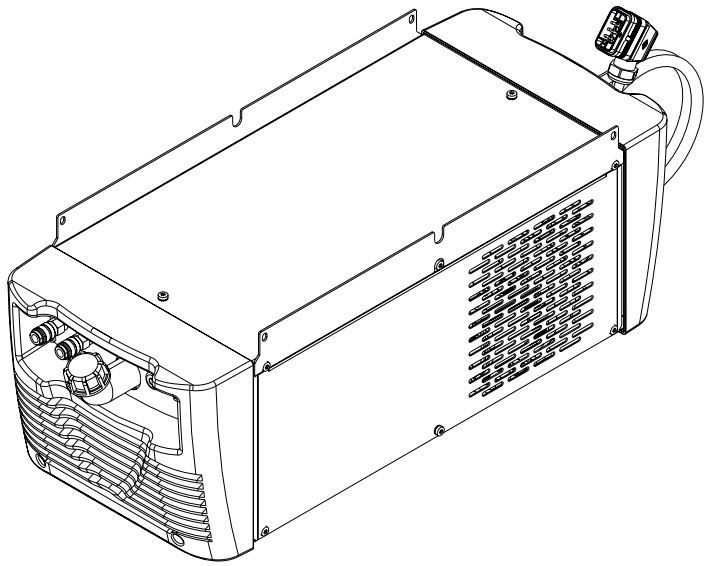
WELD THE WORLD

CU109 - CU109HP - CU109F
CU118 - CU118HP
CU120 - CU120HP

Instruction Manual

ENGLISH

Translation of the original instructions



Cod.006.0001.2310
06/02/2023 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 CU109 - CU109HP - CU109F, when connected to a generator, allows liquid cooling of TIG torches.
The cooling unit CU118 - CU118 HP and CU120 - CU120 HP, when connected to a generator, allows liquid cooling of the TIG and MIG/MAG torches.
The cooling unit CU109F, CU120 - CU120HP is equipped with a flow switch to detect the flow of liquid in the cooling circuit.
The cooling unit CU109 - CU109HP and CU118 - CU118HP is equipped with a pressure switch to detect the liquid in the cooling circuit.

	TIG TORCH	MIG/MAG TORCH
FLOW SWITCH	CU109F CU120 - CU120HP	CU120 - CU120HP
PRESSURE SWITCH	CU109 - CU109HP CU118 - CU118HP	CU109 - CU109HP CU118 - CU118HP

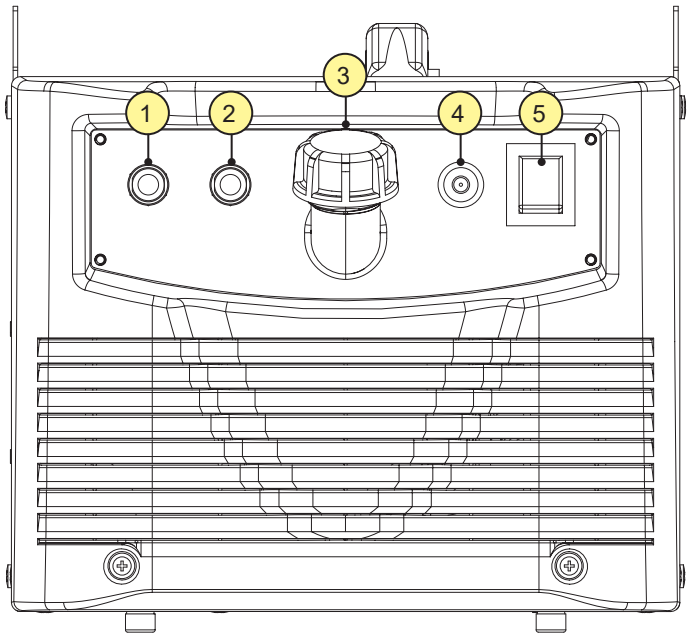
The cooling unit in the "HP" (High Pressure) version guarantees a circuit head of more than 20 metres flat (10 metres in height).
It is therefore advisable to use the cooling unit in the "HP" version when long cable bundles and/or torches (TIG) over 10 meters are required.

