



2023
FreshFocus
PLATFORM

Next generation laser equipment developed by LasX.
Smartly powered for flexible packaging converters.




FreshFocus 

Discover FreshFocus. One machine can do it all.

**FreshFocus core promise:
Consumer convenience,
product freshness.**

The FreshFocus platform is an industry-leading, high-performance, versatile equipment solution for easy-open and breathable packaging.





Innovating to respond to the fast-paced, evolving packaging market.

Innovation, convenience, and added value is the way forward in the packaging industry. Creating a competitive edge means exceeding consumer expectations.

Adaptability and agility are the key to success in today's packaging world.

Trends such as changing consumer behaviors and the explosion of e-commerce have been disrupting the flexible packaging industry. From SKU proliferation and faster product development, to consumer expectations for convenience and product safety, new market demands are putting the pressure on flexible packaging converters to innovate.

To continue offering value and capture market growth, flexible packaging converters need to adopt an agile approach to their production line capabilities. This includes managing package development faster while offering high-quality and reliable packaging solutions.

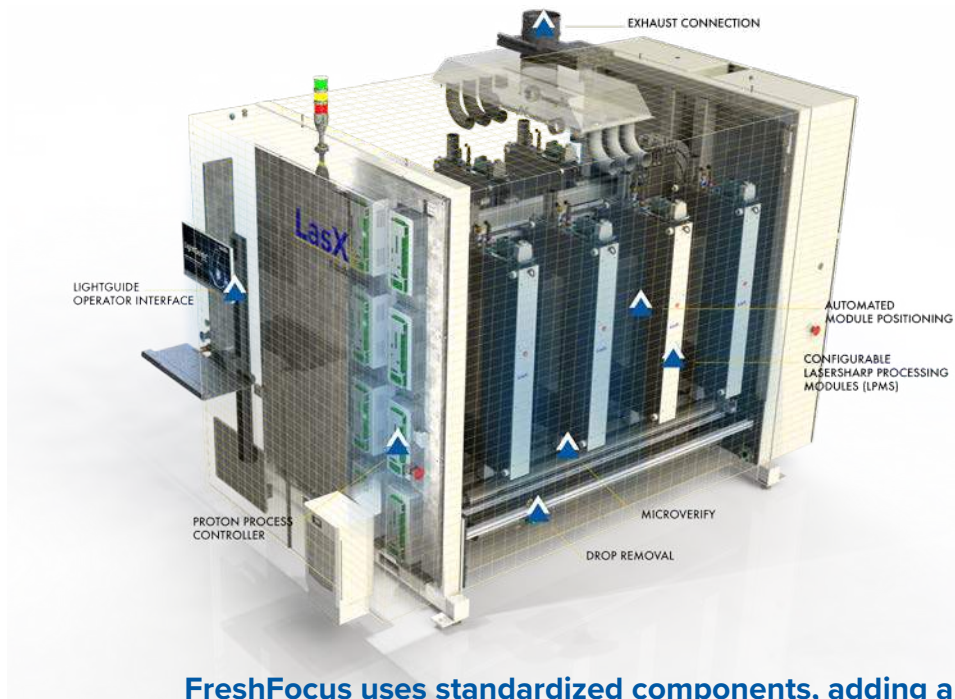
The FreshFocus configure-to-order laser system delivers a versatile, competitively priced, premium solution for creating breathable and easy-open packaging.

FreshFocus wide-web flexible packaging equipment:

- Integrates into any slitter-rewinder system — matching the production speeds you expect from your slitting department
- Increases productivity and throughput — reducing operating costs
- Reduces cycle time and lead time — boosting your competitiveness and agility to respond to the market
- Offers versatility and flexibility to perform multiple laser processes with one system — maximizing your return on investment and processing capabilities
- Provides highly engineered, high-performance capabilities — resulting in durable, high-quality packaging materials

The freedom of flexibility.

Developed by LasX Industries, the leader in premium laser digital converting solutions for the manufacturing industry, FreshFocus helps flexible packaging converters gain a competitive edge by innovating and remaining highly adaptable to changes in packaging film and brand owner requirements.



