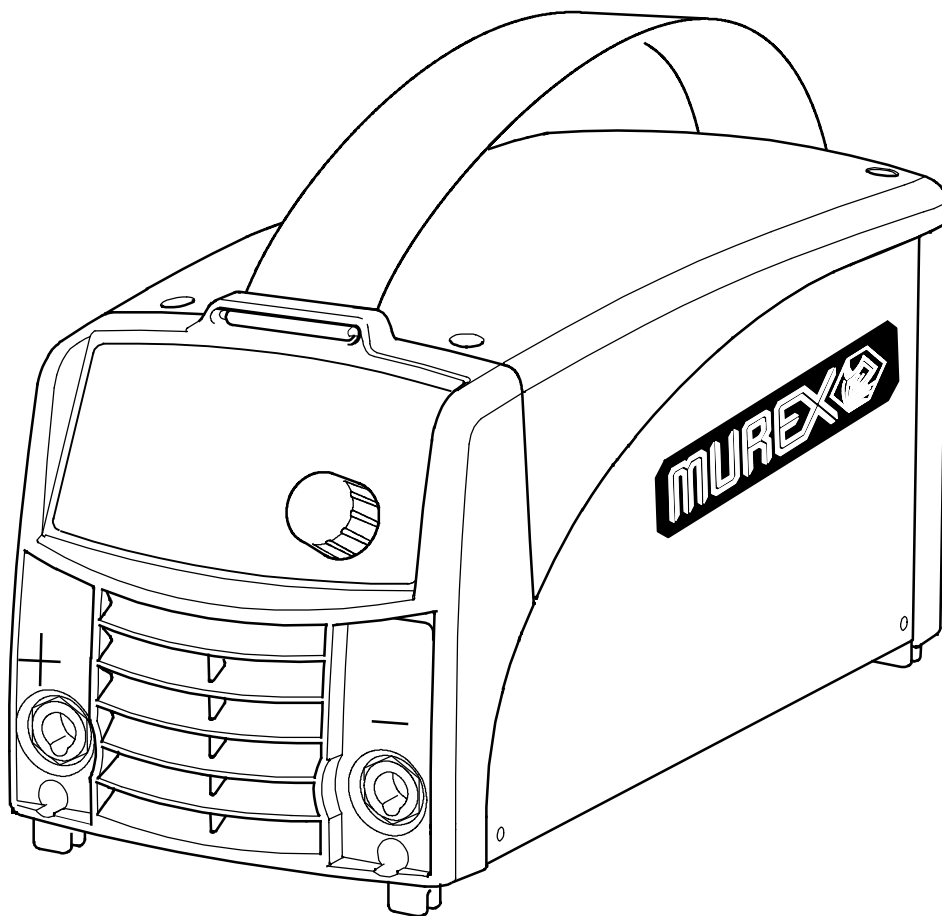


GB



Tradesarc 150



Instruction manual and
spare parts list

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1 DIRECTIVE

DECLARATION OF CONFORMITY

Murex Welding Products Ltd, EN8 7TF England, gives its unreserved guarantee that welding power source **Tradesarc 150** from serial number 827 (2008 w 27) are constructed and tested in compliance with the standard EN 60974-1 and EN 60974-10 (Class A) in accordance with the requirements of directive (2006/95/EC) and (2004/108/EEC).

On behalf of Murex Welding Products Ltd.
Laxå 2008-08-28

Kent Eimbrodt
Global Director
Equipment and Automation

Manufactured by ESAB AB, Welding Equipment
SE-695 81 Laxå Sweden

2 SAFETY

Users of welding 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 welding 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 welding 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 welding equipment must be familiar with:
 - S its operation
 - S location of emergency stops
 - S its function
 - S relevant safety precautions
 - S welding
2. The operator must ensure that:
 - S no unauthorized person is stationed within the working area of the equipment when it is started up.
 - S no-one is unprotected when the arc is struck
3. The workplace must:
 - S be suitable for the purpose
 - S be free from drafts
4. Personal safety equipment
 - S Always wear recommended personal safety equipment, such as safety glasses, flame-proof clothing, safety gloves.
 - S Do not wear loose-fitting items, such as scarves, bracelets, rings, etc., which could become trapped or cause burns.
5. General precautions
 - S Make sure the return cable is connected securely.
 - S Work on high voltage equipment **may only be carried out by a qualified electrician.**
 - S Appropriate fire extinguishing equipment must be clearly marked and close at hand.
 - S 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. Ask for your employer's safety practices which should be based on manufacturers' hazard data.

ELECTRIC SHOCK - Can kill

- S Install and earth the welding unit in accordance with applicable standards.
- S Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- S Insulate yourself from earth and the workpiece.
- S Ensure your working stance is safe.

FUMES AND GASES - Can be dangerous to health

- S Keep your head out of the fumes.
- S 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.

- S Protect your eyes and body. Use the correct welding screen and filter lens and wear protective clothing.
- S Protect bystanders with suitable screens or curtains.