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

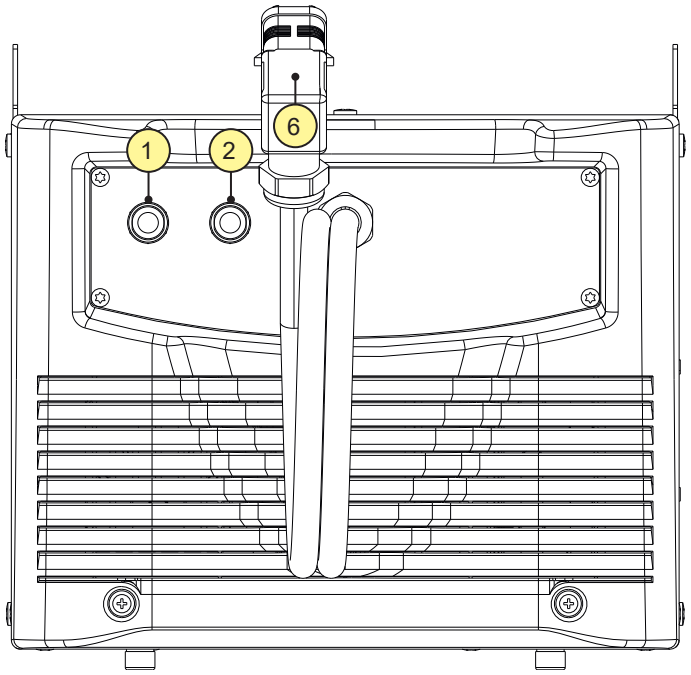
2 INSTALLATION AND ASSEMBLY

2.1 Connections and sockets

FRONT VIEW



REAR VIEW



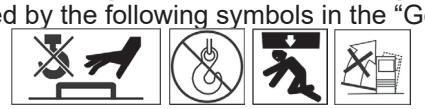
- [1] Connection (inlet) for the coolant pipe: liquid flow from the generator/torch to the coolant unit.
- [2] Connection (outlet) for the coolant pipe: liquid flow from the coolant unit to the generator/torch.
- [3] Tank filling inlet.
- [4] Protective fuse.
  - Type: Delayed (T)
  - Amperage: 1.6 A
  - Voltage: 500 V a.c.
- [5] Power on and off switch.
- [6] Power cable CU109 - CU109HP - CU109F.
  - Length (outer part): 0.43 m
  - Number and section of conductors: 5 x 1 mm^2
  - Type of electrical plug: ILME CUST 90° 8P+PE, 16 A 230 / 400 V a.c.
- [6] Power cable CU118 - CU118 HP - CU120 - CU120 HP.
  - Length (outer part): 0.43 m
  - Number and section of conductors: 8 x 1 mm^2
  - Type of electrical plug: ILME CUST 90° 8P+PE, 16 A 230 / 400 V a.c

2.2 GENERATOR ASSEMBLY

DANGER!

Lifting and positioning

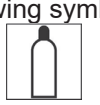
Read the warnings highlighted by the following symbols in the “General prescriptions for use”.



DANGER!

