



WELD THE WORLD

Discovery 162T

Instruction manual







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1 INTRODUCTION

 	IMPORTANT!
<p><i>This handbook must be consigned to the user prior to installation and commissioning of the unit. Read the "General prescriptions for use" handbook supplied separately from this handbook before installing and commissioning the unit.</i></p> <p><i>The meaning of the symbols in this manual and the associated precautionary information are given in the "General prescriptions for use".</i></p> <p><i>If the "General prescriptions for use" are not present, it is mandatory to request a replacement copy from the manufacturer or from your dealer.</i></p> <p><i>Retain these documents for future consultation.</i></p>	

LEGEND

	DANGER!
<i>This pictogram warns of danger of death or serious injury.</i>	

	WARNING!
<i>This pictogram warns of a risk of injury or damage to property.</i>	

	CAUTION!
<i>This pictogram warns of a potentially hazardous situation.</i>	

	INFORMATION!
<i>This pictogram gives important information concerning the execution of the relevant operations.</i>	

- ➡ This symbol identifies an action that occurs automatically as a result of a previous action.
- ① This symbol identifies additional information or a reference to a different section of the manual containing the associated information.
- § This symbol identifies a reference to a chapter of the manual.
- *1 The symbol refers to the associated numbered note.

NOTES

The figures in this manual are purely guideline and the images may contain differences with respect to the actual equipment to which they refer.

1.1 PRESENTATION








Discovery 162T is an inverter DC TIG/MMA portable welding power source.

The sturdiness of the components of this unit makes it a reliable working companion for workshop and outdoor applications.

The simply and intuitive interface allows high precision adjustments.

Special HF control provides 100 % rapid and precise arc ignition.


Up to 3,25 mm diameter electrode welding is possible in MMA.

MODE		PROCEDURE	
	MMA		
	TIG CONTINUOUS		2 STROKE LIFT-ARC (2T)
			4 STROKE LIFT-ARC (4T)
	TIG PULSED TIG SYNERGIC TIG		2T SPOT 2T SPOT + HF
			4 STROKE + HF (4T HF)

Accessories that can be connected to the unit:

- Overcut device to protect the power source from power supply voltage spikes that could damage the electrical components.





2 INSTALLATION



DANGER!

Lifting and positioning

Read the warnings highlighted by the following symbols in the "General prescriptions for use".

2.1 CONNECTIONS TO THE MAINS POWER SUPPLY

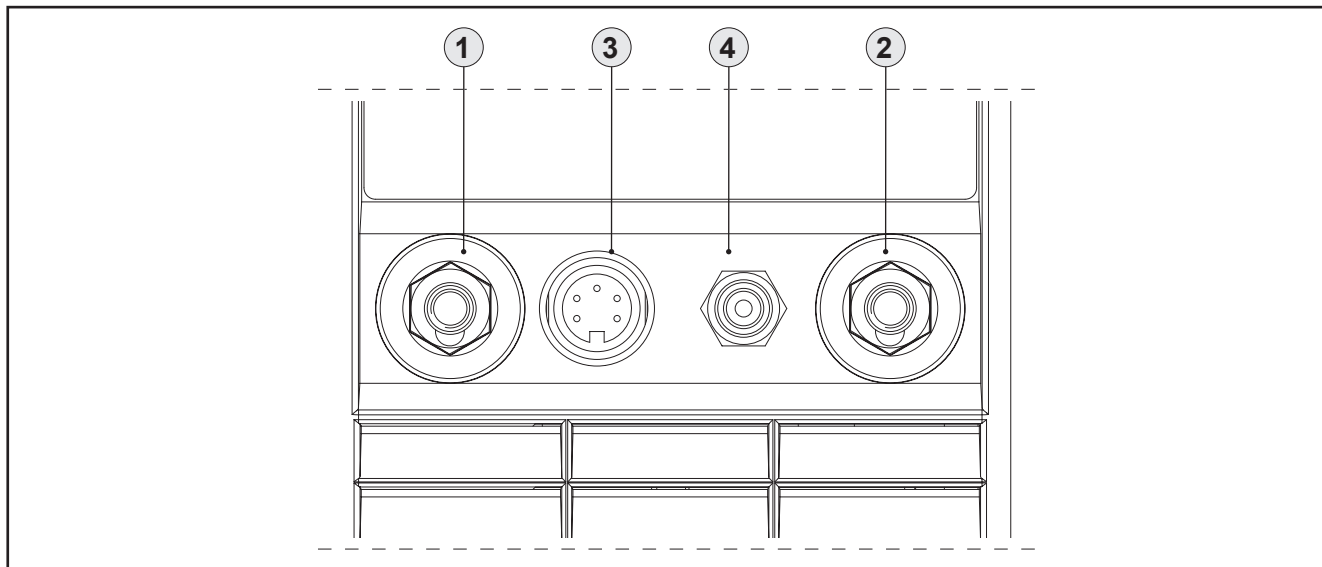
The characteristics of the mains power supply to which the equipment shall be connected are given in the chapter entitled "TECHNICAL DATA".

