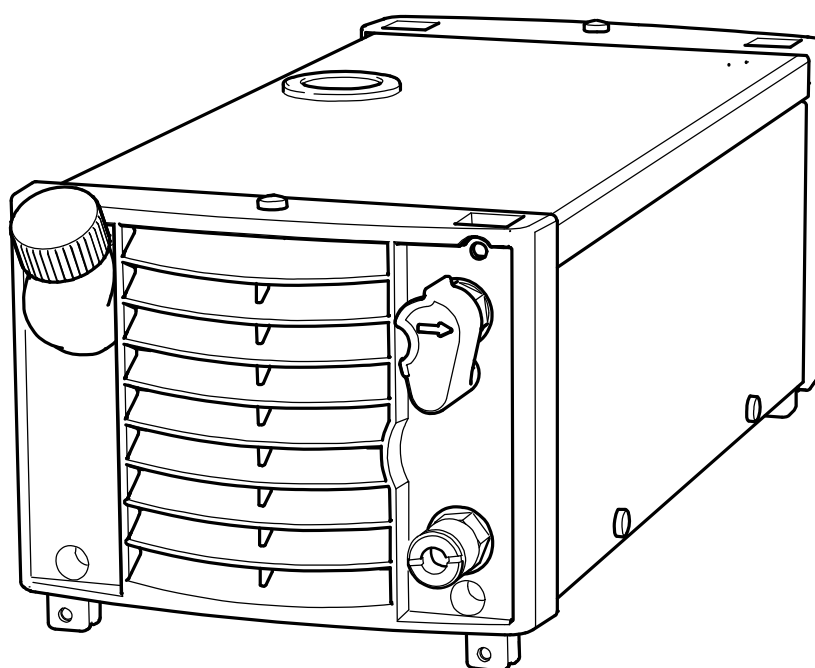


CoolMini



Instruction manual



DECLARATION OF CONFORMITY

According to

The Low Voltage Directive 2006/95/EC, entering into force 16 January 2007

The EMC Directive 2004/108/EC, entering into force 20 July 2007

Type of equipment

Cooling unit

Type of designation etc.

CoolMini from serial number 705 xxx xxxx (2007 w.5)

Brand name or trade mark

ESAB

Manufacturer or his authorised representatives established within the EEA:

Name, address, phone, website:

ESAB AB

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Box 8004, 402 77 GÖTEBORG, Sweden

Phone: +46 31 509 000, Website: www.esab.com

The following harmonised standard in force within the EEA has been used in the design:

EN 60974-2, Arc welding equipment – Part 2: Liquid cooling systems

EN 60974-10, Arc welding equipment – Part 10: Electromagnetic compatibility (EMC) requirements

Additional information: Restrictive use, Class A equipment, intended for use in locations other than residential.

By signing this document, the undersigned declares as manufacturer, or the manufacturer's authorised representative established within EEA, that the equipment in question complies with the safety requirements stated above.

Date

2012-07-31

Signature

A handwritten signature in black ink, appearing to read "Flavio Santos". The signature is stylized and somewhat cursive.

Flavio Santos
Clarification

Position

Global Director of Marketing
and Product Portfolio Equipment

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1 SAFETY

Users of ESAB 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 equipment. The following recommendations should be observed in addition to the standard regulations that apply to the workplace.

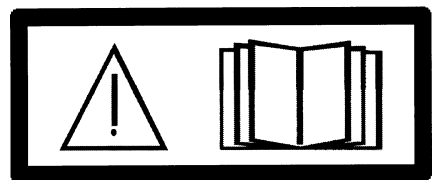
All work must be carried out by trained personnel well-acquainted with the operation of the equipment. Incorrect operation of the equipment may lead to hazardous situations which can result in injury to the operator and damage to the equipment.

1. Anyone who uses the equipment must be familiar with:
 - its operation
 - location of emergency stops
 - its function
 - relevant safety precautions
 - welding and cutting
2. The operator must ensure that:
 - no unauthorised 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 and cutting. Ask for your employer's safety practices which should be based on manufacturers' hazard data.

ELECTRIC SHOCK - Can kill

- Install and earth the 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.

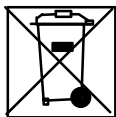
NOISE - Excessive noise can damage hearing

- 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!



Dispose of electronic equipment at the recycling facility!

