



Serial Production Glass Printing. Digital.

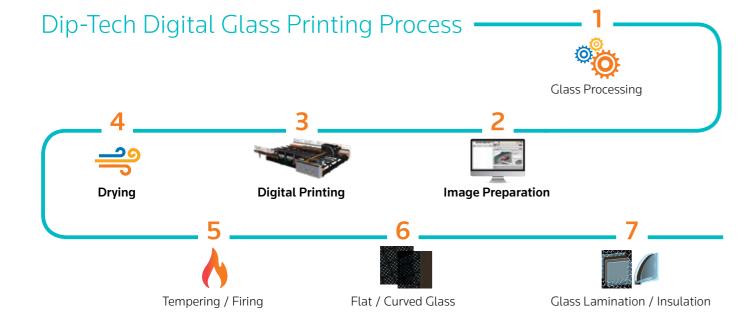
Your digital printing success starts with the right partner Architecture | Automotive | Appliances | Industrial



Technology That Delivers

The fastest, with the best results





Dip-Tech brings together innovative digital printer, ink and software R&D, state-of-the-art technologies, and over a decade of field experience in architecture, interior-design, automotive and appliances glass.

User interface. Easy.

NExT is Dip-Tech's state-of-the-art user interface. It serves as the printer's cockpit – allowing the operator to handle and manage everything from one intuitive dashboard. User-friendly and easy-to-use, NExT makes daily printing work and high-volume production jobs simple and seamless, requiring only brief training to become a professional operator.

Automatic maintenance and calibration

Online system status monitoring

Job queuing and shift management

Multi-job print management



Crop and orientation control

Automatic double vision mode

Frames and solids creation from the machine console

Crop and add variable data (numbers, barcodes, logos)

Design & produce the best glass prints. Simple.

The Dip-Tech glass design and graphics platform enables advanced image processing for Dip-Tech printing. It automatically turns standard graphic files into ready-to-print images that are tuned for optimum results on glass.

Its best-in-class color engine and color profiles allow the most vivid and vibrant prints, with high accuracy in matching the original colors. It was developed especially for ceramic glass printing, with special features that allow easy and fast design and production of prints with a special appearance and specification.

Automatic & manual multi-opacity management

Tiling and panes numbering

Conversion of any graphic file

White, transparency and see-through management

Dip-Tech Expert Package

On-screen preprint simulation

Automatic raster generator

Matching for thousands shades, RALs & Pantones

Architecture Pattern Generator



Key Specifications

	NEra-D150	NEra-D300	NEra-D460	NEra-D Plus
Maximum glass size	Width: 2800/3300 mm, 110/130 in Length: 2600 to 18000 mm, 102 to 720 in			
Jetting power - Million Drops Per Second	150 MDPS	300 MDPS	460 MDPS	610 MDPS
Printing resolution	Up to 1410 DPI			
Drop size	10pl / variable drop size			
# of channels	6	12	12	12
Minimum glass size	400 x 400 / 800 x 800 mm* 16 x 16 / 32 x 32 in*			
Glass thickness	2 - 19 mm 0.1 - 0.75 in			
Inks	Dip-Tech SPECTRUM Inks, Dip-Tech Extra Durable S1 Inks, Dip-Tech Slip-Resistance Ink			
Empowered Drop-Fixation	Included			
Software	DXP3 Advanced (includes RIP, Pattern Generator, Color Atlas)			
Inline pass through conveyor	Included			
Overall dimensions L x W x H	4 meters: 5850 x 6480 x 1600 mm, 230 x 255 x 63 in 6 meters: 8100 x 6480 x 1600 mm, 319 x 255 x 63 in			
Image format	All popular graphic formats, including PDF, PS, EPS, Tiff, BMP, JPEG			
Ambient temperature	18-25°C / 64-77°F			
Electrical phase	3 X 16A			

^{*} The machine can accommodate smaller size glass panels by using a carrying glass or adapting plate.

