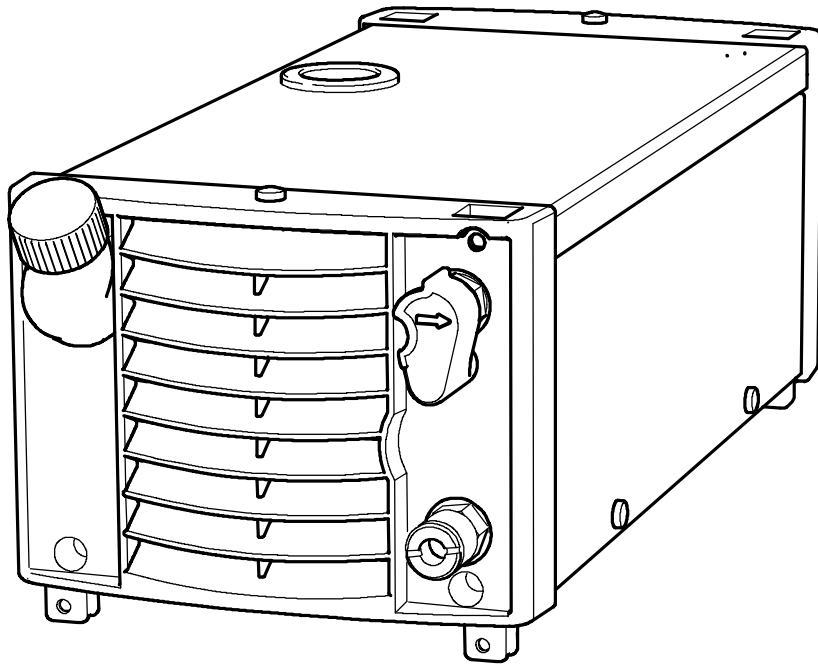


GB



# *Tradescool 220*



AH 0836

**Instruction manual and  
spare parts list**

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# 1 DIRECTIVE

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## DECLARATION OF CONFORMITY

Murex Welding Products Ltd, EN8 7TFF England, gives its unreserved guarantee that cooling unit Tradescool 220 from serial number 827 (2008 w. 27) is constructed and tested in compliance with the standard EN 60974-2 and EN 60974-10 (Class A) in accordance with the requirements of directive (2006/95EC) and (2004/108/EEC).

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Laxå 2008-10-10



Kent Eimbrodt  
Global Director  
Equipment and Automation

Manufactured by ESAB AB, Welding Equipment  
SE-695 81 Laxå Sweden

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# 2 SAFETY

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Users of ESAB welding equipment have the ultimate responsibility for ensuring that anyone who works on or near the equipment observes all the relevant safety precautions. Safety precautions must meet the requirements that apply to this type of welding equipment. The following recommendations should be observed in addition to the standard regulations that apply to the workplace.

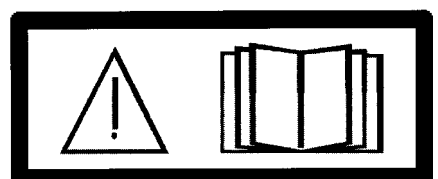
All work must be carried out by trained personnel well-acquainted with the operation of the welding equipment. Incorrect operation of the equipment may lead to hazardous situations which can result in injury to the operator and damage to the equipment.

1. Anyone who uses the welding equipment must be familiar with:
  - its operation
  - location of emergency stops
  - its function
  - relevant safety precautions
  - welding
2. The operator must ensure that:
  - no unauthorized person is stationed within the working area of the equipment when it is started up.
  - no-one is unprotected when the arc is struck
3. The workplace must:
  - be suitable for the purpose
  - be free from drafts
4. Personal safety equipment
  - Always wear recommended personal safety equipment, such as safety glasses, flame-proof clothing, safety gloves.
  - Do not wear loose-fitting items, such as scarves, bracelets, rings, etc., which could become trapped or cause burns.
5. General precautions
  - Make sure the return cable is connected securely.
  - Work on high voltage equipment **may only be carried out by a qualified electrician.**
  - Appropriate fire extinguishing equipment must be clearly marked and close at hand.
  - Lubrication and maintenance must **not** be carried out on the equipment during operation.



### CAUTION!

*Read and understand the instruction manual before installing or operating.*





# WARNING



**Arc welding and cutting can be injurious to yourself and others. Take precautions when welding. Ask for your employer's safety practices which should be based on manufacturers' hazard data.**

**ELECTRIC SHOCK - Can kill**

- Install and earth the welding unit in accordance with applicable standards.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- Insulate yourself from earth and the workpiece.
- Ensure your working stance is safe.

**FUMES AND GASES - Can be dangerous to health**

- Keep your head out of the fumes.
- Use ventilation, extraction at the arc, or both, to take fumes and gases away from your breathing zone and the general area.

**ARC RAYS - Can injure eyes and burn skin.**

- Protect your eyes and body. Use the correct welding screen and filter lens and wear protective clothing.
- Protect bystanders with suitable screens or curtains.

**FIRE HAZARD**

- Sparks (spatter) can cause fire. Make sure therefore that there are no inflammable materials nearby.

