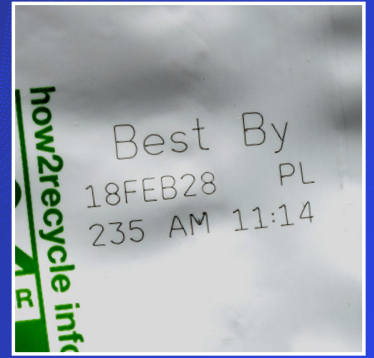


Application note for pet food manufacturers

Optimize coding on flexible pet food packaging with UV lasers



The challenge

Flexible packaging is widely used in dry pet food applications to protect product freshness across a range of formats.

In production, coding must keep pace with fast line speeds, frequent SKU changeovers, and environments that may be greasy, dusty, or subject to temperature variation. These conditions can affect code quality and readability.

Common flexible packaging formats:

- Coated paper bags, (including multi-wall and pinch-bottom)
- Laminated film bags
- Stand-up pouches (including zipper and gusseted designs)
- Multi-layer barrier films

Codes conveying **date, lot, and batch information** are essential for traceability, compliance, and quality control. Clear, legible codes support accurate identification throughout production and distribution.

Achieving consistent code quality requires a solution that performs reliably on the selected substrate while supporting production speeds and plant conditions.

Flexible pet food packaging requirements

- Reliable coding performance at production speeds
- Clear, legible codes on the selected packaging material
- Precise code placement on pre-printed packaging
- Consistent and accurate coding through frequent SKU changes and packaging size variations

Why coding technology selection matters:

Substrate type is a primary factor in coding performance.

Production environments often use multiple coding technologies across lines and facilities. A solution that performs well on one package type may not be suitable for another. The right choice depends on the substrate, production environment, and code requirements.



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The solution



UV laser marking provides a non-contact method for producing permanent codes on many flexible packaging materials.

UV lasers use a photochemical process often referred to as “cold marking,” where the material surface is altered with minimal heat input. This helps reduce the risk of thermal effects that could impact sensitive materials, depending on the substrate and application conditions.

In some applications, this approach can support marking on thin films and layered structures without compromising material performance, depending on compatibility and testing.

Key benefits

Reduced thermal impact (“cold marking”)

Uses a photochemical process with minimal heat, helping reduce the risk of material distortion or damage on suitable substrates

Supports package performance

Non-contact marking avoids adding inks or solvents and can help reduce the risk of surface impact, depending on the substrate and application

High-quality, precise codes

Suitable for date, lot, and batch information

Permanent marking

Resistant to smearing and abrasion due to direct substrate interaction

Consumable-free operation

Eliminates inks, ribbons, and solvents

UV laser systems can produce date, lot, and batch codes, and **support 2D codes such as QR codes® and DataMatrix codes**, depending on substrate compatibility and testing.



Designed for flexible packaging requirements

Pet food manufacturers need solutions that support consistent coding through packaging formats and frequent line changes without adding complexity. For flexible packaging, this means delivering consistent codes across films, coatings, and laminated structures while supporting line efficiency.

UV lasers can provide:

- ✓ Controlled marking on films, coatings, and laminated structures (substrate dependent)
- ✓ Consistent code quality on suitable flexible materials
- ✓ Non-contact marking that can help simplify operations

Videojet advantage

Videojet 7920 UV Laser

The Videojet 7920 UV laser is well suited for marking various flexible, heat-sensitive materials used in pet food packaging applications.



Key advantages

- ✓ **Reduced thermal impact**
Designed for certain flexible materials, depending on substrate testing
- ✓ **Consistent, high-quality codes**
Clear, reliable marking for date, lot, batch, time, and serial number codes, with support for variable data input from either operator entry or PLC integration—enabling flexible, real-time customization
- ✓ **Supports efficient changeovers**
Videojet SmartFocus™ technology helps maintain consistent code quality across packaging sizes on the same line without manual adjustments
- ✓ **2D code capability**
Marking of 2D codes, including QR and DataMatrix following GS1 standards, for enhanced data capacity and traceability
- ✓ **Designed for flexible substrates**
Suitable for coated paper, films, and multilayer packaging where compatibility is confirmed
- ✓ **Low consumables operation**
Only requires an occasional filter change in the fume extractor
- ✓ **Supports sustainability goals**
Low consumables operation minimizes waste

The bottom line

Flexible pet food packaging requires coding solutions that balance code quality, package compatibility, and operational efficiency. Manufacturers also need solutions that keep up with line speeds, packaging configurations, and traceability requirements.

UV laser technology enables durable coding without inks or fluid consumables. The Videojet 7920 UV laser delivers consistent coding on suitable substrates. Performance should be confirmed through sample testing on the actual packaging material.



Ask your Videojet representative for sample testing on your packaging to confirm performance and code quality.

QR Code is a registered trademark of DENSO WAVE INCORPORATED.

