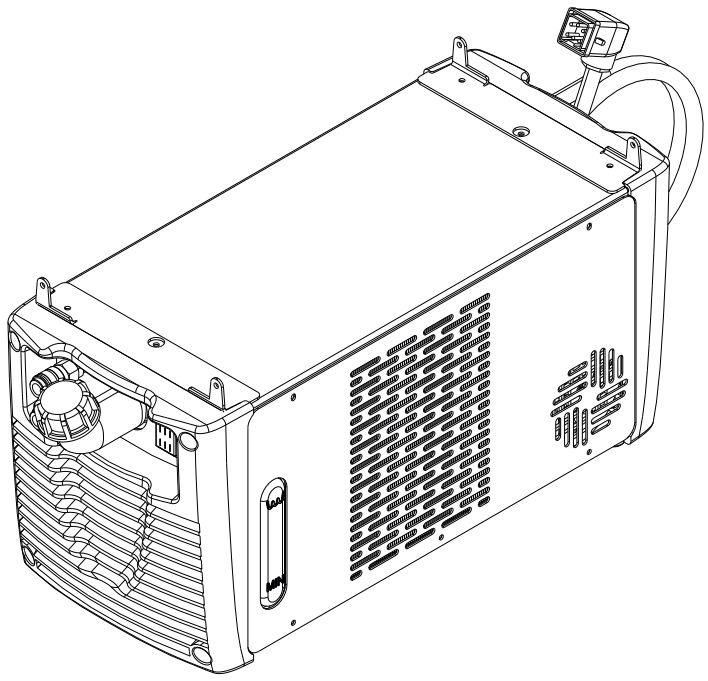
WELD THE WORLD

# CU121 / CU121HP

## Instruction Manual

**ENGLISH**

Translation of the original instructions



Cod.006.0001.2340
09/05/2023 V.1.0

# INDEX

# 1 GENERAL INFORMATION

**IMPORTANT!**
**For your safety**

This handbook must be consigned to the user prior to installation and commissioning of the unit.
**Read the manual "GENERAL INSTRUCTIONS FOR USE" provided separately from this manual before installation and commissioning of the equipment.**
The meaning of the symbols in this manual and the associated precautionary information are given in the "GENERAL PRESCRIPTIONS FOR USE".
If the "GENERAL PRESCRIPTIONS FOR USE" are not present, it is mandatory to request a replacement copy from the manufacturer or from your dealer.
Retain these documents for future consultation.

### Meaning of the symbols

**DANGER!**

**This pictogram warns of danger of death or serious injury.**

**WARNING!**

**This pictogram warns of a risk of injury or damage to property.**

**CAUTION!**

**This pictogram warns of a potentially hazardous situation.**

**WARNING!**

**This pictogram gives important information concerning the execution of the relevant operations.**

**Information**

**This pictogram indicates additional information or refers to another section of the manual with the related information.**

- **Note:** The figures in this manual are purely guideline and the images may contain differences with respect to the actual equipment to which they refer.

## 1.1 PRESENTATION

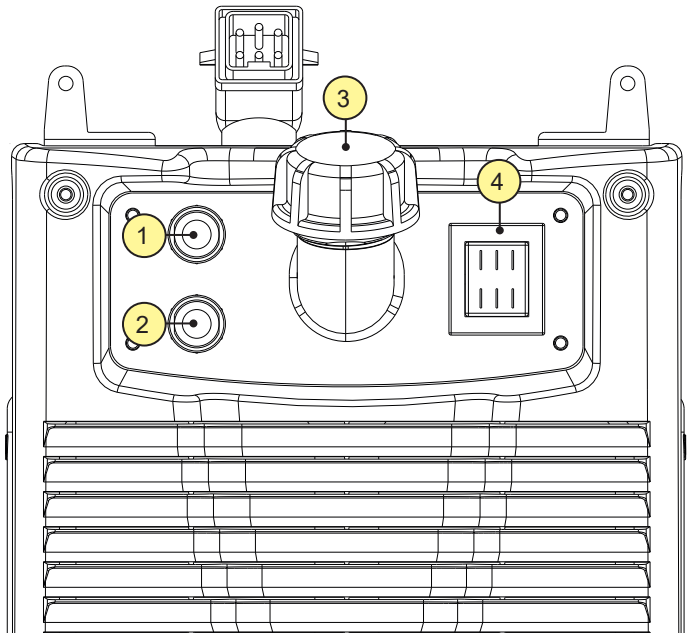
The cooling unit CU121, when connected to a generator, allows liquid cooling of TIG and MIG/MAG torches.
The cooling unit CU121 is equipped with a pressure switch to detect liquid in the cooling circuit.
The cooling unit CU121 must be connected to generators with a single-phase supply voltage.