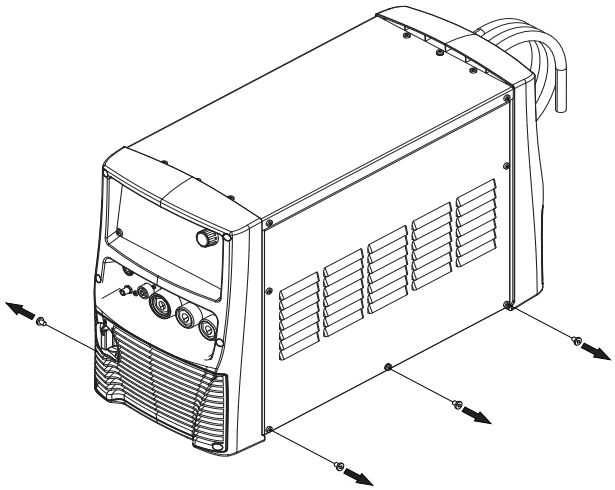
Cylinder handling and positioning

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

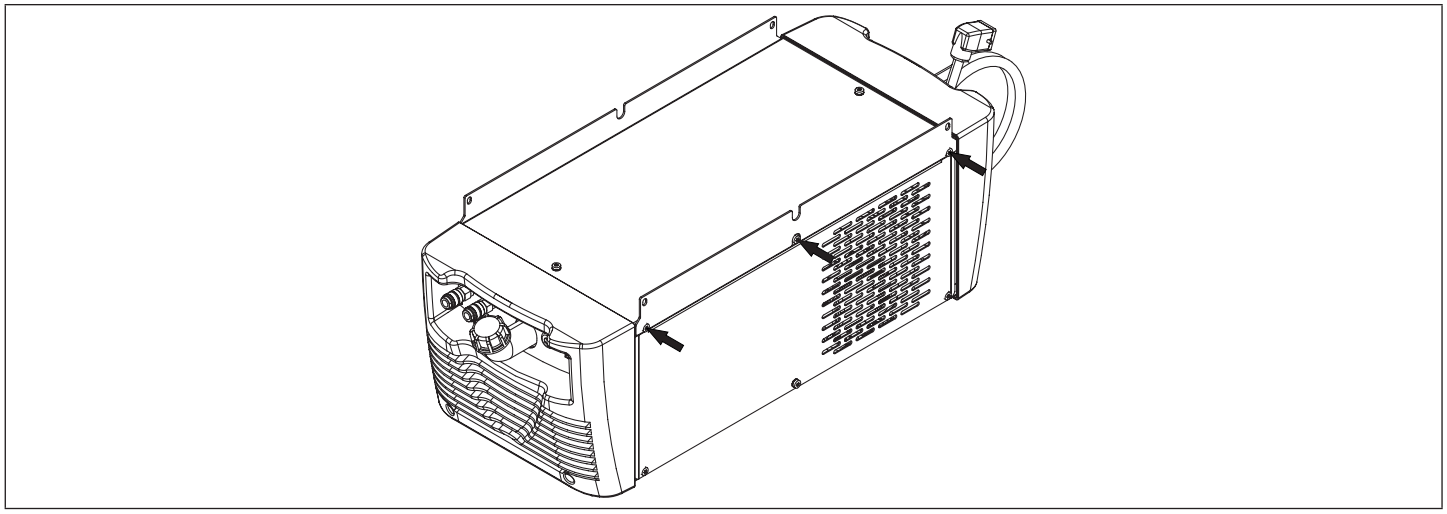


DANGER!