FIRE HAZARD

- S Sparks (spatter) can cause fire. Make sure therefore that there are no inflammable materials nearby.

NOISE - Excessive noise can damage hearing

- S Protect your ears. Use earmuffs or other hearing protection.
- S 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!



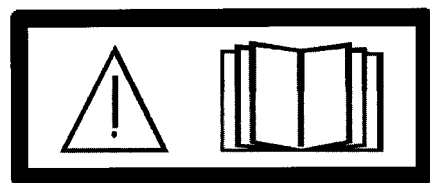
WARNING!

Do not use the power source for thawing frozen pipes.



CAUTION!

Read and understand the instruction manual before installing or operating.



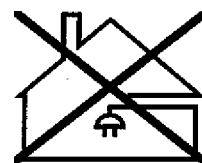
CAUTION!

This product is solely intended for arc welding.



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.



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

3 INTRODUCTION

Tradesarc 150 is a welding current power source intended for use with coated electrodes (MMA welding) and TIG welding.

Tradesarc 150 is supplied with 3 m of mains cable and an instruction manual.

Accessories for the product can be found on page 21.

4 TECHNICAL DATA

Tradesarc 150	
Mains voltage	230 V, 1 ~ 50/60 Hz
Primary current I_{max}	22 A
Mains supply	Z_{max} 0.35 ohm
No-load power	30 W
Voltage/current range	8 A /20 V - 150 A /26 V
Permissible load	
25% duty cycle	150 A / 26.0 V
60% duty cycle	100 A / 24.0 V
100% duty cycle	90 A / 23.6 V
Power factor at maximum current	0.99
Efficiency at maximum current	80%
Open-circuit voltage	58 - 72 V
Operating temperature	-10°C - +40° C
Transportation temperature	-20°C - +55° C
Constant sound pressure at no load	< 70 dB
Dimensions, l x b x h	418 x 188 x 208 mm
Weight	7.9
Enclosure class	IP 23
Application class	S

Duty cycle

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

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.

5 INSTALLATION

The installation must be executed by a professional.

Note!

Mains supply requirements

High power equipment may, due to the primary current drawn from the mains supply, influence the power quality of the grid. Therefore connection restrictions or requirements regarding the maximum permissible mains impedance or the required minimum supply capacity at the interface point to the public grid may apply for some types of equipment (see technical data). In this case 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 may be connected.

5.1 Location

Place the power source so that its cooling air inlets and outlets are not obstructed.

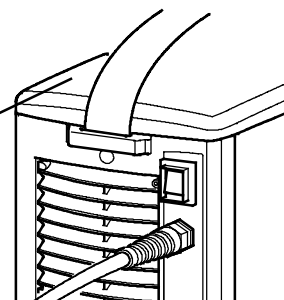
5.2 Mains power supply

Check that the welding power source is connected to the correct voltage and that the correct fuse size is used.

The standards for the country in question must be complied with as regards the mains cable area.

A protective earth connection must be made in accordance with regulations

Rating plate with supply connection data



5.2.1 Recommended fuse sizes and minimum cable area

Tradesarc 150	
Mains voltage	230 V \pm 10 %, 1-phase
Mains frequency	50-60 Hz
Mains cable, area	3G2.5 mm ²
Phase current I _{1eff}	11 A
Welding cable, area	16 mm ²
Fuse	
anti-surge	16 A
type C MCB	13 A

*) **NOTE!** The installed plug is approved for max. 16A.

NOTE! The cable area and fuse rating above comply with Swedish regulations. Use the welding power source in accordance with the relevant national regulations.

6 OPERATION

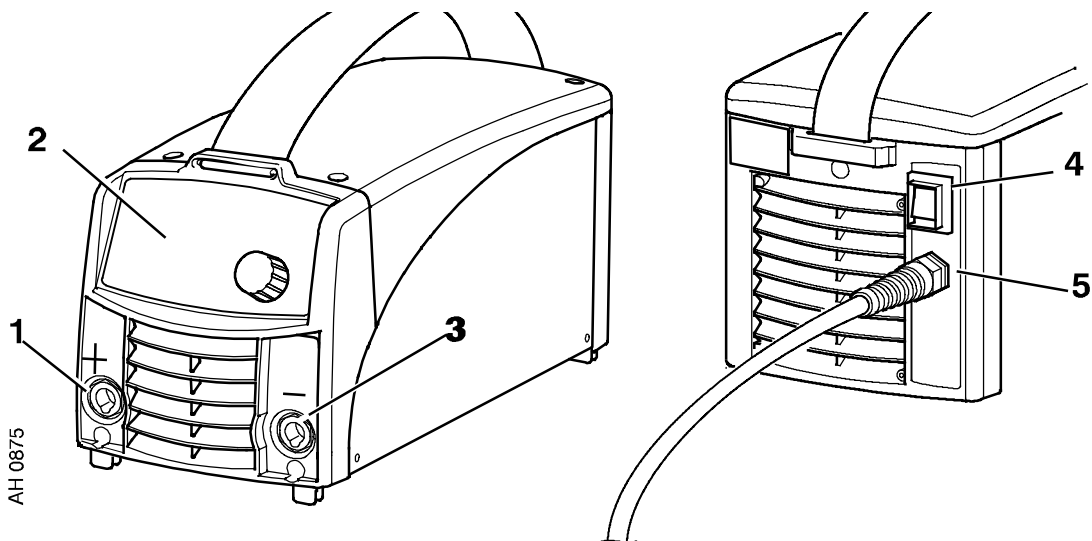
General safety regulations for the handling of the equipment can be found on page 3. Read through before you start using the equipment!

