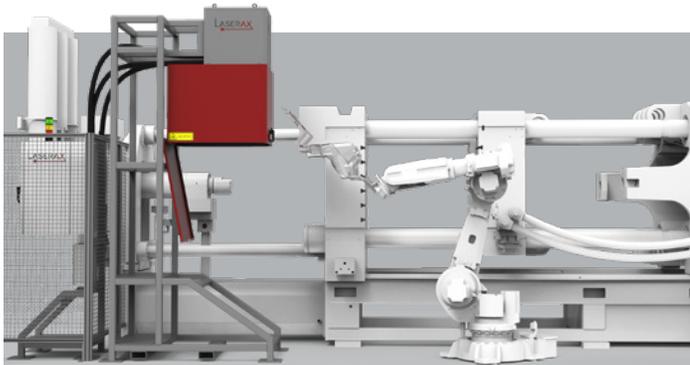
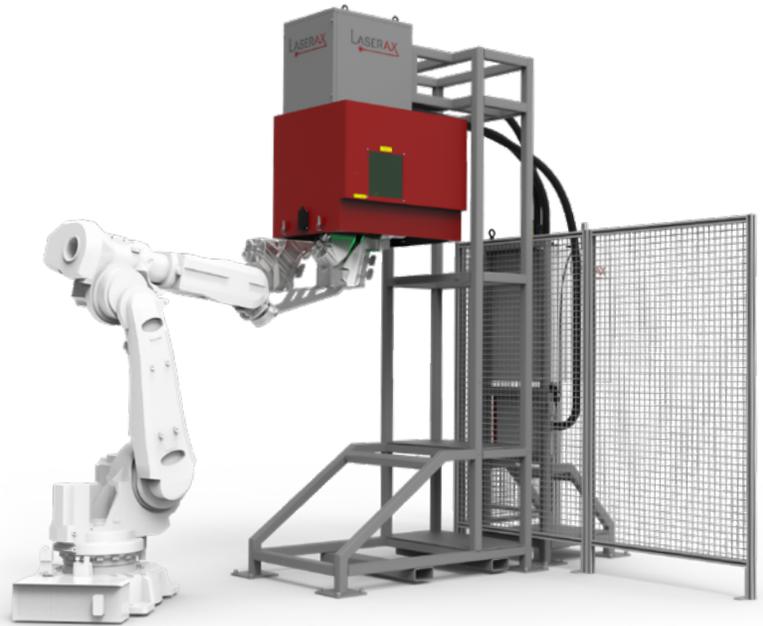




## OPEN AIR MACHINE

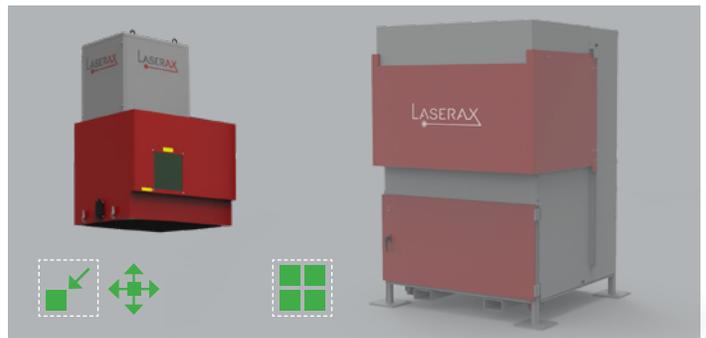
The Open Air Machine is an inline laser marker designed to provide direct part marking within your robot assisted manufacturing process without using any costly part fixtures.

Powered by a high power fiber laser, the Open Air Machine delivers repeatable high contrast marking onto parts that are brought in front of the laser aperture by a robot. Part detection sensors dynamically validate part positioning to ensure the identifier's quality compliance and laser safety. Once marking operation is completed, the robots moves the part to the next operation of the production cycle.



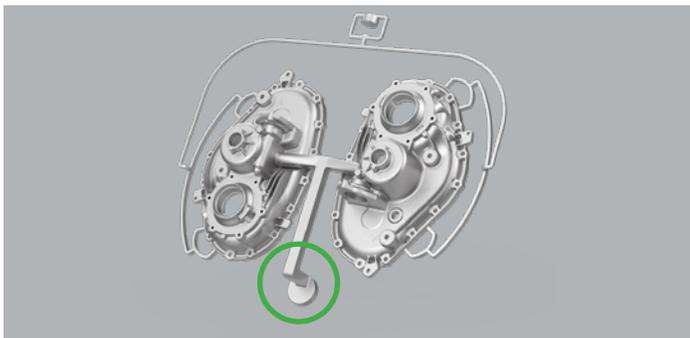
### LEVERAGE EXISTING PRODUCTION CAPABILITIES

The Open Air can be easily retrofit into an existing production cell. It allows you to leverage your robot precision and idle time to minimize the cost and complexity of adding traceability to your process.



