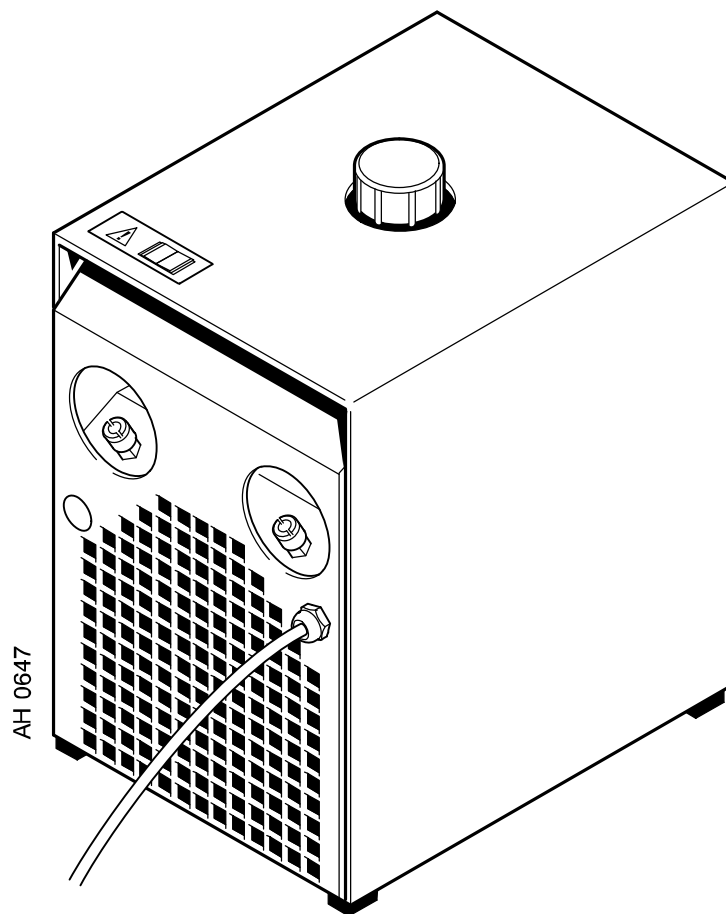


OCE 2H



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

Arc welding cooling unit

Type designation

OCE2H from serial number 339 xxx xxxx (2003 w.03)

Brand name or trade mark

ESAB

Manufacturer or his authorized representative established within the EEA:

Name, address, phone, website:

ESAB AB

Lindholmsallén 9

Box 8004, 402 77 GÖTEBORG, Sweden

Phone: +46 31 509 000

Website: www.esab.com

The following harmonized standards, 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 authorized representative established within EEA, that the equipment in question complies with the safety requirements stated above.

Date

2012-09-27

Signature

A handwritten signature in black ink, appearing to be "JF", written over a horizontal line.

Jerker Funnemark
Clarification

Position

Managing Director
Equipment & Automation

1 SAFETY	4
2 INTRODUCTION	6
2.1 Equipment	6
3 TECHNICAL DATA	6
4 INSTALLATION	7
4.1 Location	7
4.2 Electrical connection	7
5 OPERATION	8
5.1 Connections	8
5.2 Water flow guard	8
6 MAINTENANCE	8
6.1 Inspection and cleaning	9
6.2 Topping up the coolant	9
7 FAULT TRACING	9
8 ORDERING SPARE PARTS	10
DIAGRAM	11
PUMP DATA	12
COOLING CHARACTERISTIC	13
ORDERING NUMBER	14
ACCESSORIES	15

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.



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.

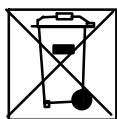
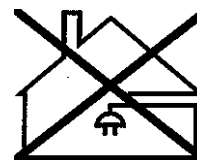
Read and understand the instruction manual before installing or operating.

PROTECT YOURSELF AND OTHERS!



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.



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.

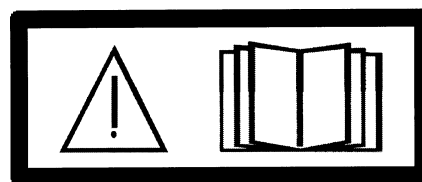
As the person responsible for the equipment, it is your responsibility to obtain information on approved collection stations.

For further information contact the nearest ESAB dealer.



CAUTION

Read and understand the instruction manual before installing or operating.



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

2 INTRODUCTION

Cooling unit **OCE 2H** is intended for cooling welding guns and TIG torches.

