



Precision Printing & Automation:
Your Partner in Industrial Success



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COMPANY



Network Site



Major Business Areas

Precision Printing Solutions:

We provide special printing technologies that realize clear and precise printing on various materials, including state-of-the-art pad printing machines. This guarantees perfect print quality even on complex shapes or irregular surfaces. We contribute to enhancing the value of our clients' products through industrial printing inks and precision nameplate production.

Automation System Construction:

We perform planning, design, manufacturing, and installation of customized automation equipment, implementing smart factory solutions that maximize production line efficiency. We lead innovation in production processes through advanced automation technologies such as robot systems and conveyor systems.

Advanced Material Processing & Surface Treatment:

We produce high-quality special materials with unrivaled technology in tempered glass, hard coating, and mirror processing, and provide optimal surface treatment solutions to improve product durability and aesthetic value.

PSA Co., Ltd. is a leading specialized company in the field of industrial printing and automation solutions through continuous technological innovation and accumulated professional know-how. We integrate advanced engineering, precision manufacturing capabilities, and intelligent automation systems to provide comprehensive products and services tailored to the diverse needs of our customers. Through these customized solutions, we not only improve overall production efficiency but also significantly enhance product quality and operational stability, ultimately supporting our customers in building a more competitive and future-ready manufacturing environment.

Vision and Values

PSA Co., Ltd. is opening new horizons in the industry through continuous R&D and technological innovation. We strive to be the best technical partner in turning customers' ideas and visions into reality, always doing our best with the belief that our customers' success is PSA's growth. We will create a better future together through skilled technical expertise, creative ideas, and customized customer-centric services.



Partners



History

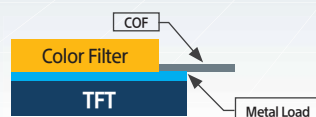
- 2008** • Established PS Industry
Developed Domestic Screen Ink (Halogen-free)
- 2009** • Developed UV Top-coating Ink
for Samsung Battery Cases
- 2010** • Supplied Micro SD Card Ink Marking Equipment to
Samsung Semiconductor & STS Semiconductor
- 2011** • A-Company Notebook Panel)
Developed and Supplied 3-Sided Side Sealing PAD
PRINTER to LGD
- 2012** • Samsung Semiconductor PSPC (Philippines Corp.)
Supplied Micro SD Card Ink Marking Equipment
Developed Pad Printing Method & Equipment for Mobile
Phone TSP Glass
Acquired Patent for Quantitative Solvent Dispensing Device
- 2013** • Signed Technical Cooperation MOU with Daihan Ink Co.,
Ltd. (Noroo Paint Affiliate)
Incorporated as PS Industry Co., Ltd.
Developed and Supplied Ink for Samsung Electronics
Mobile Touch Screens
Completed Supply of Mass Production Pad PRINTER for LG
Display Notebook Panel Side Sealing Pads
GM Korea - Dongkwang Kiyeon - SH INT (Supplied SRS
Airbag Logo Pad Printer)
- 2014** • Developed and Supplied Ag Electrode Side Bonding PAD
PRINTER to Samsung Display / Started Supplying TSP Ink to
Samsung Electronics Vietnam (SEVT)
GM Korea Spark Model (Internal Garnish Design Sample
Work and Mass Production Preparation)
- 2015** • Relocated PS Industry Headquarters to Ansan Tecom
Complex (Purchased)
Registered Trademark PS-T2000/101 White
Registered Patent for Automatic Solvent Dispensing Device
for Pad Printing
- 2016** • Supplied Side Sealing PAD PRINTER to G.I.S Chengdu,
China (A-Company Notebook Panel)
Supplied Side Sealing PAD PRINTER
- 2019** • Supplied Side Sealing PAD PRINTER (for A-Company
Notebook Panel) to B.O.E B.O.E B5 Hefei, China
Supplied Ag Electrode Side Bonding PAD PRINTER to B.O.E
B4 in Beijing, China / LG Display (Paju, Guangzhou, China)
Registered Patent for Pad Printing Device and Method
Registered Patent for Rotational Moving Display Panel Side
Terminal Printing System
Registered Patent for Parallel Mobile Display Panel Side
Terminal Printing System
Supplied an Additional Note book Panel Side Sealing PAD
PRINTER to LG Display
- 2020** • LG Display Micro LED Ag Electrode Pattern Side Bonding
Pilot PAD PRINTER
Conducted Mobile Lens Ink Sealing Project for A-Company
- 2021** • Registered as an Apple Vendor
Developed 8K Display Ag Electrode Pattern Printing for
AUO / CSOT (S-Project); Developed Mini LED Ag Electrode
Pattern Printing for CSOT M
Developed Mid-sized Display Ag Electrode Pattern Printing
for CSOT WH (Wuhan)
Mass Production Development and Supply of Micro LED Ag
Electrode Pattern Printing for LG Display
- 2022** • Supplied an Additional Side Sealing PAD PRINTER for
A-Company Notebooks to B.O.E B5 Hefei, China
Supplied an Additional Side Sealing PAD PRINTER for
A-Company Notebooks to LG Display Nanjing, China
Established Chinese Subsidiary in Suzhou: PSI Material Co.,
Ltd. (Wholly owned by PSA)
Constructed Pad & Plate Manufacturing Facility in Nanjing
Factory, China
Built New Factory & Relocated to Hwaseong Songsan
Technopark
Changed Corporate Name from PS Industry Co., Ltd. to PSA
Co., Ltd.
- 2023** • Developed and Supplied IR Inking Marking PAD PRINTER to
LG Display Nanjing, China
Supplied an Additional Side Sealing PAD PRINTER for
A-Company Notebooks to B.O.E B5 Hefei, China
PSI Material Co., Ltd. (Suzhou, China) (Wholly owned by PSA)
Registered as Vendor for LGD, Heesung Electronics, and
Serveone in China
Joint Development of Cylindrical Secondary Battery CID
Assembly Equipment with EnerEver Solution; Development
of Secondary Battery CID Insulator Punching Machine
Supplied MINI LED Side Sealing Equipment to LG Electronics
Supplied IR Printing and Side Sealing Equipment for DELL
Notebooks to LGD Nanjing
Developing Automotive Lamp and Garnish Marking
Equipment for SL Group.
- 2024** • Completed Supply of Side Sealing and IR PAD PRINTER for
DELL Notebooks
Registered as LG Innotek Vendor & Proceeding with
A-Company Mobile Camera Lens Sealing PAD PRINTER
- 2025** • Pistis Dental Parts (Zirconium) Assembly Equipment Ordered
and Supplied
Signed Partnership for Pad Printing Automation Business
using Collaborative Robots with Purn Tech

Display Skill Trend

Comparison of Display Panel Bonding Methods

General COF Mounting

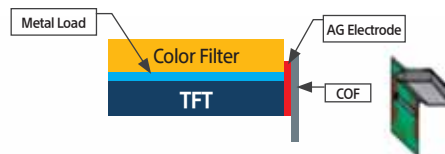
Limit to Bezel Slimming
Limit to Electrode Micro-Pattern Printing



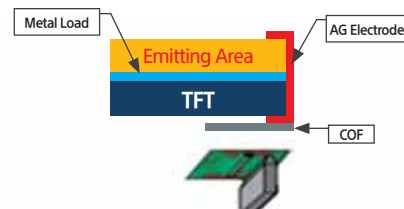
▷ TAB Attachment

COF Mounting for Zero Bezel (Side PAD Printing Method Applied)

