UNISONIC LASER BOOTH SYSTEM

PROTECTING BYSTANDERS AROUND THE WORKSPOT

CEPRO®
LEADING IN WELDING SAFETY

UNISONIC LASER BOOTHS

Setting the Standard in Laser Safety
The Cepro UniSonic Laser Booths are designed to create the safest possible environment for laser welding and processing. Fully compliant with EN IEC 60825-1:2014 standards, they provide maximum protection for operators and bystanders, ensuring that even the most powerful Class 4 laser applications can be carried out with confidence.

Robust Safety Features
Every UniSonic booth comes equipped with advanced safety technology. Fail-safe interlock systems, certified laser filter windows, and LED warning indicators guarantee that the booth cannot be used unsafely. These features not only minimize risks, but also reduce liability and operational costs, offering peace of mind for both employers and employees.

Modular and Flexible Design
Built with a modular panel system, UniSonic booths can be assembled quickly and configured to fit virtually any workplace. Doors, windows, and air inlets can be added easily, while standard panel sizes allow seamless installation. This flexibility makes UniSonic ideal for production halls, training facilities, and other industrial environments that demand both safety and adaptability.

A Complete Solution for the Modern Industry
By integrating safety, functionality, and user-friendliness, Cepro delivers a future-proof solution for industries that rely on laser technology. Choosing UniSonic means choosing compliance, reduced risks, and long-term reliability, a foundation on which companies can safely build their operations today and tomorrow.

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SPECIFIC LASER FEATURES

- Entry doors are equipped with a robust fail safe interlock system, with LED warning lights
- Pilz door sensor
- Laser filter window DIN EN 60825-4:2011
  wavelength range 897-960 nm - 124 kW/m^2 - T2
  wavelength range 960-1190 nm - 166 kW/m^2 - T2
- Control box with manual reset button
- Air inlet, labyrinth gaps and grid

USP'S UNISONIC ELEMENTS

- Easy to design and build with minimal components
- Competitively priced within the standard configurations
- Available from stock to minimize delivery times
- Excellent price-to-quality ratio
- Multifunctional: suitable for use in a variety of workplaces
- Seamless installation via a tongue & groove system
- Easily add windows, doors, air-inlets, etc

SPECIFICATIONS

- Manufactured from EPS with steel sheeting
- Thickness 80 mm
- Colour wall elements RAL 9006
- Colour door and profiles Alu-Grey
- Weight 10.4 kg/m^2
- Link panels with tongue & groove system
- Standard heights 270 cm or 390 cm

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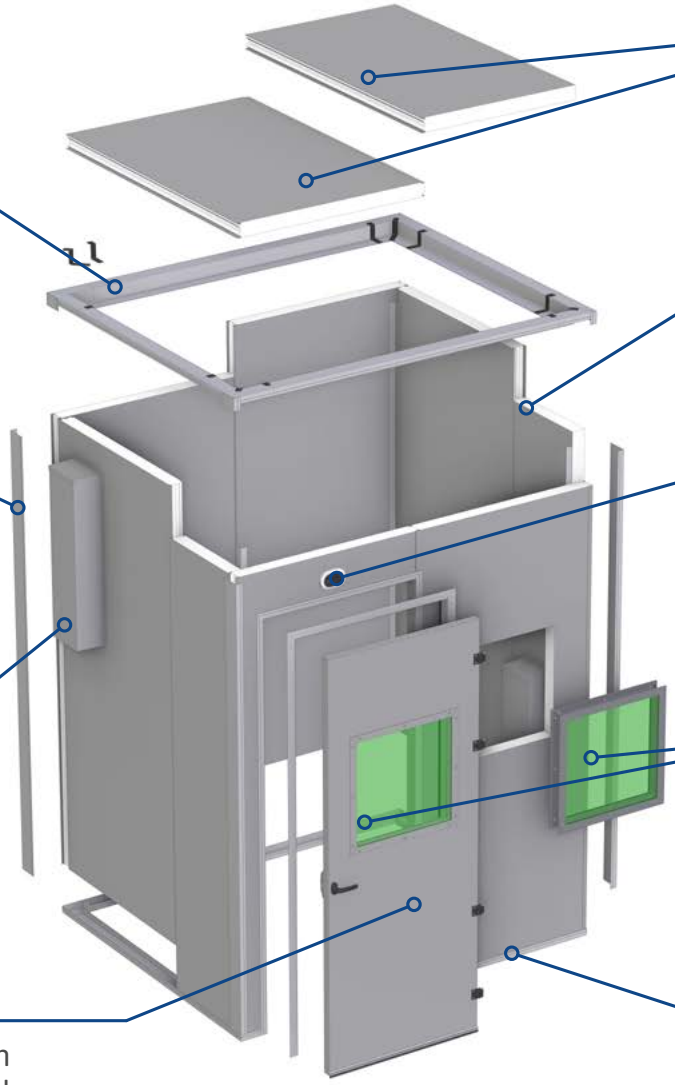

