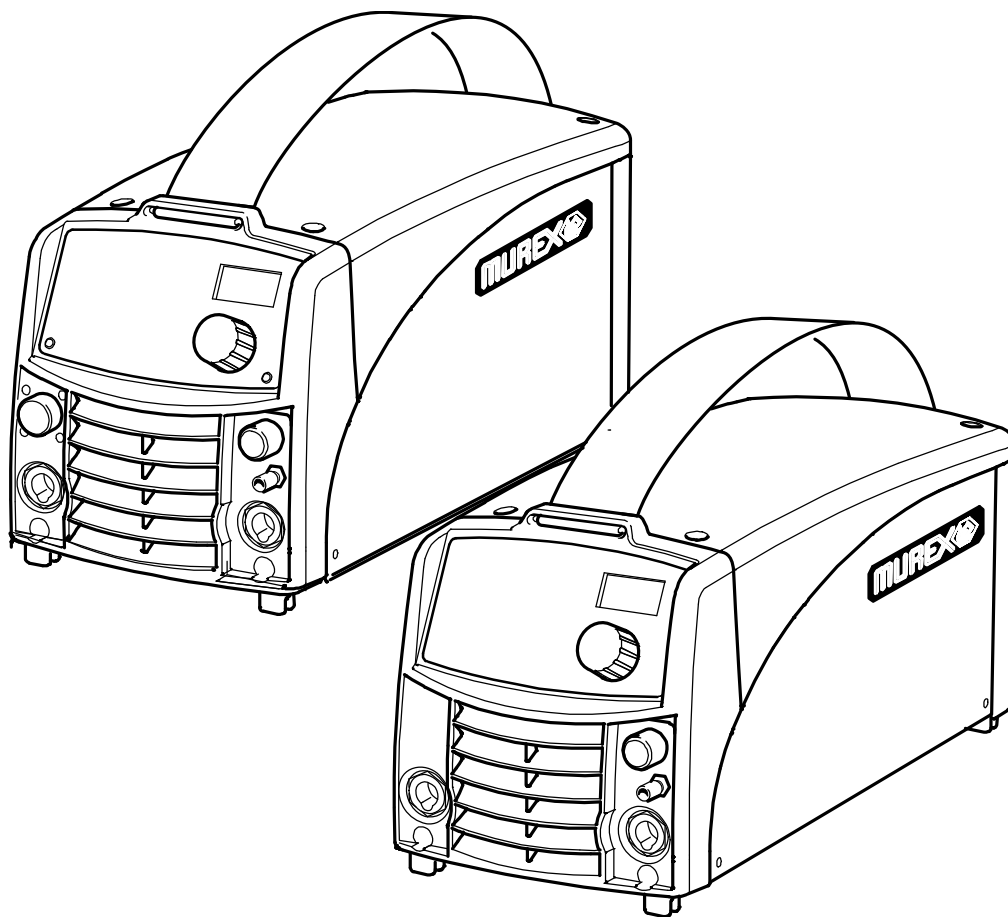


GB



# *Tradestig 150*

# *Tradestig 220*



**Instruction manual and  
spare parts list**

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## 1 DIRECTIVE

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### DECLARATION OF CONFORMITY

Murex Welding Products Ltd, EN8 7TF England, gives its unreserved guarantee that welding power source **Tradestig 150** and **Tradestig 220** from serial number 827 (2008 w 27) are constructed and tested in compliance with the standard EN 60974-1 /-3 and EN 60974-10 (Class A) in accordance with the requirements of directive (2006/95/EC) and (2004/108/EEC).

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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

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## 2 SAFETY

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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:
  - its operation
  - location of emergency stops
  - its function
  - relevant safety precautions
  - welding
2. The operator must ensure that:
  - no unauthorized 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. **Note!** *Do not use safety gloves when replacing wire.*
  - 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. Ask for your employer's safety practices which should be based on manufacturers' hazard data.**

**ELECTRIC SHOCK - Can kill**

- Install and earth the welding 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!**

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




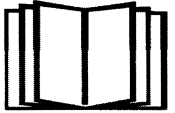
**WARNING!**


***Do not use the power source for thawing frozen pipes.***



**CAUTION!**


*Read and understand the instruction manual before installing or operating.*



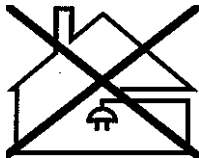
**CAUTION!**

*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.*



### 3 INTRODUCTION

The **Tradestig 150 / Tradestig 220** is a TIG welding power source, which can also be used for MMA welding. It can be used direct current (DC).

MUREX's accessories for the product can be found on page 38.

#### Equipment

The power source is supplied with a 3 m welding cable, 3 m return cable, 3 m mains cable, instruction manual for power source and control panel.

#### Control panels

**Tradestig 150**



**Tradestig 220**



When mains power is supplied the unit runs a self diagnosis of the LEDs and the display, the program version is displayed and in this example the program version is 0.18.

The manual describes the use of Tradestig 150 and Tradestig 220 control panel on page 9.

For general information about operation and connection, see page 8

### 4 TECHNICAL DATA

	<b>Tradestig 150</b>	<b>Tradestig 220</b>
<b>Mains voltage</b>	230V, ± 10%, 1~ 50/60 Hz	230V, ± 10%, 1~ 50/60 Hz
<b>Mains supply</b>	Z <sub>max</sub> 0.35 ohm	Z <sub>max</sub> 0.31 ohm
<b>Primary current</b>		
I <sub>max</sub> TIG	14 A	24 A
I <sub>max</sub> MMA	22 A	25 A
<b>No-load power</b>	30 W	30 W
demand when in the energy-saving mode, 6.5 min. after welding		
<b>Setting range</b>		
TIG	3 - 150 A	3 - 220 A
MMA	4 - 150 A	4 - 170 A

	<b>Tradestig 150</b>	<b>Tradestig 220</b>
<b>Ignition voltage</b> ( $U_{pk}$ )	11.5 kV	11.5 kV
<b>Permissible load at TIG</b>		
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
<b>Permissible load at MMA</b>		
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
<b>Power factor at maximum current</b>		
TIG	0.98	0.99
MMA	0.99	0.99
<b>Efficiency at maximum current</b>		
TIG	77 %	75 %
MMA	80 %	81 %
<b>Open-circuit voltage TIG</b> with VRD	55 - 60 V < 35 V	55 - 60 V < 35 V
<b>Open-circuit voltage MMA</b> with VRD	55 - 60 V < 35 V	55 - 60 V < 35 V
<b>Operating temperature</b>	-10 to + 40° C	-10 to + 40° C
<b>Transportation temperature</b>	-20 to + 55° C	-20 to + 55° C
<b>Constant sound pressure in open-circuit</b>	< 70 dB (A)	< 70 dB (A)
<b>Dimensions, l x b x h</b>	418 x 188 x 208 mm	418 x 188 x 208 mm
<b>Weight</b>	9.2 kg	9.4 kg
<b>Shielding gas</b>	All types intended for TIG welding	All types intended for TIG welding
max pressure	5 bar	5 bar
<b>Insulation class transformer</b>	H	H
<b>Enclosure class</b>	IP 23	IP 23
<b>Application class</b>	<b>S</b>	<b>S</b>

### 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 ambient temperature.

### 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

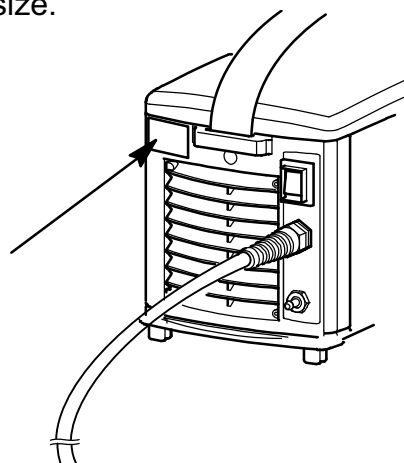
Position the welding power source such that its cooling air inlets and outlets are not obstructed.

### 5.2 Mains power supply

Check that the welding power source is connected to the correct 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

	Tradestig 150		Tradestig 220	
	TIG	MMA	TIG	MMA
<b>Mains voltage</b>	230 V $\pm$ 10 %, 1~	230 V $\pm$ 10 %, 1~	230 V $\pm$ 10 %, 1~	230 V $\pm$ 10 %, 1~
<b>Mains frequency</b>	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
<b>Mains cable area mm<sup>2</sup></b>	3G2.5	3G2.5	3G2.5	3G2.5
<b>Phase current I<sub>1eff</sub></b>	9 A	11 A	11 A	14 A
<b>Fuse</b>				
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. Use the welding power source in accordance with the relevant national regulations.

## 6 OPERATION

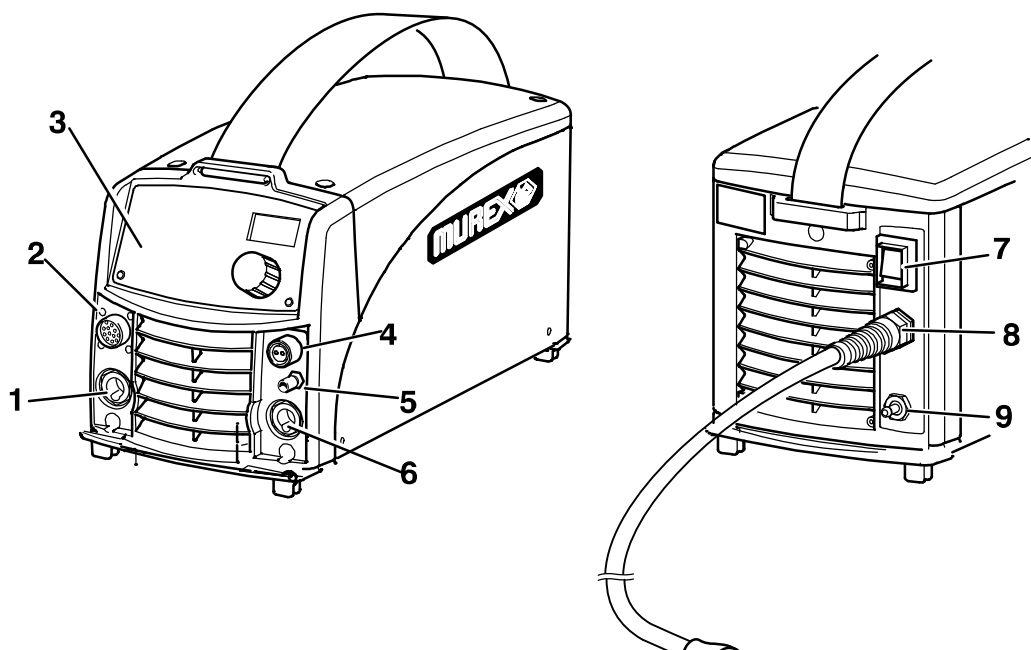
**General safety regulations for the handling of the equipment can be found on page 3. Read through before you start using the equipment!**

### 6.1 PFC - Power factor correction

The Tradestig 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. Tradestig can operate with extra long mains cables, over 100 m, giving you a very larger working radius.

