LTS 6080-VF

The Advanced Direct Laser CtS Imaging & Exposure System

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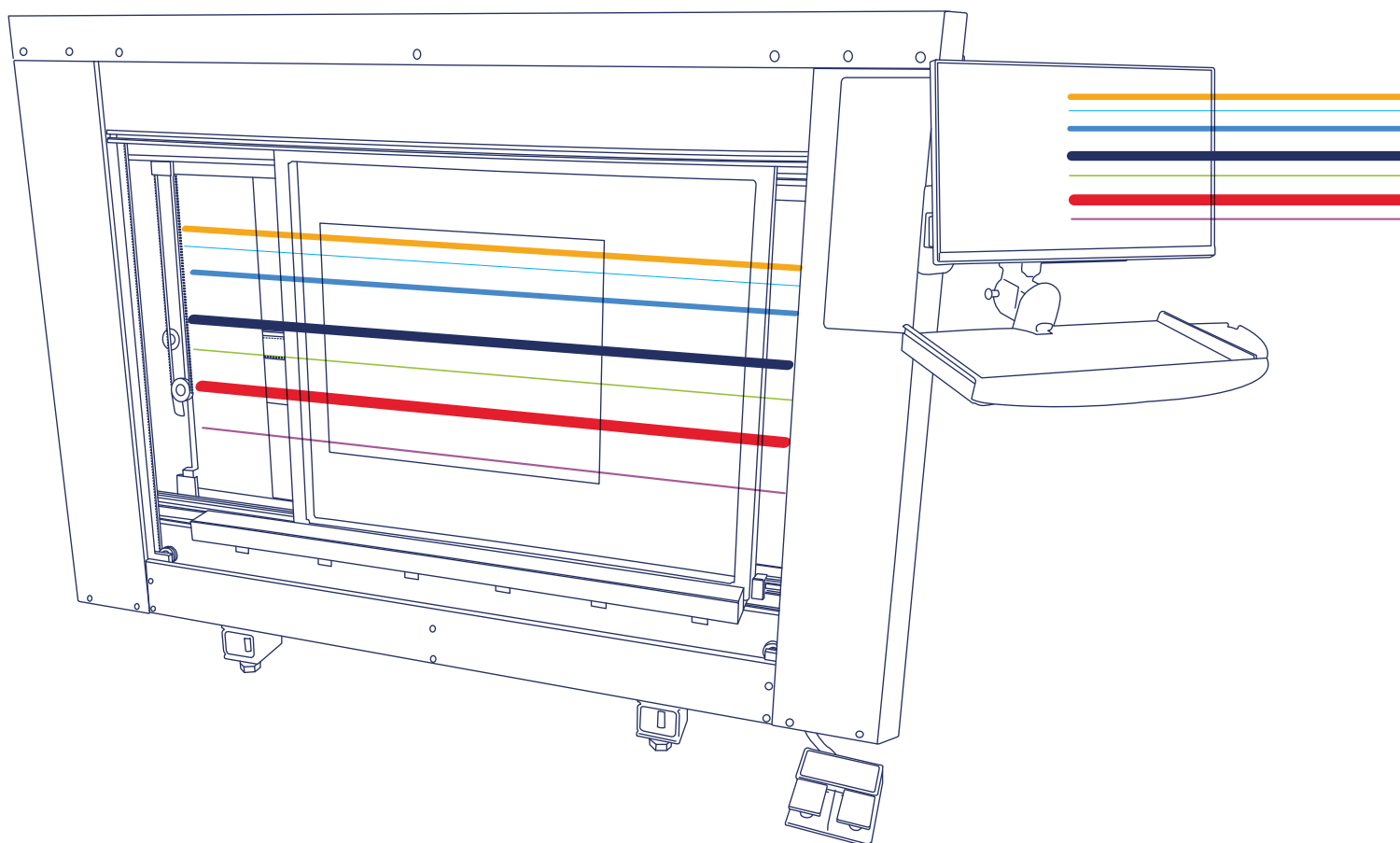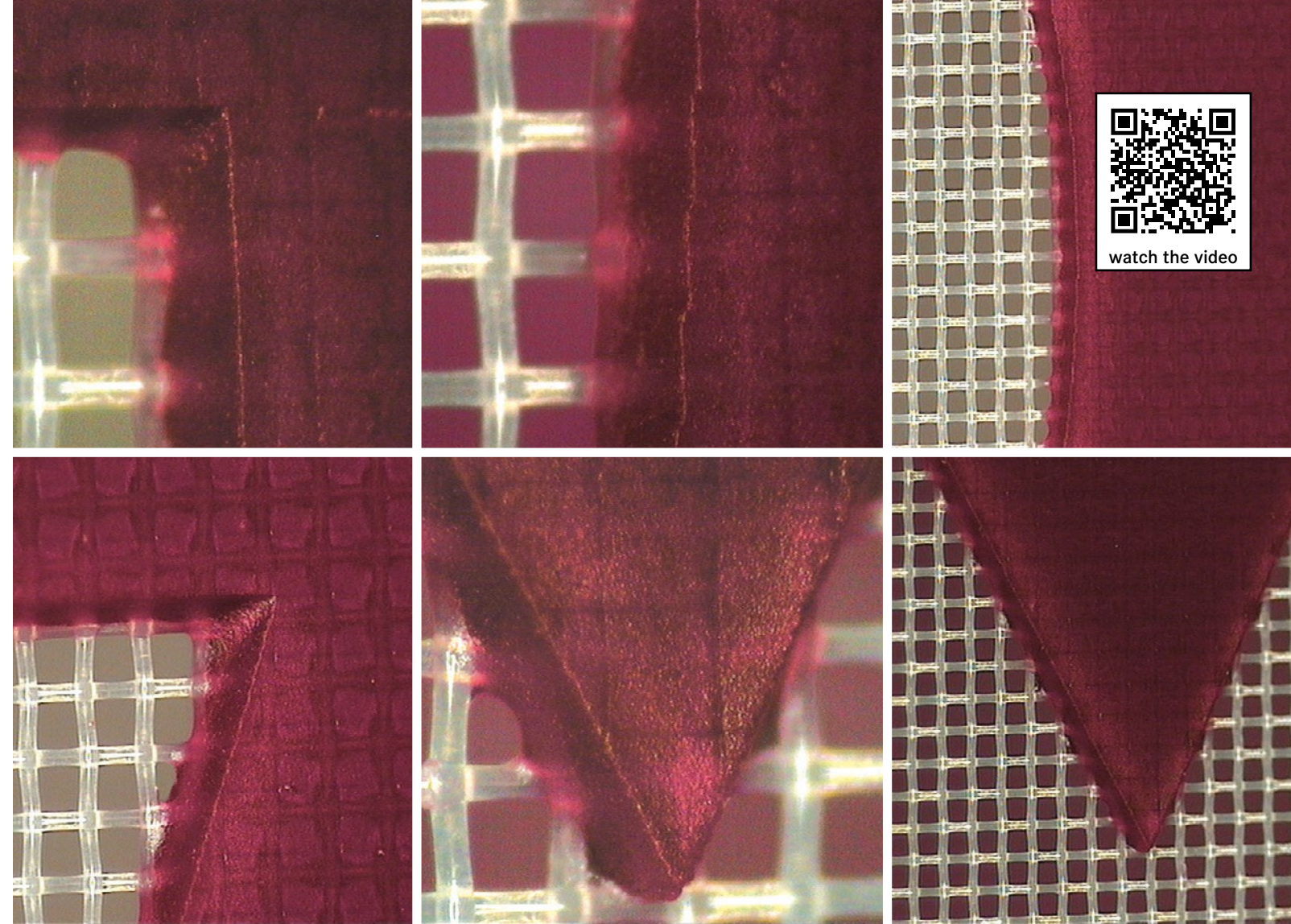