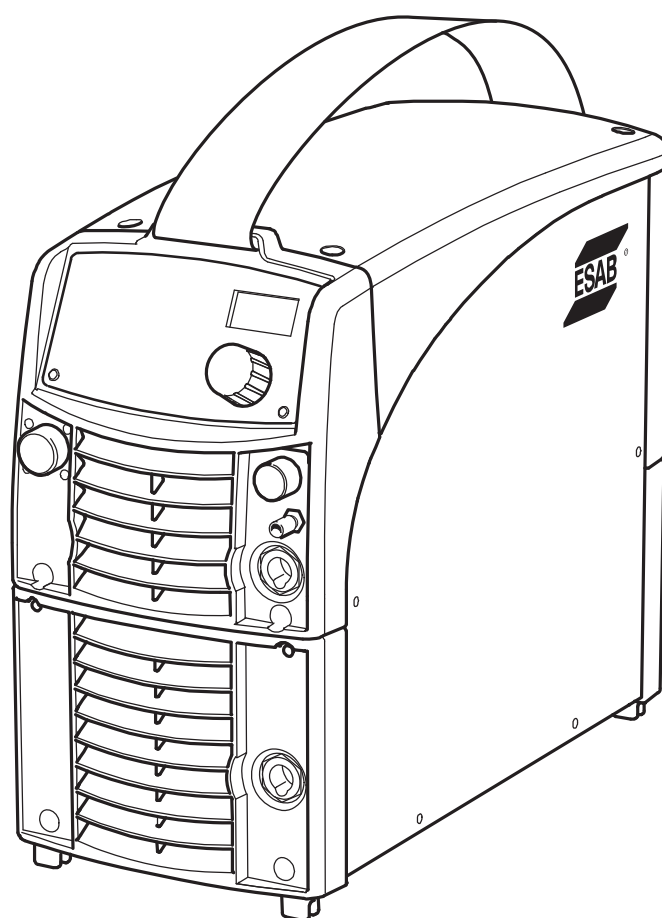


GB



Caddy®

# Tig 2200i AC/DC



AH 0834

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

Welding power source

### Type of designation etc.

Tig 2200i AC/DC, from serial number 803 xxx xxxx ( 2008 w.3)

Tig 2200i AC/DC is a member of the ESAB product family Caddy®

### Brand name or trade mark

ESAB

### Manufacturer or his authorised representatives 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 harmonised standard in force within the EEA has been used in the design:

EN 60974-1, Arc welding equipment – Part 1: Welding power sources

EN 60974-3, Arc welding equipment – Part 3: Arc striking and stabilizing devices

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

Flavio Santos  
Clarification

### Position

Global Director of Marketing  
and Product Portfolio Equipment

1 SAFETY .....	4
2 INTRODUCTION .....	6
2.1 Equipment .....	6
2.2 Control panels .....	6
3 TECHNICAL DATA .....	6
4 INSTALLATION .....	8
4.1 Lifting instructions .....	8
4.2 Location .....	8
4.3 Mains power supply .....	8
5 OPERATION .....	9
5.1 Connections and control devices .....	9
5.2 Key to symbols .....	9
5.3 Connection to cooling unit .....	10
5.4 Turning on the power source .....	10
6 MAINTENANCE .....	10
6.1 Inspection and cleaning .....	10
7 FAULT-TRACING .....	11
8 ORDERING SPARE PARTS .....	11
9 DISMANTLING AND SCRAPPING .....	11
ASSEMBLY INSTRUCTIONS .....	13
DIAGRAM .....	14
ORDER NUMBER .....	16
ACCESSORIES .....	17

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## 1 SAFETY

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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

This product is solely intended for arc welding.



## 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!**





**WARNING**


Do not use the power source for thawing frozen pipes.



**CAUTION**


Read and understand the instruction manual before installing or operating.



**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

The Tig 2200i AC/DC is a TIG welding power source, which can also be used for MMA welding. It can be used with alternating current (AC) or direct current (DC).

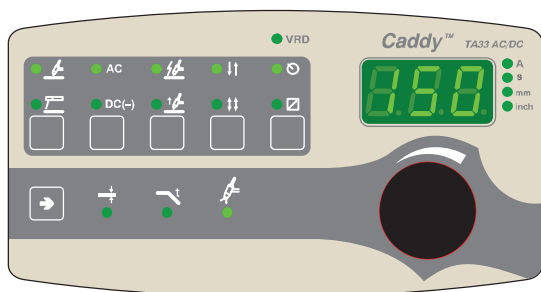
ESAB's accessories for the product can be found on page 17.

