DOMINO

F-Series for Beverage

Premium Fibre Laser

Built for coding. Made for you.

Domino. Do more.

F720i and **F520i** Fibre Laser

The ultimate coding innovation for your cans

F-Series fibre laser coders are the ideal solution for beverage can coding, providing sharp, clear codes, even on concave and wet surfaces. The coders are extremely robust, and operate efficiently, at high temperatures. With an **F-Series** laser, you can code your beverage cans with little, to no human intervention, to increase uptime and overall productivity.

Get the most out of your **coding technology**

Protection for your operators

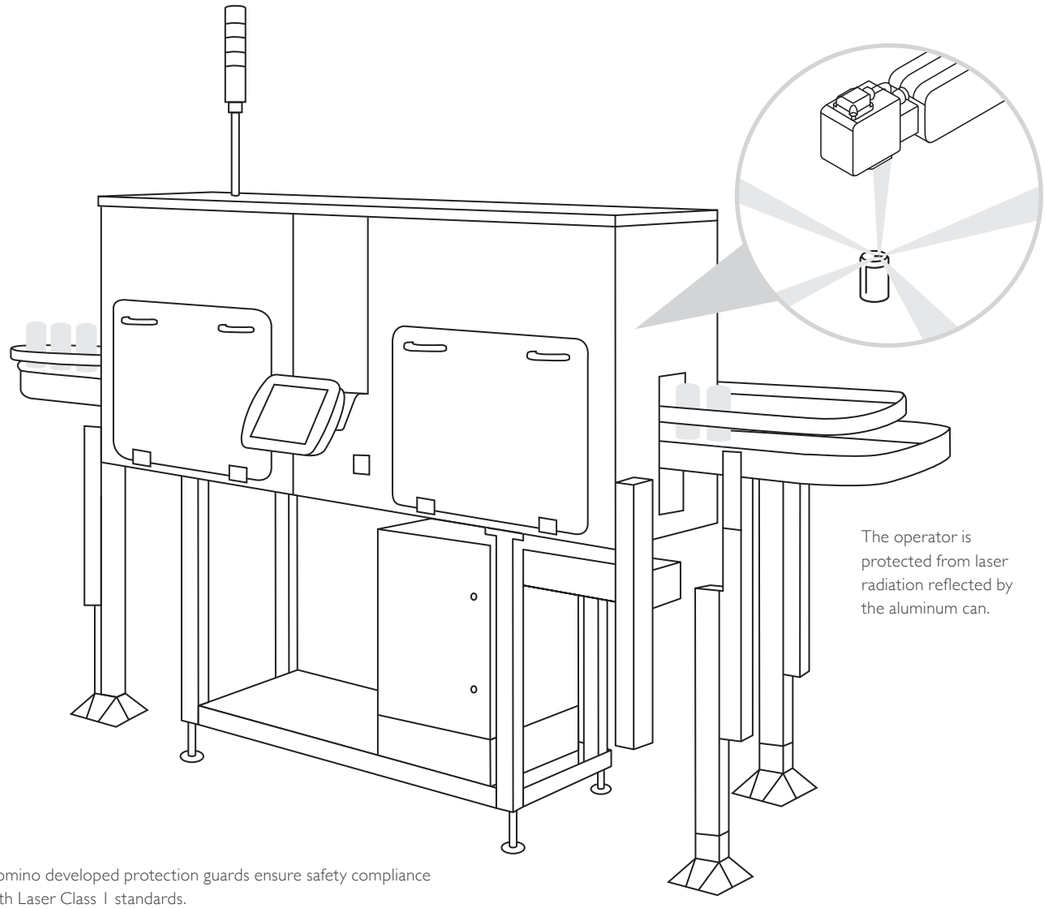
F-Series lasers are installed with protective guarding which complies with worldwide safety regulations, to keep your operators safe, and help ensure you stay compliant.

Up to 3x higher lifetime

In beverage production, some coding technologies can have a relatively short life of less than 6 years before needing replacement. Due to its extra cooling control, high IP rating for full wash-down and precision engineering, **Domino's F-Series** laser coders have a life span of up to 12 years of production.

