

SmartLase C Series

CO₂ laser coders ■ ■ ■

POWER UP your packaging line



Re-inventing the laser technology for the coding needs of your industry:

> Fast

More than 100,000 products coded per hour

> Innovative

Up to 99.9% availability ratio with easy integration

> Robust

Extended coder life time by 30%

> Customized

Wide range of industry-specific models



 markem·image

A DOVER COMPANY



Fast

More than 100,000 products coded per hour

Introducing new, patented “*SmartLase Code Technology*” embedded into all SmartLase models. This innovative advance includes single and universal fonts as well as algorithms capable of scribing impeccable lines, curves and points faster than ever before. It delivers the following key benefits:

- > 30% greater printing performance with best scribing quality compared to market standards:
 - For the beverage industry: Output rate increases from 1,200 to 1,800 bottles/min.
 - For the food industry: Character printing capacity of one code increases from 30 to 120 characters, for improved traceability and anti-diversion.



Innovative

Up to 99.9% availability ratio with easy integration

- > Modular design for efficient integration in all production lines and versatility via customer configurable features:
 - 3 separate and compact modules: controller, laser head and user interface.
 - Switch between 90° and 0° head configuration in 10 minutes.
 - Change of scan head module in 10 minutes without alignments.
 - Pointing diode and integrated laser power meter option facilitate diagnostics.
 - Wide range of accessories: fume extractor, stand, guarding tunnel, photocell, encoder, alarm beacon, etc.
- > Intuitive touch screen user interface to reduce operator training and human errors:
 - WYSIWYG 7-inch remote touch screen. The user interface is integrated into the controller in the 10 watts version.
 - Job and file transfers through USB port.
 - Web user interface capability with quick access through PC.
 - Ability to adjust contrast and code position when printing.





*SL C150 10W model controller equipped with integrated user interface

Robust

Extended coder life time by 30%

The SmartLase range is designed to deliver unmatched reliability and performance in very demanding production environments. Key features include:

- > Laser head benefits from an IP55 dust/humidity protection rating as standard.
- > SmartLase operates up to 45°C (113°F) due to head and controller optimized cooling flows. No plant air is required for cooling.
- > Extended longevity of the laser source due to reduced laser duty cycles.
- > Optional IP65 head for very dusty environments.
- > Industry leading 2-year warranty standard, up to 5-year warranty available.
- > Over 80% recyclable materials in line with global green initiatives (eg. WEEE directive).

Customized

Wide range of industry-specific models

SmartLase C series offers the right configuration for each industry, always providing a solution whatever the rate, size and substrate of the product (wide choice of lenses, scan heads and laser sources). Market solutions:

- > **Food industry:** SL C150, SL C350 and SL C350 L are designed for markets such as frozen food, chocolate confectionery and dried process food that need to code paper-based containers. SmartLase models are capable of covering coding and scoring applications simultaneously on flexible packaging.
- > **Beverage industry:** SL C150 S and SL C350 S are designed to code on PET, reducing the risk of piercing containers, even lightweight thin-walled bottles. SL C350 is perfect to code on labels.
- > **OEMs:** SmartLase C series features web user interface capability, 0/90° laser head configuration, pointing diode for easy integration into packaging machines and are compliant with ISO 13849 Pld and PackML.



