



60-watt CO₂ laser coder **SmartLase® C600**



FAST. Reliable. Intelligent.

Power up your production and bring down your costs.

If you need speed and power, the SmartLase® C600 delivers. The SmartLase C600 is the most advanced CO₂ laser coder in our line-up and delivers high-quality, chemical-free, permanent coding on PET bottles, glass, labels, confectionery labels, flexible films, inked paper/carton, coated metals and many more as it lowers your operating expenses. Exceptional performance in high-speed applications on the most demanding packaging lines—even with increasing code complexity of 1D and 2D codes.

The SmartLase C600 CO₂ laser coder is rugged, safe and **READY** for anything.

Your benefits

- High-quality, permanent coding on high density substrates
- Lower OPEX with fewer line stoppages, increased efficiency and no chemicals—ensures greater sustainability
- Improved, easier to operate and more intuitive user interface for up to 20% increase in operator efficiency
- Industry 4.0 ready—enabling advanced Packaging Intelligence

Product features

Crisp, superb quality, permanent codes

- Clean, readable and traceable—even at the highest line speeds and product throughput
- Indelible marking protects against counterfeiting
- High-speed digital galvanometers driven by a unique algorithm

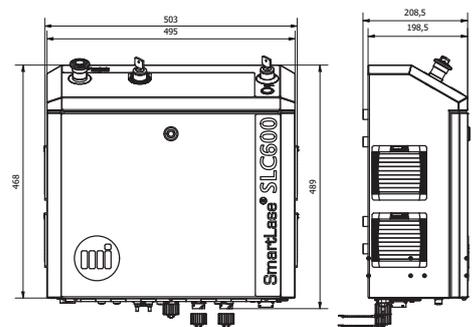
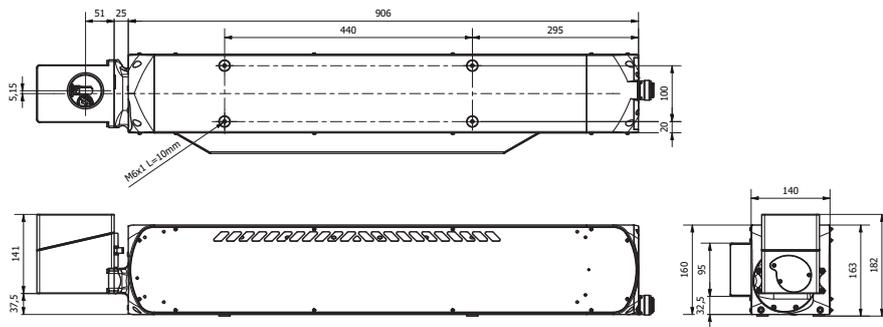
Lower OpEx, higher efficiency and chemical-free

- No added costs for consumables or external cooling
- Increased efficiency, reduced maintenance and fewer line stoppages
- Virtually maintenance-free
- Clean, sustainable and compliant

Industry 4.0 ready, rugged 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 the most challenging manufacturing environments with a complete IP55 controller and printhead
- Meets the highest standard of safety for E-stop and interlock circuits per ISO 13849-1 / PLe

SmartLase® C600 Specifications



Laser type and properties

40 W for 9300 nm, 55 W for 10200 nm,
60 W for 10600 nm CO2 laser;
Pulse frequency of 100 Hz to 25 kHz
digital galvanometers

Applications/substrates

PET Bottles, Glass, Labels, Confectionary Labels,
Flexible Films, Inked Paper/Carton, coated metals
and many more
Coding in stationary or moving “on the fly”
applications

Marking speed (max.)

Characters/sec:

Up to 2100 char/s (D8 scanhead) or
up to 1500 char/s (D13 scanhead) *

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

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, mirror (SL F600), circular,
scaling, matrix (CoLOS only)

Interface and control

Connections:

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

Direct laser control:

TCP/IP, UDP, RS-232

Pointing diode:

Standard, configurable: rectangle outline, content

User interface:

10"/250 mm touchscreen user interface in languages:
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

Software

CoLOS® V6 full support includes matrix layout design,
promotional coding, OPC UA, PackML V3.0

Industrial interfaces:

Optional Interface: OPC UA (CoLOS), PackML V3.0
(CoLOS)

Safety interlock:

Two independent interlock circuits (GIC – General
Interlock Circuit & SIC – Shutter Interlock Circuit)
enable system integration according to category
4 of machinery safety (EN ISO 13849-1) to achieve
Performance Level up to PLe.

Options and accessories

Scanheads:

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

Lens options: print area,

working distance and depth of field:

D8 scanhead:

50x50 mm / FD 91 mm / WD: 84 mm
100x100 mm / FD 178 mm / WD: 170 mm

D13 scanhead:

70x70 mm / FD 100 mm / WD: 98 mm
100x100 mm / FD 150 mm / WD: 151 mm
140x140 mm / FD 200 mm / WD: 204 mm
210x210 mm / FD 300 mm / WD: 304 mm
250x250 mm / FD 360,7 mm / WD: 369 mm

Misc: Standard MI laser accessories: encoder,
sensors, beacon towers, fume extractors, etc.

Physical characteristics

Ingress protection: IP55; Remote UI: IP66

Safety performance level:

ISO13849 safety performance level: PLe; Category 4
machine safety

Operating temperature range:

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, 1300 W

Controller dimensions:

503 mm x 468 mm x 210 mm

Printhead dimensions

1068 mm x 178 mm x 182 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; head: stainless steel
and anodized aluminum

Laser source MTBF: 60,000 hours

Cooling:

Fan cooled. No plant air required for cooling

Certifications/Approvals

CE, cMETus (UL/CSA/IEC 62368-1, IEC/CSA 60825-1),
CDRH, FCC, UKCA, CMIM, RCM

Remote services

Miva, intelligent self-support solution
Live helpdesk support with remote video capabilities

*variable based on specific application requirements
and substrates

**may require Markem-Imaje support



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