In observance of European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical and/or electronic equipment that has reached the end of its life must be disposed of at a recycling facility.

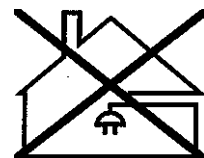
As the person responsible for the equipment, it is your responsibility to obtain information on approved collection stations.

For further information contact the nearest ESAB dealer.



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.



ESAB can provide you with all necessary welding protection and accessories.

2 INTRODUCTION

Cooling unit **CoolMini** is intended for cooling TIG torches.

ESAB's accessories for the product can be found on page 97.

2.1 Equipment

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

3 TECHNICAL DATA

Tradescool 220	
Mains voltage	230 V, $\pm 10\%$, 1~ 50/60 Hz
Primary current	
I_{\max} 50 Hz	0.5 A
I_{\max} 60 Hz	0.7 A
Cooling power	
at 230 V, 50 Hz	780W at 40° C temperature difference and flow 1 l/min
at 230 V, 60 Hz	780W at 40° C temperature difference and flow 1 l/min
Continual sound pressure in open-circuit	< 70 dB (A)
Type of cooling	50% water / 50% mono-ethylene glycol
Coolant quantity	2.2 l
Maximum water flow	2.0 l/min
Fuse (delayed-action)	2 x 1.6 A
Max pressure lift for welding gun	7 m
Q_{\max}	
Maximum water pressure	
at 50 Hz	0.23 MPa (2.3 bar)
at 60 Hz	0.23 MPa (2.3 bar)
Operating temperature	-10 to + 60° C
Transportation temperature	-25 to + 55° C
Dimensions l x w x h	407 x 188 x 151 mm
Weight	
water-filled	6.2 kg
empty	4.5 kg
Enclosure class	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.

4 INSTALLATION

The installation must be carried out by a professional.

4.1 Location

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

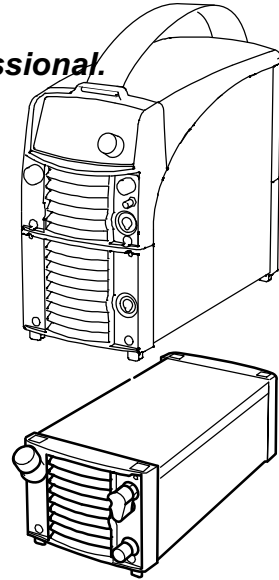
4.2 Mains power supply

The cooling unit is connected to the power source's mains and control cables, see page 90.

4.3 Installing welding equipment

The installation must be carried out by a professional.

See installation instructions on page 90.

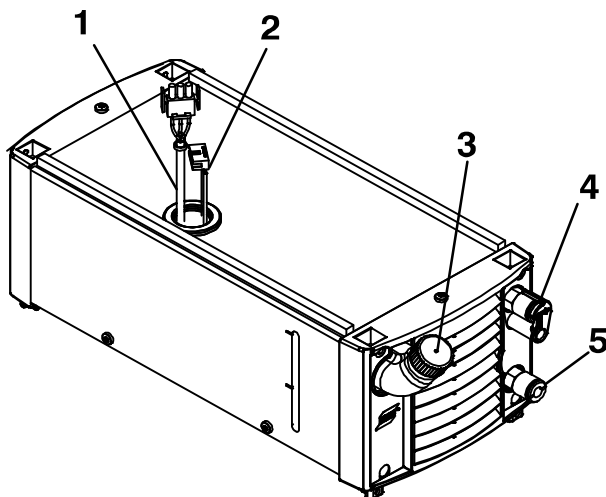


3

5 OPERATION

General safety regulations for handling the equipment can be found on page 84. Read through before you start using the equipment!

5.1 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 5.2.

5.2 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 CoolMini.

6 MAINTENANCE

Regular maintenance is important for safe, reliable operation.

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



CAUTION

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

6.1 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.

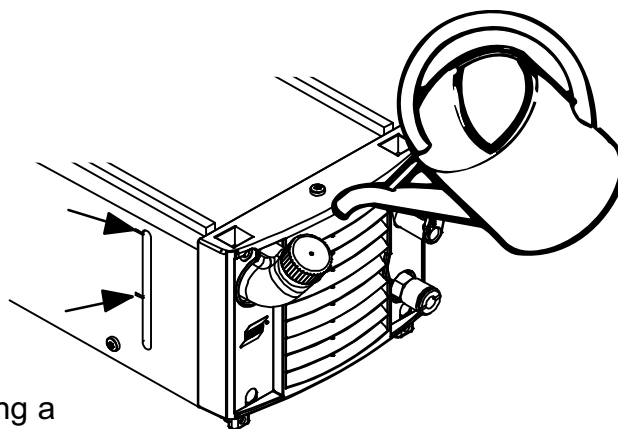
Dismantle the right side panel and blow the filter clean with compressed air.