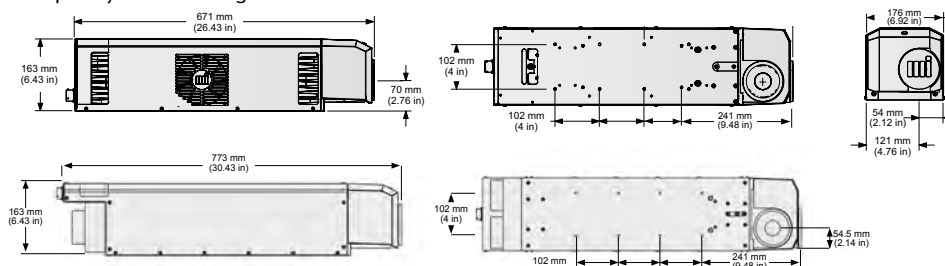
SmartLase range specifications ■ ■ ■

Model name Laser tube power	SmartLase C150 / C150 S 10 W sealed CO ₂	SmartLase C350 / C350 L / C350 S 30 W sealed CO ₂
Production line speed (max.)	125 m/min.*	250 m/min.*
Marking speed (max.)	900 characters/s	1,800 characters/s
Print features	- Number of text lines: limited only by character height and allowable print area - Character height: from 1 to 500 mm - Choice of characters: Chinese, Latin and Unicode fonts - Wide selection of languages: English, French, Spanish, German, Italian, Portuguese, Brazilian, Chinese, Korean, Japanese, Russian, Arabic, etc.	
Standard coding area and focal distance (mm)	- Lens 100 x 100 / fd 140 - Pointing diode function standard offering on all laser heads	
Operations	7" WYSIWYG color touch screen, QWERTY or AZERTY virtual keyboard, navigation via icons including on-line help file - Message storage capacity of 500 jobs - Upload and download of messages via USB Flash Drive - Quick connect/disconnect of laser head and accessories (photocell, encoder, alarm) - Standard I/O: Ethernet interface, USB, encoder, sensor, extractor controls, alarms, remote interlocks (dual channels)	
Other characteristics	2 separate modules: controller including the user interface, and laser head - Controller weight: 10.6 kg - Head weight: 17.3 kg - Dust/humidity protection: IP54 controller and IP55 laser head	3 separate modules: controller, laser head and optional user interface - Controller weight: 10.2 kg - User interface weight: 2.1 kg - Head weight: 18.5 kg - Dust/humidity protection: IP55 laser head, IP54 controller and IP54 user interface
Options	- Controller: stainless steel - Head: stainless steel and protected coated materials - User interface: protected coated materials - Operating temperature range: 5 to 45°C - Humidity: 5 to 90% non-condensing - Interconnecting cable length: controller to laser head: 6 m - Electrical power supply: 100-240 V with automatic switching - Frequency: 50/60 Hz - C350 Power consumption 7 A; 700 VA - C150 Power consumption 3 A; 300 VA	
Accessories	- Coding area and focal distance (mm): Lens 55 x 55 / fd 80 - Lens 70 x 70 / fd 100 - Lens 120 x 120 / fd 175 - Lens 155 x 155 / fd 220 - Lens 205 x 205 / fd 290 - Remote user interface - IP65 laser head (no plant air using FS400 cooler.) Optional IP65 Adapter kit available for plant air solution - Integrated laser power meter - Optional 90° printhead cable adaptor 9-meter interconnecting cable length. 3-meter cULus listed interconnecting cable. 6-meter option also available - Industrial interface option board: RS-232/422 connectivity, 20 configurable operator I/O (12 inputs / 8 outputs), 2 voltage free relays, USB (optional scanners) - Signal tower relay board	
PC software	- Dust and gas extractor, stand (controller, laser head and user interface), guarding tunnel, photocell, encoder, alarm beacon - Web user interface provided as standard - Compatible with CoLOS Create Professional and CoLOS Enterprise • Logo creation with CoLOS Graphics	

* Depends on the size and the complexity of the message as well as the nature of the surface marked

Laser head

SL C150 / SL C150 S
SL C350 / SL C350 S
SL C350 L

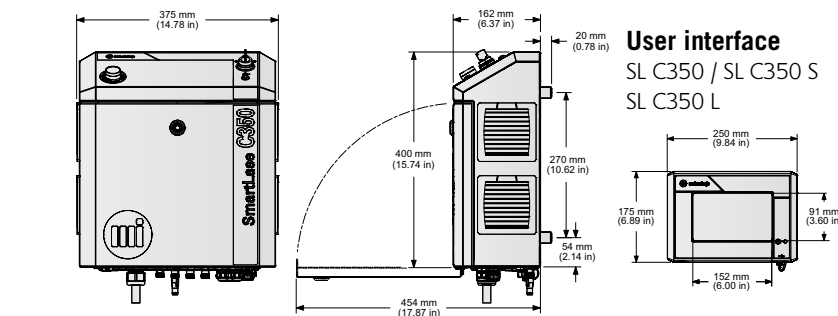


Laser head

SL C150 IP65
SL C350 IP65

Controller

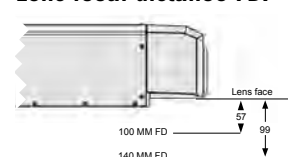
SL C350 / SL C350 S
SL C350 L / SL C350 IP65



User interface

SL C350 / SL C350 S
SL C350 L

Lens focal distance FD:



To learn more, visit www.markem-ijae.com



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a **DOVER** company



CO₂ laser coder

SmartLase® C600

Fast. Reliable. Intelligent.

Printer Intelligence | Packaging Intelligence | Brand Intelligence

Fast. Reliable. Intelligent.

Power up your packaging line and bring down your costs.

The SmartLase® C600 CO₂ laser coder is the pinnacle of high-speed, high-quality permanent coding from Markem-Imaje. With the SmartLase® C600 laser coder, you get reliable laser printing with lower operating expenses and a reduced chemical footprint. Our powerful laser, with ultrafast galvos and processor, allows for fewer line stoppages and higher efficiency—even with increasing code complexity of 1D and 2D codes. And the SmartLase® C600 is ready for Industry 4.0 connectivity, with a variety of industrial interfaces and support for seamless plant integration.

- High-quality, chemical-free and permanent coding on high-density substrates
- Lower operating expenses (OPEX) with fewer line stoppages, higher efficiency and no consumables
- Easy to integrate and operate with intuitive user interface for improved operator efficiency and reduced risk of human errors

A close-up photograph of a blue plastic bottle, likely for spring water. The bottle has white text printed on it. The text reads "Spring Water" in a large, sans-serif font, followed by the date "03/15/2024" in a slightly smaller font. Below the date, there is some partially visible text that appears to be "7 mL)". The background is blurred, showing the bottle's cap and some other parts of the packaging line.

Spring Water
03/15/2024

Rugged, safe and ready for anything



Industry 4.0 ready

Industry 4.0 ready Supports industrial interfaces such as Ethernet/IP, PROFINET, NGPCL and full-featured CoLOS® software support

Standard Markem-Imaje laser accessories

Encoder, sensors, beacon towers, fume extractors, etc.