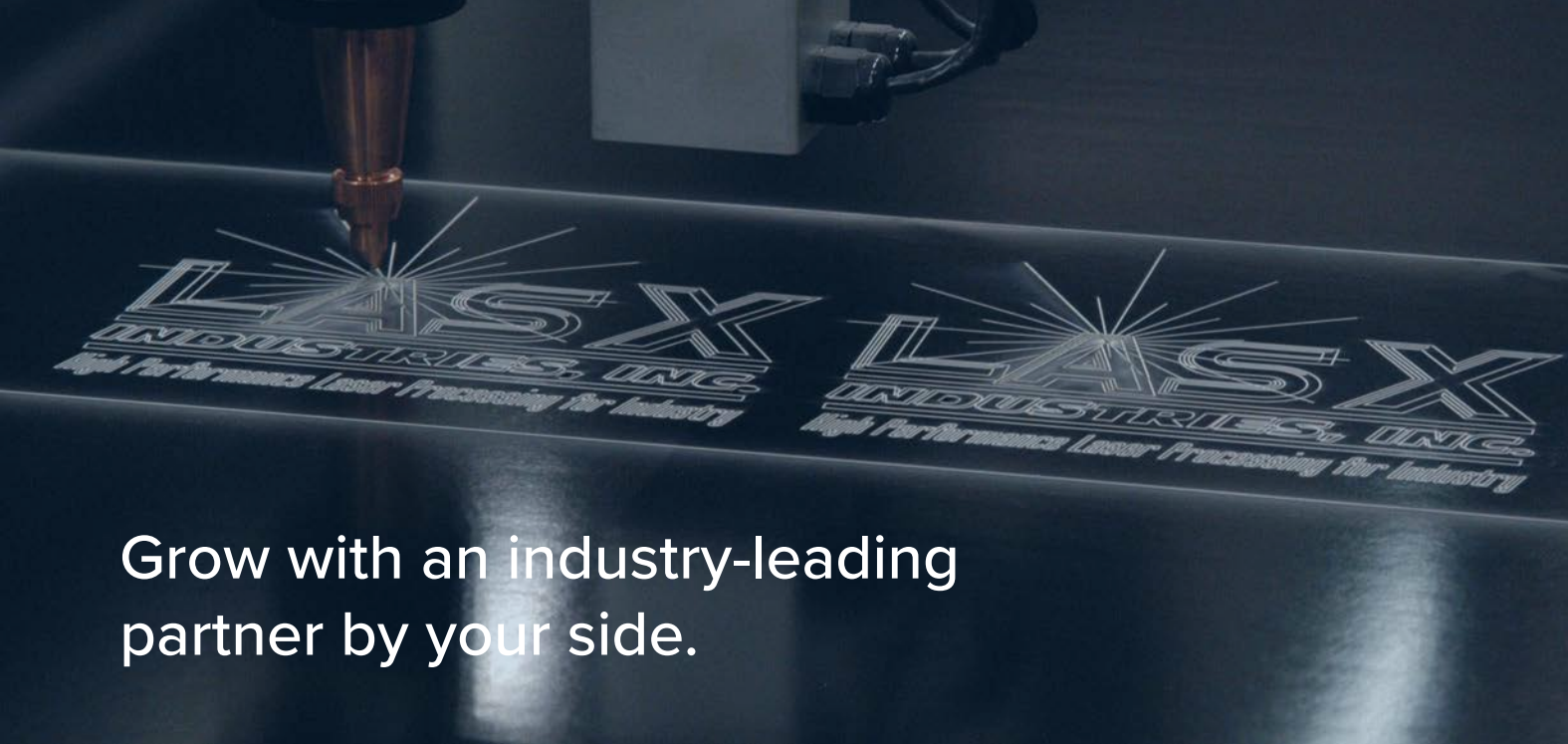
FreshFocus uses standardized components, adding a higher guarantee of performance and consistency to your converting process.

FreshFocus delivers unmatched flexibility, quality, and speed for a variety of flexible packaging requirements.

- The predefined features and additional options meet a variety of applications and allow you to tailor the solution to your specific needs.
- With no engineering and design time required, your equipment is ready to build as soon as you choose the specs.
- Expert assistance from our team of laser specialists can help you configure and implement your solution.
- Additional options, laser modules, and software features can be added to the system at a later stage without substantial modifications.



FreshFocus



Grow with an industry-leading partner by your side.

Your success in a highly competitive market relies on your relationships with your material and equipment partners. Working with an experienced, trusted partner ensures that your business remains responsive as the market evolves. LasX has been providing unique laser solutions through our LaserSharp® technology for more than two decades — and we launched FreshFocus in response to our customers' needs and industry challenges.

