



WELD THE WORLD

# CU-12 CU-12-HP CU-12 MAX

## Instruction Manual







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# 1 INTRODUCTION

 	<b>IMPORTANT!</b>
<p><i>This handbook must be consigned to the user prior to installation and commissioning of the unit. Read the “General prescriptions for use” handbook supplied separately from this manual before installing and commissioning the unit.</i></p> <p><i>The meaning of the symbols in this manual and the associated precautionary information are given in the “general prescriptions for use”.</i></p> <p><i>If the “general prescriptions of use” are not present, it is mandatory to request a replacement copy from the manufacturer or from your dealer.</i></p> <p><i>Retain these documents for future consultation.</i></p>	

## KEY

	<b>DANGER!</b>
<p><i>This pictogram warns of danger of death or serious injury.</i></p>	

	<b>WARNING!</b>
<p><i>This pictogram warns of a risk of injury or damage to property.</i></p>	

	<b>CAUTION!</b>
<p><i>This pictogram warns of a potentially hazardous situation.</i></p>	

	<b>INFORMATION!</b>
<p><i>This pictogram gives important information concerning the execution of the relevant operations.</i></p>	

## NOTES

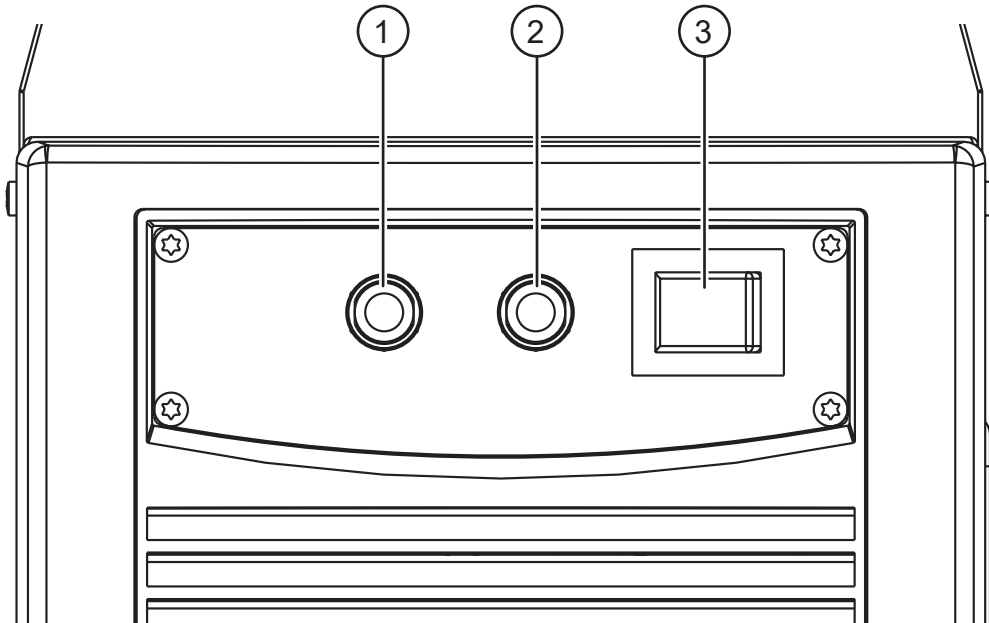
The figures in this manual are purely guideline and the images may contain differences with respect to the actual equipment to which they refer.

### 1.1 INTRODUCTION

The cooling unit CU-12 / CU-12-HP / CU-12 MAX can be connected to the generator, allowing the liquid cooling of the TIG torch.