▷ LCD Display Panel



▷ Micro LCD Display Panel



▷ Limit to Bezel Slimming
▷ Limit to Electrode Micro-Pattern Printing

▷ Zero Bezel
▷ Manufacturing Ultra-Large Displays Using Mid-Sized Displays
▷ Realization of Micro-Patterns (Reduced Display Heat & Improved Lifespan)
▷ High-Resolution Display

Video Wall Bezel Evolution



Super Narrow Bezel (SNB) 5.7mm



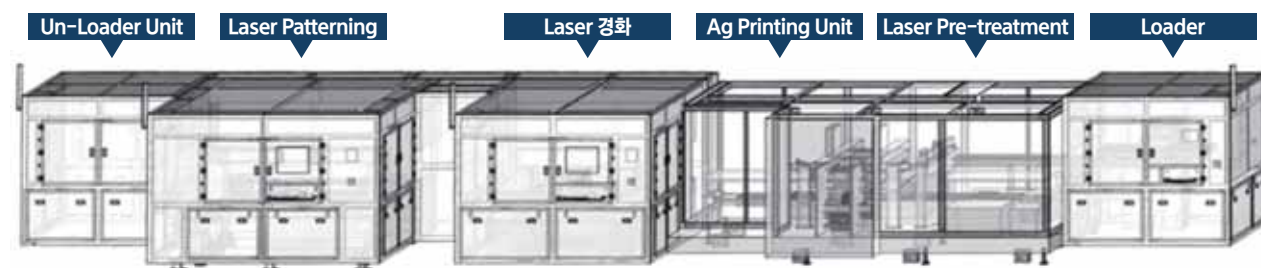
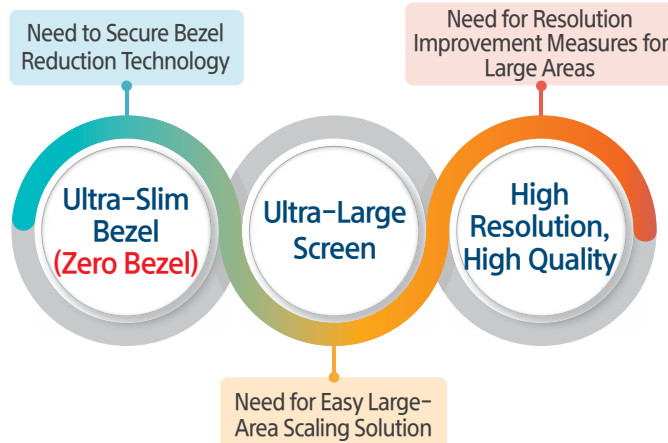
Ultra Narrow Bezel (UNB) 3.5mm



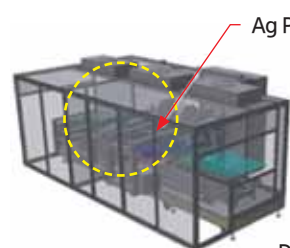
Extremely Narrow Bezel (SNB) 1.7mm



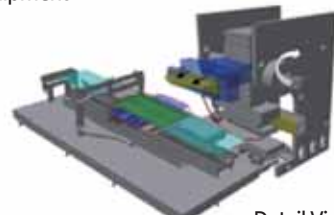
Next Generation



Since all processes from logistics > plasma > printing > curing can be done at once, you can save time and money.



Ag Printing Equipment



Detail View

Display Panel



WORK TABLE

Ink transferred from silicone pad to panel



Silicone Pad Z-Axis

Consumables

1. Silicone Pad

As trend-sensitive products globally, such as mobile phones, adopt bold designs or patterns, the difficulty of the surface to be printed is increasing. In pad manufacturing, techniques are becoming increasingly complex and require higher technical skills compared to traditional manufacturing methods. Also, since the pad is closely related to print quality in the pad printing factory, proper selection criteria must be premised to obtain the desired quality.

Features of PAD

- 1 Excellent ink adsorption and transfer capabilities allow for nearly perfect image transfer.
- 2 High tensile strength and durability against solvents and ink ensure a long lifespan.
- 3 Continuous use is possible depending on the pad's elasticity, shape, and print quality.
- 4 It is used for the highest quality printing among existing industrial printing methods.

Factors to Consider When Selecting a PAD

- 1 Shape and surface condition of the substrate
- 2 Area and size of the surface to be printed
- 3 Characteristics of the ink
- 4 Number of colors to be printed
- 5 Hourly production output of the product
- 6 Machine speed
- 7 Ability to maintain consistent quality during continuous printing operations
- 8 Testing whether the pad's curvature and elasticity are correct

Since there are various prices and pad lifespans depending on the silicone material, you must conduct tests when selecting a pad to consider print quality and various pad variables to choose the pad closest to your desired specifications.



2. Plate – Image Etched Plate

Features of Alcohol Resin Plates (Polymer Plates) Supplied by PSA

- 1 Highly effective for high-mix, low-volume production.
- 2 Anyone can easily and quickly make a plate at any time with just a plate-making machine and ethyl alcohol.
- 3 It has been widely used globally for high-quality printing for a long time.

* Typical applications: Printing on high-value model trains and automotive plastic models.

Features of Steel Plates Supplied by PSA

- 1 In the case of 0.3t, it is a product designed to combine the advantages of resin plates and steel plates.
- 2 It has a long lifespan and is very effective for low-mix, high-volume production.
- 3 Unlike resin plates, the plate-making process requires a separate etching step, demanding high-level etching technology.
- 4 Therefore, there is the inconvenience of having to request it from a specialized manufacturer.
- 5 It is widely used for printing on low-to-mid-priced products where price competitiveness is required.

We provide a one-stop service from raw material supply to the plate imaging process with the most reasonable prices and advanced technology, and we strive for product technology development to ensure smooth technical support tailored to customer specifications at any time.



3. Ink Cups

Features of Ceramic Ring Blade Supplied by PSA

- 1 Lifespan varies by ceramic material, so you must select a product known for durability and quality.
- 2 The better the ceramic blade, the longer it maintains flatness, which is effective for maintaining high-quality printing.

Advantages of Printing Equipment Equipped with Ceramic Ink Cups

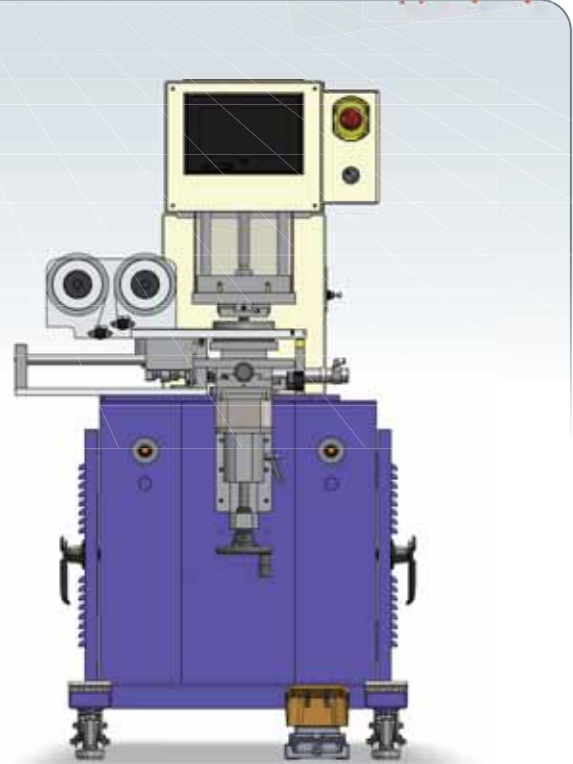
- 1 Even when using 2-component ink, ink consumption is significantly reduced.
- 2 The solvent content in the ink cup is maintained for a long time.
- 3 Cleaning the equipment upon completion of work is very easy and convenient.
- 4 After work, remaining ink can be sealed in the cup for reuse; however, if left for too long, reuse may become impossible due to the ink's own chemical reaction.
- 5 The magnetic force built into the ink cup and the smooth, sturdy movement of the guide reduce the wear rate of the image plate, making it economical by lowering consumable costs.