### 6.2 Connections and control devices

- |   |   |   |                              |
|---|---|---|------------------------------|
| 1 | Connection (+) for the return cable for TIG.<br>MMA: for the return cable or the welding cable. | 7 | Mains switch                 |
| 2 | Connection for the remote control unit, only with Tradestig 220                                 | 8 | Mains cable                  |
| 3 | Control panel (see separate instruction manual)   | 9 | Connection for shielding gas |
| 4 | Connection for the TIG-torch  |   |                              |
| 5 | Connection for gas to the TIG-torch   |   |                              |
| 6 | Connection (-) for the TIG-torch<br>MMA: return cable or welding cable                          |   |                              |



AH 0877

### 6.3 Key to symbols





## 6.4 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.

## 6.5 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.

## 6.6 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.

# 7 CONTROL PANELS



When mains power is supplied the unit runs a self diagnosis of the LEDs and the display, the program version is displayed and in this example the program version is 0.18.

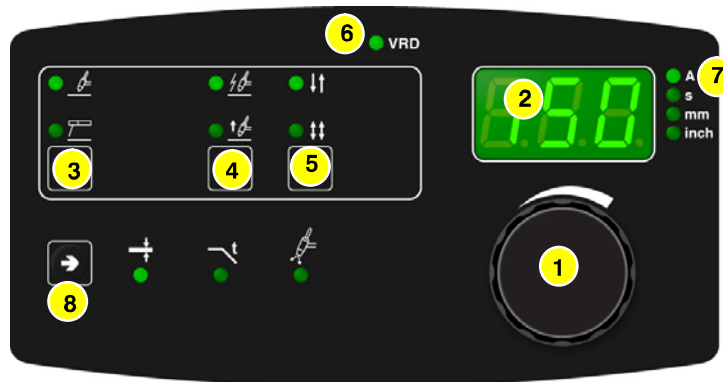
### VRD (Voltage Reduction Device)










The VRD function ensures that the open-circuit voltage does not exceed 35 V when welding is not being carried out. This is indicated by a lit VRD LED. The VRD function is deactivated when the system senses that welding has started.

If the VRD function is activated and open-circuit voltage exceeds the 35 V limit, this is indicated by an error message (16) appearing in the display and welding cannot be started whilst the error message is displayed.

**NOTE!** The VRD function is not active (LED has gone out) on delivery. Contact an authorised ESAB service technician to activate the function.

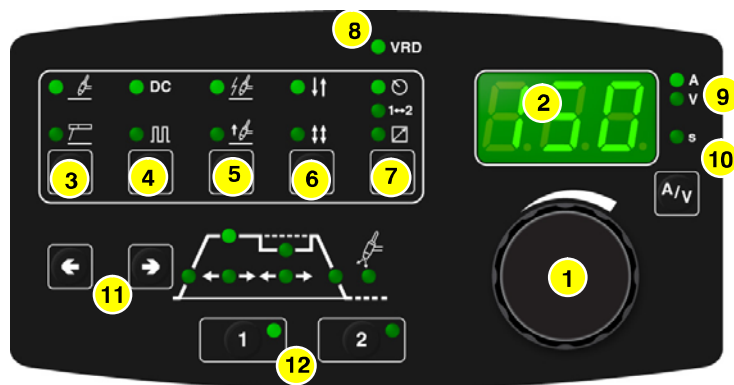
## 7.1 Tradestig 150














- 1 Knob for setting data (current (A), time (s) or material thickness (mm/inch))
- 2 Display
- 3 Choice of welding method TIG  or MMA 
- 4 Choice of selection of HF start  or LiftArc™ start 
- 5 Choice of 2-stroke  or 4-stroke 
- 6 Display of VRD function (*reduced open-circuit voltage*) is active or inactive..
- 7 Indication of which parameter is shown in the display, current (A), time (s) or material thickness (mm/inch)
- 8 Choise for selection of setting parameter,  
 material thickness , slope down  or gas post flow  .

*Note! The pushbutton is also used for hidden functions, see on page 16.*

## 7.2 Tradestig 220



- 1 Knob for setting of current (A) or time (s)
- 2 Display
- 3 Choice of welding method TIG  eller MMA 
- 4 Choice of TIG- / MMA-welding with direct current  or TIG-welding with pulsed current 
- 5 Choice of HF start  or LiftArc™ 
- 6 Choice of 2-stroke  or 4-stroke 
- 7 Setting from panel , welding data change with torch trigger switch  or connecting remote control unit 
- 8 Display of VRD-function (reduced open-circuit voltage) is active or inactive.
- 9 Indication of which parameter is shown in the display current (A), voltage (V), time (s)
- 10 Choice of current indication (A) or voltage indication (V) during welding, in the display.
- 11 Indication of selected setting parameter, see page 13.  
*The right-hand button is also used for hidden functions, see page 16 and 18.*
- 12 Buttons for weld data memory settings, see page 19.

## 8 TIG WELDING

### 8.1 Settings

Function	Setting range	Tradestig 150	Tradestig 220
HF / LiftArc™ 2)	HF or LiftArc™	x	x
2/4-stroke 2)	2 stroke or 4 stroke	x	x
Gas pre flow time 1)	0 - 5 s	x	x
Slope up-time 1)	0 - 10 s	x	x
Slope down time	0 - 10 s	x	x
Gas post flow time	0 - 25 s	x	x
Current	4 - max 3)	x	x
Active panel	OFF or ON	-	x
Changing trigger data	OFF or ON	-	x
Remote control unit	OFF or ON	-	x
Min current remote 1)	0-99%	-	x
Pulse current	4 - max 3)	x	x
Pulse time	0.01 - 2.5 s	-	x
Micro pulse 1)	0.001 - 0.250 s		
Background current	4 - max 3)	-	x
Background time	0.01 - 2.5 s	-	x
Micro pulse 1)	0.001 - 0.250 s		
Material thickness 3)	30 A/mm in step of 0.1 mm	x	-

1) These functions are hidden Tig functions, see description point 8.3.

2) These functions cannot be changed while welding is in progress

3) The setting range is depended on the power source used.

### 8.2 Symbol and Function explanations TIG



#### TIG welding

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



#### Direct current

A higher current gives a wider weld pool, with better penetration into the workpiece.

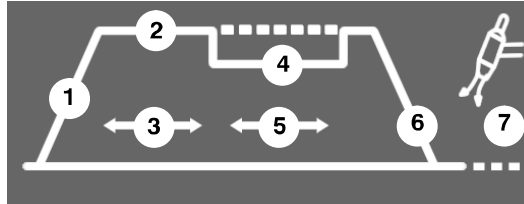


#### Pulsed current

Pulsing is used for improved control of the weld pool and the solidification process. The pulse frequency is set so slow that the weld pool has time to solidify at least partially between each pulse. In order to set pulsing, four parameters are required: pulse current, pulse time, background current and background time.

**Parameter settings**

1. Slope up
2. Welding current
3. Pulse time
4. Background current
5. Background time
6. Slope down
7. Gas post flow time

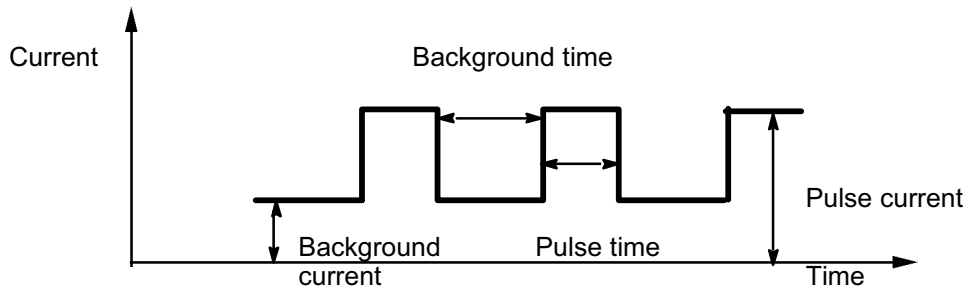


**Slope up**

The slope up function means that, when the TIG arc strikes, the current rises slowly to the set value. This provides 'gentler' heating of the electrode, and gives the welder a chance to position the electrode properly before the set welding current is reached.

**Pulse current**

The higher of the two current values in the event of pulsed current.



*TIG welding with pulsing.*

**Pulse time**

The time the pulse current is *on* during a pulse period.

**Background current**

The lower of the two current values in the event of pulsed current.

**Background time**

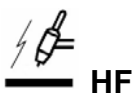
Time for background current which, along with the time for pulse current, gives the pulse period.

**Slope down**

TIG welding uses "slope down", by which the current falls 'slowly' over a controlled time, to avoid craters and/or cracks when a weld is finished.

**Gas post-flow**

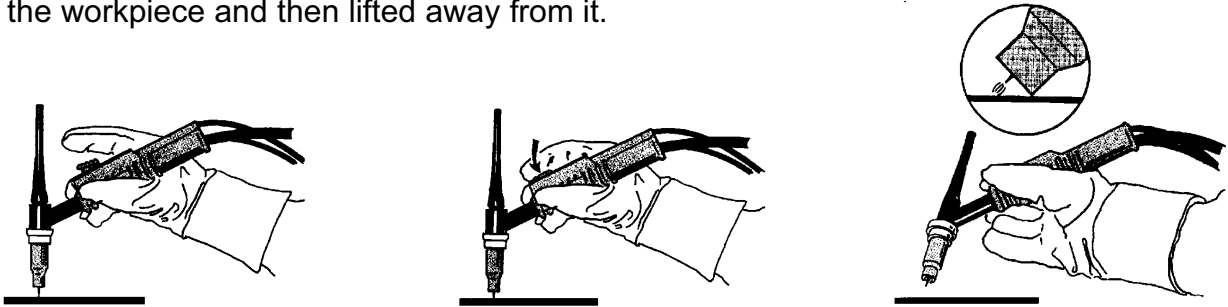
This controls the time during which shielding gas flows after the arc is extinguished.