Roof panels
- Easily mounted into the roof frame

Roof frame
- Easy fitted roof panels
- Roof panels are recessed into the frame

Sandwich panel
- Thickness 80mm

Corner profile
- To create a 90° angle
- Achieve a sleek and polished appearance

Interlock system
- With LED warning signs
- Robust fail safe system

Air inlet
- In preparation for an external air extraction system

Laser filter window
- Double-glazed safety glass
- DIN EN 60825-4:2011

Entrance door
- Left or right opening option
- Fitted with window and lock

Floor profiles
- Sturdy mounting walls
- Easy to install and cut to size

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FREQUENTLY ASKED QUESTIONS

Why choose a certified laser cabin?
A certified laser cabin is essential for a safe working environment in laser welding. The Cepro UniSonic Laser Booth meets strict safety standards and has been accredited by an independent laser expert. This minimizes risks, reduces costs, and ensures a safe workplace.

Why is full compliance important?
Achieving full compliance is essential for creating a safe and legally compliant laser workspace. Simply using a CE-certified laser machine is not enough. A truly compliant setup must include all critical safety components. These are:

- A certified laser cabin.
- A CE-certified laser machine.
- CE-certified personal protective equipment
- A designated Safety Officer for handheld lasers.

What are the key advantages of the UniSonic laser booth

- Designed for Class 4 laser us: Complies with EN IEC 60825-1:2014 standards.
- **Fully enclosed with a roof**: Cepro UniSonic booths include a roof, providing the only safe and compliant solution for Class 4 laser applications.
- Robust safety features: Includes fail-safe interlock systems and laser filter windows.
- Customizable & scalable: Modular options for various workplace configurations.
- Comprehensive risk reduction: Prevents costly damages and liability expenses.
- Quick & easy installation: Ready-to-build structures with tongue-and-groove panels.

What laser safety features does the UniSonic booth offer?

- Interlock system & safety controls
  - The Class 4 laser source must be connected to the booth's remote interlock connector.
  - Laser operation is only possible when the safety switch is activated and the door is closed.
  - A fail-safe interlock (PLd) ensures immediate laser radiation termination in case of unauthorized access.
  - Pilz MN207S safety sensors provide additional protection.

- Integrated control system
  - Manual reset and key control prevent unauthorized use.
  - Emission warning indicators alert users to active laser systems.
  - Emergency stop (E-stop) functionality ensures immediate shutdown in case of hazards.

What are the requirements for safe operation?

- Laser source requirements:
  - CE-compliant handheld laser welding source.
  - Laser wavelength between 897-1190 nm.
  - Maximum average laser power: 2.5 kW.

- Employer & operator responsibilities:
  - Conduct a thorough laser hazard and risk assessment.
  - Provide laser safety training for operators.
  - Ensure the use of CE-certified personal protective equipment (PPE).
  - Prohibit direct aiming of the laser torch at enclosure walls or safety windows.
  - Regularly inspect the enclosure walls and laser filter window for discoloration or damage.

What should the user manual include?
Each UniSonic Laser Booth comes with a detailed manual containing:

- Comprehensive assembly, maintenance, and safety guidelines.
- Description of wavelengths and power exceeding Class 1 AEL.
- Diagrams and warnings indicating laser aperture locations and associated risks.

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- Mandatory safety warnings, such as: *"Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure."*
- A complete list of required labels and hazard markings.

What should be done in case of damage to the booth?

If any part of the laser booth (walls, door, or windows) is damaged, work must be stopped immediately. The damaged components must be replaced before resuming operations.