PSA also provides Tungsten Carbide Ring Blades, which can be used for a long time on steel plates, upon customer request.



PSA 901C

PSA 110C



- Numerical control of each drive part via PLC & TOUCH
- Display Total Production Qty / 1 Cycle Takt Time
- Display PAD & PLATE replacement cycle
- Display INK usage cycle

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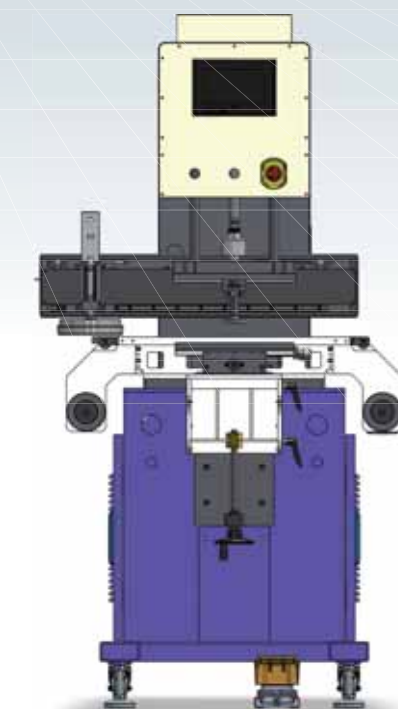
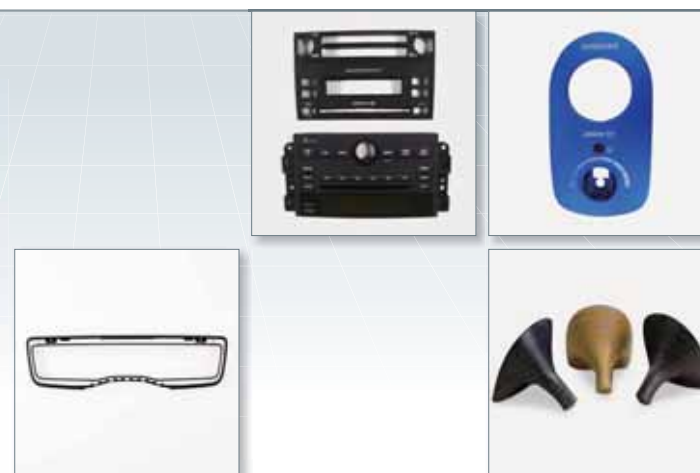
Item	Specification (MM)
IMAGE PLATE SIZE	100 * 225
INK CUP	90
Max Print IMAGE	75
Horizontal (Fwd/Bwd) STROKE	125
Vertical (Up/Down) STROKE	75
Drive Method	Air Cylinder (Pressure 6bar)
Control Method	PLC & TOUCH SCREEN
Power Consumption	110/220, 50/60Hz
Machine Dimensions	600 * 800 * 1170
Options	PAD CLEANING, 10T STEEL PLATE

Item	Specification (MM)
IMAGE PLATE SIZE	120 * 250
INK CUP	110
Max Print IMAGE	95
Horizontal (Fwd/Bwd) STROKE	125
Vertical (Up/Down) STROKE	100
Drive Method	Air Cylinder (Pressure 6bar)
Control Method	PLC & TOUCH SCREEN
Power Consumption	110/220, 50/60Hz
Machine Dimensions	600 * 840 * 1210
Options	PAD CLEANING, 10T STEEL PLATE



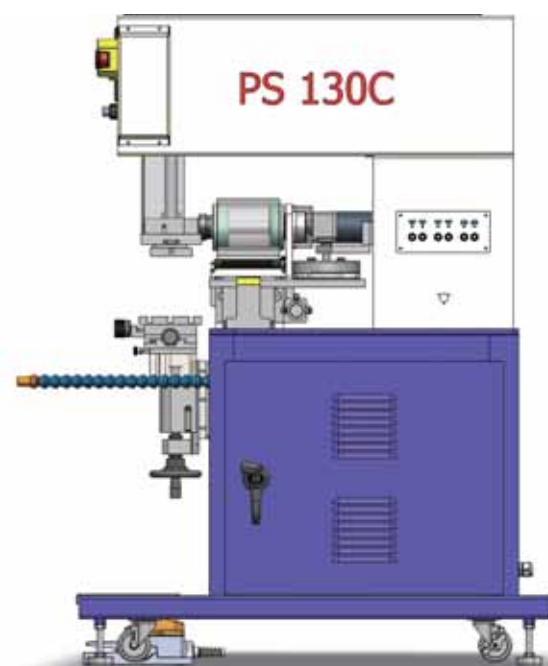
PSA 130C

PSA 160S

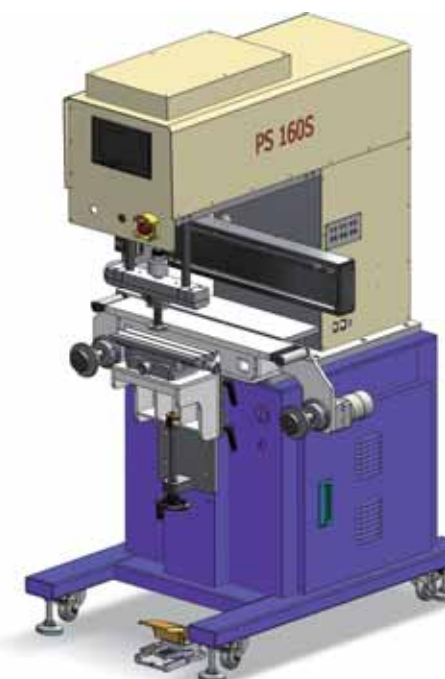


- Numerical control of each drive part via PLC & TOUCH
- Display Total Production Qty / 1 Cycle Takt Time
- Display PAD & PLATE replacement cycle
- Display INK usage cycle

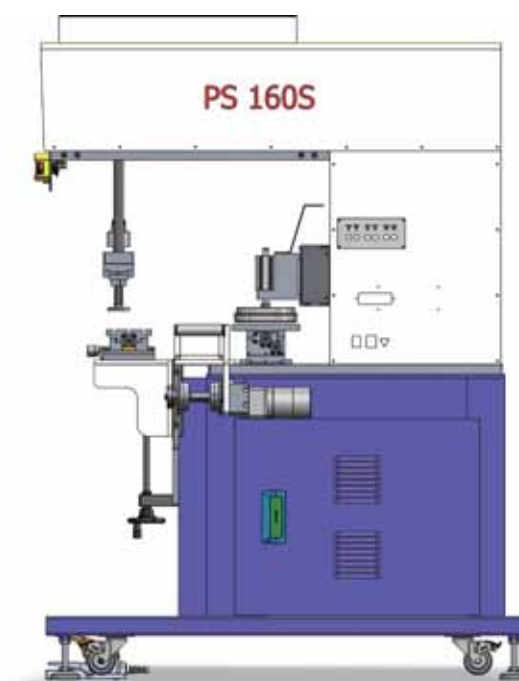
- Numerical control of each drive part via PLC & TOUCH
- Display Total Production Qty / 1 Cycle Takt Time
- Display PAD & PLATE replacement cycle
- Display INK usage cycle