6.1 PFC - Power factor correction

The Tradesarc is 230 V single-phase power sources equipped with a PFC circuit making it possible to use the full range of the machine on a 16 A fuse. The PFC also protects the machines against fluctuating mains voltage and makes it safer to use with a generator. Tradesarc 150 can operate with extra long mains cables, over 100 m, giving you a very larger working radius.

6.2 Connections and control devices

- | | |
|---|--|
| <p>1 Connection (+)
MMA: for return cable or welding cable
TIG: for return cable</p> <p>2 Control panel, see under 6.3</p> <p>3 Connection (-)
MMA: connection for return cable
TIG: connection for Tig torch</p> | <p>4 Toggle switch for mains power supply 0 / 1</p> <p>5 Mains cable</p> |
|---|--|



6.3 Control panel

- S Knob for setting the current
- S Mains voltage LED (green)
- S Thermal overload trip indicator (yellow)



6.4 Connection of welding and return cable

The power source has two outputs, a positive (+) terminal and a negative (-) terminal, for connecting welding and return cables. The output to which the welding cable is connected depends on the type of electrode used. The connecting polarity is stated on the electrode packaging.

Connect the return cable to the other output on the power source. Secure the return cable's contact clamp to the work piece and ensure that there is good contact between the work piece and the output for the return cable on the power source.

6.5 Overheating protection

The welding power source has a thermal overload trip which operates if the temperature becomes too high, interrupting the welding current and lighting a yellow indicating lamp on the front of the power source. The thermal overload trip resets automatically when the temperature has fallen.

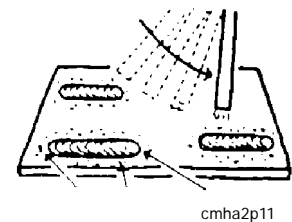
6.6 MMA welding

Tradesarc 150 gives direct current, and you can weld most metals to alloy and non-alloy steel, stainless steel and cast iron. Tradesarc 150 allows you to weld most coated electrodes from \varnothing 1.6 to \varnothing 3.25.

MMA welding may also be referred to as welding with coated electrodes. Striking the arc melts the electrode, and its coating forms protective slag.

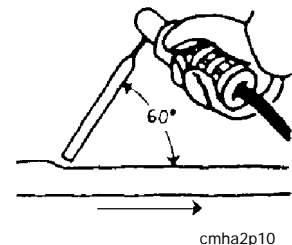
If, when striking the arc, the tip of the electrode is pressed against the metal, it immediately melts and sticks to the metal, rendering continued welding impossible. Therefore, the arc has to be struck in the same way that you would light a match.

Quickly strike the electrode against the metal, then raise it so as to give an appropriate arc length (approx. 2 mm). If the arc is too long, it will crackle and spit before finally going out completely.



If you are working on a welding bench, check before attempting to strike the arc that residual waste metal, pieces of electrode or other objects on the bench do not insulate the part to be welded.

Once the arc has been struck, move the electrode from left to right. The electrode must be at an angle of 60° to the metal in relation to the direction of welding.



When you want to weld wide beads, or when you want the weld to be so thick that you have to weld in a number of layers, however, you have to use lateral movements.

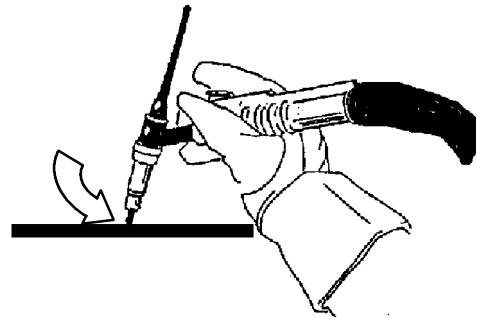
6.7 TIG welding

TIG welding melts the metal of the workpiece, using an arc struck from a tungsten electrode, which does not itself melt. The weld pool and the electrode are protected by shielding gas.

TIG welding is particularly useful where high quality is demanded and for welding thin plate. Tradesarc 150 also has good characteristics for TIG welding.

In order to TIG weld, Tradesarc 150 must be equipped with:

- S a TIG torch with gas valve
- S a welding gas cylinder (a suitable welding gas)
- S a welding gas regulator (suitable gas regulator)
- S tungsten electrode
- S suitable auxiliary material, if necessary.



TIG scrape start

To scrape start lightly scrape the tungsten electrode against the workpiece to create an arc.