### 2.1 Equipment

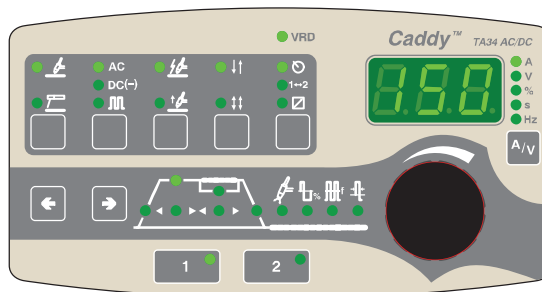
The power source is supplied with a 5 m return cable, 3 m mains cable, carrying strap, cable holder, shaft belt, instruction manual for power source and control panel.

### 2.2 Control panels

- TA33 AC/DC



- TA34 AC/DC



See the separate instruction manual for a detailed description of the control panels.

Instruction manuals in other languages can be downloaded from the website, [www.esab.com](http://www.esab.com).

## 3 TECHNICAL DATA

Tig 2200i AC/DC	
Mains voltage	230V, $\pm 10\%$ , 1~50/60 Hz
Mains supply	$Z_{max}$ 0.28 ohm
Primary current	
$I_{max}$ TIG	27 A
$I_{max}$ MMA	25 A
No load power demand when in the energy-saving mode, 6.5 min. after welding	40 W
Setting range	3 - 220 A
TIG AC* / DC	4 - 160 A
MMA	
Permissible load at TIG AC/DC	
20% duty cycle	220 A / 18.8 V
60% duty cycle	150 A / 16.0 V
100% duty cycle	140 A / 15.6 V
Permissible load at MMA	
30% duty cycle	160 A / 26.4 V
60% duty cycle	120 A / 24.8 V
100% duty cycle	110 A / 24.4 V

Tig 2200i AC/DC	
Ignition voltage ( $U_{pk}$ )	11.5 kV
Power factor at maximum current	
TIG	0.99
MMA	0.99
Efficiency at maximum current	
TIG	66 %
MMA	74 %
Open-circuit voltage TIG	55 - 60 V
Open-circuit voltage MMA	55 - 60 V
with VRD	< 35 V
Operating temperature	-10 to + 40° C
Transportation temperature	-20 to + 55° C
Constant sound pressure in open-circuit	< 70 dB (A)
Dimensions, l x b x h	418 x 188 x 345 mm
Weight	15,7 kg
Shielding gas	All types intended for TIG welding
max pressure	5 bar
Insulation class transformer	H
Enclosure class	IP 23
Application class	<b>S</b>

\*) The minimum current during AC welding depends on the alloy used for the aluminium plates and their surface cleanliness.

#### Duty cycle

The duty cycle refers to the time as a percentage of a ten-minute period that you can weld or cut at a certain load without overloading. The duty cycle is valid for 40° 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.

#### Application class

The symbol **S** indicates that the power source is designed for use in areas with increased electrical hazard.

#### Mains supply, $Z_{max}$

Maximum permissible line impedance of the network in accordance with IEC 61000-3-11.

## 4 INSTALLATION

The installation must be carried out by a professional.

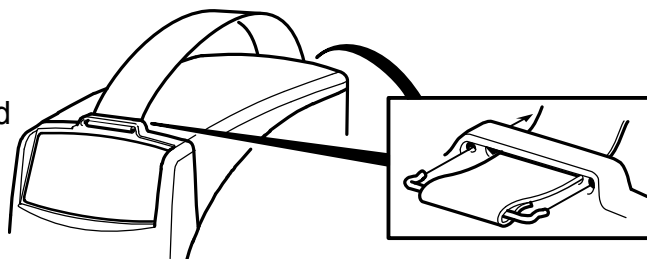


### CAUTION

This product is intended for industrial use. In a domestic environment this product may cause radio interference. It is the user's responsibility to take adequate precautions.

### 4.1 Lifting instructions

Install the carrying strap as illustrated and lift the power source by the strap.

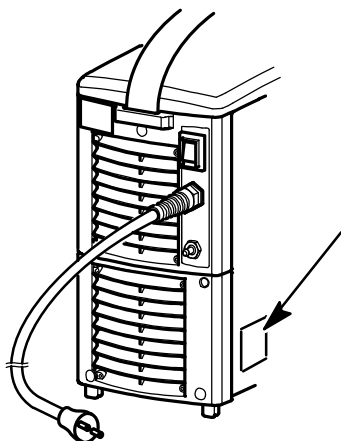


AH 0837

### 4.2 Location

Position the welding power source such that its cooling air inlets and outlets are not obstructed.