The HF function strikes the arc by means of a spark from the electrode to the workpiece as the electrode is brought closer to the workpiece.

 **LiftArc™**

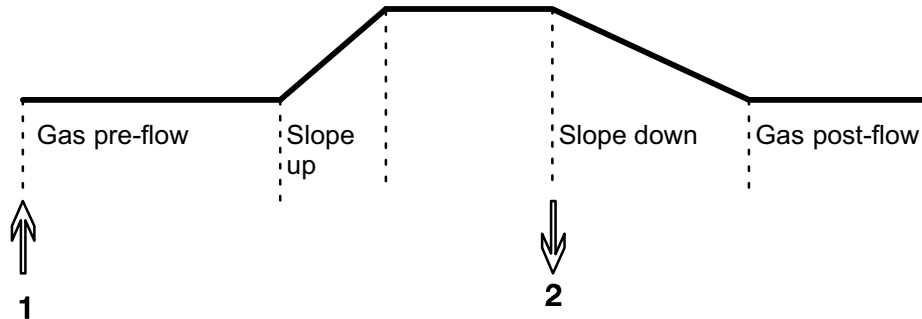
The LiftArc™ function strikes the arc when the electrode is brought into contact with the workpiece and then lifted away from it.



Striking the arc with the LiftArc function™. Step 1: the electrode is touched on to the workpiece. Step 2: the trigger switch is pressed, and a low current starts to flow. Step 3: the welder lifts the electrode from the workpiece: the arc strikes, and the current rises automatically to the set value.

 **2-stroke**

With 2-stroke gas pre-flow (if used) starts when the welding gun trigger switch is pressed. The welding process then starts. Releasing the trigger switch stops welding entirely and starts gas post-flow (if selected).

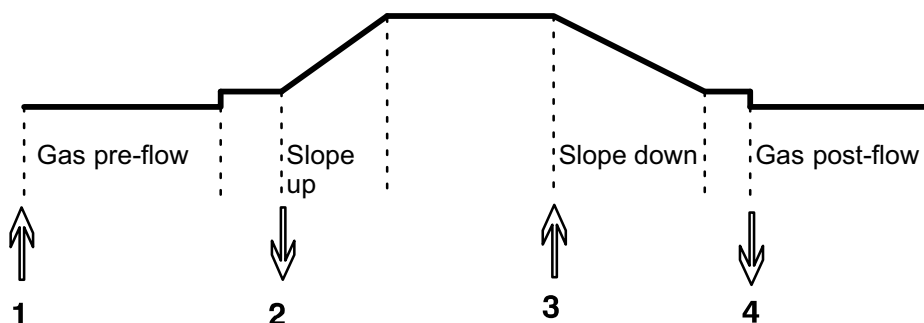


Functions when using 2 stroke control of the welding torch.

In the 2 stroke control mode, pressing the TIG torch trigger switch (1) starts gas pre-flow (if used) and strikes the arc. The current rises to the set value (as controlled by the slope up function, if in operation). Releasing the trigger switch (2) reduces the current (or starts slope down if in operation) and extinguishes the arc. Gas post-flow follows if it is in operation.

↓ ↑ **4-stroke**

With 4 stroke, the gas pre-flow starts when the welding gun trigger switch is pressed in and the arc is struck when it is released. The welding process continues until the switch is pressed in again, the arc is extinguished when the switch is released the gas post flow starts (if selected).



*Functions when using 4 stroke control of the welding torch.*

In the 4 stroke control mode, pressing the trigger switch (1) starts gas pre-flow (if used). At the end of the gas pre-flow time, the current rises to the pilot current (a few ampere), and the arc is struck. Releasing the trigger switch (2) increases the current to the set value (with slope up, if in use). When the trigger switch is pressed in (3) the current returns to the set pilot current (with "slope down" if in use). When the trigger switch is released again (4) the arc is extinguished and any gas post flow occurs.

↓ ↑ **Material thickness**

The current is set automatically due to material thickness (mm/inch).



To increase or decrease the current, push on [ ] until the symbols for material thickness, slope down and gas post flow no longer are active and set the current.



**Gas post-flow**

This controls the time during which shielding gas flows after the arc is extinguished.



**Active panel**

Settings are made from the control panel.



**Changing trigger data**

This function permits changing between different welding data memories by a double press on the trigger of the welding gun. *Only applies for TIG welding.*



### Remote control unit


Settings are made from the remote control unit.

The remote control unit must be connected to the remote control unit socket on the machine before activation. When the remote control unit is activated the panel is inactive.


## 8.3 Hidden TIG functions

There are hidden functions in the control panel.



To access the functions, press  for 5 seconds. The display shows a letter and a value. Select function by pressing the right arrow. The knob is used to change the value of the selected function.



To leave hidden functions, press  for 5 seconds.

### Tradestig 150

Function	Settings
<b>A</b> = gas pre-flow	0 - 5 s
<b>b</b> = slope up	0 - 9,9
<b>C</b> = metric/inch	0 = inch, 1 = mm


### Tradestig 220

Function	Settings
<b>A</b> = gas pre-flow	0 - 5 s
<b>b</b> = micro pulse	0 = OFF; 1 = ON
<b>I</b> = min current	0 - 99%

### Gas pre-flow

This controls the time during which shielding gas flows before the arc is struck.

### Micro pulse

In order to select micro pulse, the machine must be in the pulsed current function . The value for pulse time and background current is normally 0.01 – 2.50 seconds. By using the micro pulse, the time can go down to 0.001 seconds. When the micro pulse function is active, times that are shorter than 0.25 seconds are shown in the display without decimal points.

### Min current

Used to set the minimum current for the remote control T1 Foot CAN.

If the max current is 100 A and the min current is to be 50 A, set the concealed function min current to 50%.

If the max current is 100 A and the min current is to be 90 A, set the min current to 90%.



## 9 MMA WELDING

### 9.1 Settings

Function	Setting range	Tradestig 150	Tradestig 220
Current	16 - max. A <sup>2)</sup>	x	x
Hotstart <sup>1)</sup>	0 - 99	-	x
Arc force <sup>1)</sup>	0 - 99	-	x
Drop welding <sup>1)</sup>	0=OFF or 1=ON	-	x
Weld regulator ArcPlus™ <sup>1)</sup>	1=OFF or 0=ON	-	x
Active panel	OFF or ON	-	x
Remote control unit	OFF or ON	-	x

<sup>1)</sup> These functions are hidden functions, see description point 9.3.

<sup>2)</sup> The setting range is dependent on the power source used.

### 9.2 Symbol and Function explanations MMA



#### MMA welding

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



#### Active panel

Settings are made from the control panel.



#### Remote control unit


Settings are made from the remote control unit.

The remote control unit must be connected to the remote control unit socket on the machine before activation. When the remote control unit is activated the panel is inactive.


### 9.3 Hidden MMA functions

There are hidden functions in the control panel.



To access the functions, press  for 5 seconds. The display shows a letter and a value. Select function by pressing the right arrow. The knob is used to change the value of the selected function.



To leave hidden functions, press  for 5 seconds.

#### Tradestig 220

Function	Settings
<b>C</b> = Arc Force	0 - 99
<b>d</b> = drop welding	<b>0</b> = OFF; <b>1</b> = ON
<b>F</b> = regulator type ArcPlus™	<b>1</b> = ArcPlus™ II; <b>0</b> = ArcPlus™
<b>H</b> = Hotstart	0 - 99
<b>I</b> = min current	0 - 99%

#### Arc Force

The arc force is important in determining how the current changes in response to a change in the arc length. A lower value gives a calmer arc with less spatter.

#### Drop welding

Drop welding can be used when welding with stainless electrodes. The function involves alternately striking and extinguishing the arc in order to achieve better control of the supply of heat. The electrode needs only to be raised slightly to extinguish the arc.

#### Welding regulator

Welding regulator is a type of control that produces a more intense, more concentrated and calmer arc. It recovers more quickly after a spot short-circuit, which reduces the risk of the electrode becoming stuck.

- Arc Plus™ (0) recommended for basic type of electrodes
- Arc Plus™ II (1) recommended for rutile and cellulosia typ of electrodes

#### Hot Start



Hot start increases the weld current for an adjustable time at the start of welding, thus reducing the risk of poor fusion at the beginning of the joint.



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## 10 WELDING DATA MEMORY

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Two different welding data settings can be stored in the control panel memory.

Press button  or  for 5 seconds to store the welding data in the memory. The welding data is stored when the green indicator lamp starts to flash.

To switch between the different welding data memories press button  or .

The welding data memory has a back-up battery so that the settings remain even if the machine has been switched off.

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## 11 FAULT CODES

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The fault code is used to indicate that a fault has occurred in the equipment. It is indicated in the display by an E followed by a fault code number.

A unit number is displayed to indicate which unit has generated the fault.

Fault code numbers and unit numbers are shown alternately.

If several faults have been detected only the code for the last occurring fault is displayed. Press any function button or turn the knob to remove the fault indication from the display.

NOTE! If the remote control is activated, deactivate the remote control by pressing

 to remove the fault indication.

See detailed description of the control panels on page x.

## 12 MAINTENANCE

*Regular maintenance is important for safe, reliable operation.*

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



**CAUTION!**

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

### 12.1 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.

## 13 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> <li>• Make sure that the power source is clean.</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>

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## 14 ORDERING SPARE PARTS

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

**TYPE is designed and tested in accordance with the international and European standards EN and EN . 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.**

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## 15 DISMANTLING AND SCRAPPING

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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.