Item	Specification (MM)
IMAGE PLATE SIZE	150 * 300
INK CUP	130
Max Print IMAGE	115
Horizontal (Fwd/Bwd) STROKE	150
Vertical (Up/Down) STROKE	100
Drive Method	Air Cylinder (Pressure 6bar)
Control Method	PLC & TOUCH SCREEN
Power Consumption	110/220, 50/60Hz
Machine Dimensions	600 * 900 * 1250
Options	PAD CLEANING, 10T STEEL PLATE

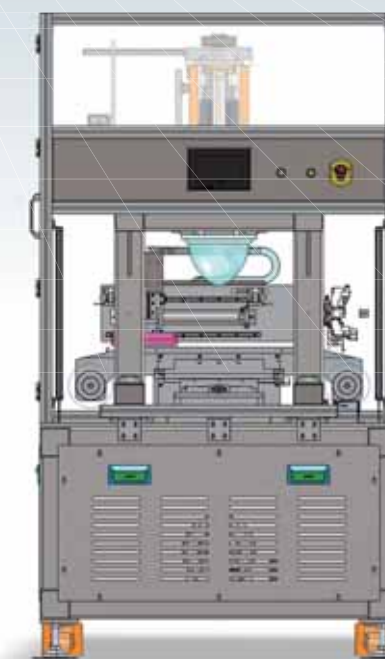
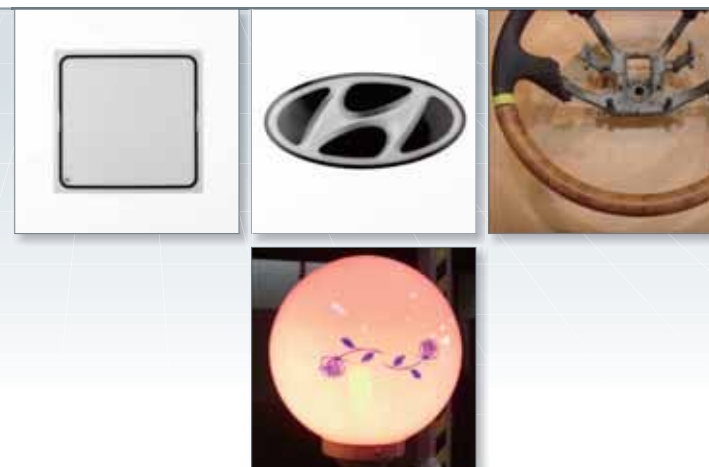
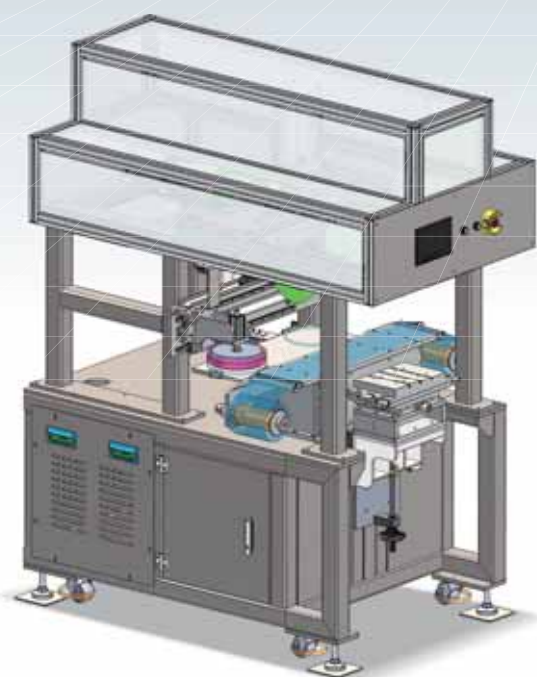


Item	Specification (MM)
IMAGE PLATE SIZE	180 * 360
INK CUP	160
Max Print IMAGE	145
Horizontal (Fwd/Bwd) STROKE	150
Vertical (Up/Down) STROKE	100
Drive Method	Air Cylinder (Pressure 6bar)
Control Method	PLC & TOUCH SCREEN
Power Consumption	110/220, 50/60Hz
Machine Dimensions	680 * 1300 * 1750
Options	PAD CLEANING, 10T STEEL PLATE



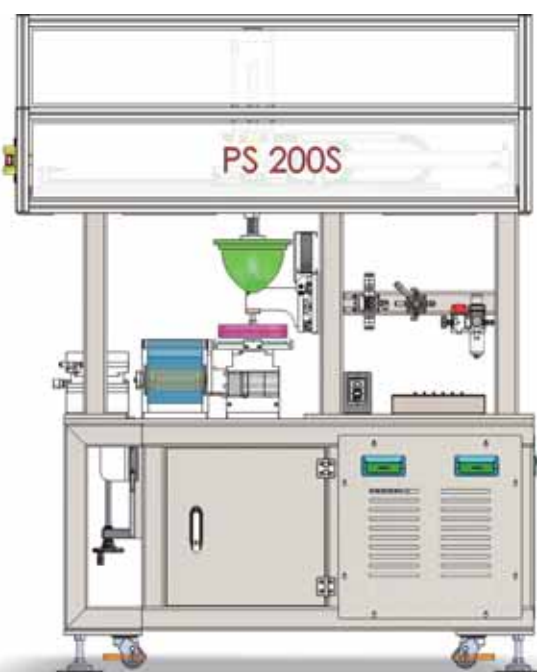
PSA 200S

PSA 250S



- Numerical control of each drive part via PLC & TOUCH
- Display Total Production Qty / 1 Cycle Takt Time
- Display PAD & PLATE replacement cycle
- Display INK usage cycle

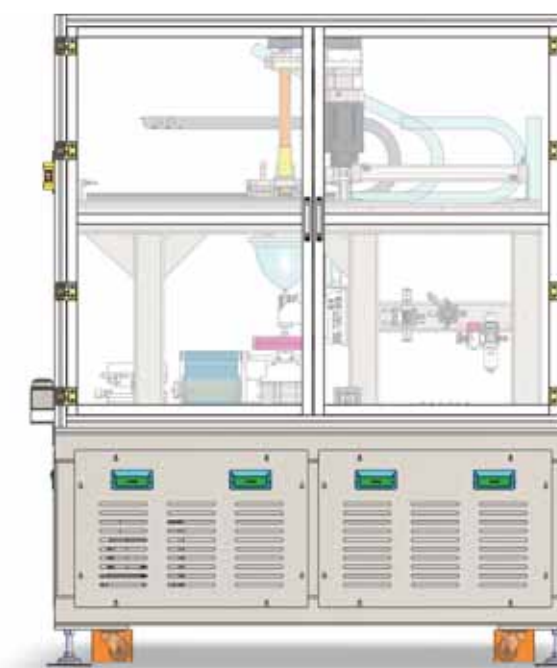
- Numerical control of each drive part via PLC & TOUCH
- Display Total Production Qty / 1 Cycle Takt Time
- Display PAD & PLATE replacement cycle
- Display INK usage cycle



Item	Specification (MM)
IMAGE PLATE SIZE	220 * 440
INK CUP	200
Max Print IMAGE	175
Horizontal (Fwd/Bwd) STROKE	500
Vertical (Up/Down) STROKE	200
Drive Method	Air Cylinder (Pressure 6bar)
Control Method	PLC & TOUCH SCREEN
Power Consumption	110/220, 50/60Hz
Machine Dimensions	1000 * 1500 * 2100
Options	PAD CLEANNING, 10T STEEL PLATE