**NOISE - Excessive noise can damage hearing**

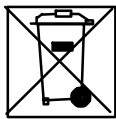
- Protect your ears. Use earmuffs or other hearing protection.
- Warn bystanders of the risk.

**MALFUNCTION - Call for expert assistance in the event of malfunction.**

**Read and understand the instruction manual before installing or operating.**

**PROTECT YOURSELF AND OTHERS!**

**Murex can provide you with all necessary welding protection and accessories.**



**Do not dispose of electrical equipment together with normal waste!**

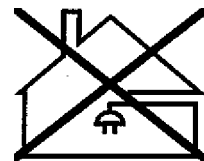
In observance of European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and returned to an environmentally compatible recycling facility. As the owner of the equipment, you should get information on approved collection systems from our local representative.

By applying this European Directive you will improve the environment and human health!



**CAUTION!**

*Class A equipment is not intended for use in residential locations where the electrical power is provided by the public low-voltage supply system. There may be potential difficulties in ensuring electromagnetic compatibility of class A equipment in those locations, due to conducted as well as radiated disturbances.*



## 3 INTRODUCTION

Cooling unit **Tradescool 220** is intended for cooling TIG torches.

**Accessories for the product can be found on page 18.**

### 3.1 Equipment

The cooling unit is supplied with instruction manual, assembly instructions and 4 x screws for mounting the cooling unit on a power source.

## 4 TECHNICAL DATA

<b>Tradescool 220</b>	
<b>Mains voltage</b>	230 V, $\pm 10\%$ , 1~ 50/60 Hz
<b>Primary current</b> <i>I</i> <sub>max</sub> 50 Hz <i>I</i> <sub>max</sub> 60 Hz	0.5 A 0.7 A
<b>Cooling power</b> at 230 V, 50 Hz at 230 V, 60 Hz	780W at 40°C temperature difference and flow 1 l/min 780W at 40°C temperature difference and flow 1 l/min
<b>Continual sound pressure in open-circuit</b>	< 70 dB (A)
<b>Type of cooling</b>	50% water / 50% mono-ethylene glycol (ready mixed)
<b>Coolant quantity</b>	2.2 l
<b>Maximum water flow</b>	2.0 l/min
<b>Fuse (delayed-action)</b>	2 x 1.6 A
<b>Max pressure lift for welding gun</b> <i>Q</i> <sub>max</sub>	7 m
<b>Operating temperature</b>	-10 to + 60°C
<b>Transportation temperature</b>	-20 to + 55°C
<b>Dimensions l x w x h</b>	407 x 188 x 151 mm
<b>Maximum water pressure</b> at 50 Hz at 60 Hz	0.23 MPa (2.3 bar) 0.23 MPa (2.3 bar)
<b>Weight</b> water-filled empty	6.2 kg 4.5 kg
<b>Enclosure class</b>	IP23 C

### **Enclosure class**

The IP code indicates the enclosure class, i. e. the degree of protection against penetration by solid objects or water. Equipment marked **IP23** is designed for indoor and outdoor use.

## 5 INSTALLATION

*The installation must be executed by a professional.*

### **5.1 Location**

Position the cooling unit such that its cooling air inlets and outlets are not obstructed.

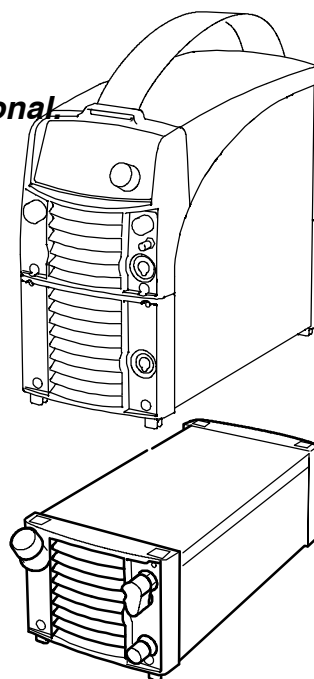
### **5.2 Mains power supply**

The cooling unit is connected to the power source's mains and control cables, see page 9.

### 5.3 Installing welding equipment

**The installation must be executed by a professional.**

See installation instructions on page 9.

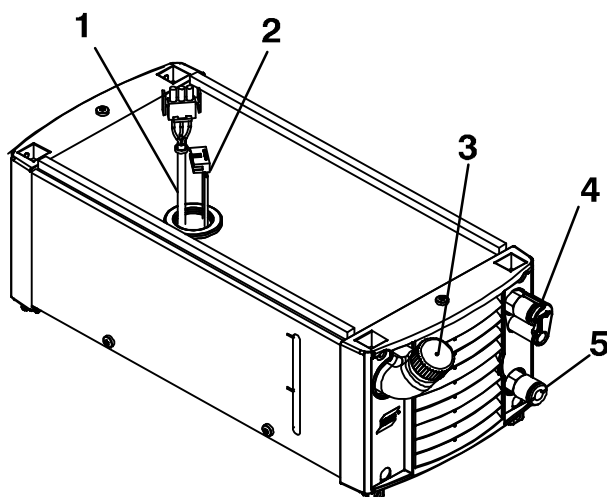


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## 6 OPERATION

**General safety regulations for the handling of the equipment can be found on page 3. Read through before you start using the equipment!**

### 6.1 Connections



- 1 Connection for mains cable from power source
- 2 Connection for control cable from power source
- 3 Filling the coolant
- 4 Connection BLUE, with ELP\* for coolant from cooling unit
- 5 Connection RED for coolant to cooling unit

\*ELP = ESAB Logic Pump, see point 6.2.