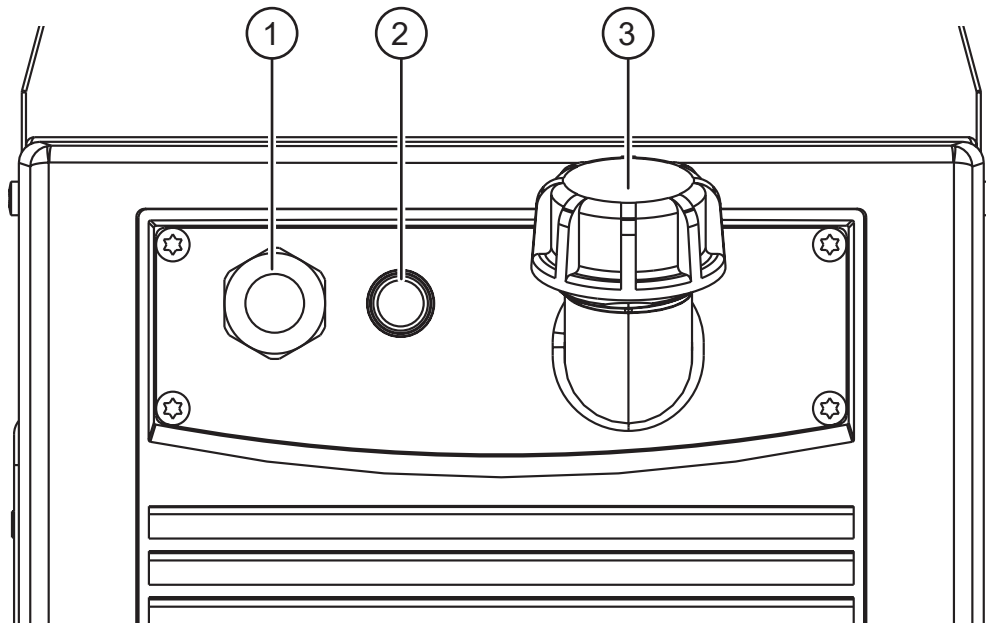
## 2 INSTALLATION

### 2.1 FRONT PANEL



1. Connector for coolant hose:  
power source → cooler
2. Connector for coolant hose:  
cooler → power source
3. Switch for switching on and off.

## 2.2 REAR PANEL



1. Fuse.
  - Type: Delayed acting (T)
  - Amperage: 2.5 A
  - Voltage: 250 V a.c.
2. Power cable.
  - Total length (including internal part): 0,95 m
  - Number and cross section of wires: 5 x 1 mm<sup>2</sup>
  - Power plug type: ILME 16 A 230 / 400 Va.c.
3. Inlet for jerrycan filling.

## 2.3 ASSEMBLY WITH THE WELDING POWER SOURCE

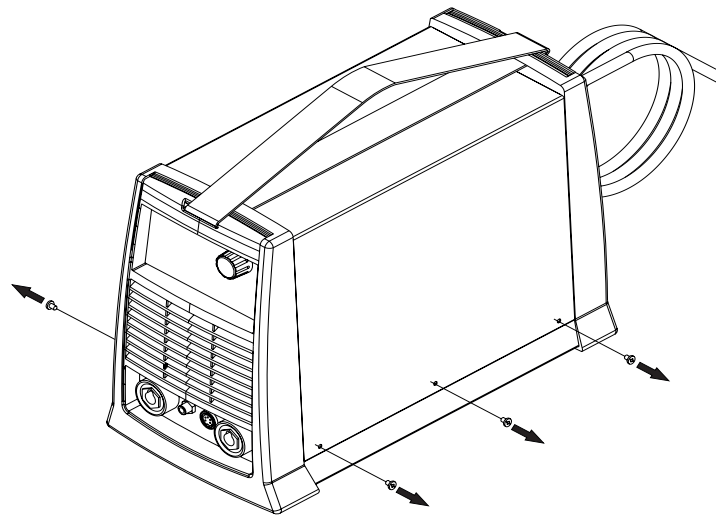


### **DANGER!** **Lifting and positioning**

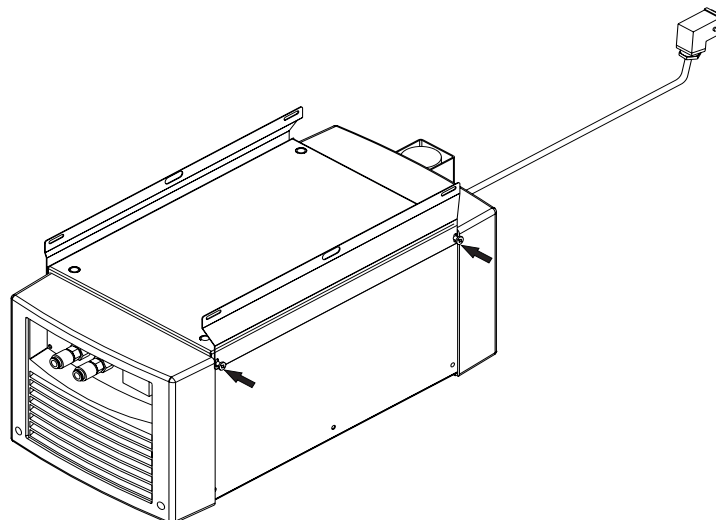
Read the warnings highlighted by the following symbols in the "General prescriptions for use".



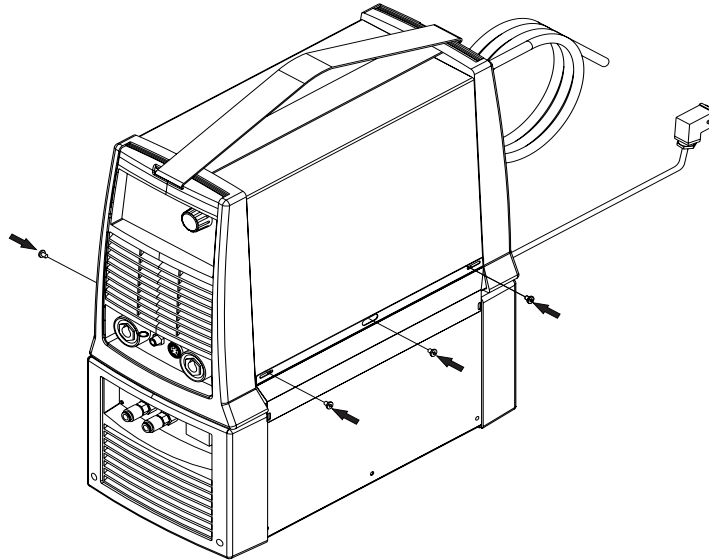
1. Set the welding power source ON/OFF switch to "O" (unit de-energized).
2. Remove the screws from the power source cabinet.