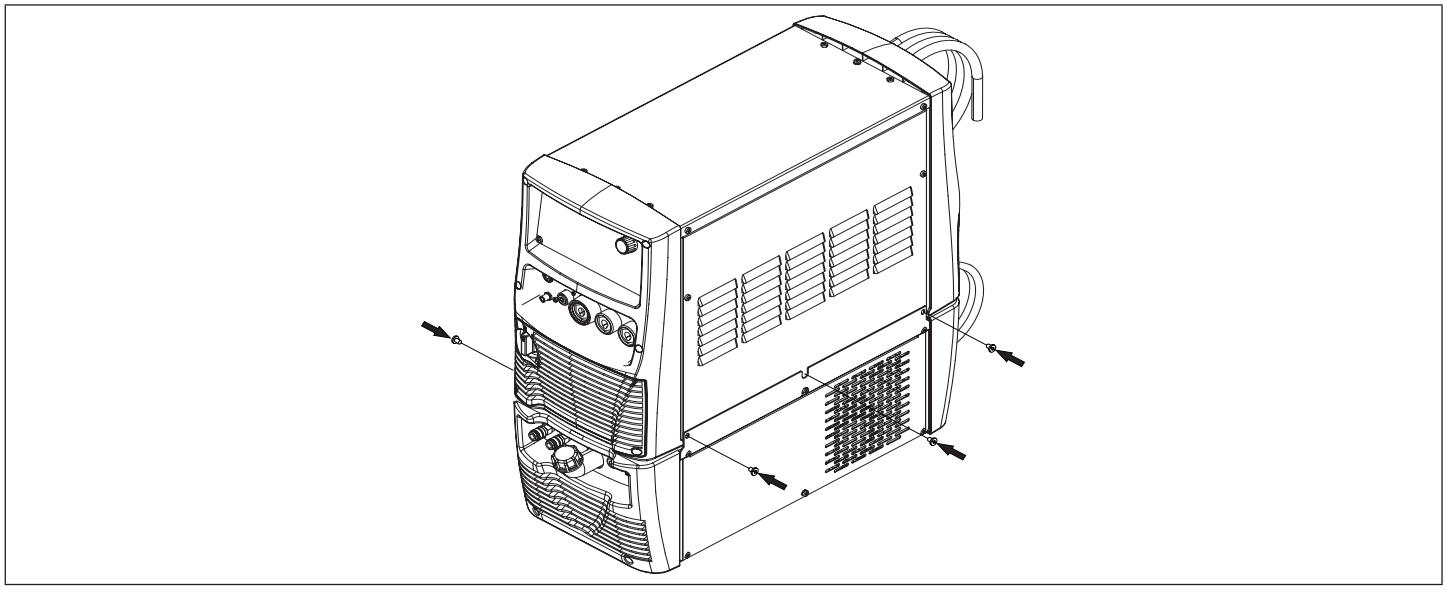
Disconnect the equipment from the mains before performing any assembly operations.
Closing the power switch does not guarantee disconnection from the mains.



1. Place the power generator switch in position “O” (equipment off).
2. Remove the screws on the hood of the power generator.



3. Loosen the screws of the upper brackets of the cooling unit and slightly widen the brackets.
4. Place the power generator above the cooling unit.
5. Secure the brackets of the cooling unit to the current generator using the screws previously removed.



6. Connect the power cord plug of the cooling unit to the connector to power the cooling unit in the rear panel of the power generator.
7. Plug the power cable plug into a mains socket outlet.
8. Set the welding power source ON/OFF switch to “I” to switch on the unit.
9. Place the cooling unit 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.

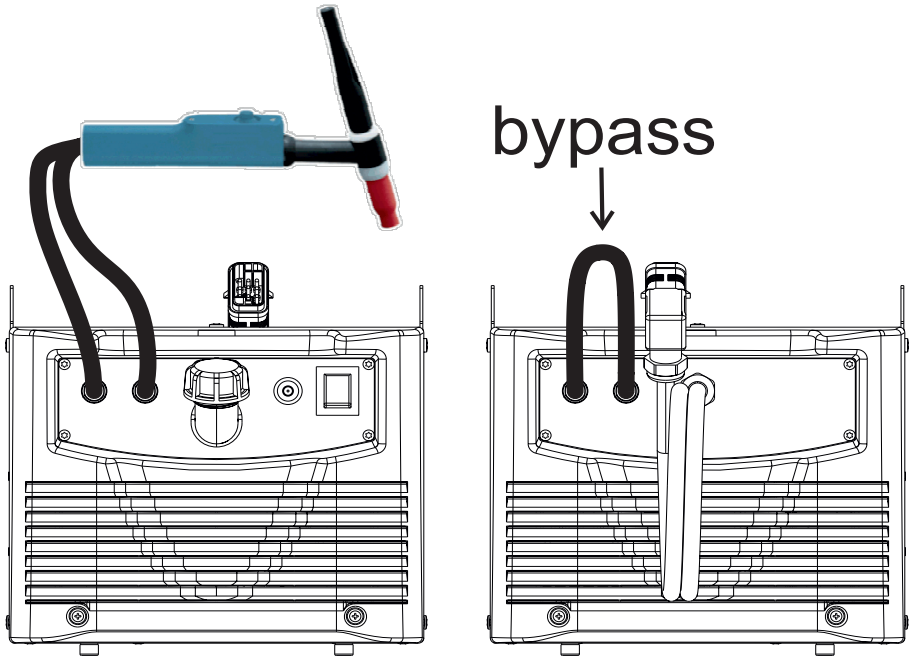
WARNING!