Maximum Throughput per Application*



Single-color dots & lines
Up to 1000 sqm/hr
Up to 10760 sqft/hr



Black frames Up to 380 sqm/hr Up to 4090 sqft/hr



Photorealistic images
Up to 135 sqm/hr
Up to 1450 sqft/hr

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.



^{*} Indicative maximum throughput (depends on: number of MDPS, ink wet layer thickness, glass/print size, colors' configuration, graphic design and complexity, and printing quality mode) speeds are measured at 3300X1000 mm glass size.



Ideal quality and speed

- Up to 200 million drops per second (MDPS)
- 6 8 color channels
- Dual-technology Drop-Fixation system Enables high quality and efficiency
- Variable drop size Allows high image quality and productivity for all applications
- Automated ink recirculation in the printhead

Ideal seamless workflow

- NExT state-of-the-art user interface Provides a simplified workflow
- Modular, flexible-size solution
- Inline dyer Eliminates need for an extra line and process, saving floor space and energy
- Near-zero maintenance Yet 100% automatic

Ideal for business

- · Exceptionally vivid and opaque printing
- Comprehensive Dip-Tech business support for better business Architects, marketing experts, graphic specialists, and more
- The choice of the world leading architects Proven across 13 years
- Dip-Tech expert package Image processing solution Optimized glass design and graphics platform for challenging projects, easy graphic preparation

Key Specifications

	GPi150	GPi200	
Maximum glass size	2400 x 1400 mm, 95x55 in 2400x2400 mm, 95x95 in 2400x4000 mm, 95x157 in 2400x6000 mm, 95x236 in		
Jetting power - Million Drops Per Second	150 MDPS 200 MDPS		
Printing resolution	Up to 1410 DPI		
Drop size	10pl / variable drop size		
# of channels	6	8	
Minimum glass size	800 x 800 mm*		
Millimum glass size	32 x 32 in*		
Glass thickness	2 - 19 mm		
	0.1 - 0.75 in		
Inks	Dip-Tech SPECTRUM Inks, Dip-Tech Extra Durable S1 Inks, Dip-Tech Slip-Resistance Ink		
Drop-Fix	Included		
Software	DXP3 Advanced (includes RIP, Pattern Generator, Color Atlas)		
Overall dimensions	3260 x 5095 x 1652 mm 5460 x 5095 x 1652 mm		
L x W x H	9860 x 5095 x 1652 mm 14260 x 5095 x 1652 mm		
= 7	129 x 200 x 65 in 215 x 200 x 65 in 390 x 200 x 65 in 562 x 200 x 65 in		
Image format	All popular graphic formats, including PDF, PS, EPS, Tiff, BMP, JPEG		
Ambient temperature	18-25°C / 64-77°F		
Electrical phase	3 X 16A		

Maximum Throughput per Application*



Single-color dots & lines Up to 130 sqm/hr Up to 1230 sqft/hr



Black frames Up to 75 sqm/hr Up to 800 sqft/hr



Photorealistic images Up to 35 sqm/hr Up to 375 sqft/hr

* Indicative Maximum Throughput (depends on: number of MDPS, ink wet layer thickness, glass/print size, colors' configuration, graphic design and complexity, and printing quality mode) speeds are measured at 3300X1000 mm

Available in different lengths, from 1 to 6 meters



Production Flexibility

Various color configurations, economical and simple change from one to another.



Dip-Tech World of Colors

Ferro and Dip-Tech Digital Ceramic Inks are developed by our chemistry experts, working together with world-leading academic institutions. Proven outdoors in thousands of projects around the globe and on millions of automotive glass panels for over 12 years, Dip-Tech digital ceramic inks also add functionality such as solar control, light diffusion, transmission, and conductivity to glass.