The machine can be connected to motor-generators provided their voltage is stabilised.

Connect/disconnect the various devices with the machine switched off.

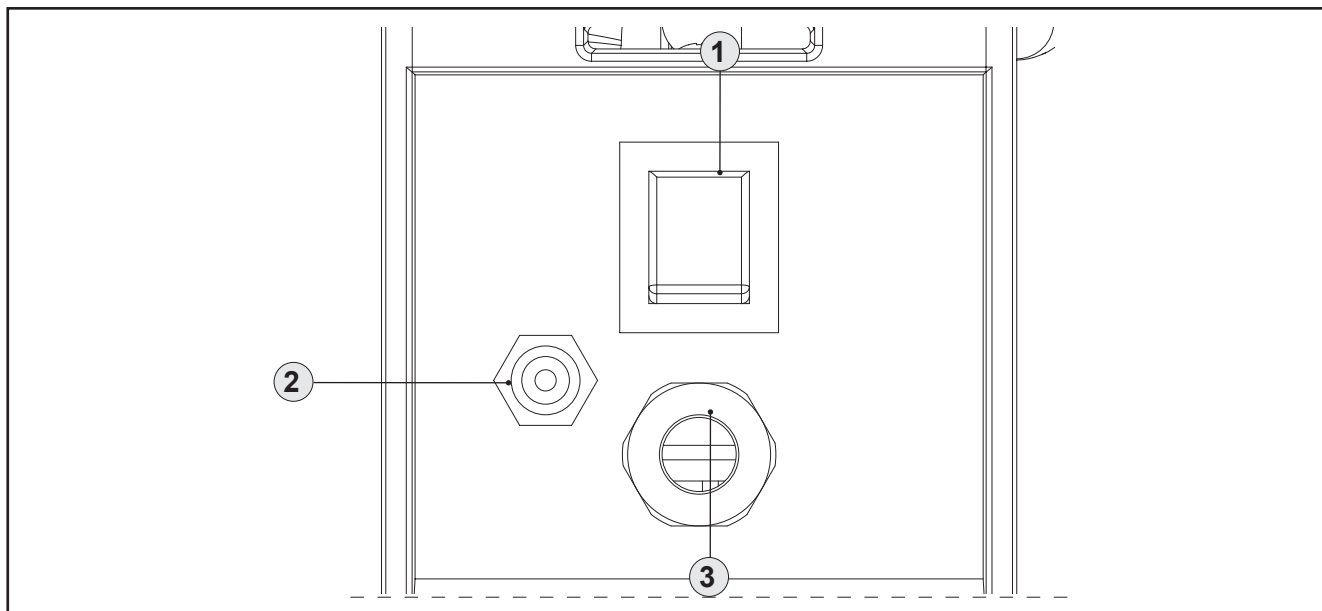
ENGLISH

2.2 FRONT PANEL



- Negative pole welding socket.[Item 1].
- Positive pole welding socket.[Item 2].
- Connector for logic signals of TIG torch.[Item 3].
- Connector for gas feed hose: Torch power source [Item 4].

2.3 REAR PANEL



- Welding power source ON/OFF switch [Item 1].
- Connector for gas feed hose [Item 2]
 - cylinder-generator
- Power cable. [Item 3].
 - Total length (including internal part): 2.5 m
 - Number and cross section of wires: 3 x 2.5 mm²
 - Type of plug supplied: Schuko

2.4 PREPARING FOR MMA WELDING

1. Set the welding power source ON/OFF switch to "O" (unit off).
2. Plug the power cable plug into a mains socket.
3. Choose the electrode based on the type of material and thickness of the workpiece to be welded.
4. Insert the electrode in the electrode holder.
5. Connect the electrode holder clamp plug to the following welding socket: Positive pole welding socket.
6. Connect the earth clamp plug to the following welding socket: Negative pole welding socket.
7. Connect the earth clamp to the workpiece being processed.