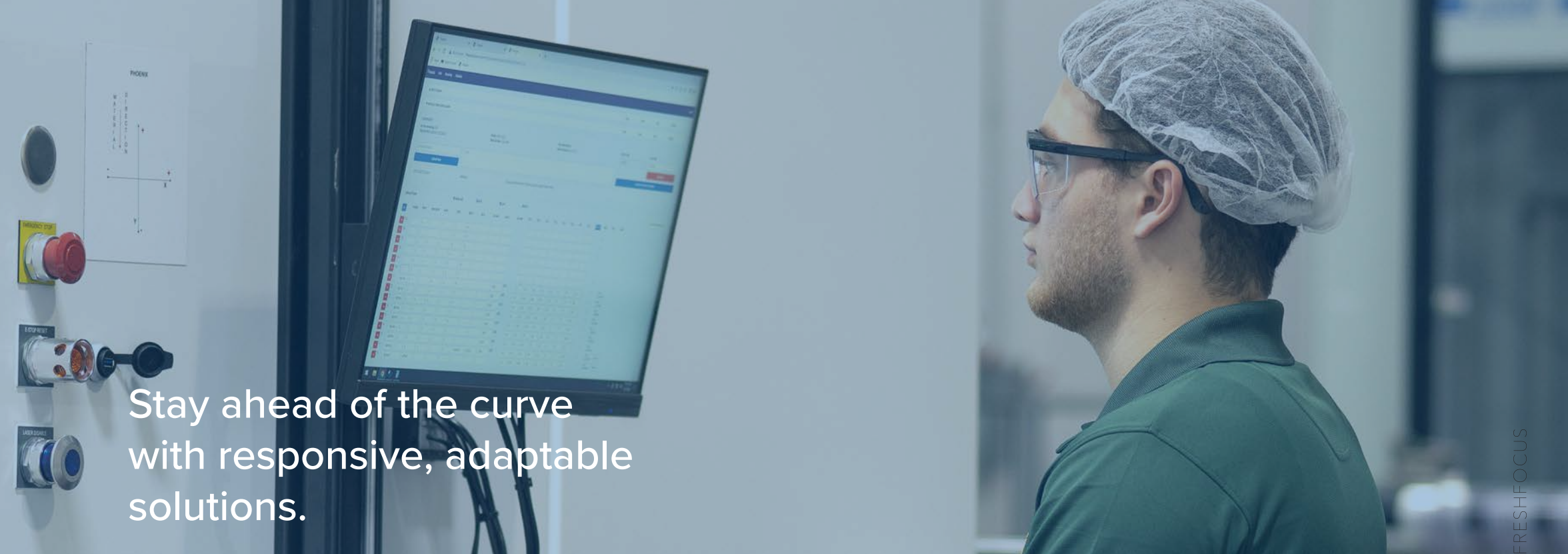
FreshFocus delivers the speed, precision, and performance that LasX customers have come to expect from our custom laser solutions. In partnership with our sister company, FlexPak Services, we've developed designs and expertise based on real production experience. Rugged durability, superior control, unparalleled versatility — these are among the many LaserSharp® equipment qualities reflected in the FreshFocus series.

In LasX, you'll find much more than a laser equipment provider. Whether you are ready to deploy new technology, need assistance with configuring the options with the right features, seek expertise for package development, or are exploring on-demand contract manufacturing options, we're your strategic partner that can guide you through your journey.

Our relationship with you doesn't end at machine deployment. Through ongoing service and support, LasX ensures you achieve the best return on your investment and outstanding value.

As a long-term partner committed to our customers' success, we also keep abreast of market trends. To respond to new manufacturing needs, we continue to add more options. Our roadmap includes future capabilities for recyclable and compostable film, helping our customers implement sustainability initiatives.





Stay ahead of the curve
with responsive, adaptable
solutions.

Laser-enabled scoring and perforation enhance the quality of the final product and drive a superior process.








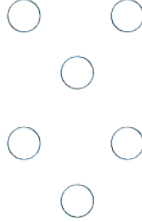

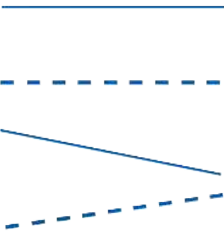























The advantages of laser converting technology include:

- ✓ Highly accurate processing
- ✓ Easy setup
- ✓ Quick changeovers and flexibility to modify patterns or files on-the-fly
- ✓ Flexible, controlled process regardless of web speed
- ✓ Smallest possible features and intricate patterns and shapes
- ✓ Consistent score depth without penetrating the barrier layer



The versatility of LaserSharp® Processing Modules (LPMs).