Powerful and fast

High-speed 60-watt CO₂ laser printhead

Scanheads

Standard: D8 straight
Standard: D8 90° angle
Wide: D13 straight
Wide: D13 90° angle

10.1" (250 mm) touch screen

User interface (IP66)

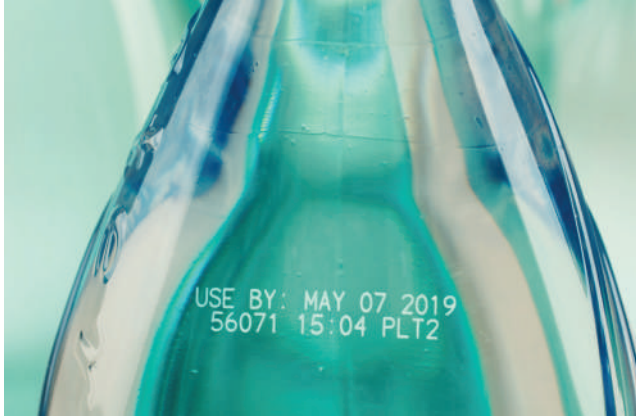
Industrial grade

Controller and printhead (IP55)



Applications

Markem-Imaje is committed to helping you achieve the best quality codes for your specific application. We provide customized sample print test support that considers your code, content, line speed and substrate to ensure you have the 'just right' laser wavelength, power and lens solution.



Food and beverage: PET bottles and sleeves, paper labels and films, glass, flexible packaging, glossy laminated boxes and pouches, cardboard and inked cardboard boxes, paper cups, wood

Pharma: Aseptic packaging, blister packs, PP containers, paper labels and films, glass, inked paper and carton

Cosmetics and household: Inked boxes, plastic packaging (PET, PVC, PP, BOPP), laminated foil packaging

Industrial, electronics and automotive: PVC pipe, rubber, wood, inked boxes, glass, cardboard, paper labels and films, flexible packaging, glossy laminated boxes

The SmartLase[®] C600 CO₂ laser coder

Crisp, superb quality, permanent codes

- Clean, readable and traceable even at high line speeds and product throughput, minimizing rework and recall costs
- Permanent, indelible marking prevents counterfeiting, protecting brand integrity
- High-performance digital galvanometers are driven by a unique algorithm

Lower OpEx, higher efficiency and chemical-free

- Lower operating expenses by eliminating the cost of consumables and external cooling
- Virtually maintenance free to increase Overall Equipment Efficiency (OEE) and minimize production losses with fewer line stoppages
- Clean and compliant production supports your sustainability goals by eliminating chemical components

Industry 4.0 ready, rugged and safe

- Industry 4.0 optimized with industrial interfaces such as Ethernet/IP, PROFINET, NGPCL and full-featured support for CoLOS[®] software (part of the Systech Packaging Intelligence Suite[™]), enabling seamless integration with complex plant automation and manufacturing execution systems (MES)
- Reliable operation in harsh, dusty and humid manufacturing environments with an IP55 controller unit and printhead
- Meets highest safety standards for E-stop and interlock circuits as per ISO 13849-1 / PL_e





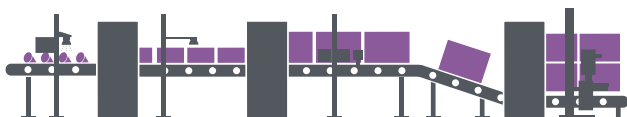
Intelligent solutions to connect and protect your products

Systech Packaging Intelligence Suite™ | We understand the operational complexity of running multiple packaging lines in the most efficient way without downtime. Optimize packaging processes with automated solutions to minimize waste, drive efficiency and achieve compliance in any market.

- Manage complex messages and package layouts
- Eliminate incorrectly coded and packaged products
- Maximize uptime and overall equipment effectiveness (OEE)

Systech Brand Protection Suite™ | Our solutions transform a mark or code into a source of smart decisions with real-time supply chain insight, actionable data and digital connectivity. We've built upon decades of product identification and traceability expertise to develop a fully integrated platform that empowers you to authenticate and track every product—from production to your consumer's hands.

- Achieve critical sustainability and compliance objectives
- Connect, protect and track products across the supply chain
- Strengthen consumer confidence in your brand



Packaging Operations



Distribution



Point of Sale



Consumer



Markem-Imaje reliability and service support

Markem-Imaje ensures peace of mind with our comprehensive service portfolio. Our global team of technical experts is here to help you increase production output, reduce downtime and optimize printer performance—from startup and training through upkeep and repairs.

We are committed to providing the best customer service and support possible, using the method that's most convenient for you.