7 MAINTENANCE

Regular maintenance is important for safe, reliable operation.



CAUTION!

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



WARNING!

The mains supply must be disconnected before cleaning!

7.1 Power source

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

How often and which cleaning methods apply depend on:

- S the welding process
- S arc times
- S placement
- S 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.

7.2 Welding torch

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

8 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"> S Check that the mains power supply switch is turned on. S Check that the welding current supply and return cables are correctly connected. S Check that the correct current value is set. S Check the mains power supply.
The welding current is interrupted during welding.	<ul style="list-style-type: none"> S Check to see whether the thermal cut-outs have tripped. S Check the mains power supply fuses.
The thermal cut-out trips frequently.	<ul style="list-style-type: none"> S 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.	<ul style="list-style-type: none"> S Check that the welding current supply and return cables are correctly connected. S Check that the correct current value is set. S Check that the correct electrodes are being used. S Check the gas flow.

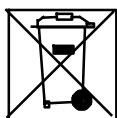
9 ORDERING SPARE PARTS

Repair and electrical work should be performed by an authorized serviceman. Use only original spare and wear parts.

Tradesarc 150 is designed and tested in accordance with the international and European standard IEC/EN 60974-1. 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.

10 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.

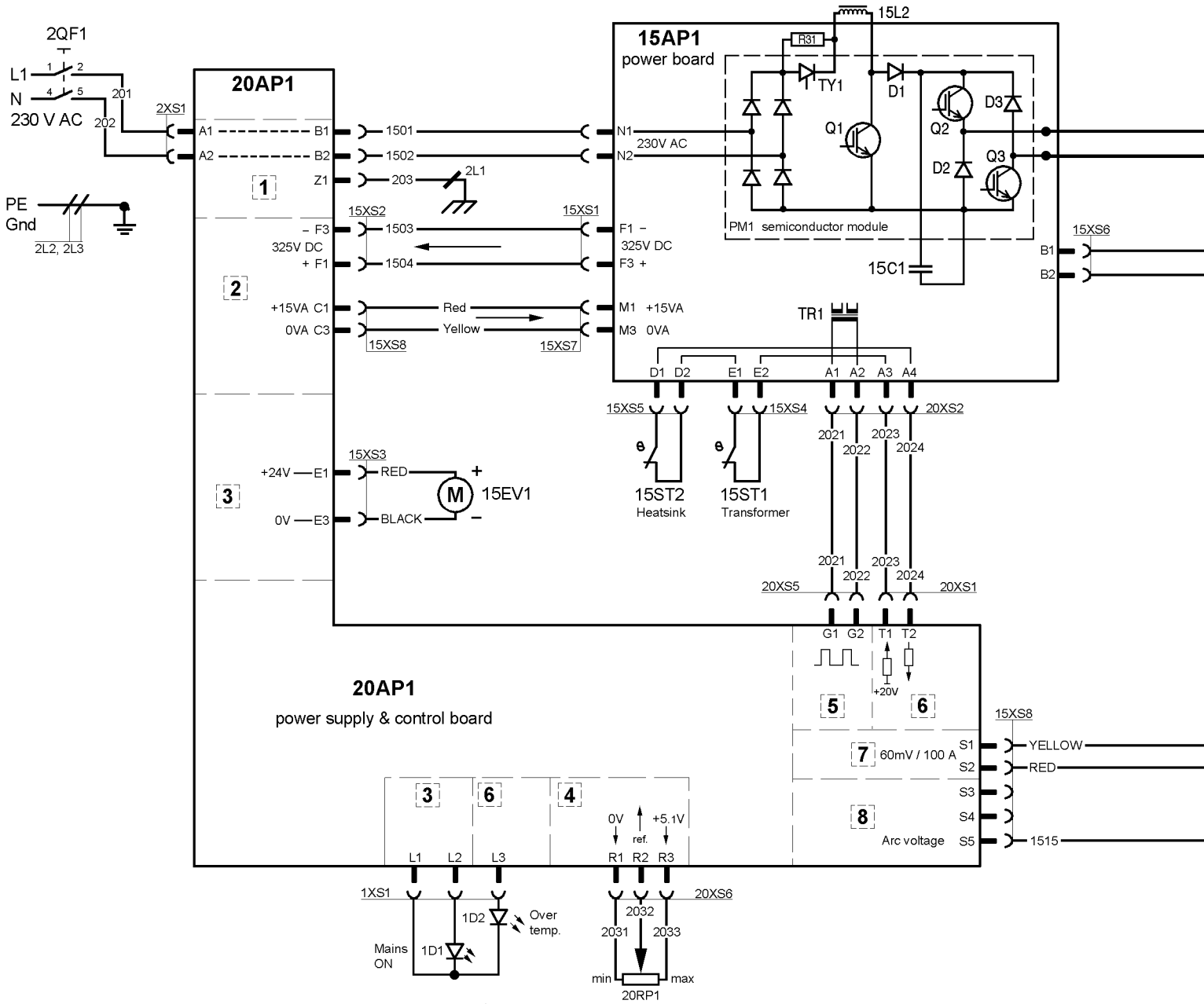


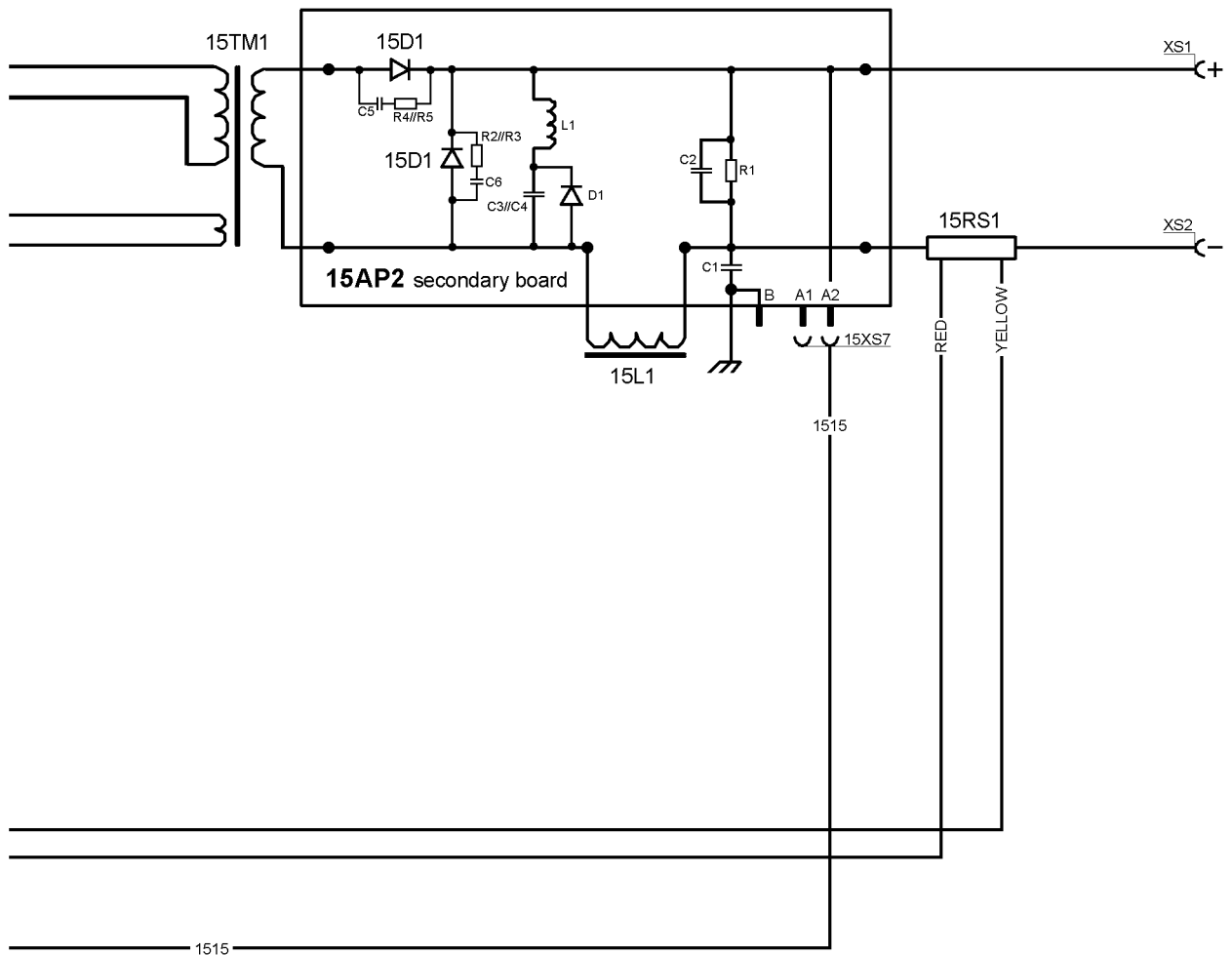
Do not dispose of electrical equipment together with normal waste!

In observance of European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and returned to an environmentally compatible recycling facility. As the owner of the equipment, you should get information on approved collection systems from our local representative.

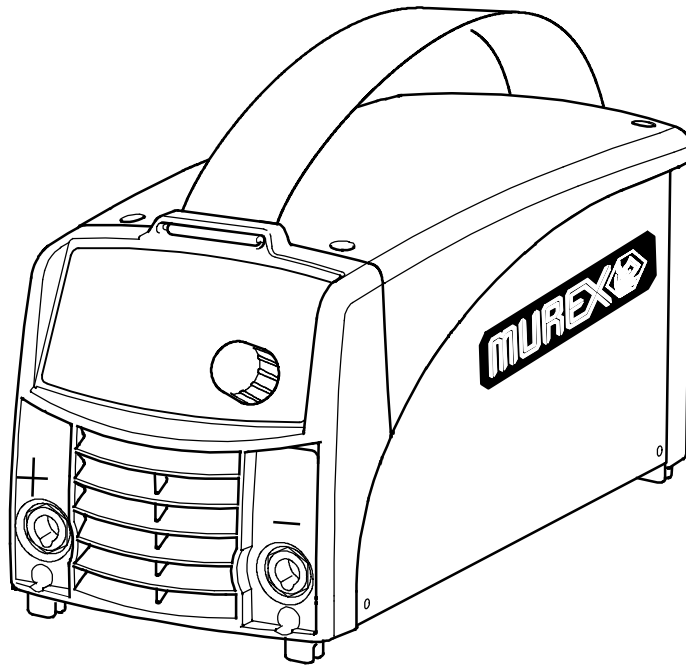
By applying this European Directive you will improve the environment and human health!