Item	Specification (MM)
IMAGE PLATE SIZE	240 * 500
INK CUP	220
Max Print IMAGE	175
Horizontal (Fwd/Bwd) STROKE	500
Vertical (Up/Down) STROKE	380
Drive Method	Air Cylinder (Pressure 6bar) & Z-axis Servo
Control Method	PLC & TOUCH SCREEN
Power Consumption	110/220, 50/60Hz
Machine Dimensions	1200 * 1750 * 2170
Options	PAD CLEANNING, 10T STEEL PLATE

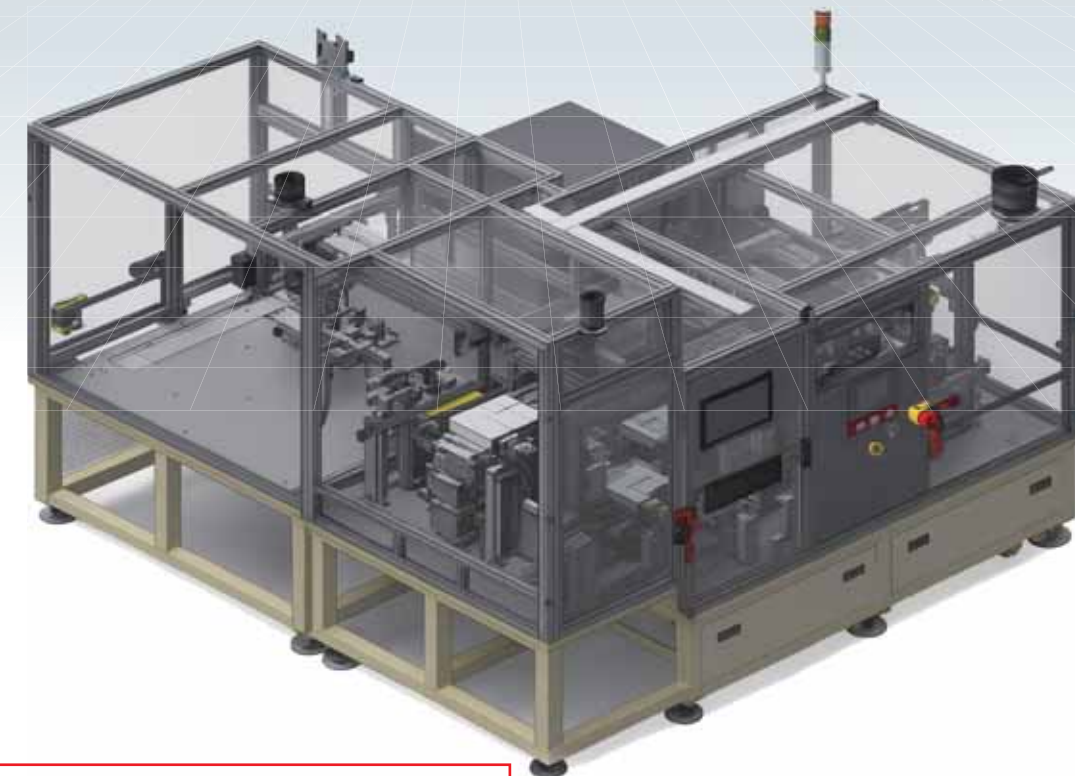


Large-Scale Printer for Automotive Interior Parts

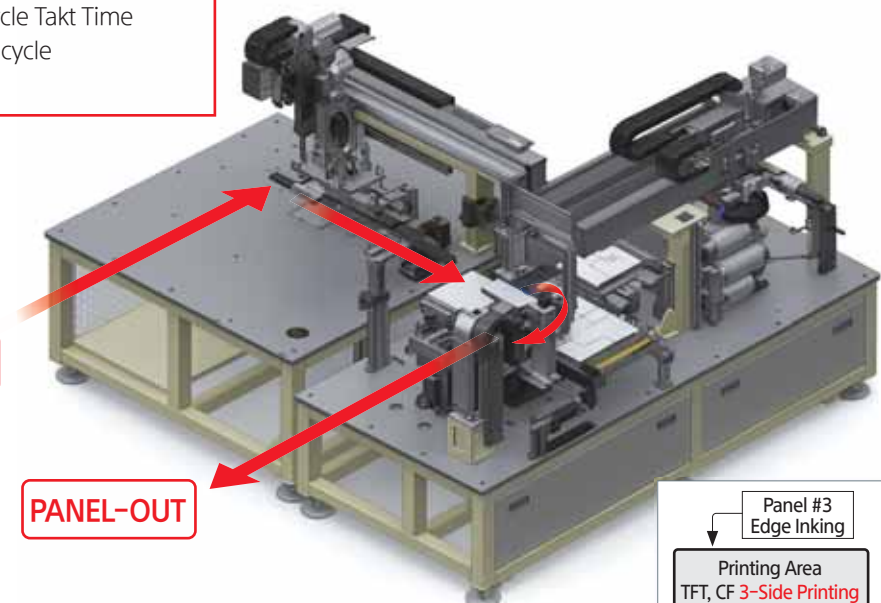
Mid-sized Display Side Sealing Automation Equipment Parts



- ▶ Numerical control of each drive part via PLC & TOUCH
- ▶ Display Total Production Qty / 1 Cycle Takt Time
- ▶ Display PAD & PLATE replacement cycle
- ▶ Display INK usage cycle

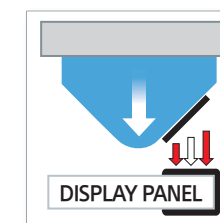
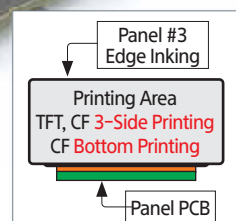


- ▶ Numerical control of each drive part via PLC & TOUCH
- ▶ Display Total Production Qty / 1 Cycle Takt Time
- ▶ Display PAD & PLATE replacement cycle
- ▶ Display INK usage cycle