For an up-to-date list of accessories and the latest news available, contact your dealer.

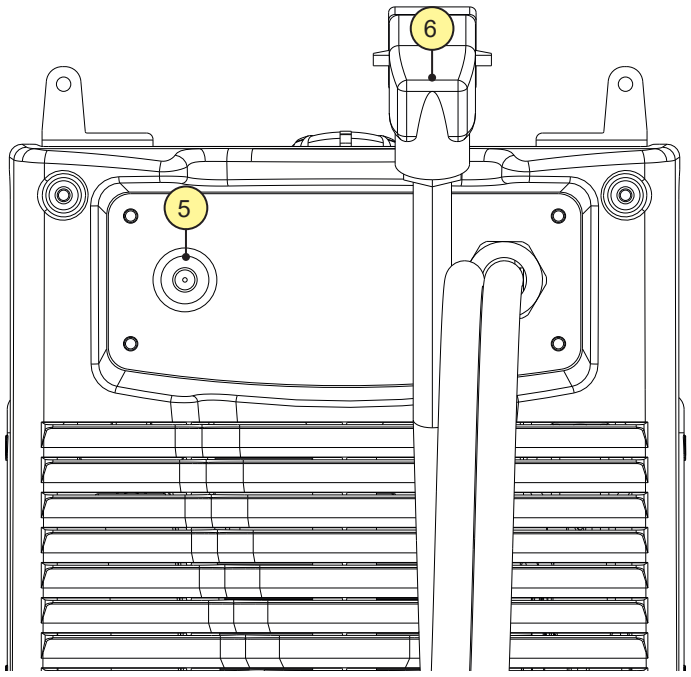
# 2 INSTALLATION AND ASSEMBLY

## 2.1 CONNECTIONS AND SOCKETS

**FRONT VIEW**




**REAR VIEW**



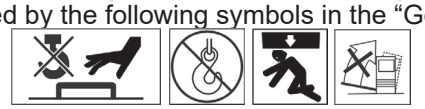
- [1] Connection (inlet) for the coolant pipe: liquid flow from the generator/torch to the coolant unit.
- [2] Connection (outlet) for the coolant pipe: liquid flow from the coolant unit to the generator/torch.
- [3] Tank filling inlet.
- [4] Power on and off switch.
- [5] Protective fuse.
  - Type: Delayed (T)
  - Amperage: 1.6 A
  - Voltage: 500 V a.c.
- [6] Power cable CU121.
  - Length (outer part): 0.43 m
  - Number and section of conductors: 5 x 1 $mm^2$
  - Type of electrical plug: ILME CUST 90° 5P+PE, 16 A 230 / 400 V a.c.

## 2.2 GENERATOR ASSEMBLY

**DANGER!**

**Lifting and positioning**

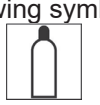
Read the warnings highlighted by the following symbols in the “General prescriptions for use”.



**DANGER!**

**Cylinder handling and positioning**

Read the warnings highlighted by the following symbols in the “General prescriptions for use”.



**DANGER!**

Disconnect the equipment from the mains before performing any assembly operations.
Closing the power switch does not guarantee disconnection from the mains.

1. Place the current generator switch in position “O” (equipment off).
2. Remove the bottom screws of the power generator plastics.
3. Place the power generator above the cooling system. The flanges of the fixing brackets must enter the slots arranged on the base of the generator.
4. Screw back the bottom screws of the power generator plastics.
5. Connect the power cord plug of the cooling unit to the connector to power the cooling system in the rear panel of the power generator.
6. Plug the power cable plug into a mains socket outlet.
7. Set the welding power source ON/OFF switch to “I” to switch on the unit.
8. Place the cooling system switch in position “I” (equipment on).