Online and remote expert resources

Quickly recover from unexpected technical and mechanical issues with live helpdesk support including remote video capabilities

Resolve technical issues yourself anytime with the help of our intelligent self-support solution, Miva



On-demand consumables, repairs and spares

Plan ahead with consumable and maintenance agreements tailored to meet your business needs

Order and track spare parts and consumables as you need them with our online portal



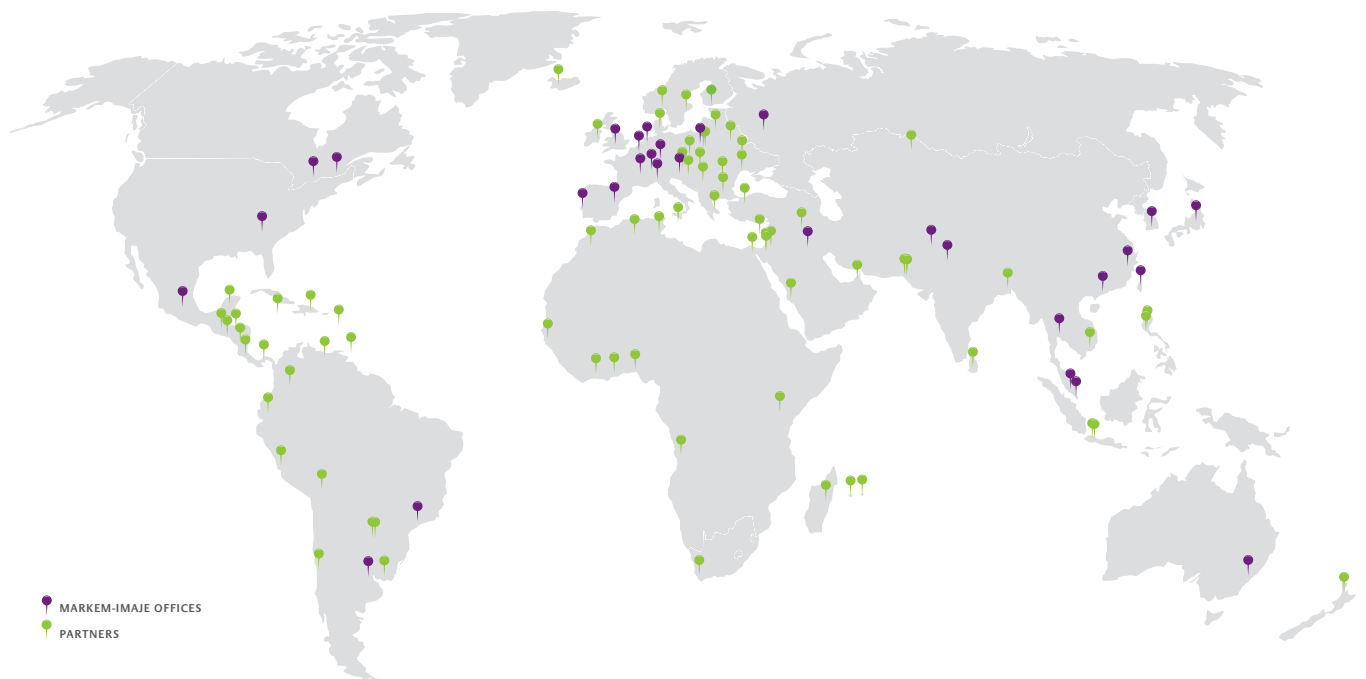
Personalized, scalable rental program

Design a turnkey coding solution that perfectly fits your unique needs with Confidence 360 — our flexible rental program, giving you cost predictability

About Markem-Imaje

Markem-Imaje, a wholly owned subsidiary of Dover Corporation, connects products and protects brands through intelligent identification, traceability and consumer engagement solutions. We offer the industry's most comprehensive range of marking and coding systems seamlessly integrated with trusted software, services and consumables. Over 50,000 customers worldwide partner with us to help them unlock the power of information in codes.

With decades of proven expertise provided through the most extensive global network, we empower our customers to optimize supply chain efficiencies, achieve sustainability and compliance objectives, keep products safe and engage their consumers. This is intelligence, beyond the mark.



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markem-imaje.com

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Fiber laser coder

SmartLase[®] F250

Reliable. Compact. Intelligent.

Power in a small package

The intelligent choice for your smart factory

The SmartLase® F250 fiber laser coder delivers superb code quality in high-speed applications, even with increasing code complexity of 1D and 2D codes, all in an easy-to-integrate and easy-to-operate compact unit.

- High-quality, chemical-free and permanent coding on high-density substrates
- Lower operating expenses (OPEX) with fewer line stoppages, higher efficiency and no consumables
- Easy to integrate and operate with intuitive user interface for improved operator's efficiency and reduced risk of human errors
- Industry 4.0 ready



Easy to use and integrate



Industry 4.0 ready

Supports industrial interfaces such as Ethernet/IP, PROFINET, NGPCL and full-featured CoLOS® software support

Standard MI laser accessories

Encoder, sensors, beacon towers, fume extractors, etc.