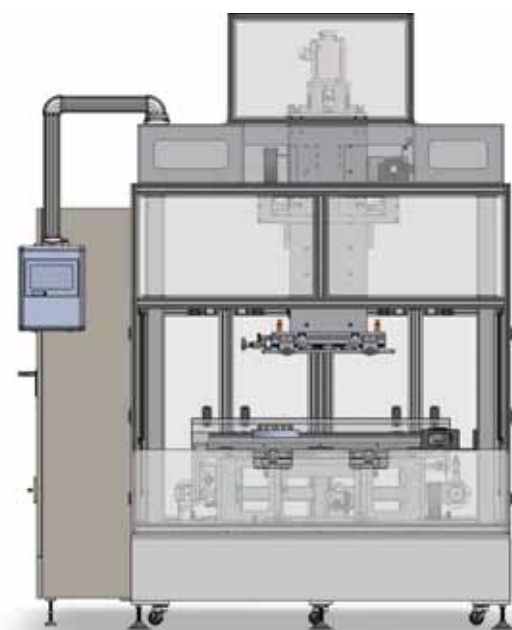


PANEL-IN

PANEL-OUT



Top, Bottom Inverted
Printing Each /
Side Light Leakage
Prevention



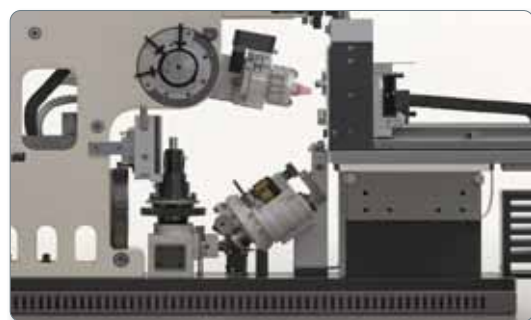
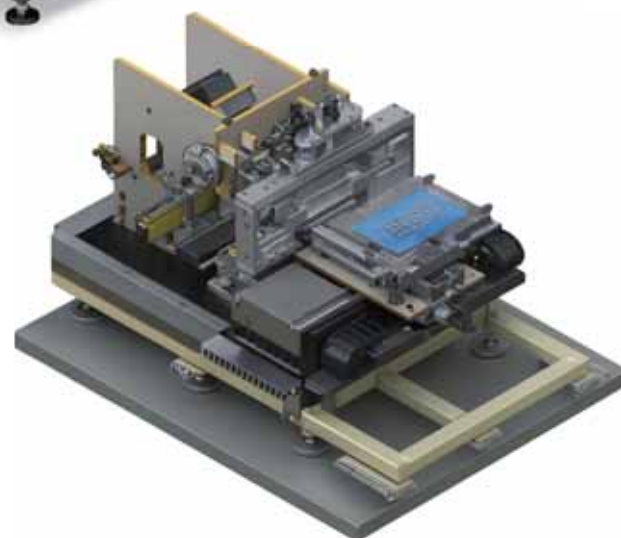
Item	Specification (MM)
IMAGE PLATE SIZE	920 * 1050
INK CUP	300
Max Print IMAGE	200 * 800
Horizontal (Fwd/Bwd) STROKE	2000
Vertical (Up/Down) STROKE	600
Drive Method	Servo Motor & Air Cylinder
Control Method	PLC & TOUCH SCREEN
Power Consumption	220/380V, 50/60Hz
Machine Dimensions	1200 * 1750 * 2170
Options	Work Table Tilt Axis (Servo)

Item	Specification (MM)
IMAGE PLATE SIZE	320 * 860
INK CUP	300
Max Print Area	175
Drive Method	SERVO MOTOR & INDEX MOTOR
Power Input	220V 60Hz
Machine Dimensions	2720 * 2370 * 2500
Inspection Device	PC & VISION SYSTEM

Mid-to-Large Display Ag Side Bonding Automation Equipment

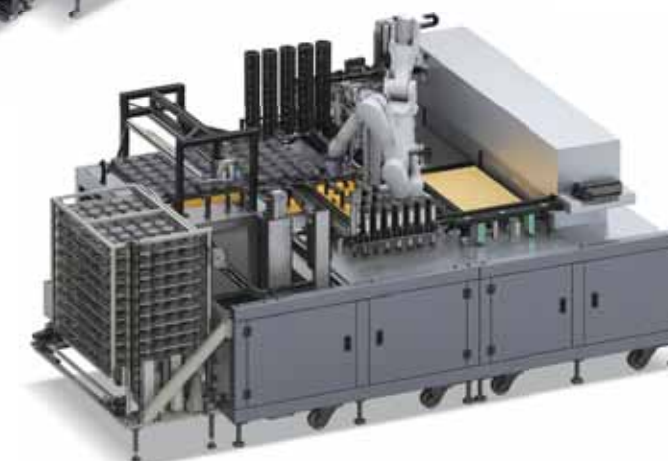


- ▶ Numerical control of each drive part via PLC & TOUCH
- ▶ Display Total Production Qty / 1 Cycle Takt Time
- ▶ Display PAD & PLATE replacement cycle
- ▶ Display INK usage cycle



Item	Specification (MM)
IMAGE PLATE SIZE	320 * 860
INK CUP	90
Max Print IMAGE	250 * 450
Drive Method	SERVO MOTOR & INDEX MOTOR
Power Input	3Phase, 220V, 60Hz
Machine Dimensions	4000 * 2850 * 2500
Inspection Device	PC & VISION SYSTEM

Zirconia-ABS Ring Adhesive Dispensing Equipment



■ Purpose: Automatic assembly equipment for attaching Plastic Rings to Zirconia Discs

■ Manufacturing Specs:

- Machine Size : 4,500 x 3,000 x 2,500 (T.B.D)
- Zirconia Disc Size : OD 93.82 ~ 94.35mm, Thickness 10 ~ 30T
- Plastic Ring Spec : Material - ABS, OD - 98.3 ± 0.1 mm, ID - 94.4+0.2 mm, Glue Inlet: 6 points
- Daily Output : 480 ea (T.B.D)

- Tact Time : 1 min/ea
- Product Supply : Manual supply of Zirconia Disc Trays via Cart to Magazine (10 Trays)
- Main Components : Vertical Articulated Robot, Tray Magazine, Tray Elevator, Tray Transfer Unit, Jig Conveyor, Collar/Ring Supply Unit, Vision Unit (OD, Thickness, Glue Hole Check), Non-contact Displacement Sensor (Collar Thickness Measure), Drying Oven
- Equipment Control Method : PLC

PAD PRINTING INK

Printing opens up possibilities that are difficult to realize with conventional printing processes. Perhaps the most adaptable of all printing processes, it stands out due to its diverse substrates and high flexibility. It can print on various materials, surface structures, and almost any shape.

Our pad printing inks are as diverse as the possibilities of pad printing itself, as our system provides the optimal solution for every application.

High brilliance and excellent opacity are a matter of course for all our pad printing inks. In addition to 1-component and 2-component solvent inks, universally applicable UV systems complete the product range.

The universal ink system can be adjusted to various processing parameters, requirements, and environmental influences using various auxiliaries.

Special products for difficult surfaces (e.g., Soft-touch) and color mixing according to all well-known color fans (RAL, Pantone®, etc.) complete the range and offer the right solution in every situation.

INK SERIES	SERIES 711	SERIES 712	SERIES 747	SERIES 751	SERIES 752	SERIES 786
ITEM	S 1C	S 1C	UV	S 2C	S	S 2C
ARS / SAN	★		★	★ H	★ (H)	★ H
Acrylics (PMMA)	★		★	★ H	★ (H)	★ H
Duroplastics			★	★ H	★ (H)	★ H
Glass & Ceramic			★	★ H		
Laquered surfaces	★		★	★ H	★ (H)	★ H
Metal			☆	★ H	☆ (H)	★ H
PET-A	★		★		★ (H)	★ H
PET-G					★ (H)	
Polyamid (PA)			★	★ H	★ (H)	★ H
Polycarbonate (PC)	★		★	★ H	★ (H)	★ H
Polyester	☆		☆	★ H	★ (H)	★ H
Polyethylene (PE)			★☺	★☺ H	★☺ (H)	★☺ (H)
Polyoxymethylene (POM)				★ H		
Polypropylene (PP)		★	★☺	★☺ H	★☺ (H)	★☺ (H)
Polystyrole (PS)	★		★		★ (H)	★ H
PVC, rigid	★		★	★ H	★ (H)	★ H
PVC, soft	★		★		★ (H)	
TPE / Rubber						
Tritan™ (Copolyester)						★ H

INDEX S = Solvent WB = Water based UV = curing ★ = Suitable ☆ = Inspection necessary H = Hardener (H) = Ah

SERIES 786

Highly durable and user-friendly 2-component pad printing ink.

Highly glossy, extremely durable, and highly opaque pad printing ink, Series 786 is based on PAH and halogen-free raw materials and is suitable for printing on plastics, coatings, and metals. Series 786 does not contain butyl hydroxyacetate, which is classified as critical to user health. Typical applications are technical parts, bottle caps, and childcare products.