Dip-Tech Ink Advantages:

- User-safe No Dip-Tech product is classified under "health hazard" marking according to GHS
- Recognized and trusted by architects worldwide as a stamp of quality and durability
- Widest gamut ink series, with the most vivid and vibrant tones
- Ultra-high opacity Reduces ink consumption with no compromise on optical density
- Suitable for a wide range of firing temperatures Improves project compatibility
- Proven for 12 years in thousands of outdoor installations





Description	Industry Standard
Weathering resistance	ISO-11341 (ISO-16474)
Acid resistance	ASTM C 724-91, ASTM 777-04
Alcohol resistance	UNE-EN 15200
Scratch resistance	AS 3894.4, EN 438-2, ISO 4586-2
Glass bend strength	BS EN 1288-5
Stain resistance	UNE-EN 15200
Slip resistance surface	ASTM E 303, ANSI A137.1, EN1341
Durability of laminated glass	EN ISO 12543-4

Compatibility with Industrial Products	Supplier and Brand	
Lamination industry products – tested with pummel test, bake test, boil test	Kuraray: TROSIFOL® PVB & SentryGlas®	
Architecture adhesives and sealants industry products	SIKA: Sikasil®, Dow Corning: 993®	
Structural glazing tape	3M: VHB™ B23F, G23F, W20F	

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

Precious Metal Inks

- Adds colors with an extra shine for the perfect metallic effect
- Suitable for prestigious projects and reflective applications
- Available in Gold and Platinum

Special Functionality

Extra Durable S1 Series

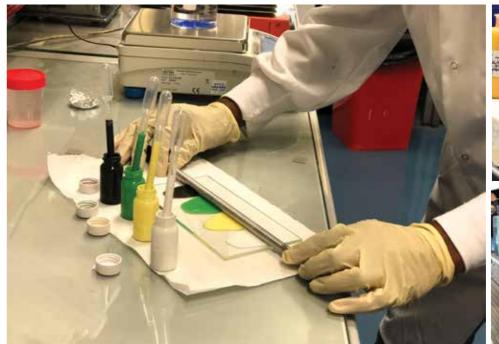
- High chemical, scratch, and environmental resistance
- Reduced glare and reflection
- Environmental sustainability The inks are lead-free and cadmium-free
- Compliance with architecture industry standards and requirements

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 bent during the thermal process (firing and/or tempering) – Ideal for large glass panels, sharp angles, and furnaces that use molding. Anti-Stick inks are available in any color, both for side 2 and side 1 (S1).







Architecture Applications The world's top architects express their vision with Dip-Tech

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.



Rooftops

Mysore Convention Hall

Printed by: ART-N-GLASS Inc. Architect and designer: ACE Group (Bangalore)



Glass Farm

Schijndel, Netherlands Printed by: AGC Glass Europe Architects: MVRDV





Balustrades Campbell Park

South East England Printed by: Toughglaze, UK Architects: HTA Design LLP



Memorial

Battle of Cemetery Hill Mural

Gettysburg, PA USA Printed by: Standard Bent Glass Architect and designer: Mark H. Dunkelman



St-Laurent Sports Complex

Quebec, Canada Printed by: Laurier Architect and designer: HSaucier+Perrotte Architects/ Hughes Condon Marler Architects

Facades

Concert Hall in the Moscow International Business Center "Moscow City"

Moscow, Russia Printed by: Modern Glass Architect and designer: FUN GENERATION - Facility concept, design and construction management Philip Nikandrov - Head of the group of authors





Aljamea tus Saifiyah (Nairobi Campus) Nairobi, Kenya

Printed by: Impala Glass Architect and designer: FX Fowel



Rouen Medical Training Center

Rouen, France Printed by: Macocco Architect and designer: Vib architecture, Murielle Monier

Public Art

Sandberg Currumbin, Gold Coast, Australia Printed by: G.James Sculpture: Jaco Roeloffs

Interior Applications
Exceptionally vivid and vibrant tones created by ceramic digital inks, with an ultra-wide basic color gamut

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 residential interior design glass applications— for dividers, partitions, doors, windows, and shower glass. Dip-Tech technology is increasingly being used as a replacement for traditional materials and surfaces, for kitchen backsplashes, table tops, wall covers, glass art, and more.