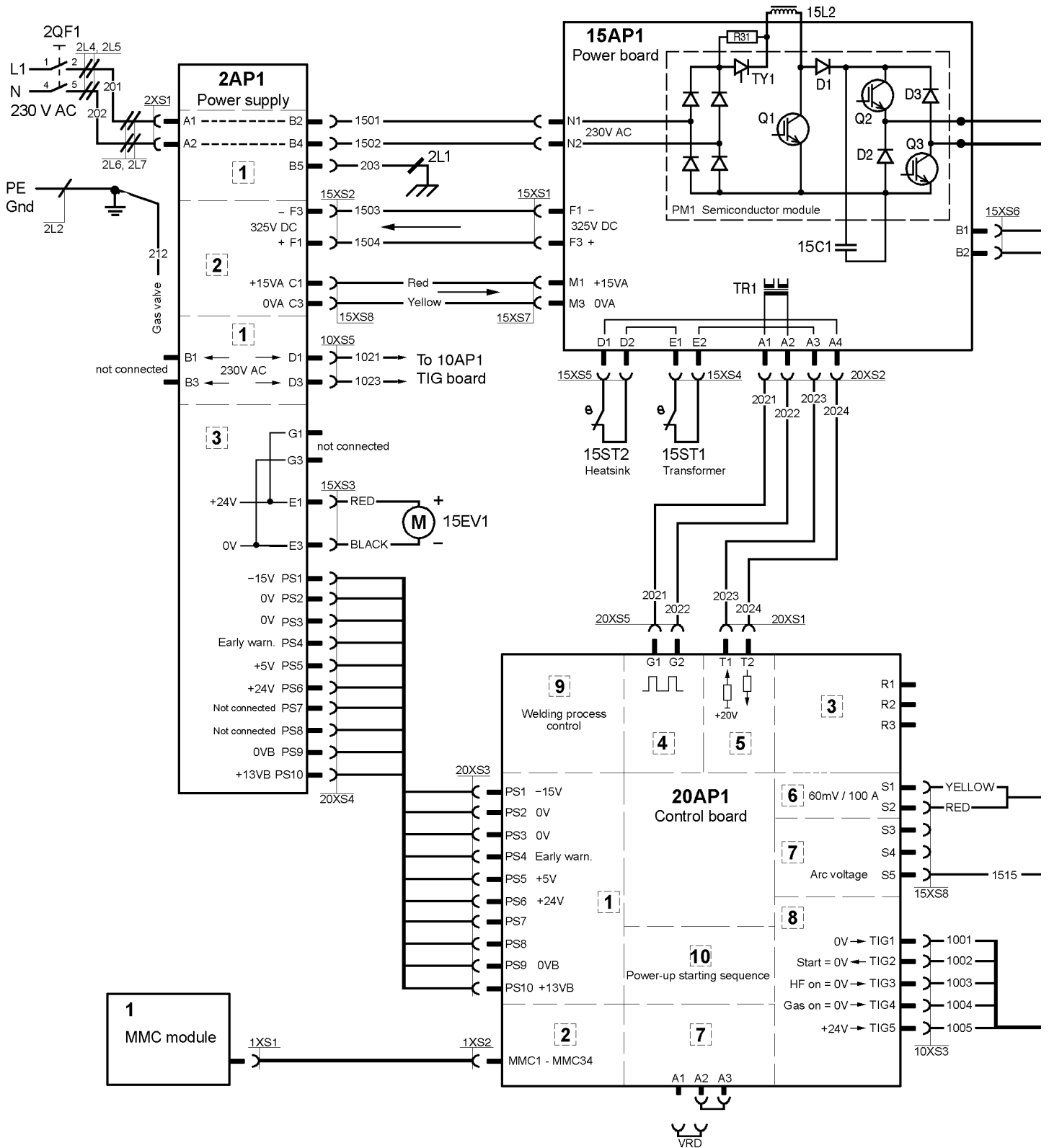
**Do not dispose of electrical equipment together with normal waste!**

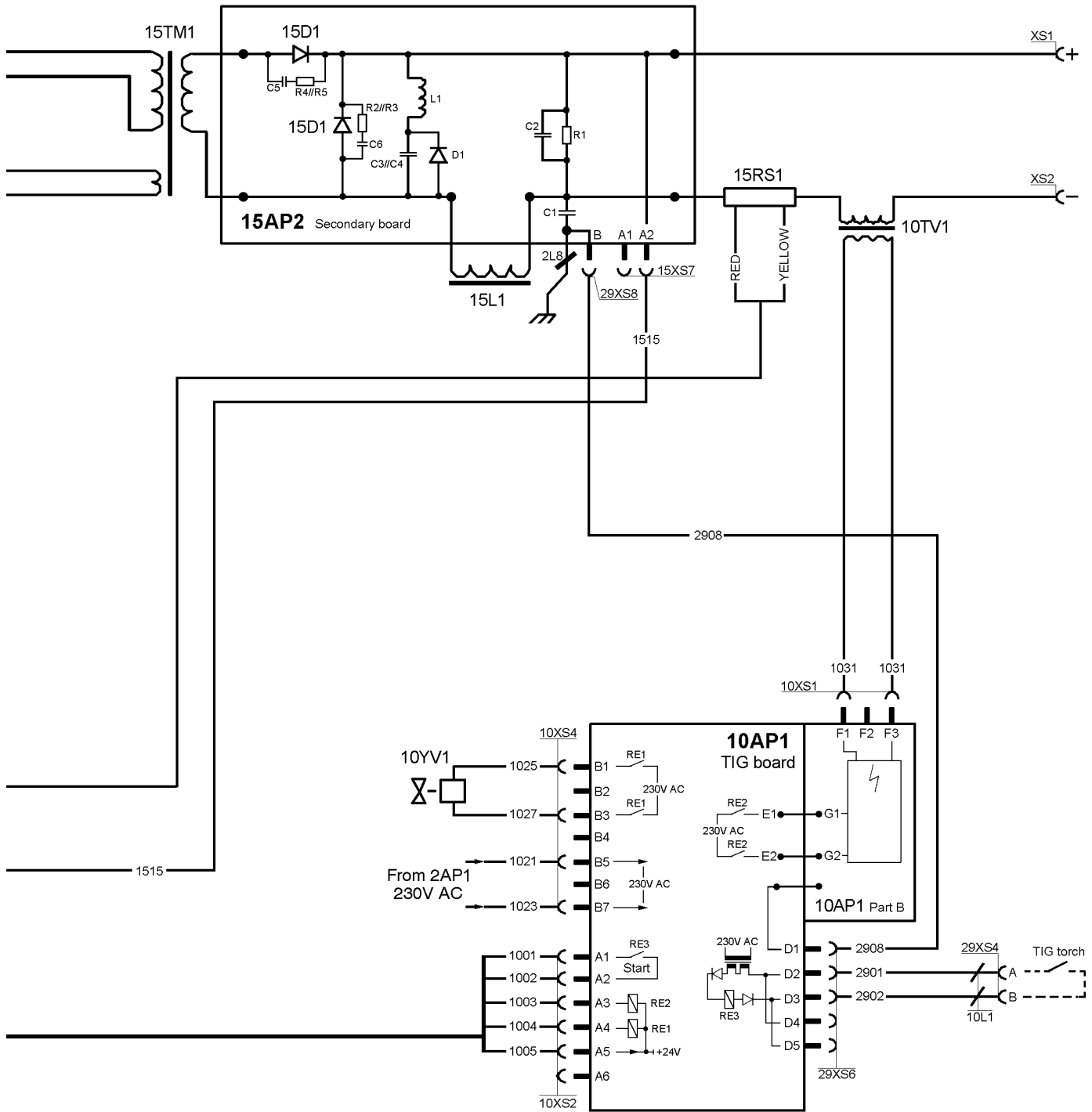
In observance of European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and returned to an environmentally compatible recycling facility. 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!