Features	Rating
Abrasion Resistance	◆◆◆◆◆
Alcohol and Gasoline Resistance	◆◆◆◆◆
Flexibility	◆◆◆◆◇
Gloss Level	High Gloss
Perspiration Resistance	◆◆◆◆◆
Lightfastness	◆◆◆◆◇
Pigmentation	◆◆◆◆◆
Temperature Resistance	◆◆◆◆◇
Drying	◆◆◆◆◇
Water Resistance	◆◆◆◆◇
Weather Resistance	◆◆◆◆◆



SERIES 751

2-Component Pad Printing Ink for Glass, Metal, and Duroplasts

Glossy and highly durable pad printing ink, Series 751, prints on glass, various metals, and duroplasts. Series 751 does not contain PAH or halogens. For systemic reasons, some individual shades contain halogen-bearing pigments. Series 751 is free of cyclohexanone. Typical applications are glass decoration, advertising materials, and automotive interiors.

Features	Rating
Abrasion Resistance	◆◆◆◆◆
Alcohol & Gasoline Resistance	◆◆◆◆◆
Flexibility	◆◆◆◆◇
Gloss Level	광택
Perspiration Resistance	◆◆◆◆◆
Lightfastness	◆◆◆◆◇
Pigmentation	◆◆◆◆◆
Temperature	◆◆◆◆◇
Resistance	◆◆◆◆◇
Drying Water Resistance	◆◆◆◆◇
Weather Resistance	◆◆◆◆◇



SCREEN PRINTING INK

The centuries-old screen printing process remains unmatched in quality even today. It produces long-lasting, durable prints with unrivaled uniformity and color brilliance. Printcolor's screen printing inks maintain the same high quality as the printing technology itself. They are resistant, highly opaque, and offer a wide range of adhesion.

Our extensive product portfolio includes UV-curing, water-based, and solvent-based ink series. Thanks to years of experience, we can provide ideal solutions for any application in graphics, technology, or security fields. Possible uses are diverse and varied: From paper and synthetic materials to metals, plastics, and even glass and ceramics, screen printing can be used on a wide variety of materials.

Here you can find products for graphic applications such as displays, self-adhesive products, vehicle signage, POS applications, vehicle and illuminated advertising. Technical industrial screen printing is ideal for producing a wide range of products including membrane switches, security signage, exterior decals, automotive parts, smart and credit cards, flat glass, glass containers, and many other applications.

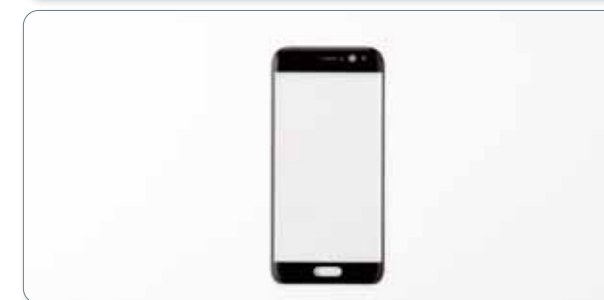
COLOR SERIES	242	275	278	310	311	320	325	347	384	386	387	388	392	420	540	544	552	560	567	592	632	640	650	658	660	665
SYSTEM	SB	SB	SB	SB 1C	SB 1C	SB 1C	SB 1C	SB 1C	SB 1C	SB 1C	SB 1C	SB 1C	SB 1C	WB	UV	UV 2C	UV	UV	UV	UV	SB 2C	SB 2C	SB 2C	SB 2C	SB 2C	SB 2C
ABS / SAN				★						★	★	★						★	★		★H	★H	★H			
Acrylic glass (PMMA)				★	★	★				★	★	★					★				★H	★H	★H			
Coated surfaces										★	★	★									★H	★H	★H			★H
Composite materials				★						★	★	★					★		☆		★H	★H	★H			★H
Duroplasts																					★H					
Foils, primed				★	★	★			★	★	★	★						★	★				★H			
Galvanized plastic surfaces			★																							
Glass & ceramic															★	★	★				★H	★H	★H	☆H		
Metals															★						★H	★H	★H	☆H		★H
Mineral substrates																								★H		★H
OPP-laminate																		★								
Paper & cardboard	★	★	★	☆	★	★			☆	☆	☆	★	★	★				★	★	★						
Paraffin		★																								
PET-A / PET-G / PET-GAG					★	★							★					★	★	★	☆			★H		
Polyamide (PA)																					★H	★H	★H			
Polycarbonate (PC)				★	★	★				★	★	★	★					★	★	★	★	★H	★H	★H		
Polyester			★				★	★		★	★	★	★				★	★	★	★	★H	★H	★H			
Polyethylene (PE)																					★H	★H	★H			
Polyolefins (PO)			★														★				★H	★H	★H			
Polyoxymethylene (POM)																					★H					
Polypropylene (PP)	★					★											☆	★	★		★H	★H	★H			
Polystyrene (PS)			★	★	★	★					★	☆		★			★	★	★				★H			
Polyurethane (PU)																								★H	★H	
PVC																										
PVC, rigid				★	★	★			★	★	★	★	★	★			★	★	★		★H	★H	★H			
PVC self-adhesive foils					★	★			★	★	★	★	★	★			★	★	★				★H			
PVC, soft-tarpaulins									★	★	★	★														
Scrathe-off inks	★																									
Silicone																								☆H	☆H	
Soft-touch surfaces																								★H	★H	
Styrofoam														★												
Synthetic fabrics																									★H	
Teslin													★													
TPE / rubber																								★H	★H	
Tritan™ (copolyester)																					★H					
Tyvek	★													★												
Wood														★			★	★			★H	★H				

KEY SB = Solvent-based WB = Water based UV = curing ★ = Suitable ☆ = Pre-tests necessary H = Hardener

SERIES 388

Glossy and high-pigmentation screen printing ink, Series 388 is based on high-strength raw materials for printing on various plastic materials. Typical applications include high-quality stickers, outdoor signage, and other technical applications.

Features	Rating
Alcohol and Gasoline Resistance	★★★★
Adhesive Resistance	★★★★
Block Resistance	★★★
Flexibility	★★★★
Gloss Level	Gloss Level
Perspiration Resistance	★★★★
Lightfastness	★★★★
Abrasion Resistance	★★★★
Pigmentation	★★★★★
Screen Openness	★★★★
Temperature Resistance	★★★
Drying	★★
Moldability	★★★★
Weather Resistance	★★★★

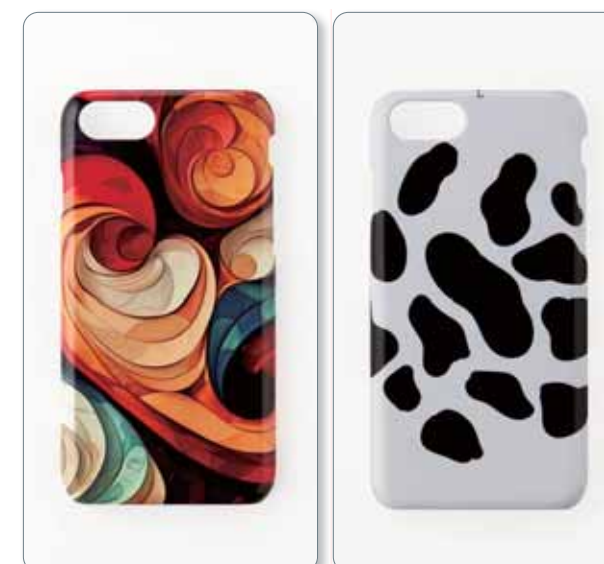


SERIES 552

UV Screen Printing Ink for Plastics

Series 552 is a high-gloss UV-curing screen printing ink for functional and decorative printing on plastics, coatings, and paper. The resulting color film is flexible, offers excellent chemical and block resistance, and is suitable for medium-term outdoor use. Typical applications include labels, signage, and cosmetics.