The versatility of the FreshFocus configure-to-order series allows flexible packaging converters to adapt, scale, and upgrade the equipment based on their unique needs. Three different laser processing configurations (LPM1, LPM2, LPM3) support multiple applications, automatically scoring and perforating the materials in a variety of patterns.

Web Direction	Downweb Scoring	Downweb Intermittent Cutting	Pattern Scoring	Pattern Intermittent Cutting	Downweb Micro-Perforating	Pattern Micro-Perforating	Pattern Hole Cutting	Marking	Crossweb Scoring/ Intermittent Cutting	Scoring/ Micro-Perforating
										
LPM1										
LPM2										
LPM3										
CONSUMER/PACKAGING FEATURES										
	Easy Open	Easy Open	Easy Open	Easy Open	Breathable	Breathable	Moisture Control	Security	Easy Open	Easy Open
		Microwavable	Pour Spouts	Microwavable	Microwavable	Microwavable	Draining	Print Etching	Microwavable	Breathable
		Venting		Venting	Venting	Venting	Display Windows	Coating Removal		Microwavable

Breathable packaging.

Effective for preserving perishable products, breathable features modify the packaging atmosphere by controlling the inside oxygen and moisture amounts. The packaging extends product shelf life and keeps produce fresh longer while maintaining flavor.

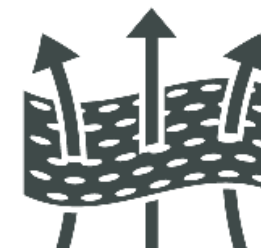
Laser perforating (hole drilling) provides adjustable hole size, location, and patterns.

- Regulate oxygen to required respiration rates
- Regulate water vapor and gas transmission rates
- Reduce condensation and bacteria growth
- Eliminate residues or drops (when compared to mechanical die cutting)
- Control product weight loss
- Produce a precise hole size
- Prevent package failure due to hole tearing or ripping



Example applications:

- Microwavable packaging
- Modified-atmosphere produce packaging
- Infusion packages for consumables such as tea, cannabis, salts, etc.
- Carbon dioxide release for meat and seafood packaging
- Venting
- Air evacuation





Easy-open packaging.

Easy-open packaging answers consumer demand for convenience and speed. The effortless functionality of the packaging eliminates the need for knife or scissors while maintaining the package integrity and aesthetic appearance — boosting consumer satisfaction.

Laser scoring for easy-open packaging offers both straight and contour patterns and shapes and provides benefits such as:


- Ensuring precise, consistent tearing along the scored line
- Controlling the score depth and tear propagation
- Maintaining barrier properties
- Accessing the product quickly
- Preventing product spilling out of the package
- Preventing damage of zippered pouches during opening



Example applications:

- Retort pouches
- Flat or stand-up pouches
- Stick-packs or single-use pouches
- Straw holes for juice packages
- Contoured scores for pour spouts
- Lidding film for trays
- Zippered pouches





Configure-to-order options tailored to a range of converting needs.

Each FreshFocus system integrates two or more LaserSharp Processing Modules (LPMs) within a Class 1 safety enclosure that ensures operator safety and eliminates the need for personal protective equipment. FreshFocus provides the framework to completely support digital finishing of packaging films on any split slitter-rewinder.

The steel-welded frame supports up to eight LPMs, with laser powers up to 100W, in a choice of two web widths: 1.4-meter (55-inch) and 1.8-meter (71-inch).

A highly engineered machine designed for rugged durability, FreshFocus integrates the LPMs, control panels, purge air, cooling water, and exhaust into a single system that's easy to install and maintain. The frame and work support guide the material through the work area and integrate with industry-leading slitting equipment.

Standard components include:

- Automatic LPM positioning across the web (based on process recipe)
- LPM carriage frame with integrated electrical cabinets
- Operator interface terminal with LightGuide® control software
- Class 1 safety enclosure
- Work support idlers
- Purge air panel
- Water heat exchanger
- Exhaust connection with automated blast gate
- Maintenance kit

An overview: LaserSharp Processing Modules (LPMs).

✦ **LPM1:** A fixed beam enables repeat and registered down-web scoring and precision perforating for easy opening.

Applications include:

- Zippered pouches
- Venting

✦ **LPM2:** Adds a scanner for micro-perforation (single-hole drilling) and pattern contouring for small features.