Change the coolant approximately once a year.

6.2 Filling the coolant

ESAB's coolant is recommended for use. See accessories on page 97.

- 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! Coolant must be topped up if connecting a welding torch or connection cables that are 5 meters in length or longer. When adjusting the water level by topping up, the coolant hose does not need to be disconnected.

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



CAUTION

The coolant must be handled as chemical waste.

7 FAULT-TRACING

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"> • Clean the cooling element using compressed air. • Check the coolant level.

8 ORDERING SPARE PARTS

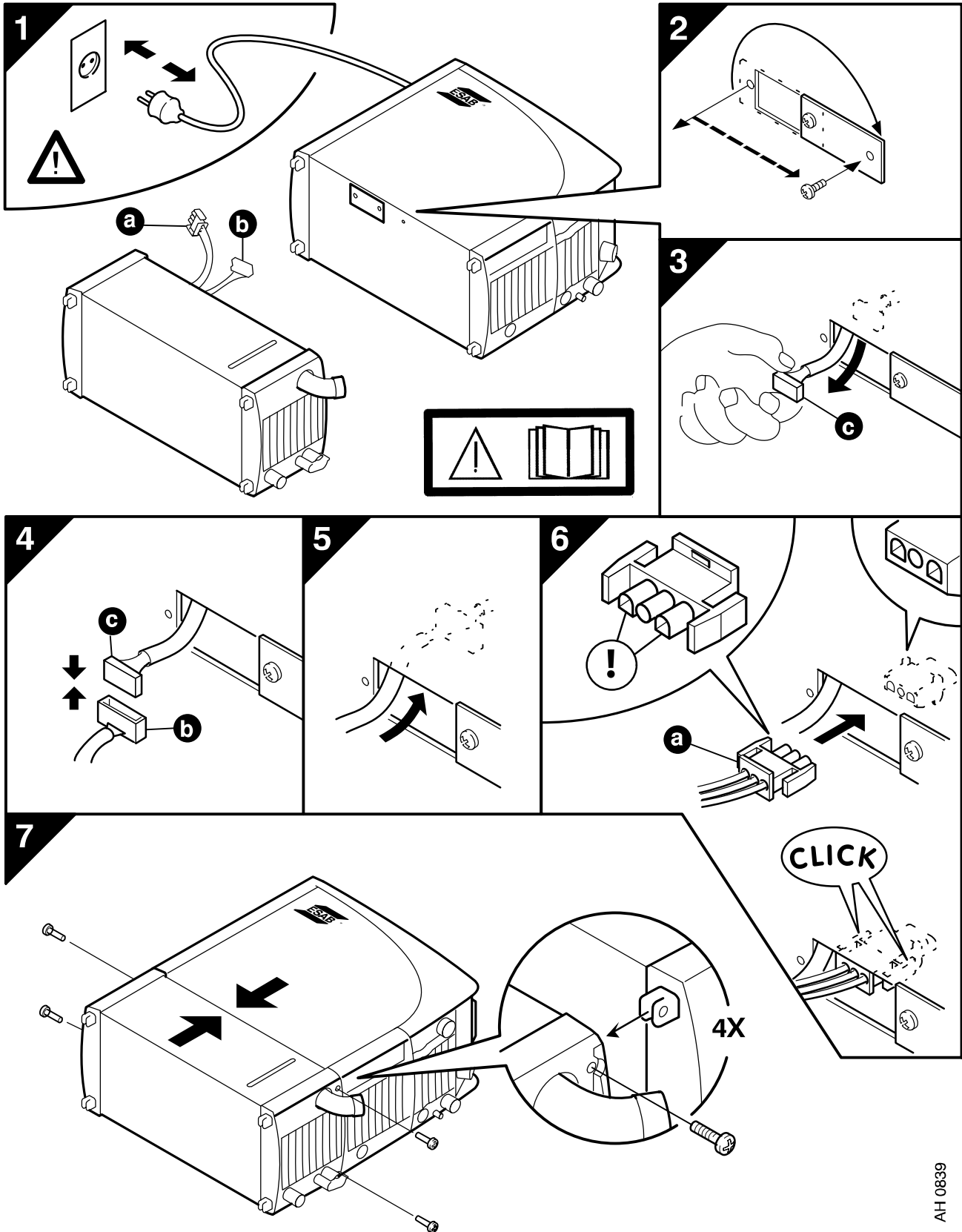
Repair and electrical work should be performed by an authorised ESAB service technician. Use only ESAB original spare and wear parts.