Scanheads

Available in 0 & 90°, 8 mm (STD) and 10 mm (HD) configurations

Compact and powerful

Easy to integrate 20-watt fiber printhead

250 mm (10.1") touch screen

User interface (IP66)

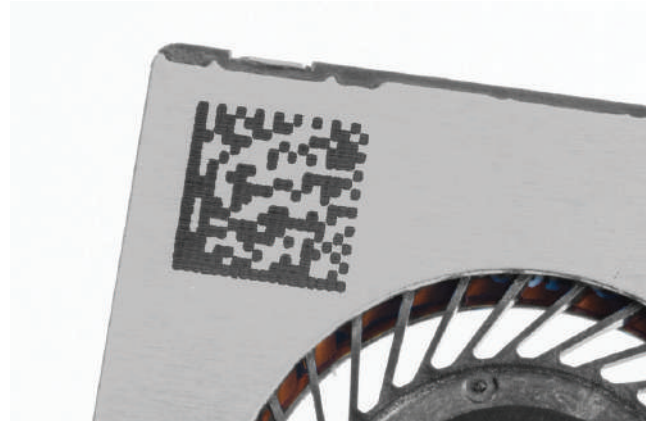
Industrial grade

Controller and printhead (IP55)



Applications

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Food and beverage: Bare metals, metalized foil packaging, plastics, aluminum and anodized aluminum containers or caps

Pharma: Aseptic packaging, blister packs, vial enclosures

Electrical: Metal and plastic parts (ABS, HDPE), wire jackets

Automotive: Metal (steel, copper, titanium, aluminum) and plastic parts (POM, polycarbonate, polystyrene)

The SmartLase F250

Crisp, superb quality, permanent codes

- Clean, readable and traceable even at high line speeds and product throughput, minimizing rework and recall costs
- Permanent, indelible marking prevents counterfeiting, protecting brand integrity
- High-performance digital galvanometers are driven by a unique algorithm

Lower OpEx, higher efficiency and chemical-free

- Lower operating expenses by eliminating the cost of consumables and external cooling
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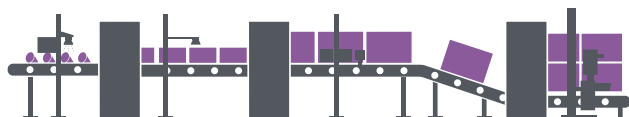
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Distribution



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Consumer



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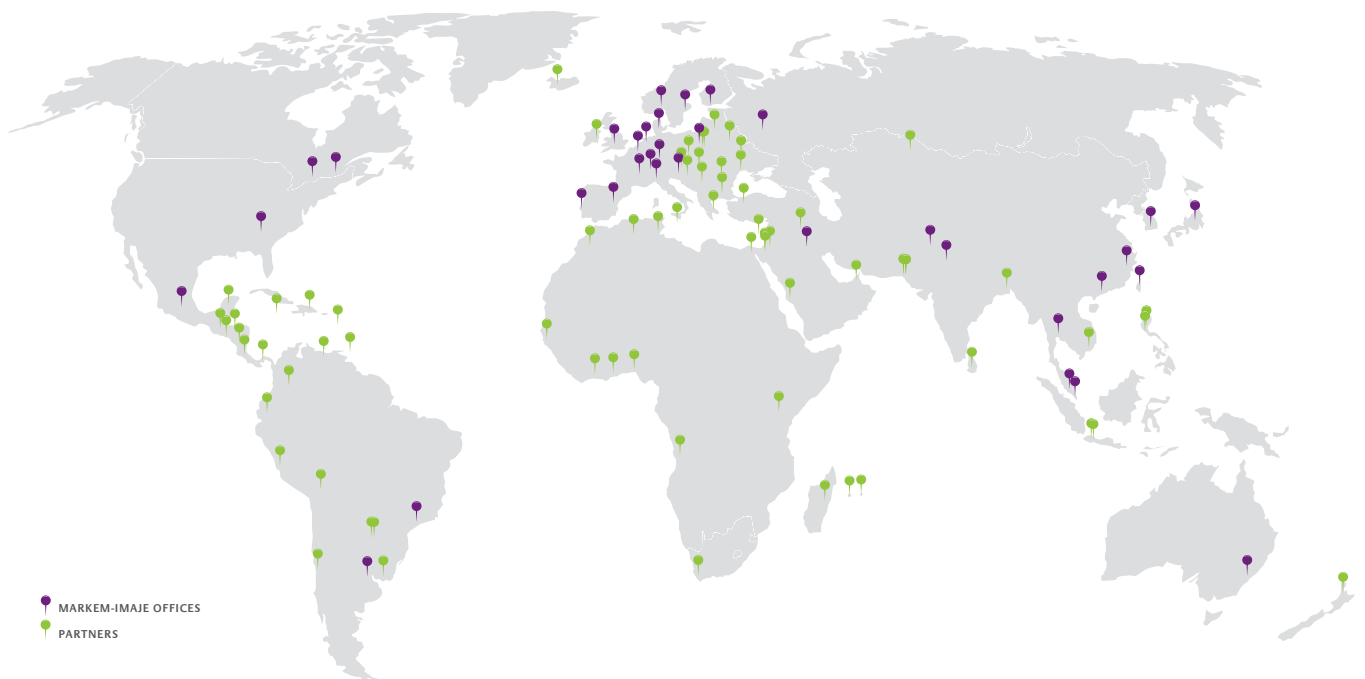
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Fiber Laser Technology

The SmartLase F500 fiber laser delivers a reliable turnkey coding solution for high-speed beverage can lines and other high throughput applications. The SmartLase F500 produces crisp permanent codes and meets your financial and sustainability goals.

