New Era Technology in Digital Ceramic Glass Printing
Architecture | Interior | Industrial | Automotive
Dip-Tech
The Digital Glass Printing Leader

Dip-Tech, a Ferro company, is the pioneer and the leading provider of digital ceramic glass printing. With state of the art printers and unique vivid and durable ceramic inks, it delivers superior printing productivity and quality solutions for architecture, interior design, industrial & automotive glass. Dip-Tech opens exciting capabilities and opportunities for glass processors by complementing its printers and inks with advanced tools, global logistics and support, graphics, marketing and business support. Dip-Tech’s investment in the development of ceramic inks and printers has led to many innovative and patented technologies, particularly in the areas of ink formulations and printing technologies. As the pioneer of digital ceramic glass printing solutions, Dip-Tech holds more patents than any other company in the digital glass printing field.

Combining art with functionality, Dip-Tech glass is the choice of architects and designers worldwide, and so enhances thousands of projects across the globe, including many iconic structures. Additionally, relying on Dip-Tech industrial solutions for over a decade, Dip-Tech’s worldwide customer base has produced millions of glass products for automotive, transportation and specialty glass applications.

Build Your Business With Dip-Tech's Complete Solution

Our Products
- Digital Glass Printers
- Digital Ceramic Inks
- DXP Graphic Software

Tools for Success
- Architects & Business Support
- Graphic & Design Support
- Marketing Support
- Global Customer Support & Logistics

SUCCESS

Dip-Tech Digital Glass Printing Process

1. Glass Processing
2. Image Preparation
3. Digital Printing
4. Drying
5. Tempering / Firing
6. Flat / Curved Glass
7. Glass Lamination / Insulation

Cool Gelato, Elato, Happiness...
New Era Technology

Premium **quality.**
Production **flexibility.**
Extraordinary **throughput.**

Dip-Tech's New Era Technology brings together innovative printers, inks and software R&D, state-of-the-art technologies, and over a decade of field experience in architecture, interior and automotive glass.

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## Innovative New Era printing engine

- Automatic fast color change system
- Automated ink recirculation in the print head
- Wide Gradual Drop Placement – high quality at high speeds
- Durable stainless steel nozzle plate
- Fully refurbished printing components
- Powerful dual-technology Drop Fixation for quality and efficiency

## Extra-vivid and vibrant printing technology

- Integrates Dip-Tech ceramic inks, printing engine, and software
- The Most opaque & vivid printing solution

## NExT

Maintain the printer with a single screen for:

- Fully digital management of efficient maintenance & calibration
- Online system monitoring
- Fast job loading and editing (including multiple jobs in parallel)
- Printing parameters control
- Add and edit variable data (part numbers, tracking numbers)
- Creating frames / solid jobs quickly from the machine
- Design a variety of multi-job plates

## DXP software

A complete user-friendly software package for turning any graphic file into printed glass project.

- Most vivid and vibrant color ceramic printing
- Advanced, automatic graphic file conversion
- Pattern Generator – automatic conversion to patterns
- Easy scale-up for facades, tiling & paneling
- Color Atlas – matching thousands of RAL/Pantone colors

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*Million Drops Per Second*
New Era Technology delivers premium-quality results with extraordinary throughput

**Maximum Throughput per Application**

- Single-color dots & lines
  - Up to 450 sqm/hr
  - Up to 4800 sqft/hr
- Multi-color patterns
  - Up to 270 sqm/hr
  - Up to 2900 sqft/hr
- Photorealistic images
  - Up to 80 sqm/hr
  - Up to 860 sqft/hr

**Production Versatility**

- Up to 12 ink channels
- Printing array enables seamless multi-application process
- Different high speed applications without changing ink tanks
- NEXT - State-of-the-art user interface - a simplified workflow

**Printing Engine**

- Up to 460 Million Drops Per Second
- High jetting frequency enables fast printing passes

**Maintenance**

- Automatic fast color change system
- Nearly zero maintenance yet fully automatic
- Automated ink recirculation in the print head

**Quality**

- Variable drop size - for high image quality and flexibility
- High-power dual technology Drop-Fixation system

**Operation**

- Stationary glass printing for unmatched accuracy
- Optimized footprint reduces production floor space requirements
- NEra Inline Dryer – fully integrated powerful drying