3. Loosen the screws of the upper brackets of the cooler and open out the brackets slightly.



4. Place the power source on top of the cooler.
5. Secure the cooler brackets to the power source using the previously removed screws.



6. Connect the plug of the cooler power cable to the cooler power socket on the rear panel of the welding power source.
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. Set the cooler ON/OFF switch to "I" (unit powered).







## WARNING!

**Periodically checking the level of the liquid in the indicator on the side of the cooling unit.  
Be careful when choosing the cooling liquid: it must not be an electricity conductor.  
Do not use polypropylene liquids because they damage the seals and generate incrustations.  
Read the warnings highlighted by the following symbols in the "General prescriptions for use".**





### 3 TECHNICAL DATA

<b>Directives applied</b>	Waste electrical and electronic equipment (WEEE)
	Electromagnetic compatibility (EMC)
	Low voltage (LVD)
	Restriction of the use of certain hazardous substances (RoHS)
<b>Construction standards</b>	EN 60974-2; EN 60974-10 Class A
<b>Conformity markings</b>	 Equipment compliant with European directives in force
	 Suitable in an environment with increased hazard of electric shock
	 Compliant with WEEE directive
	 Equipment compliant with RoHS directive

#### 3.1 CU-12

<b>Supply voltage</b>	1 x 230 V~ ± 15 % / 50-60 Hz
<b>Dimensions ( D x L x H )</b>	530 x 230 x 210 mm
<b>Weight</b>	12.0 kg (15.8 kg with liquid)
<b>Tank capacity</b>	4.5 l
<b>Protection rating</b>	IP23
<b>Maximum input current (A)</b>	1.3 A (50 Hz) - 1.53 A (60 Hz)
<b>Cooling power</b>	700 W (1l/min) - 1.1 kW (max. l/min)
<b>Maximum pressure</b>	0.33 MPa (50 Hz) - 0.44 MPa (60 Hz)

#### 3.2 CU-12-HP

<b>Supply voltage</b>	1 x 230 V~ ± 15 % / 50-60 Hz
<b>Dimensions ( D x L x H )</b>	530 x 230 x 210 mm
<b>Weight</b>	12.0 kg (15.8 kg with liquid)
<b>Tank capacity</b>	4.5 l
<b>Protection rating</b>	IP23
<b>Maximum input current (A)</b>	1.5 A (50 Hz) - 1.78 A (60 Hz)
<b>Cooling power</b>	700 W (1l/min) - 1.1 kW (max. l/min)
<b>Maximum pressure</b>	0.41 MPa (50 Hz) - 0.51 MPa (60 Hz)