CoolMini is designed and tested in accordance with the international and European standards IEC/EN 60974-2 and IEC/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 ESAB dealer, see the last page of this publication.

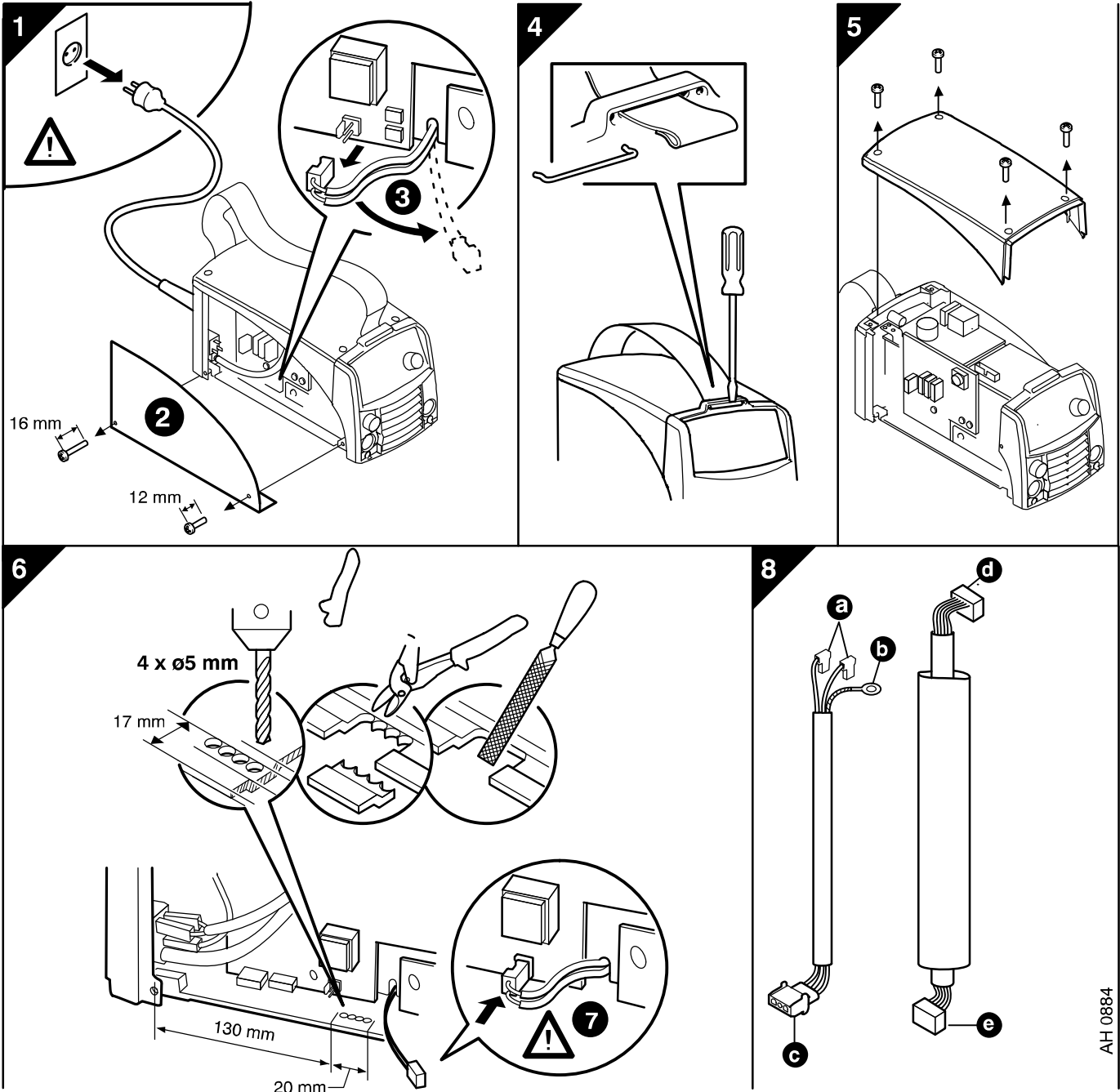
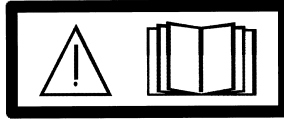
Assembly instructions

