INTEGRABLE LASER MARKER

**FIBER LASER**

GRAVOTECH

EXPRESSION OF THINGS

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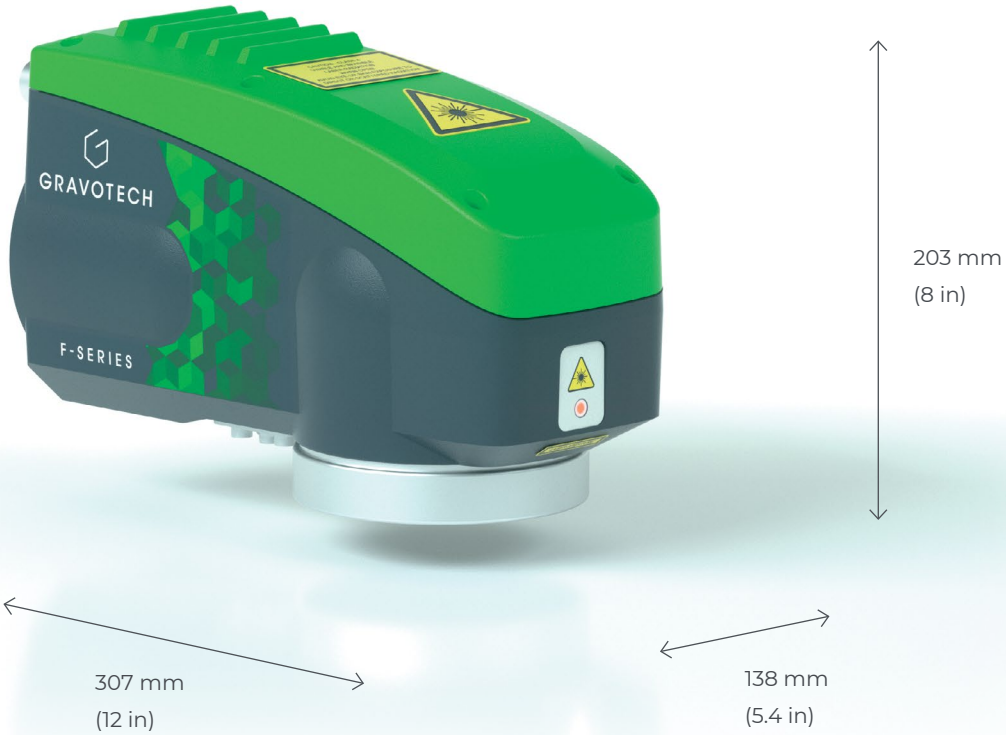
**Integrated laser marking system for metal and plastic parts**

Our powerful and high-quality Fiber Laser engraver performs precise markings in very short cycle times. Compact, with great communication links and simple to integrate in a manufacturing process, it is the perfect laser engraver for metal and plastics.




## COMPACT

The heavy-duty design, based on a cast aluminum structure, and high-quality optical components guarantee strength and low maintenance. Whether integrated on production lines or robotic cells, its implementation is easy in all mounting positions. The laser can be oriented to the part surface to significantly reduce installation times and costs.

## INDUSTRIAL

Equipped to meet the needs of Industry 4.0, the fiber laser engraver is equipped as standard with full network communication ports allowing full compatibility with all PLCs brands and ensure quick and cost-effective integration.

## POWERFUL

This laser marking machine is available in several powers, 20W, 30W and 50W. 20W is adapted for most of the applications for a surface marking, 30w is the solution for your fast and high-contrast markings, and 50W is the most suitable solution for deep laser markings.

Looking for a simple & affordable laser marker? The Fiber ENERGY contains all core features necessary for basic applications.

SEE OUR VIDEO

# OPTIONAL FEATURES


## 3D Marking

This module guarantees you a precise and uniform laser marking, whatever the regularity of the pieces, or the complexity of their shape.

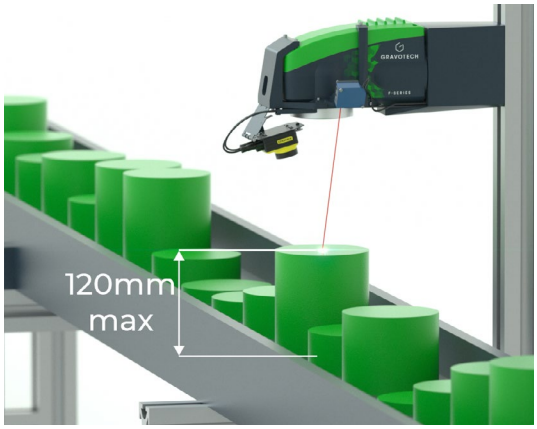
Simplify your integration: No need to adjust the focal distance - Easy programming Highest amplitude.

Choose the best solution on the market:

Focal 160: up to 60 mm (2.36 in)

Focal 254: up to 120 mm (4.72 in)

Fastest solution – Reduce your marking cycle time: Less than 100ms to change the focal distance Instant refocusing.




## Autofocus

This module automatically adjusts the focal distance without calibration or wait time:

Guarantee of optimal marking regardless of the flatness of the parts or their shape.

Exceptional range up to 120mm (4.72 in) for part height variation for marking of various types of parts on the same line.

Constant contrast & depth.


## Vision Manager - Immediate marking control

2D code content verification.