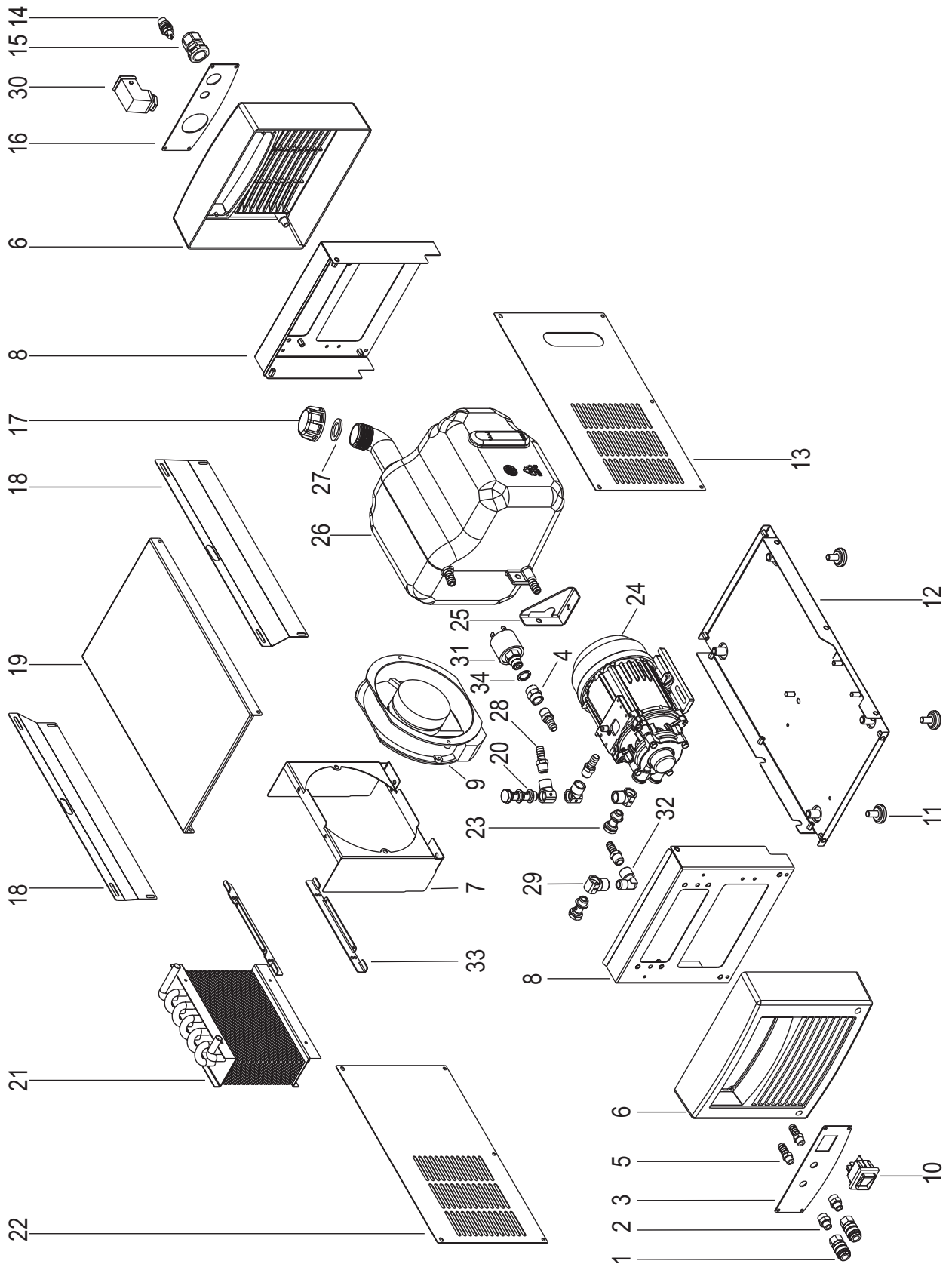
### 3.3 CU-12 MAX

<b>Supply voltage</b>	1 x 230 V~ ± 15 % / 50-60 Hz
<b>Dimensions ( D x L x H )</b>	530 x 230 x 210 mm
<b>Weight</b>	12.0 kg (15.8 kg with liquid)
<b>Tank capacity</b>	4.5 l
<b>Protection rating</b>	IP23
<b>Maximum input current (A)</b>	1.5 A (50 Hz) - 1.78 A (60 Hz)
<b>Cooling power</b>	840 W (1l/min) - 1.26 kW (max. l/min)
<b>Maximum pressure</b>	0.41 MPa (50 Hz) - 0.51 MPa (60 Hz)

The technical characteristics of the antifreeze liquid supplied with this appliance are found below:

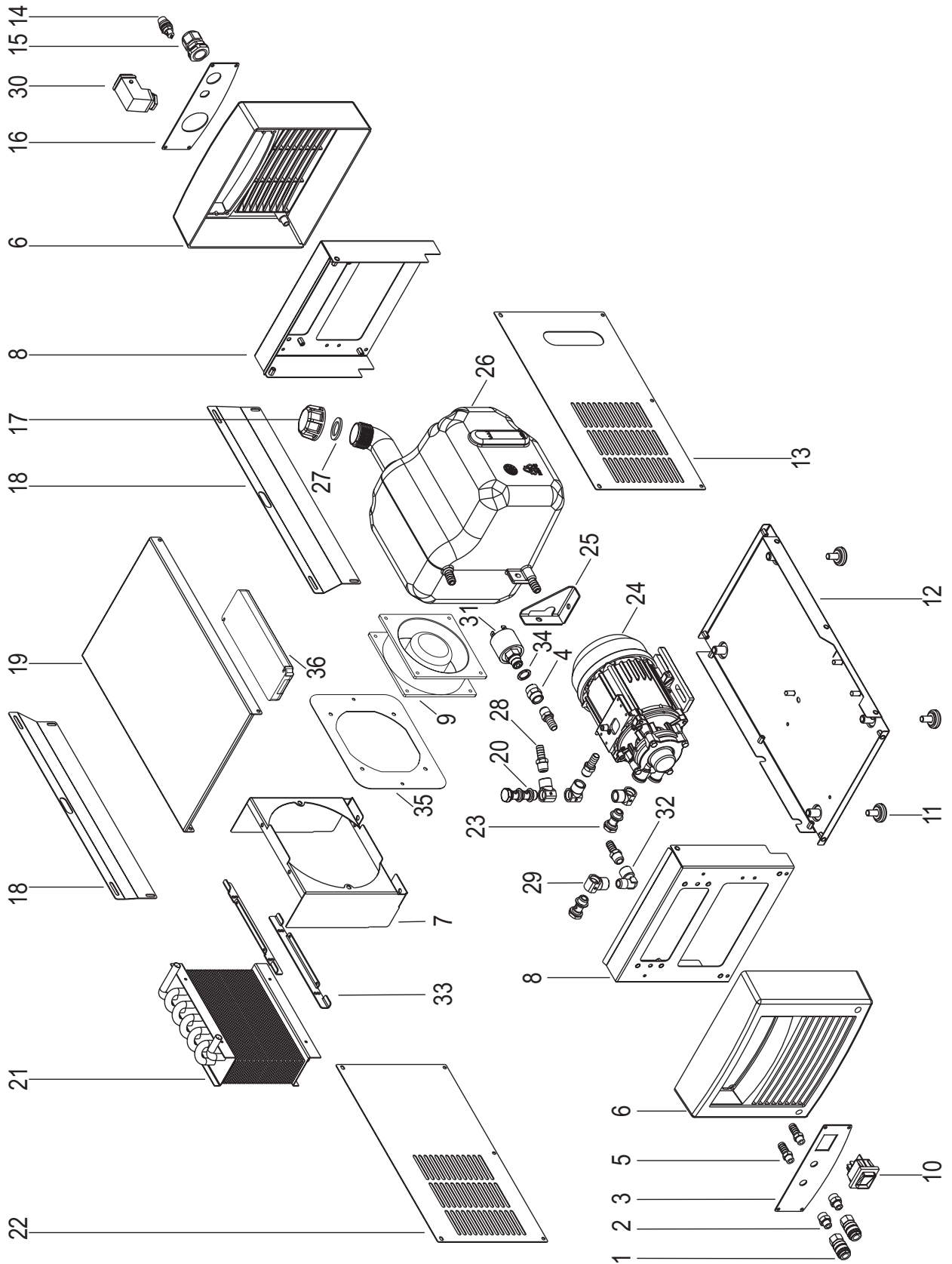
<b>Base</b>	Refrigerants polymers with low pour point
<b>Appearance</b>	Liquid
<b>Color</b>	Colorless
<b>Odor</b>	Odorless
<b>Specific weight</b>	1.030 g/cm <sup>3</sup>
<b>Viscosity</b>	< 100 cP
<b>pH</b>	7 / 8
<b>Refractive index</b>	1.369 nD (20 °C)
<b>Boiling point</b>	102 °C
<b>Specific heat</b>	3.9 kJ/kg K
<b>Thermal conductivity</b>	0.45 W/m k (25 °C)
<b>Electrical conductivity</b>	2.3 mS/cm (20 °C)
<b>Dissolved chloridea</b>	< 2 ppm
<b>Dissolved sulfides</b>	< 2 ppm
<b>Hardness</b>	< 0.1 mol/m <sup>3</sup> (Ca <sup>++</sup> , Mg <sup>++</sup> )
<b>Biodegradability</b>	Complete
<b>Foaming power</b>	No
<b>Solubility</b>	Soluble in water