Artists are also choosing Dip-Tech printed glass for art and cultural installations. With Dip-Tech, the design options are endless!



Dividers & Partitions

The Ashland Residential Tower New York, USA Printed by: Alice, GGI Interior designer: SPAN Architecture Photographer: Brett Beyer



Printed by: Jingqi Glass

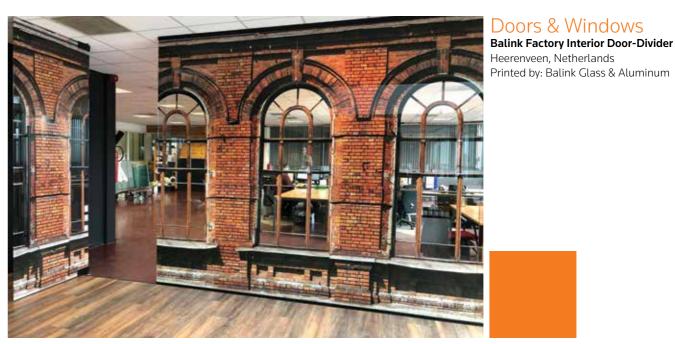


Transportation Stations Mogilev, Underground Crossing Station

Printed by: Stekloluks, Gomel Belarus



Stained Glass Stained Glass Chapel Printed by: Window Creations, LLC



Riverlight Pool London, UK Printed by: Toughglaze

Wall Covers





Showers

The "Grid Shower"

Printed by: SWOON by Woon-Tech Designer: Woon-Tech design division



The EY Building Elevator Lobby Tel-Aviv, Israel

Printed by: KH Tasarim, Turkey Interior design: Studio Yaron Tal Graphic designer: Elkeslasi Surface Design

Your Success. Our Passion.

Dip-Tech 360° unique support for Architecture market -Significant contribution to fast Return On Investment

Marketing Support

Your digital printing success starts with the right partner

tools, best practices and know-how to enhance your business ramp-up. A marketing ramp-up plan is built and executed with every interested customer.













Catalogs

Success Stories Newsletters & Media

Events

Showroom

Digital Marketing Specialist Sofia Lemberg at a marketing consultancy session with a customer

Architects Support

Global cooperation with architects that benefits your business

The Dip-Tech architects team presents Dip-Tech to thousands of architects every year, introduces Dip-Tech customers to projects and architects in their region, trains you on











Architect Eyal Porat at a training to architects in China

Graphics and Design Support

Become a master of design for digitally printed glass

The Dip-Tech graphic and design support team works with you to enhance and optimize your ability to win projects in your market, and deliver beautiful, high-quality printed glass solutions to your customers.



Support



Sessions





Color Matching Project Remote Online Training E-Learning



Application Manager, Aliza Edry at an on-site graphic workshop, Amsterdam 2018

Tools for Success



The Projects Book

The Dip-Tech Projects Book – A stunning collection of printed glass applications. This gorgeous book includes glass drawing details, facades layouts, graphic diagrams, and pictures of international projects. Customized for your company, the Projects Book is a powerful way to make your digital print capabilities more attractive to architects and more accessible to them than ever.



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-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.



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-Tech Customer Online Resource Center

The Dip-Tech Customer Online Resource Center provides customers with web access to a variety of tools, such as of 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. shading goals.



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.