High speed at high temperature

On hot, humid beverage lines, conventional fan-cooled fibre lasers are prone to overheating, which may mean that you have to reduce your speed. **F-Series** optimized concept gives you water cooling control and a closed loop system. You keep 100% duty cycle even at 45°C so your line always runs at the speed you really need.



The operator is protected from laser radiation reflected by the aluminum can.

Domino developed protection guards ensure safety compliance with Laser Class 1 standards.

The **F-Series Code**
Scientifically engineered for you

Code through condensation

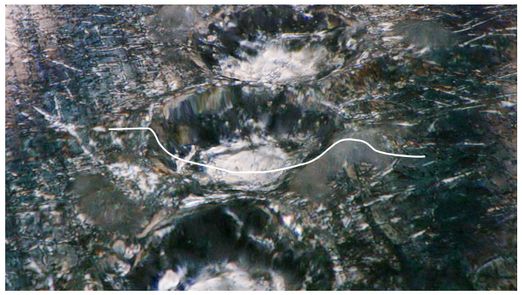
Codes provided by conventional coding technologies can be affected by condensation on the can surface. **F-Series** lasers are designed to provide coding, even on wet surfaces, removing the need for can drying systems – this will save you money and energy, and reduce the overall footprint of your production line. What's more, you'll have crisp code quality on every can.

Easy on your substrate

F-Series laser coders engrave substrate surfaces at a depth of 6 to 8 microns, that's 10 times smaller than a human hair. To achieve this, the laser's parameters and waveform are precisely adjusted to suit your specific can. By following a scientific testing process Domino precisely tunes the laser to your substrate, so your product's properties remain totally unaffected.

Microscopic 3D image show single engraved dots.

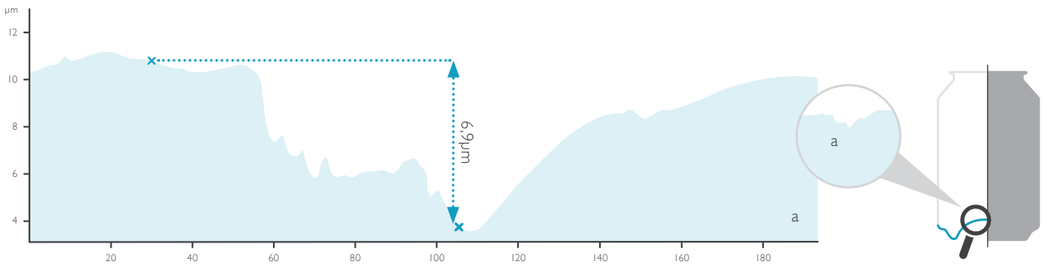
Laser engraved date and lot code.



Product penetration depth analysis along one dot.

Code with confidence

You can choose to code wherever you want on the concave base of a can. You can also incorporate more information, such as a logo or a machine-readable code.



The engraving depth is only 6,9 microns, about 2 % of the body wall.

The can body wall is 0.3 mm thick.

A full **coding solution**

SafeGuard
Protect your investment

An outstanding level of care, wherever you are. Our **SafeGuard** packages provide high-quality, on-site assistance, and augmented reality enabled remote guidance from our engineers. **SafeGuard** helps to ensure we can be with you when you need us most.

Domino Cloud
Smart production

Gain operational insight by connecting your printer to **Domino Cloud**. Obtain production analytics dashboards and receive system error alerts. **Domino Cloud** provides you with the information you need to run your operations more efficiently.

R-Series
Code inspection automated

Ensure every code that leaves your factory is present and correct, and free up operator time. With the **R-Series**, Domino's range of vision control systems, you can automate your code inspectio n to validate code presence, placement, and readability.

Automation

Centralise your label management: **Domino Automation** easily integrates into your manufacturing process as well as your ERP/MES systems. It makes automatic changeovers safe and simple, helping you to reduce waste and drive sustainability initiatives while increasing productivity and efficiency.

Value

Operational support

Automatic code inspection

Control software

Prepare your factory for **today** and the **future**

Futureproof coding

An **F-Series** laser will push your coding into the future. The laser's 300mm lens provides an incredibly wide marking area to create more text and machine-readable codes at highest speed. Whatever your requirements, you'll be ahead of your time, and prepared to code whatever comes next.

