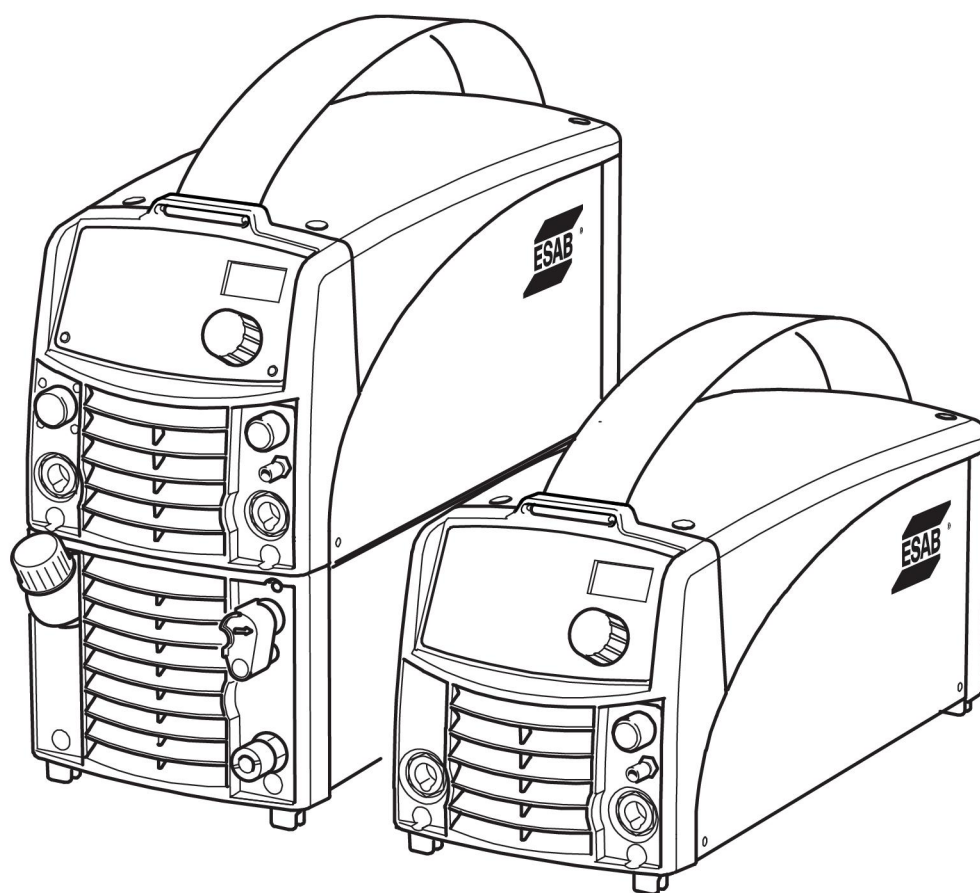




Caddy®

Tig 1500i, Tig 2200i



Instruction manual



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 1500i

with serial number from 711 xxx xxxx

Tig 2200iw

with serial number from 747 xxx xxxx

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 60974-2:2019	Arc welding equipment - Part 2: Liquid cooling systems
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 1500i and Tig 2200iw are 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

Göteborg
2020-12-17

Signature

Pedro Muniz
Standard Equipment Director

CE mark in 2020

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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!**

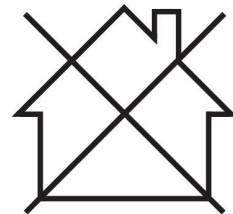
This product is solely intended for arc welding.

**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 1500i / 2200i is a TIG welding power source, which can also be used for MMA welding. It supplies direct current (DC).

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

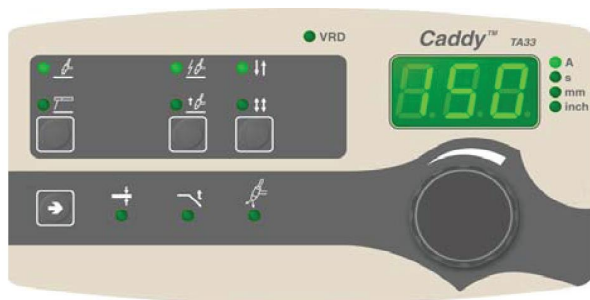
2.1 Equipment

The power source is supplied with a 3 m welding cable complete with a TIG-torch, 3 m return cable, 3 m mains cable, instruction manual for power source and control panel, see chapter "ORDERING INFORMATION".