ESAB's accessories for the product can be found on page 15.

2.1 Equipment

Cooling unit OCE 2H is supplied with two nipples and an instruction manual.

3 TECHNICAL DATA

OCE 2H	
Mains voltage	230 V, 1 ~ 50/60 Hz
Primary current	
I_{\max} 50 Hz	1.3 A
I_{\max} 60 Hz	1.37 A
Max power requirement	300 W
Cooling power	
at 230 V, 50 Hz	2.0 kW at 40° C temperature difference and flow 1 l/min
at 230 V, 60 Hz	2.0 kW at 40° C temperature difference and flow 1 l/min
Continual sound pressure in open-circuit	< 72 dB (A)
Coolant	50% water / 50% mono-ethylene glycol
Coolant quantity	8 l
Maximum water flow	5.5 l/min
Fuse (delayed-action)	6 A
Max height of pressure for welding gun Q_{\max}	7 m
Rpm	
at 50 Hz	2,800 rpm
at 60 Hz	3,300 rpm
Maximum water pressure	
at 50 Hz	3.3 bar
at 60 Hz	4.2 bar
Operating temperature	-10 to + 40° C
Transportation temperature	-25 to + 55° C
Dimensions l x w x h	316 x 236 x 374 mm
Weight	
water-filled	21 kg
empty	14 kg
Insulation class	S
Enclosure class	IP23

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.

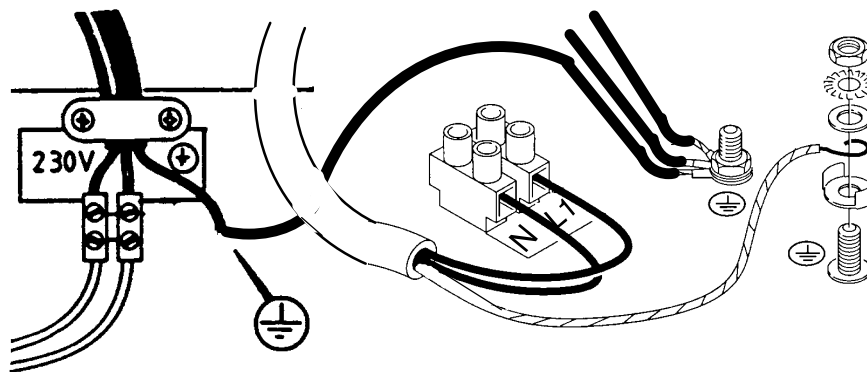
4.1 Location

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

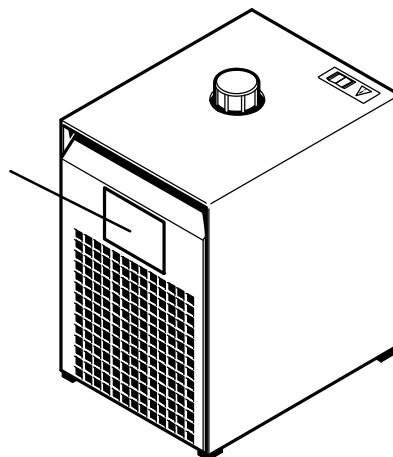
The cooling unit can be anchored to the surface using two rivet nuts installed in the base plate and two M8 screws.

4.2 Electrical connection

Connection of OCE2 H mains cable to power source.



Rating plate with supply connection data

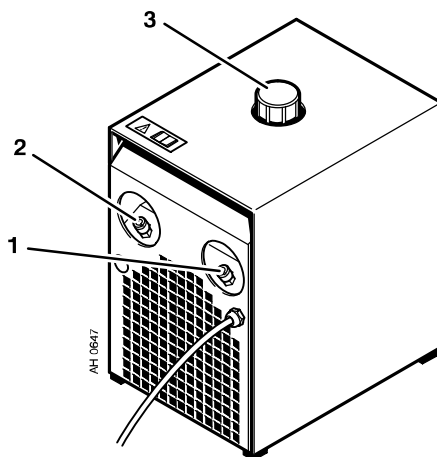


5 OPERATION

General safety regulations for handling the equipment can be found on page 4. Read through before you start using the equipment!

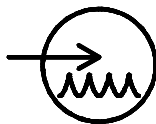
5.1 Connections

- 1 Connection for coolant from cooling unit BLUE
- 2 Connection for coolant to cooling unit RED
- 3 Topping up with coolant



Note

Coolant in



Coolant out

5.2 Water flow guard

The water flow guard blocks the welding power source if the coolant stops (minimum water flow 0.7 l/min). The water flow guard is an accessory. See accessories on page 15.

