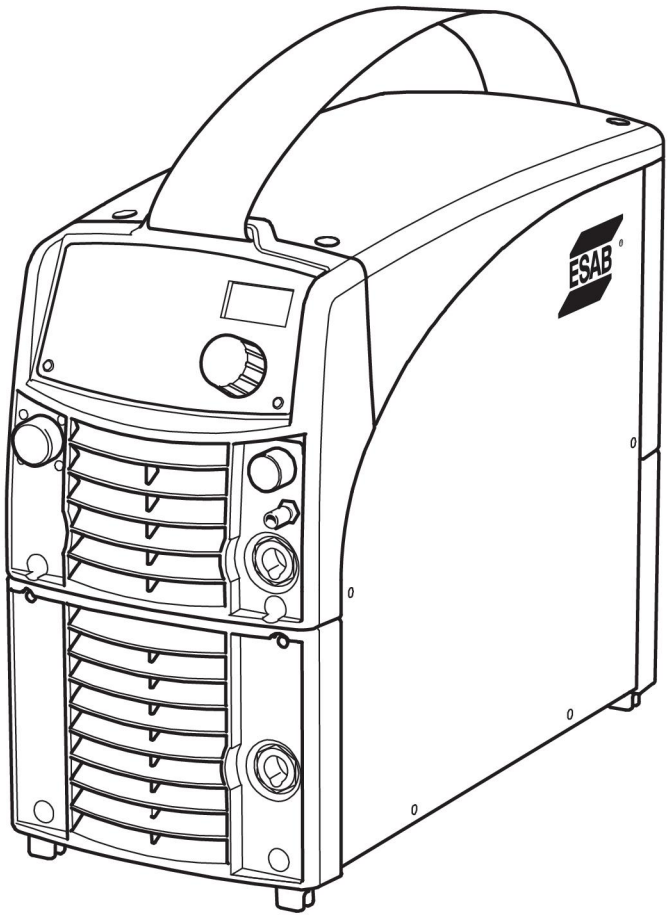
Caddy®

Tig 2200i AC/DC



Instruction manual

0460 225 301 GB 20220103

Valid for: serial no. 711-, 747-xxx-xxxx

EU DECLARATION OF CONFORMITY

According to:

The Low Voltage Directive 2014/35/EU; The EMC Directive 2014/30/EU;
The RoHS Directive 2011/65/EU; The Ecodesign Directive 2009/125/EC

Type of equipment

Arc welding power source

Type designation

Tig 2200i AC/DC with serial number from 711 xxx xxxx (2017 w11)

Brand name or trademark

ESAB

Manufacturer or his authorised representative established within the EEA

ESAB AB
Lindholmsallén 9, Box 8004, SE-402 77 Göteborg, Sweden
Phone: +46 31 50 90 00, www.esab.com

The following EN standards and regulations in force within the EEA has been used in the design:

EN IEC 60974-1:2018/A1:2019	Arc Welding Equipment - Part 1: Welding Power Sources
EN IEC 60974-3: 2019	Arc Welding Equipment - Part 3: Arc striking and stabilizing devices
EN 60974-10:2014/A1:2015,	Arc Welding Equipment - Part 10: Electromagnetic Compatibility (EMC)
EU no. 2019/1784	Ecodesign requirements for welding equipment pursuant to Directive 2009/125/EC

Additional Information:

Restrictive use, Class A equipment, intended for use in locations other than residential.
IEC EN draft standard 26/708/CDV have been used to establish EU no. 2019/1784 data.
Tig 2200i AC/DC is part of the Esab Caddy product family.

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

Place/Date **Signature**

Göteborg
2020-12-16

Pedro Muniz
Standard Equipment Director

CE mark in 2020

1 SAFETY

1.1 Meaning of symbols

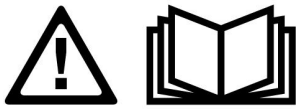
As used throughout this manual: Means Attention! Be Alert!

DANGER!
Means immediate hazards which, if not avoided, will result in immediate, serious personal injury or loss of life.

WARNING!
Means potential hazards which could result in personal injury or loss of life.

CAUTION!
Means hazards which could result in minor personal injury.

WARNING!
Before use, read and understand the instruction manual and follow all labels, employer´s safety practices and Safety Data Sheets (SDSs).



1.2 Safety precautions

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 or other applicable operation of the equipment
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 or work is started with the equipment
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.