Instruction manuals in other languages can be downloaded from the Internet: www.esab.com

2.2 Control panels

TA33



TA34



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

3 TECHNICAL DATA

	Tig 1500i	Tig 2200i/2200iw
Mains voltage	230V, 10%, 1~ 50/60 Hz	230V, 10%, 1~ 50/60 Hz
Mains supply	$Z_{\max}$ 0.35 ohm	$Z_{\max}$ 0.31 ohm
Primary current		
$I_{\max}$ TIG	14 A	25 A
$I_{\max}$ MMA	22 A	26 A
No-load power demand when in the energy-saving mode, 6.5 min. after welding	30 W	31 W
Setting range		
TIG	3 A - 150 A	3 A - 220 A
MMA	4 A - 150 A	4 A - 170 A
Ignition voltage (Upk)	11.5 kV	11.5 kV
Permissible load at TIG		
20% duty cycle	-	220 A / 18.8 V
25% duty cycle	150 A / 16.0 V	-
60% duty cycle	120 A / 14.8 V	150 A / 16.0 V
100% duty cycle	110 A / 14.4 V	110 A / 14.4 V
Permissible load at MMA		
25% duty cycle	150 A / 26.0 V	170 A / 26.8 V
60% duty cycle	100 A / 24.0 V	130 A / 25.2 V
100% duty cycle	90 A / 23.6 V	110 A / 24.4 V
Power factor at maximum current		
TIG	0.98	0.99
MMA	0.99	0.99
Efficiency at maximum current		
TIG	77 %	73.0 %
MMA	80 %	77.9 %
Apparent power at maximum current		5.9 kVA
Active power at maximum current		5.9 kW
Open-circuit voltage		
without VRD	55-60 V	55-60 V
with VRD from serial number 843 & 927	< 35 V	< 35 V
Open-circuit voltage from serial number 803	72 V	72 V
No-load voltage from serial number 747		
without VRD, U_0		56 V

	Tig 1500i	Tig 2200i/2200iw
with VRD, U_r		22 V
U_{pk} (with arc ignition unit, Tig) from serial number 747		10.7 kV
Operating temperature	-10 to + 40°C	-10 to + 40°C
Transportation temperature	-20 to + 55°C	-20 to + 55°C
Constant sound pressure in open-circuit	< 70 dB (A)	< 70 dB (A)
Dimensions, l × b × h		
without the cooling unit	-	418 × 188 × 208 mm
including the cooling unit	418 × 188 × 208 mm	418 × 188 × 345 mm
Weight	9.2 kg	
Power source including cooling unit		14 kg
Power source including cooling unit, In delivery mode		19.4 kg
Shielding gas		
max pressure	All types intended for TIG welding 5 bar	All types intended for TIG welding 5 bar
Insulation class transformer	H	H
Enclosure class	IP 23	IP 23
Application class	S	S

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.

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.



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.

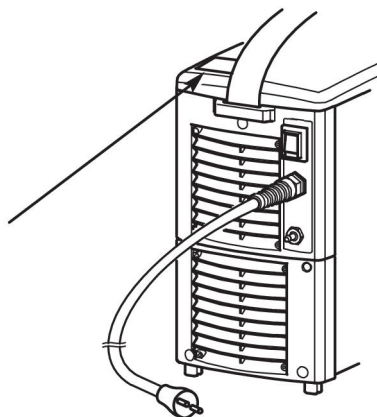
4.1 Location

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

4.2 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



	Tig 1500i		Tig 2200i/2200iw	
	TIG	MMA	TIG	MMA
Mains voltage	230 V $\pm$ 10%, 1~	230 V $\pm$ 10%, 1~	230 V $\pm$ 10%, 1~	230 V $\pm$ 10%, 1~
Mains frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Mains cable area	3G2.5 mm ²	3G2.5 mm ²	3G2.5 mm ²	3G2.5 mm ²
Phase current I_{1eff}	9 A	11 A	11 A	14 A
Fuse				
anti-surge	16 A	16 A	16 A	16 A
type C MCB	13 A	13 A	16 A	16 A

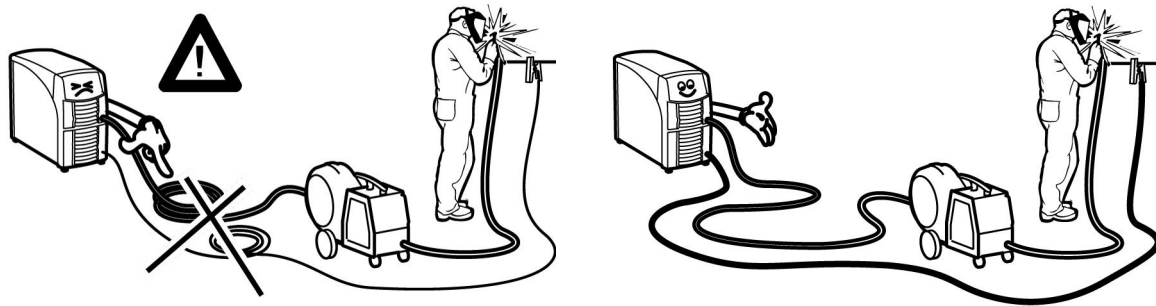


NOTE!