Diagram





Spare parts list



Valid for serial no. 827-xxx-xxxx

Ordering number

0460 441 880 Tradesarc 150, for 230 V 50/60 Hz with MMA-kit

Spare parts are to be ordered through the nearest MUREX agency. Kindly indicate type of unit, serial number, denominations and ordering numbers according to the spare parts list.

Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

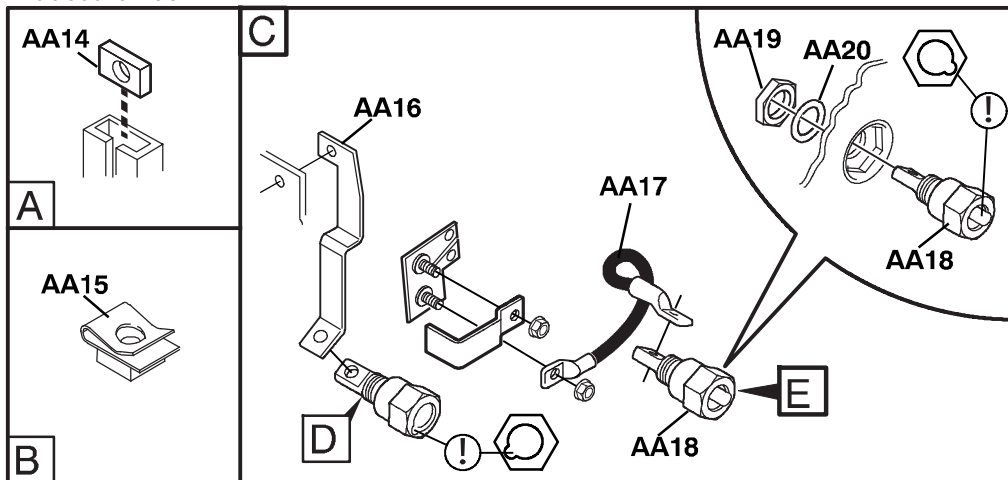
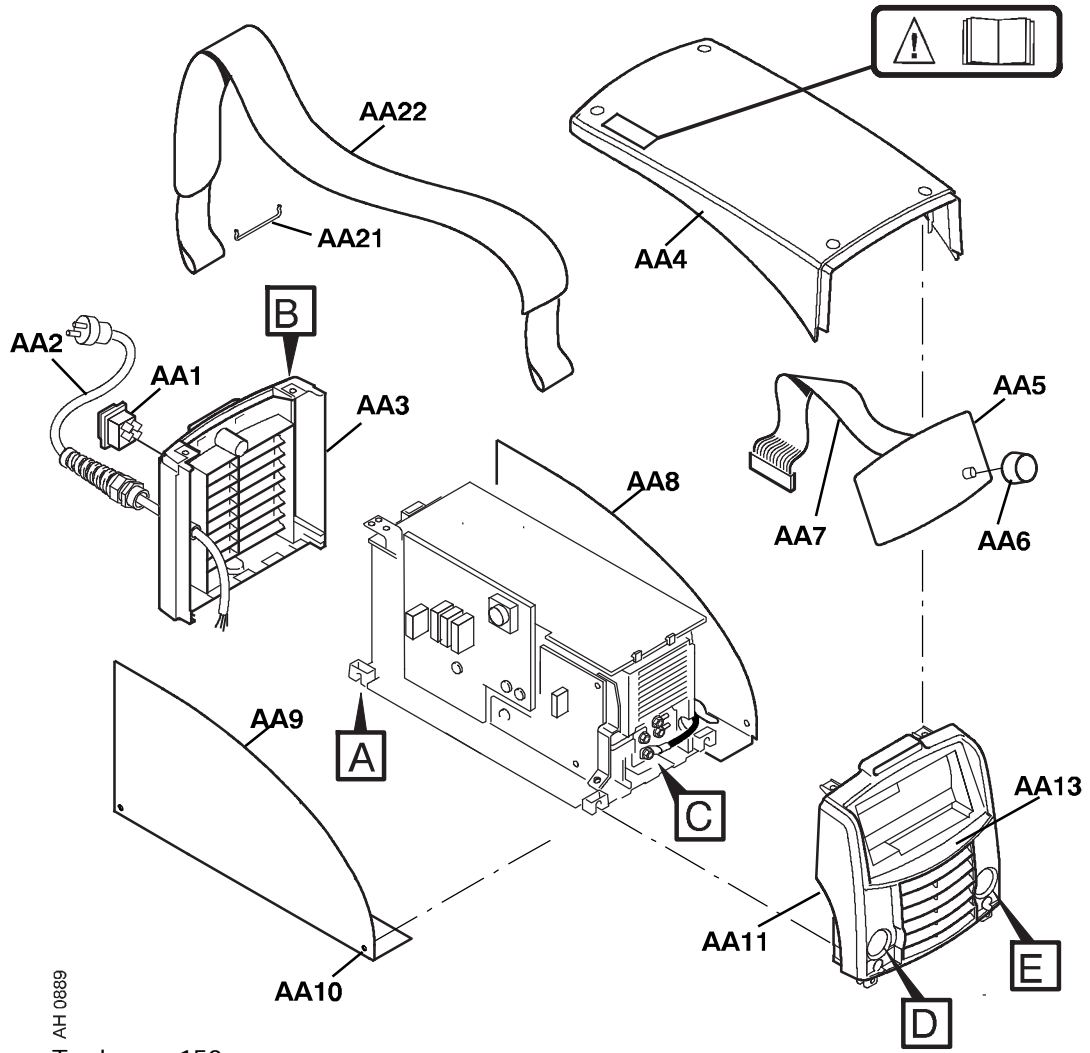
Tradesarc 150