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 to connect or carry out service, maintenance or repair work on welding equipment.



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

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.

Replace the coolant approximately once a year.

6.2 Topping up the coolant

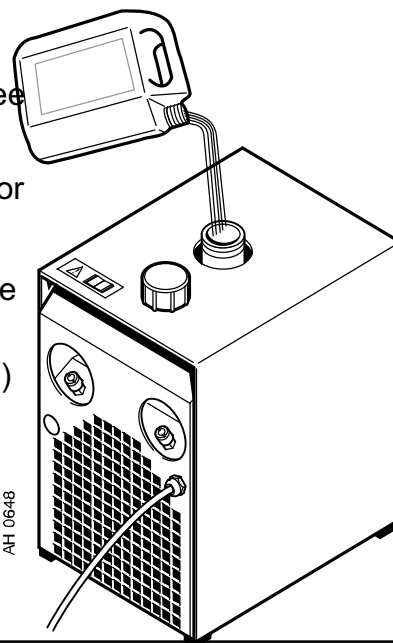
ESAB's ready mixed coolant is recommended for use. See accessories on page 15.

When the water container is to be filled for the first time, or if the pump has been running without water:

- Fill the coolant to a level about a centimetre below the bottom edge of the filling hole.
- Disconnect the coolant hose for outgoing water (blue) in order that trapped air can disappear.
- Connect the coolant hose again.

Note! 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	Action
Indicating lamp for thermal overload trip lights at the power source.	<ul style="list-style-type: none"> • Check that the cooling unit is running. • If there is a flow, the water flow guard may be defective.
Flow does not start	<ul style="list-style-type: none"> • Switch off the current. Disconnect the blue coolant connection and blow out the coolant hose to empty the system. • Check that the correct nipples are fitted.
Poor cooling effect	<ul style="list-style-type: none"> • Clean the cooling element using compressed air.