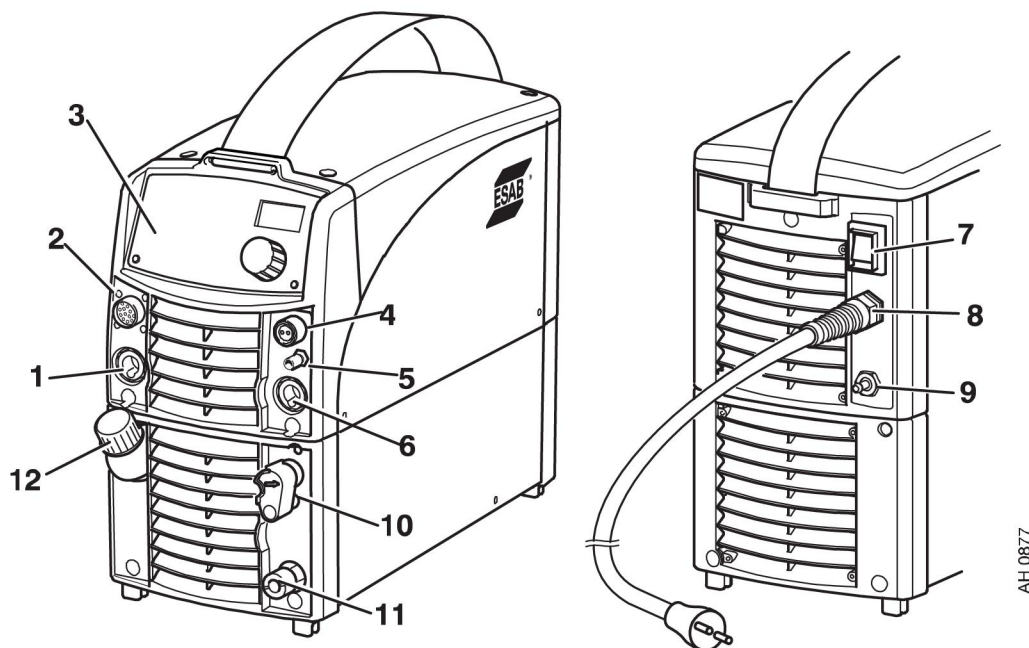
The mains cable areas and fuse sizes as shown above are in accordance with Swedish regulations. For other regions, supply cables must be suitable for the application and meet local and national regulations.

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 the return cable for TIG. MMA: for the return cable or the welding cable. | 7. Mains switch |
| 2. Connection for the remote control unit, only for TA34 | 8. Mains cable |
| 3. Control panel (see separate instruction manual) | 9. Connection for shielding gas |
| 4. Connection for the TIG-torch | 10. Connection BLUE, with ELP* for cooling water from the cooling unit |
| 5. Connection for gas to the TIG-torch | 11. Connection RED for cooling water to the cooling unit. |
| 6. Connection (-) for the TIG-torch MMA: return cable or welding cable | 12. Refilling of cooling water |

* ESAB Logic Pump, see section "Water connection".

5.2 Key to symbols



MMA



TIG

5.3 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.

5.4 TIG-welding

Before using the Tig 1500i/2200i for TIG welding it must be equipped with:

- a TIG torch
- a cylinder of suitable welding gas
- a welding gas regulator (suitable gas regulator)
- tungsten electrodes
- suitable filler metal, if necessary

5.5 MMA-welding

Connection of welding and return cable

The welding power source has two terminals, one plus and one minus pole, for the connection of the welding and the return cable. Connect the welding cable to the pole indicated on the package of the electrode to be used.

Connect the return cable to the other terminal. Fit the earth clamp of the return cable to the work-piece and make sure there is good contact between the work-piece and the return cable terminal on the welding power source.

5.6 Overheating protection

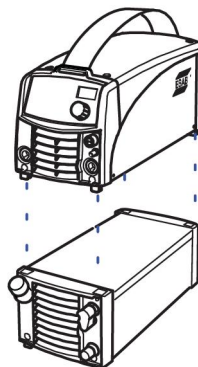
The power source has two thermal overload trips which operate if the internal temperature becomes too high. A fault code is shown in the panel. They reset automatically when the temperature has fallen.

5.7 Connection to cooling unit

(only valid for Caddy Tig 2200i)

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 the installation instructions in the instruction manual for the cooling unit.



5.8 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 and 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 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.	• 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). • Make sure that the power source is clean.
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!

