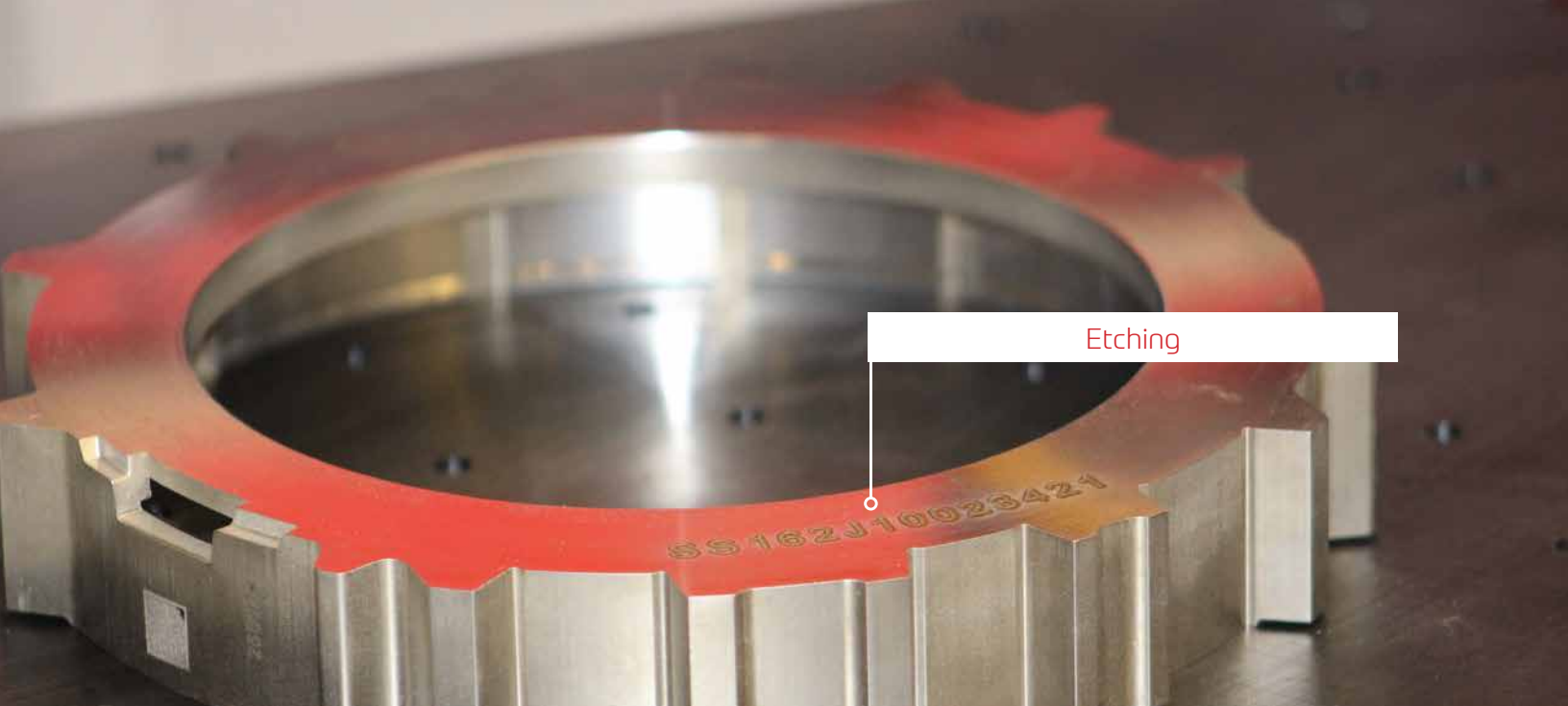# STANDARD
SYSTEMS

A wide range of American made, turn-key laser marking solutions, with an industry-leading 100,000+ hour lifespan.

BEAMER®
Laser Marking Systems

Etching

Laser Marking Vs. Etching

Fiber marking systems can laser etch a variety of materials, including metals, plastics, and ceramics. Contrast marking involves creating a permanent discoloration on the material, producing either lighter or darker marks on the substrate.

Oxidation

Oxidation microscopically raises the surface of a metallic material and oxidizes its top layer, creating a dark, often black, mark. This method is particularly effective on ferrous materials.

Annealing

Annealing ferrous metals creates a corrosion-resistant black mark below the material surface. And depending on the carbon content of substrate, the mark will not disturb the outermost layer or affect its anti-corrosive properties.

Deep Engraving

Deep engraving with a 1064nm fiber marking system, requires specific techniques to attain the desired depth.

