



Best suited for

- Identification
- Text and 2D codes
- Metals and plastics
- Traceability
- Direct part marking
- Tamperproof marking

The Mini-inline is a compact class 1 laser solution. This unique and proven design secures the marking process without implementing a costly enclosure. Designed to mark large industrial pieces such as: engine crankcases, gearbox housings, stamped body parts, fuel tanks, etc., this solution fits between the laser marking machine and the part.

In addition, it ensures the extraction of all fumes and particles generated by the laser, thus protecting the operators. Flexible and reliable, the Mini-inline can be integrated in many positions and is compatible with robot arms or linear actuators.



Bodywork



Aerospace turbine



Car battery bay module



Hydraulic tank

## KEY FEATURES

### HIGH SAFETY

- DGUV certified
- Laser is isolated in chamber
- Integrated particle extraction
- Direct part detection

### COMPACT

- Much smaller than standard laser housing
- Fit tight spaces
- Integrable in robotic cells

### EASY TO INTEGRATE

- Integrable on robots, axis systems, rotary tables, etc.
- Laser to part or part to laser
- Horizontal or vertical integration

### COST EFFECTIVE

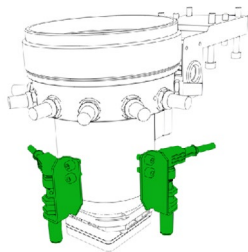
- Cheaper than laser safety housing
- Low maintenance costs

### PRODUCTIVITY

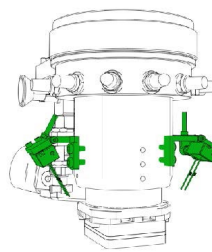
- No door opening/closing
- Ensures high production rates

## OPTIONS & ACCESSORIES

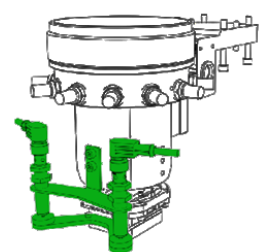
PART DETECTOR :



Inductive (metal parts)

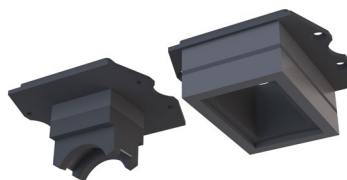


Optical (plastic parts)



Touch (better cycle-time)

COMPLEMENTARY OFFER



Custom sealing interface



Exhaust systems

# MINI-INLINE

## MARKING SPECIFICATIONS

Marking area	Up to 32 x 42 mm (standard) (1.26 x 1.65 in)
Materials	Marks most metals and plastics
Typical parts	Engine crankcases, gearbox housings, stamped body parts, fuel tanks, etc.
Marking type	+60 Gravotech fonts; possible to convert User & TTF fonts All formats of barcode and 2D codes, logos
Part shape	Flat (standard) Curved (on request) Other (feasibility study required)
Part temperature	Max 100°C (212°F)

## TECHNICAL SPECIFICATIONS

Suitable for	Fiber, Hybrid and Green laser series (F160 focal lens)
Maintenance cycle	Depends on application: cleaning operation every 20 000 marking cycles
Humidity level	C.f. Laser marking machine
Operating temperature	C.f. Laser marking machine
Storage temperature	C.f. Laser marking machine
Air filtration	Optimized air channels and exhaust tube

## INTERFACE SPECIFICATIONS (FOR MARKING MACHINE)

Interfaces	Ethernet TCP/IP; Terminal block 8I / 8O; Laser Safety Dedicated I/O; RS232; USB
Interface options	Profinet or Ethernet/IP fieldbuses; dual channel safety module
Safety	Connectors for safety relay

## PHYSICAL SPECIFICATIONS

Dimensions (Fiber series Mini-inline alone)	293 mm x 192 mm x 168 mm (11.54 x 7.56 x 6.61 in)
Weight	3.8 kg (8.378 lb)
Marking solution installation direction	Horizontal, facing down and in-between

\*Dimensions in mm