**4 SPARE PARTS**  
**4.1 CU-12 / CU-12-HP**

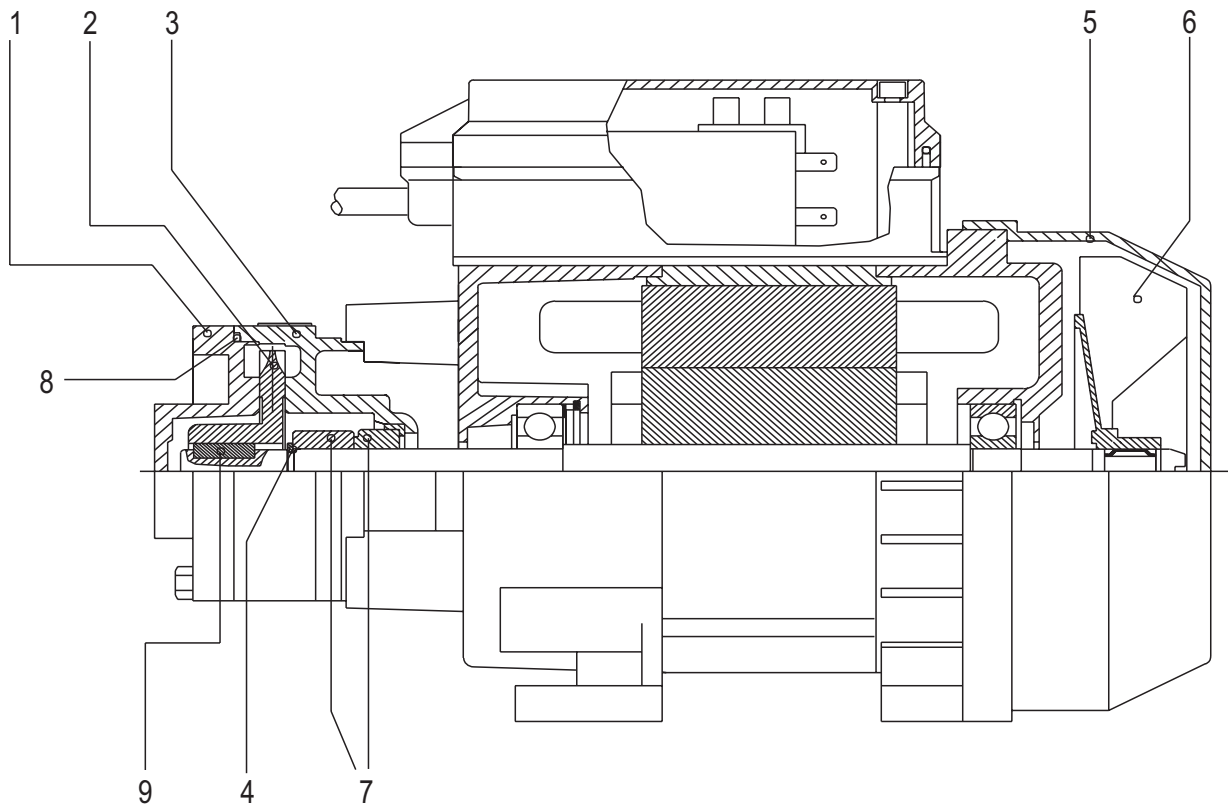


N°	CODE	DESCRIPTION
1	018.0002.0004	QUICK CLUTCH 1/8 GAS
2	017.0003.0055	F=1/8 - M=1/8 NIPPLE CONNECTOR
3	011.0012.0016	FRONT PLATE
4	017.0003.0056	F= 1/4 - M= 1/4 NIPPLE CONNECTOR
5	016.5001.3041	SLEEVE HOSE ADAPTER FOR RUBBER HOSE Ø= 10 mm F= 1/8 M
6	012.0006.0000	FRONT-REAR PLASTIC PANEL
7	011.0012.0060	FAN SUPPORT
8	011.0012.0036	FRONT/REAR PLATE
9	003.0002.0020	FAN
10	040.0001.0004	SWITCH
11	016.0009.0003	RUBBER FOOT
12	011.0012.0017	LOWER CASE
13	011.0000.1011	LEFT SIDE COVER
14	040.0006.1420	FUSE HOLDER
15	045.0000.0014	CABLE CLAMP
16	011.0012.0015	REAR PLATE
17	003.0003.0015	CAP
18	011.0012.0013	CLAMPING PLATE
19	011.0012.0012	UPPER COVER
20	017.0003.0022	DOUBLE HOLLOW BOLT M= 1/4
21	003.0003.0003	RADIATOR
22	011.0000.1001	RIGHT SIDE COVER
23	017.0003.0021	HOLLOW BOLT M= 1/4
24	003.0004.0006	PUMP CU-12
24	003.0004.0040	PUMP CU-12-HP
25	011.0012.0018	TANK FIXING PLATE
26	003.0003.0012	TANK
27	003.0003.0016	GASKET
28	016.5001.3042	SLEEVE HOSE ADAPTER FOR RUBBER HOSE d= 10 mm F= 1/4 M
29	017.0003.0024	HYDRAULIC SWIVEL JOINT LF= 1/4
30	022.0002.0082	POWER SUPPLY CABLE
31	017.0006.0007	PRESSURE SWITCH
32	017.0003.0027	90° F= 1/4 - M= 1/4 NIPPLE CONNECTOR
33	011.0012.0061	RADIATOR SUPPORT
34	016.1001.1001	WASHER 1/4 GAS NYLON

## 4.2 CU-12 MAX

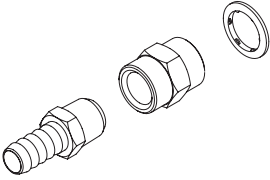
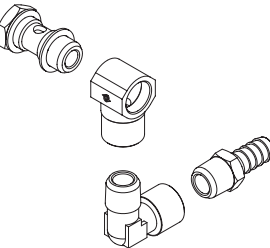
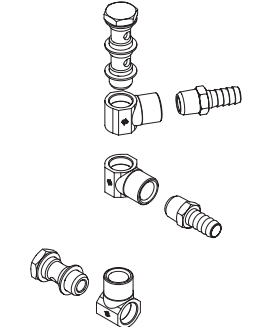