Dedicated to Production

- Simultaneous multi-ink printing with Ferro inks (black, anti-stick, etc.)
- Maximum glass size 3300*2600mm, fast cycle time for both large and small size glasses
- Inline automatic indexing system for nonsystematic glass
- Cost-effective production of large printed batches
- Effective cycle time per unit production

Dedicated Technology

- Gradual wide brush and high jetting frequency High speed and quality
- Variable drop size High image quality and application flexibility
- High-power dual technology Drop-Fixation system High efficiency

Dedicated to Efficiency

- Near-zero maintenance Yet 100% automatic
- Automated ink recirculation in the print head
- Automatic color change system Quick color changes, seamlessly, with almost no waste
- NExT state-of-the-art user interface Provides a simplified workflow
- Generates automotive frames and rasters Dip-Tech tool

Key Specifications

	NEra-V300	NEra-V460	Nera-V Plus
Maximum glass size	3300 x 2600 mm 130 x 102 in*		
Jetting power - Million Drops Per Second	300 MDPS	460 MDPS	610 MDPS
Printing resolution	Up to 1410 DPI		
Drop size	10pl / variable drop size		
# of channels	6-12		
Minimum glass size	400 x 400 mm* 16 x 16 in*		
Glass thickness	2 - 19 mm 0.1 - 0.75 in		
Inks	Automotive Black Ink, 14 801 – Digital Black Ink 72H, 14 802 - Digital Anti-Stick Ink, SP 8001 – Digital Conductive Ink		
Empowered Drop-Fixation	Included		
Software	Dip-Tech Expert Package, NExT, Automotive Raster Generator		
Inline pass through conveyor	Included		
Overall dimensions L x W x H	4500 x 6480 x 1600 mm 178 x 255 x 63 in		
Image format	All popular graphic formats, including PDF, PS, EPS, Tiff, BMP, JPEG		
Ambient temperature	18-25°C / 64-77°F		
Electrical phase	3X16A		

^{*} The machine can accommodate smaller size glass panels by using a carrying glass or adapting plate.

Maximum Throughput per Application*



Single-Color Dots & Lines Up to 1000 sqm/hr

Up to 10760 sqft/hr



Black Frames

Up to 380 sqm/hr Up to 4090 sqft/hr



Single-Color Fine Details & Logo Up to 120 sqm/hr

Up to 1290 sqft/hr

Dynamic Index 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.

- Designed for complex non symmetric shapes
- Fast user friendly setup
- Centralizing indexing

Production Flexibility

color configurations, with fast, economical and automatic change from one to another.





^{*} Indicative maximum throughput (depends on: number of MDPS, ink wet layer thickness, glass/print size, colors' configuration, graphic design and complexity, and printing quality mode) speeds are measured at 3300X1000 mm glass size.

Ferro Digital Automotive Inks

Custom-made digital inks for the automotive and special transportation market

Ferro digital automotive inks were designed exclusively for use with Dip-Tech automotive printers. Ferro inks meet the strictest standards of the automotive industry, with high chemical resistance, optical density and dark black shades.

Automotive Black Ink

- Formulated specifically for the automotive industry treatment process
- Suited for bending, lamination and tempering, wide firing temperature range
- Providing UV resistance for automotive applications

14 801 Digital Black Ink

- Chemical resistance Durable for 72 hours in sulphur acid attacks at 80°C
- Wide firing range
- High opacity and maximum blackness of color

14 802 Digital Anti-Stick Ink

- Designed for complex curving operations and special firing profiles
- Suitable for press bending
- Formulated to fit variety of Dip-Tech inks

SP 8001 Digital Conductive Ink

- Suitable for numerous automotive and transportation applications
- Can be used for antennas, sensors, busbars and defrost systems
- For tempering and lamination
- High conductivity
- Heavy-metal free
- Developed in collaboration with PV Nano Cell, integrating its Sicrys™ technology



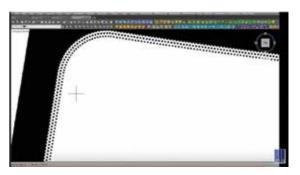




Automotive Raster Master

An innovative Dip-Tech tool that assists to create gradient raster pattern for automotive / transportation black frame drawings.