Foaming & Charring
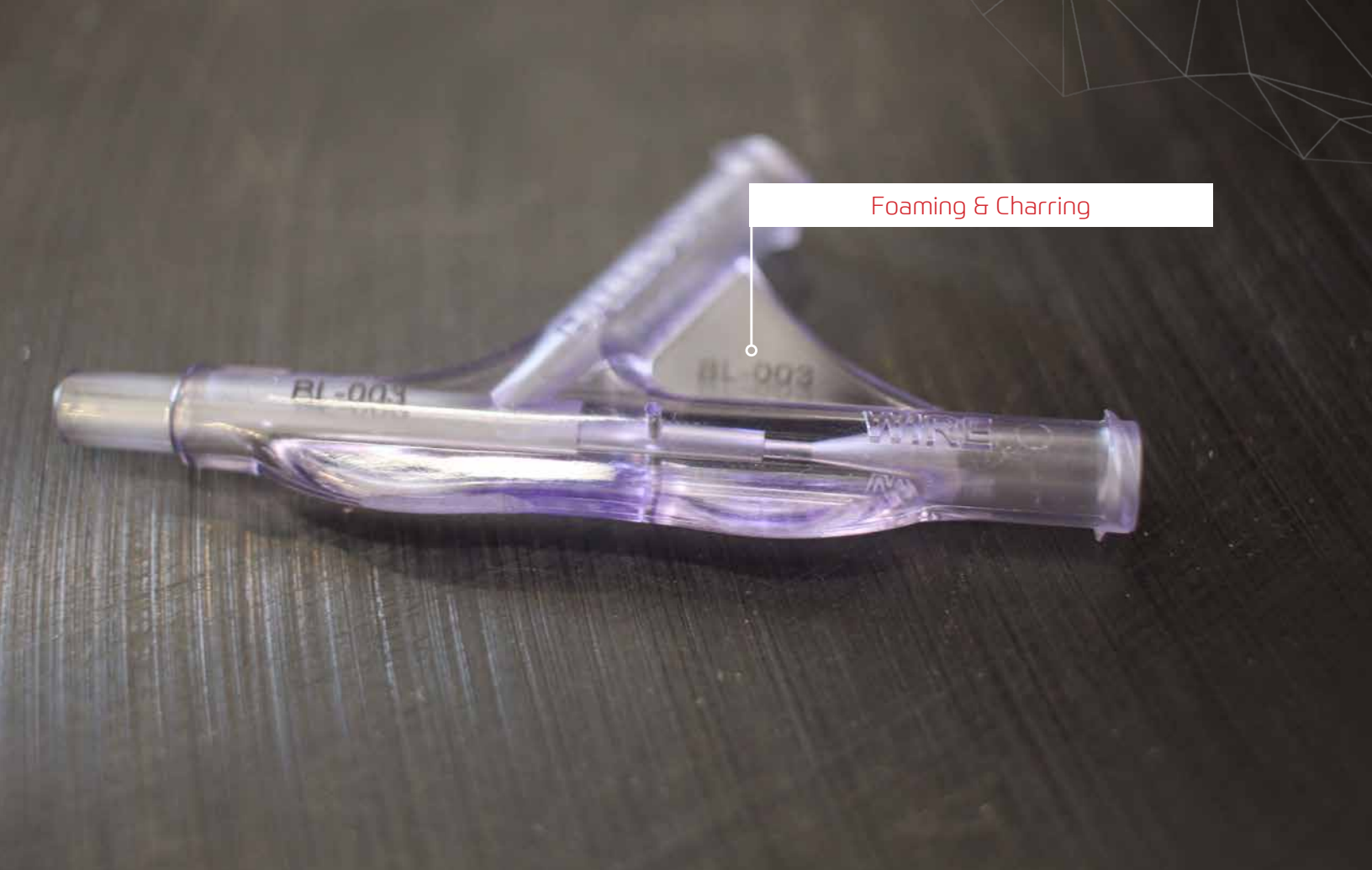
Etching

Etching with a 1064nm fiber laser is a fast marking method used in various applications, often alongside oxidized marks.

Foaming

Using a marking process that precise and permanent microscopic bubbles, foaming creates a light mark on dark materials, including plastics, polymers, and resins.

Charring

Using a marking process that precise and permanent microscopic bubbles, charring creates a dark mark on light materials, including plastics, polymers, and resins.

LEARN MORE
Watch the Laser Marking Guide video

MARKING CREATOR 3.0

Every standard machine is equipped with our graphical process-oriented software, Marking Creator 3.0. Marking Creator 3.0 allows users to precisely control laser parameters, build automation scripts, switch between metric and imperial units of measure, and edit images and text with ease.

Parameter Finder Quickly identify the optimal marking requirement for your specific material, including speed, power, and frequency using the Parameter Matrix function.
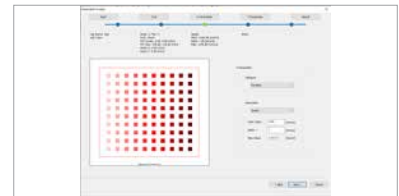
Serial Code Generation Create serial numbers, date codes, and automatically update variable data all within the software.

Preloaded Marking Pen

Our software comes preloaded with 255 customizable pens for specific applications and materials, eliminating the hassle of adjusting settings between programs. Additionally, there are 18 preset pens to help you get started.

Pen	Name	Power [Watt]	Speed [mm/s]	Frequency [kHz]
1	Alum. White Mark	50	1100	50
2	Clean Up Pass	30	1100	80
3	White Steel Watch	25	850	60
4	Steel Black Engrave	50	127	50
5	Corrosion Resistant	20	35	80
6	Black	40	3500	50
7	Plated	30	1100	50
8	Plastic	20	850	100
9	Black Anneal	12	35.56	80
10	Black Oxide Steel	20	1092.2	65

Array Marking

Simply mark pallets of parts by using the array function.
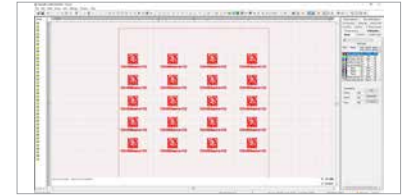
1D / 2D Barcoding

Marking Creator 3.0 software offers a comprehensive range of barcode generation options for all industries—just select your desired format.


Truetype Font

The fonts that are loaded on your computer are automatically integrated into Marking Creator 3.0. TrueType Fonts allow you precise control over how your laser marks appear.

Marking User Levels

Our software features failsafe settings designed to prevent accidental or unintended modifications to your optimized laser program, minimizing operator error and restricting editing capabilities.
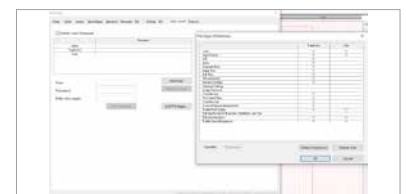
INDUSTRIAL GRADE LASER MARKING SYSTEMS

Beamer Laser Marking Systems provides a wide range of standard, engineered, and inline solutions, all providing an unmatched 100,000+ hour lifespan. Whether you are just beginning to explore laser marking for your operation, are a part marking expert, or need support, repair, or production streamlining, our team is readily available. Find an associate near you.