### 4.3 Mains power supply



Check that the welding power source is connected to the correct mains power supply voltage, and that it is protected by the correct fuse size. A protective earth connection must be made in accordance with regulations.

Rating plate with supply connection data

### Recommended fuse sizes and minimum cable area

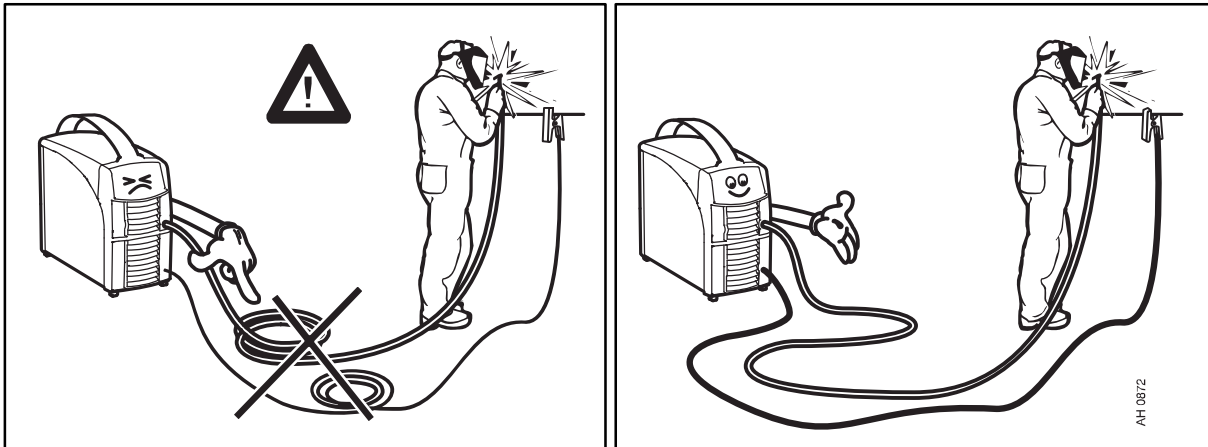
Tig 2200i AC/DC	TIG	MMA
Mains voltage	230 V $\pm$ 10 %, 1~	230 V $\pm$ 10 %, 1~
Mains frequency	50 Hz	50 Hz
Mains cable area mm <sup>2</sup>	3G2.5	3G2.5
Phase current I RMS	14 A	15 A
Fuse anti-surge type C MCB	16 A 16 A	16 A 16 A

NOTE! The mains cable areas and fuse sizes as shown above are in accordance with Swedish regulations. Use the welding power source in accordance with the relevant national regulations.