ELECTRIC SHOCK - Can kill

- Install and ground the unit in accordance with instruction manual.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- Insulate yourself from work and ground.
- Ensure your working position is safe

ELECTRIC AND MAGNETIC FIELDS - Can be dangerous to health

- Welders having pacemakers should consult their physician before welding. EMF may interfere with some pacemakers.
- Exposure to EMF may have other health effects which are unknown.
- Welders should use the following procedures to minimize exposure to EMF:
  - Route the electrode and work cables together on the same side of your body. Secure them with tape when possible. Do not place your body between the torch and work cables. Never coil the torch or work cable around your body. Keep welding power source and cables as far away from your body as possible.
  - Connect the work cable to the workpiece as close as possible to the area being welded.

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.

NOISE - Excessive noise can damage hearing

Protect your ears. Use earmuffs or other hearing protection.

MOVING PARTS - Can cause injuries

- Keep all doors, panels and covers closed and securely in place. Have only qualified people remove covers for maintenance and troubleshooting as necessary. Reinstall panels or covers and close doors when service is finished and before starting engine.
- Stop engine before installing or connecting unit.
- Keep hands, hair, loose clothing and tools away from moving parts.

FIRE HAZARD

- Sparks (spatter) can cause fire. Make sure that there are no inflammable materials nearby.
- Do not use on closed containers.

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

PROTECT YOURSELF AND OTHERS!

CAUTION!

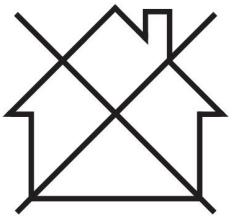
This product is solely intended for arc welding.

WARNING!

Do not use the power source for thawing frozen pipes.

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.



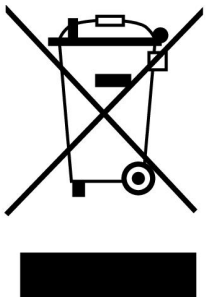
NOTE!

Dispose of electronic equipment at the recycling facility!

In observance of European Directive 2012/19/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.



ESAB has an assortment of welding accessories and personal protection equipment for purchase. For ordering information contact your local ESAB dealer or visit us on our website.

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).

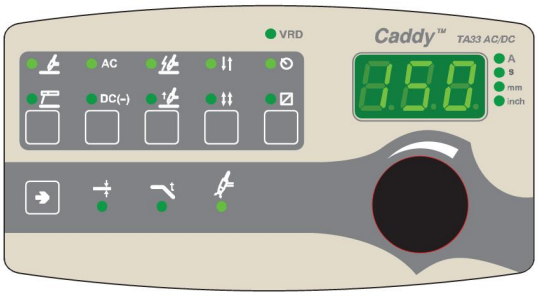
ESAB accessories for the product can be found in the "ACCESSORIES" chapter of this manual.

2.1 Equipment

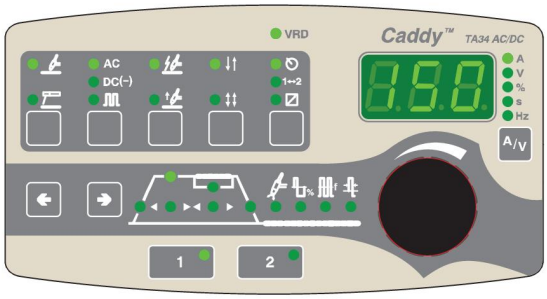
The power source is supplied with a 5 m return cable, 3 m mains cable, carrying strap, cable holder, shaft belt, instruction manual for power source and control panel.