Applications include:

- Zippered pouches with hooded sliders
- Food pouches
- Venting for pet food
- Produce packages
- Microwavable packages

✦ **LPM3:** Offers the largest laser processing area for full cross-web laser processing, with the flexibility to switch between full cross-web coverage with larger features and small, targeted areas with smaller patterns.

Applications include:

- Zippered bags
- Contoured laser scores for resealable applications (e.g., FlexPak's PrimePeel®)
- Macro holes



Optional features for FreshFocus.

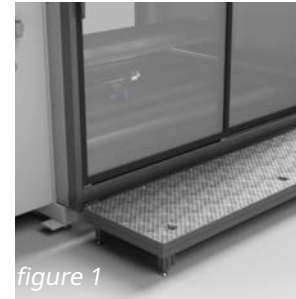


figure 1

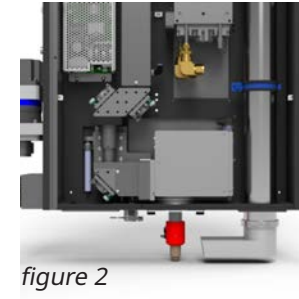


figure 2



figure 3

MicroVerify: LasX is introducing an affordable, high-speed, inline inspection system for quality assurance for the small laser holes and score lines that are produced. MicroVerify provides instant feedback and alarms that can be configured for specific warning thresholds.

Drop removal: To ensure easy and fast cleanup, the drop removal system collects and removes the drop cutouts as the laser processes packaging films used in high-moisture products such as produce (e.g., tomatoes, peppers, grapes) or in packages that include a window to display the product (e.g., snacks).

Dual process fields: This feature provides two laser processing widths on the LPM; one narrow width for micro-perforating small holes and a second wider width for scoring cross-web — supporting both easy-open and breathable applications in one system.

Catwalk: LasX's catwalk design enables the operator to easily lift up the panels to access the web underneath. (figure 1)

Unicorn head: This optional add-on for the LPM2 replicates the performance of the LPM1 by attaching a fixed-focusing apparatus to the bottom of the LPM2's scanner. (figure 2)

Swing arm OIT: This upgrade allows the operator to position the OIT so that it can be accessed on the infeed or outfeed side of the machine — making setting up new jobs even easier! (figure 3)

At a glance.

FreshFocus LPM capabilities

Applications, features, and capabilities	LPM1	LPM2	LPM3
Print registered down-web scoring and cutting for easy-open application	✓	✓	✓
Print-registered pattern scoring and perforating for easy-open applications		✓	✓
Smallest holes for breathable applications		✓	✓
Cross-web or full-web width scoring and perforating patterns		✓	✓
Small laser processing width – 70 mm (2.7") or 165 mm (6.5")		✓	
Large laser processing width – 140 mm (5.5") to 350 mm (13.8")			✓
2 banks of LPMs, 4 LPMs per bank – up to 8 LPMs in two banks**	✓	✓	✓
1.4-m (55") or 1.8-m (71") web width	✓	✓	✓
Narrow LPM design for tight lane-to-lane spacing, LPM1/LPM2 <135 mm (5.3"), LPM3 < 150 mm (5.9")	✓	✓	✓
Optimized fume exhaust for collection of gases from laser processing	✓	✓	✓
Automated quick set LPM positioning across the web, stored with job recipe	✓	✓	✓

Applications, features, and capabilities (continued)	LPM1	LPM2	LPM3
3 available laser powers: 40W, 70W, 100W	✓	✓	✓
Choice of lasers optimized for polypropylene, polyester, paper, or other packaging films	✓	✓	✓
Compatible with all industry-leading slitting equipment (split unwind and rewind stands)	✓	✓	✓
Versatile operator interface terminal with adjustable height options	✓	✓	✓
Class 1 laser enclosure for maximum operator safety	✓	✓	✓
LightGuide operator controls for laser processing	✓	✓	✓
Add-in options			
Automated in-line inspection of laser score and perforation (MicroVerify)	✓	✓	✓
Automated drop removal of laser cut holes in packaging film		✓	✓
Dual-process fields (manual)		✓	
Dual-process fields (automatic)			✓