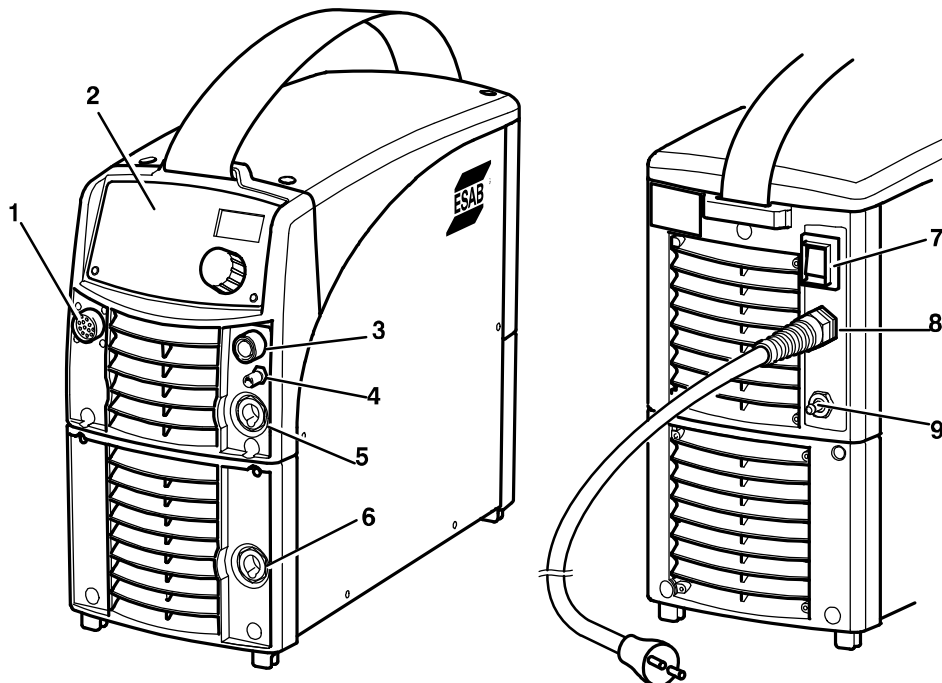
## 5 OPERATION

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



### 5.1 Connections and control devices

- |   |   |   |                              |
|---|---|---|------------------------------|
| 1 | Connection for remote control unit              | 6 | Connection for return cable  |
| 2 | Control panel (see separate instruction manual) | 7 | Mains switch                 |
| 3 | Connection for torch                            | 8 | Mains cable                  |
| 4 | Connection for gas to the torch                 | 9 | Connection for shielding gas |
| 5 | Connection for welding cable or torch           |   |                              |



### 5.2 Key to symbols

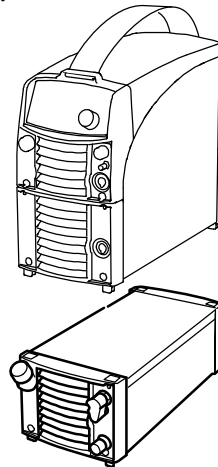


### 5.3 Connection to cooling unit

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.

See installation instructions on page 8.

NOTE! Coolant must be topped up if connecting a welding torch or connection cables that are 4 meters in length or longer.



### 5.4 Turning on the power source

Turn on the mains power by turning the mains switch to the "1" position.

Turn the unit off by turning the switch to the "0" position.

Whether the mains power supply is interrupted or the power unit is switched off in the normal manner, welding data will be stored so that it is available next time the unit is started.

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## 6 MAINTENANCE

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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

#### Power source

Check regularly that the welding power source is not clogged with dirt.

How often and which cleaning methods apply depend on: the welding process, arc times, placement, and the surrounding environment. It is normally sufficient to blow down the power source with dry compressed air (reduced pressure) once a year.

Clogged or blocked air inlets and outlets otherwise result in overheating.

#### Welding torch

The welding torch's wear parts should be cleaned and replaced at regular intervals in order to achieve trouble-free welding.

## 7 FAULT-TRACING

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

Type of fault	Corrective action
No arc.	<ul style="list-style-type: none"> <li>• Check that the mains power supply switch is turned on.</li> <li>• Check that the welding current supply and return cables are correctly connected.</li> <li>• Check that the correct current value is set.</li> <li>• Check the mains power supply.</li> </ul>
The welding current is interrupted during welding.	<ul style="list-style-type: none"> <li>• Check to see whether the thermal cut-outs have tripped.</li> <li>• Check the mains power supply fuses.</li> </ul>
The thermal cut-out trips frequently.	<ul style="list-style-type: none"> <li>• Make sure that you are not exceeding the rated data for the welding power source (i.e. that the unit is not being overloaded).</li> </ul>
Poor welding performance.	<ul style="list-style-type: none"> <li>• Check that the welding current supply and return cables are correctly connected.</li> <li>• Check that the correct current value is set.</li> <li>• Check that the correct electrodes are being used.</li> <li>• Check the gas flow.</li> </ul>

## 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.

Tig 2200i AC/DC is designed and tested in accordance with the international and European standards IEC/EN 60974-1, 60974-3 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.

## 9 DISMANTLING AND SCRAPPING

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.