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### Key Specifications

<table>
<thead>
<tr>
<th></th>
<th>NEra-D150</th>
<th>NEra-D250</th>
<th>NEra-D300</th>
<th>NEra-D460</th>
</tr>
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<tbody>
<tr>
<td><strong>Maximum glass size</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Width</td>
<td>2800/3300 (mm), 110/130 (in)</td>
<td>2600/1800 (mm), 102/720 (in)</td>
<td>2600/1800 (mm), 102/720 (in)</td>
<td>2600/1800 (mm), 102/720 (in)</td>
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<td>Length</td>
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<td>Jetting power - Million Drops Per Second</td>
<td>150 MDPS</td>
<td>250 MDPS</td>
<td>300 MDPS</td>
<td>460 MDPS</td>
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<tr>
<td>Printing resolution</td>
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<tr>
<td>Drop size</td>
<td>10pl / variable drop size</td>
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<tr>
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<td>12</td>
<td>12</td>
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<tr>
<td>Minimum glass size</td>
<td>400 x 400 / 800 x 800 (mm) *</td>
<td>16 x 16 / 32 x 32 (in) *</td>
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<tr>
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<tr>
<td>Inks</td>
<td>Dip-Tech SPECTRUM Inks, Dip-Tech Extra Durable S1 Inks, SPECTRUM Sense, Dip-Tech Slip-Resistance Ink, Dip-Tech Architectural Light Diffusion Ink</td>
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<td>Empowered Drop-Fixation</td>
<td>Included</td>
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<tr>
<td>Software</td>
<td>DXP3 Advanced (includes RIP, Pattern Generator, Color Atlas)</td>
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<tr>
<td>Inline pass through conveyor</td>
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<tr>
<td>Overall dimensions</td>
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<tr>
<td>Ambient temperature</td>
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<tr>
<td>Electrical phase</td>
<td>3X16A</td>
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</tr>
</tbody>
</table>

*The machine can accommodate to smaller size glasses by using a carrying glass or adapting plate.

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**Available in different lengths, from 2.6 to 18 meters**

**Production Flexibility**

Endless color configurations and beyond, fast economical and automatic change from one to another.
New Era Technology delivers premium-quality results with extraordinary throughput

- Up to 200MDPS
- NEXT - State-of-the-art user interface enables a simplified workflow
- Modular, flexible-size solution
- Easy periodical maintenance
- Dual technology Drop-Fixation system enables high quality and efficiency
- Variable drop size high image quality and productivity for all applications
- Automated ink recirculation in the print head

**Indicative Maximum Throughput (depends on: number of MDPS, ink wet layer thickness, glass/print size, colors configuration, printing modes).**

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**Key Specifications**

<table>
<thead>
<tr>
<th></th>
<th>GPI150</th>
<th>GPI200</th>
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<tr>
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<td></td>
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<td>Up to 1410 DPI</td>
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<td>Drop size</td>
<td>10pl / variable drop size</td>
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<td></td>
<td>32 x 32 (in) *</td>
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<td>Glass thickness</td>
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<tr>
<td>Drop-Fix</td>
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<td>Software</td>
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<td>390 x 200 x 65 (in)</td>
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<td>Ambient temperature</td>
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</tr>
</tbody>
</table>

*The machine can accommodate to smaller size glasses by using a carrying glass or adapting plate.

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**Available in different lengths, from 1 to 6 meters**

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**Production Flexibility**

Various color configurations, economical and simple change from one to another.
Architecture Applications
The Choice of Architects & Designers

By overcoming the traditional restrictions of architectural glass printing and decoration methods, Dip-Tech has inspired thousands of architects and designers to explore new avenues of creativity for modern and sustainable designs that meet the highest standards for durability, quality and functionality.

Thousands of Dip-Tech printed projects are the work of world-leading architects who have established outstanding landmarks and won prestigious awards.
Dip-Tech New Era Technology takes glass design for interior surfaces and applications to the next level of creativity, beauty and durability.

