

# adelco CTS Systems

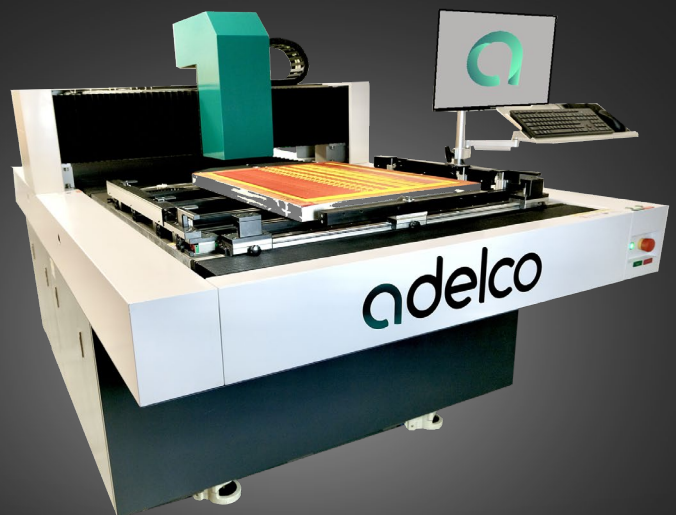
## InkPro - InkJet System



The Adelco InkPro industrial **Computer to Screen** solution, has a **higher resolution** than any other inkjet system on the market. With **superior image integrity**, richer details and smoother halftone transitions. All at a **low price** point, ensuring the best value on the market.

## LaserPro - Laser System

An advanced **Computer to Screen** solution. High precision, High productivity, a truly **simple process**. This direct screen laser exposure system produces perfect screen plates.



# InkPro - InkJet System



Adelco's **InkPro** CTS system, is a high speed, high resolution industrial computer to screen imaging system based on **inkjet printing technology**, that directly generates and exposes opaque images on emulsion - coated screens with UV-blocking ink so that users can reduce the time and effort required for screen preparation.

- **High Resolution**

Utilising the advantages of higher resolution inkjet technology, Adelco **InkPro** has the ability to print computer-to-screen images with richer details and smoother halftone transitions, which are superior to traditional film positives.

- **Optional on board exposure lamp available**

The specially formulated UV-blocking ink also works well on **ALL emulsions on the market.**

- **Easy to integrate**

The screens produced by the **InkPro** are compatible with existing standalone exposure equipment for subsequent exposure. Easy to integrate into current screen printing production lines.

- **High Efficiency**

Exposes screens in less than **60 seconds.**

- **Low Cost**

Elimination of film positives. Litho film is becoming increasingly expensive, and the suppliers on the market are decreasing. One procedure of CTS digital screen making, **replaces five procedures of the conventional process.**

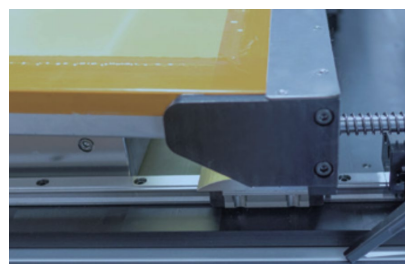
- Professional ColorPRINT server RIP Software for an **efficient workflow.**

- Adjustable frame fixture provides **fast setup for screen frames** upto 635mm x 914.4 mm (25" x 36")

- Print head maintenance module allows **automatic purging, wiping and capping.**

## Specifications

Specification	Adelco InkPro
Application	Textile, decals, labels, decorations, etc.
Max Screen Frame Size	635 x 914.4 mm (25" x 36")
Max Image Size (mm)	508 x 660.4mm (20" x 26")
Machine dimensions	1520 x 1700 x 1350 mm (W x D x H)
Screen profile	250.8 mm (2")
Print Technology	DOD piezolectric inkjet print technology
Print Head	600 DPI Ricoh gen 6 piezo print head
Print Head Control	Auto voltage & temp control, auto print head maintenance, variable droplet size control for grayscale printing.
Exposure time	Under 60 seconds
Resolution	1440 x 1200 dpi
Ink	Black, UV blocking, Ink tank : 1 litre
File Format	Includes PDF, EPS,PS, TIFF, PSD, etc.
Color mode	Monochrome
Connections	15W/20W/25W (optional)
Machine size mm	1600 x 1350 x 1550                      2700 x 1550 x 1600
Power requirements	Single Phase 220V,±10% 50/60HZ AC 10 amps max 1000W
Equipment Conditions	Yellow/dark room - Altitude up to 1000m Temperature 16 - 28°C. (61b - 82°F) 40 - 60% relative humidity (recommended)
Software	ColorPRINT server RIP software, Print production software (PPS) Print control software (PCS)