CoolMini + Tig 2200i AC/DC

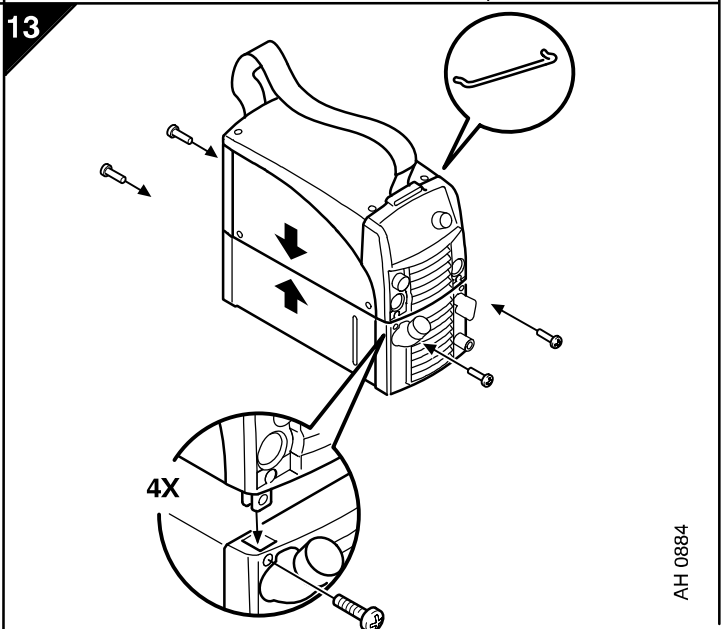
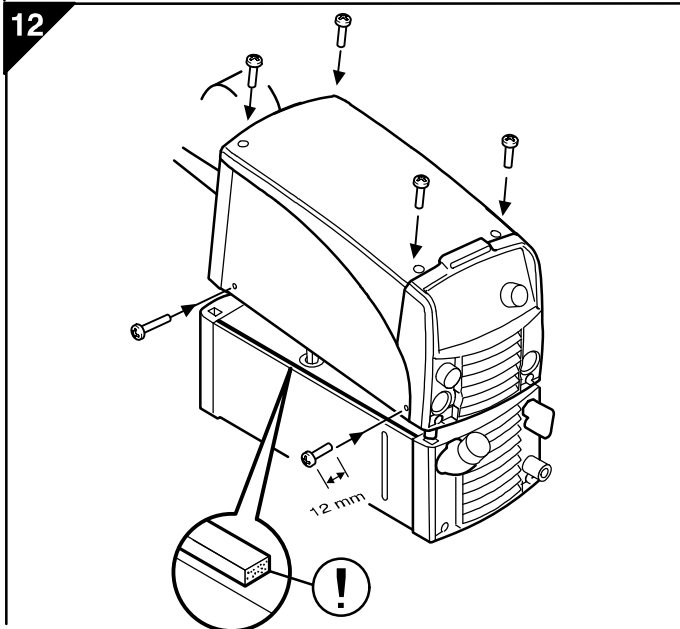
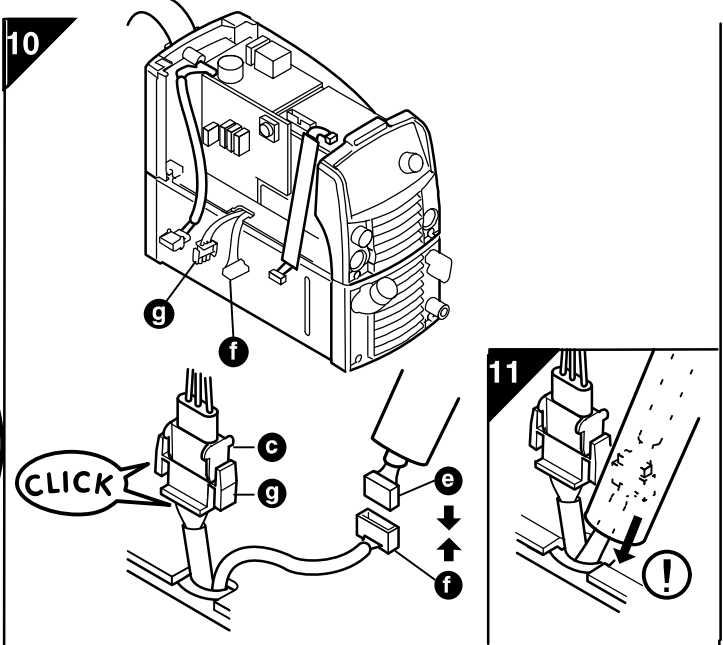
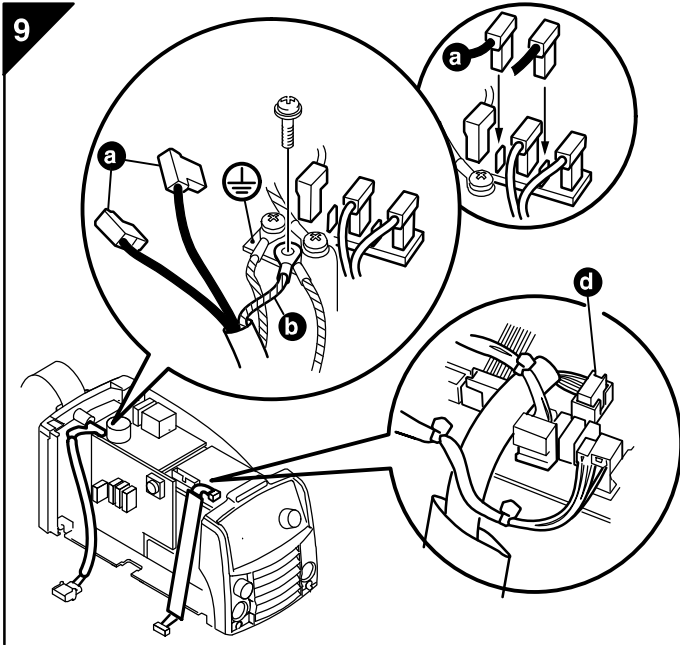