MANUFACTURED IN THE USA

Nicholas E. Kaczmarski

Business Director

Gabrielle "Gabi" Molina
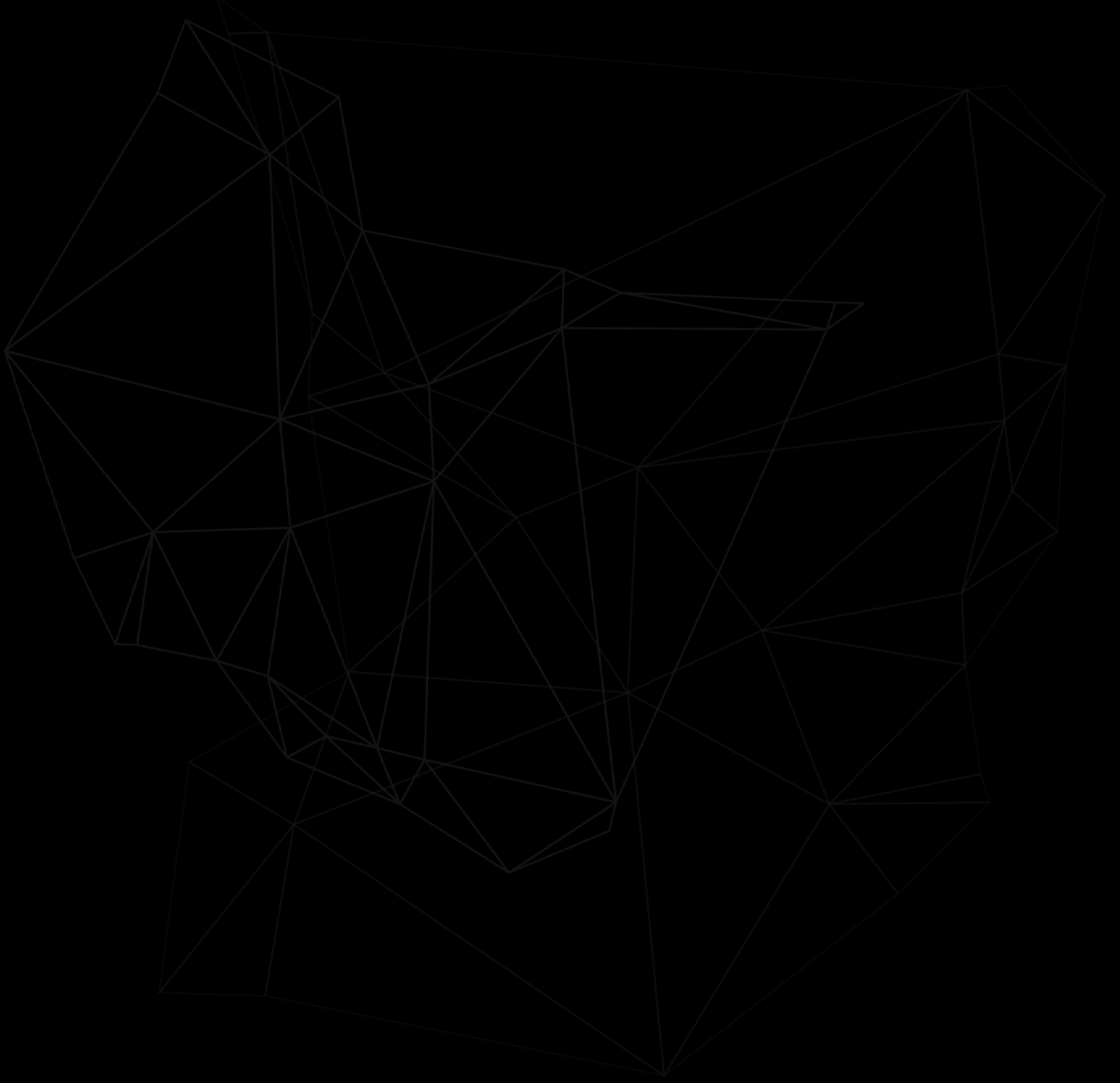
Technical Sales Engineer

Matthew Kaczmarski

Senior Technical Sales Engineer

CONTACT US

Connect with a team member near you.

STANDARD SOLUTIONS

S-SERIES LASER MARKING SYSTEM

Designed for quick and precise loading, the compact S-Series Bench Top Laser Marking System is a cost-effective solution for part marking.

Safe-view work window

Laptop controlled via user-friendly Marking Creator 3.0 software

Specifications

Dimensions	28″ H	25″ W	28″ D	
Opening	17″ H	22.5″W		
Max Part Height	5.25″			
Voltage	110VAC			
Fiber Laser Options	20W (FS24)	50W (FS54)		
Standard Options	Programmable Z	Auto Door	Vision Basic	Rotary

New lift door design

Includes a motorized, programmable, or manual scissor table to raise and lower parts into focus against a stable laser

Compact size fits atop a bench, counter, and other workplace surfaces

CONTACT US

Get in touch with a Technical
Sales Engineer

B-SERIES LASER MARKING SYSTEM

The B-Series machine is built for efficient part marking, featuring smooth, fast-gliding doors for quick and precise loading through a 24" x 28" opening. The easily removable side panels allow for larger parts or automated loaders.