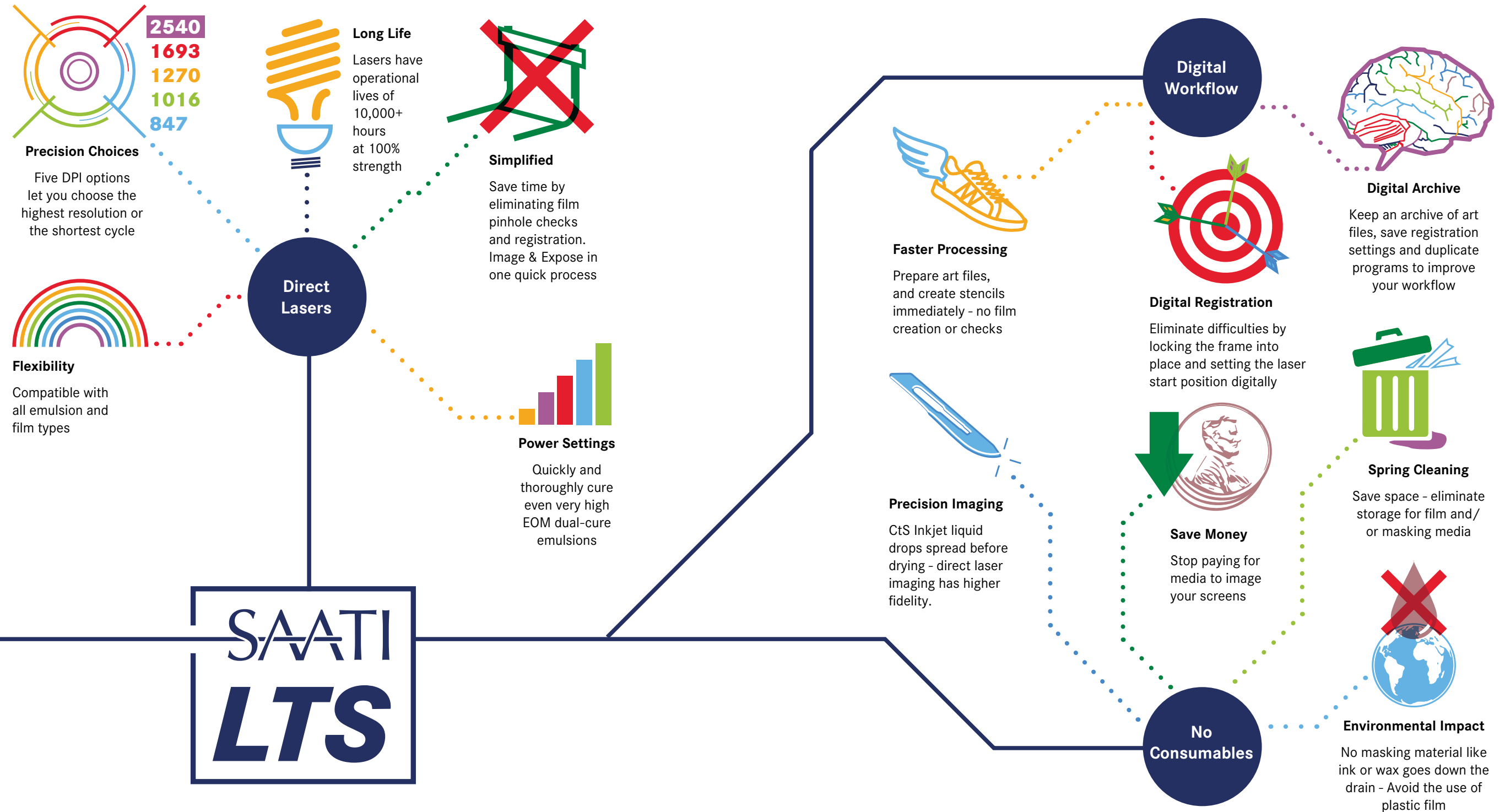
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The LTS Series: Introducing State of the Art Laser Stencil Making from SAATI