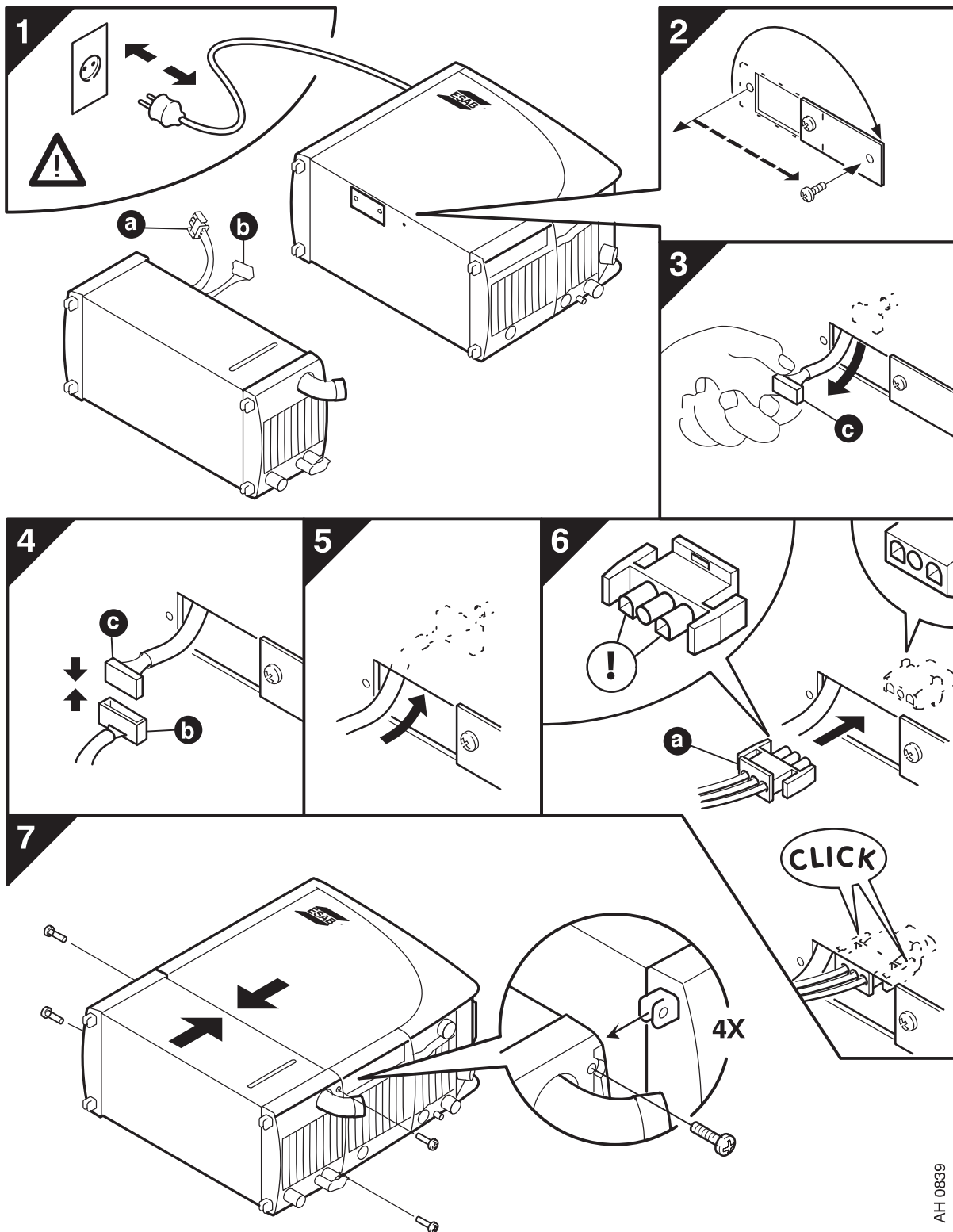
Dispose of electronic equipment at the recycling facility!

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.