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 Internet: www.esab.com

3 TECHNICAL DATA

Tig 2200i AC/DC, From serial no. 747-xxx-xxxx	
Mains voltage	230V, 10%, 1~ 50/60 Hz
Primary current I_{max}:	
MMA	25 A
TIG	28 A
No-load power (idle state)	41 W
Setting range:	
MMA	4 A/20 V–160 A/26.4 V
TIG, AC* / DC	3 A/10 V–220 A/18.8 V
Values of the conventional load:	
TIG (duty cycle at 40 °C/104 °F ambient temperature):	
20%	220 A / 18.8 V
60%	150 A / 16.0 V
100%	140 A / 15.6 V
MMA (duty cycle at 40 °C/104 °F ambient temperature):	
30%	160 A / 26.4 V
60%	120 A / 24.8 V
100%	110 A / 24.4 V
Power factor at maximum current (I_2):	
MMA	0.99
TIG	0.99
Efficiency at maximum current (I_2):	
MMA	73 %
TIG	65 %
Apparent power at max current (I_2)	6.4 kVA
Active power at max current (I_2)	6.3 KW
$\mathbf{U_0}$ No-load voltage	58 V
$\mathbf{U_r}$ No-load voltage with VRD	25 V
$\mathbf{U_{pk}}$ (with arc ignition unit, Tig)	10.7 kV
Working temperature	-10 to +40 °C (+14 to +104 °F)
Continual sound pressure at no-load	< 70 dB(A)
Dimensions l×w×h	418×188×345 mm (16.46×7.40×13.58 in.)
Dimensions l×w×h with cooler	418×188×496 mm (16.46×7.40×19.53 in.)
Weight	15.7 kg (34.61 lbs)
Weight with cooler	22.1 kg (48.72 lbs)
Isolation class transformer	H
Enclosure class	IP23

Tig 2200i AC/DC, From serial no. 747-xxx-xxxx	
Application class	S
Restrictive use	Class A

*) 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 / 104 °F, or below.

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 intended 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.

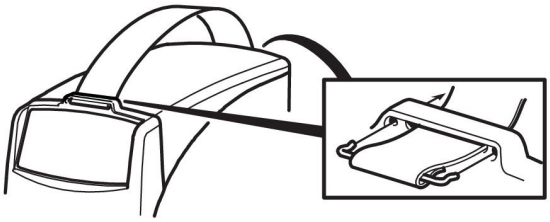
4 INSTALLATION

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.



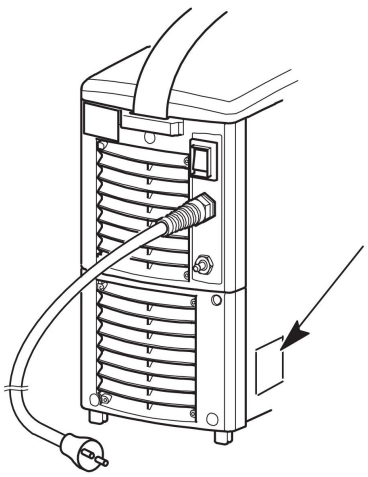
4.2 Location

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

4.3 Mains power supply

NOTE!
Mains supply requirements

This equipment complies with IEC 61000-3-12 provided that the short-circuit power is greater than or equal to S_{scmin} at the interface point between the user's supply and the public system. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a short-circuit power greater than or equal to S_{scmin}. Refer to the technical data in the TECHNICAL DATA chapter.



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

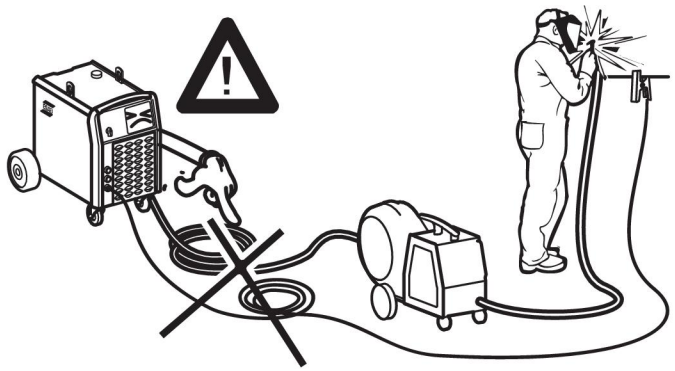
Recommended fuse sizes and minimum cable areas

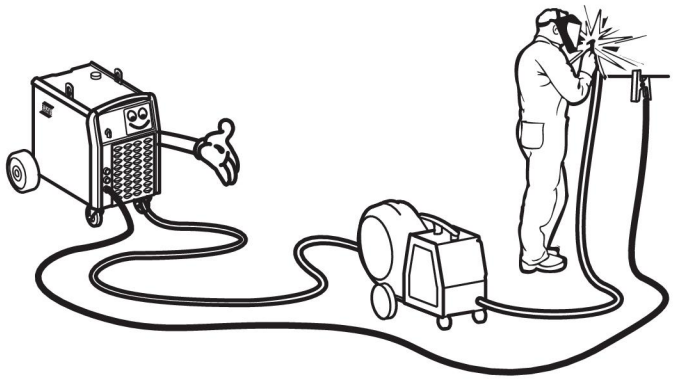
Tig 2200i AC/DC		
Mains voltage		230 V ±10%, 1~ 50/60 Hz
Mains cable area		3×2.5 mm^2
Primary current I_{max}		28 A
Phase current I_{1eff}		15 A
Fuse	Anti-surge	16 A
	Type C MCB	16 A

NOTE!
The mains cable areas and fuse sizes as shown above are in accordance with Swedish regulations. For other regions, supply cables must be suitable for the application and meet local and national regulations.

