	0.012 in (<0.3 mm)							
MACHINE ASSEMBLY	**C6**	**D6**	**M6**	**N6**	**P6**	**P6+**	**P6 L**	**P6+ L**
External power supply	Variable (380 / 400 / 440 / 480V)							
Max. power consumption (8 colors)	24 KVA	32 KVA	30 KVA	42 KVA	53 KVA	65 KVA	65 KVA	78 KVA
Electrical phases	3F + GND							
Power connection frequency	50 / 60 Hz							
Pneumatic connection	Line 1:73-123 psi (5-8.5 bar) Line 2:102-123 psi (7-8.5 bar)							
Cabin recommended temp	72-79 °F (22 - 26 °C)							
UPS included	Yes							
DIMENSIONS PRINTER	**C6**	**D6**	**M6**	**N6**	**P6**	**P6+**	**P6 L**	**P6+ L**
Width	5.41 ft (1650 mm)	5.41 ft (1650 mm)	6.89 ft (2100 mm)	6.89 ft (2100 mm)	7.22 ft (2200 mm)	8.04 ft (2450 mm)	11.68 ft (3560 mm)	11.68 ft (3560 mm)
Height	6.40 ft (1950 mm)	6.73 ft (2050 mm)	6.73 ft (2050 mm)	7.45 ft (2270 mm)	7.94 ft (2420 mm)	7.83 ft (2385 mm)	8.27 ft (2520 mm)	8.27 ft (2520 mm)
Length	13.12 ft (4000 mm)	16.40 ft (5000 mm)	16.08 ft (4900 mm)	20.01 ft (6100 mm)	20.51 ft (6250 mm)	25.62 ft (7810 mm)	32.32 ft (9850 mm)	39.37 ft (12000 mm)
DIMENSIONS CABIN	**C6**	**D6**	**M6**	**N6**	**P6**	**P6+**	**P6 L**	**P6+ L**
Width	12.14 ft (3700 mm)	12.14 ft (3700 mm)	15.42 ft (4700 mm)	15.42 ft (4700 mm)	21.33 ft (6500 mm)	23.13 ft (7050 mm)	24.8 ft (7560 mm)	24.8 ft (7560 mm)
Height	9.19 ft (2800 mm)	9.19 ft (2800 mm)	9.19 ft (2800 mm)	10.83 ft (3300 mm)	10.83 ft (3300 mm)	10.83 ft (3300 mm)	11.48 ft (3500 mm)	11.48 ft (3500 mm)
Length	18.04 ft (5500 mm)	18.04 ft (5500 mm)	21.33 ft (6500 mm)	25.26 ft (7700 mm)	26.25 ft (8000 mm)	30.38 ft (9260 mm)	38.88 ft (11850 mm)	45.93 ft (14000 mm)

Cretaprint

TECHNICAL DATA

PRINTHEADS							
Printhead type	Seiko RC 1536	Seiko RC 1536 · L	ED5	EQ5	EQ5 L	Dimatix SG 1024 MC	Dimatix SG 1024 HFL
Native resolution (dpi)	360	360	360	360	360	400	400
Drop size range (pL)	13 - 98	25 - 225	22 - 110	12 - 100	30 - 220	22 - 66	35 - 150
Grayscale levels	Up to 8	Up to 8	Up to 6	Up to 6	Up to 6	Up to 4	Up to 4
Firing frequency (kHz)	Up to 37	Up to 37	Up to 41	Up to 41	Up to 41	Up to 35	Up to 20
Laydown gr/m² @25 m/min*	Up to 40	Up to 80	Up to 68	Up to 45	Up to 85	Up to 40	Up to 65

Remarks: * It is related to the ink characteristics.

SOFTWARE	
Image file type	TIFF, PSD and RPF
Rendering time	Variable
Image loading time	1 - 15 s
Image changing time during production	1 s
Parallel RIPing and printing	Yes
Number of images per model	100
Print an image without stopping	Yes
Cretafit: Tile printing angle intelligent reconition and correction system	Optional
CretaVision: Relief recognition system	Optional
Double tile printing	Optional

Printer in development, specifications subject to change without notice.





Cretafit **Optional*

AI Vision System for tile printing position adjustment.

Cretafit redefines alignment accuracy and calibration efficiency in ceramic digital printing with AI vision technology.

At the infeed, it detects tile positions on the conveyor in real time, applying pattern translation and rotation correction to ensure perfect print-to-tile registration. No stops, idle time, or rendering delays are needed, keeping production running continuously and at peak efficiency.

Integrated with Cretaprint electronics and software, Cretafit unlocks the machine's full potential, boosting automation and mechanical alignment accuracy. It achieves millimeter-perfect print registration, handles complex workflows, and reduces manual calibration work.



AI Real-time Alignment

- Accurately identifies tile positions at the infeed and performs real-time pattern translation and rotation correction. No stops, waiting, or rendering delays are required.

Precision Centering

- Ensures perfect pattern alignment to the tile center, preventing overprinting and ink waste. This keeps the conveyor belt clean and significantly reduces maintenance costs.

Millimeter-Level Positioning

- Equipped with a HD vision system, it comprehensively captures tile surface and location data. It transmits information in real time to dynamically adjust print graphics.

Minimized Physical Damage

- Effectively reduces physical wear and breakage rates of tiles, minimizing waste at the source and enhancing overall product quality and production yield.