Graduation of the code and trigger of operations: file selection, dialogue with the PLC, activation of alarms, actuators for rejecting faulty parts.

Used with Lasertrace software, this module includes a Cognex Insight camera with lighting, auto-focus system and protective lens.

It offers a perfect reading of all 1D and 2D codes.

## Mini Inline - Innovative solutions for permanent marking

Gravotech has designed a turnkey marking solution that will fit perfectly on your production lines.

Mini in line is a Class-1 nozzle to perform marking without designing a costly class-1 casing to secure all the marking process.

Designed for Marking of large industrial parts: This class 1 solution is fully customizable to fit your parts perfectly.

# SOFTWARE



## Embedded on the Laser

This Fiber laser marker can work independently in a production line and generate all data necessary to your identification without a computer.

It can serialize your parts instantaneously, generate unique ID with complex marking content (timestamps with multiple formats, variables, counters, shift codes) and update the text and 1D/2D codes predefined in your templates.

This powerful embedded electronic can communicate and centralize information coming from your PLCs and database in real-time, saving you time while increasing your productivity.

## LASERTRACE

Developed by Gravotech and enriched by numerous application experiences,

Lasertrace is a unique software specially designed to create marking files to be loaded in the laser system.

It includes a graphic composition to add text, logos and codes like Datamatrix in your marking templates.

You can describe your marking process according to specified rules: the actions (marking blocks) to be carried out, the sequence of execution and the possibility to implement a large choice of transitions (output activations, camera blocks, variables, etc).

# DO YOU NEED ONLY THE ESSENTIAL?


## Fiber Energy

Taking all of our expertise, our proven design and dependable components we have created the essential laser, the Fiber Energy. Without the need for autofocus or complex multi-level marking, we can now provide a simple stripped back experience without compromising our product quality. The Fiber Energy has a modular design using proven components to identify permanently your parts, with a high-contrast and high durability marking.

We have carried the reliability from the Fiber over to the Fiber Energy, with a IP54 marking head sealed from dust and other projections, designed to cope with a harsh environment. The fiber energy also carries the full communication capacities to integrate into any manufacturing process for traceability. PROFINET, Ethernet IP, Ethernet TCP/IP and RS232 interfaces are available along with dedicated I/O and USB ports to easily connect it to your workflow.

With fibre source available in 20W and 30W versions, you can get a precise and powerful marking on a wide range of metallic materials: steel, stainless steel, titanium, aluminium and more.

# APPLICATIONS


Annealing


Laser etching

Deep engraving


Surface cleaning


Coating removal


Contrasted marking on plastic

# SERVICE & SUPPORT

## Training

Our training modules are designed to optimize your use of our solutions and are available for our full range of machines, software and accessories.

## Technical support

We bring you local support in your language in more than 50 countries, where we have established presence directly and with our distribution partners.

## Maintenance

Thanks to experience gathered with Gravograph and Technifor and our global presence in more than 50 countries with 150 Gravotech technicians and our distributor partners, we can offer you a wide range of services.

# TECHNICAL DATA

| | FIBER SERIES | FIBER ENERGY |
|---|---|---|
| **Model** | F20 / F30 / F50 | F20E / F30E |
| **Laser technology** | Fiber | |
| **Power** | 20W /30W /50W | 20W /30W |
| **Peak power** | 10 kW | |
| **Frequency** | 2-200 Khz | 30-60Khz |
| **Scan speed** | Up to 10000 mm/s (393.7 in/s) | Up to 3000 mm/s (118.11 in/s) |
| **Marking area - Available lenses** | F100: 65 x 65 mm (2.6 x 2.6 in)<br>F160: 110 x 110 mm (4.3 x 4.3 in)<br>F254: 175 x 175 mm (6.9 x 6.9 in)<br>F330: 205 x 205 mm (8 x 8 in) | F160: 110 x 110 mm (4.3 x 4.3 in)<br>F254: 175 x 175 mm (6.9 x 6.9 in) |
| **Communication Interfaces (standard)** | Ethernet TCP/IP; Terminal block 8I / 8O; Laser Safety Dedicated I/O; RS232; USB | |
| **Fieldbus** | PROFINET or ETHERNET IP | |
| **Display** | Integrated screen with control panel for: real-time supervision, easy diagnosis, software updates, memory back-up... | |
| **Marking Specifications** | +60 Gravotech fonts, Possible to convert User & TTF fonts, All formats of barcode and 2D codes, Logos | |
| **Operating temperature** | 10 to 40°C (50 to 104 F) | |
| **Rated voltage** | 100 - 240 V AC | |
| **Marking head weight** | 8.3 kg (18.3 lbs) | 7.5 kg (16.5 lbs) |
| **Control unit** | F20-F30: 16.6 kg (36.6 lbs)<br>F50: 20.6 kg (45.4 lbs) | 17 kg (37.5 lbs) |
| **Marking head cable length** | 3 m – 9.8 Ft (5 m – 16.4 Ft in option) | 3 m – 9.8 Ft |
| **Marking head installation direction** | All positions | |
| **Laser Safety Classification** | Class 4 Laser system, possibility to switch in Class 1 for integration on a station or equipped with Mini Inline module. | |

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info.uk@gravotech.com
+44 1926 884433
gravotech.co.uk

**GRAVOTECH LTD**
Unit 3 Trojan Business Centre,
Tachbrook Park Drive, Leamington Spa
CV34 6RH, Warwickshire, United Kingdom

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