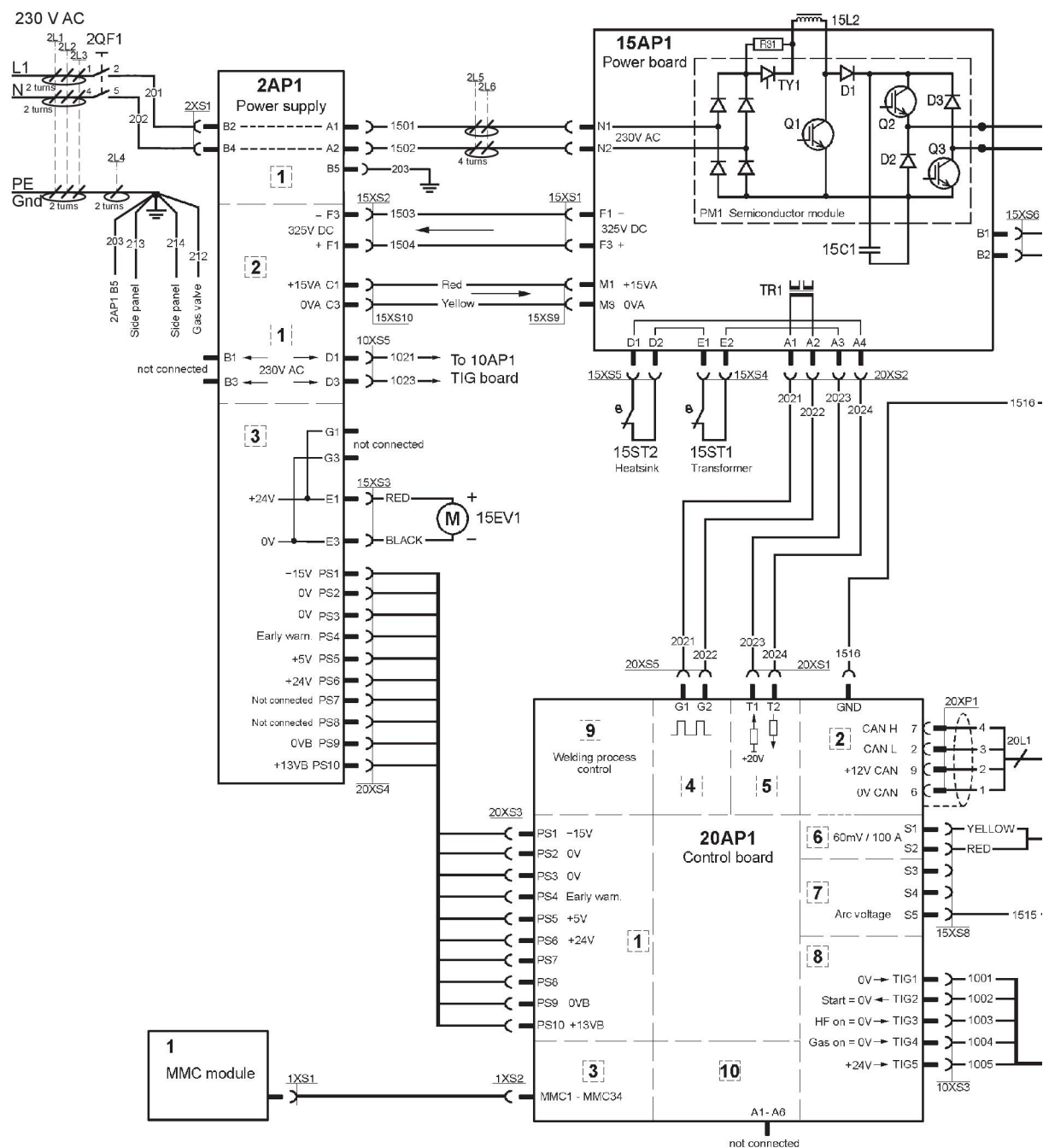
Repair and electrical work should be performed by an authorised ESAB service technician. Use only ESAB original spare and wear parts.

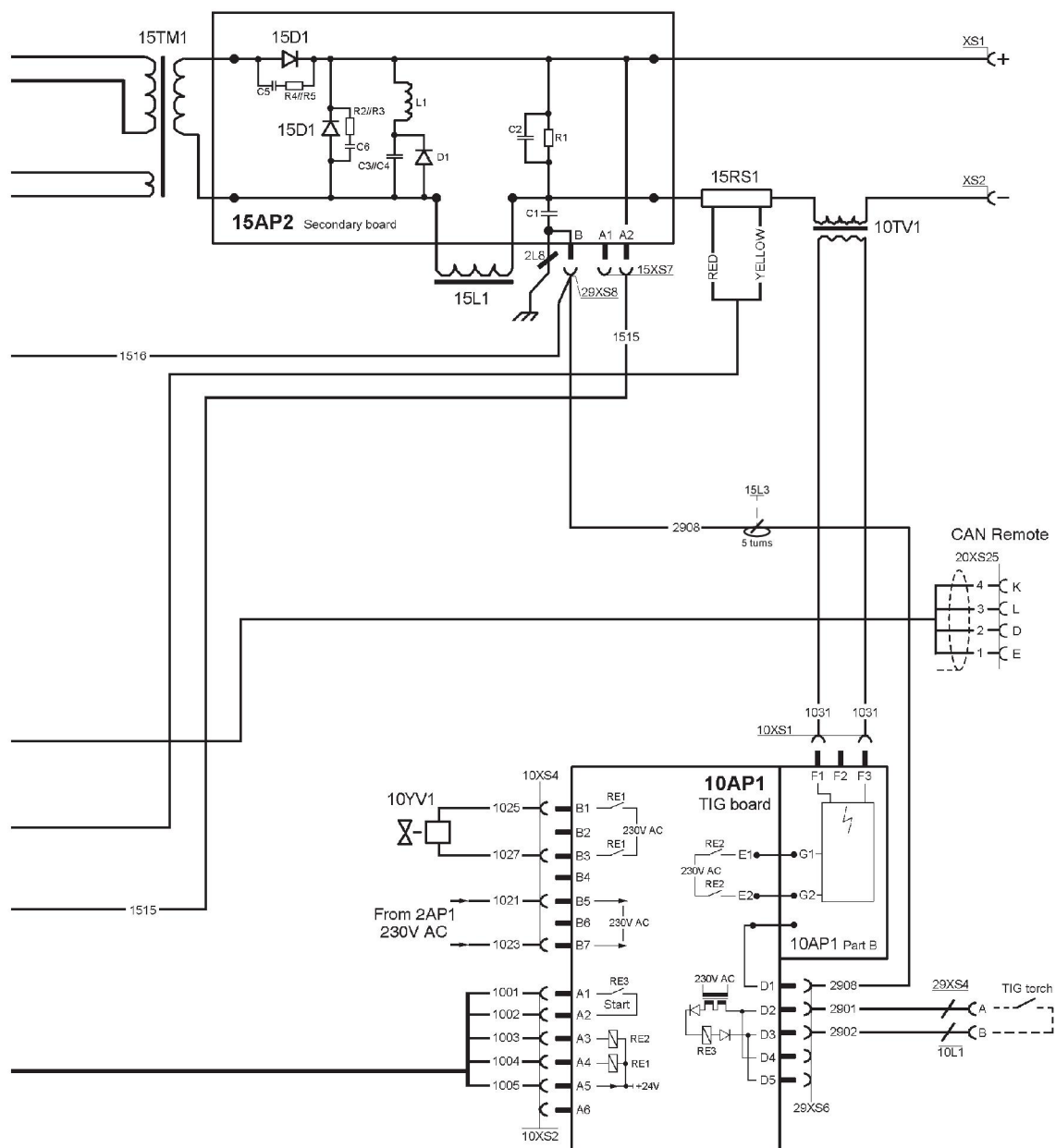
Tig 1500i and Tig 2200i are designed and tested in accordance with the international and European standards **IEC/EN 60974-1**, **IEC/EN 60974-3** and **IEC/EN 60974-10 Class A**. It is the obligation of the service unit which has carried out the service or repair work to make sure that the product still conforms to the mentioned standards.