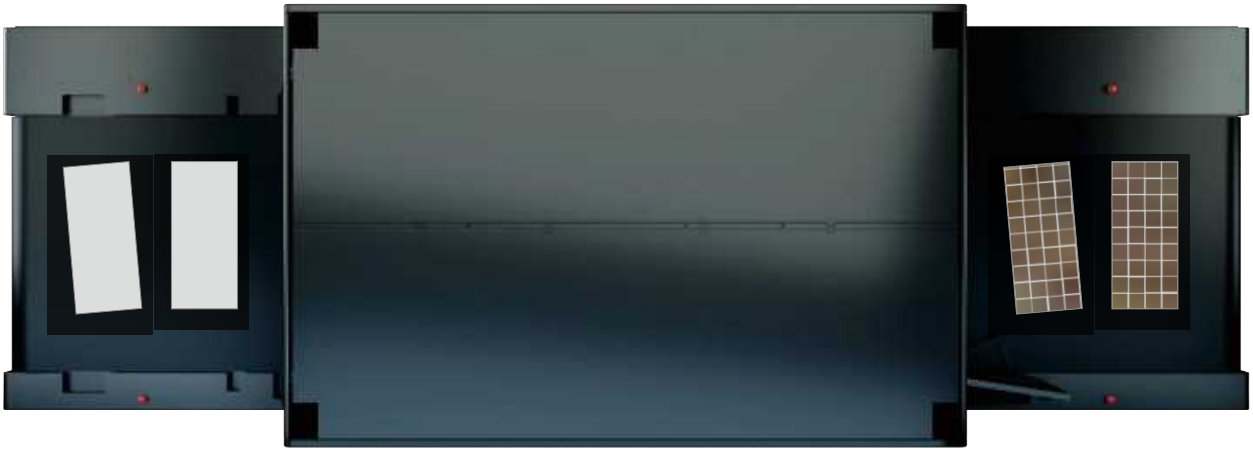
Adaptable to Complex Scenarios

- It accommodates tiles that are hard to position or thin and fragile, significantly reducing manual calibration effort.

*Small-format tiles can be directly loaded into the printers, while oversized tiles require a dedicated loading platform. For more details, please contact DPI

AI Vision System
Enabling High Efficiency Ceramic Production

The Cretafit AI vision system detects the position of every moving tile on the conveyor in real time at the printer infeed. It synchronizes position data to the print software, automatically correcting pattern translation and rotation for millimeter-level print-to-tile alignment. No manual intervention is required throughout the process.





Cretafit offers broad compatibility, with flexible installation on all Cretaprint 6th generation printers, as well as retrofit support for Cretaprint 5th generation and Cretaprint Shield models. It accommodates diverse processes including digital glazes and special ceramic effects.

By perfectly centering designs on the tile surface, it eliminates overprinting and reduces ink waste, keeping the belt system clean. It also lowers defect rates, reduces tile scrapping, optimizes non-quality-related costs, and boosts overall production efficiency.

CretaVision 2.0 **Optional*

Core Configuration for Precision Relief Tile Printing

A vision sync system purpose-built for decorative relief tiles.

Powered by integrated AI vision hardware, it accurately detects tile relief textures and perfectly aligns print patterns with surface contours. It operates independently of print order, ensuring consistent, precise decorative results.

Intelligent Relief Surface Recognition

- Automatically and accurately identifies the relief-molded surface of the green tile, enabling precise pattern-to-mold alignment printing.

Multi-Size No-Adjustment Adaptation

- With a fixed camera design, it accommodates different tile sizes without mechanical adjustments. This enables fast, efficient format changes and significantly boosts production flexibility.

Industry 4.0 Seamless Integration

- It supports integration with digital production line systems for data interoperability, enabling end-to-end factory digitization and smart manufacturing upgrades.

CretaVision Main Features

- Compact camera with embedded high performance processor
- All processing is performed onboard, requiring no external computing resources
- Internal RAM for storing backups
- High processing speed at only 0.3s
- Supports up to 20 different reliefs
- Integrated lighting system ensures consistency
- Easy configuration with an intuitive user interface



The CretaVision 2.0 Compact Camera in place

*Small-format tiles can be directly loaded into the printers, while oversized tiles require a dedicated loading platform. For more details, please contact DPI

Requirements

- Cretavision 2.0 is available for Cretaprint 4th , 5th and 6th gen printers for seamless integration with both new and existing equipment.
- Cabin must maintain consistent lighting intensity.
- Relief depth greater than 1.5 mm*



The CretaVision 2.0 Compact Camera in place

Media Handling

- Minimum size of the tile: 200 * 200 mm
- Gap between tiles: 10 mm
- Number of patterns: 20
- Compatibility with DTP: Yes; 2 cameras needed

Environmental Considerations

It is recommended not to install Cretavision under the following conditions:

- Wetness, dust or poor ventilation
- Places where the system is exposed to direct sunlight or increases in temperature
- Places where there may be ramble or corrosive gases
- Places where the system is exposed to strong vibrations or impacts
- Places where the system is exposed to splashing water, oils or chemicals
- Places that are a source of static electricity



Example of the type of tiles where Cretavision can be helpful





Example of the type of tiles where Cretavision can be helpful

*For tile relief depth identification, please contact DPI for confirmation.

CretaVision

Making Industry Smarter!

DPI is a global technology enterprise, specializes in the R&D, manufacturing, sales, and service of high-speed industrial digital inkjet printers. DPI delivers innovative digital printing solutions to diverse industries such as ceramics, building materials, textiles, and packaging. For more information, please visit www.dpi-t.com