SAATI has decades of experience in manufacturing and commercializing precision woven mesh, emulsion, stencil films and chemicals. Knowledge we have gained from our customers has been compiled, analyzed and applied to produce a full range of screen making equipment, and the jewel of this collection is the LTS Series.

The SAATI LTS range takes into account the contemporary needs of stencil makers with an eye towards future challenges that will demand more efficient and precise results. SAATI LTS machines are Direct Laser CtS Image & Exposure units. They surpass the results of other CtS systems, and simultaneously provide enhancements to time and money spent producing stencils, as well as reducing your ecological footprint.
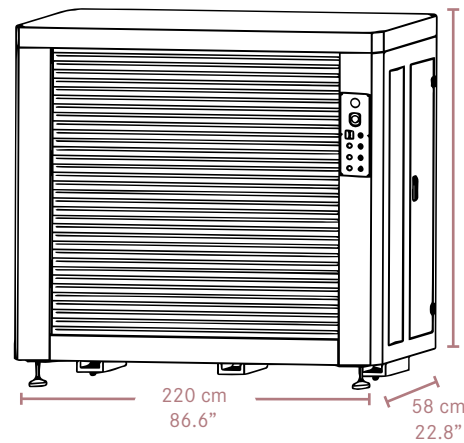
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SAATI LTS 6080-VF

Features

2540
1693
1270
1016
847

Precision Choices

Five DPI options let you choose the highest resolution or the shortest cycle

Flexibility

Compatible with all emulsion and film types

Long Life

Lasers have operational lives of 10,000+ hours at 100% strength

Simplified

Save time by eliminating film pinhole checks and registration. Image & Expose in one quick process

Power Settings

Quickly and thoroughly cure even very high EOM dual-cure emulsions

Direct Lasers

SAATI
LTS

Digital Workflow

Faster Processing

Prepare art files, and create stencils immediately - no film creation or checks

Precision Imaging

CtS Inkjet liquid drops spread before drying - direct laser imaging has higher fidelity.

Digital Registration

Eliminate difficulties by locking the frame into place and setting the laser start position digitally

Save Money

Stop paying for media to image your screens

Digital Archive

Keep an archive of art files, save registration settings and duplicate programs to improve your workflow

Spring Cleaning

Save space - eliminate storage for film and/or masking media

Environmental Impact

No masking material like ink or wax goes down the drain - Avoid the use of plastic film

No Consumables

Dimensions

163 cm
64"

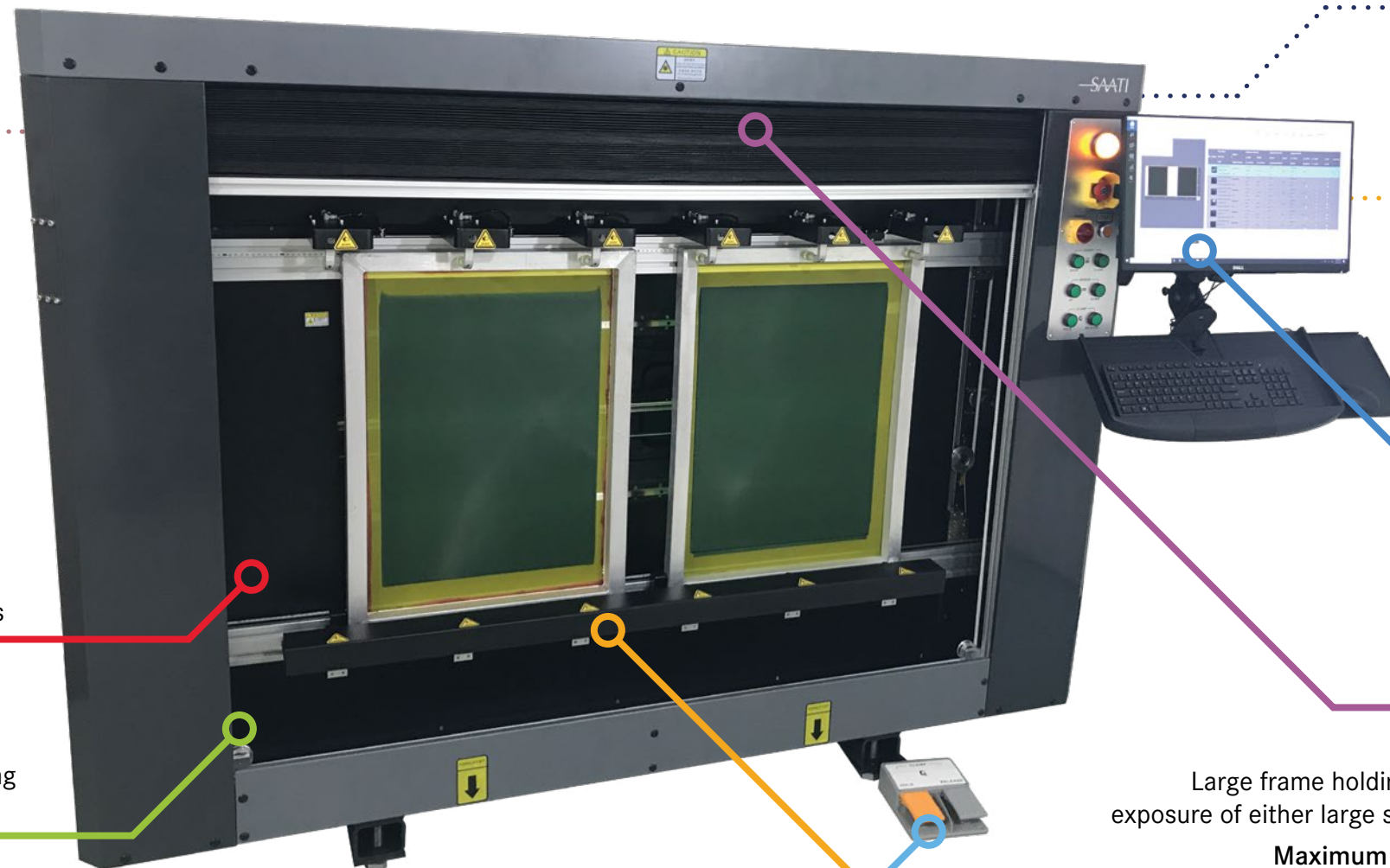220 cm
86.6"

58 cm
22.8"

Weight

850 kg
1,874 lbs

Power

110V
standard

240V
with adapter

800W
consumption

Touch screen workflow

Characteristics

Glass-free vertical loading and
frame lock system ensure accurate,
easy screen placement and reduced pinholes