5 OPERATION

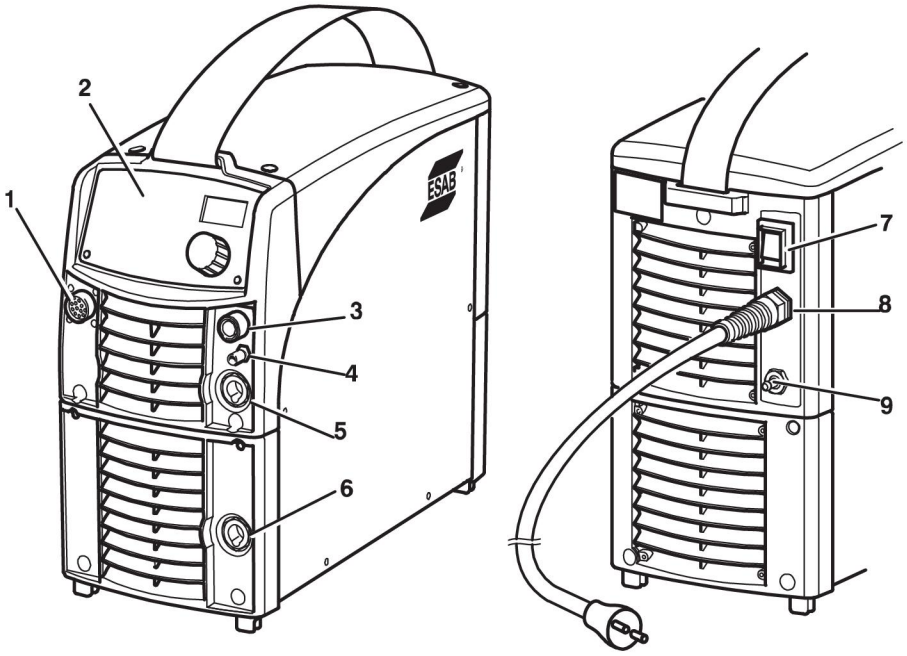
General safety regulations for handling the equipment can be found in the "SAFETY" chapter of this manual. Read it through before you start using the equipment!





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


MMA


TIG

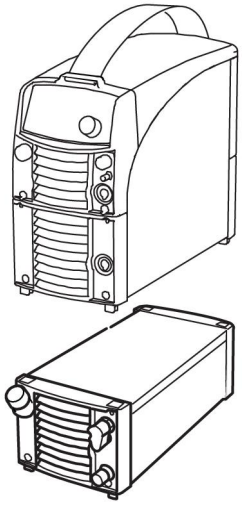

Return clamp

5.3 Connection to cooling unit

Only those persons who have appropriate electrical knowledge (authorised personnel) may remove the safety plates to connect or carry out service, maintenance or repair work on welding equipment.

See installation instructions in chapter "INSTALLATION".

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.

6 MAINTENANCE

NOTE!
Regular maintenance is important for safe and reliable operation.

Only those persons who have appropriate electrical knowledge (authorised personnel) may remove the safety plates to connect or carry out service, maintenance or repair work on welding equipment.

CAUTION!
All warranty undertakings from the supplier cease to apply if the customer attempts any work to rectify any faults in the product during the warranty 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 wear parts of the welding torch should be cleaned and replaced at regular intervals in order to achieve trouble-free wire feed. Blow the wire guide clean regularly and clean the contact tip.

7 TROUBLESHOOTING

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

Type of fault	Corrective action
No arc.	• Check that the mains power supply switch is turned on. • Check that the welding current supply and return cables are correctly connected. • Check that the correct current value is set. • Check the mains power supply.
The welding current is interrupted during welding.	• Check to see whether the thermal cut-outs have tripped. • Check the mains power supply fuses.
The thermal cut-out trips frequently.	• Make sure that you are not exceeding the rated data for the welding power source (i.e. that the unit is not being overloaded).
Poor welding performance.	• Check that the welding current supply and return cables are correctly connected. • Check that the correct current value is set. • Check that the correct electrodes are being used. • Check the gas flow.