C = component designation in the circuit diagram

Item	Qty	Ordering no.	Denomination	Notes	C
AA1	1	0193 317 001	Switch	Included in item AA50	2QF1
AA2	1	-	Cord set	Included in item AA50	
AA3	1	0460 140 001	Rear panel		1XS1, 1XS2
AA4	1	0460 143 001	Cover		
AA5	1	0460 476 880	MMC Module A31	Including AA6 and AA7	
AA6	1	0460 600 328	Knob	Included in AA5	
AA7	1	-	Ribbon cable with connectors	34 pole, included in AA5	
AA8	1	0460 479 004	Side panel	right	
AA9	1	0460 479 003	Side panel	left	
AA10		0194 179 327	Screw MRT	ground cutter, M5x12	
AA11	1	-	Front panel	Included in item AA51	
AA13	1	0460 690 001	Sticker	Tradesarc 150	
AA14	5	0366 588 001	Nut		XS1, XS2
AA15	6	0469 381 002	Fast lock nut	M5	
AA16	1	0460 427 001	Bar plus		
AA17	1	0460 152 981	Cable set course		
AA18	2	0160 362 025	Connector OKC 50	Included in item AA51	
AA19	2	0366 247 001	Nut		
AA20	2	0366 306 003	Spring washer	Ø21/15x1	
AA21	2	0468 497 001	Holder		
AA22	1	0460 265 001	Strap		

SPARE PARTS SETS

Item	Ordering no.	Denomination	Notes
AA50	0460 601 881	Mains module	Includes items: AA1 switch, AA2 mains cable with plug, cable clamp and one ferrite rings 2L2.
AA51	0460 379 894	Front complete	Includes items: AA11, AA18, AA19, AA20 When replacing "front complete" also item AA5, MMC module, must be replaced.