### 6.2 Water connection

The cooling unit is equipped with a detection system **ELP (ESAB Logic Pump)** which checks that the water hoses are connected. When connecting a water-cooled TIG torch cooling starts.

Detection only works with power sources that are equipped with the ELP function.

*Note! Flow guard cannot be installed in Tradescool.*

## 7 MAINTENANCE

Regular maintenance is important for safe, reliable operation.

Only those persons who have appropriate electrical knowledge (authorized personnel) may remove the safety plates.



### WARNING!

*The mains supply must be disconnected before cleaning!*



### CAUTION!

*All guarantee undertakings from the supplier cease to apply if the customer himself attempts any work in the product during the guarantee period in order to rectify any faults.*

### 7.1 Inspection and cleaning

**IMPORTANT!** *The mains supply must be disconnected before cleaning!*

The air stream through the cooling unit carries particles that become trapped in the cooling element, particularly in dirty working environments. This results in reduced cooling capacity. For this reason, blow clean using compressed air at regular intervals.

Dismantle the right side panel and blow the filter clean with compressed air.

Change the coolant approximately once a year.

### 7.2 Filling the coolant

Coolant recommended for use, see accessories on page 18.

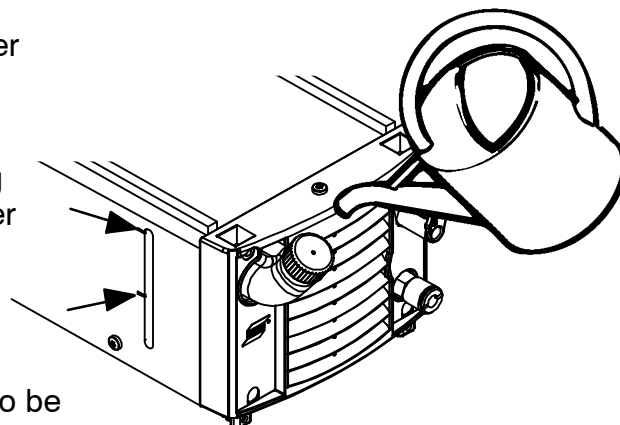


### CAUTION!

*The coolant must be handled as chemical waste.*

- Fill with coolant.  
(The fluid level must not exceed the upper marking but neither must it be below the lower marking)
- Disconnect the coolant hose for outgoing water (TIG torch blue connection) in order for any trapped air to disappear.
- Connect the coolant hose again.

**NOTE!** When adjusting the water level by topping up, the coolant hose does not need to be disconnected.





Coolant must be topped up if connecting a welding torch or connection cables that are 5 meters in length or longer.

The temperature of the coolant must not exceed 70°C.

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## 8 FAULT-TRACING

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Try these recommended checks and inspections before sending for an authorised service technician.

Fault	Corrective action
Poor cooling effect	<ul style="list-style-type: none"><li>• Clean the cooling element using compressed air.</li><li>• Check the coolant level.</li></ul>

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## 9 ORDERING SPARE PARTS

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*Repair and electrical work should be performed by an authorized serviceman. Use only original spare and wear parts.*

**Tradescool 220 is designed and tested in accordance with the international and European standards IEC/EN 60974-2 and EN 60974-10. It is the obligation of the service unit which has carried out the service or repair work to make sure that the product still conforms to the said standard.**

Spare parts may be ordered through your nearest dealer.

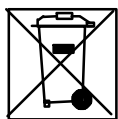
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## 10 DISMANTLING AND SCRAPPING

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Welding equipment primarily consists of steel, plastic and non-ferrous metals, and must be handled according to local environmental regulations.

Coolant must also be handled according to local environmental regulations.