Motorized safety shutter

Solid metal construction provides a vibration
free stencil making platform while maintaining
a smaller footprint than other CtS machines
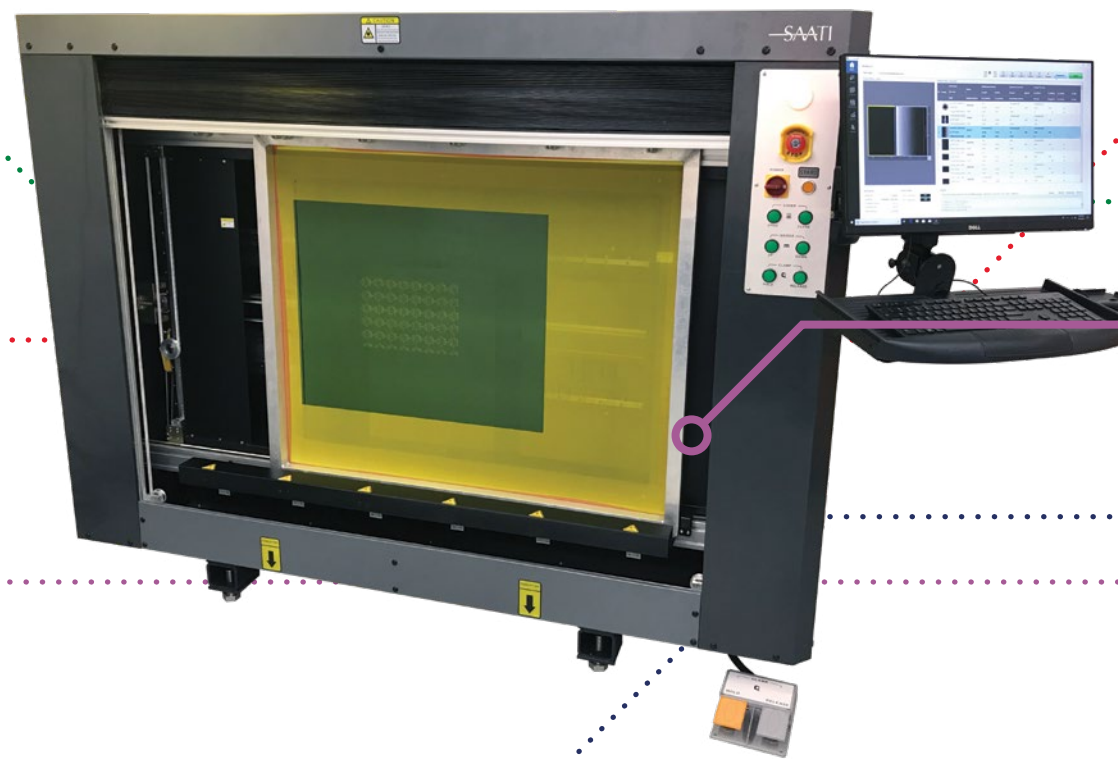
Large frame holding area enables simultaneous imaging &
exposure of either large screens, or 1 or 2 standard size screens

