

Large Format
Fiber Laser Solution



LASER SOLUTION
LS900 FIBER

Innovative solutions for engraving and marking

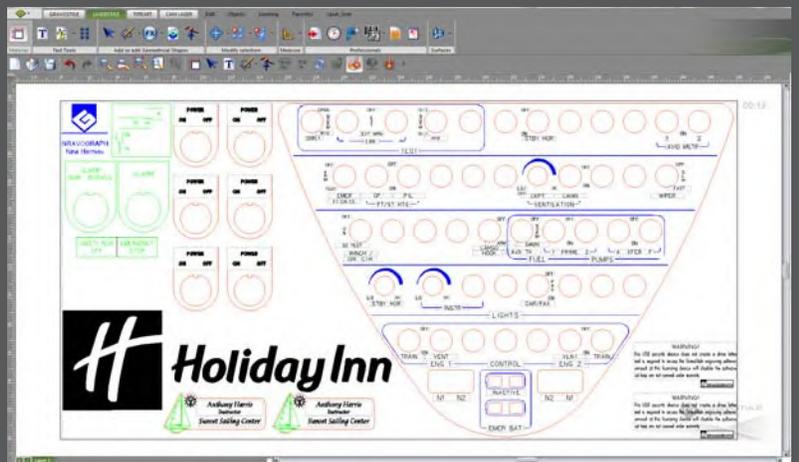


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LaserStyle™ Graphic Level
Professional
Engraving & Cutting
Software





TECHNICAL SPECIFICATIONS

Physical Characteristics

	LS900 Fiber
Size (L, W, H)	37.21 x 42.52 x 31.89 in
Shipping dimensions (L, W, H)	44.09 x 43.31 x 42.13 in
Net Weight	Max. 353 lbs
Shipping weight	Max. 485 lbs
Table surface	27.16 x 25.79 in
Maximum engraving area	24 .016 x 24.016 in
Maximum object weight	55 lbs
Maximum size of the part/material	25.59 x 24.80 x 9.84 in
Pass-through (over size material)	Yes, Optional with 4" Lens (9.25x7.25")
Z travel	9.843 in
Table Flatness	< 0.012 in
Perpendicularity	< 0.012 in

Engraving Characteristics

	LS900 Fiber
X max. travel speed - Raster	59 in/s
X, Y max. travel speed - Vector	7.9 in/s
Z travel speed	.512in/s
X, Y engraving precision	0.0079 in
Engraving repeatability	<0.002 in

Normal Sound Levels - ISO 11201

	LS900 Fiber
Idle - Waiting for engraving	<62 db
Normal Engraving - Raster	<70 db

Environment - EN 60721

	LS900 Fiber
Operational temperature	50 - 95° F
Storage temperature	50 - 104° F
Degree of relative humidity	20 - 80%

Laser & Optics

	LS900 Fiber 20W, 30W or 50W
Laser source wavelength	1064 nm
Red pointer wave length	645 - 665 nm
Lens focus (standard)	2 inches +/- 2%
Classification	CDRH, Class 2 (pass-through Class4)

Electrical Characteristics

	LS900 Fiber 20W, 30W or 50W
Input voltage Max.	100-240 VAC
Max. Amperage draw	15 A
Frequency	50-60 Hz
Absorbed power	1100W
Insulation	Class 1
Type of service	S1
Surge protection	2 x 16 A