**Information** Refer to the power generator user manual for the cooling unit activation procedure.

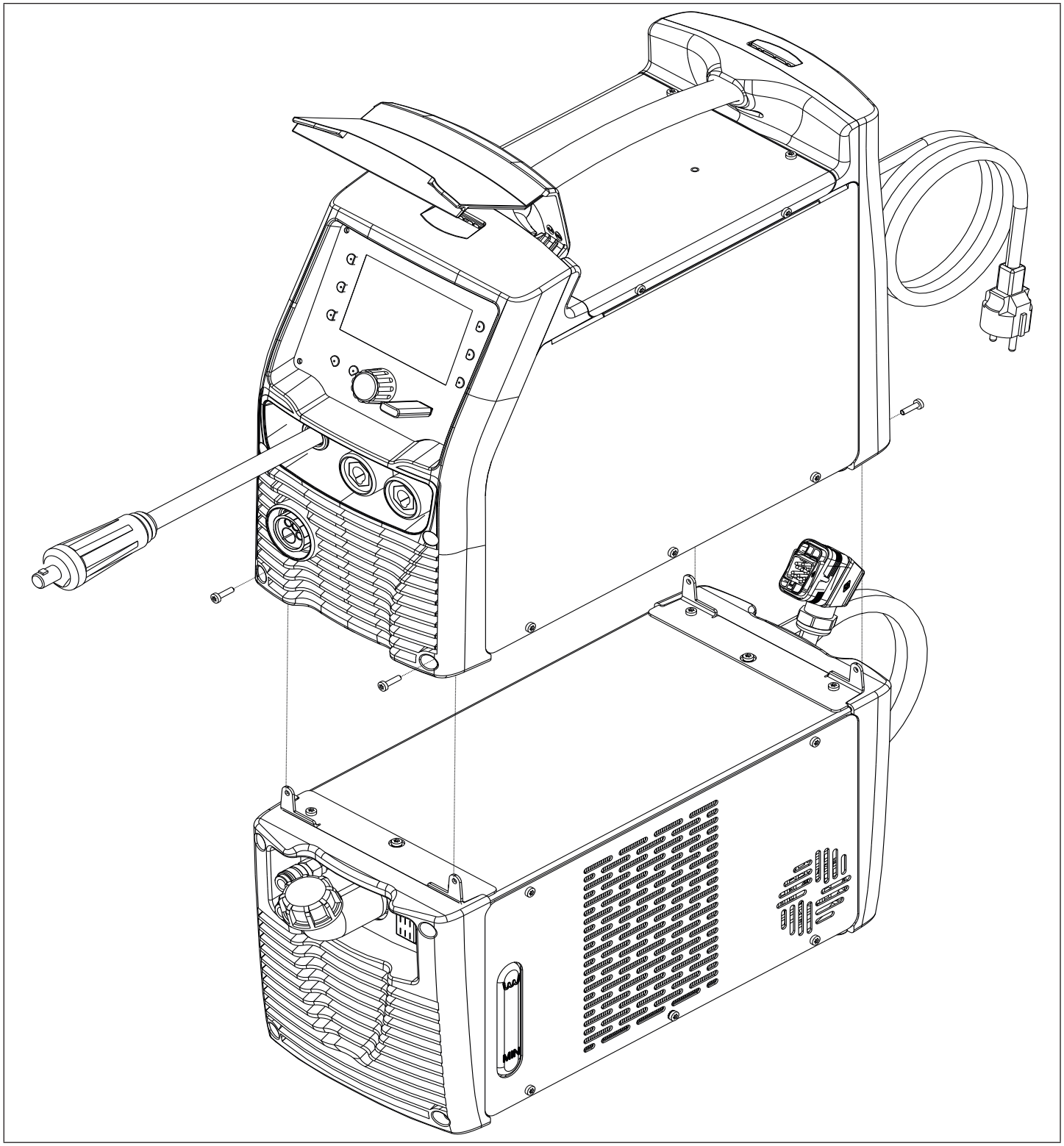
**WARNING!** Make sure the torch in use is correctly sized in relation to the welding current required and for the available and selected cooling type. This prevents the risk of burns to which the operator is potentially exposed, potential faults, and irreversible damage to the torch and the system.
If a torch is installed or replaced while the unit is running, the circuit of the newly installed must be filled with coolant to avoid the risk of damage to the torch in the case of high voltage arc strikes without any liquid in the circuit.