It adds enormous value to commercial and home interior design glass applications – for dividers, partitions, doors, windows and shower glass. It is increasingly being used as a replacement for traditional materials and surfaces, such as kitchen backsplashes, table tops, wall covers and glass art. Artists are also choosing Dip-Tech printed glass for art and cultural installations. With Dip-Tech, the design options are endless!
### Key Specifications

<table>
<thead>
<tr>
<th></th>
<th>NEra-V300</th>
<th>NEra-V460</th>
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<td>460 MDPS</td>
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<td># of channels</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Minimum glass size</td>
<td>400 x 400 (mm) *</td>
<td>16 x 16 (in) *</td>
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<tr>
<td>Glass thickness</td>
<td>2 - 19 (mm)</td>
<td>0.1 - 0.75 (in)</td>
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<td>Inks</td>
<td>Dip-Tech Automotive Black Inks</td>
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<tr>
<td>Software</td>
<td>DXP3 Advanced (includes RIP, Pattern Generator, Color Atlas)</td>
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<tr>
<td>Inline pass through conveyor</td>
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<tr>
<td>Overall dimensions L x W x H</td>
<td>4500 x 6480 x 1600 (mm)</td>
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*The machine can accommodate to smaller size glasses by using a carrying glass or adapting plate.

### Digital printing solution for industrial & automotive, transportation and specialty glass

**Production Versatility**
- Simultaneous multi-ink printing (black, anti-stick, etc.)
- Cost-effective production of larger printed batches
- Effective Cycle Time per unit production
- NEvT - State-of-the-art user interface enables a simplified workflow

**Printing Engine**
- Up to 460MDPS
- High jetting frequency enables fast movement of the printing carriage

**Maintenance**
- Easy periodical maintenance
- Automated ink recirculation in the print head

**Quality**
- Variable drop size - for high image quality and application flexibility
- High-power dual technology Drop-Fixation system for high efficiency

**Operation**
- Inline automatic indexing system for automatically registration nonsystematic glass
- Stationary glass printing for unmatched accuracy
- Optimized footprint reduces production floor space requirements

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### Automatic indexing motion system

The Dip-Tech Nera V is the first-ever digital glass printer designed for the unique demands of the automotive industry.
It includes an inline automatic indexing system that is able to automatically index and register shaped glasses, with no manual operation required.

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### Production Flexibility

Endless color configurations and beyond, fast economical and automatic change from one to another.
Digital printing for Industrial Applications: Automotive, Appliance, Furniture, and more

Millions of Dip-Tech printed automotive and transportation glass panels are in use in a wide range of vehicles all around the world. Building on this success, Dip-Tech offers a proven digital ceramic printing solution for automotive transportation and specialty glass producers who are looking for efficient digital ways to print ceramic black frames, rasters, logos and other designs for any type of vehicle.

Dip-Tech’s industrial oriented printers are the most advanced digital ceramic printing solution for automotive and repeatable patterns. It offers turbo-charged throughput, superb quality and a competitive ROI as compared to screen printing in larger batches, and it fits high-speed serial production of refrigerator-doors and furniture. The printers are capable of automatic integration into the production lines.

Segments
- Automotive replacement glass
- Rail transport, buses and coaches
- Bulletproof & protection vehicles glass
- Recreational vehicles (RV)
- Agricultural, construction & specialty vehicles
- Marine glazing & yacht Interior
- Appliances: refrigerators, ovens, gas cookers, showers
- Furniture: table tops, cupboard doors/tops

Benefits
- Digital ceramic printing solution
- Up to 300 sqm/hr for opaque automotive frames
- Cost-effective
- Increased flexibility and design customization
- No setup time or costs
- Single operator – save on labor costs
- Immediate prototype availability
- Simplified production line
- High throughput and quality
- Exceptional throughput and quality for all applications
- Superior resolution
- Fast cycle time for cost-effective production
- Proven inks
- High optical density and opaqueness
- Proven in transportation applications worldwide
- Customization and variable data printing
- Branding options - logos, serial #, features, text

Types of frames
Dip-Tech World of Colors

Dip-Tech Digital Ceramic Inks are developed by Dip-Tech chemistry experts, working together with world-leading academic institutions. The inks are fused into the glass during the tempering or annealing process, creating vivid designs. This formula results in glass that can be laminated, bent and double-glazed. Proven outdoors in thousands of projects around the globe and on millions of automotive glasses for over 10 years, Dip-Tech digital ceramic inks also add functionality such as solar control, light diffusion and transmission to glass.