Lower OpEx, fewer stoppages, clean and green

- **Eliminate the cost of consumables**
With the F500 there is no need for ink and consumables, so the impact to your operating expenses (OpEx) is immediate.
- **Increase efficiency, reduce maintenance**
The F500 improves production efficiency by maximizing the Overall Equipment Effectiveness (OEE) and minimizing losses caused by line stoppages. With the ES500i+, extraction and cooling are achieved with one unit; no additional cooling costs.
- **Clean, sustainable and compliant**
The SmartLase F500 helps achieve your sustainability compliance goals by eliminating chemical components. The F500 helps you make your beverage production truly environmentally friendly.



Crisp, high quality, permanent codes

- **Clean, readable, traceable**
Even at the highest line speeds and product throughput, the SmartLase F500 provides reliable traceability that minimizes rework and recall costs.
- **Permanent**
Indelible marking produced by the fiber laser reduces counterfeiting - no rubbing, smudging, fading or faking.
- **Ultrafast**
High-performance digital galvanometers with lightweight mirrors are driven by a proprietary lasing algorithm. This unique scribing method enables high quality consistent codes much faster than conventional vector lasers in both static and dynamic applications.



Proven reliability, global service

- **Designed for most challenging environments**
Complete IP 55* controller and printhead ingress protection enables long and reliable operation in humid and sugar-infused beverage environments.
- **Install it and forget it**
With the F500 and its excess of 100,000 hours meantime between failure (MTBF), you can count on laser source reliability of 98% in the first few years of service. This maximizes your total return on investment and delivers maintenance-free peace of mind.
- **Easy to operate**
Intuitive touchscreen interface simplifies and automates code updates, minimizing user errors.
- **Markem-Imaje reliability and service support**
Wherever you are, a Markem-Imaje representative is just a phone call away. 24 or 48 hour on-site repair service level agreement (SLA) available in most geographic locations.



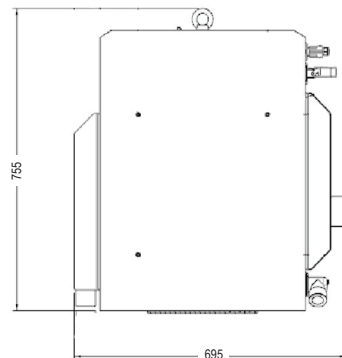
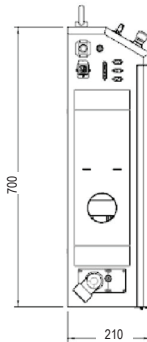
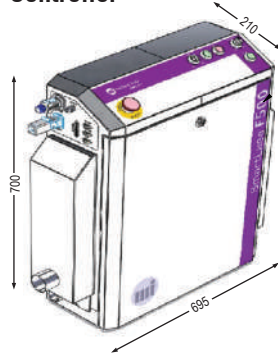
*Ingress protection

SmartLase F500 - Specifications

Laser printhead



Controller



Model name	SmartLase F500
Laser type and properties	• 50 W 1064 nm Ytterbium pulsed fiber laser • Digital galvanometers, pulse frequency 50 kHz and higher
Applications/substrates	• Aluminum and steel beverage cans, flexible film, bare metals, some plastics and polymers (e.g. HDPE, PP, PVC, PS, etc.) * • Coding in stationary or moving "on the fly" applications
Beverage can line speed (max.) in cans per hour	• Up to 120 m/m or 1750 cans per minute (18 alpha-numeric characters 2.6 mm high in two lines, on 66 mm diameter cans) *
Marking speed (max.)	• Up to 640 m/m or 2400 characters/s *
Print features	• Number of text lines: limited only by character height and allowable print area • Character height: from 1 mm to allowable print area • Fonts: English/Latin character/numerals; Unicode: Katakana/Hiragana/Kanji (JIS Level 1 and Level 2); Chinese (GB2312 No.1 and No.2)/Symbols; Laser Font: arabic, arialpro, crossfree, haspaller, hspal, newmod, newpal rus, newpal, ocr-a, ocr-b, ocr-b2; CrystallFont: cryst5x5 RUS, cryst5x5, cryst7x5 RUS, cryst7x5 • 1D and 2D barcodes (static or dynamic) NW-7, JAN (EAN)/UPC, GS1 DataMatrix, JAN(EAN)/UPC CC-A, CC-B GS1 DataBar: Standard, truncated, stacked, stacked omnidirectional, limited, expanded, expanded stacked: CC-A, CC-B GS1-128 CC-A, CC-B, CC-C – with message design software. • Logos, graphics in DXF, BMP, JPG, GIF, PNG, ICO, VGF, PLT, PCX, TIFF, TGA formats • Sequence and serial numbering, automatic date, shift and time coding, real-time clock; online coding of individual data (weight, contents, etc.), timestamps • Linear, circular, angular text marking; rotation, reflection, expansion, compression of marking contents, etc.
Interface and control	• Standard I/O: Ethernet, RS-232/422, encoder, photocell/sensor, extractor controls, alarms, remote interlocks (dual channel) • Direct laser control with TCP/IP or RS232 • Event-handler allows flexible integration by configuring the laser to send or receive data via TCP/IP, extract data from files or write to files in response to printing or operator events • Standard pointing diode (635 nm red) • Message storage capacity: 512 MB for resident jobs
Options and accessories	• All stainless steel variable height laser stand, ES500i+ cooler/extractor, contactless encoder for beverage can lines, custom guarding tunnel, conventional photocell/sensor, conventional encoder, alarm beacon, touch screen interface, handheld terminal, optional lenses (see below) • 6" touchscreen interface in English (Default); Chinese; Czech; Deutsch; Finnish; French; Greek; Italian; Japanese; Korean; Polish; Portuguese; Russian; Spanish; Turkish.
Coding area and focal distance (mm)	• Lens 55 x 55 mm / FD 100 mm • Lens 100 x 100 mm / FD 162 mm (standard) • Lens 160 x 160 mm / FD 254 mm • Lens 212 x 212 mm / FD 346 mm • Lens 242 x 242 mm /FD 420 mm
PC software	• Software available for message editing in Arabic; Chinese; Czech; Danish; Deutsch; Dutch; English (Default); Spanish; French; Hebrew; Hungarian; Indonesian; Italian; Japanese; Korean; Malaysian; Polish; Portuguese (Brazil); Russian; Serbian; Thai; Turkish; Vietnamese; Swedish. • CoLOS support upon request
Physical characteristics	• Ingress protection: Controller: IP55, Printhead: IP55 • EN ISO 13849-1 and -2 safety performance level: Pld • Operating temperature range: +5°C (41°F) to +40°C (104°F) at 100% duty cycle • Operating humidity: 10 to 95% non-condensing • Electrical power supply: 1 phase 115/230 V 50/60 Hz, 700VA • Dimensions: Controller: 210 x 700 x 695 mm; Printhead: 490 x 110 x 124 mm; Interconnecting cable length: 3 m • Weight: Controller 35 kg, Printhead: 7 kg • Outer material: Controller: stainless steel, Printhead: stainless steel and anodized aluminum • Laser source MTBF: 100,000 hours • Cooling: air cooled. No plant air required for cooling; ES500i+ cooling/extractor