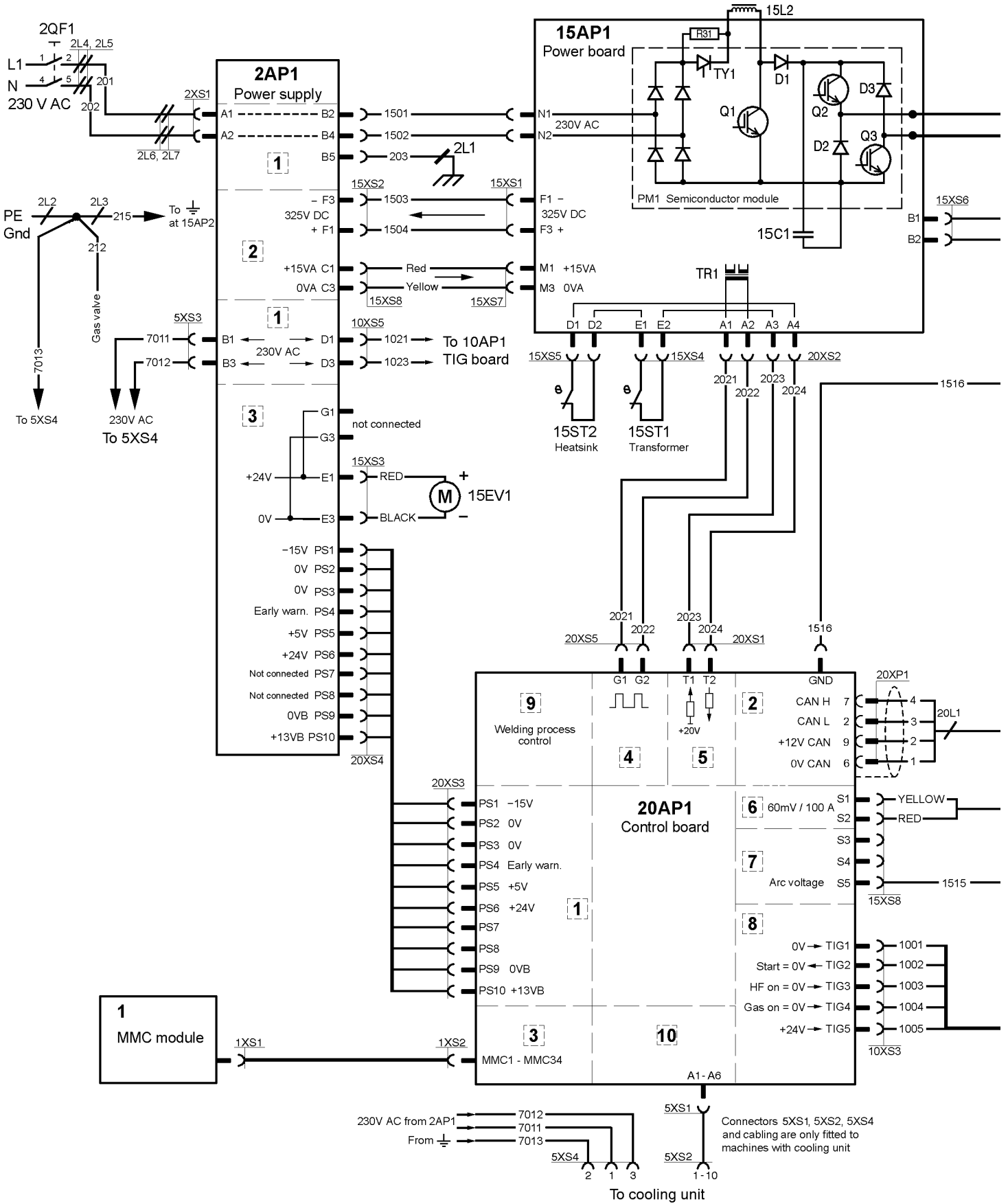
# Diagram

## Tradestig 150

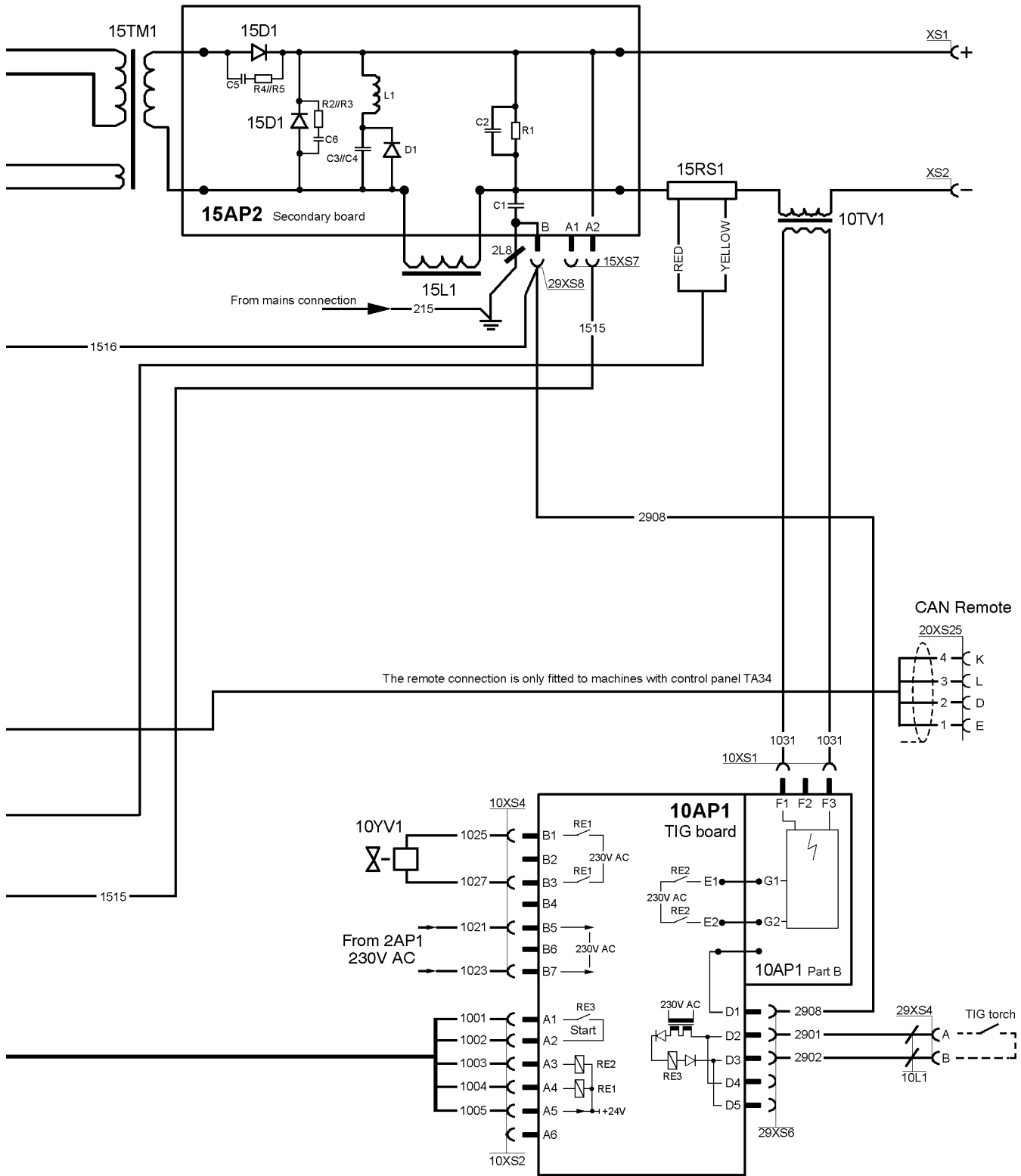




# Tradestig 220

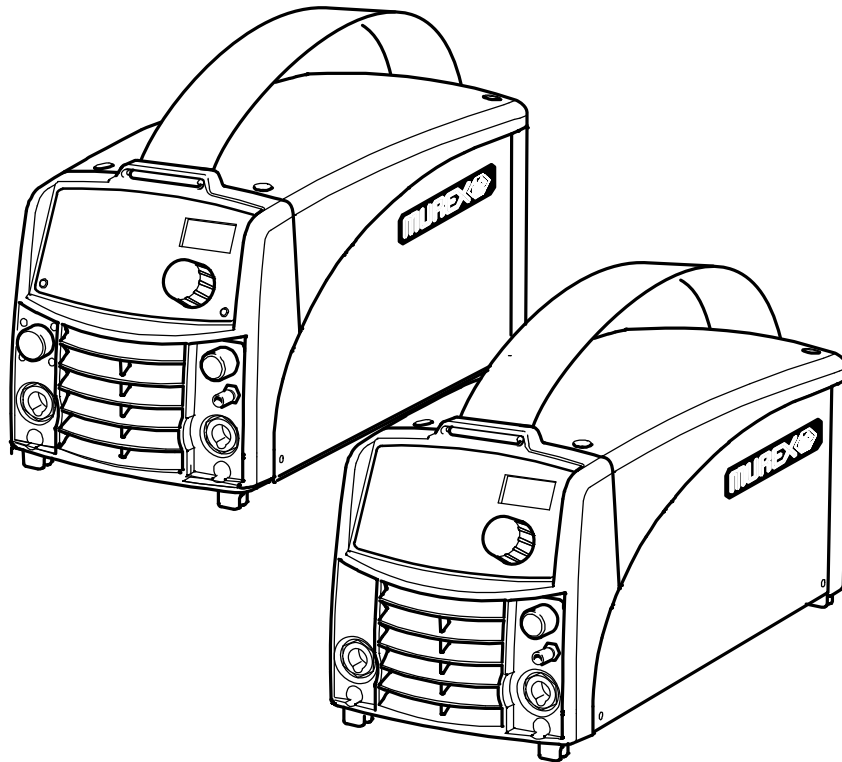








## Spare parts list



Valid for serial no. 827-xxx-xxxx

### Ordering number

0460 441 882 Tradestig 150, 230 V 50/60 Hz with MMA kit

0460 441 883 Tradestig 220, 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.

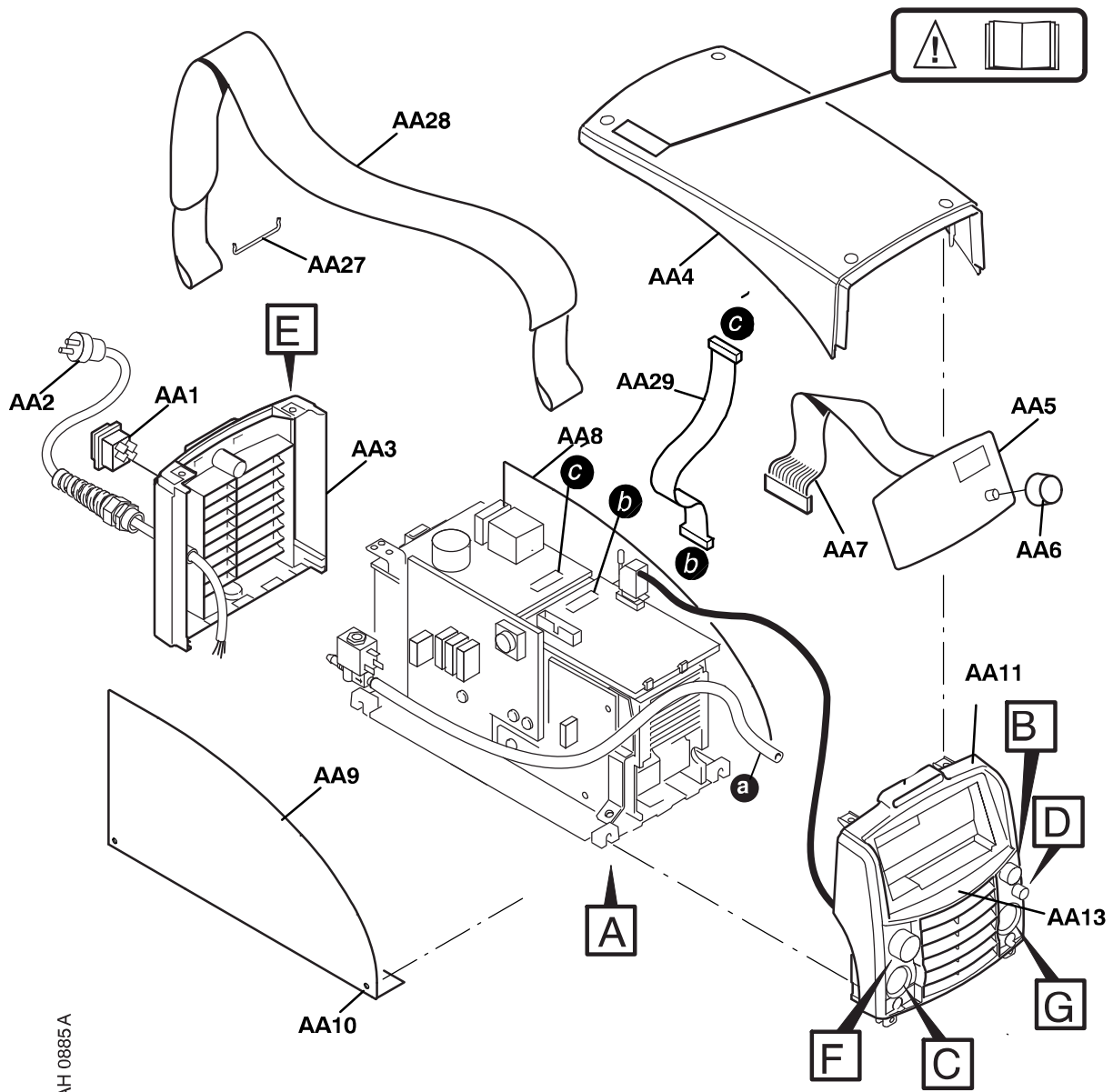
Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