**Adjustable Frame Fixture**



**Locating blocks**



**Shuttle Gantry Design**



**Print Head Maintenance Module**

# LaserPro - Laser System



Adelco's **LaserPro** machine, is a direct screen laser exposure machine to produce perfect screen plates. Data files are directly read by the computer to screen (CTS) and then converted into images which will be transmitted through **laser beams** onto screens by DMD and lens.

With **no added consumables**, and using Digital Imaging Technology, images are produced by DMD (digital micro-mirror device) which has over **800 thousand or 2 million micrometer** micro-mirrors, enabling clear and sharp square dots. This latest digital exposure system has now become the new standard for the screen printing industry.

- **High Precision and Resolution**

Easy and fast to achieve raster 133LPI and high quality screen dots by the optical 1270dpi, while with the optical 2540dpi, **high definition curved lines** and **perfect FM screen dots** can be realised.

- **High Efficiency**

Three minutes to finish the exposure on screen size 1000mm x 1000mm. **Stencil making efficiency** has been greatly improved due to a lot of time saved by the **accurate exposure alignment** and labour reduction.

- **Low Cost**

Elimination of film positives. Litho film is becoming increasingly expensive, and the suppliers on the market are decreasing. One procedure of the **LaserPro** digital screen making, **replaces five procedures of using the conventional process**.

- **Excellent laser piercing power**

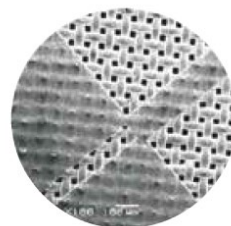
**15W, 20W** and **25W** three laser powers are optional, and the thickness EOM  $\mu\text{m}$  with solvent resistant emulsions and EOM 220 $\mu\text{m}$  with water resistant emulsion can be achieved for some special screen making such as carbon oil and capillary.

- **Compatible processes with the conventional process**

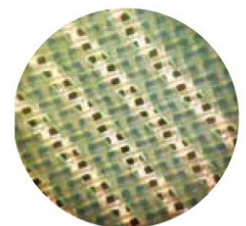
**Data files are directly read by the LaserPro** and then converted into images which will be transmitted through laser beams onto screens by DMD and lens.

Specification	Adelco Laser	Adelco LaserPro
Application	Textile, decals, labels, decorations, etc.	
Max Screen Size (mm)	900 x 1100mm	1080 x 1200mm
Min Screen Size (mm)	400 x 400mm	400 x 400mm
Max exposure Size (mm)	850 x 950mm	900 x 1000mm
Screen frame thickness	25 - 45 mm	25 - 45 mm
Imaging System	DMD DLP Technology	
Emulsion thickness (EOM)	Solvent resistant emulsion	3 $\mu\text{m}$ - 150 $\mu\text{m}$
	Water resistant emulsion	3 $\mu\text{m}$ - 350 $\mu\text{m}$
Exposure time	120 - 240s /M <sup>2</sup> , 350 mesh yellow screen	
Resolution	1270dpi	1270dpi
Raster	120LPI	133LPI
File Format	1_ bit tiff	1_ bit tiff
Focus system	UVLD laser, wavelength 405.5nm	
Laser Power	20W/25W	15W/20W/25W
Machine size mm	1740 x 1500 x 1480	2700 x 1550 x 1600
Equipment net weight	1200 KG	2200KG
Equipment Conditions	Yellow light room with cleanliness class 10000, temperature 22 $\pm$ 2°C, 40 - 70% relative humidity (no condensation)	
Connections	Single Phase 220V, 50/60HZ, 4KW, Gas 1L/min	

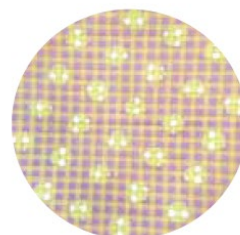
## High Resolution



**2540dpi**



**50-micron positive line on 120pw34(300/in)**



**5% halftone dots at 120lpi on 150pw31(380/in)**



**Four-colour picture**

# Laser - Laser System



Introducing **Adelco's Laser System**, a revolutionary direct screen laser exposure system designed to create **flawless screen plates**. This advanced technology seamlessly translates data files through Computer-to-Screen, transforming them into **high-resolution images**. These images are then transmitted onto screens with precision using **cutting-edge DMD** and lens technology. Witness a new era of perfection in screen plate production.