**Do not dispose of electrical equipment together with normal waste!**

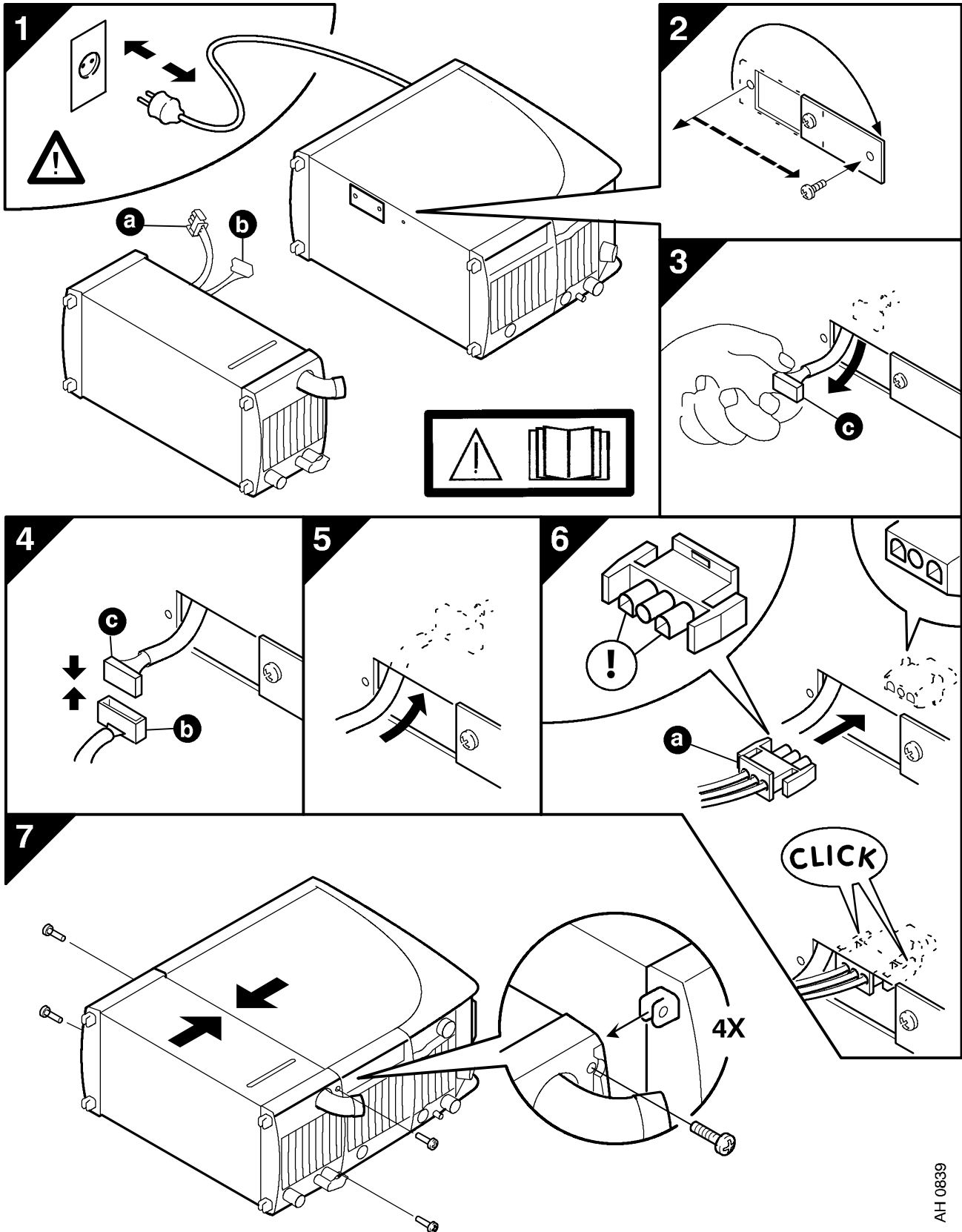
In observance of European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and returned to an environmentally compatible recycling facility. As the owner of the equipment, you should get information on approved collection systems from our local representative.

By applying this European Directive you will improve the environment and human health!



