Laser Experts for Flexible Packaging
Our Laser Based Solutions

Products
PrimePeel® Peel & Reseal
Easy Open Packaging
PrimeVent™ Steamable
PrimeVent™ Degassing Valve
X-Fresh™ Breathable Packaging

Services
Laser Contract Mfg.
Label Application
Slitting
Product Development
Testing & Analysis

LaserSharp® Equipment
Floor Mount onto Slitter
Stand Alone Rewinder
Pouch Line Retrofit
Fixed Beam Systems
Scanning Based Systems
Advantages of Laser Processing

FlexPak is a recognized leader in the flexible packaging industry thanks to our advanced laser processing technology. Using LaserSharp® technology provides us the ability to deliver unique laser scoring and laser perforating solutions.

- Flexible and controlled process regardless of web speed
- Complete accuracy
- Quick changes to patterns and/or shapes
- Intricate patterns and shapes not possible with conventional tooling
- Non-contact method maintains package barrier integrity
- Accurate print registration
- Smallest features possible
- Rapid turnaround
- Multiple laser processes available in a single production run
  - Contour and/or straight score lines
  - Micro and macro perforated patterns
  - Machine direction and/or crossweb processing
  - Laser etching capabilities
  - Laser die cut windows or large openings
Laser Processes & Applications

Laser Perforating (Hole Drilling)
- Proven for perishable food & modified atmosphere packaging
- Excellent for microwave steam release features
- Regulated oxygen, vapor & gas transmission rates
- Venting for rapid fill packaging
- Adjustable hole size, location & patterns
- Offers round shapes free of residue or drops
- Thermally sealed edges reduce propagation & tear
- Reduction of condensation & bacteria growth

Laser Scoring
- Proven for easy open, re-sealable, retort & pourable packaging
- Excellent for microwave steam release features
- Controlled score depth & location
- Precise score lines or shapes
- Straight lines and/or contoured features
- Capabilities for machine and transverse direction or both simultaneously
- Marking, etching, peel & reseal and tamper-proof applications
**Laser Die Cutting**
- Proven for a variety of film laminations including foil
- Through cut
- Notching
- Macro perforations
- Eliminates the use of dies and conventional tooling
- Display windows
  - Perfect cuts, size and geometry
  - Clean shapes & edges
  - Intricate patterns & shapes

**Laser Etching**
- Proven for anticounterfeit and security features
- Product marking & identification
- Date coding
- Serial and bar coding
PrimePeel® ~ Peel & Reseal

Our PrimePeel® peel-and-reseal process enables packages to be easily opened and reclosed while maintaining the integrity of the contents. PrimePeel® technology is used to preserve perishable food items such as produce, cheese, and cookies. It can also be used in cosmetic, medical, pharmaceutical industries and more!
Advantages of PrimePeel®
- Hermetic, flexible, breathable
- Tamperproof to protect product integrity
- Seals completely and allows for multiple reseals
- Easy to open and close
- Safe, convenient, and reliable
- Opening feature can be of any size and/or shape
- Allows for production of unique patterns and designs
- Suitable for any type of film structures
- Features printed or clear labeling
- Variety of adhesive types for different applications
- Includes FDA approved pressure sensitive adhesives
- Great for pouches, trays or flow-wrap applications
- Up to 20% cost savings and material reduction when compared to similar applications including clamshell
Easy Open Packaging

Easy open packaging is a preferred product in the flexible packaging industry because of its convenient and clean-tear capabilities. Our advanced laser process ensures a precise and consistent tear that maintains the integrity of the package.

Advantages of Laser Scoring for Easy Open Packaging
- Precise, clean and consistent tear along scored line
- Controlled score depth and tear propagation
- Offers both straight and contoured patterns and shapes
- Maintains barrier properties
- In registration with print
- Eliminates need for knife or scissors to open
- Aesthetic appearance of package unaffected
- Effortless functionality resulting in consumer satisfaction

Easy open features can be utilized on a variety of packaging such as stand-up, press-to-close zipper and slider pouches, pour spouts, stick packs, and zipper bags. These features can also be used in peel & reseal, and microwavable applications.
PrimeVent™ ~ Steamable

From the freezer to the table, PrimeVent™ Steamable is designed for microwavable packaging for a variety of frozen and perishable foods. PrimeVent™ Steamable eliminates extensive food preparation and increases the value and convenience of your product.