Easy to use pedals engage and disengage the frame clamps

Maximum Image Size: 60x120 cm | 23.6 x 47.2"
Max Frame Sizes: 1 Screen up to 104 x 167 cm | 41 x 66"
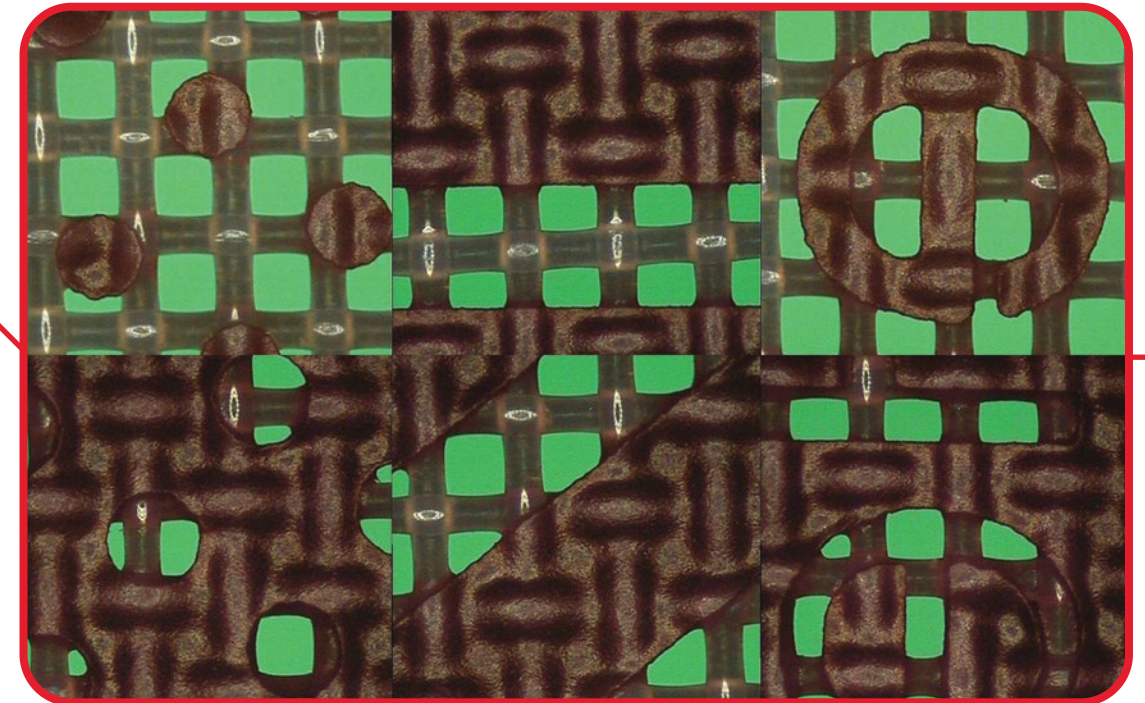**or 2 Screens** up to 58 x 78 cm | 23 x 31"
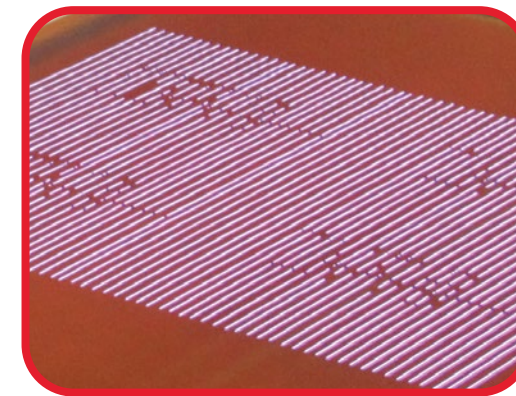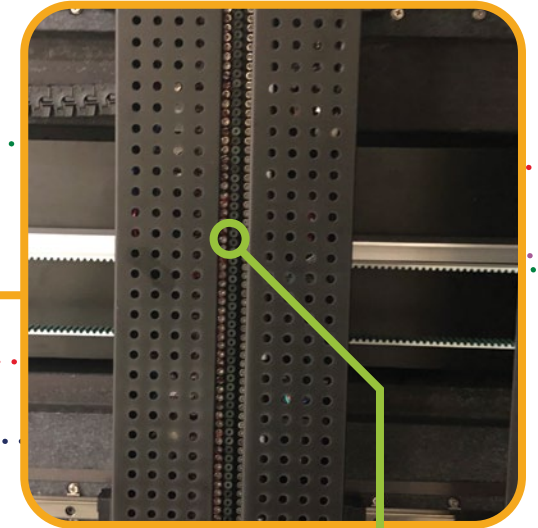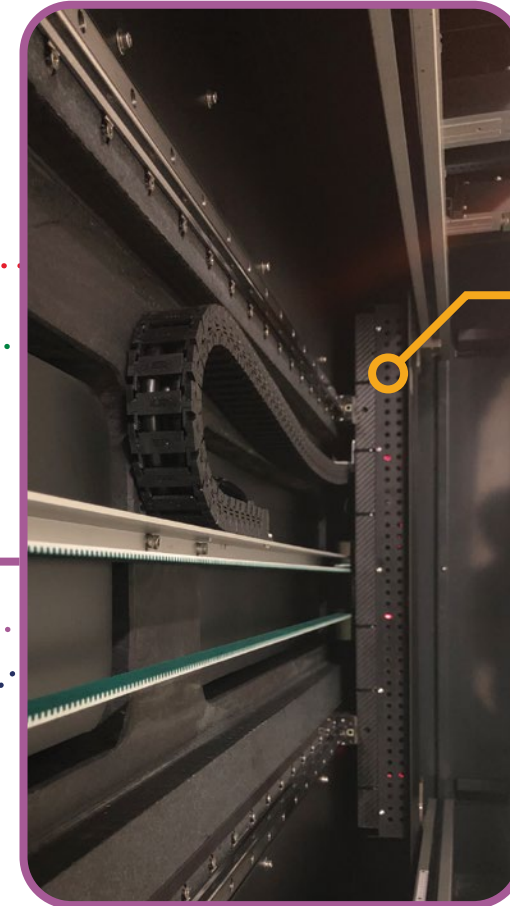
- Linear array of 96 Blu-Ray Lasers on a belt-driven head, the system is durable and requires minimal maintenance
- The targeted light wavelength of the lasers maximizes curing speed and minimizes both power consumption and heat generation
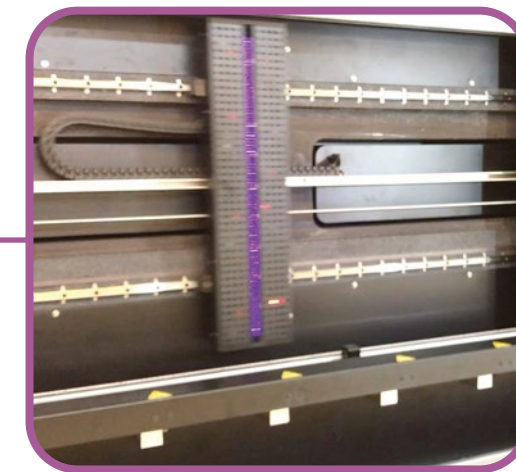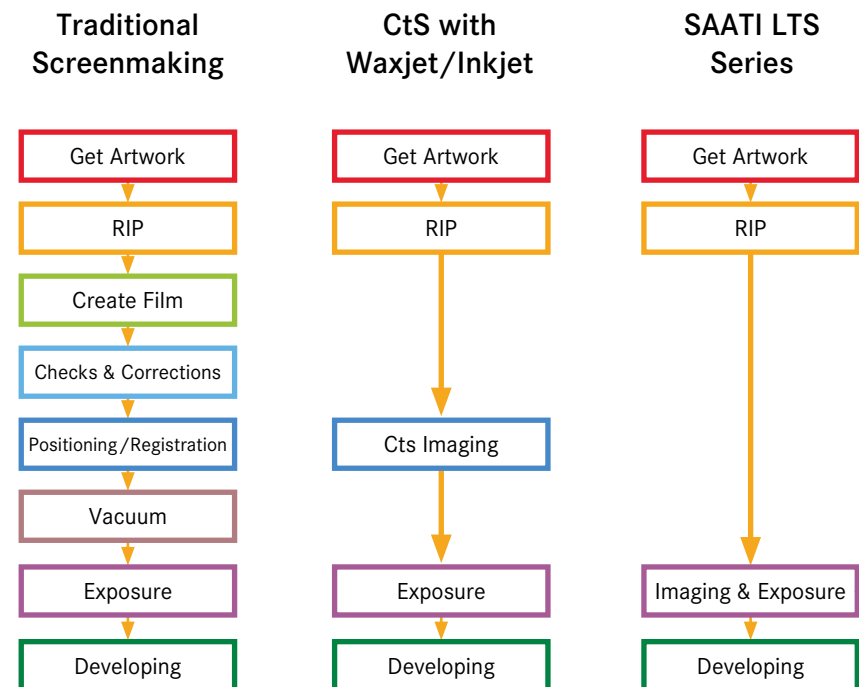- LED Lasers last 10,000+ hours with 100% efficiency