Our Vision: Preserving the safety, quality, and authenticity of daily essentials for billions

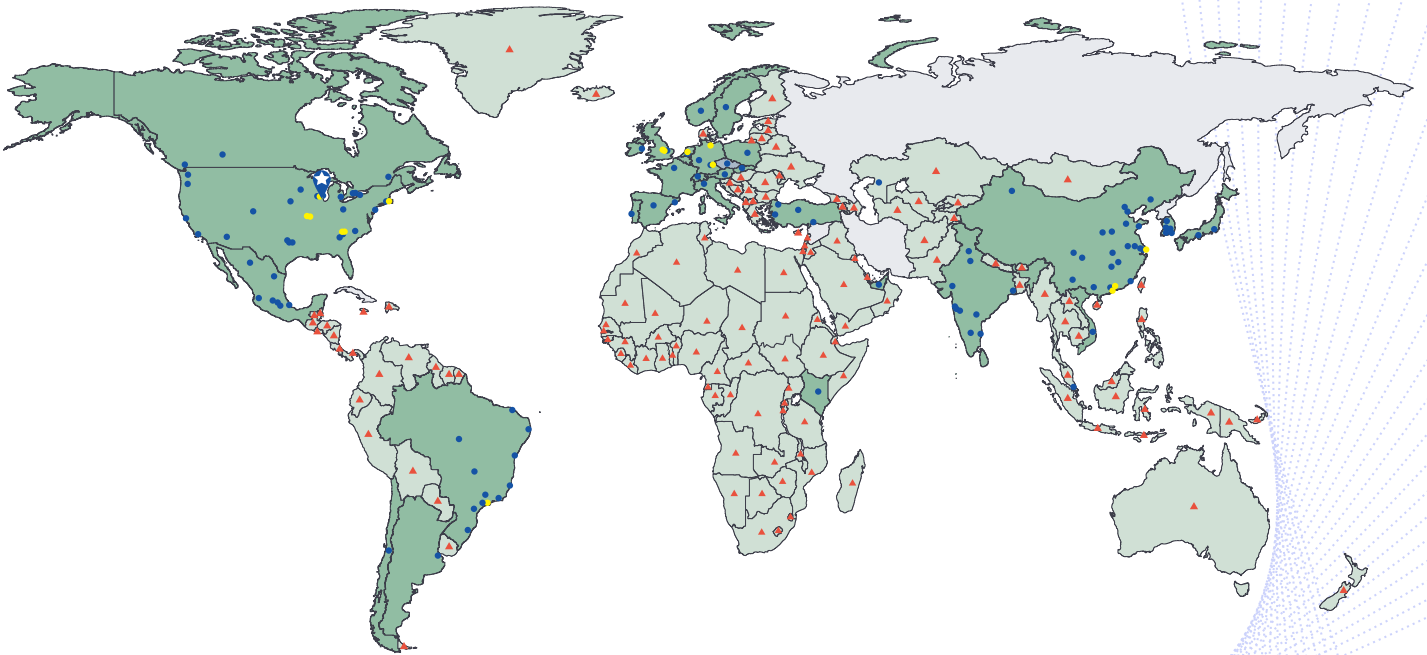
At Videojet Technologies, we believe that every product tells a story—a story of quality, care, and trust. As a global leader in product identification, we proudly partner with manufacturers in over 20 industries, from food, beverage, cosmetics, and personal care to pharmaceuticals, tobacco, packaging, aerospace, and beyond, helping them to identify products, enhance operations, and improve productivity. We work tirelessly with customers, OEMs, and channel partners, to protect the safety and integrity of daily essentials relied on by billions of people every day.

The Videojet core pillars of **expertise, adaptability, usability, and consistency** are values that drive us forward, inspiring us to deliver high-performance, reliable solutions that meet the unique needs of every manufacturer we support. With an unwavering commitment to excellence, we offer a comprehensive suite of **marking and coding equipment, high-quality supplies, dedicated Videojet-trained on-site service technicians, and advanced software solutions** to bring peace of mind and pride to our customers.

Our technology portfolio spans **Continuous Inkjet (CIJ), Thermal Inkjet (TIJ), Laser Marking Systems, Large Character Marking (LCM), Thermal Transfer Overprinting (TTO), Print and Apply Labeling (LPA), Pallet Labeling, and wide-array printing solutions**—all crafted to deliver adaptability, precision, and cutting-edge innovation that makes a difference.

With over 400,000 printers marking ten billion products daily, our solutions touch lives across the globe. Supported by a team of 4,000 associates in 26 countries and a network of 400 distributors and channel partners in 135 countries, we bring expert service and heartfelt dedication wherever companies operate.

As part of Veralto—a global leader in essential technology solutions dedicated to “**Safeguarding the World’s Most Vital Resources™**”—we are not just building systems but shaping a future where every brand can deliver trusted products with confidence, enriching lives and fostering connections with consumers worldwide.



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