Safe-view work window

User-friendly control panel on convenient double-jointed swinging arm

Specifications

Dimensions	70″ H	32″ W	28″ D		
Opening	24″ H	28″ W			
Voltage	110VAC				
Max Part Height	13.5″ H				
Axis	Z				
Fiber Laser Options	20W (FB23)*	50W (FB53)*	100W (FB103)*		
Standard Options	Auto Focus	Auto Door	X/Y Table	Rotaries	Vision Basic

*Variable Pulse Lasers Available

Door design offer quick and precise part loading

Foldable side panels allow larger parts to be marked

Built-in compartments house the computer tower and double as storage areas, providing easy access to components. Store your fixtures in the machine.

1.5″ industrial grade square steel tube framing and heavy duty casters for maximum portability

CONTACT US

Get in touch with a Technical Sales Engineer

L-SERIES LASER MARKING SYSTEM

The L-Series system efficiently marks larger products, accommodating up to a 3.5' part with removable side panels for even larger items. It features dual doors for easy loading, built-in compartments for the computer tower, and a double-jointed swing arm for convenient monitor and control panel placement.

Safe-view work window

Fully-programmable X, Y, and Z-axes

Ample storage for fixtures in cabinets or drawer

Specifications

Dimensions	70″ H	48″ W	40″ D	
Opening	24″ H	38″ W		
Voltage	110VAC			
Max Part Height	13.5″			
Max Part Width	26.5″			
Axis	X	Y	Z	
Fiber Laser Options	20W (FL23)*	50W (FL53)	100W (FL103)	
Standard Options	Auto Focus	Auto Door	Rotary	Vision Basic

*Variable Pulse Lasers Available

Large workspace can easily accommodate rotary options, fully-enclosed parts up to 38'' wide, or fixturing for batch marking

User-friendly control panel on convenient double-jointed swinging arm

1.5″ industrial grade square steel tube framing and heavy duty casters for maximum portability

CONTACT US

Get in touch with a Technical Sales Engineer

T-SERIES LASER MARKING SYSTEM

The T-Series system sets the standard for high-volume marking. Place parts on the rotating table, set up the laser, press a button, and watch the table turn. While marking, unload finished items and reload for the next cycle, reducing throughput time

Safe-view work window

User-friendly control panel on convenient double-jointed swinging arm

Specifications

Dimensions	70″ H	32″ W	30″ D
Voltage	110VAC		
Max Part Height	11″		
Axis	X	Y	Z
Fiber Laser Options	20W (FT23)*	50W (FT53)	100W (FT103)
Standard Options	Auto Focus	Auto Door	Vision Basic

*Variable Pulse Lasers Available

Easy-access side door for manually loading larger parts

Safety light curtains

1.5″ industrial grade square steel tube framing and heavy duty casters for maximum portability

Fast-rotating table increases production throughput

CONTACT US

Get in touch with a Technical Sales Engineer

M-SERIES LASER MARKING SYSTEM

With its 360° turntable and 180° rotating head, the M-Series is designed to quickly and safely mark large, complex, or multiple zone parts. It features a 28″ programmable X-axis and an 18.5″ programmable Z-axis, all in one solution.

Safe-view work window

1.5″ industrial grade square steel tube framing and heavy duty casters for maximum portability

Specifications

Dimensions	71″ H	58″ W	36″ D	
Main Opening	36.5″ H	25″ W		
Side Opening	27″ H	19″ W		
Voltage	110VAC			
Max Part Height	16″			
Axis	X	Rotational Y	Z	R
Fiber Laser Options	20W (FM23)*	50W (FM53)	100W (FM103)	
Standard Options	Auto Focus	Auto Door	X/Y Table	

*Variable Pulse Lasers Available

Programmable R, X, Rotational Y, and Z-Axes
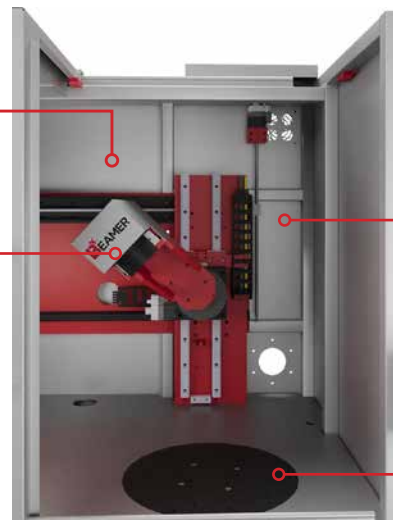
Easy-open side panel allows for larger parts to be crane loaded

User-friendly control panel on convenient double-jointed swinging arm

28″ programmable X-Axis

18.5″ programmable Z-Axis

180° rotating head

16.5″diameter, 360° turntable

MADE IN USA

ANCILLARY OPTIONS

Our laser marking enclosures are available with ancillary equipment options to ensure long-term productivity and accuracy for your marking application.
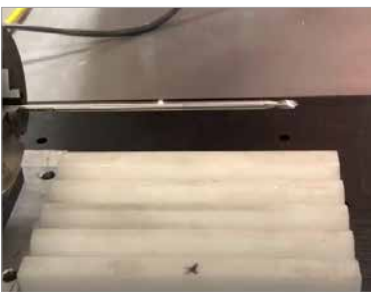
Laser Options

Any of our enclosures can be equipped with a 20W, 50W, or 100W Fiber / IR laser, or a 5W or 10W UV laser, based on your marking requirements.
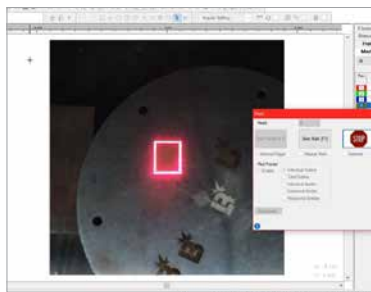
Visions Systems

Vision Basic provides a real-time preview of your part and marking entity for precise alignment.