**C = component designation in the circuit diagram**

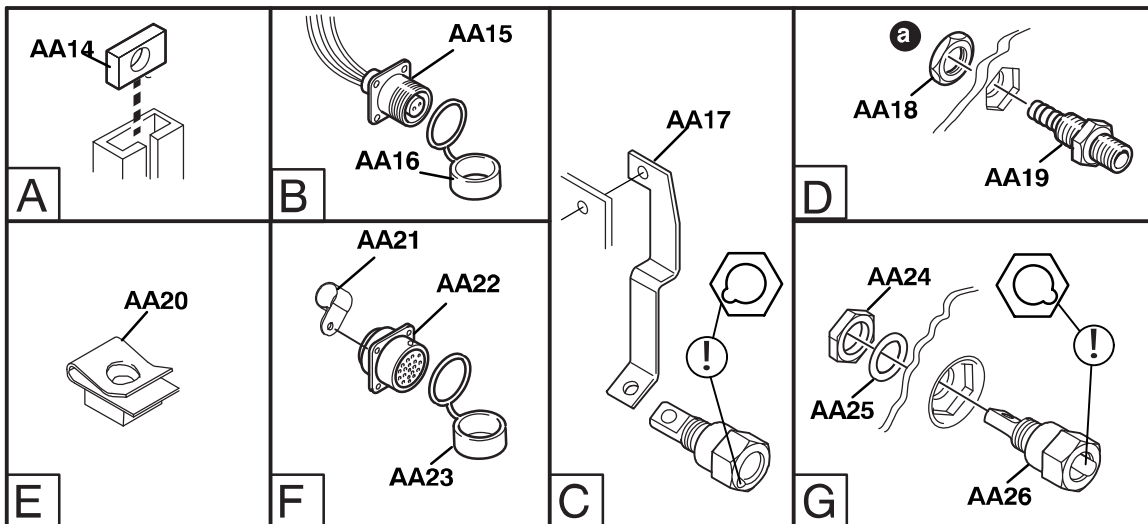
Item	Qty	Ordering no.	Denomination	Notes	C	
AA1	1	0193 317 001	Switch	Included in item AA50	2QF1	
AA2	1	-	Cord set	Included in item AA50		
AA3	1	0460 140 001	Rear panel			
AA4	1	0460 143 001	Cover			
AA5	1	0460 476 882	MMC Module Tradestig 150	Control panel Including Insulation snticker, AA6 and AA7		
	1	0460 420 001	Insulation sticker	Included in AA5		
AA6	1	0460 600 528	Knob	Included in AA5		
AA7	1	0193 700 711	Ribbon cable with connectors	34 pole, included in AA5		1XS1, 1XS2
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 690 003	Sticker	Tradestig 150		
AA14	5	0366 588 001	Nut		29XS4	
AA15	1	-	Socket	2 pole included in item AA52		
AA16	1	0457 626 001	Protection cap			
AA17	1	0460 427 001	Bar plus			
AA18	1	-	Nut	Included in item AA51, M8		
AA19	1	0459 269 002	Gas connection	Included in item AA51		
AA20	6	0469 381 002	Fast lock nut	M5		
AA24	2	0366 247 001	Nut	Included in AA51		
AA25	2	0366 306 003	Spring washer	Ø21/15x1 Included in AA51		
AA26	2	0160 362 025	Connector OKC 50	Included in item AA51		XS1, XS2
AA27	1	0460 265 001	Strap			
AA28	2	0468 497 001	Holder			

**SPARE PARTS SETS**

Item	Qty	Ordering no.	Denomination	Notes
AA50	1	0460 601 881	Mains module	Includes items: AA1 switch, AA2 mains cable with plug, cable clamp and one ferrite rings 2L1.
AA51	1	0460 379 892	Front complete	Includes items: AA11, AA15, AA16, AA18, AA19, AA24, AA25, AA26
AA52	1	0459 280 892	Cable set	Including item AA15, 2 pole socket 29XS4, 5 pole socket 29XS6, and the wires between them.



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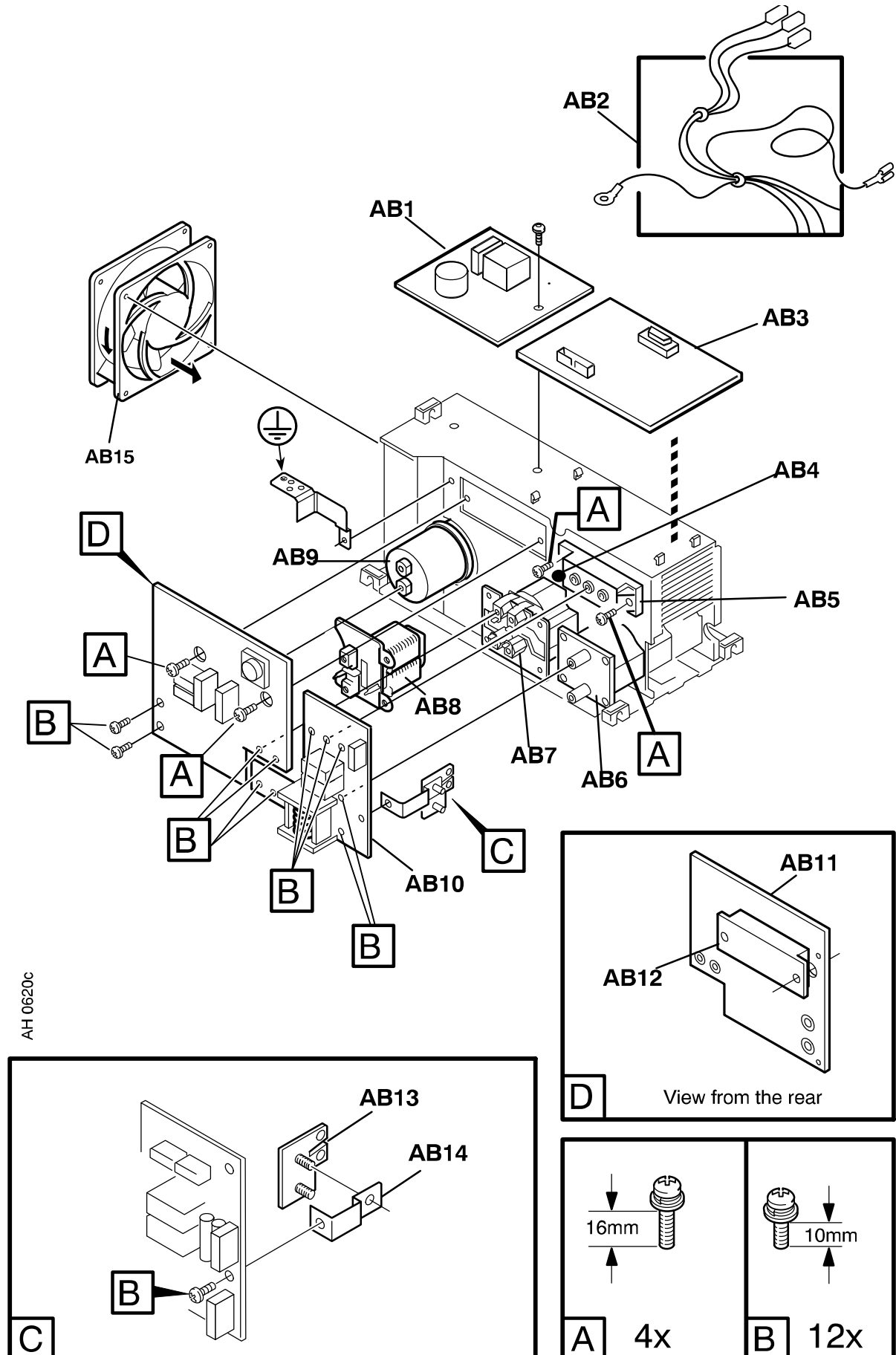


**C = component designation in the circuit diagram**

Item	Qty	Ordering no.	Denomination	Notes	C
AC1	1	0487 064 880	Power supply board		2AP1
AB1	1	0487 064 884	Power supply board		2AP1
AC1		0487 045 880	Power supply board		2AP1
	1	0487 045 882	Power supply board		2AP1
AC2	1	0459 280 880	Cable set	Including wires 1501, 1502 and their sockets	15XS1, 15XS2, 15XS7, 15XS8
AC2		0459 280 880	Cable set	Including wires 1501, 1502 and their sockets	15XS1, 15XS2, 15XS7, 15XS8
	1	0459 280 888	Cable set	Including wires 1501, 1502, 1505, 1506 and their sockets	15XS1, 15XS2, 15XS7, 15XS8
	1	0459 280 889	Cable set	Wires 201, 202, 205, 206 and their sockets	2XS1
AB2	1	0193 700 702	Ribbon cable with connectors	10 pole	20XS3, 20XS4
AC3	1	0459 390 881	Control board kit	The board must be configured. See the service manual.	20AP1
AB3	1	0487 599 884	Control board	Configured for Transtig 150	20AP1
AC3		0487 005 880	Control board		20AP1
	1	0487 005 890	Control board		20AP1
AB4	1	0468 940 005	Thermal switch	Socket connector 15XS5 included	15ST2
AB5	1		Diode module	See item AB50	15D1
AB6	1	0459 177 001	Inductor		15L1
AB7	1	0459 355 881	Transformer	Includes: main transformer, sockets 15XS4, 15XS6, thermal switch 15ST1	15TM1
AB8	1	0460 117 001	Inductor	PFC	15L2
AB9	1	0194 158 003	Capacitor	1000 uF 450 V DC	15C1
AB10	1	0487 060 880	Secondary board		15AP2
AB11	1		Circuit board	See item AB51	15AP1
AB12	1		Semiconductor module	See item AB51	
AB13	1	0468 030 880	Shunt		15RS1
AB14	1	0459 194 001	Busbar		
AB15	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 AB5 diode module, screws (type A and B), thermal compound and roller.
AB51	1	0459 384 887	Power board kit	Includes: item AB11 power board, item AB12 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	