AH 0839

CoolMini + Tig 2200i

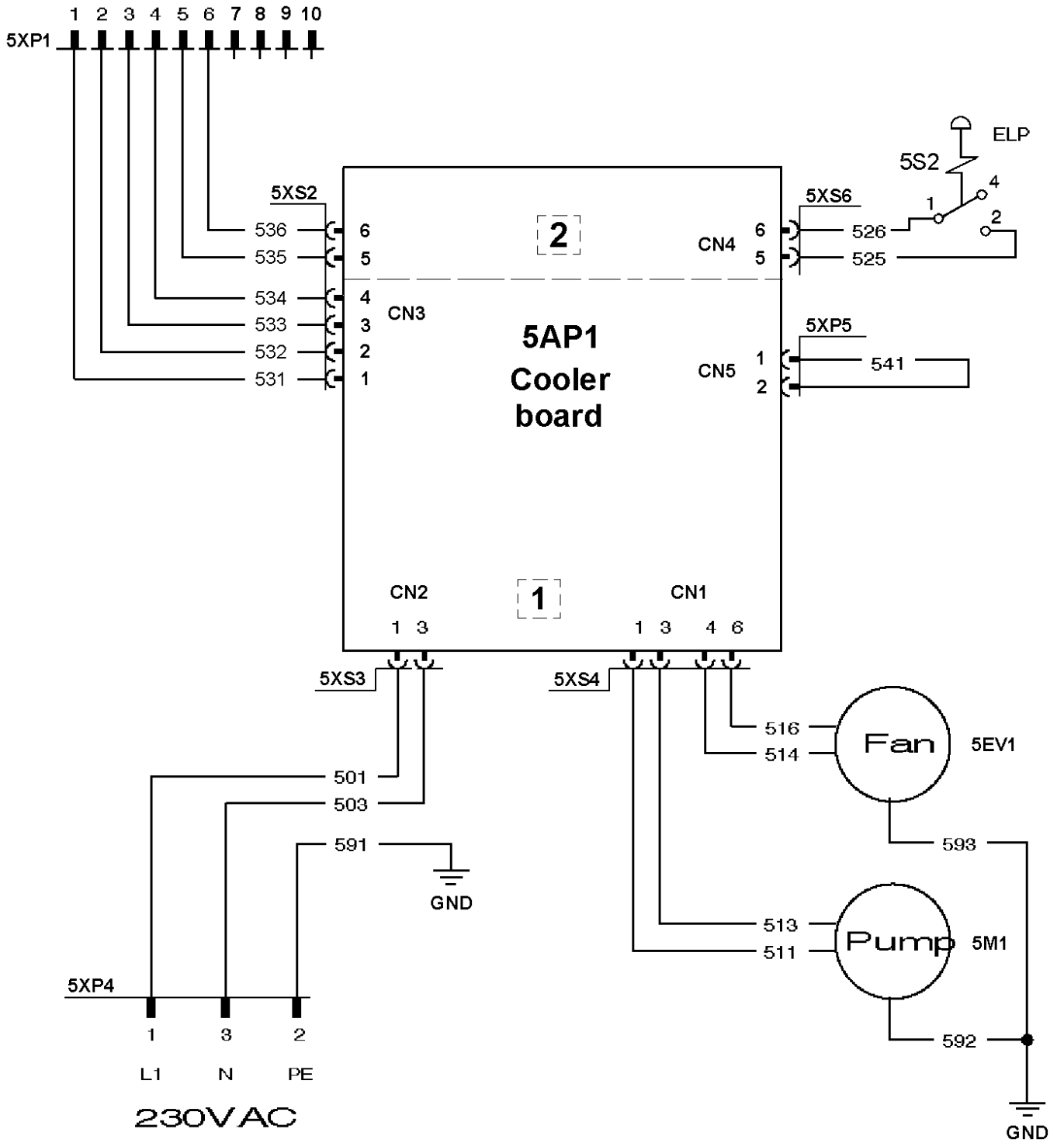