Auto Focus

Auto Focus allows users to accurately adjust scan head height up to 13.5 inches with the push of a button, eliminating the need for manual adjustments and accelerating new part setup.

Auto Door

Auto Door allows the operator to open and close system doors using the "start cycle" button and at "cycle complete."
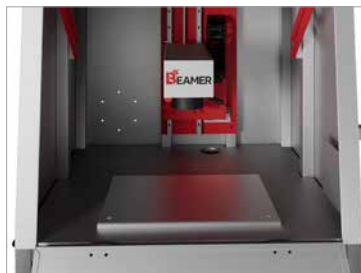
X/Y Table

Placing an X/Y Table in the B-Series machine increases marking field size and the number of axes to three, allowing the functionality of the L-Series in a small footprint

Automation Ready

Regardless of the configuration of your machine equipment upon initial purchase, it is automation ready and completely expandable.

ROTARY OPTIONS

Rotaries provides over 360-degree part marking around any diameter size, and are available as a standard option in four configurations: manual, air-powered, 5C collet, and heavy duty.

Specifications	Manual 3 Jaw	Air Powered 3 Jaw	5C Collet Style	Heavy Duty
Model #	PR4	AR3J	AR5C	HD8
Max Part OD/ID	2.75″	3″	-	6.57″
Max Weight Capaciity	25 lbs	25 lbs	36 lbs	80 lbs
Moment Capacity	65 in-lbs	20 in-lbs	20 in-lbs	240 in-lbs

FUME EXTRACTION SOLUTIONS

Eliminate smoke and particulate produced by the laser, which can damage the operator's lungs and respiratory tract, or the laser itself.

TBH® 3-tiered, stacked filtration systems eliminate the by-products of laser marking, known as off-gassing. Off-gassing is collected by the fume extraction system and transported into one of the filters, depending on its size and type. The pre-mat filter at the top collects large to median size particulate. The HEPA filter in the middle collects median to small particulate. And the activated carbon filter at the bottom collects gases and vapors.

Air returned by TBH filtration systems is completely purified and safe for recirculation into the work environment.

LN 260

Pre-Mat Filter

HEPA Filter

Activated Carbon Filter
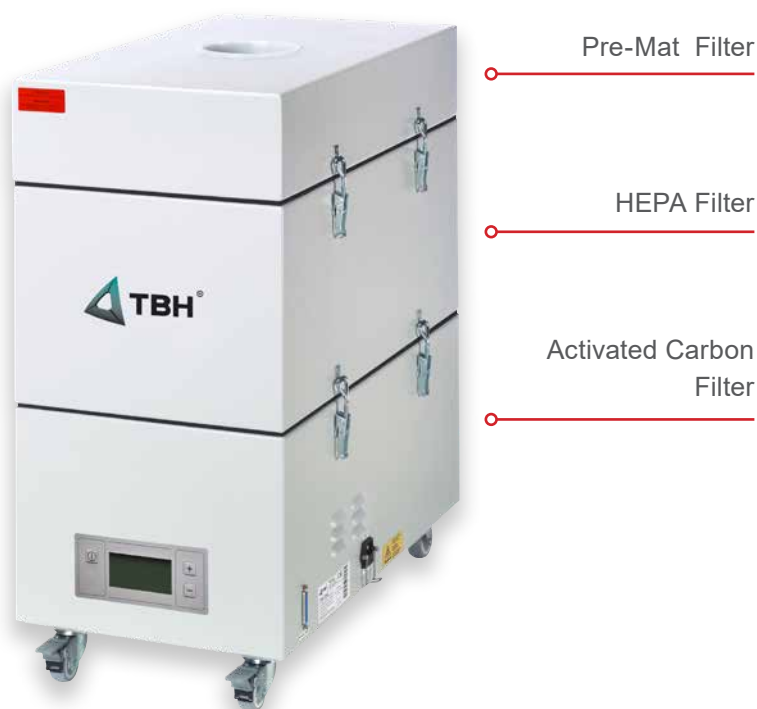
BF100R   LN 265   TFS500 PLUS

LEARN MORE

Visit our website to view our fume extraction offering.

FIND THE ENCLOSURE FOR YOUR APPLICATION

Our laser marking enclosures are available in different sizes, and include standard options to ensure long-term accuracy for your marking application. Standard options include everything from laser type and wattage to lens size, fume extraction units, rotaries, and other ancillary equipment.

Dimensions	S-Series	B-Series	L-Series	T-Series	M-Series
Height	25″	70″	70″	70″	71″
Width	25″	32″	48″	32″	58″
Depth	25″	28″	40″	30″	36″
Main Opening	16″ x 17″	24″ x 28″	24″ x 38″	11″	36.5″ x 25″
Side Opening	-	-	-	-	27″ x 19″

Lens Options	S-Series	B-Series	L-Series	T-Series	M-Series
4.3″ x 4.3″	●	●	●	●	●
7″x 7″	-	●	●	●	●
8.5″x 8.5″	-	●	●	●	●
11.5″ x 11.5″	-	●	●	-	●

Ancillary Options	S-Series	B-Series	L-Series	T-Series	M-Series
Auto Focus	-	●	●	●	●
Auto Door	●	●	●	●	●
Fume Extraction Units	●	●	●	●	●
Vision Basic	●	●	●	●	●
X/Y Table	-	●	●	●	●