Experience a consumable-free process powered by state-of-the-art Digital Imaging Technology. Our system employs a Digital Micro-Mirror Device (DMD) boasting an impressive array of over **800 thousand to 2 million micrometer-sized mirrors**, ensuring the creation of impeccably defined square dots with **unparalleled clarity**. This cutting-edge digital exposure technology has firmly established itself as the gold standard within the industry.

- **High Precision and Resolution**

Easy and fast to achieve raster 120LPI and high quality screen dots by the optical 1270dpi, while with the optical 2540dpi, **high definition curved lines** and **perfect FM screen dots** can be realised.

- **High Efficiency**

Three minutes to finish the exposure on screen size 900mm x 1000mm. **Stencil making efficiency** has been greatly improved due to a lot of time saved by the **accurate exposure alignment** and labour reduction.

- **Low Cost**

Elimination of film positives. Litho film is becoming increasingly expensive, and the suppliers on the market are decreasing. One procedure of the **Adelco Laser** digital screen making, **replaces five procedures of using the conventional process**.

- **Excellent laser piercing power**

**20W** and **25W** twolaser powers are optional, and the thickness EOM  $\mu\text{m}$  with solvent resistant emulsions and EOM 150 $\mu\text{m}$  with water resistant emulsion can be achieved for some special screen making such as carbon oil and capillary.

- **Compatible processes with the conventional process**

**Data files are directly read by the Adelco Laser** and then converted into images which will be transmitted through laser beams onto screens by DMD and lens.

## Specifications

	Adelco Laser	Adelco Laser Plus
<b>Application</b>	Textile, decals, labels, decorations, etc.	Textile, decals, labels, decorations, etc.
<b>Max Screen Size (mm)</b>	900 x 1100	1200 x 1300
<b>Min Screen Size (mm)</b>	400 x 400	400 x 400
<b>Max exposure Size (mm)</b>	850 x 950	1100 x 1250
<b>Screen frame thickness</b>	25 - 45mm	25 - 45mm
<b>Imaging System</b>	DMD DLP Technology	DMD DLP Technology
<b>Emulsion thickness (EOM)</b>	Solvent resistant emulsion 3 $\mu\text{m}$ - 150 $\mu\text{m}$	Solvent resistant emulsion 3 $\mu\text{m}$ - 150 $\mu\text{m}$
	Water resistant emulsion 3 $\mu\text{m}$ - 350 $\mu\text{m}$	Water resistant emulsion 3 $\mu\text{m}$ - 350 $\mu\text{m}$
<b>Exposure time</b>	120 - 240s /m <sup>2</sup> , #350 mesh yellow screen	120 - 240s /m <sup>2</sup> , #350 mesh yellow screen
<b>Resolution</b>	1270dpi	1270dpi
<b>Raster</b>	120LPI	120LPI
<b>File Format</b>	1_ bit tiff	1_ bit tiff
<b>Focus system</b>	Wavelength 405 5 $\pm$ nm Auto	Wavelength 405 5 $\pm$ nm Auto
<b>Laser Power</b>	20W/25W (optional)	20W/25W (optional)
<b>Machine size mm</b>	1740 x 1500 x 1480 (68.5" x 59.1" x 58.3")	1960 x 1800 x 1500 (77.2" x 70.9" x 59.1")
<b>Equipment net weight</b>	1200 KG	1500 KG
<b>Equipment Conditions</b>	Yellow light room with cleanliness class 10000, temperature 22 $\pm$ 2°C, 40 - 70% relative humidity (no condensation)	Yellow light room with cleanliness class 10000, temperature 22 $\pm$ 2°C, 40 - 70% relative humidity (no condensation)
<b>Connections</b>	Single Phase 110/220v, 50/60HZ, 3KW	Single Phase 110/220v, 50/60HZ, 3KW



# Laser V - Laser System



Adelco's **Laser V** system utilizes direct screen laser exposure technology to achieve **impeccable screen plate production**. It operates by directly reading data files through the computer to screen (CTS) system, converting them into images, and transmitting them onto screens using laser beams facilitated by the DMD and lens components.