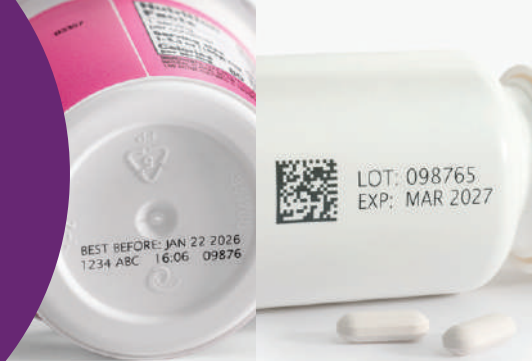
*Depends on the substrate and size/complexity of printed message. Please consult with Markem-Imaje representative for your application.

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To learn more, visit www.markem-imaje.com



5-Watt UV laser coder **SmartLase® UV500**



Ultra Powerful. Ultra Fast. Ultra Flexible.

UV laser technology is the perfect solution for challenging materials.

The SmartLase® UV500 delivers the most precise, high-quality coding with the added benefit of minimal heat transfer. This leaves the substrate surface integrity intact—perfectly suited for high-density and delicate materials. Benefit from exceptional performance in high-speed applications with the added value of solvent-free, chemical-free, permanent markings—even complex 2D codes. All with the Markem-Imaje signature reliability, ease of integration and operation.

The SmartLase® UV500 ensures high speed and quality. Plus, you gain the flexibility to mark on the most challenging substrates.

Your benefits

- Unique marking method, unique marking algorithm
- No chemicals, no consumables—contributing to sustainability goals
- Lower OpEx thanks to less maintenance and fewer line stoppages
- Intuitive user interface
- Industry 4.0 ready—enabling advanced packaging intelligence
- Compact, safe and powerful

Product features

High-definition, damage-resistant, permanent codes

- Our unique combination of a proprietary marking algorithm, a high-speed digital scanning head and the fine laser beam provides ultra-fast and high-quality marking
- Minimal to no interference with material integrity
- Protection against counterfeiting with permanent laser marking

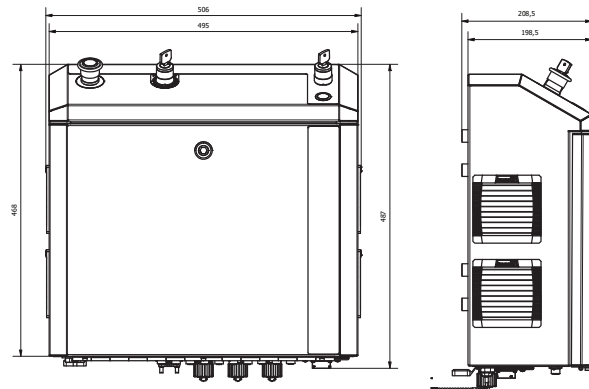
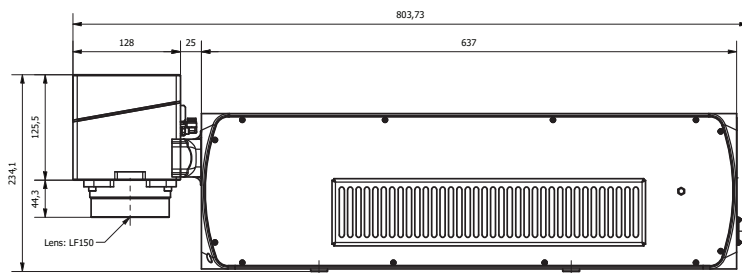
Lower OpEx, higher efficiency and chemical-free