**WARNING!** Periodically check the liquid level in the indicator on the side of the cooling unit. Care must be taken when choosing the cooling liquid so that it is not electrically conductive. Do not use polypropylene liquids as they damage the seals and create deposits.

**WARNING!**

**Risk of burns**

Read the warnings highlighted by the following symbols in the “General prescriptions for use”.



# 3 TECHNICAL DATA

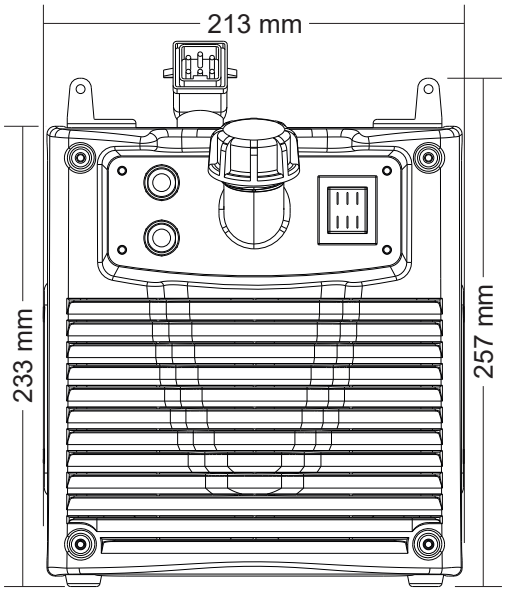
| | |
|---|---|
| **Directives applied** | Waste electrical and electronic equipment (WEEE) |
| | Electromagnetic compatibility (EMC) |
| | Low voltage (LVD) |
| | Restriction of the use of certain hazardous substances (RoHS) |
| | Eco Design of energy-related products |
| **Construction standards** | EN 60974-2; EN 60974-10 Class A |
| **Conformity markings** | Equipment compliant with European directives in force |
| | Equipment suitable in an environment with increased hazard of electric shock |
| | Equipment compliant with WEEE directive |
| | Equipment compliant with RoHS directive |