Improve uptime

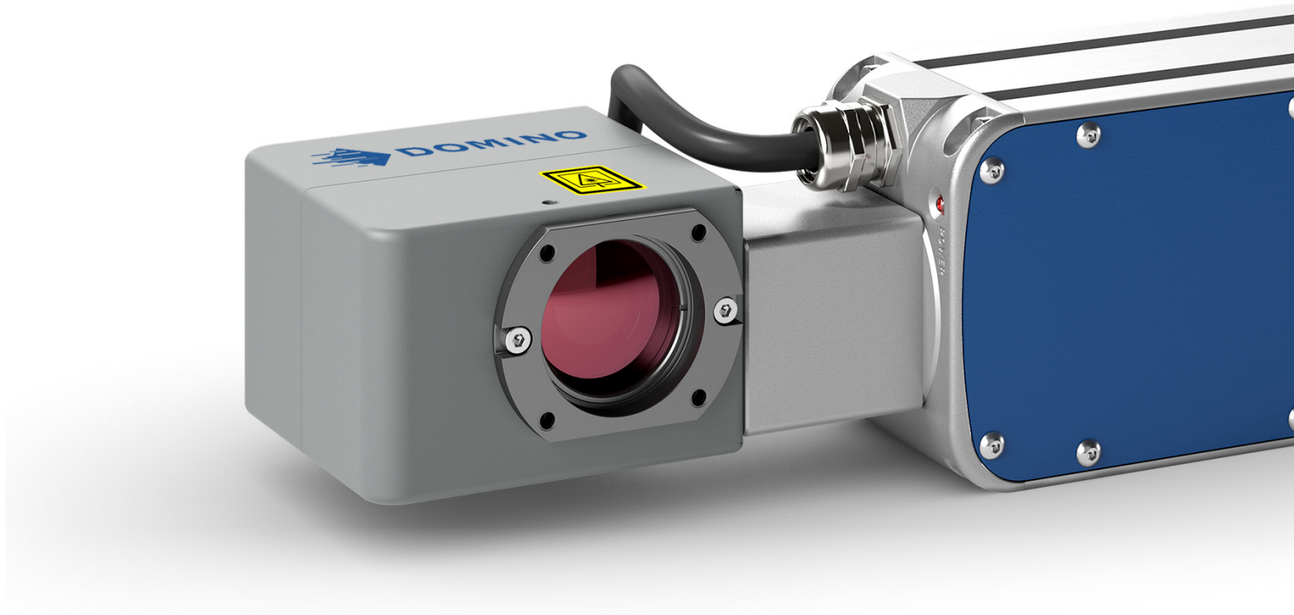
Your uptime will improve significantly when you switch to laser coding. Laser coders require almost no planned maintenance and are inherently more reliable than conventional coding technologies.

Clean coding

Dominos **F-Series** lasers require no chemicals, solvents, or acids. Coders come without any bottles or cartridges, so you don't need to deal with purchase, consumption, storage, or disposal of any stock or packaging of fluid consumables. **F-Series** lasers create clean, crisp codes time after time, reducing defect waste from poor code quality.

Brand protection

F-Series codes are indelible and high in quality, which will help to ensure you can trace your products in the event of a recall. And because they can't be altered or removed you can be sure that only authentic products will be traced back to you.



Your **professional partner** in coding

How can we help you?

Tell us what your coding problem is, and we will help you solve it. Our teams of in-house scientists working in Germany, the USA, and China, are available to test your substrate and determine the best laser solution for your requirments. This can be conducted virtually if you are unable to meet with our experts in person.

High precision engineering

F-Series is developed and manufactured in Germany with highest precision and engineering excellence, specifically for the beverage canning industry.

Safe and custom-fit integration

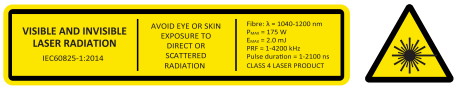
Domino provides unique and high value engineering services and guarding designs, ensuring an easy straightforward and safe application for any company to install **F-Series** laser can coding.