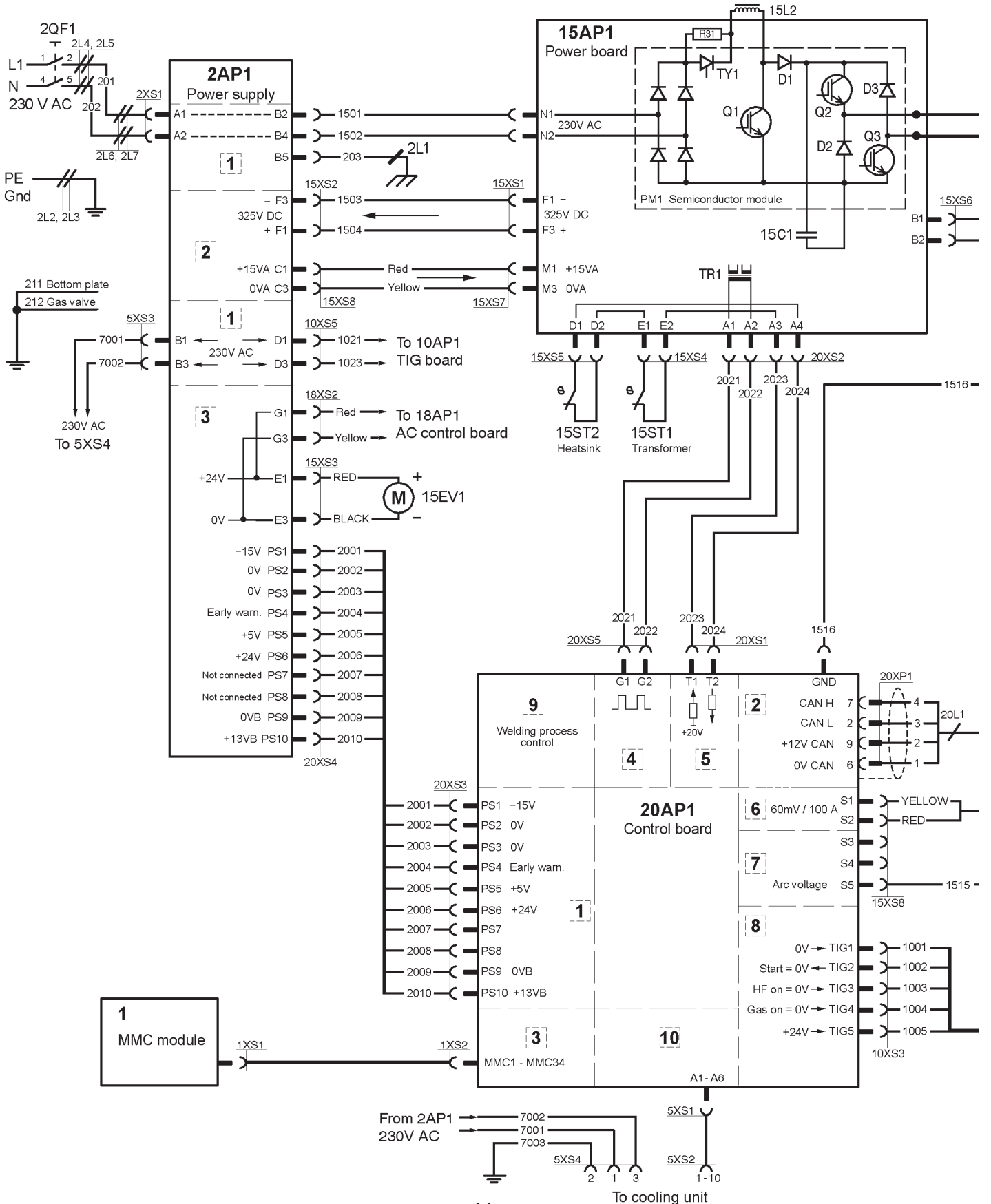
For further information contact the nearest ESAB dealer.