Risk of burns

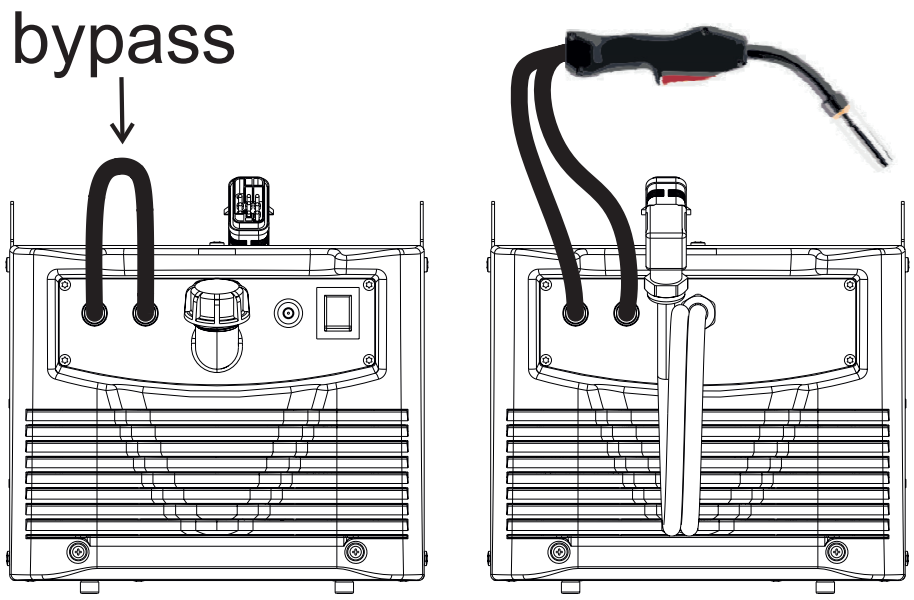
Read the warnings highlighted by the following symbols in the “General prescriptions for use”.

2.3 Bypass

TIG Configuration



MIG/MAG Configuration



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 CU109 - CU109HP - CU109F

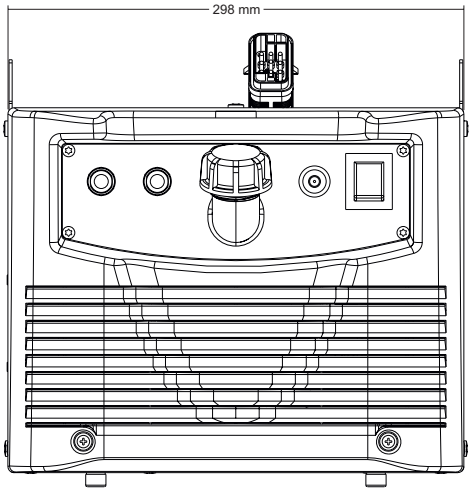
Supply voltage	1 x 400 Va.c. ± 15% 50/60 Hz
Dimensions	height: 246 mm / width: 298 mm / depth: 737 mm
Weight	20.8 kg (25.2 kg with liquid)
Tank capacity	4.5 l
Protection rating	IP23
Maximum absorbed current CU109 - CU109F	1.0 A (50 Hz) - 1.1 A (60 Hz)
Maximum absorbed current CU109HP	1.35 A (50 Hz) - 1.53 A (60 Hz)
Cooling power	950 W (1l/min) - 2.8 kW (max. l/min)
Maximum pressure CU109 - CU109F	0.32 MPa (50 Hz) - 0.43 MPa (60 Hz)
Maximum pressure CU109HP	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.