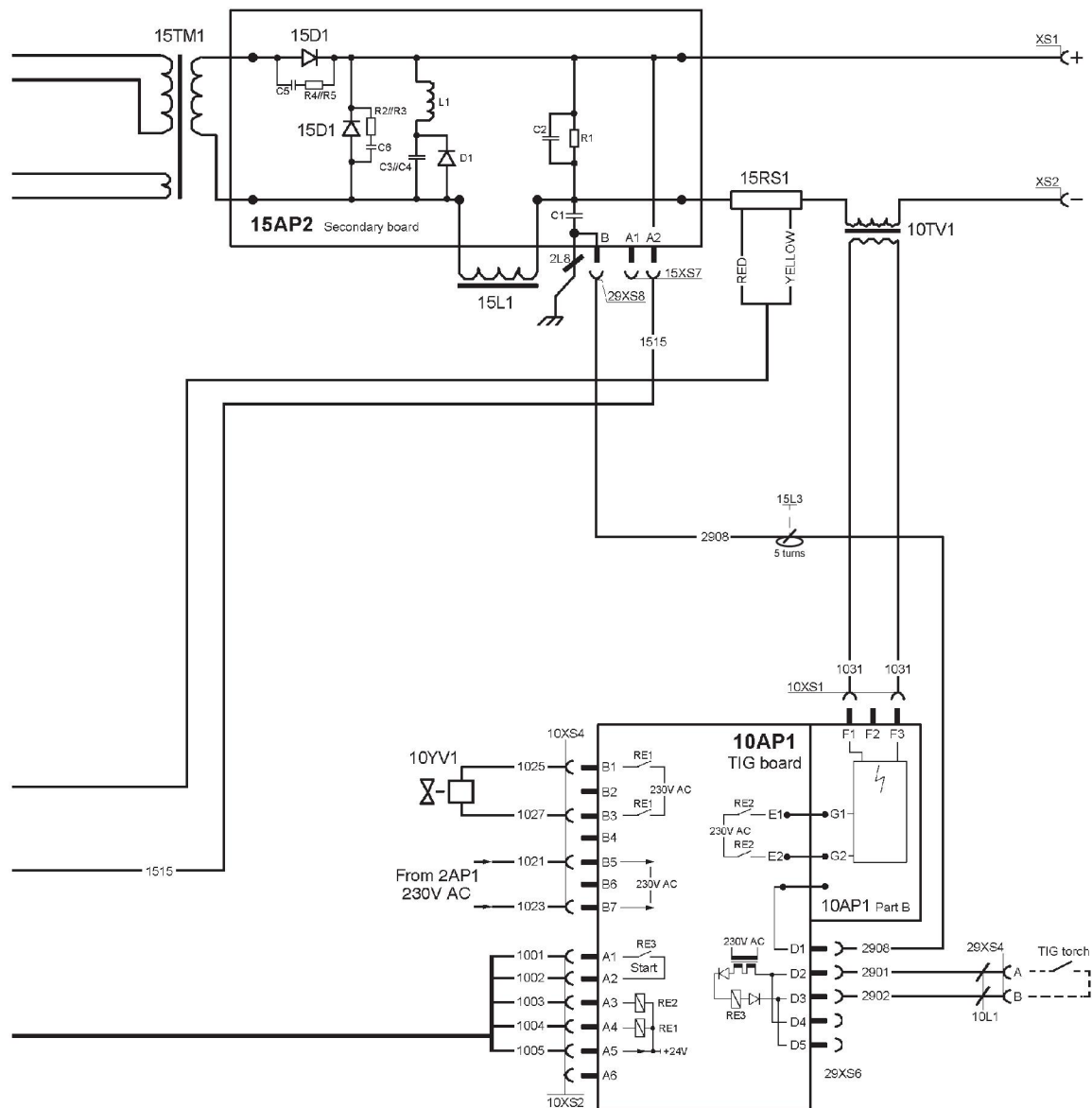
Spare parts and wear parts can be ordered through your nearest ESAB dealer, see [esab.com](https://www.esab.com). When ordering, please state product type, serial number, designation and spare part number in accordance with the spare parts list. This facilitates dispatch and ensures correct delivery.