Resolution Settings

The SAATI LTS has five resolution resolution settings, each tailored to a different types of image requirements

847	**1016**	**1270**	**1693**	**2540**
Low Setting		**Middle Setting**		**Highest Setting**

- Fastest processing times
- Superior to inkjet films

- Superior to inkjet/waxjet resolution

- Equivalent to DLE systems

- Superior to many other DLE systems

- Image setter quality for the most demanding applications

Improvements to Workflow

Traditional Screenmaking	**CtS with Waxjet/Inkjet**	**SAATI LTS Series**
Get Artwork	Get Artwork	Get Artwork
RIP	RIP	RIP
Create Film		
Checks & Corrections		
Positioning/Registration	Cts Imaging	
Vacuum		
Exposure	Exposure	Imaging & Exposure
Developing	Developing	Developing
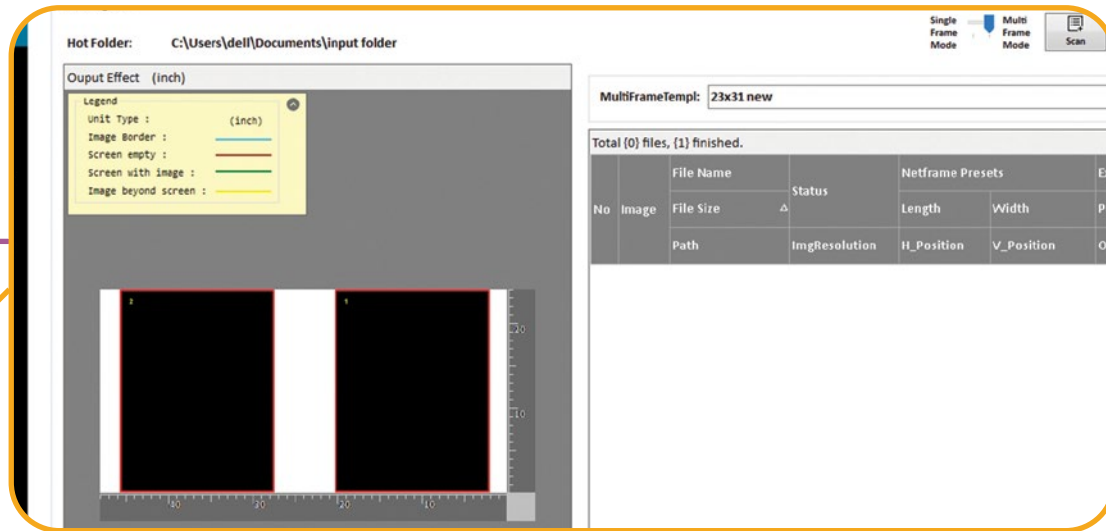
Precision placement of multiple art files across two screens
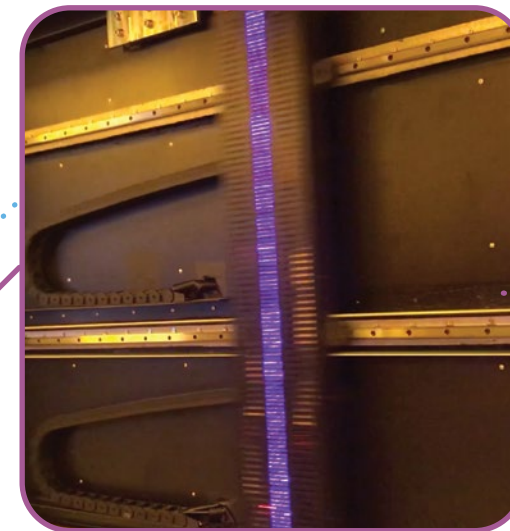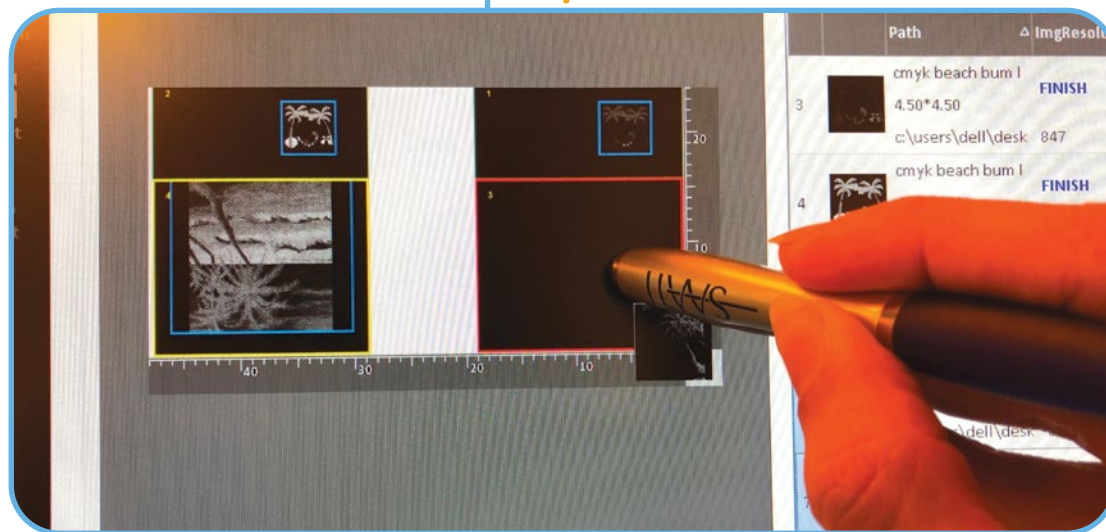
Laser array exposes images much more quickly than scrolling chip DLE or ink/waxjet that require subsequent exposure
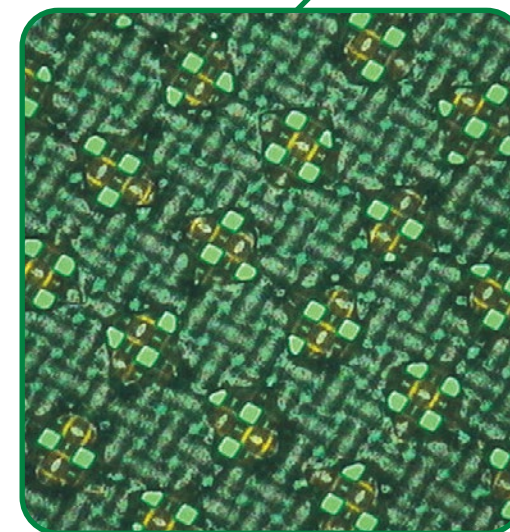
120 LPI 40% dot on 380.31 YE