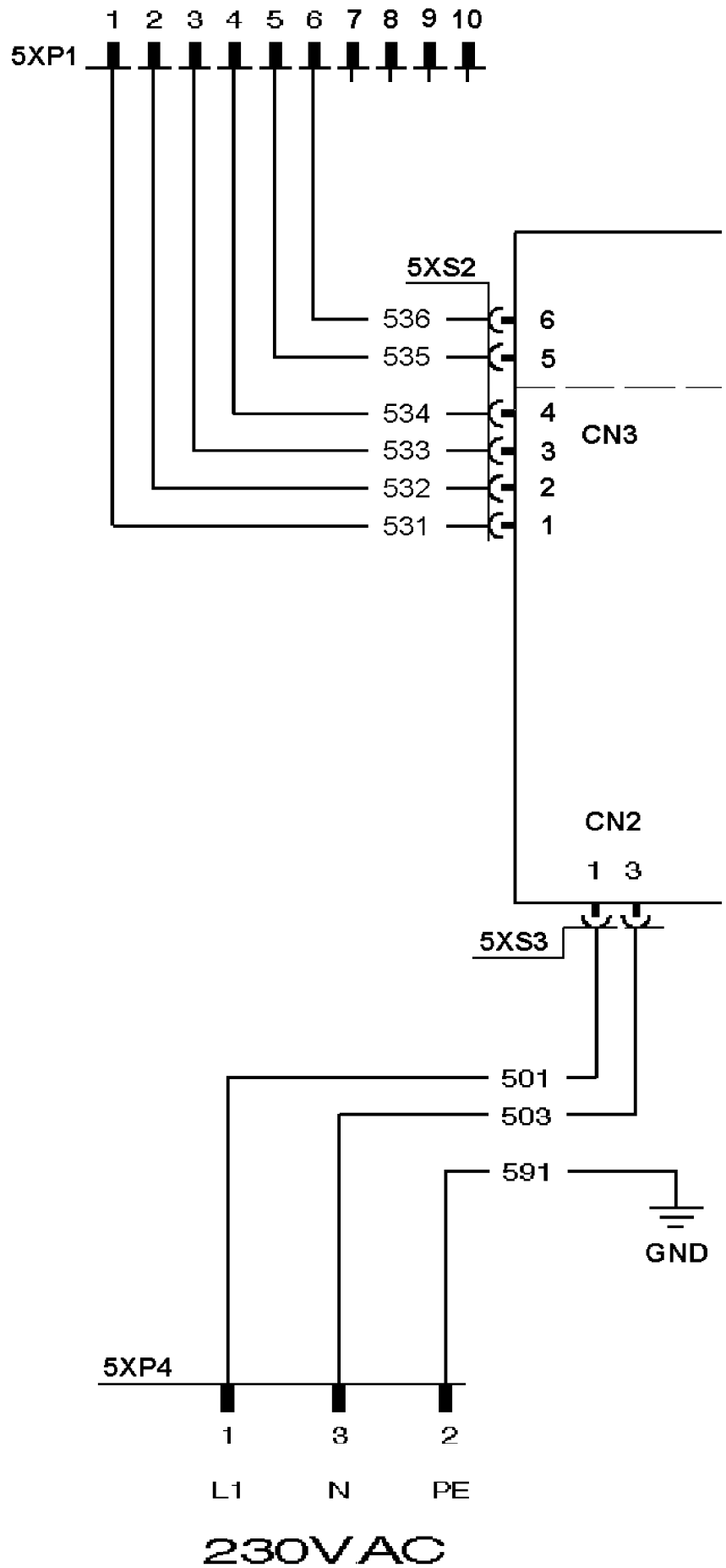
# Assembly instructions

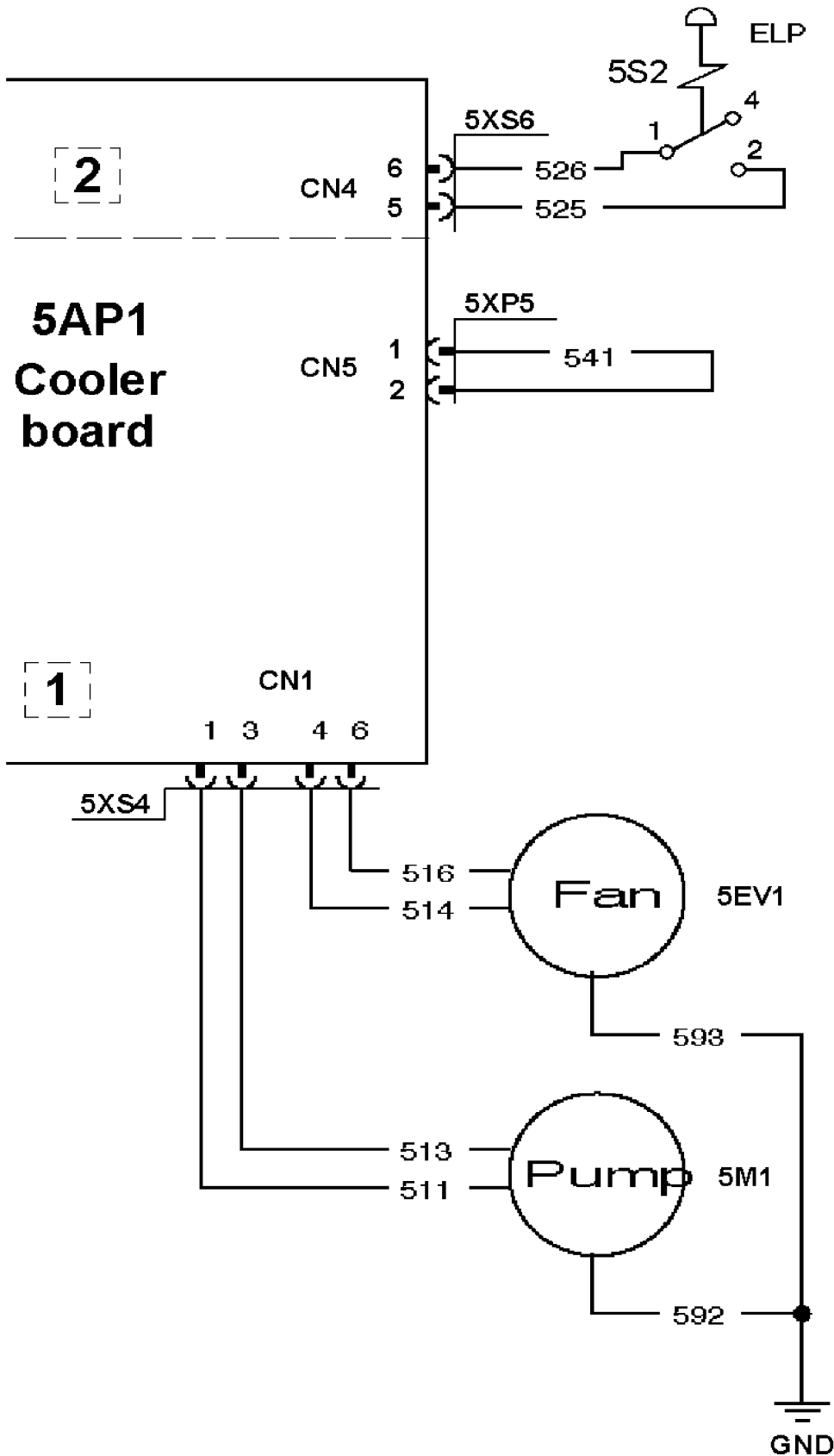
## Tradescool 220 + Tradestig AC 220 / Tradestig AC 220a