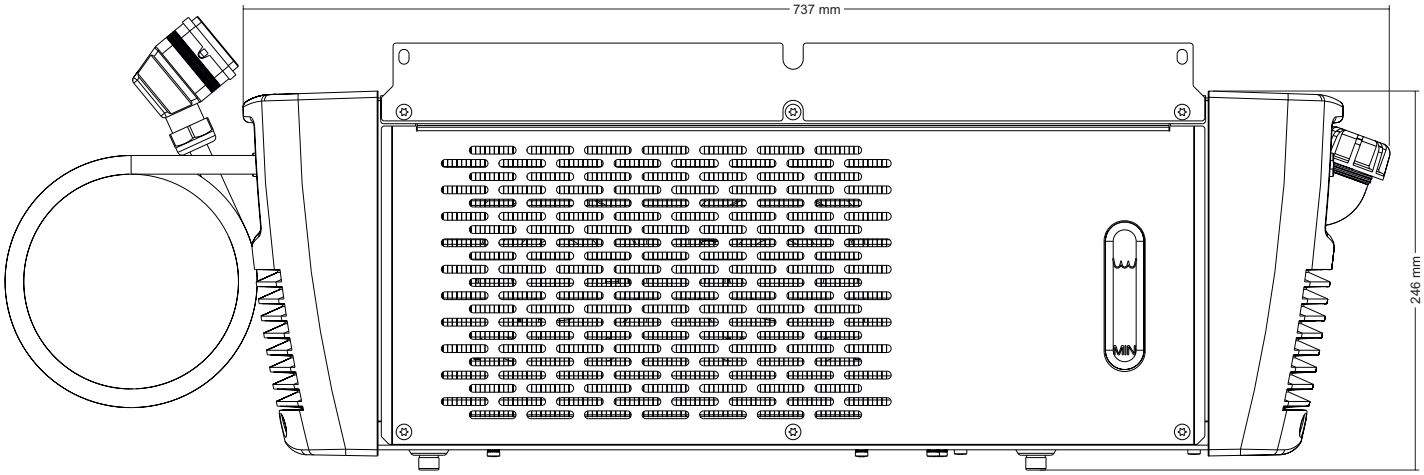
3.2 CU118 - CU118HP

Supply voltage	1 x 400 Va.c. ± 15% 50/60 Hz
Dimensions	height: 246 mm / width: 298 mm / depth: 737 mm
Weight	23.0 kg (27.4 kg with liquid)
Tank capacity	4.5 l
Protection rating	IP23
Maximum current absorbed	0.7 A (50 Hz)
Cooling power	1650 W (1l/min)
Maximum pressure CU118	0.33 MPa (50 Hz) – 0.44 MPa (60 Hz)
Maximum pressure CU118HP	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.

3.3 CU120 - CU120HP

Supply voltage	1 x 400 Va.c. ± 15% 50/60 Hz 1 x 230 Va.c. ± 15% 50/60 Hz
Dimensions	height: 246 mm / width: 298 mm / depth: 737 mm
Weight	23.0 kg (27.4 kg with liquid)
Tank capacity	4.5 l
Protection rating	IP23
Maximum current absorbed	with 400 V AC power supply: 0.7 A (50 Hz) with 230 V AC power supply: 1.2 A (50 Hz)
Cooling power	1650 W (1l/min)
Maximum pressure CU120	0.33 MPa (50 Hz) – 0.44 MPa (60 Hz)
Maximum pressure CU120HP	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.





3.4 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”.

WELD THE WORLD

WECO srl
www.weco.it

Cod.006.0001.2310
06/02/2023 V.1.0