Dip-Tech Architecture Inks

Core Inks

- **SPECTRUM Series**
  - High-performance, with long-lasting durability, and built-in gloss
  - Seven core colors – blue, green, white, orange, red, black, yellow
  - Numerous shades and colors based on digital mix and pre-mixed colors

Special Effects

- **Light Diffusion Series**
- **Precious Metal Inks**
- **Special Functionality**
  - Extra Durable S1 Series
  - High chemical, scratch, and environmental resistance
  - Reduced glare and reflection
  - Environmental sustainability – the inks are lead and cadmium free
  - Compliance with architecture industry standards and requirements

Anti-Slip Resistance Ink

- Excellent mechanical, environmental, UV, and chemical performance
- Complies with industry standards for anti-slip coatings
- Enables varied levels of anti-slip, based on any design

Anti-Stick Ink

- Allows glass to be pressed during the thermal process (firing and/or tempering) for bending - ideal for large glass panels, sharp angles, and furnaces that use molding.

Dip-Tech Automotive & Specialty Transportation Inks

Automotive Black Inks

- Long-lasting UV resistance - ideal for vehicles, air and sea craft.

Anti-Stick Ink

- Allows glass to be pressed during the thermal process (firing and/or tempering) for bending - ideal for large glass panels, sharp angles, and furnaces that use molding.

Dip-Tech World of Colors
Investing in a digital ceramic Glass printer is the first step in developing a promising business and adding value to various glass products. In order to enhance the learning process, business ramp-up and market share, Dip-Tech provides the end-to-end support you need in order to deliver outstanding printed glass products and increase your business potential and ramp-up.

**Architects & Business Support Team**

Dip-Tech Architects Support Team provides customer sales team training, tools, and know-how. Ongoing collaboration of Dip-Tech with thousands of architects around the globe enables us to capture project leads and share them with customers.

**Graphics & Design Support Team**

Dip-Tech's Graphics and Design Support Team provides hands-on onsite and interactive training, advice for complex projects, a Graphics Support call center and online access to a wide variety of designs, samples and resources.

**Marketing Support Team**

Dip-Tech's Marketing Support Team provides training, ready-to use marketing tools, best practices & know-how to enhance your business ramp-up.

**Global Customer Support**

Dip-Tech is experienced in supporting customers in more than 60 countries through multiple regional support centers around the globe. We offer a 24/7 service call center and onsite & interactive training & support tools anytime, anywhere.

**Post-Sale Services & System Upgrades**

Dip-Tech does its utmost to make new capabilities, features, inks, designs, and tools available to the widest install base possible, to ensure that customers are able to keep up with the latest developments even many years after the printer was installed.

**Regional Ink Supply Hubs**

Dip-Tech supplies its wide variety of ink products through several global regional hubs to ensure high stock availability, maximum ink shelf life, short delivery time.
TOOLS FOR SUCCESS

INTERIORI – Redefining Interior Surfaces
INTERIORI is a Designed Glass Surface Collection that brings together global trends in materials, interior and home decoration, new design elements and inspiration.

Dip-Tech Pattern Catalog
Dip-Tech Pattern Catalog offers a wide variety of patterns, with endless design possibilities and combinations of different themes aligned with design trends, architecture and interior trends.

Dip-Tech Customer Online Resource Center
The Dip-Tech Customer Online Resource Center provides customers with web access to a variety of tools, such as designs, samples, interactive tutorials, technical procedures, interactive spare parts catalog, ink shipment information, and much more.

Dip-Energy – Printed Glass Performance Calculator
Dip-Energy is a software tool that allows evaluation of energy performance, such as heat gain and the shading coefficient, all before printing a single panel to assure that the print supports energy-saving and shading goals.

Online Design Catalog
Dip-Tech’s online design catalog enables glass processors to demonstrate the different designs and applications that are possible with Dip-Tech printing. The designs are available to customers as ready-to-print files.

Dip-CMiX – Communicate Colors before Printing Glass
Dip-CMiX is a new standard of Ceramic Pre-mix Color Guide, similar to RAL and Pantone color guides. The swatch book enables effective communication of printed glass colors with architects and designers.

Dip-Tech Showroom Guidelines
Presenting their Digital printing capabilities with printed glass panels, helps glass processors to inspire their clientele, with an impressive variety of applications & designs. This tool includes number of concepts and Ready-to-Print files.

Dip-Tech Mobile Application
The user-friendly Dip-Tech mobile application enables glass processors to efficiently access information on the go.