120 LPI 60% dot on 380.31 YE

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Software Capabilities
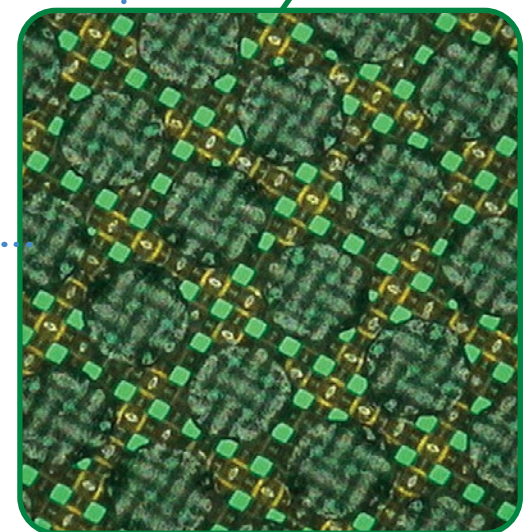
User Friendly Layout System

- Set size & location of image(s) and define exposure area
- Place multiple stencil images across 1 or more screens with touchscreen or mouse
- Finalized layouts go to queue for easy work management
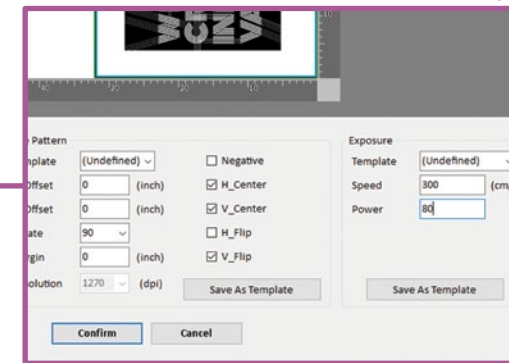
Exposure System

- Set the laser power and scan speed to effectively and thoroughly cure all emulsion and film types in under 3:00
- Customize settings and/or create standard templates for future use
- Proprietary file naming system automatically loads Netframe, Image Pattern & Exposure settings (not required)

Create Your Own Archive

- Processed files settings are saved
- After screen imaging, layouts go to designated folder for archiving or deletion
- Create your own file archive for easy retrieval through the search function

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Software Capabilities

Sophisticated Image Correction

- Adjust image size, skew & fit for more accurate printed results
- Ensure perfect registration on with individual micron adjustments on X,Y grid
- Prep art for substrate deformation in printed electronics, or emulate deformations present in your inkjet film and other legacy technologies

Original Artwork

Printed Distortion

Compensation

Final Result

Adjust

Set the adjust parameters for this device, you can load from files and save to local file. System will save those data to device's memory automatically.

| Save | Save as | Load From File | Load From Device | Save To Device |

FPGA Version: V26+   Description:

Common Parameters   Size Calibrate   Error Record

Size Calibrate

YOffset(um)-Vertical offset

YPos	YOffset	YScale
100mm	200	100.2
200mm	320	100.12
300mm	380	100.06
400mm	525	100.145
500mm	640	100.115
600mm	760	100.12
700mm	915	100.155
800mm	1010	100.095

XOffset(um)-Horizontal offset

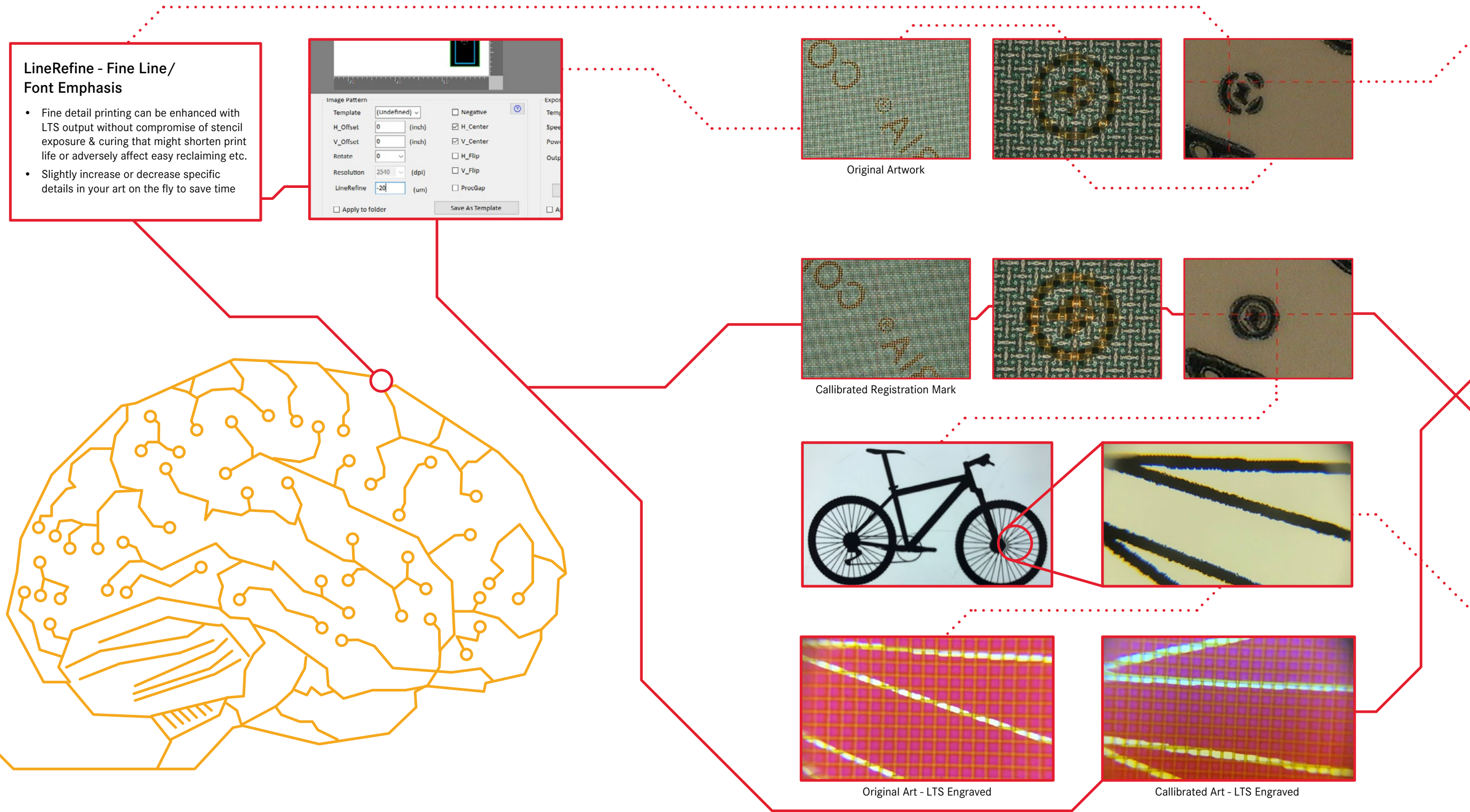| XPos	0mm	200mm	400mm	600mm	800mm	1000mm	1200mm
0mm	0	0	0	0	0	0	0
200mm	405	405	405	405	405	405	405
400mm	980	980	980	980	980	980	980
600mm	1720	1720	1720	1720	1720	1720	1720
800mm	2370	2370	2370	2370	2370	2370	2370