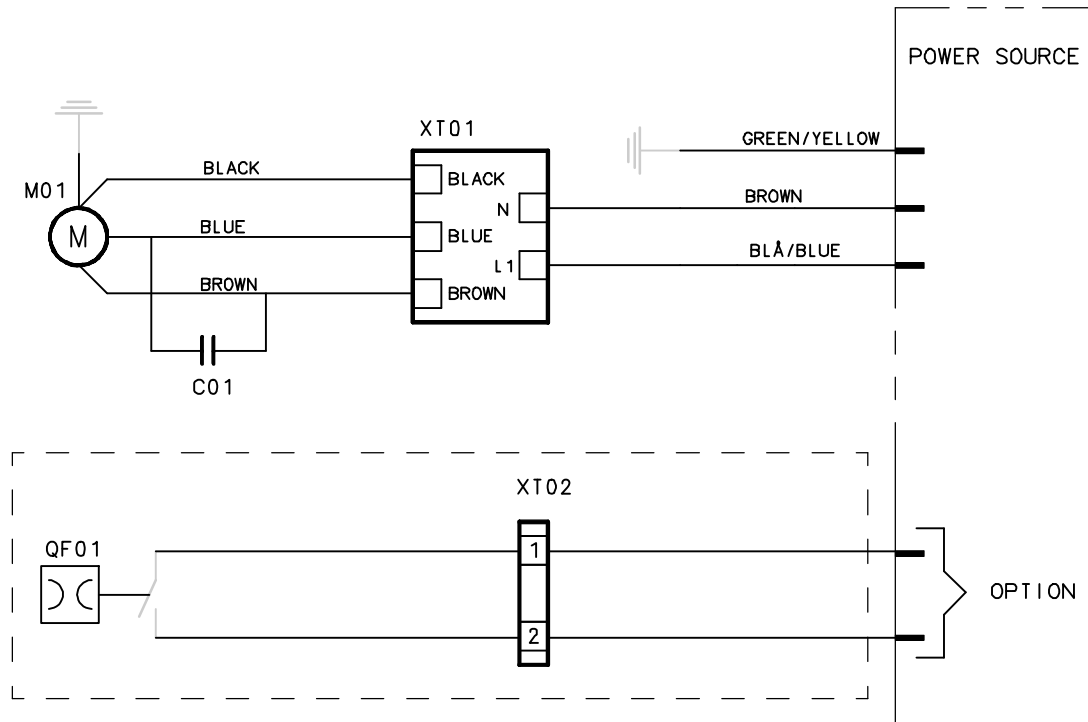
8 ORDERING SPARE PARTS

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

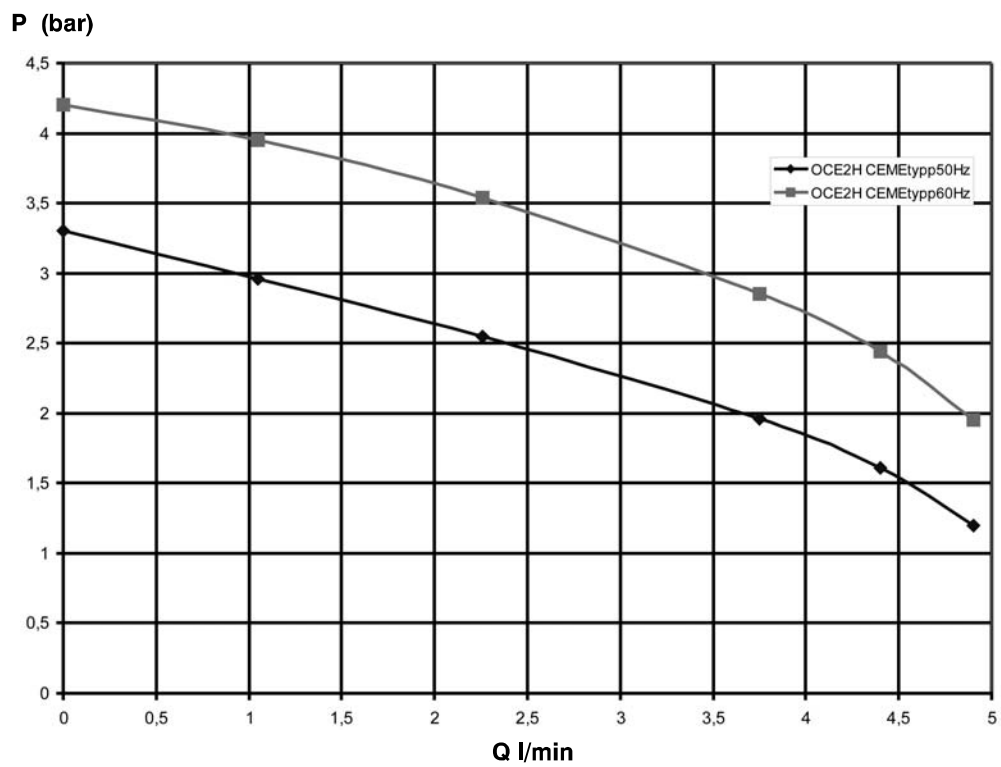
OCE 2H is designed and tested in accordance with the international and European standards EN 60974-2 and EN 60974-10. It is the obligation of the service unit which has carried out the service or repair work to make sure that the product still conforms to the said standard.

Spare parts may be ordered through your nearest ESAB dealer, see the last page of this publication.