N°	CODE	DESCRIPTION
1	018.0002.0004	QUICK CLUTCH 1/8 GAS
2	017.0003.0055	F=1/8 - M=1/8 NIPPLE CONNECTOR
3	011.0012.0016	FRONT PLATE
4	017.0003.0056	F= 1/4 - M= 1/4 NIPPLE CONNECTOR
5	016.5001.3041	SLEEVE HOSE ADAPTER FOR RUBBER HOSE Ø= 10 mm F= 1/8 M
6	012.0006.0000	FRONT-REAR PLASTIC PANEL
7	011.0012.0060	FAN SUPPORT
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9	003.0002.0020	FAN
10	040.0001.0004	SWITCH
11	016.0009.0003	RUBBER FOOT
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30	022.0002.0082	POWER SUPPLY CABLE
31	017.0006.0007	PRESSURE SWITCH
32	017.0003.0027	90° F= 1/4 - M= 1/4 NIPPLE CONNECTOR
33	011.0012.0061	RADIATOR SUPPORT
34	016.1001.1001	WASHER 1/4 GAS NYLON
35	011.0012.0062	FAN SUPPORT
36	041.0007.0002	SINGLE PHASE POWER SUPPLY



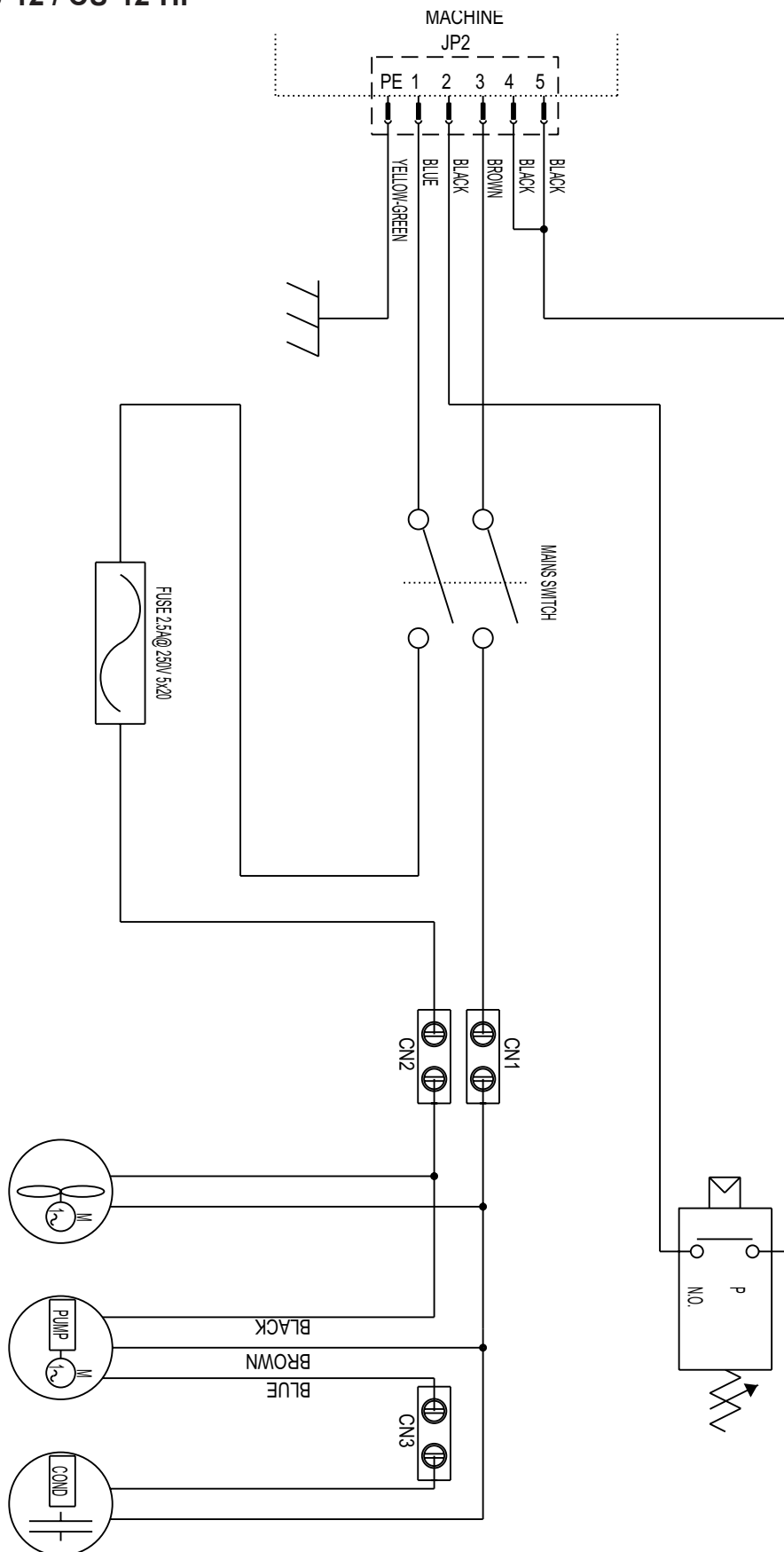
N°	CODE	DESCRIPTION
1	003.0004.0017	PUMP BODY ¼ GAS
2	003.0004.0018	IMPELLER
3	003.0004.0019	SEAL BODY
4	003.0004.0020	SEAL SEEGER
5	003.0004.0008	COVER FAN
6	003.0004.0007	FAN
7	003.0004.0021	MECHANICAL COMPLETE SEAL
8	003.0004.0023	BODY O-RING
9	003.0004.0022	SHAFT KEY