- No consumables needed
- Virtually maintenance-free
- Higher reliability means higher productivity and fewer line stoppages
- Eliminating solvents and chemicals contributes to achieving sustainability goals

Industry 4.0 ready, reliable and safe

- Industry 4.0 optimized with a variety of industrial interfaces such as Ethernet/IP, PROFINET, NGPCL and full-featured CoLOS® software support
- Designed for challenging manufacturing environments with Ingress Protection up to 55
- Meets the highest standard of safety for E-stop and interlock circuits integration per ISO 13849-1 up to PLe

SmartLase® UV500 Specifications



Laser type and properties

5 W, 355 nm UV laser coder, with digital galvanometer control

Applications/substrates

- Polymers and hard polymers: HDPE, LDPE, PP, PVC, PS, PE, etc.
- Flexible film packaging
- Aseptic packaging (Tetra Pak®)
- Glass
- Automotive and industrial parts

Marking speed (max.)

Characters/sec: Up to 2000 char/s

Product per hour: 150,000 pph*

Line speed: Up to 900 m/min*

Print features

Number of text lines:

Limited only by character height and allowable print area

Character height:

From 0.2 mm to allowable print area

Fonts: English/Latin, Arabic, Cyrillic, Hebrew, Korean, Japanese (Katakana, Hiragana, Kanji), Chinese (Hanzi) OCR, TrueType** and Unicode

1D barcodes:

Code 39, Code 128, Code 2 of 5 (industry), I2 of 5, EAN 8, EAN 13, Code 128-A, Code 128-B, UPC-A, UPC-E, EAN 128, ITF 14

2D barcodes:

Data Matrix ECC200, QR Code, HIBC QR Code, Micro QR Code, Aztec, DotCode and HIBC Aztec

Logos, graphics:

DXF, PLT, FPS, EPS, PS, SVG, AI, CDR, PDF**

Data automation:

Static, user-prompted, alphanumeric counter, serial, external promotional codes (CoLOS® only), multi-code/calculated field (e.g., yyyymmddnnn)

Time/date handling:

Standard, custom, time / day offsets, prompting BBE date (CoLOS® only), start week, update and rounding rules, custom calendars

Print field manipulation:

Linear, angular, rotation, circular, scaling

Certifications/Approvals***

CE, RoHS, REACH, US-Canada NRTL safety mark, FCC Part 15B

Interface and control

Connections:

Ethernet, PoE and industrial, RS-232, USB, digital I/O, custom programmable outputs, product sensor, encoder, shutter, fume extractor controls, alarm beacon, start/stop, dual channel safety interlocks

Direct laser control:

TCP/IP, UDP, RS-232, NGPCL
Optional: PROFINET or EtherNet/IP

Job set up pointing diode:

Available as standard. Configurable to show content outline, content field or visualize the content characters for easy job changeover

User interface:

10"/250 mm touchscreen user interface in: Arabic, Chinese, Croatian, Czech, Dutch, English, French, German, Hebrew, Italian, Korean, Polish, Portuguese, Romanian, Russian, Slovenian, Spanish, Swedish, Turkish, and Vietnamese

Other UI options:

Remote PC access via VNC

Standard lens 1:

Print area: 150x150 mm / Focal Length: 250 mm / Working Distance: 342 mm

Standard lens 2:

Print area: 330x330 mm / Focal Length: 511 mm / Working Distance: 652 mm

Optional lens:

Up to 500 mm width

Misc:

Standard Markem-Imaje laser accessories: encoder, sensors, beacon towers, fume extractors, etc.

Physical characteristics

Ingress protection: Marking unit: IP52, optional IP55

Remote UI: IP66

Controller: IP54

For more detailed information, consult paragraph "Operating temperature range" in the next column

Safety performance level:

The highest standard of safety for E-stop and interlock circuits integration per ISO 13849-1 up to PLe; Category 4 machine safety

Operating temperature range:

Printer marking unit	Operating temperature range
IP52 with integrated cooling	5° C (41° F) to 35° C (95° F)
IP55 with external air blower required	5° C (41° F) to 35° C (95° F)
IP55 with external air chiller and plant air source required	5° C (41° F) to 45° C (113° F)
Controller unit	Operating temperature range
IP54	5° C (41° F) to 40° C (104° F)

Operating humidity:

10 to 95% non-condensing

Electrical power supply:

100 – 240 V AC, 50-60 Hz, 350 W

Controller dimensions:

503 mm x 468 mm x 210 mm

Printhead dimensions:

790 mm x 217 mm x 234 mm

Controller weight: 20.3 kg (44.7 lbs)

Printhead weight: 28.4 kg (62.6 lbs)

Umbilical length: 3 m, 6 m, 10 m

Outer material:

Controller cabinet: stainless steel
Printhead: stainless steel and anodized aluminum

Cooling:

IP52 – integrated fan cooling system
Optional IP55 – external cooling system
Plant air might be required

Remote services***

Our intelligent self-support solution
Live helpdesk support with remote video capabilities

* variable based on specific application requirements and substrates

** may require Markem-Imaje support

*** more available upon request



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