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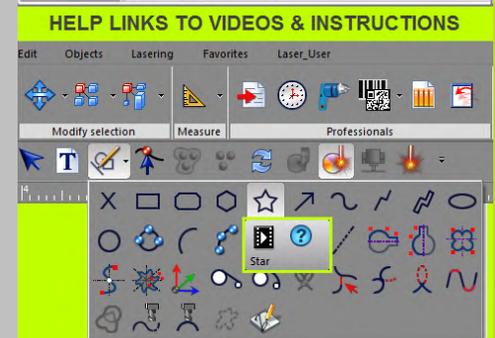
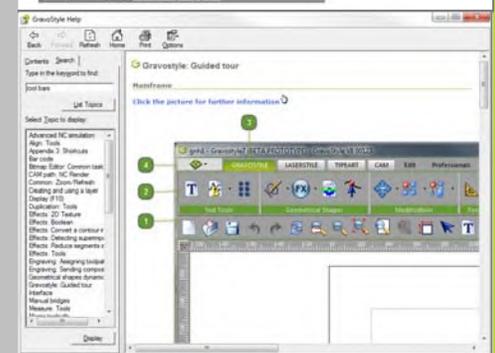
<u>Communications</u>	<u>LS900 Fiber</u>	<u>Software, Drivers & Firmware</u>	<u>LS900 Fiber</u>
Parallel	26 - pin - Delta Ribbon	Operating system (Windows Driver)	Vista, Windows 7, 8 & 10
USB	1.1, 2.0, 3.0 compatible	Memory buffer storage (firmware)	Up to 99 selectable jobs
Standard Input/Outputs	Sub - D Female	Languages supported	ENG, FRA, DEU, ITA, SPA, DUTCH
Exhaust System Input/Outputs	DIN - female 5 pin	Design Software - (included in purchase)	LaserStyle Graphic Professional Engraving & Cutting Software
Cylinder Attachment	DIN - female 8 pin	Software compatibility - (customer supplied)	CorelDraw, Illustrator, Office, PaintShop, & many others
Air assist	Pneumatic connector - 4mm	Job saves / template storage	Unlimited - based on PC storage
Air assist pressure	Maximum - 6 bars	Safety interlocks	Redundant, active safety interlocks
Exhaust connection	Inside diameter 4 in		
Exhaust airflow	0,5 kPa / 200 m3/h		

KEY FUNCTIONALITY

Laser Source	State of the art, high efficiency, air cooled Fiber laser. This source has superior stability with rapid recovery and extended firing duration, which translates into darker marks with crisp details.
Air Assist	Attach an external (or optional integrated) air compressor to the included air assist delivery system, for removing heat & combustible gases from the cutting area. System includes flow adjustment dial, programmable activation by color within the laser driver.
LCD Display & Control Panel	View job progress, time to completion, file name and setting on the LCD screen. Job parameters (position, power, speed, focus, air assist, exhaust automation and the red spotting beam) can be accessed, adjusted and controlled from the control panel. No need to resend/restart the job in order to make adjustments.
Red Spotting Beam	The red spotting beam can provide a preview box defining where the work will occur, or visibly trace the actual letters/graphic to validate size and position before processing the job.
Point & Shoot Layout	The red spotting beam communicates with Laserstyle software, allowing you to point to the corners of the material or define a box to automatically size and position the objects to be engraved. This feature reduces setup time, potential mistakes and simplifies user training.
Intelligent Control Driver	All laser settings are controlled by color from a single icon within Laserstyle, no plugins or secondary programs (Control Dashboards or Job Managers) are required. This provides streamlined operation without communication issues & software conflicts.
Calibration Wizard	When processing a new material, the calibration wizard is used to process a range of settings on your scrap material. Simply apply the speed & power settings that provided the desired results to process your finished work piece.
Material Settings Library	The operator can save job settings in the library by material and later recall the perfect settings for use on other jobs. This eliminates wasted time & materials associated with trying to find good settings in the future. Simply select the material being processed and all saved parameters (speed, power, focus, DPI, air assist, exhaust) will automatically populate. This allows for easy training of backup users and new employees.
Resolution	DPI on the X & Y axis can be set independently if desired. This enables you to run very high resolution on the X axis and lower resolution on the Y axis. The benefit is higher quality engraving with a greatly reduced processing time when raster engraving. DPI can be set in a range from 50 to 3,600.
X, Y Speed and Power Settings	Power settings can be controlled in increments of 1%, up to 100%. Speed can be defined in increments of 0.1% up to 100.0%.
Processing Modes	Processing modes are set by color assignment, the available modes are: raster, vector, cutting, dotted line, skip color, widen hairline (user defines width) and raster/vector.
Automatic Focus	Automatic focus is accomplished using a permanently mounted flexible sensing post. This allows for accurate Z positioning without user interaction, on flat, raised and recessed (bowl shaped) items. This cannot be achieved with sensing beams or dangling Z clips that fall off on uneven surfaces. The user can program for a single Z touch off, or for automatic Z sensing in each engraved location across the work area, this insures tight focus control over a large or uneven area.
Drive System Bearings	All bearings are sealed from dust and debris, no lubrication is required by the operator.
Drive Belts	All drive belts are Kevlar reinforced flex gear belts for extended life cycles, they do not stretch or require routine maintenance.
Engraving Direction	The operator can elect to process the engraving job from the top the bottom or from the bottom to the top of the work piece. This can be helpful when processing heat sensitive material or materials that require very low power settings to process. Without this option any debris accumulating on the unprocessed surface could insulate the material from the beam causing a different appearance in the engraved area.