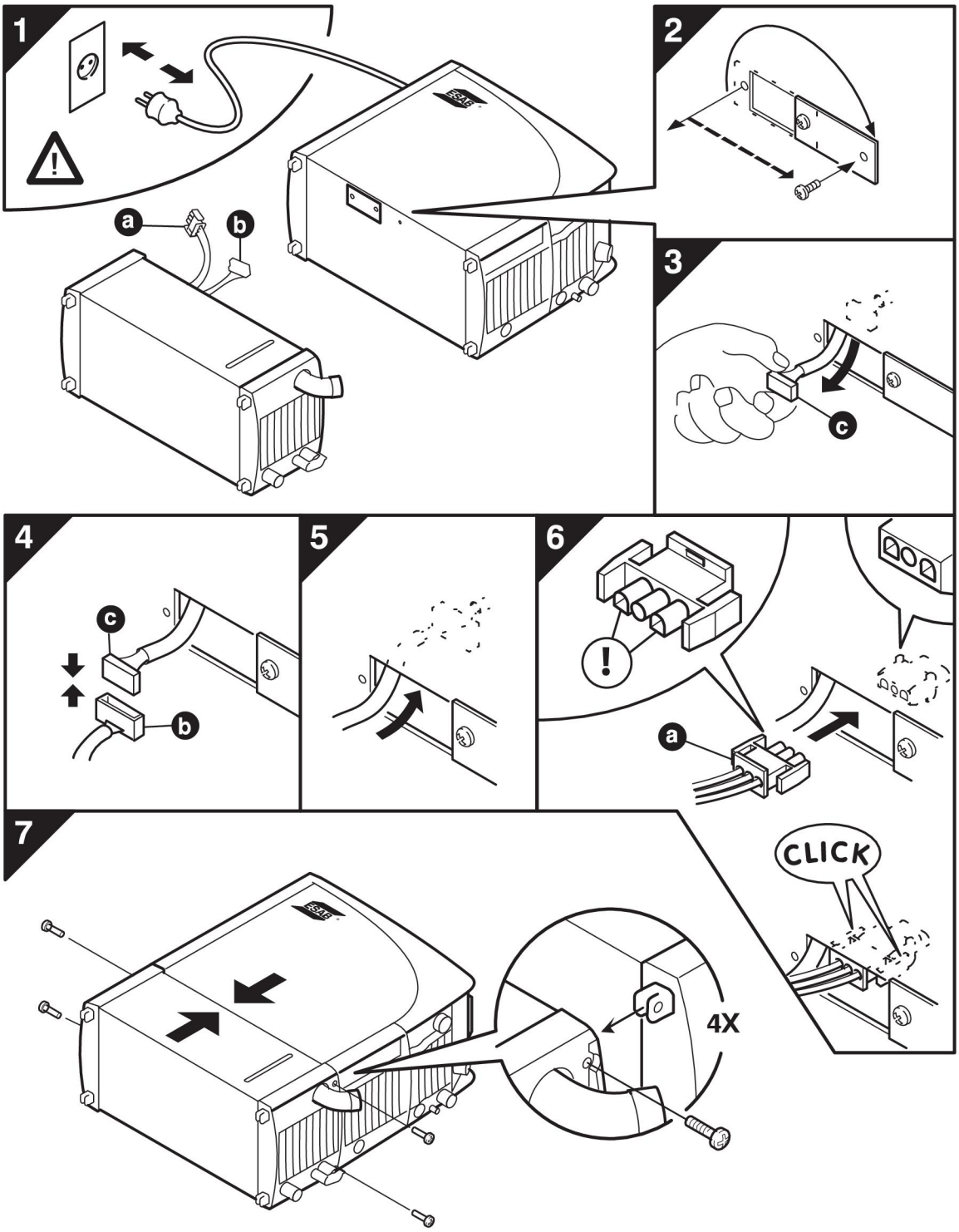
8 ORDERING SPARE PARTS

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

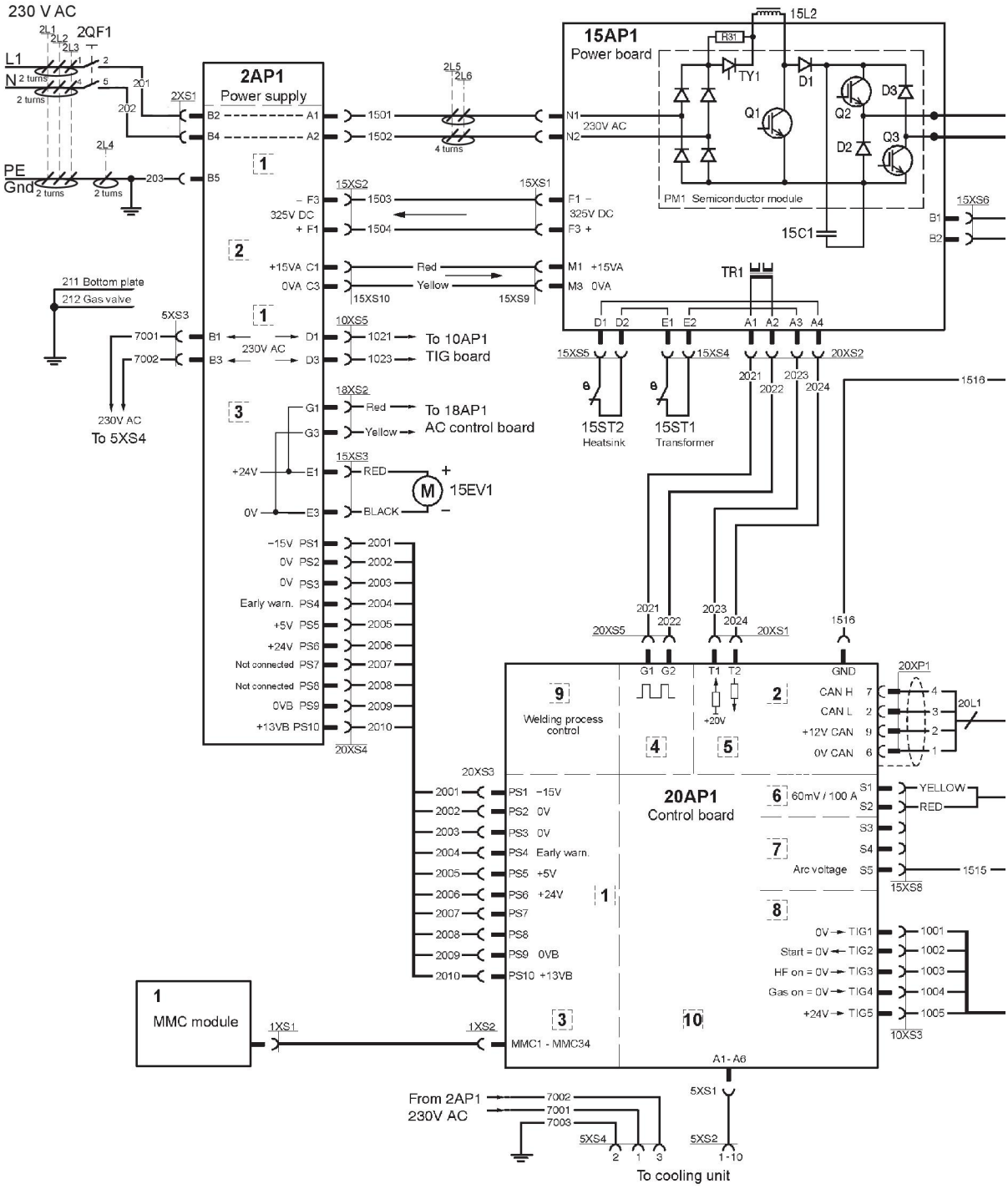
Tig 2200i AC/DC is designed and tested in accordance with the international and European standards **IEC/EN 60974-1**, **60974-3** and **IEC/EN 60974-10 Class A**. It is the obligation of the service unit which has carried out the service or repair work to make sure that the product still conforms to the mentioned standards.