By employing Digital Imaging Technology and **without the need for additional consumables**, this innovative system generates images utilizing the DMD (digital micro-mirror device), which boasts an impressive array of over 800 thousand or 2 million micrometer micro-mirrors. This advanced configuration ensures the production of **crisp and well-defined square dots**. As a result, this cutting-edge digital exposure system has swiftly emerged as the prevailing benchmark within the screen printing industry.

- **High Precision and Resolution**

Effortlessly and swiftly achieve a raster of 133LPI and obtain **high-quality screen dots** through the utilization of an optical resolution of 1270dpi. Alternatively, with an optical resolution of 2540dpi, attain impeccable FM screen dots and high-definition curved lines.

- **High Efficiency**

The exposure process for a screen size of 1000mm x 1000mm can now be completed in just **three minutes**. This remarkable reduction in time, coupled with precise exposure alignment and decreased labor requirements, has significantly enhanced the efficiency of stencil making.

- **Low Cost**

**Elimination of film positives.** Litho film is becoming increasingly expensive, and the suppliers on the market are decreasing. One procedure of CTS digital screen making, **replaces five procedures of using the conventional process**.

- **Excellent laser piercing power**

Two laser powers are optional: **20W** and **25W**, the thickness EOM (emulsion over mesh) pf 120µm with solvent resistant emulsions and an EOM of 220µm with water resistant emulsion can be achieved for special screen making such as carbon oil and capillary.

- **Compatible processes with the conventional process**

**The CTS directly reads data files** and subsequently converts them into images. These images are then transmitted onto screens using **laser beams**, facilitated by the DMD and lens components.

## Specifications

	Adelco Laser V	Adelco Laser V- XL
<b>Application</b>	Textile, Decals, Labels, Decorations, etc.	Textile, Decals, Labels, Decorations, etc.
<b>Max Screen Size (mm)</b>	1000 x 1000 mm	1200 x 1300 mm
<b>Min Screen Size (mm)</b>	400 x 250 mm	400 x 250 mm
<b>Max exposure Size (mm)</b>	1100 x 1200 mm	1100 x 1200 mm
<b>Screen frame thickness</b>	20 - 50 mm	20 - 50 mm
<b>Imaging System</b>	DMD DLP Technology	DMD DLP Technology
<b>Emulsion thickness (EOM)</b>	Solvent resistant emulsion 3µm - 150µm Water resistant emulsion 3µm - 350µm	Solvent resistant emulsion 3µm - 150µm Water resistant emulsion 3µm - 350µm
<b>Exposure time</b>	120 - 240s / m <sup>2</sup> , 350 mesh yellow screen	120 - 240s / m <sup>2</sup> , 350 mesh yellow screen
<b>Resolution</b>	1270dpi / 2540dpi (Optional)	1270dpi / 2540dpi (Optional)
<b>Raster</b>	133LPI	133LPI
<b>File Format</b>	1_ bit tiff	1_ bit tiff
<b>Focus system</b>	UVLD laser, wavelength 405 5±nm	UVLD laser, wavelength 405 5±nm
<b>Laser Power</b>	20W/25W (Optional)	20W/25W (Optional)
<b>Machine size mm</b>	1900 x 1417 x 2300 mm / 74.8 x 55.9 x 90.6"	1900 x 1417 x 2300 mm / 74.8 x 55.9 x 90.6"
<b>Equipment net weight</b>	1400 KG	1400 KG
<b>Equipment Conditions</b>	Yellow light room with cleanliness class, temperature 22±2°C, 40 - 70% relative humidity (no condensation)	Yellow light room with cleanliness class, temperature 22±2°C, 40 - 70% relative humidity (no condensation)
<b>Connections</b>	Single Phase 110V/ 220V, 50/60HZ 4KW, Compressor air 0.5 mpa	Single Phase 110V/ 220V, 50/60HZ 4KW, Compressor air 0.5 mpa