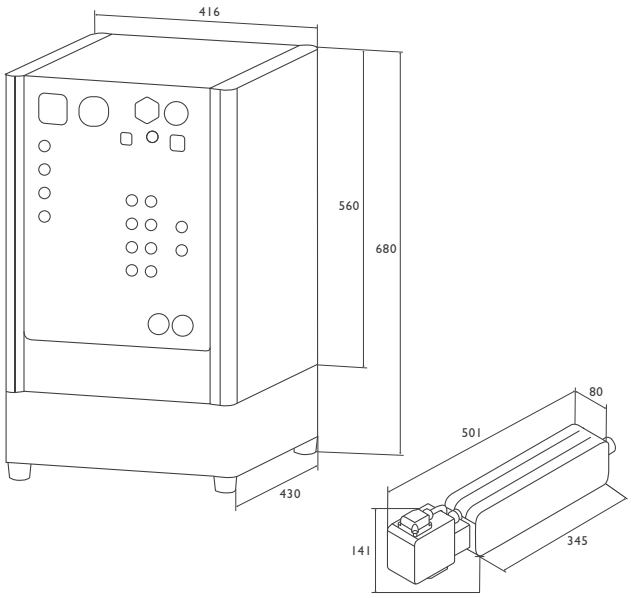
Technical specification

	F520i CP	F720i CP
Laser type	Pulsed fibre laser	
Selectable waveforms	2	
Laser wavelength	1059-1065nm	
Laser power (maximum average output)	50W	70W
Laser source life time (MTBF)	100,000h	
Internal aiming	Wavelength: 630-670nm Pmax=390µW Class 1 Laser Product	Wavelength: 630-670nm Pmax=5mW Class 3R Laser Product
Coding Features		
Coding speed	Supports high speed application.*	
Fonts & texts	Laser optimized fonts for high speed marking incl. standard fonts, multi-language and unicode.	
Graphics & logos	*.bmp (monochrome), *.plt, *.dxf	
Machine readable codes	More than 60 1-D bar codes and 2-D matrix codes. Supporting GS1.	
Code content	Supporting traceability coding with serialization data. Configurable date, counter and time format.	
Focal length/coding field	160mm/118x118mm, 250mm/187x187mm, 300mm/229x229mm	
Dimension & Weight, Integration		
Laserhead dimension	80x141x501mm	80x141x501mm
Laserhead weight	7 kg	
Controller dimension	405x560x430mm 405x680x430mm (Water cooled with optional Heat Exchange Module)	
Controller weight	40.5kg Water cooled: 49kg	43kg Water cooled: 51.5kg
Fibre length	2.7m - bending radius 75mm	
Integration	**i-Tech** Scan Head. Customizable integration through various scan head orientations.	
Environment		
Operating temperature	5-35°C (up to 45°C optional with water cooling)	
Humidity	Max. 90% RH, non-condensing	
Ingress protection laser head	IP65	
Ingress protection controller	IIP55 air cooled (IP65 optional with water cooling)	
Power requirements	100-240VAC, 50/60Hz	
Power consumption	max. 5.3A/500VA	
User Interface & Software		
User interface	Graphical User Interface, WYSIWYG entry, ***TouchPanel*** (optional) Control language is configurable in over 25 languages.	
Marking software	*QuickStep2* including Dynamark4	
Inputs & Outputs, Interfaces		
Product detect inputs	NPN/PNP/24V – sensor	
Product speed detect	Shaft encoder (differential) or steady signal (single ended signal)	
Signal inputs/outputs	Multiple inputs and outputs available from controller e.g. Fume Extractor, Compressed Air-kit, Water Chiller, Encoder, Product Detect, Beacon and Interlocks. Output signals provided for Coder Ready, Coder Busy, Compile OK and Coding Done. Additional Inputs available for Laser Start, Coding Control and Programmable Logic.	
Interfaces	USB, RS232, EtherNet (10/100 Mbit), EtherNet/IP™ (optional)	
Options / Accessories		
Options	User Port Kit I/O, USB Image Backup/Restore Kit, 4-colour Beacon, Heat Exchange Module (IP65 options: chiller / factory water), Pharma Option	
Accessories	Laser Stand, Fume Extraction System	
Application certification	Marking: CE,** cTÜVus / Fullfills requirement: ROHS, FDA listed, EMC, FCC	

*Substrate, pitch and code dependent. Please consult your local sales agent.

**Partly Completed Machinery as per Machinery Directive (2006/42/EC), CE marking according to ROHS (2011/65/EU) and EMC (2014/30/EU).





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