### 4.3 COUPLINGS KIT ALREADY ASSEMBLED

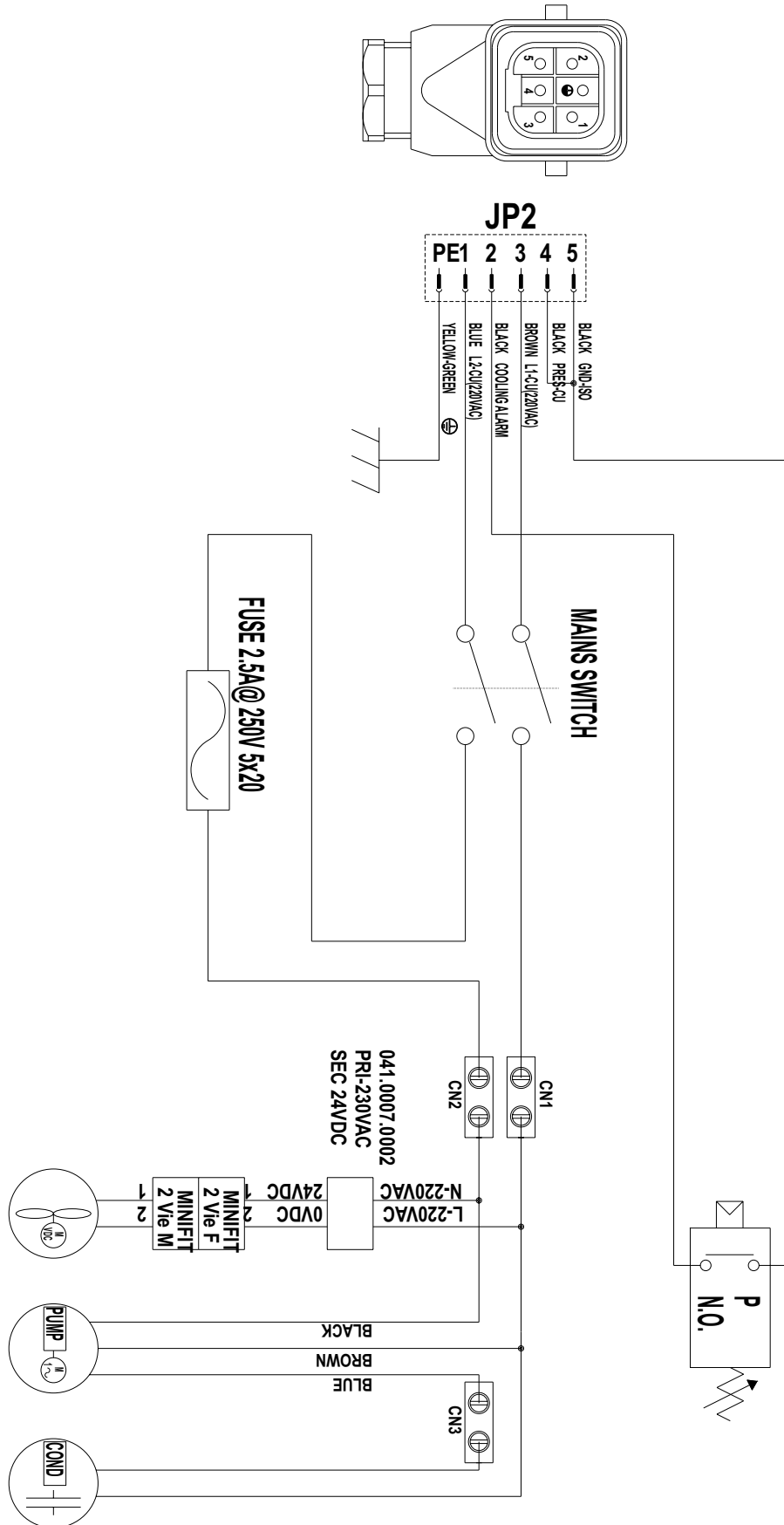
N°	CODE	DESCRIPTION
	010.0000.0068	PRESSURE SWITCH CONNECTOR KIT
	010.0000.0071	PUMP CONNECTION KIT (B)
	010.0000.0072	PUMP CONNECTION KIT (C)



5 ELECTRICAL DIAGRAM  
5.1 CU-12 / CU-12-HP



**5.2 CU-12 MAX**







**WELD THE WORLD**

[www.weco.it](http://www.weco.it)