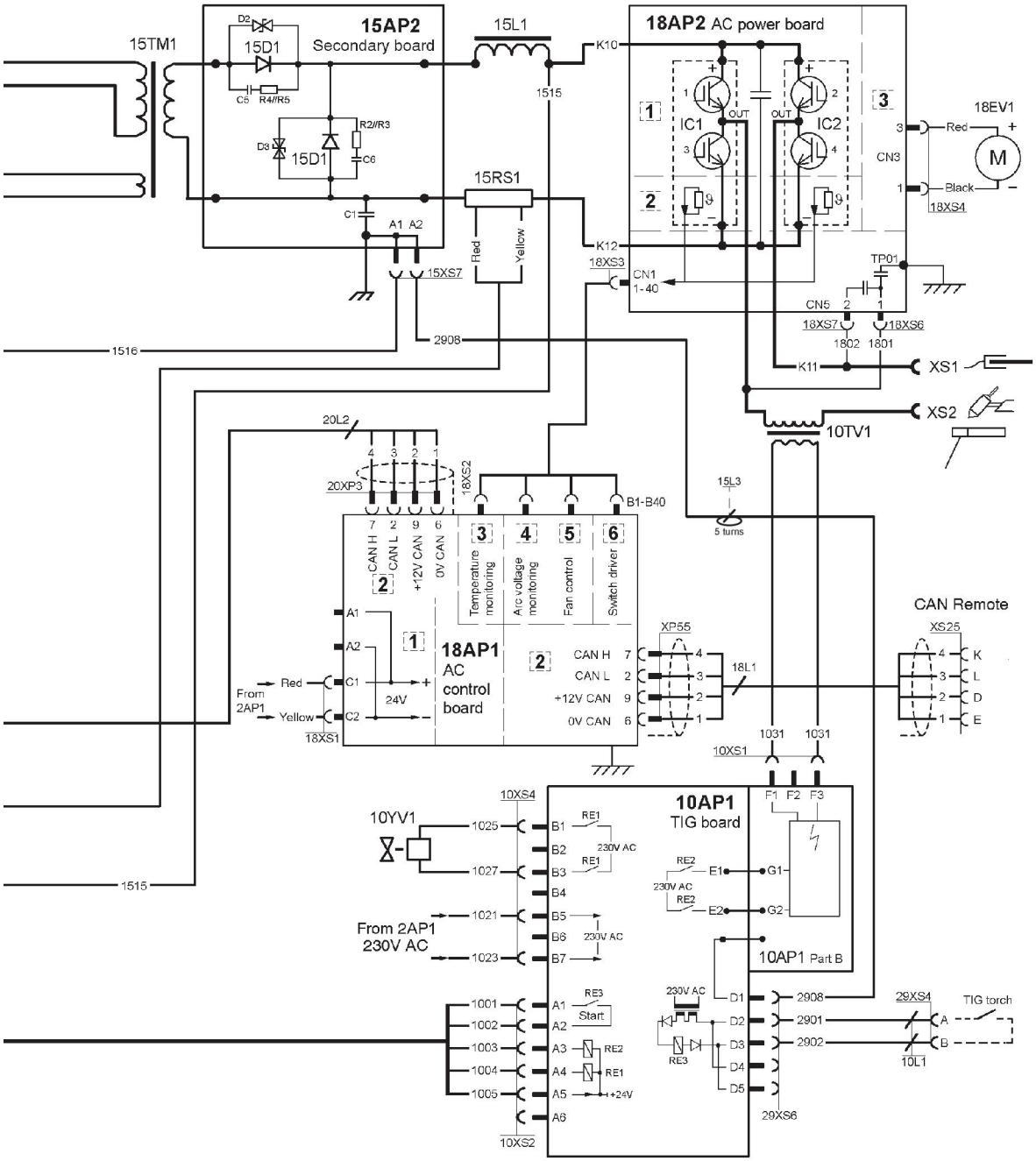
Spare parts and wear parts can be ordered through your nearest ESAB dealer, see esab.com. When ordering, please state product type, serial number, designation and spare part number in accordance with the spare parts list. This facilitates dispatch and ensures correct delivery.