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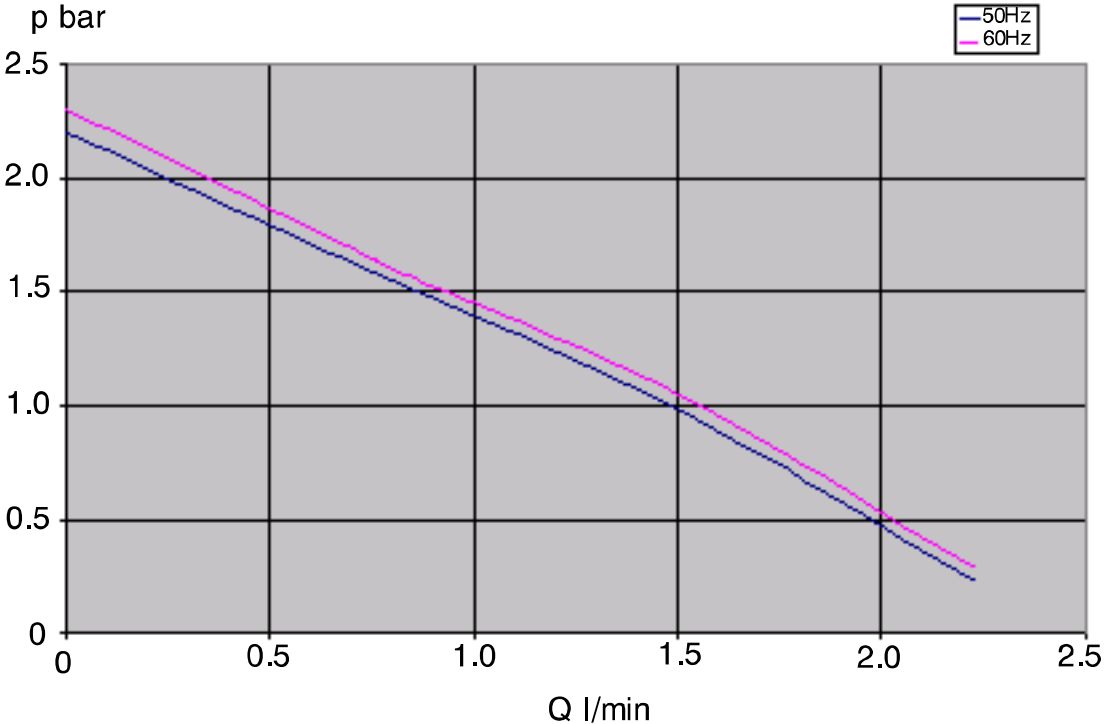