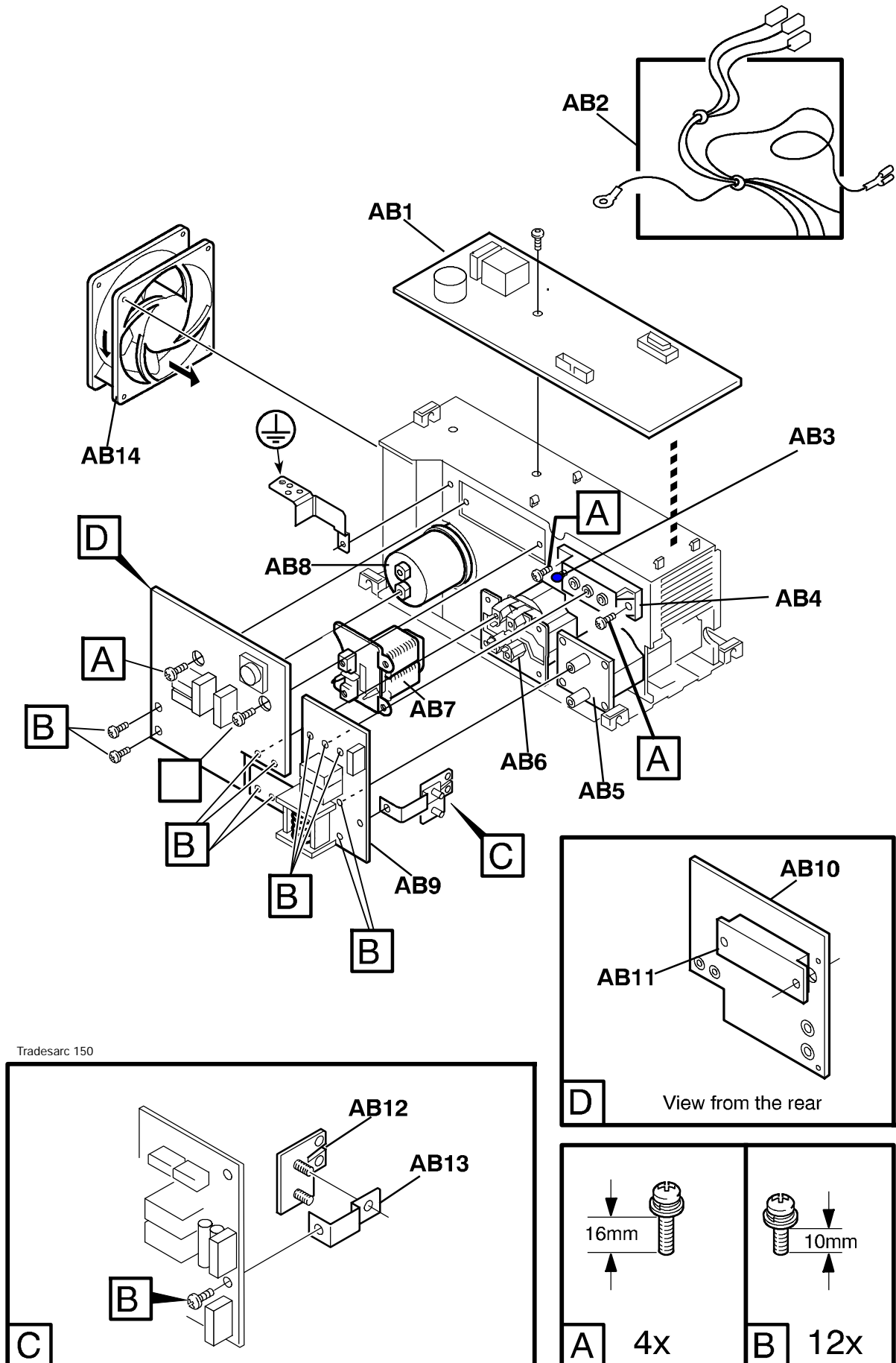


C = component designation in the circuit diagram

Item	Qty	Ordering no.	Denomination	Notes	C
AB1	1	0487 261 880	Power supply/control board		20AP1
AB2	1	0193 700 702	Ribbon cable with connectors	10 pole	20XS3, 20XS4
AB3	1	0468 940 005	Thermal switch	Socket connector 15XS5 included	15ST2
AB4	1		Diode module	See item AB50	15D1
AB5	1	0459 177 001	Inductor		15L1
AB6	1	0459 355 881	Transformer	Includes: main transformer, socket 15XS4, socket 15XS6, thermal switch 15ST1	15TM1
AB7	1	0460 117 001	Inductor	PFC	15L2
AB8	1	0194 158 003	Capacitor	1000 uF 450 V DC	15C1
AB9		0487 060 880	Secondary board		15AP2
AB10	1		Circuit board	See item AB51	15AP1
AB11	1		Semiconductor module	See item AB51	
AB12	1	0468 030 880	Shunt		15RS1
AB13	1	0459 194 001	Busbar		
AB14	1	0467 801 002	Fan	24 V DC; with cables and socket 15XS3	15EV1

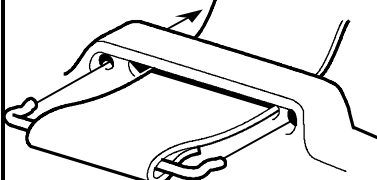


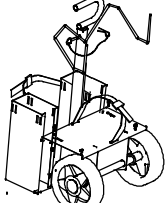
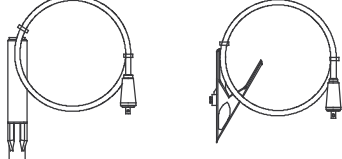
SPARE PARTS SETS

Item	Qty	Ordering no.	Denomination	Notes
AB50	1	0459 385 880	Diode module kit	Includes: item AB4 diode module, screws (type A and B), thermal compound and roller.
AB51	1	0459 384 887	Power board kit	Includes: item AB10 power board, item AB11 semiconductor module, screws (type A and B), thermal compound and roller.
-		0458 910 002	Roller handle	For the roller in the spare parts sets above
-		0192 058 101	Thermal compound	



Tradesarc 150

Accessories

	<p>Strap 0460 265 001</p>
	<p>Cable holder 2 pcs 0460 265 002</p>
	<p>Shoulder strap 0460 265 003</p>
	<p>Trolley for 5-10 litre gasbottle 0459 366 885</p>
	<p>Welding cable kit 0700 006 898 Return cable kit 0700 006 899</p>



**Please ensure that this
Operating Manual is
available to the user of
the equipment.**



Murex Welding Products Ltd
Hanover House
Queensgate
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Waltham Cross
Hertfordshire EN8 7TF
England