Main
Presets
Options
Maintain
Report
About

Areas of Application

- Digital transfers – screen printed white & adhesive on color transfer
- Print finishing – UV Clear on offset printed graphics
- Industrial labels or FIM & IMD to facilitate die cut registration

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Software Capabilities

LineRefine - Fine Line/ Font Emphasis

- Fine detail printing can be enhanced with LTS output without compromise of stencil exposure & curing that might shorten print life or adversely affect easy reclaiming etc.
- Slightly increase or decrease specific details in your art on the fly to save time

Image Pattern

Template	(Undefined)	☐ Negative
H_Offset	0 (inch)	☑ H_Center
V_Offset	0 (inch)	☑ V_Center
Rotate	0	☐ H_Flip
Resolution	2540 (dpi)	☐ V_Flip
LineRefine	-20 (um)	☐ ProcGap

☐ Apply to folder   Save As Template

Original Artwork

Callibrated Registration Mark

Original Art - LTS Engraved

Callibrated Art - LTS Engraved

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Software Capabilities

Asymmetric Resolution

- Set the lowest resolution setting in the X dimension and the highest in the Y
- The high processing speed of the lowest resolution setting is maintained
- The Y dimension detail will be the highest
- The resulting stencil is a hybrid product that has much higher quality achieved in the shortest possible processing interval

847 x 847 DPI stencil

2540 x 2540 DPI stencil

847 x 2540 DPI stencil - increased quality at the same speed as 847x847 DPI

847 x 847 stencil

847 x 2540 asymmetric stencil

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Alternative LTS Models

Machine	LTS 6080-VF	LTS 8012	LTS 1015
Number of Lasers	96	128	160
Resolution (dpi)	847 – 1016 – 1270 – 1693 – 2540		
Dimension	220 x 58 x 163 cm 86.6 x 22.8 x 64"	220 x 58 x 163 cm 86.6 x 22.8 x 64"	260 x 68 x 200 cm 102.4 x 26.8 x 78.7"
Weight	850 kg / 1874 lbs	925 kg / 2039 lbs	1200 kg / 2646 lbs
Maximum Image Size	60 x 120 cm 23.6 x 47.2"	80 x 120 cm 31.5 x 47.2"	100 x 150 cm 39.4 x 59.1"
Maximum Frame Size (Single)	104 x 167 cm 41 x 66"	115 x 167 cm 45 x 66.0"	140 x 200 cm 55 x 79"
Maximum Frame Sizes (Double)	58 x 78 cm 23 x 31"	64 x 91 cm 25 x 36"	64 x 91 cm 25 x 36"
Power Consumption	800 W	800 W	1000 W
Voltage	110/240 V		
Interface	USB 2.0		
Process Mode	Bi-Directional		
Stencil Materials	Most kinds of emulsion & film		
Maximum Emulsion Thickness	700 µm		
Repeatability	Less than 0.1 mm		
Sample Exposure Settings	Fabric Type Saatilene Hi-R 120.34 (305.34) Color: Yellow Power: 50 Emulsion: SAATIgraf CTS7 EOM: 9 µm DPI:1270 Speed: 300 SAATI 21-Step Exposure Level: Step 5 **Time: Less than 3.5 Minutes**		

SAATI LTS 6080

- Facedown glass panel with enclosing lid and safe viewing window
- 96 laser array
- Digitally register, image & expose several small screens simultaneously - perfect for electronics
- Total image area of up to 60 x 80 cm | 23.6 x 31.5"
- Comes with pneumatic clamp registration system, also adaptable to other systems
- Fits multiple small frames or one large frame up to 85 x 110 cm | 33.5 x 43.3"
- Dimensions: 167 x 82 x 93 cm | 65.7 x 32.3 x 36.6"
- Weight: 597 kg | 1316 lbs

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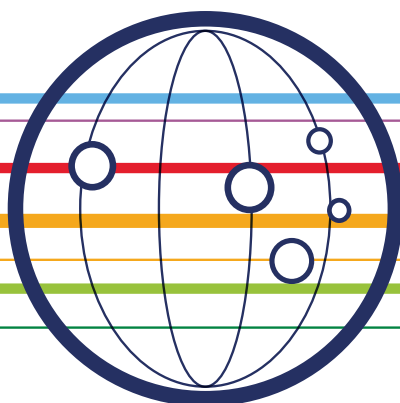
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