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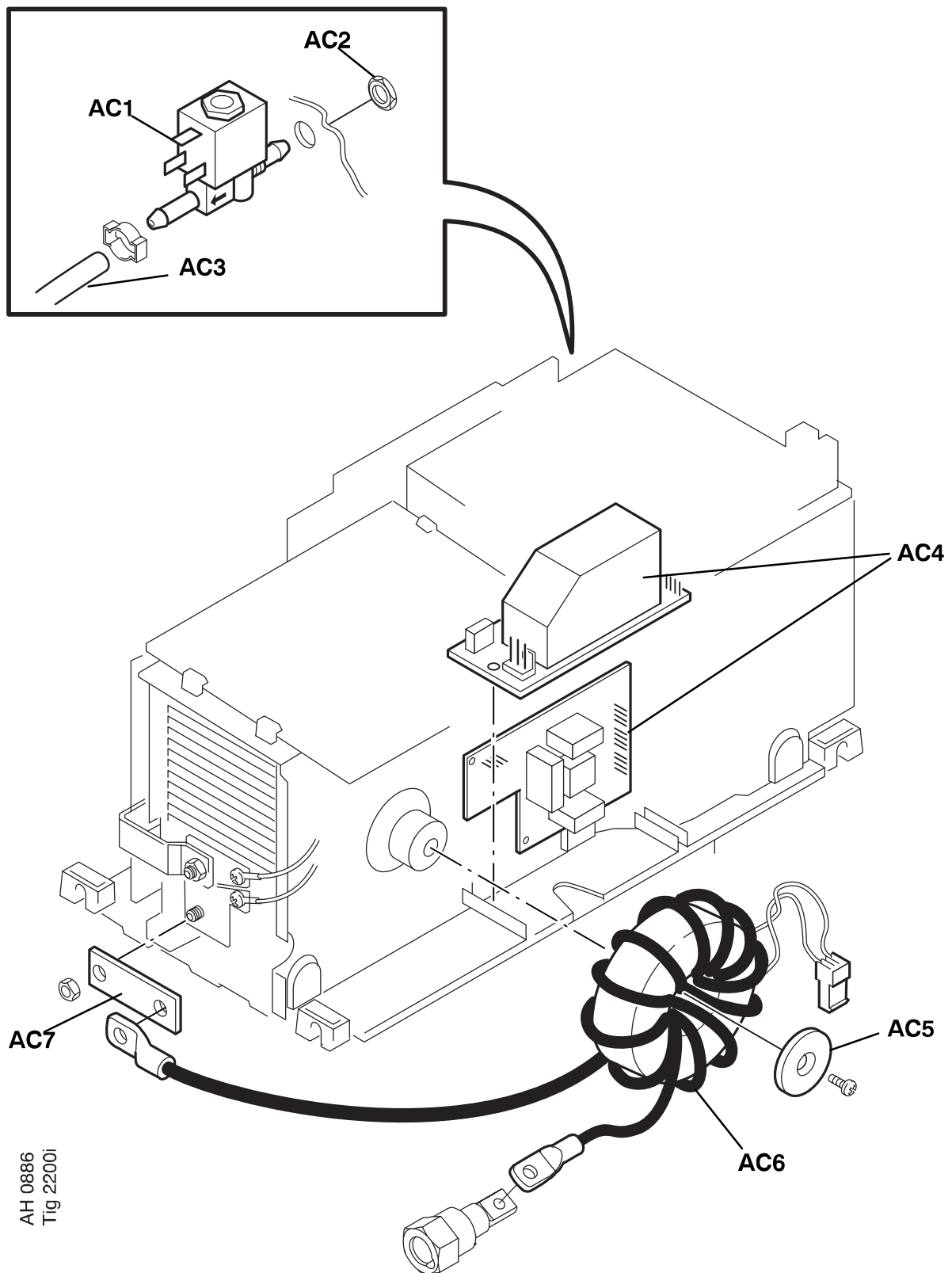
## Tradestig 150, Tradestig 220

C = component designation in the circuit diagram

Item	Qty	Ordering no.	Denomination	Notes	C
AC1	1	0193 054 005	Solenoid valve	230 V AC	10YV1
AC2	1		Nut	ML6M MF10x1	
AC3	1	0456 496 001	Hose	D = 9/5 mm, L = 0.57 metre reinforced PVC	
AC4	1	0487 028 880	Circuit board TIG		10AP1
AC5	1	0459 258 001	Coil bracket		
AC6	1	0460 135 001	HF coil		10TV1, 10XS1
AC7	1	0460 427 002	Bar	Negative	



Tradestig 150, Tradestig 220



AH 0886  
Tig 2200i

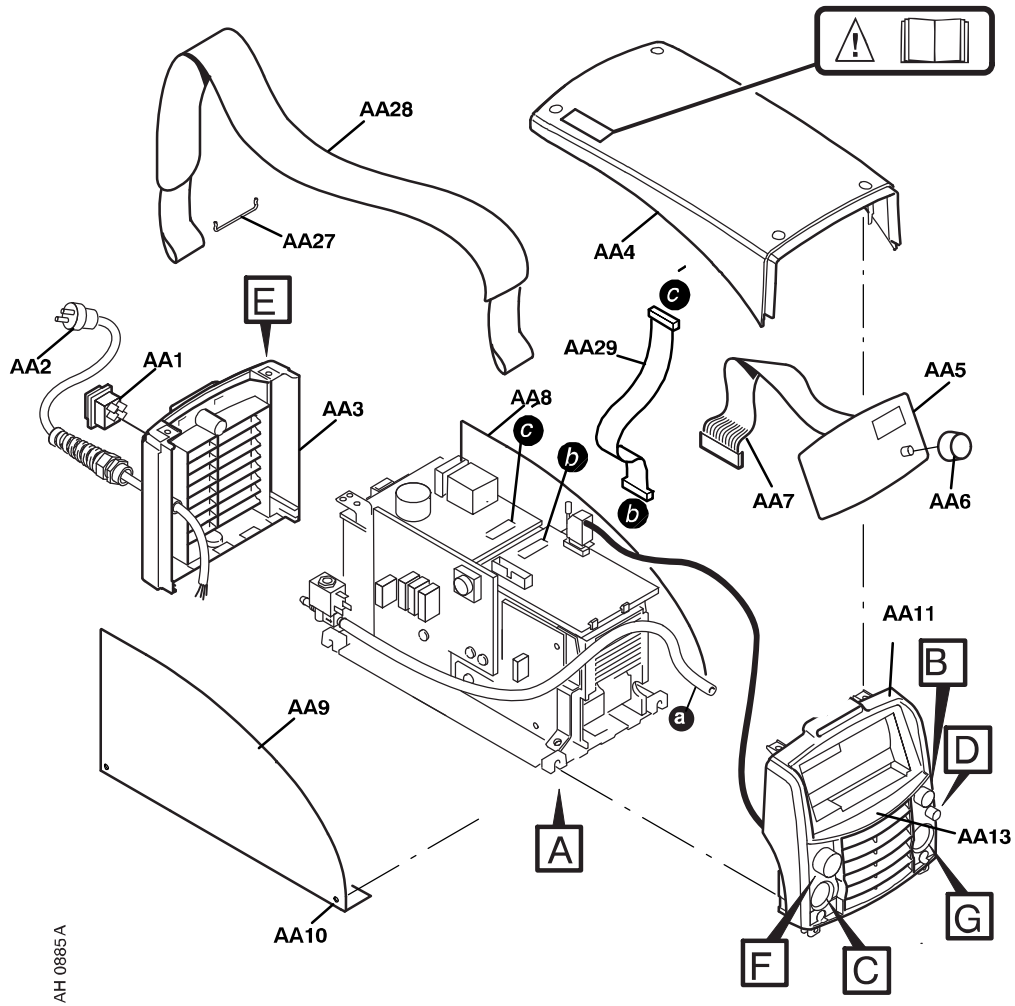
**C = component designation in the circuit diagram**

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		
AA4	1	0460 143 001	Cover		
AA5	1	0460 476 883	MMC Module Transtig 220	Control panel Including Insulation snticker, AA6 and AA7	
	1	0460 420 001	Insulation sticker	Included in AA5	
AA6	1	0460 600 528	Knob	Included in AA5	
AA7	1	0193 700 711	Ribbon cable with connectors	34 pole, included in AA5	1XS1, 1XS2
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 690 004	Sticker	Tradestig 220	
AA14	5	0366 588 001	Nut		
AA15	1	-	Socket	2 pole Included in item AA51 and AA52	29XS4
AA16	1	0457 626 001	Protection cap	Included in item AA51	
AA17	1	0460 427 001	Bar plus		
AA18	1	-	Nut	Included in item AA51, M8	
AA19	1	0459 269 002	Gas connection	Included in item AA51	
AA20	6	0469 381 002	Fast lock nut	M5	
AA21	1	0194 227 003	Clamp	Only TA34 Included in item AA51	
AA22	1	0458 681 897	Cable with connectors	Only TA34 Included in item AA51	20XS25, 20XP1
AA23	1	0366 285 001	Protection cap	Only TA34 Included in item AA51	
AA24	2	0366 247 001	Nut	Included in item AA51	
AA25	2	0366 306 003	Spring washer	Ø21/15x1 Included in item AA51	
AA26	2	0160 362 025	Connector OKC 50	Included in item AA51	XS1, XS2
AA27	1	0460 265 001	Strap		
AA28	2	0468 497 001	Holder		

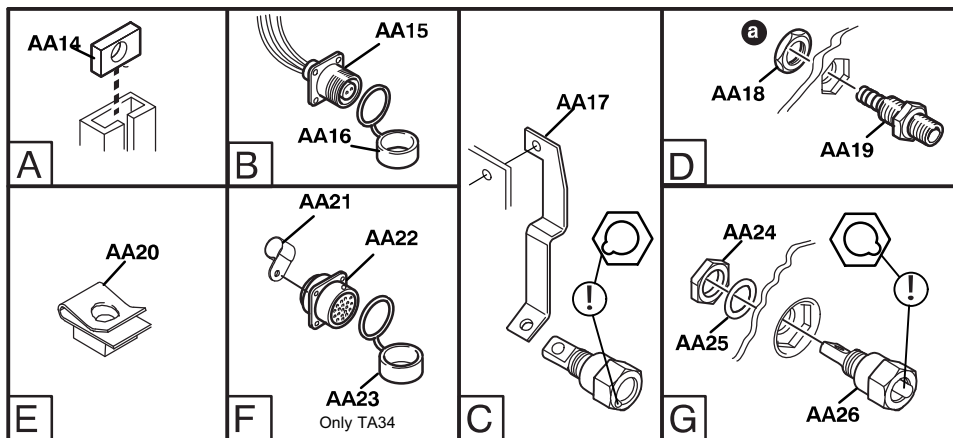
# Tradestig 220

## SPARE PARTS SETS

Item	Ordering no.	Denomination	Notes
AA50	0460 601 880	Mains module	Includes items: AA1 switch, AA2 mains cable with plug, cable clamp and one ferrite rings 2L2.
AA51	0460 379 891	Front complete	Includes items: AA11, AA15, AA16, AA18, AA19, AA21, AA22, AA23, AA24, AA25, AA26
AA52	0459 280 892	Cable set	Including item AA15, 2 pole socket 29XS4, 5 pole socket 29XS6, and the wires between them.