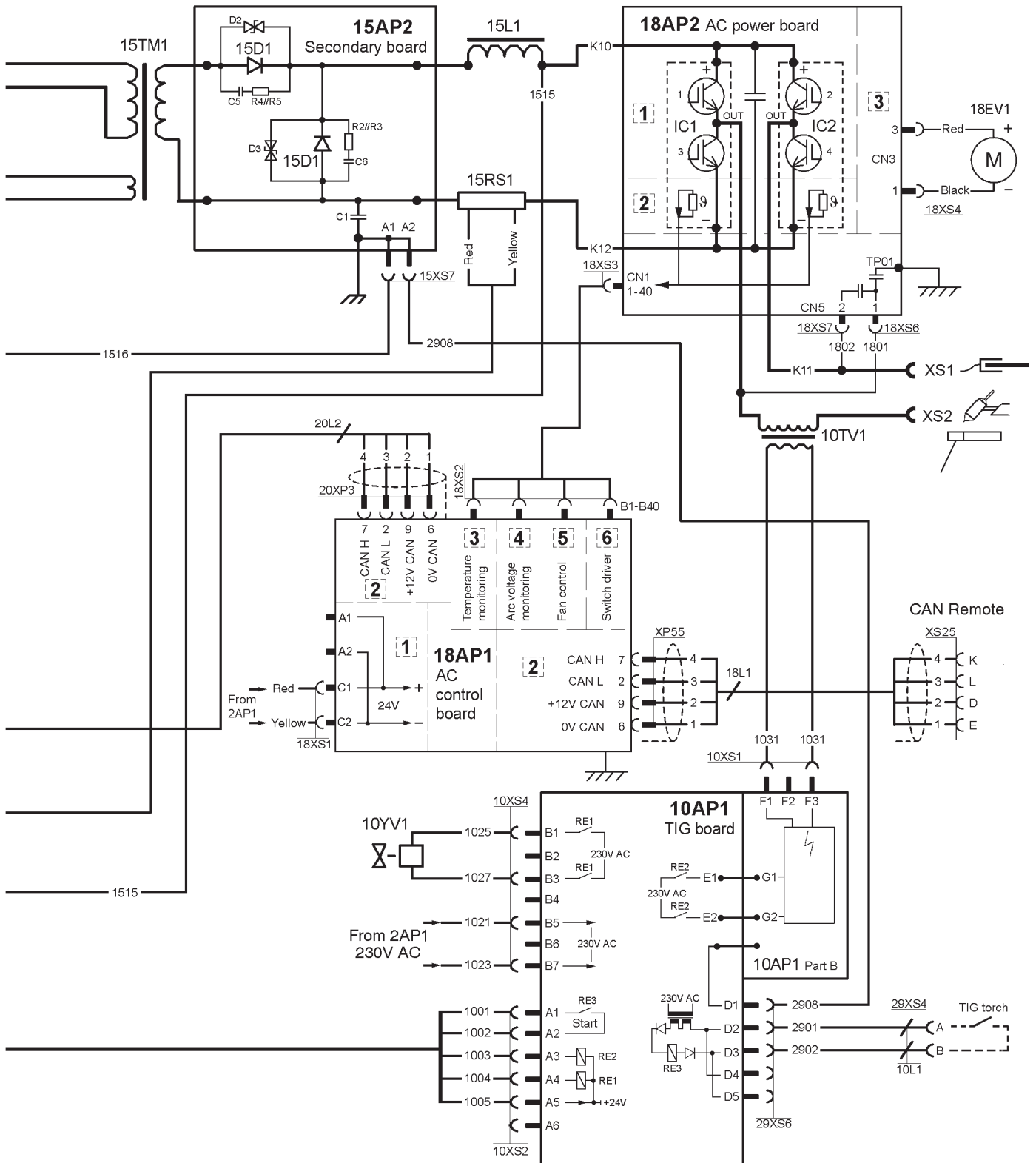




AH 0839

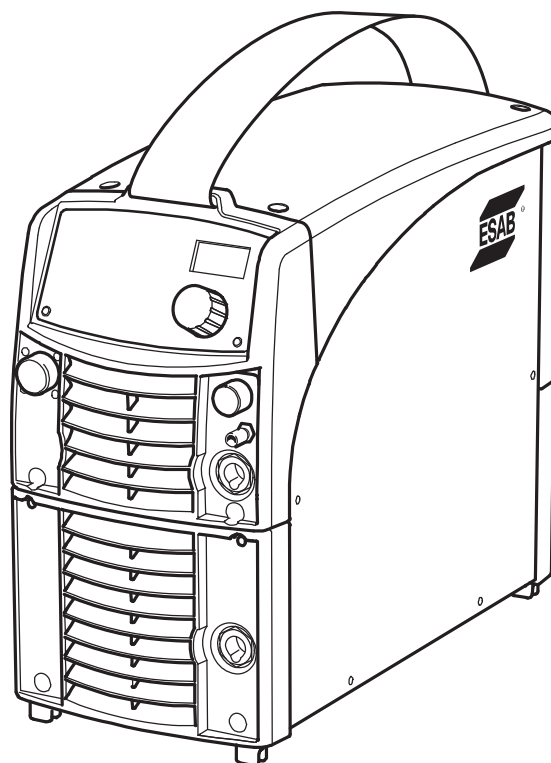
# Diagram





# Tig 2200i AC/DC

Order number



AH 0834






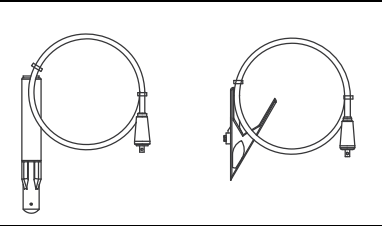
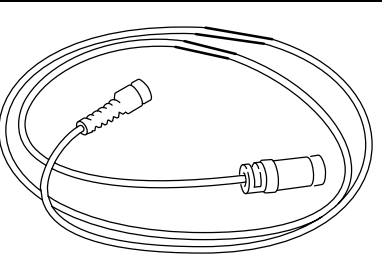
Ordering no.	Denomination	Type
0460 150 881	Welding power source	Caddy <sup>®</sup> Tig 2200i, AC/DC, TA33 AC/DC
0460 150 880	Welding power source	Caddy <sup>®</sup> Tig 2200i, AC/DC, TA34 AC/DC
0460 150 882	Welding power source	Caddy <sup>®</sup> Tig 2200i, AC/DC, TA33 AC/DC, MMA cable kit complete and Tig torch TXH201 4 m
0460 150 883	Welding power source	Caddy <sup>®</sup> Tig 2200i, AC/DC, TA34 AC/DC, MMA cable kit complete and Tig torch TXH201 4 m
0460 150 884	Welding power source	Caddy <sup>®</sup> Tig 2200i, AC/DC, TA34 AC/DC, MMA cable kit complete and Tig torch TXH251 4 m, Water cooler CoolMini, 2-wheel trolley