Advantages of PrimeVent™ Steamable

- Guarantees a hermetically sealed package prior to cooking
- Offers a reliable, safe designed, and affordable steam release and cook in the bag mechanism
- Includes a precise laser scored pattern or shape that allows for controlled release of steam pressure and temperature while cooking
- Designed to consistently and flawlessly release steam from the package
- Protects from breakage due to mishandling
- NO leaks prior to cooking
- NO piercing required prior to cooking
- NO whistling when steam is released
- NO more failures or explosions when cooking in the microwave
PrimeVent™ ~ Degassing Valve

Our PrimeVent™ Degassing Valve features a unique combination of laser processing and a small pressure-sensitive valve to automatically release CO₂ gases from a sealed package. This invention offers unmatched simplicity, performance and quality in providing a pre-applied and affordable one-way degassing solution. Our PrimeVent™ Valve can be used in foil-based laminated packaging film as well as a wide variety of other film materials.

Advantages of PrimeVent™ Degassing Valve

- Pre-applied to fractional and/or retail packages
- Reliably releases CO₂ gas produced by roasted coffee
- Prevents O₂ gas from entering the package which minimizes oxidation of the coffee during shelf life
- Prevents moisture build up
- Open and closes completely
- Successful on any type of film material
- Preserves aroma characteristics within the package during shelf life
- Allows for filling and sealing immediately after roasting
We have extensively tested our PrimeVent™ Degassing Valve in venting CO₂ gases produced by roasted coffee and are astounded by the results! This testing has proven that our valve significantly outperforms the current, expensive molded valves. Using our technology will simplify your production process resulting in both reduced costs and reduced packaging inventory.

Our PrimeVent™ Degassing solution can be used in multiple applications including coffee, garlic, figs and more.
Breathable packaging has been proven effective in preserving food products by modifying the packaging atmosphere and controlling the amount of oxygen and moisture inside the package. Unlike mechanical methods or specialty films, laser processing is an affordable way to create controlled breathable packaging.

Our new X-Fresh™ technology for fresh produce packaging combines both laser processing and patent-applied technologies to maximize shelf life beyond expectations. X-Fresh™ offers unmatched simplicity, performance, and quality in providing an affordable CAP solution to a wide variety of breathable produce packaging types.

Our LaserSharp® technology provides the ability to laser score to a controlled depth or micro-perforate on any flexible film to increase gas exchange rates or controlling the release of moisture from packaged perishable foods.
Advantages of X-Fresh™ Breathable Packaging
- Controls moisture, bacteria growth, and build-up of gases inside the package
- Keeps produce fresh for longer while maintaining product flavor
- Balances the minimum required gaseous needs of produce to maintain aerobic respiration
- Extends shelf life allowing for reduced food and weight losses
- Designed to maintain specific oxygen transmission rates using laser micro perforated films
- Able to maintain hermetic capabilities using laser scored films
- Works on any tray, pouch, and flow-wrap package design as well as any laminated barrier film structure
- Reduces plastic and lowers cost of tray packaging

Our extensive testing shows that our X-Fresh™ technology significantly outperforms traditional produce packaging.
Label Application

FlexPak manufactures and applies label stock to flexible packaging materials in either a roll-to-roll format or pre-made pouches. We can also die cut a window or any shape underneath the applied label.

Personalization and branding of plain films or paper using clear or printed labels is a new and affordable trend in the flexible packaging market. Commodity films or paper stock can now be enhanced by applying high end quality labels to market brand names, product information, nutritional facts, and more.

Advantages of Label Application

- Manufactured in any type of size, material, thickness and printing option
- Can be any design or function
- Applied with high precision, speed and in registration with film
- Variety of adhesive types are available for different applications
- Laser processing features such as scoring and micro and/or macro perforating can be utilized in line while the label itself is applied
Slitting Services

FlexPak now offers combined laser processing and slitting services! Our top of the line LaserSharp® lasers have been retrofit to a 51.5" web-width slitter rewinder to accommodate high speed processing of wide format rolls. This new addition allows us to continue to deliver a reliable, cost-effective and commercially scalable service to our customers.

**Slitter Capabilities**
- Machine speed 1,600 fpm
- Edge trimming
- Shear and razor slitting
- Maximum web width 51.5”
- Unwind diameter 40” or 2,200 lb. rolls
- Unwind roll cores 3” (76mm) and 6” (152mm)
- Minimum slit width 30 mm
- Rewind diameter 24” Rolls or 660 lbs. per finished roll
- Rewind roll cores 3” (76mm) and 6” (152mm)
Our sister company, LasX Industries, Inc, has been designing and manufacturing LaserSharp® equipment for over 20 years. This equipment features patented LightGuide® software which is an intuitive and easy-to-use interface allowing for customer defined pattern files to guide the laser process.