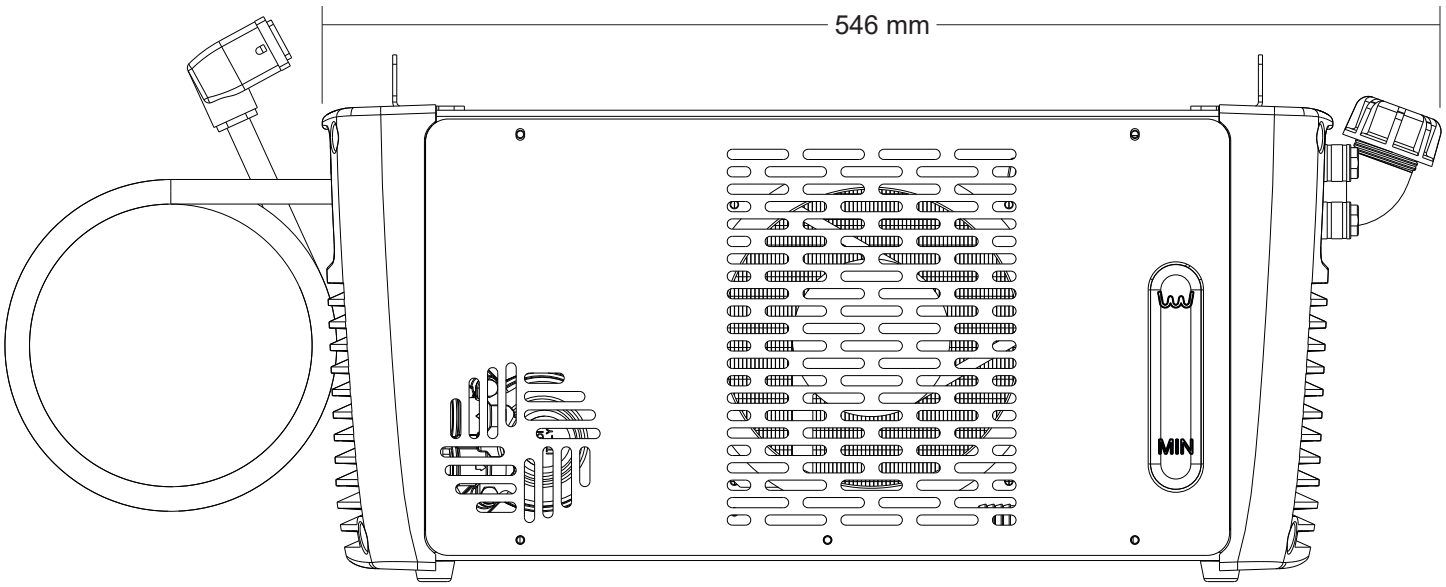
## 3.1 CU121

| | |
|---|---|
| **Supply voltage** | 1 x 230 Va.c. ± 15% 50/60 Hz |
| **Dimensions** | height: 257 mm / width: 213 mm / depth: 546 mm |
| **Weight** | 13.6 kg (15.6 kg with liquid) |
| **Tank capacity** | 2.0 l |
| **Protection rating** | IP23S |
| **Maximum absorbed current** | 1.3 A (50 Hz) - 1.53 A (60 Hz) |
| **Cooling power** | 880 W (1l/min) - 1.1 kW (max. l/min) |
| **Maximum pressure** | 0.33 MPa (50 Hz) - 0.44 MPa (60 Hz) |
| **Essential raw materials** | According to the information provided by our suppliers, this product does not contain essential raw materials in quantities greater than 1 g per component. |

## 3.2 CU121HP

| | |
|---|---|
| **Supply voltage** | 1 x 230 Va.c. ± 15% 50/60 Hz |
| **Dimensions** | height: 257 mm / width: 213 mm / depth: 546 mm |
| **Weight** | 13.6 kg (15.6 kg with liquid) |
| **Tank capacity** | 2.0 l |
| **Protection rating** | IP23S |
| **Maximum absorbed current** | 1.5 A (50 Hz) - 1.78 A (60 Hz) |
| **Cooling power** | 880 W (1l/min) - 1.1 kW (max. l/min) |
| **Maximum pressure** | 0.41 MPa (50 Hz) - 0.51 MPa (60 Hz) |
| **Essential raw materials** | According to the information provided by our suppliers, this product does not contain essential raw materials in quantities greater than 1 g per component. |


213 mm
233 mm
257 mm


546 mm
MIN

## 3.3 ANTIFREEZE LIQUID

The technical characteristics of the antifreeze liquid supplied with this equipment are shown below.

| | |
|---|---|
| **Base** | Low-sliding point refrigerant polymers |
| **Appearance** | Liquid |
| **Colour** | Colourless |
| **Smell** | Odourless |
| **Specific weight** | 1,030 g/cm$^3$ |
| **Viscosity** | < 100 cP |
| **pH** | 7/8 |
| **Refractive index** | 1,369 nD (20 °C) |
| **Boiling point** | 102°C |
| **Specific heat** | 3.9 kJ/kg K |
| **Thermal conductivity** | 0.45 W/m K (25 °C) |
| **Electrical conductivity** | 2.3 mS/cm (20 °C) |
| **Dissolved chlorides** | < 2 ppm |
| **Dissolved sulphides** | < 2 ppm |
| **Hardness** | < 0.1 mol/m$^3$ (Ca++, Mg++) |
| **Biodegradability** | Complete |
| **Foaming power** | Null |
| **Solubility** | Soluble in water |

**WARNING!**

Periodically check the liquid level in the indicator on the side of the cooling unit.
Care must be taken when choosing the cooling liquid so that it is not electrically conductive.
Do not use polypropylene liquids as they damage the seals and create deposits.

**WARNING!**

**Risk of burns**

Read the warnings highlighted by the following symbols in the “General prescriptions for use”.

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**WECO srl**
**www.weco.it**

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