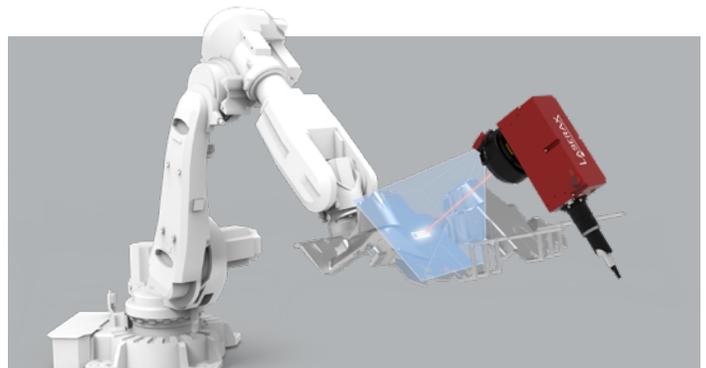
### FLEXIBLE AND COMPACT FOOTPRINT

With its high compact design, the Open Air can be positioned in any orientation or height within any production cell. Its electrical cabinet and control panel can be remotely positioned to minimize footprint and facilitate operation and maintenance.



### MULTI PART AND MULTI CAVITY SUPPORT WITHOUT FIXTURE

Avoid spending money on costly fixtures. The Open Air system makes use of the robot gripper and does not require you to drop the part in a fixture and therefore simplifies the laser marking process. It offers enhanced flexibility for various marking needs including multi-parts or multi-cavities production.



### AUTOMATIC ADJUSTMENT TO ROBOT PART POSITIONING

In order to provide reliable datamatrix quality compliance, the Open Air Machine can be equipped with a Z-autofocus and an X-Y vision system to ensure high precision presentation of the part to the laser marker.

## GENERAL SPECIFICATIONS

| STANDARD OPEN-AIR MACHINE                         |  |
|---|--|
| Laser Power                                       | 20 to 500W   |
| Laser Type  | Ytterbium-doped fiber  |
| Wavelength  | 1064 nm  |
| Laser Source MTBF                                 | 100,000 hours  |
| Marking Process                                   | Etching, engraving, annealing  |
| Standard Marking Window (Others Available)        | 35 x 25 mm, 70 x 55 mm   |
| Typical Weight                                    | 950 kg   |
| Cooling   | Air cooling  |
| Power Requirements                                | 120V, 230V, 240V / 15-40 AMP   |
| Power Consumption                                 | 1.5 kW to 5.8 Kw   |
| Operating Temperature                             | 10°C to 45°C   |
| Communications                                    | Ethernet/IP, PROFINET, Profibus  |
| Multi-Parts Marking                               | Yes  |
| Part Size   | Adaptable  |
| Part Temperature                                  | Up to 450 C  |
| Part Material                                     | Aluminium, Zinc, Magnesium, Steel, Iron (All Metals)                           |
| Marking Surface Roughness (Positioning) Tolerance | Standard +/- 3 mm<br>Engraving +/- 1.5 mm<br>Up to +/- 70 mm with 3D Autofocus |
| General Dimensions (W x D x H)                    | 1000mm x 1500 mm x 3000 mm   |



## COMPLETE SOLUTION

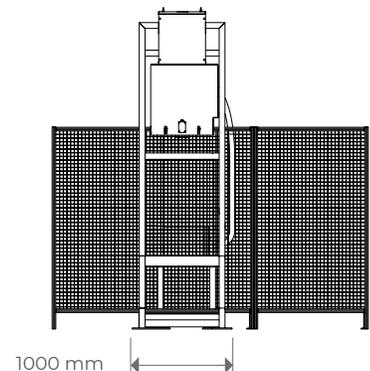
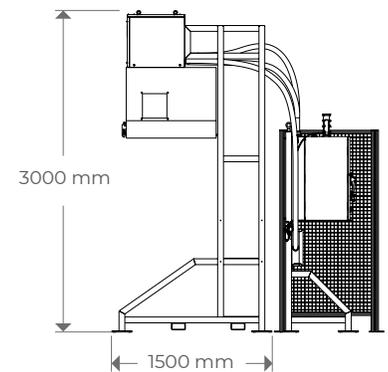
### Laser

- 20 to 500 W Laser power
- Distance sensors and 3D Laser with autofocus
- Up to 5 m fiber length

### Station

- Class 1 Laser safe station
- Harsh environment rated
- Standard nozzle design (others available)
- Rugged welded steel construction
- Integrated in IP66 control cabinet with cooling (IP54 AC or Vortex)
- Minimal footprint with remote cabinet outside the cell for easy access to controls
- PLC Controlled
- Safety PLC for part presence validation
- Air-knife unit for dust and contaminant protection (minimal maintenance)
- HMI control available
- Code reading camera with quality metrics
- Code reading interface screen available

## TYPICAL DIMENSIONS



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### LASERAX HEADQUARTERS

101-2811 Watt Ave  
Quebec, QC G1X 4S8  
Canada  
+1 418 780-7324

### LASERAX USA

2401 Parkman Road  
Warren OH 44485  
United States  
+1 412 301-9957

### LASERAX GMBH

Ferhnheitstraße 1  
28359 Bremen  
Germany  
+49 421 2208-121