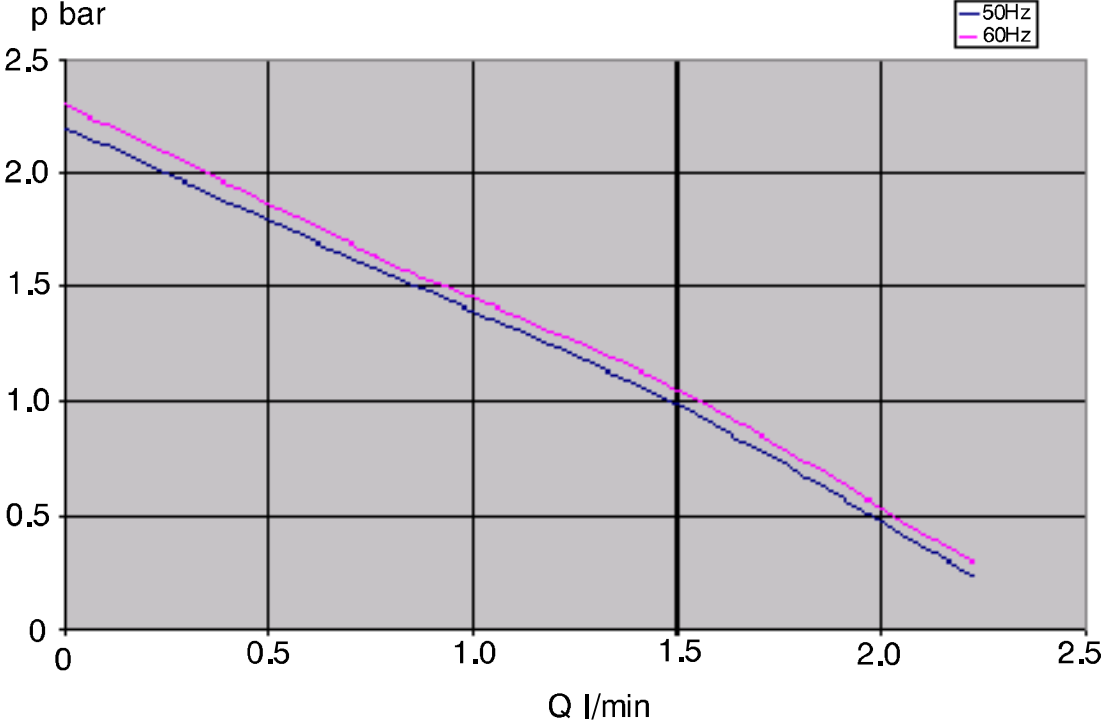
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# Diagram



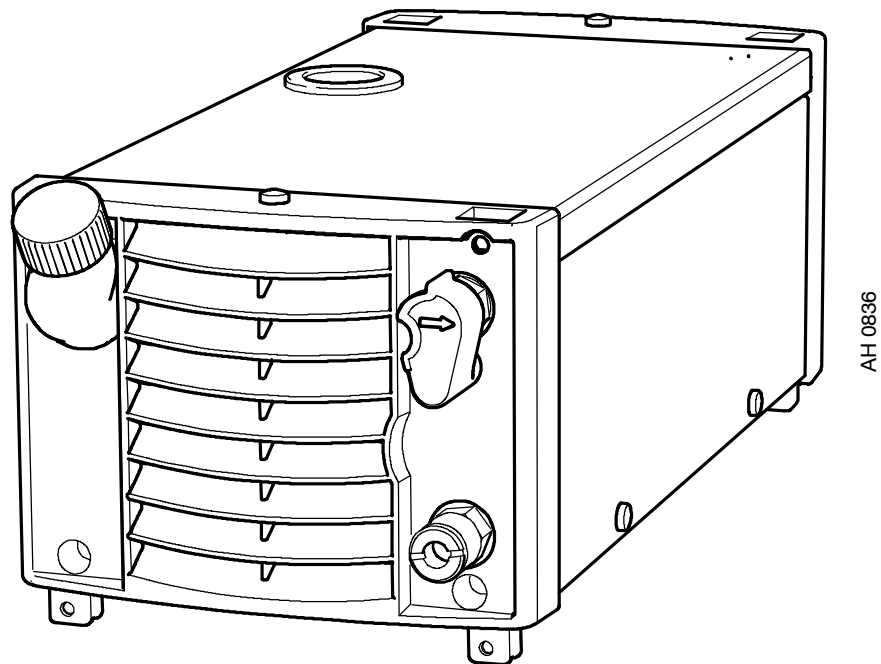


**Pump data**



**p** = Pump pressure  
**Q** = Flow rate

**Spare parts list**



**Valid for serial no. 827-xxx-xxxx**

**Ordering number**

0460 144 881 Cooling unit Tradescool 220

Spare parts are to be ordered through the nearest MUREX agency. Kindly indicate type of unit, serial number, denominations and ordering numbers according to the spare parts list.