- Can automatically create raster grid to all frame designs
- Provides seamless raster arrangement in corners, curves and special fill area on the CAD
- Replaces tedious corrections and completions of rasters in current process
- Interfaces with AutoCAD



& Yacht Interiors

Digital Now Offers a Competitive ROI vs. Screen Printing in Large Batches



Recommended Applications

Millions of Dip-Tech printed automotive and transportation glass panels are already in use in a wide range of vehicles around the world.



OLIANCE

VEra Printer at Work

A powerful, high-performing machine, the VEra printer can produce multi-color printed appliances glass at speeds comparable to screen printing.

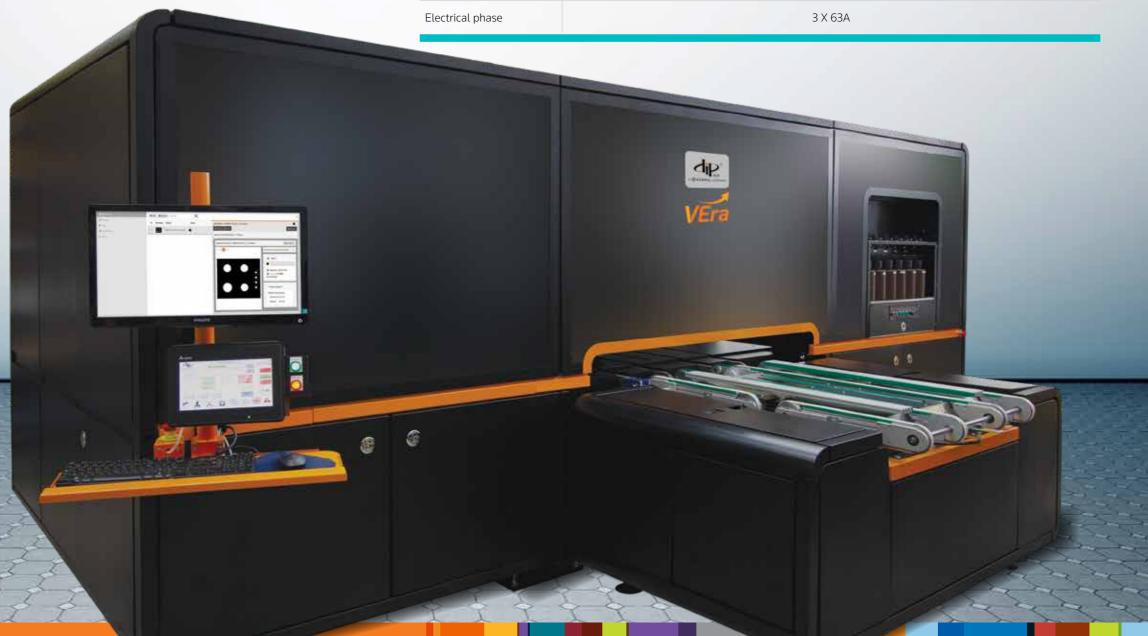
- Designed from scratch for appliances glass processing factories
- Enables printing of a 6-color appliance panel 600 X 600mm in a cycle time of up to 12 seconds (in-out)
- No color bleeding or color migration even at maximum speed and fine graphics
- Automatic ink recirculation in the print head
- Variable drop size For high image quality
- Automatic fast color changeover system
- Near-zero maintenance
- Almost 100% ink efficiency

Built-In Glass Transport and Registration System

- Full production line compliance and line commonality
- Fast and high accuracy index system
- User friendly and intuitive interface