ASSEMBLY INSTRUCTIONS

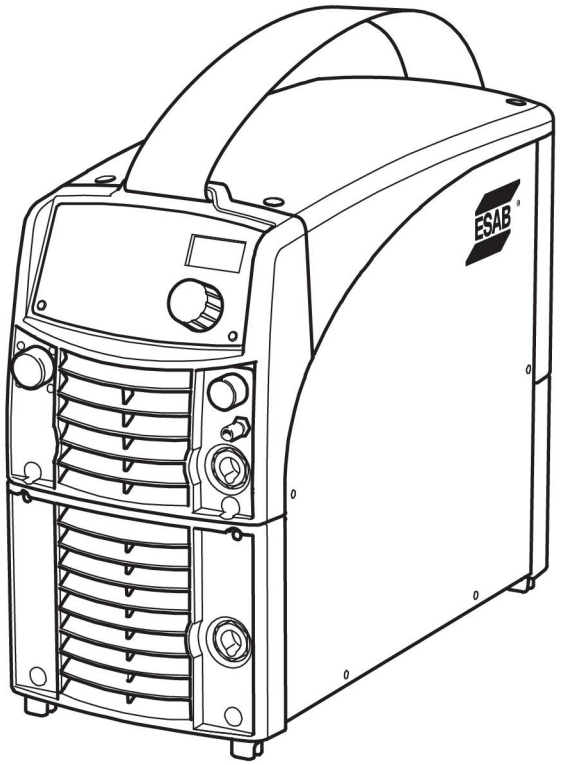


DIAGRAM




15AP2
Secondary board
15TM1
15D1
15L1
15RS1
18AP2 AC power board
IC1
IC2
18EV1
Red
Black
M
CN3
18XS4
TP01
CN5
18XS7
18XS6
1802
1801
K10
K11
K12
XS1
XS2
10TV1
15XS7
18XS3
CN1
1-40
1516
2908
1515
20L2
20XP3
18XS2
B1-B40
15L3
5 turns
CAN H
CAN L
+12V CAN
0V CAN
Temperature monitoring
Arc voltage monitoring
Fan control
Switch driver
18AP1
AC control board
24V
From 2AP1
18XS1
XP55
18L1
CAN Remote
XS25
1031
10XS1
10AP1
TIG board
10AP1 Part B
10XS4
10YV1
From 2AP1
230V AC
Start
10XS2
29XS6
29XS4
TIG torch
10L1

ORDERING NUMBERS

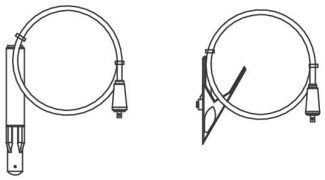
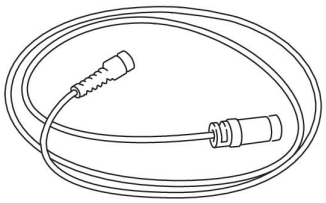


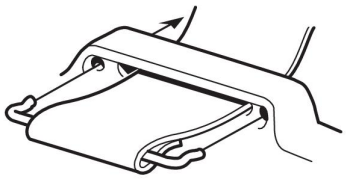
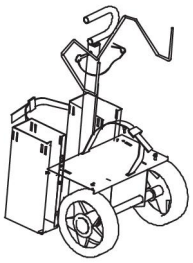
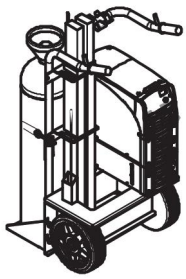
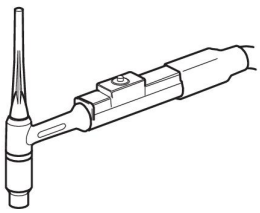
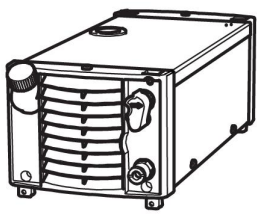
Ordering no.	Denomination	Type
0460 150 881	Welding power source	Caddy® Tig 2200i, AC/DC, TA33 AC/DC
0460 150 880	Welding power source	Caddy® Tig 2200i, AC/DC, TA34 AC/DC
0460 150 882	Welding power source	Caddy® Tig 2200i, AC/DC, TA33 AC/DC, MMA cable kit complete and Tig torch TXH201 4 m
0460 150 883	Welding power source	Caddy® Tig 2200i, AC/DC, TA34 AC/DC, MMA cable kit complete and Tig torch TXH201 4 m
0460 150 884	Welding power source	Caddy® 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® TA33 AC/DC
0460 227	Instruction manual	Control panel, Caddy® TA34 AC/DC

Instruction manuals and the spare parts list are available on the Internet at: www.esab.com

ACCESSORIES

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

0460 265 001	Strap	
0460 265 002	Cable holder	
0460 265 003	Shoulder holder	
0459 366 885	Trolley for 5-10 litre gasbottle	
0460 330 880	Trolley for 20-50 litre gasbottle	
0700 300 552 0700 300 561	Tig torch TXH 201 4 m Tig torch TXH 251w 4 m	
0460 315 880	Foot pedal TI Foot CAN	
0460 144 880	Cooling unit CoolMini	

A **WORLD** OF **PRODUCTS** AND **SOLUTIONS.**

For contact information visit esab.com

ESAB AB, Lindholmsallén 9, Box 8004, 402 77 Gothenburg, Sweden, Phone +46 (0) 31 50 90 00

http://manuals.esab.com