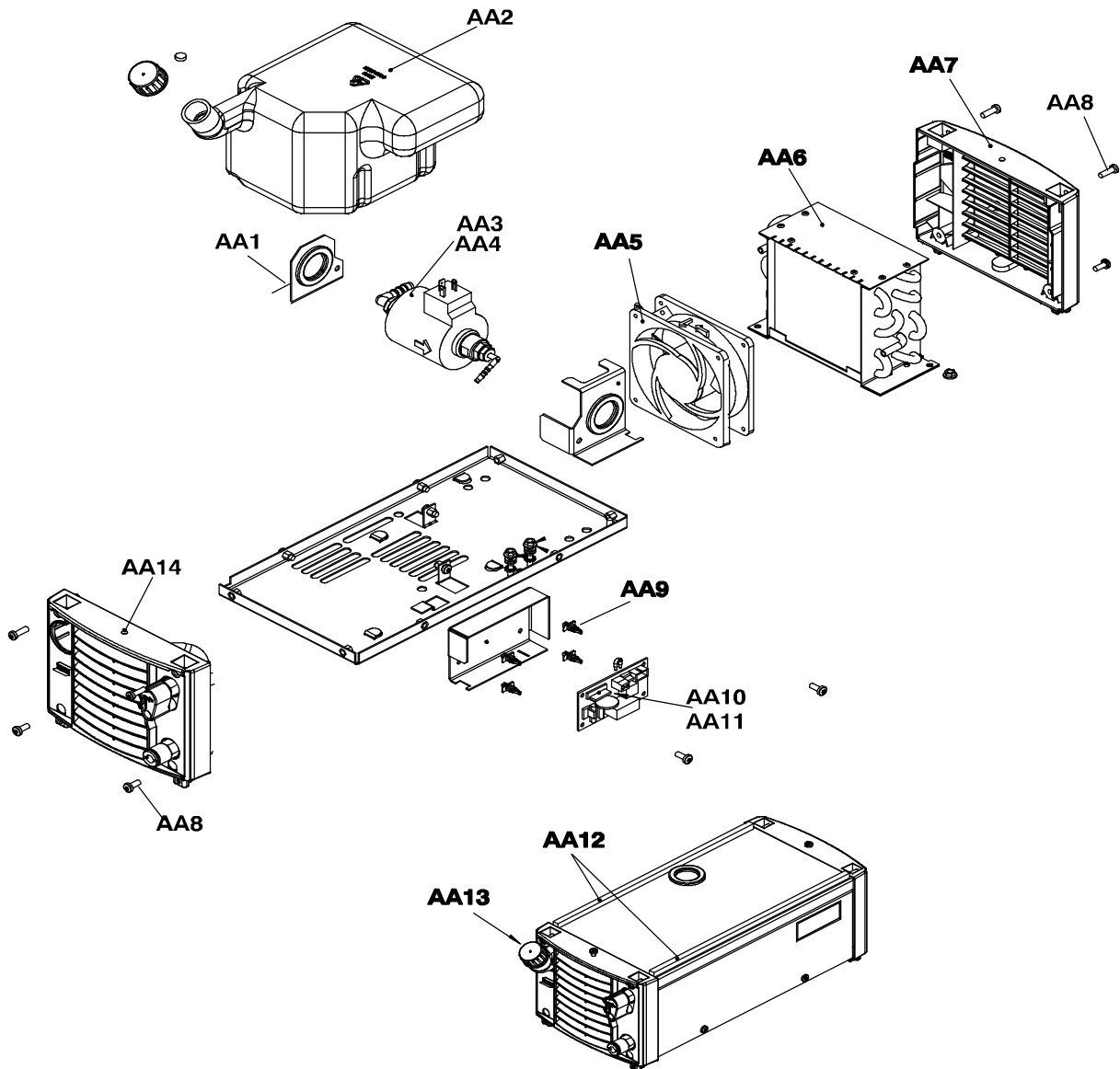
Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

## Tradescool 220

C = component designation in the circuit diagram

Item	Qty	Ordering no.	Denomination	Notes	C
AA1	1	0194 069 003	Rubber inlet	Ø 37mm hole	
AA2	1	0460 195 880	Tank	with connections	
AA3	1	0460 229 880	Pump with connections		
AA4	1	0460 208 880	Cable set	pump, fan	
AA5	1	0365 539 001	Fan	without cables	
AA6	1	0460 120 001	Cooling radiator		
AA7	1	0460 139 001	Rear panel	cooling / AC	
AA8	4	0194 153 329	Screw	Remform Torx 5x16	
AA9	4	0192 790 102	Spacer	6.3mm, LCBS 4R	
AA10	1	0487 540 880	PC-board		
AA11	1	0460 206 880	Cable set	power source	
AA12	2	0192 526 004	Sealing strip		
AA13	-	0194 230 001	Anti-freezing mixture	6704	
AA14	1	0460 199 881	Front complete		