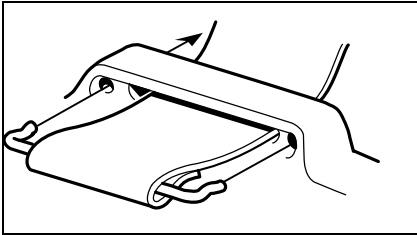
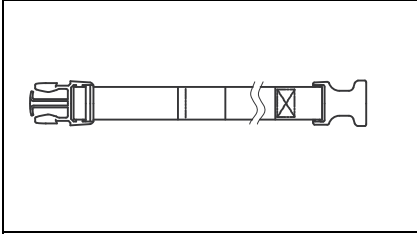
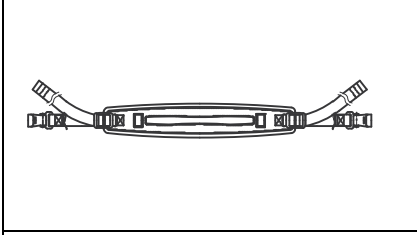
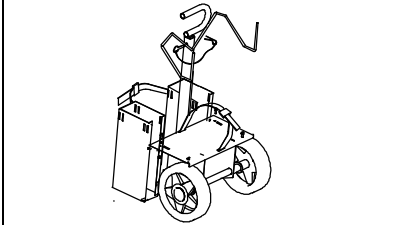

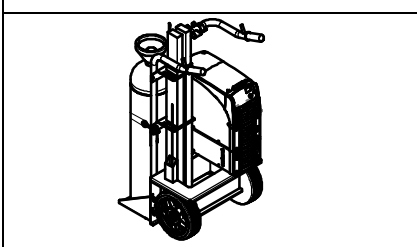
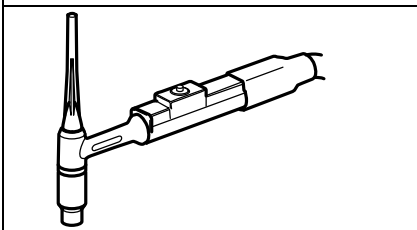
Filename	Denomination	Product
0459 839 013	Spare parts list	Welding power source, Tig 2200i AC/DC
0460 226	Instruction manual	Control panel, Caddy <sup>®</sup> TA33 AC/DC
0460 227	Instruction manual	Control panel, Caddy <sup>®</sup> TA34 AC/DC


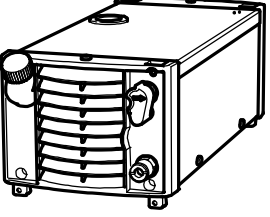
Instruction manuals and the spare parts list are available on the Internet at [www.esab.com](http://www.esab.com)



Accessories

	<p>Remote control adapter RA12 12 pole . . . . 0459 491 910 For analogue remote controls to CAN based equipment.</p>
	<p>Remote control unit MTA1 CAN . . . . . 0459 491 880 MIG/MAG: wire feed speed and voltage MMA: current and arc force TIG: current, pulse and background current</p>
	<p>Remote control unit M1 10Prog CAN . . . . . 0459 491 882 Choice of on of 10 programs MIG/MAG: voltage deviation TIG and MMA: current deviation</p>
	<p>Remote control unit AT1 CAN . . . . . 0459 491 883 MMA and TIG: current</p>
	<p>Remote control unit AT1 CF CAN . . . . . 0459 491 884 MMA and TIG: rough and fine setting of current.</p>
	<p>Welding cable kit . . . . . 0700 006 884 Return cable kit . . . . . 0700 006 885</p>
	<p>Remote cable CAN 4 pole - 12 pole 5 m . . . . . 0459 544 880 10 m . . . . . 0459 554 881 15 m . . . . . 0459 554 882 25 m . . . . . 0459 554 883 0.25 m . . . . . 0459 554 884</p>

	<p>Strap ..... 0460 265 001</p>
	<p>Cable holder ..... 0460 265 002</p>
	<p>Shoulder holder ..... 0460 265 003</p>
	<p>Trolley ..... for 5-10 litre gasbottle ..... 0459 366 885</p>
	<p>Trolley ..... for 20-50 litre gasbottle ..... 0459 366 887</p>
	<p>Trolley ..... for 20-50 litre gasbottle ..... 0460 330 880</p>
	<p>Tig torch TXH 201 4 m ..... 0700 300 552 Tig torch TXH 251w 4 m ..... 0700 300 561</p>

 A black foot pedal with a coiled black cable and a connector.	Foot pedal TI Foot CAN ..... 0460 315 880
 A black rectangular cooling unit with a front grille and a handle.	Cooling unit CoolMini ..... 0460 144 880

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