AH 0885 A

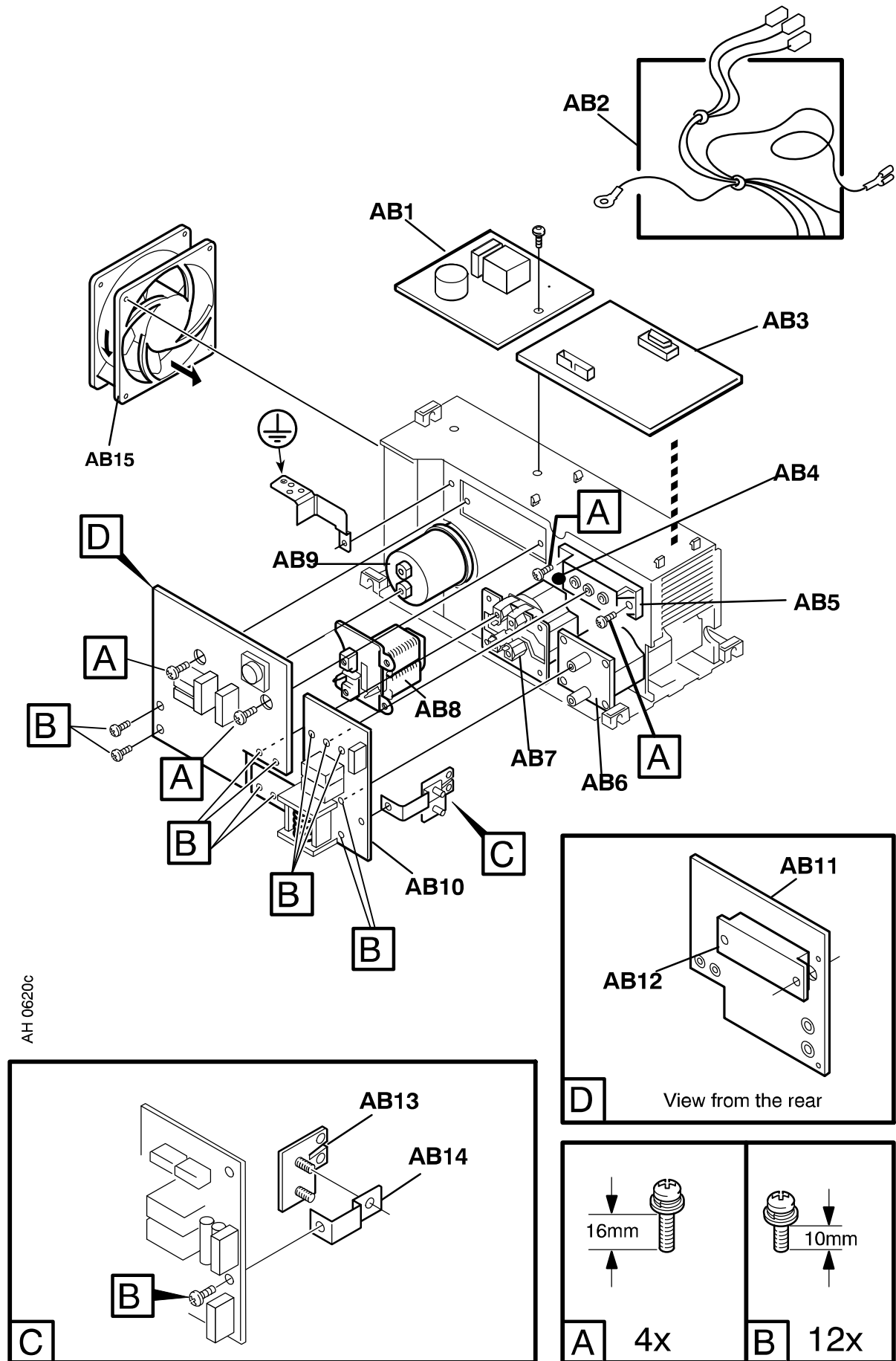


**C = component designation in the circuit diagram**

Item	Qty	Ordering no.	Denomination	Notes	C
AC1	1	0487 064 880	Power supply board		2AP1
AB1	1	0487 631 880	Power supply board		2AP1
AC1		0487 045 880	Power supply board		2AP1
	1	0487 045 882	Power supply board		2AP1
AC2	1	0459 280 880	Cable set	Including wires 1501, 1502 and their sockets	15XS1, 15XS2, 15XS7, 15XS8
AC2		0459 280 880	Cable set	Including wires 1501, 1502 and their sockets	15XS1, 15XS2, 15XS7, 15XS8
	1	0459 280 888	Cable set	Including wires 1501, 1502, 1505, 1506 and their sockets	15XS1, 15XS2, 15XS7, 15XS8
	1	0459 280 889	Cable set	Wires 201, 202, 205, 206 and their sockets	2XS1
AB2	1	0193 700 702	Ribbon cable with connectors	10 pole	20XS3, 20XS4
AC3	1	0459 390 881	Control board kit	The board must be configured. See the service manual.	20AP1
AB3	1	0487 344 885	Control board	Configured for Transtig 220	20AP1
AC3		0487 005 880	Control board		20AP1
	1	0487 005 890	Control board		20AP1
AB4	1	0468 940 005	Thermal switch	Socket connector 15XS5 included	15ST2
AB5	1		Diode module	See item AB50	15D1
AB6	1	0459 177 001	Inductor		15L1
AB7	1	0459 355 881	Transformer	Includes: main transformer, sockets 15XS4, 15XS6, thermal switch 15ST1	15TM1
AB8	1	0460 117 001	Inductor	PFC	15L2
AB9	1	0194 158 003	Capacitor	1000 uF 450 V DC	15C1
AB10		0487 060 880	Secondary board		15AP2
AB11	1		Circuit board	See item AB51	15AP1
AB12	1		Semiconductor module	See item AB51	
AB13	1	0468 030 880	Shunt		15RS1
AB14	1	0459 194 001	Busbar		
AB15	1	0458 065 002	Fan	24 V DC; with cables and socket 15XS3	15EV1

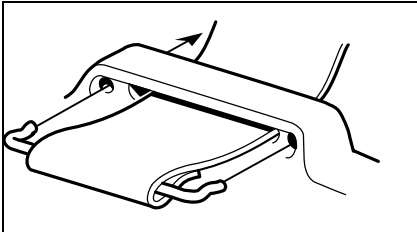
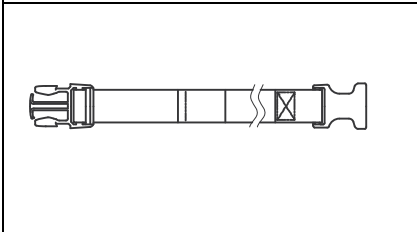
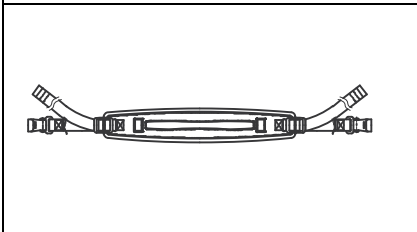
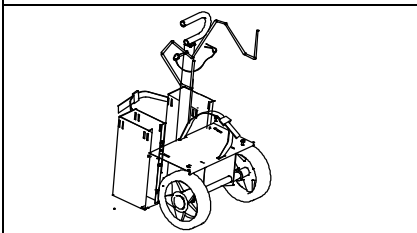

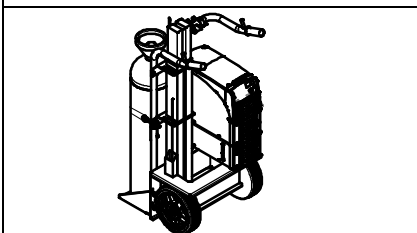
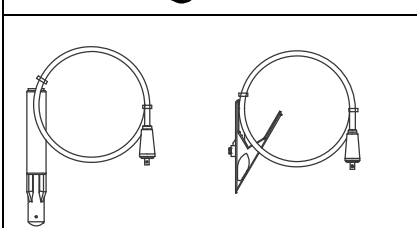
**SPARE PARTS SETS**





Item	Qty	Ordering no.	Denomination	Notes
AB50	1	0459 385 881	Diode module kit	Includes: item AB5 diode module, screws (type A and B), thermal compound and roller.
AB51	1	0459 384 884	Power board kit	Includes: item AB11 power board, item AB12 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	



AH 0620C

Accessories

	<p><b>Strap</b> ..... 0460 265 001</p>
	<p><b>Cable holder 2 pcs</b> ..... 0460 265 002</p>
	<p><b>Shoulder strap</b> ..... 0460 265 003</p>
	<p><b>Trolley</b> ..... for 5-10 litre gasbottle ..... 0459 366 885</p>
	<p><b>Trolley</b> ..... for 20-50 litre gasbottle ..... 0459 366 886</p>
	<p><b>Trolley</b> ..... for 20-50 litre gasbottle ..... 0460 330 880</p>
	<p><b>Welding cable kit, Tradestig 150</b> ..... 0700 006 898  <b>Return cable kit, Tradestig 150</b> ..... 0700 006 899  <b>Welding cable kit, Tradestig 220</b> ..... 0700 006 900  <b>Return cable kit, Tradestig 220</b> ..... 0700 006 901</p>

	<p><b>Remote control adapter RA12 12 pole . . . .</b> 0459 491 910 For analogue remote controls to CAN based equipment.</p>
	<p><b>Remote control unit MTA1 CAN . . . . .</b> 0459 491 880 MIG/MAG: wire feed speed and voltage MMA: current and arc force TIG: current, pulse and background current</p>
	<p><b>Remote control unit M1 10Prog CAN . . . . .</b> 0459 491 882 Choice of on of 10 programs MIG/MAG: voltage deviation TIG and MMA: current deviation</p>
	<p><b>Remote control unit AT1 CAN . . . . .</b> 0459 491 883 MMA and TIG: current</p>
	<p><b>Remote control unit AT1 CF CAN . . . . .</b> 0459 491 884 MMA and TIG: rough and fine setting of current.</p>
	<p><b>Remote cable CAN 4 pole - 12 pole</b> 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><b>Foot pedal TI Foot CAN . . . . .</b> 0460 315 880</p>



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



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