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Diagram

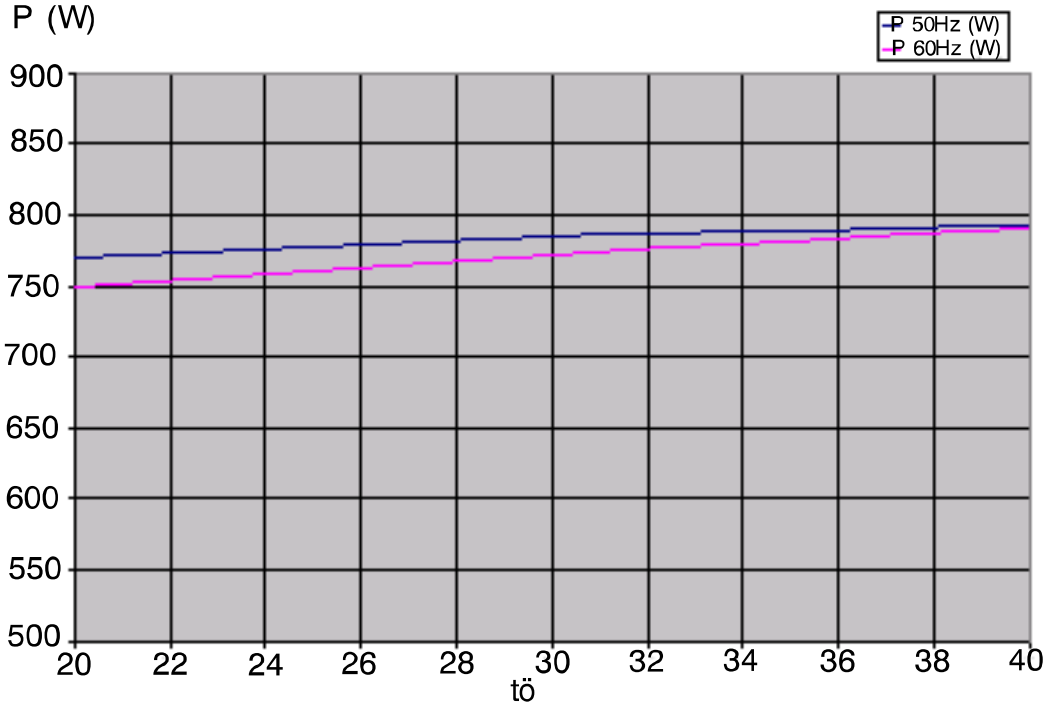


Pump data



p = Pump pressure
Q = Flow rate

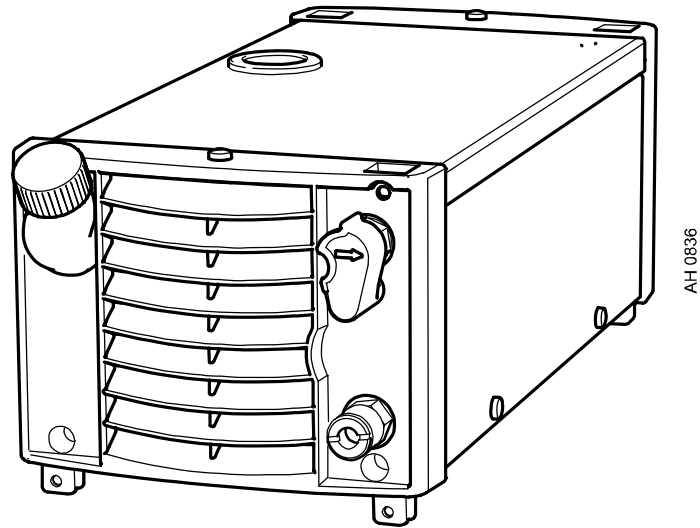
Cooling characteristic



P = Power
t₀ = temperature difference °

CoolMini

Order number



Ordering no.	Denomination	Type
0460 144 880	Cooling unit	CoolMini

Filename	Type	Product
0459 839 015	Spare parts list	CoolMini

Technical documentation is available on the Internet at www.esab.com

CoolMini

Accessories



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

Assembly kit. For connection of the
CoolMini to the Tig 2200i 0460 509 880

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www.esab.com



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