FlexPak is the exclusive representative of the LaserSharp® equipment brand for the flexible packaging market and we work closely with our customers to ensure each system is custom designed to exceed their needs.
LaserSharp® Equipment Features
- CO₂ laser with output power from 40W through 2500W
- Laser beam is focused to a 200µm (0.008”) diameter spot
- Process area is configured from 50mm x 50mm to 500mm x 500mm
- Jobs are created by importing a vector file and selecting the material
- The laser beam is focused and then ‘steered’ in two dimensions by two high performance mirrors
- LaserSharp® is a standard product designed for high speed cutting, perforating and scoring of roll to roll-fed materials
- Zero-maintenance sealed laser design
- LaserSharp® technology allows for instant change over and immediate part modification
- Single operator Interface
- Each LaserSharp® module is controlled independently and can run different processes simultaneously
- Patented Proton® controls and Lightguide® Software
- Equipment designed to worldwide standards, including CE certification
Product Development

Confidential product development is a core part of our business and in recent years we have established ourselves as a leader in providing innovative solutions to the flexible packaging industry. Our goal is to provide a complete end-to-end solution to our customer that overcomes any existing difficulties, adds value, and ensures an exceptional end-user experience.
In today’s market, choosing a packaging partner who can translate market need into a deployable complete turnkey solution has never been more critical. Our expert staff confidentially collaborates with each customer to find a cost-effective solution that is viable in both manufacturing and commercial scalability. FlexPak strives to ensure the proper materials are selected and close partnerships are built to develop your products on time and with the highest quality possible.

FlexPak offers: pre-made pouches & bag manufacturing, breathable films, thermoforming trays, printing, labels, and coating.
At FlexPak, quality is the most vital component of our production process. We are proud to deliver the highest quality product to our customers by performing extensive in-house testing and analysis as well as careful monitoring of each laser process and production run to ensure we are exceeding our customers’ expectations.

We use the most advanced equipment and software available to perform microscopic analysis, conduct tensile strength tests, measure oxygen transmission rates and complete airflow and headspace analysis.

Our food-grade facility is both ISO 9001:2015 and AIB certified. We’re also in the process of becoming SQF certified. These certificates support us to properly execute laser processing packaging materials and products that will come in contact with food.
**Microscopic Analysis**

Using microscopic technology immediately reveals the state of each laser feature to identify and address even the slightest defects. Using a microscope beats the untrained eye with up to a 500x displayed magnified image which quickly allows for measurement, dimension and visual checks to be performed. We consistently conduct these checks to ensure we produce the highest quality laser processed products.

**Tensile Strength**

The tensile strength of a film is the maximum amount of stress the material can endure while being stretched or pulled. Our advanced testing equipment delivers precise and consistent results, is easily configurable, and can be adapted to a wide range of speeds. Conducting this test allows for the certification of our laser processes, ensuring that all required specs are met.

**Oxygen Transmission Rate**

OTR is a calculated measurement of the amount of oxygen that passes through a substrate at a steady rate over a given amount of time. The goal is to achieve a balance between declining oxygen levels and increasing carbon dioxide levels as well as eliminating moisture. OTR testing ensures perishable oxygen sensitive products maintain their freshness and extend the shelf life.

**Headspace Analysis**

Headspace is the space above the packaged product; over time volatiles or gases coming from the food product diffuse into the gas phase, forming the headspace gas within the package. Headspace analysis is the analysis of the components present in that gas and is vital in predicting shelf life of the perishable food.
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At FlexPak, we specialize in providing innovative packaging solutions for the flexible packaging market. We’re dedicated to developing laser based solutions and products for the design, testing and production of easy open, microwavable, vented, peel & reseal, degassing and breathable packages.

We were founded in 2008 as a sister company to LasX Industries and exclusively represent their LaserSharp® equipment brand for the flexible packaging market. Since 1998, LasX has designed and manufactured industry leading LaserSharp® equipment that uses advanced laser digital converting technology.

Customers are encouraged to visit us to tour our facility, meet with our experts, and experience a hands-on trial. Contact us to learn how to benefit from a wide range of laser services and solutions to meet your flexible packaging needs.