Features	Rating
Alcohol and Gasoline Resistance	★★★★★
Block Resistance	★★★★★
Flexibility	★★★
Gloss Level	Gloss Level
Hand Sweat Resistance	★★★★★
Curing	★★★★★
Lightfastness	★★★★
Abrasion Resistance	★★★★★
Pigmentation	★★★★★
Temperature Resistance	★★★★
Overprintability	★★★★★
Water Resistance	★★★★★
Weather Resistance	★★★★

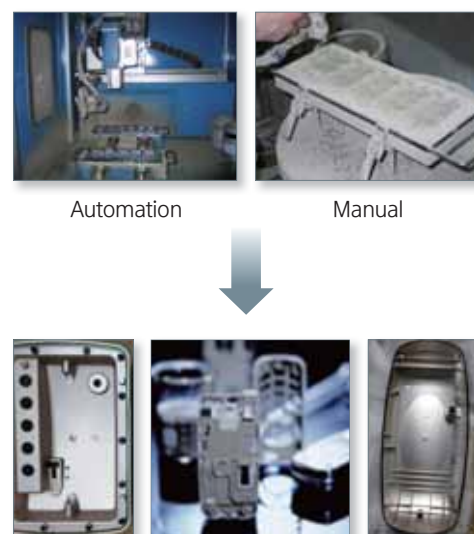


Conductive ink is an ink with improved conductivity by mixing conductive materials such as carbon black, graphite, and silver. Productivity is high because printed electrical circuits can be constructed using it as wires.

ITEM		Application	Status
EMI/EMC Conductive Coatings	Spray	Mobile-phone, PDA, Notebook, Tablet, Medical Devices et al.	Ag AgCu et al.
		Membrane Switch, FPCB, RFID	Ag Carbon
Conductive Paste	Screen Printing	Paste for TSP electrode (Laser Etching Type)	Ag AgCu
		PTC (Positive Temperature Coefficient)	Ag (Bus bar) Carbon
		FSR (Force Sensing Resistor)	Carbon
		Display, Electrical & Electronic Components	Ag
	PAD Printing	metal mesh transparent electrode	Ag Carbon
	Gravure & knife coating	Display devices	Ag
Conductive Adhesive	Dispensing	Die Attach etc.	Ag

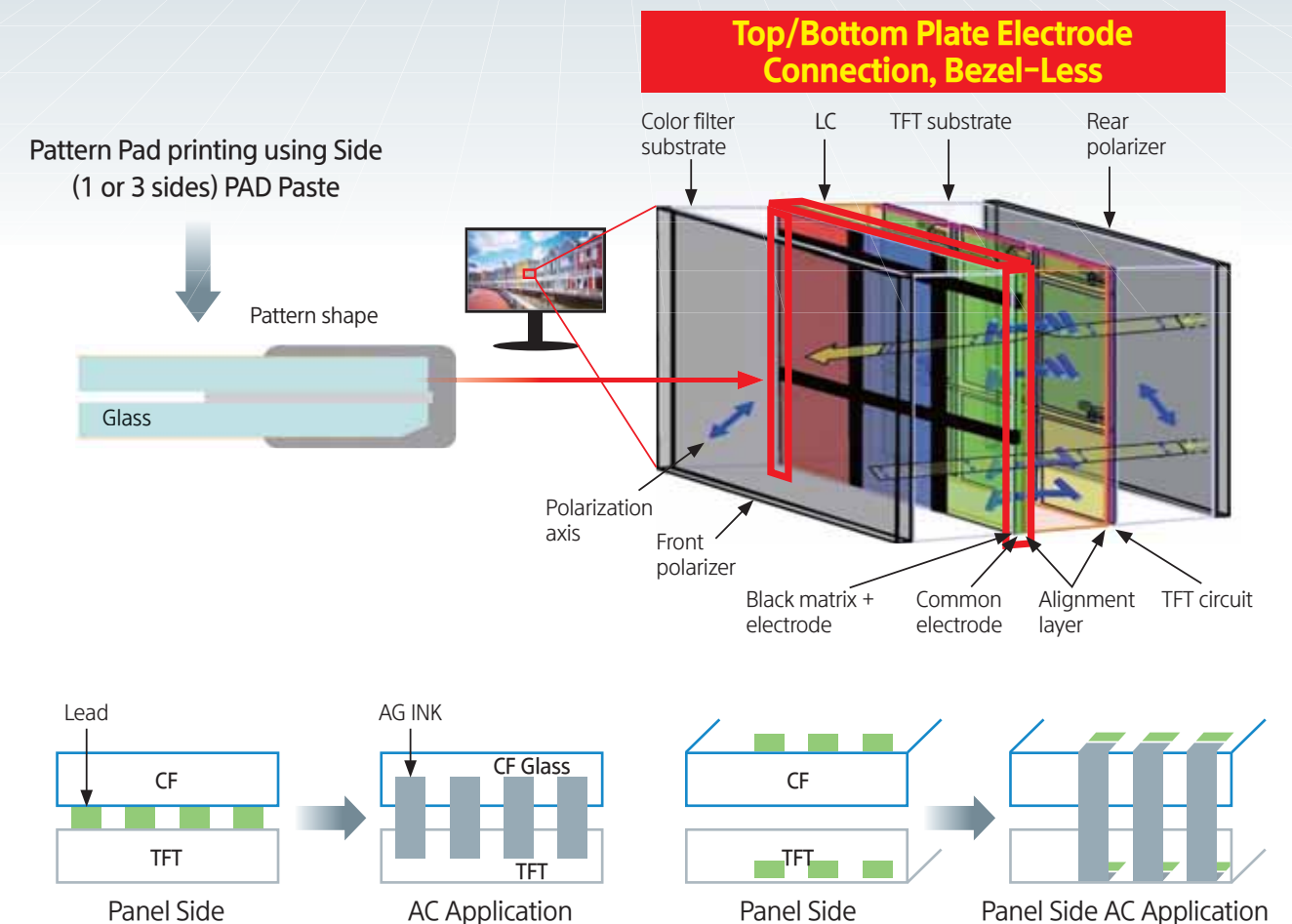
Conductive Coatings for EMI/EMC

- Mobile-phone, PDA, Notebook, Tablet, Medical Devices et al.
- Ag type, Ag-Cu type



	Spray type		Remarks
	Ag	AgCu	
Solid content	42.0 ± 1.5	23~30 ± 1.0	%
Viscosity	10,000~20,000	10,000 ± 5,000	(25°C, cps)
Shielding Rate (dB)	75 ~ 85	75 ~ 85	ASTM D4945
Resistivity	≤ 0.015 Ω/sq	≤ 0.02 Ω/sq	12.5 ~ 20 μm
Curing condition	60°C X 20min	60°C X 20min	
Adhesion	100/100	100/100	Cross cut
Dilution (sec)	10 ~ 20	10 ~ 20	Zhan cup
Storage	6 months	3 months	0 ~ 15°C

PAD Printing Conductive Paste for Display



ITEM	LCD/LED	OLED
Paste	Appearance and Color	Silver Gray
	Viscosity (cps) @ 25°C	24,000 ± 2,500
	Solid Content (wt.%)	80 ± 2
	Drying Condition	≥ 220°C x 1min./Hot plate
Printed Film	Resolution (min. line width)	≥ 50 μm
	Thickness	≥ 3 μm
	Volume Resistivity (ohm * cm)	< 2.0 X 10 ⁻⁴
	Film Hardness	≥ 2H
	Adhesion	100/100 @ Cross Cut Test