Key Specifications

	VEra 103	VEra 106	
Maximum glass size	300 X 1000mm / 11.81 X 39.37in	600 X 1000mm / 23.62 X 39.37in	
Cycle time	Up to 12 seconds in-out cycle time, 6-color high definition printing for 300 X 600mm / 11.81 X 23.62in glass	Up to 12 seconds in-out cycle time, 6-color high definition printing for 600 X 600mm / 23.62 X 23.62in glass	
Jetting engine	Automatic ink recirculation, variable drop size, multi-color - ULTRA-FIX single pass array		
Number of color channels	6		
Minimum glass size	100 X 450mm		
Glass thickness	3 - 20mm / 0 .157 X 0.787in		
Inks	Ferro <i>Ultra</i> -FIX digital ceramic inks series for appliances		
Software	Dip-Tech Productivity Console		
Dimensions L x W x H	5400 x 4700 x 2600mm / 212.6 X 185 X 102.3 inches		
Image format	All popular graphic formats: PDF, PS, EPS, TIFF, BMG, JPEG		
Ambient temperature	18-25°C / 64-77°F		
Electrical phase	3 X 63A		



Appliances Inks

Opening a world of colors with Ferro *ULTRA*-FIX digital ceramic inks

Ferro, the leading global supplier of functional coatings and color solutions, has long held a strong market share in the appliances domain, including an extensive portfolio of high-performing porcelain enamels for metals, and ceramic color enamels for glass.

The new *ULTRA*-FIX digital inks were developed based on this proven expertise and in-line with Dip-Tech's state-of-the-art patented technology, to create a full digital print solution for the appliances market.

Available in:



- Based on Ferro's proven enamels for the appliances industry
- 6 basic colors, intermixable to achieve a wide and vivid range.
- Compatible RAL and Pantone shades
- Comply with industry standards and regulations
- High chemical, heat and environmental resistance

Pre-Mix Color Guide

The Dip-CMiX is a premix color guide, similar to RAL and Pantone color guides. Using the Dip-CMiX guide, glass processors can demonstrate to product designers the end color results they will see in VEra printed glass, before printing a single pane.



Designed for appliances glass lines,

Fully Industrial and Automated

Exceptionally versatile, this new solution is suited for a wide range of home appliances including:

- Baking ovens
- Cook tops
- Microwaves
- Oven doors
- Switch panels
- Gas cookers
- Refrigerators
- Retail glass displays



The World's Leading Glass Color Solutions Provider.

Always with You.

Ferro and Dip-Tech's wide global network ensures close customer care and service. Service and logistics offices all around the globe enhance availability of stock, reduce lead time, and make it easy to get technical or logistic service in local language and working hours.

International Customer Support (ICS)

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



Ami (ICS), Yuri (R&D) Rimantas (ICS Local engineer), with the customer's representative

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.



Ronen Sagi (ICS) with the printer

Regional Ink Supply Hubs

With Over 30 global customer logistic centers to support Dip-Tech customers locally, efficient service, stock availability and short delivery time are all enhanced.



The World's Leading Glass Color Solutions Provider. Inspired by You.



Ferro (NYSE: FOE) is a leading global supplier of technology-based functional coatings and color solutions. It supplies functional coatings for glass, metal, ceramic and other substrates and color solutions in the form of specialty pigments and colorants for a broad range of industries and applications.

Ferro products are widely sold in the building and construction, automotive, electronics, industrial products, household furnishings and appliances markets, with thousands of manufacturers worldwide relying on Ferro products and technologies. As the world's leading glass color solutions provider, Ferro leads the supply of proven and innovative solutions to various glass production segments, including the automotive, architecture, appliance, container glass, and dinnerware markets.



Dip-Tech, a Ferro company, is the pioneer and leading provider of digital ceramic glass printing solutions. With state-of-the-art glass printers and unique vivid and durable ceramic inks, it delivers serial production productivity and quality solutions for architecture, interior design, industrial applications, home appliances and automotive glass. Its digitally printed glass has been used in thousands of architectural and interior design projects.

Dip-Tech's extensive and unique business support allows glass processors to do more business with their Dip-Tech systems. Dip-Tech's new serial production solutions provide fully digital industrial and automated solutions that offer a compelling alternative to traditional printing methods.





























www.dip-tech.com | sales@dip-tech.com