**Each bank can have different LPMs — i.e., the first bank has 4 LPM1s, second bank has 4 LPM2s

LASERSHARP® FRESHFOCUS



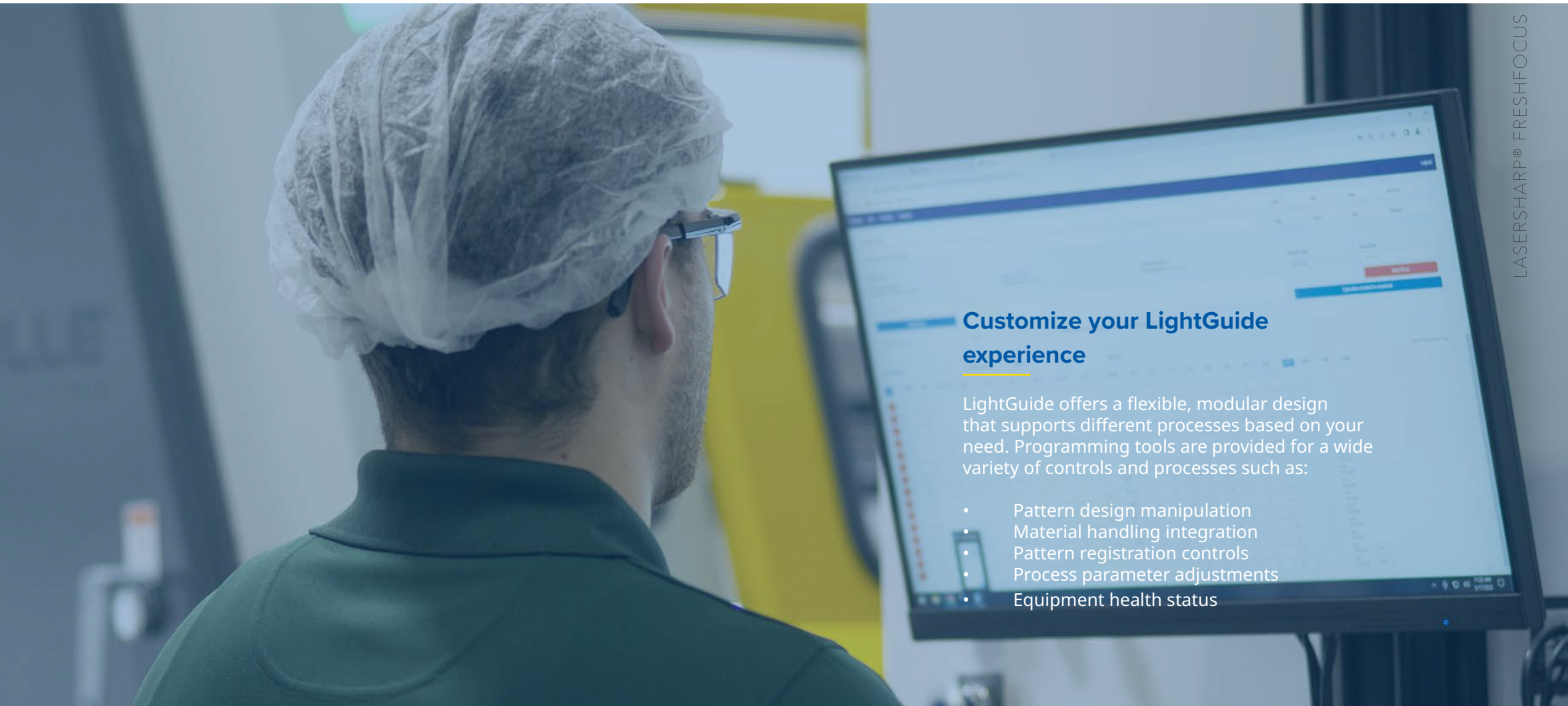
FreshFocus

Simplify processing for maximum productivity with LightGuide software.

With the LightGuide comprehensive set of tools, operators can access the controls of all laser processing aspects through a single, intuitive interface. And thanks to digital workflows, you eliminate downtime for product changeover, further reducing costs.

Guiding all aspects of the laser process is the LightGuide control software, engineered exclusively by LasX for LaserSharp equipment. Configured specifically for your FreshFocus system and applications, LightGuide enables you to achieve consistent output on your materials. And you can stop, start, and ramp up or decrease speed without impacting the quality.

- Simplify industrial laser processing by minimizing machine setup time and directly importing common image and software files.
- Reduce operating costs and maximize productivity, starting with initial file preparation and through the automated material handling of the finished parts.
- Independently control multiple LPMs in the same production job.



Customize your LightGuide experience

LightGuide offers a flexible, modular design that supports different processes based on your need. Programming tools are provided for a wide variety of controls and processes such as:

- Pattern design manipulation
- Material handling integration
- Pattern registration controls
- Process parameter adjustments
- Equipment health status



Rapidly deliver cutting-edge package designs with one team of laser experts.