DIAGRAM

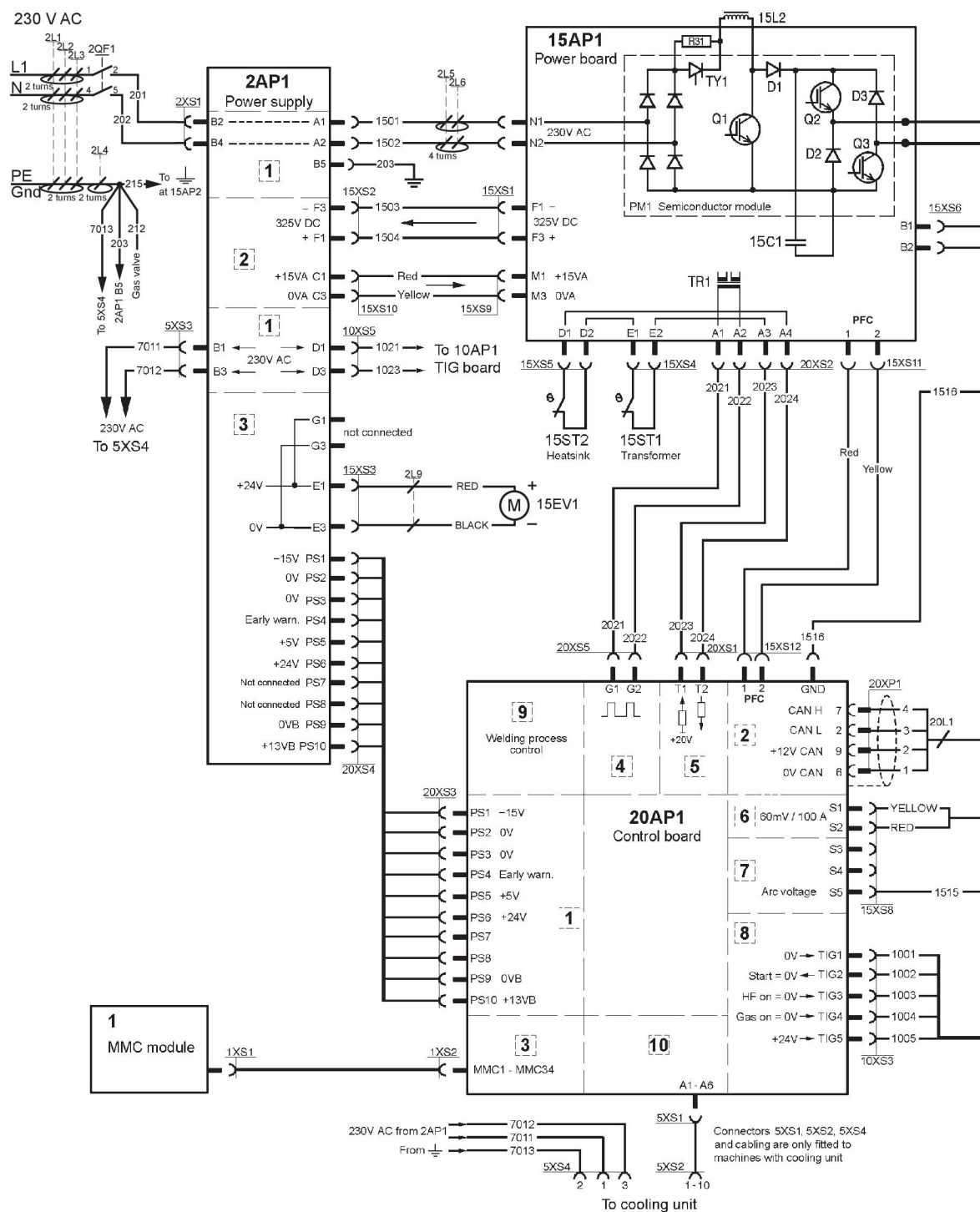
Tig 1500i TA34

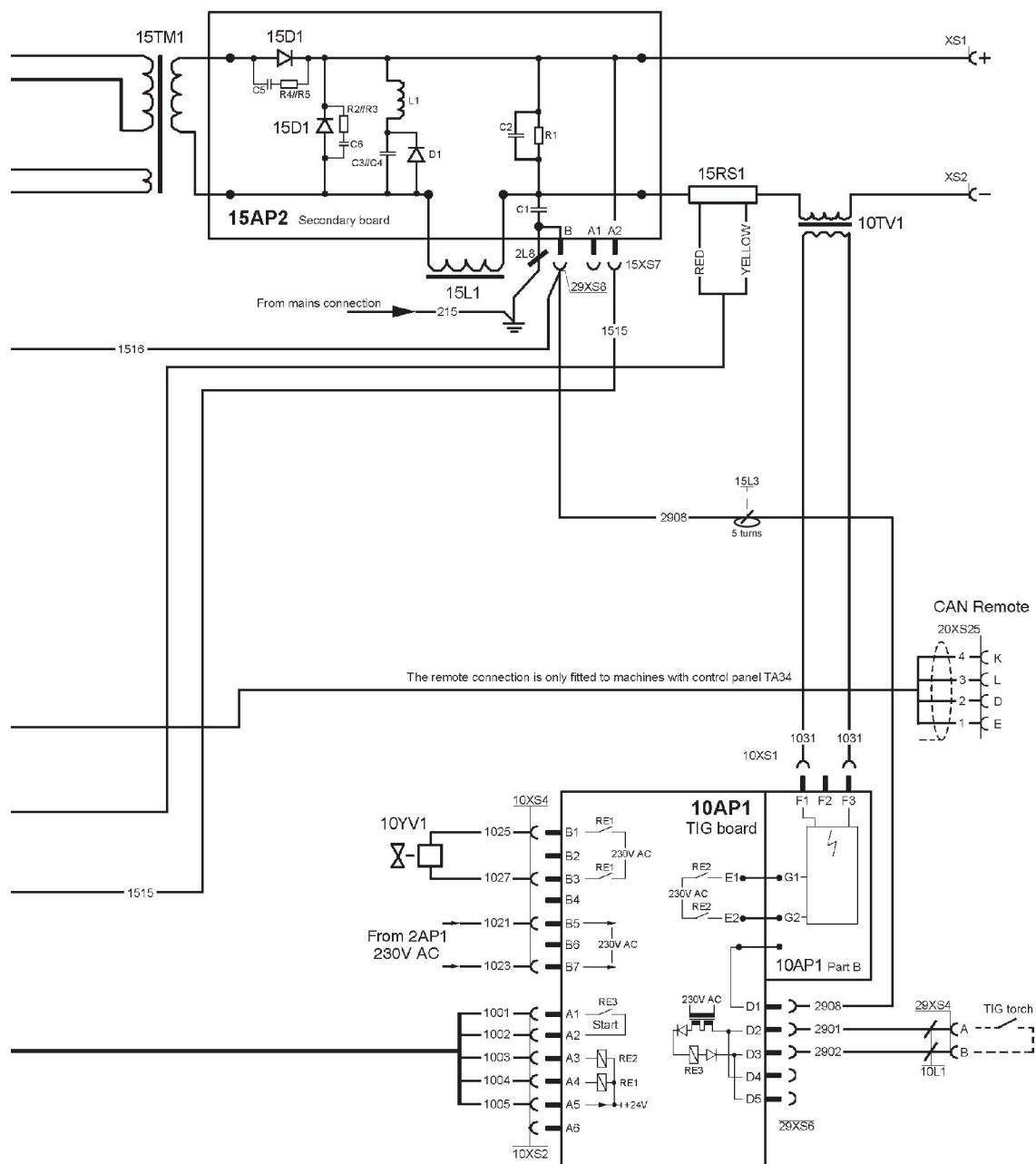




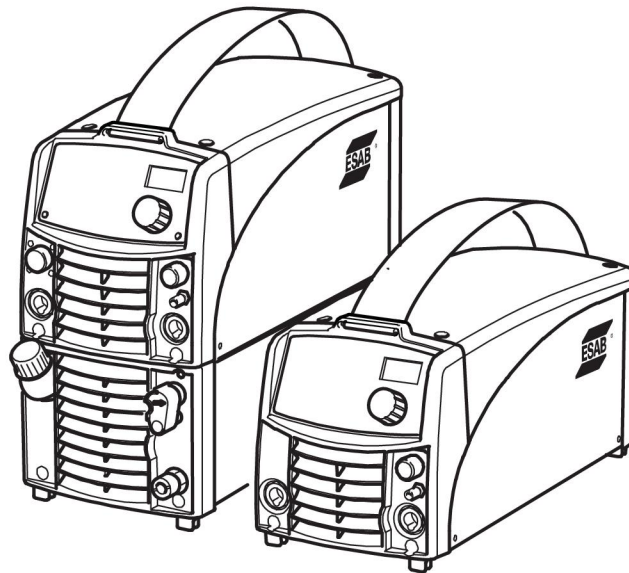


Tig 2200i TA33/TA34





ORDERING NUMBERS

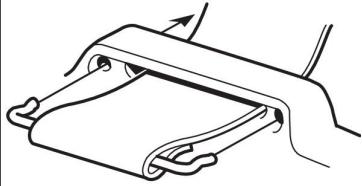
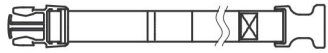
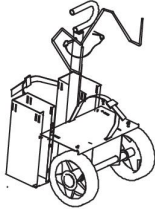
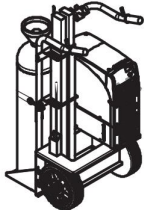