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IMPORTANT USER INFORMATION

Preconditions

It is the responsibility of the end-user, who will provide, in all cases the laser hand-held laser welding source, that this is a laser class 4 product and complies to EN IEC 60825-1:2014 with respect of laser safety engineering precautions.

- Hand-held laser welding source must:
  - CE compliant
  - Laser source engineering precautions according to class 4 of EN IEC6025-1:2014
  - Laser wavelength between 897– 1190nm
  - Maximum average laser power of 2.5kW
- Employer / end-user responsibility to incorporate the use of this laser hand-held welding enclosure into the company laser hazard and risk assessment
  - Laser safety instructed laser hand-held welding operator
  - Correct use of laser safety personal protective equipment (eyewear and clothing)
- The handheld laser weld torch should not be aimed directly at the enclosure walls or laser safety filter windows in the doors.
- The users should inspect the internal enclosure walls and laser filter window for discolorations on a regular bases.

The end-users class 4 laser source must be connected through its remote interlock connector to the internal Uni-Sonic laser booth's laser safety circuit. The result is that laser can only operate when this laser safety switch is activated, and the door is closed, which simultaneously controls the warning text outside.

It is the responsibility of the end-user, who will provide, in all cases the laser hand-held laser welding source, that this is a laser class 4 product, which complies to EN IEC 60825-1:2014 with respect of laser safety engineering precautions. This includes, the manual reset, key control, the emission waring and the e-stop on the laser weld equipment.

- Safety interlock in protective housing / remote interlock
- The entry door is equipped with a robust fail-safe (PLd), interlock.
- Pilz sensors – safety component MN207S
- An activated interlock results in the termination of laser radiation / manual reset present inside the Uni-Sonic Laserbooth.

The end-user is responsible for correctly connecting the interlock system, the control box, and the laser.

User Manual

The following information must be present in the user manual:

- Adequate instructions for correct assembly, maintenance and safe use, including clear warnings concerning precautions to avoid possible exposure to hazardous laser radiation.
- A description of all radiation that is above the Class 1 AEL, including wavelength and maximum power.
- For embedded laser products and other incorporated laser products, information to describe the incorporated laser.
- Legible reproductions of all required labels and hazard warnings to be affixed to the laser product. The corresponding position of each label shall be indicated.
- A clear indication in the manual of all locations of laser apertures through which laser radiation in excess of the Class 1 AEL is emitted.
- List of controls, adjustments and procedures for operation and maintenance, including the warning "Caution – Use of controls or adjustments or performance of

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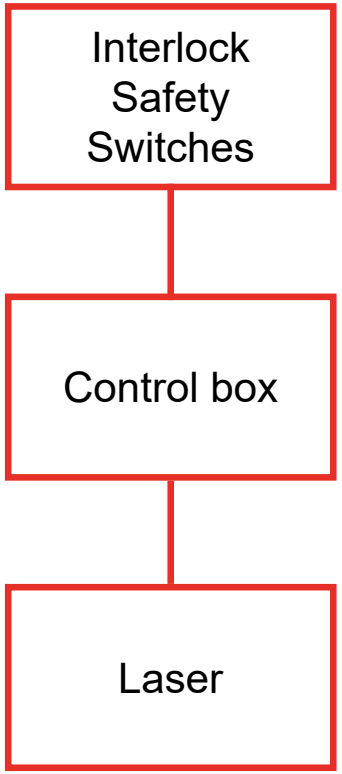
procedures other than those specified herein may result in hazardous radiation exposure".

In case of breakage or other damage to the walls, door, or windows, the damaged part must be replaced immediately. Until then, all work must be halted.



FROM PRODUCT
TO A COMPLETE SOLUTION

At Cepro, our commitment goes far beyond supplying individual products. Alongside our wide product catalogue, featuring all standard, off-the-shelf solutions, we also offer a dedicated project catalogue. This unique combination demonstrates how our proven standard items and our special project components can be integrated to create complete, tailor-made solutions for every welding environment.

Whether in workshops, production areas, or complex industrial zones, we work closely with our customers to identify challenges, recommend the best approach, and deliver turnkey solutions. From consultancy to fast, professional installation, you can rely on certified Cepro products backed by decades of expertise.

Together with you, we can solve any welding safety challenge, combining practicality, safety, and custom design into solutions that truly fit.

Curious to learn more?
Discover our Product Catalogue and explore the Project Catalogue at www.cepro.eu

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