Rotary Options	S-Series	B-Series	L-Series	T-Series	M-Series
Manual 3-Jaw (PR4)	●	●	●	●	-
Air Powered 3-Jaw (AR3J)	●	●	●	●	-
5C Collet Style (AR5C)	●	●	●	●	-
HD Rotary (HD8)	-	●	●	●	-

| Axis Options	S-Series	B-Series	L-Series	T-Series	M-Series
X	●	●	●	●	●
Y	-	-	●	-	●
Z	-	-	●	-	-
R	-	-	-	-	●
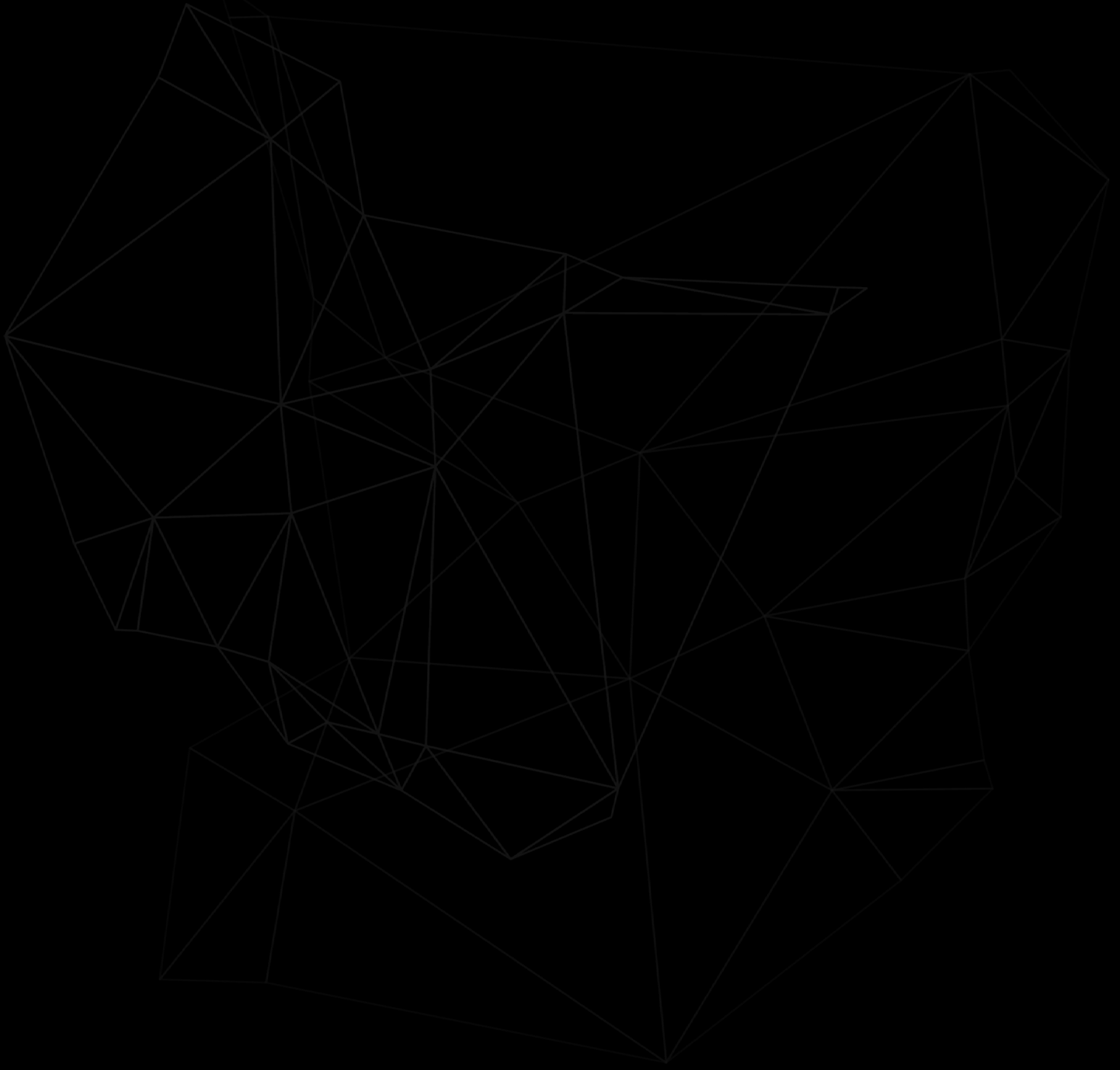
BEYOND STANDARD

FIL SERIES INLINE LASER MARKING SYSTEM

The FIL-Series is a compact yet robust inline laser that can seamlessly integrate into manufacturing cells, assembly lines, or other high production environments. Its inline scan head can be easily mounted in the optimal part marking location, and simplistic I/O allows for rapid inclusion into existing PLC.

Can be easily mounted in the optimal part marking location

Standard 110 volt air cooled

Seamlessly integrates into manufacturing cells, assembly lines, and other high production environments