# Tradescool 220



## Tradescool 220

Item	Qty	Ordering no.	Denomination	Notes
AB1	1	0190 735 314	Nut	M5
AB2	1	0193 104 002	Washer	D16/5x1
AB3	1	0458 365 001	Spring	
AB4	1	0458 366 001	Water lock cam	
AB5	1	0365 803 015	Quick connector	Female, blue
AB6	1	0458 368 001	Water lock outlet	
AB7	1	0192 238 337	Screw	M5x35
AB8	1	0365 803 014	Quick connector	Female, red
AB9	1	0194 245 001	Micro switch	
AB10	1		Nut	M3
AB11	1	0460 370 880	Damper hose	
AB12	1	0460 370 880	Damper hose	
AB13	1	0456 496 001	Hose	Ø 9/5 PVC, red, to be ordered per metre
AB14	1	0460 198 001	Hose	

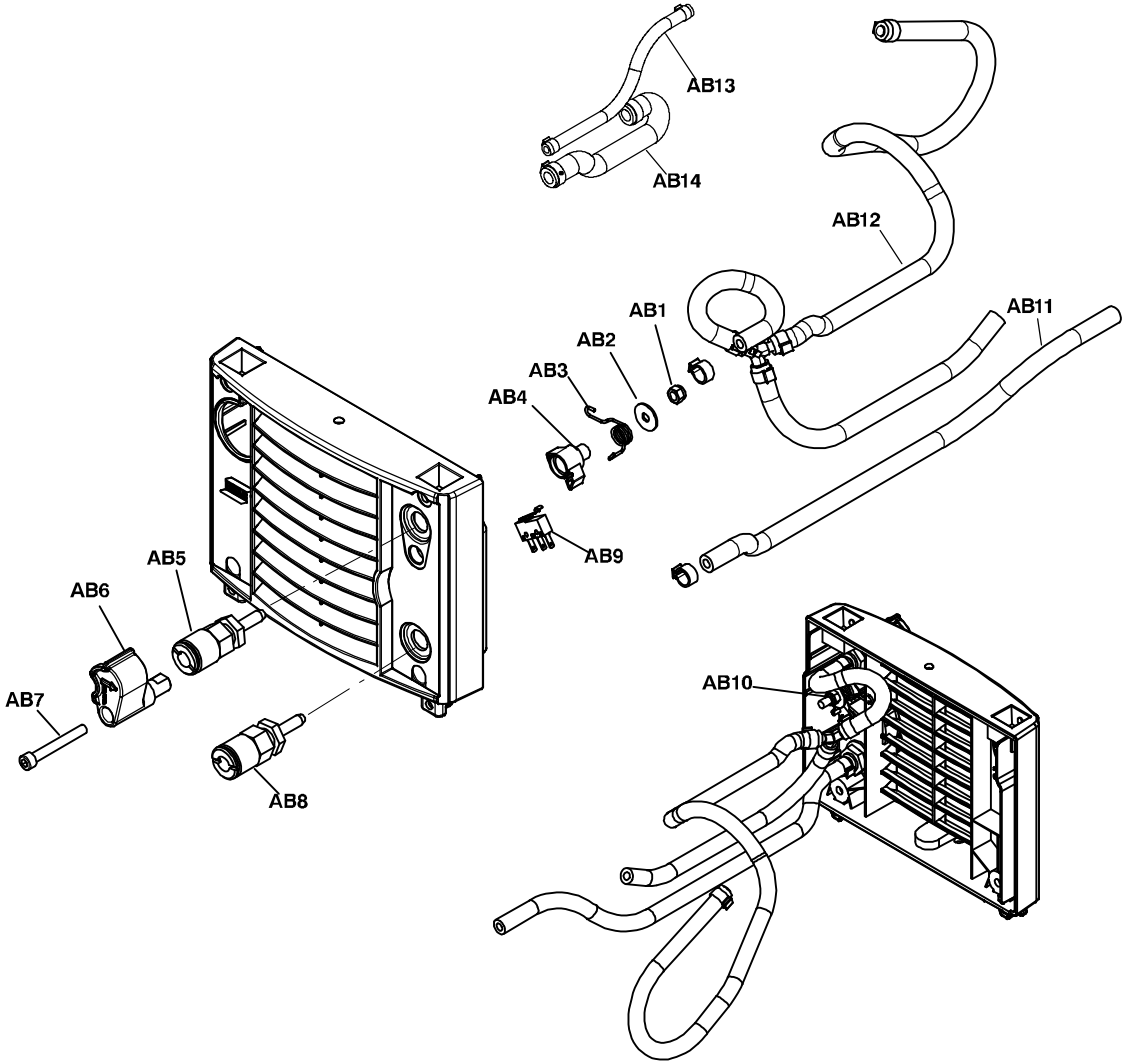
### SPARE PARTS SET

Item	Qty	Ordering no.	Denomination	Notes
AB50	1	0458 370 900	Water connection spare kit	Contains items AB1, AB2, AB3, AB4, AB6 and AB7

H



Tradescool 220



## Tradescool 220

### Accessories



**Coolant** 50% water and 50% ready mixed  
mono-ethylene glycol (10 l) ..... 0007 810 012





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**Please ensure that this  
Operating Manual is  
available to the user of  
the equipment.**



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Murex Welding Products Ltd  
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