Diagram



Pump data

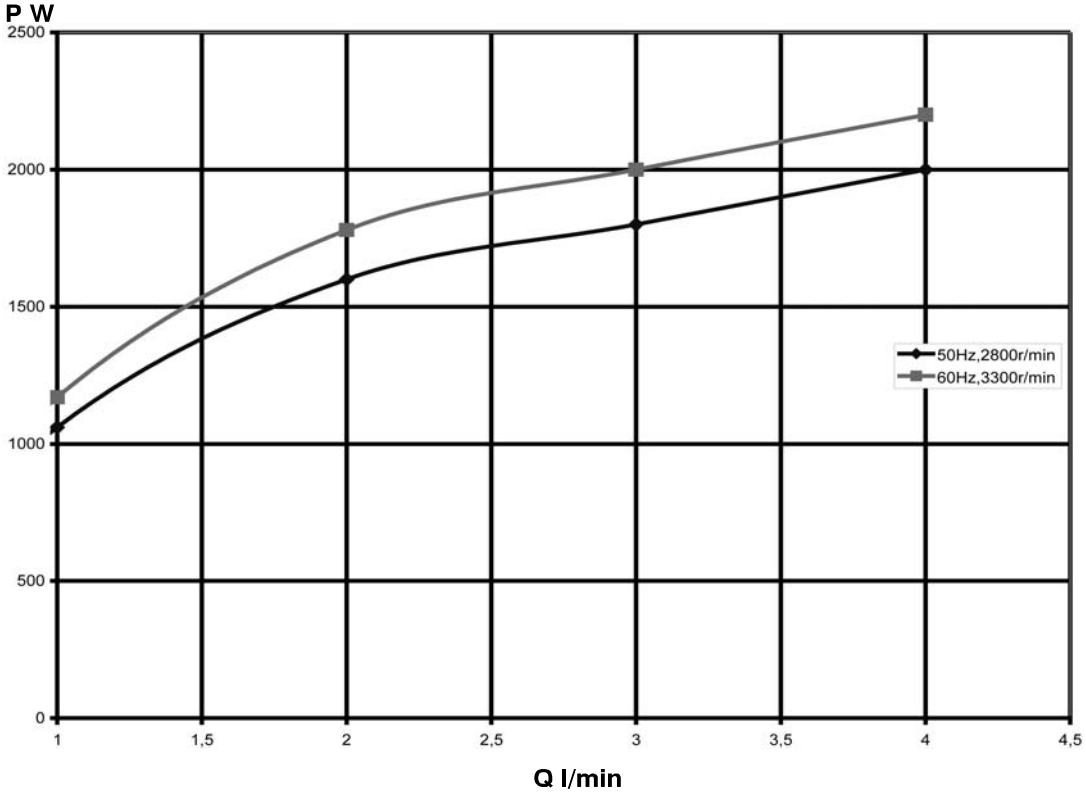


P = Pump pressure

Q = Flow rate

Cooling characteristic

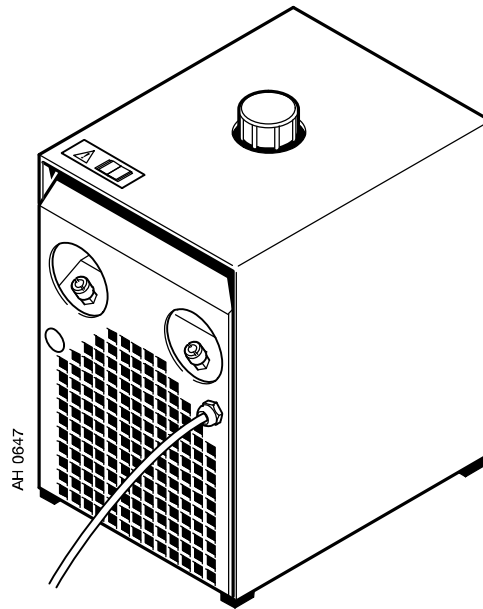
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P = Power
Q = Flow rate

OCE 2H

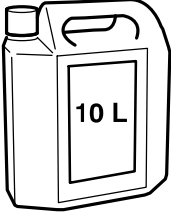
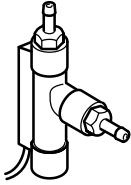
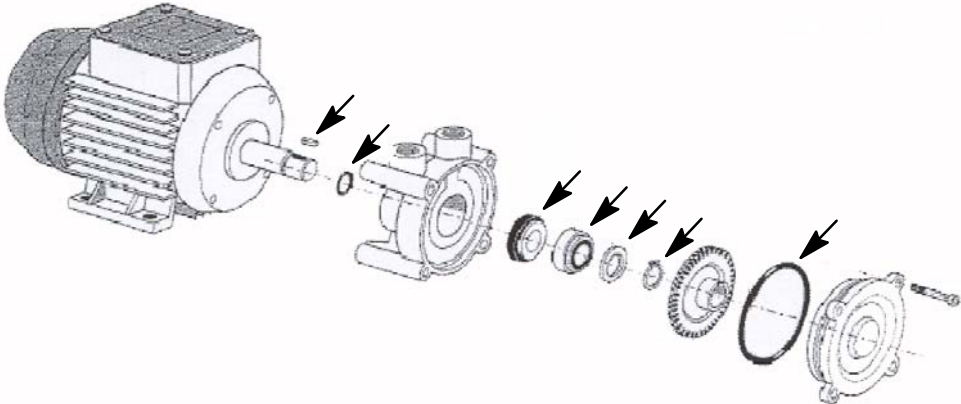
Order number



Ordering no.	Denomination	Type
0414 191 881	Cooling unit	OCE 2H
0443 406 990	Spare parts list	OCE 2H

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

Accessories

	<p>ESABs ready mixed coolant 0007 810 012</p>
	<p>Water flow guard 0414 231 880</p>
	<p>Gasket kit for water pump 0459 699 880</p>

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