Easily integrated into existing PLC
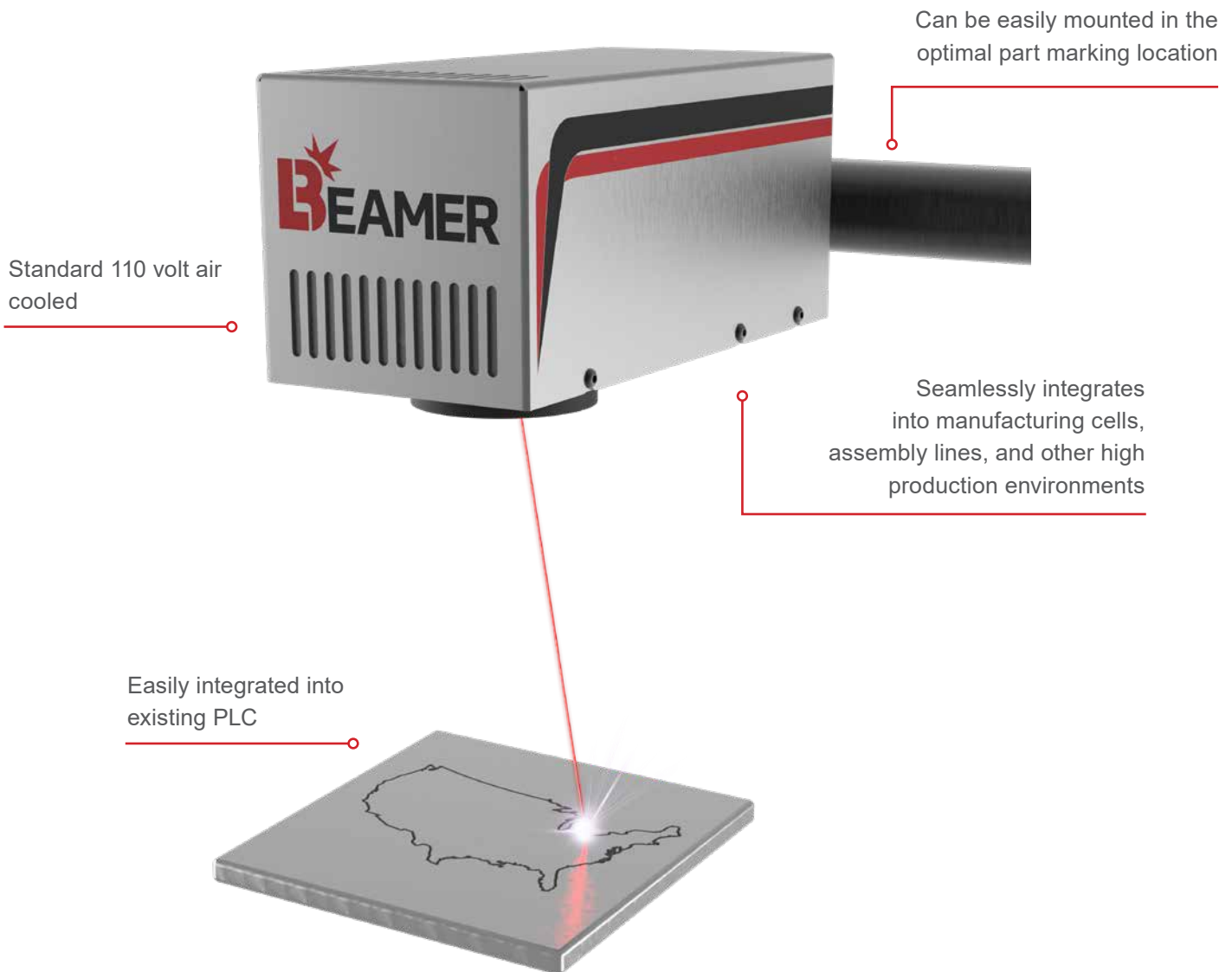
IP65 rated exterior means that the laser and its electronics are protected from dust, moisture, oil mist, and jets of water from all directions

Optical Characteristics

	Test Condition	Symbol	Min	Typ	Max	Unit
Mode of Operation				20 /50 /100		
Polarization				Random		
Central Emission Wavelenght	$P_{out}=P_{nom}$	λ	1055	1062	1070	nm
Nominal Average Output Power	16" x 17"	P_{nom}		20 /50 /100		W
Output Power adjusment range	-		10		100	%
Emission Bandwidth	FWHM $P_{out}=P_{nom}$	$\Delta\lambda$		5	10	nm
Pulse Duration	FWHM Nominal Energy	ΔT		100-120		ns
Laser Switching ON Time	$P_{out}=P_{nom}$ 0->90%			180	250	µs
Laser Switching OFF Time	$P_{out}=P_{nom}$ 100->10%			180	250	µs
Pulse Repetition Rate		RR	20		80	kHz
Pulse Energy				1-5		mJ
Peak Power Instability	$P_{out}=P_{nom}$				5	%
Red Guide Laser Power (optional)	λ=660nm		0.3	0.5	1	mW

Optical Output, Isolated and Non-Isolated Heads

		Test Condtion	Symbol	Min	Typ	Max	Unit
Fiber Cable				6-7mm Metal Shielded Protection Tubing			
Beam Quality			M^2		1.5	2.0	
Fiber Cable Length	0.5 mJ Model				5		m
	1 mJ Model				3		
Beam Diameter	Isolated Head	1/e² level		6	7.5	9	mm
	Non-Isolated Head			6.5	8.5	10.5	
Beam Ellipticity					10	20	%
Beam Offset					1	10	mm
Beam Misalignment					8	12	mrad
Beam Divergence Adjustment				Minimum Divergence			

Electrical Characteristics

		Test Condtion	Symbol	Min	Typ	Max	Unit
Control Interface Type				6-7mm Metal Shielded Protection Tubing			
Laser Module Supply Voltage			M^2		1.5	2.0	
Maxium Current Consumption	20W Model	supply=24VDC				7	
	50W Model					14	
	100W Model					17A	

General Characteristics

		Min	Typ	Max	Unit
Operating Temperature Range	20W Model, 50/100% Emission Time			+42/36	°C
	50W, 50/100% Emission Time	0		+40/36	
	100W Model, 50/100% Emission Time			+42/36	
Storage Temperature		-10		+60	°C
Cooling Method		3 Fans			
Warm-Up Time	To Start Of Operation		0.5		min
	To Full Stabilization		10		
Humidity		10		95	%
Laser Module Dimensions			215 x 95 x 286		mm
Weight				9	kg