KEY LASERSTYLE GRAPHIC LEVEL FEATURES

LaserStyle vs. GravoStyle	LaserStyle is provided complementary with all lasers purchased, and it has unique tools and features optimized for laser processing. Laserstyle can be optionally upgraded to GravoStyle when you need one software platform to drive rotary/routing/CNC & laser equipment. GravoStyle provides the specialized tools and ability to seamlessly pilot both technologies using the same job layout. Laserstyle can drive galvo and gantry laser systems, and it is compatible with Co2, YAG, Fiber and Green laser technologies .
Laser Integration	LaserStyle fully integrates with the laser system allowing for point & shoot plate definition, scaling & resizing of content to fit a defined space, and creation of text on a curve or ribbon as defined with the red spotting beam. This saves time, reduces errors and wasted materials.
Print & Cut Registration	When processing materials that were digitally printed using registration marks, the laser can automatically compensate for position, stretch, rotation and skew when vector cutting designs. This is achieved using the red spotting beam and Print & Cut Wizard in conjunction with the related print job file.
WYSIWIRE	WYSIWIRE provides a 2-D view of what will be engraved, you can select the material being engraved to render an approximation of what the finished project will look like. With this tool you can save a proof copy of the job including the material color and provide it to your client for approval and proof reading.
Language & Spell Check	GravoStyle/LaserStyle is available in 22 languages with spell checking available based on the selected language.
User Manual	The integrated user manual is provided in 9 languages, and it can be printed or accessed within LaserStyle/GravoStyle for reference. Navigating the manual is easy using key word searches, the table of contents, or by clicking on icons and hyperlinks.
Help - F1 / Fly Out Menus	When instruction is needed on a specific tool or icon's function, hover the pointer over the item and press F1 to activate instructions for the icon. Simply hovering over the icon will reveal a help window, select the question mark for instruction or the movie reel to see a short instructional video.
Wizards	Normally complex tasks are made easy using the various project wizards that step you through the setup process for common processes: Variable Text - adding reference fields that populate from external files or lists, Matrix/Multi Plate - Creating a large batch of tags with unique text from a single tag design, Rubber Stamp - Design multiple rubber stamps and process them on a single sheet with automated cut lines and standardized sizing.
Nesting	When multiple objects/shapes will be cut out of a sheet, nesting automatically rearranges the shape to optimize material yield and save cost.
Scanning / Vectorizing / Importation	Raster & vector images can be scanned or imported into LaserStyle in common formats (.bmp, .jpg, .png, .tiff, .gif, .dxf, .hpg, .plt, .eps, .ai, .igs, .wmf, etc...). When the files are raster images (pixel art), Laserstyle can trace them into vector lines for higher quality processing or cutting.
Bitmap Editor	Raster images can be edited, resized and modified in LaserStyle using the standard bitmap editor. Which means there is no need to purchase and learn 3rd party software.
Point Edit	Point Edit Mode allows the user to clean up, design, or modify vector art using powerful tools within LaserStyle.
PhotoLase	PhotoLase processes raster images with unique filters that prepare the image for optimal laser results. Define the material type and color being lasered, add text, a frame or borders and let PhotoLase optimize the image. The PhotoLase feature is standard in LaserStyle Graphic.
Scripting	LaserStyle Graphic includes customizable scripting capabilities, allowing Gravotech's customization team to integrate your system into automated processes and data exchange applications.
Bar Codes	Bar Codes is an option that can be added, giving you access to generate UID, Data Matrix, Linear, and QR codes within LaserStyle.



TECHNICAL SUPPORT AND WARRANTY

Gravograph LS900 laser systems are provided with a 24 month limited warranty in the 48 Contiguous United States. The first 12 months include parts, shipping, travel cost and labor for onsite service if required. The second 12 month period includes phone support, parts ,and shipping if required. All engraving systems are provided to the original owner with complementary phone support for the machine. Additional Web based and onsite training, extended warranties, and preventative maintenance visits may be purchased by contacting the customer support department at 800-843-7637