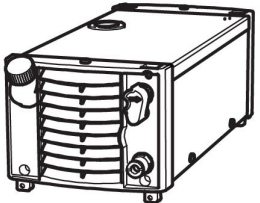
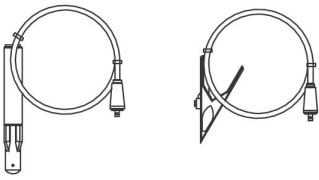
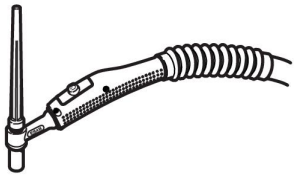
Ordering no.	Product
0460 450 583	Caddy® Tig 2200i, TA34 incl. Tig torch TXH 201, For China
0460 450 593	Caddy® Tig 2200i, TA34 incl. return cable and Tig torch TXH 201, For China
0460 450 880	Caddy® Tig 1500i, TA33 incl. MMA cable kit complete (3 m) and Tig torch TXH 151 (4 m)
0460 450 881	Caddy® Tig 2200i, TA33 incl. MMA cable kit complete (3 m) and Tig torch TXH 201 (4 m)
0460 450 882	Caddy® Tig 1500i, TA34 incl. MMA cable kit complete (3 m) and Tig torch TXH 151 (4 m)
0460 450 883	Caddy® Tig 2200i, TA34 incl. MMA cable kit complete (3 m) and Tig torch TXH 201 (4 m)
0460 450 884	Caddy® Tig 2200iw, TA33 incl. water cooler CoolMini, MMA cable kit complete (3 m) and Tig torch TXH 250w (4 m)
0460 450 885	Caddy® Tig 2200iw, TA34 incl. water cooler CoolMini, MMA cable kit complete (3 m) and Tig torch TXH 250w (4 m)
0460 450 890	Caddy® Tig 1500i, TA33 incl. 3 return cable with clamp
0460 450 891	Caddy® Tig 2200i, TA33 incl. 3 return cable with clamp
0460 450 892	Caddy® Tig 1500i, TA34 incl. 3 return cable with clamp
0460 450 893	Caddy® Tig 2200i, TA34 incl. 3 return cable with clamp
0460 450 894	Caddy® Tig 2200iw, TA33 incl. 3 return cable with clamp
0460 450 895	Caddy® Tig 2200iw, TA34 incl. 3 return cable with clamp

Filename	Type	Product
0460 447 074	Instruction manual	Control panel, Caddy® TA33, TA34
0459 839 025	Spare parts list	Welding power source, Tig 1500i
0459 839 026	Spare parts list	Welding power source, Tig 2200i, Tig 2200iw

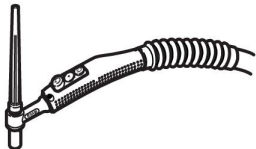
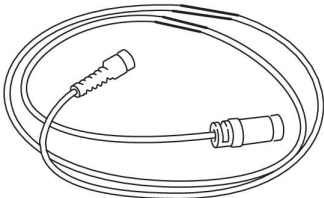
Instruction manuals in other languages can be downloaded from the Internet: www.esab.com

ACCESSORIES

0460 265 001	Strap	
0460 265 002	Cable holder	
0460 265 003	Shoulder strap	
0459 366 885	Trolley for 5-10 litre gas bottle	
0460 330 880	Trolley for 20-50 litre gas bottle	
0459 491 910	Remote control adapter RA12, 12 pole For analogue remote controls to CAN based equipment. Only with panel TA34	
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 Only with panel TA34	

0459 491 882	Remote control unit M1 10Prog CAN 10 program selections MIG/MAG: voltage deviation TIG and MMA: current deviation Only with panel TA34	
0459 491 883	Remote control unit AT1 CAN MMA and TIG: current Only with panel TA34	
0459 491 884	Remote control unit AT1 CF CAN MMA and TIG: rough and fine setting of current. Only with panel TA34	
0460 315 880	Foot pedal TI Foot CAN Only with panel TA34	
Cooling unit		
0460 144 880 0460 509 880	Cooling unit CoolMini Assembly kit Only for Tig 2200i	
Cable kit		
0700 006 884 0700 006 885	Welding cable kit Return cable kit	
Tig torches		
0700 300 538 0700 300 544 0700 300 552 0700 300 555 0700 300 561 0700 300 563	TXH 151, 4 m TXH 151, 8 m TXH 201, 4 m TXH 201, 8 m TXH 251w, 4 m TXH 251w, 8 m	
Tig torches		

ACCESSORIES

0700 300 624	TXH 151r, 4 m	
0700 300 626	TXH 151r, 8 m	
0700 300 628	TXH 201r, 4 m	
0700 300 630	TXH 201r, 8 m	
0700 300 632	TXH 251wr, 4 m	
0700 300 634	TXH 251wr, 8 m	
Remote cable CAN 4 pole - 12 pole		
0459 544 880	5 m	
0459 554 881	10 m	
0459 554 882	15 m	
0459 554 883	25 m	
0459 554 884	0.25 m	
	Only with panel TA34	



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>