Hopper Loaders
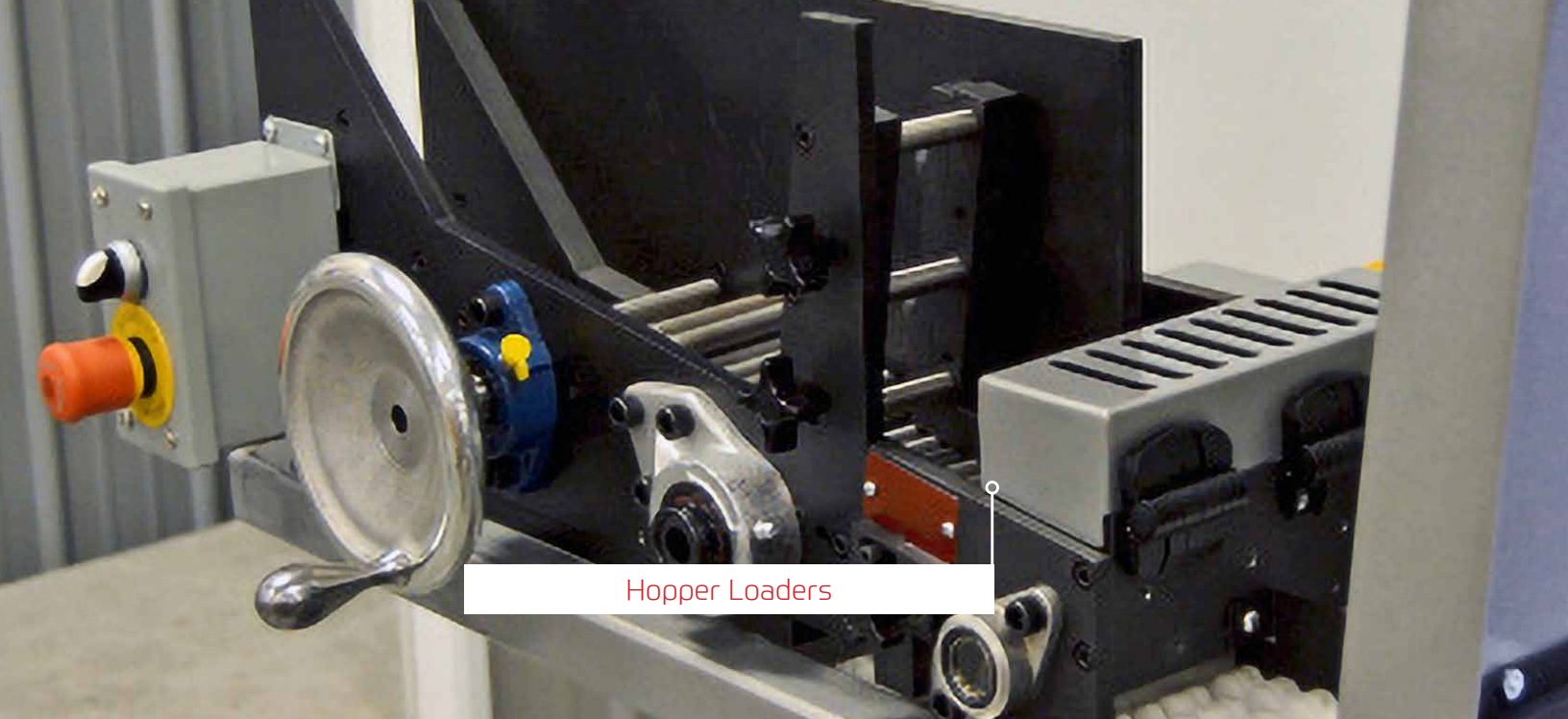
CREATE AN ENGINEERED SOLUTION

Beamer Laser Marking Systems will work closely with you to design a custom-built, engineered solution tailored to your specific requirements, ensuring perfect integration into your workflow.

Powerful Laser Options

Engineered systems can be equipped with a 20W, 50W, or 100W fiber / IR laser, which are ideal for deep or dark metal applications, or with a UV or Ultra-Fast laser, which are ideal for marking difficult materials, including ceramics, plastics, and metals.

Automated Solutions

The programmable PLC in our laser marking systems allows you to add partial or full automation solutions not only during the initial configuration but also after the machine is integrated into your production environment.

Hopper Loaders

By automating the loading process, Hopper Loaders eliminate manual intervention and ensure a steady flow of parts with the push of a button, allowing your laser systems to operate at peak efficiency.

Conveyors & Belts

Machine Vision Systems

Vision systems provide a real-time preview of your part and marking entity, allowing for alignment, barcode reading and grading, part recognition, rotation orientation, and X/Y positional orientation.

Conveyors And Belts

Conveyors and belts integrate seamlessly with our laser marking machines to streamline material handling, speed up production, and boost throughput. They eliminate manual loading for Fiber/IR parts and enable UV and Ultra-Fast lasers to "mark on the fly".

Barcode Scanners

After laser marking completion, this feature verifies the barcode marking requirements, ensuring precision and accuracy every time.

BEAMER®
Laser Marking Systems

Beamer Laser Marking Systems delivers American-made quality in a full range of fiber laser marking machines, providing an industry-leading 100,000+ working-hour lifespan. With simple point-and-click software, Beamer Laser has what your operation needs – whatever its focus. From tracking and traceability, serialization, 2D codes, and decorative laser marking; in industries from automotive to medical and many others. Save production time and boost productivity with these affordable solutions.

Beamer offers user-friendly Standalone Solutions, as well as custom Engineered Solutions and Inline Solutions – all provided with fast turnaround times to maintain productivity. Whatever your direct part marking needs, Beamer Laser has the solution that will enhance your product quality and assure your operation a competitive edge.

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▶ /BeamerLaser

V. 3.1.9

www.beamerlaser.com 1 (810) 471-3044

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Connect with a team member near you.