To ensure success for our customers, LasX offers a complete package design and development solution, along with contract manufacturing services, through FlexPak Services. A recognized leader in the flexible packaging industry, FlexPak is our FreshFocus representative that works with you to achieve the optimal results for your converting processes.

FlexPak operates a state-of-the-art, food-grade, Safe Quality Food (SQF) certified facility that supports customers who want to develop, prove, and implement their FreshFocus solution.

The innovative, highly experience team at FlexPak offers an array of services, including:

- Selection of the configuration for your configure-to-order FreshFocus machine to match your use case
- Confidential consultation and package development with the converter and brand owner
- Technical testing, analysis, and validation of your recipe and applications
- Strategic, cost-effective material sourcing
- On-site operator training on your equipment
- Food-grade processing facility that provides you commercial runs prior to implementing your FreshFocus system



FlexPak validates each FreshFocus solution based on specific criteria for a factory acceptance test (FAT) performed at LasX, then a site acceptance test (SAT) at your facility. Both procedures ensure your new machine performs as promised.

On-demand services tailored to your applications.

In addition to end-to-end packaging and design services, FlexPak offers contract manufacturing services as a cost-effective approach that doesn't require capital expenditures from brand owners. Customers benefit immediately from this service while growing their business to justify a future capital investment in the FreshFocus platform.

Through this partnership, FlexPak's team of packaging experts continuously analyzes your needs and optimizes your production flow and output. When you're ready to invest in FreshFocus, the FlexPak team ensures an easy and seamless transition from our contract manufacturing process to your vertically integrated FreshFocus system.

One of the many advantages of working with FlexPak is the company's unrelenting package design innovation. FlexPak constantly researches and develops new products to help customers stay on the cutting edge — including future capabilities to address the growing sustainability trends with recyclable and compostable film options. By working with FlexPak, you can take advantage of these innovative solutions and add them to your portfolio to boost your offerings.



To learn more, contact FlexPak at sales@flexpakservices.com.

FreshFocus demo available. FlexPak Services' in-house capabilities deliver the ideal solution for fulfilling your needs for easy-open and breathable packaging. FlexPak offers a demonstration FreshFocus system, integrated into a 1.8-meter (71-inch) wide slitter-rewinder at its facility in St. Paul, Minnesota, USA. This system is ready for your commercial runs so you can scale up your volume and secure new business.



Rely on exceptional service and support to remain successful.

At LasX and FlexPak, we see our customers as partners for life. As part of our commitment to exceptional customer experience, your FreshFocus contract includes premium support services to maintain the health of your FreshFocus equipment and laser materials processing.



ClearCut
Service and Process Experts

With ClearCut, you gain assurance that your FreshFocus system performs at its peak consistently — boosting your return on investment.

Gain peace of mind with dedicated support through our ClearCut plan.

Our premium ClearCut® service plan helps you maximize machine time and performance, extend the life of the equipment, and achieve top productivity. An experienced team of laser and packaging experts protect and maintain your machine and laser materials process via preventative maintenance, machine health checkup, and on-site laser process development and operator training.

ClearCut advantages and benefits include:

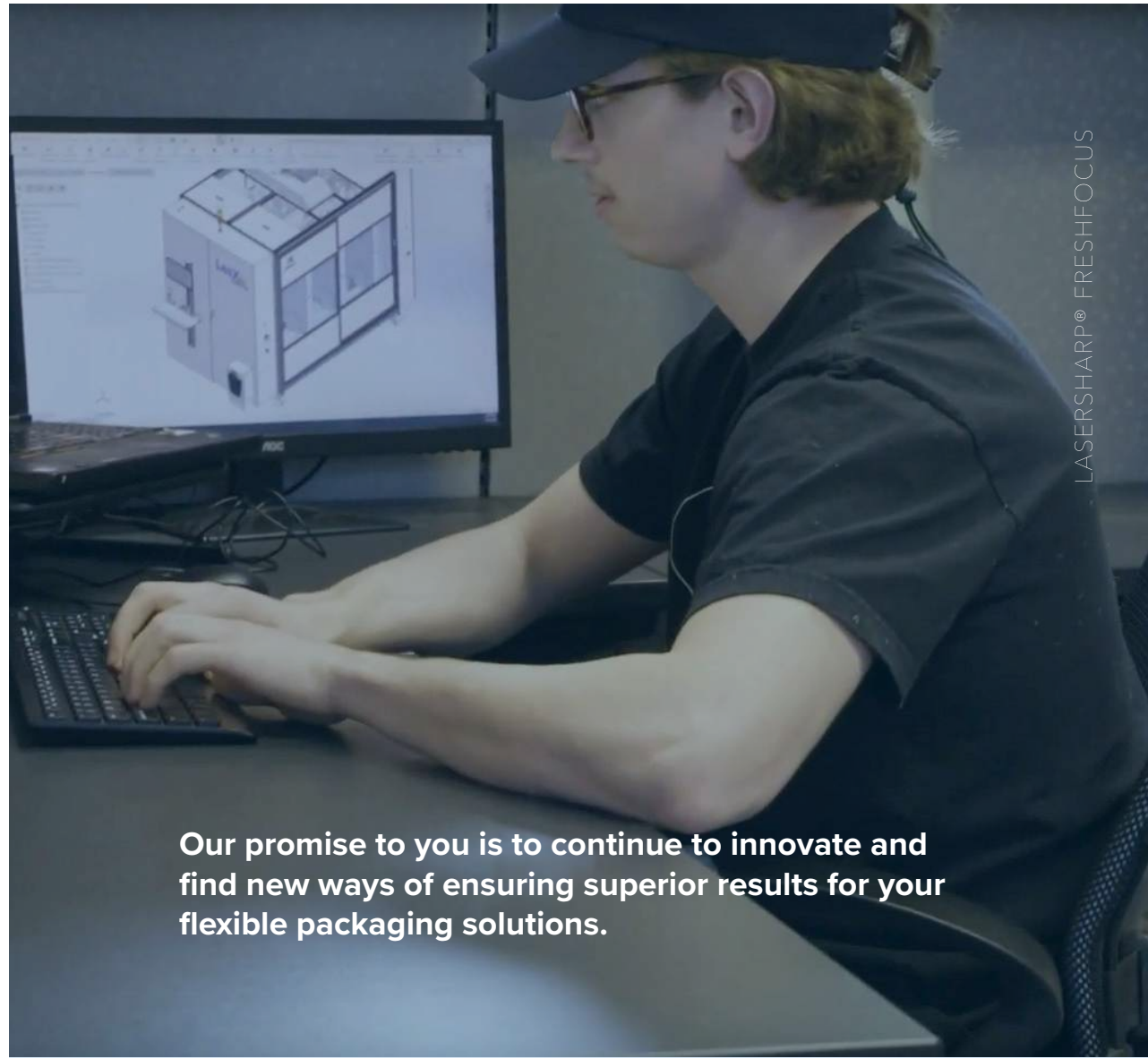
- ✓ Planned visits to ensure equipment efficiency and best performance
- ✓ Backup production at FlexPak facilities during any production increase
- ✓ On-site operator training and on-site or remote process development assistance
- ✓ Machine inspection, cleanup, testing, and calibration during preventative maintenance visits
- ✓ Comprehensive, priority remote support to quickly identify and resolve problems
- ✓ LightGuide software updates so you can benefit from new features
- ✓ Discounts on spare parts and on-site service
- ✓ Purchase orders are not required — we get on the job immediately after you contact us.

Achieve outstanding results with your industry-leading partner.

Founded in 1998 in St. Paul, Minnesota, USA, LasX Industries delivers intelligent laser processing solutions for the changing and growing needs of the manufacturing industry. Our dedicated team has developed the world's fastest, most accurate industrial laser solutions to solve unique manufacturing challenges.

A recognized expert in laser digital converting solutions, LasX serves global customers from our locations in USA and Germany. Our commitment to you extends beyond the laser system. We build responsive relationships from the early process development, through the delivery of high-performance solutions that integrate with your workflows. Simply put, our laser experts are part of your team.

Today, LasX continues to push digital manufacturing technology to the next level. We continually explore new opportunities and products that support you on your journey of growth and respond to your evolving strategic objectives.



Our promise to you is to continue to innovate and find new ways of ensuring superior results for your flexible packaging solutions.

Ready to explore what's possible?

FreshFocus configure-to-order equipment, combined with the expertise of LasX and FlexPak, delivers unique and versatile laser processing to our flexible packaging partners. Your success is our success.

North or South America?

Contact FlexPak Services at sales@flexpakservices.com for a demo and information about a complete flexible packaging solution.

Outside Americas?

Contact LasX Europe at sales@lasx.com to explore all your FreshFocus options.

Explore video and feature highlights.

lasx.com/solutions/freshfocus