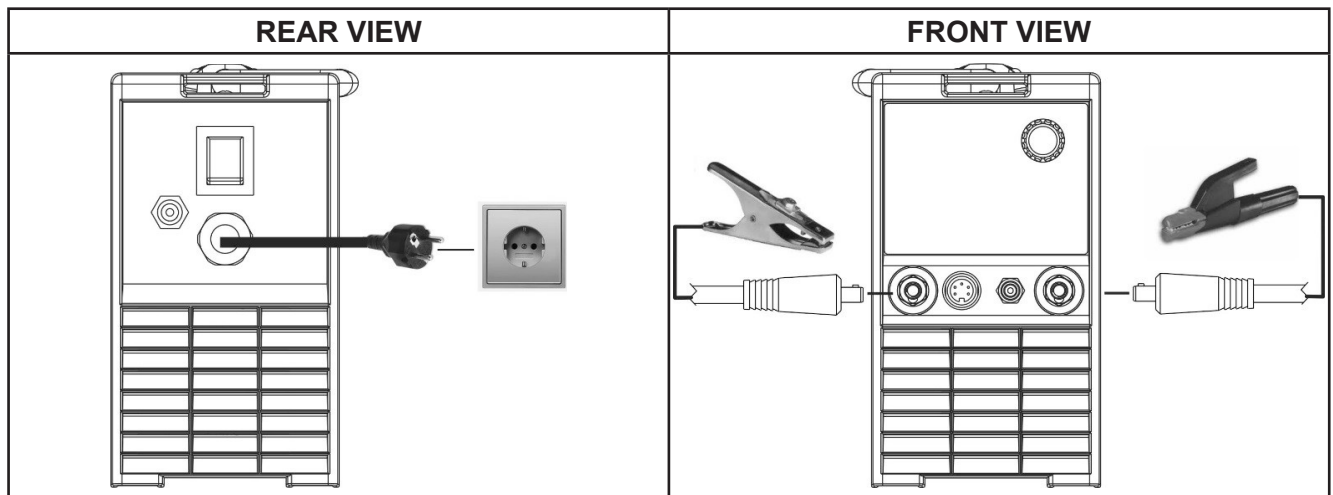
DANGER!

Electric shock hazard!

Read the warnings highlighted by the following symbols in the "General prescriptions for use".

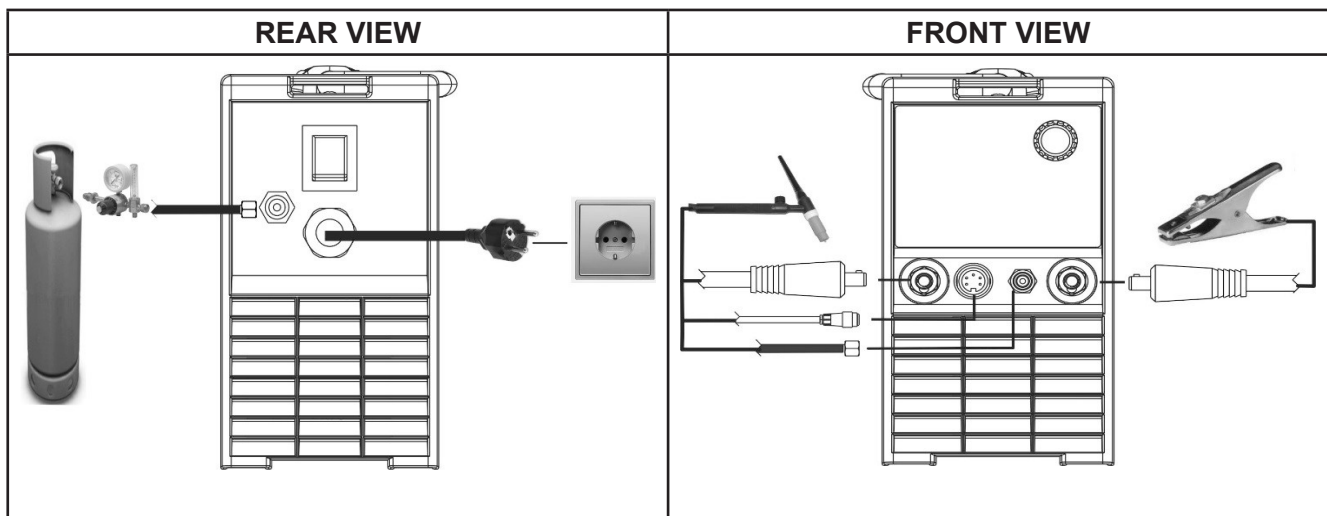


8. Set the welding power source ON/OFF switch to "I" (unit on).
 9. Select the following welding mode on the user interface: MMA
 10. Set the required welding parameter values on the user interface.
- The system is ready to start welding.

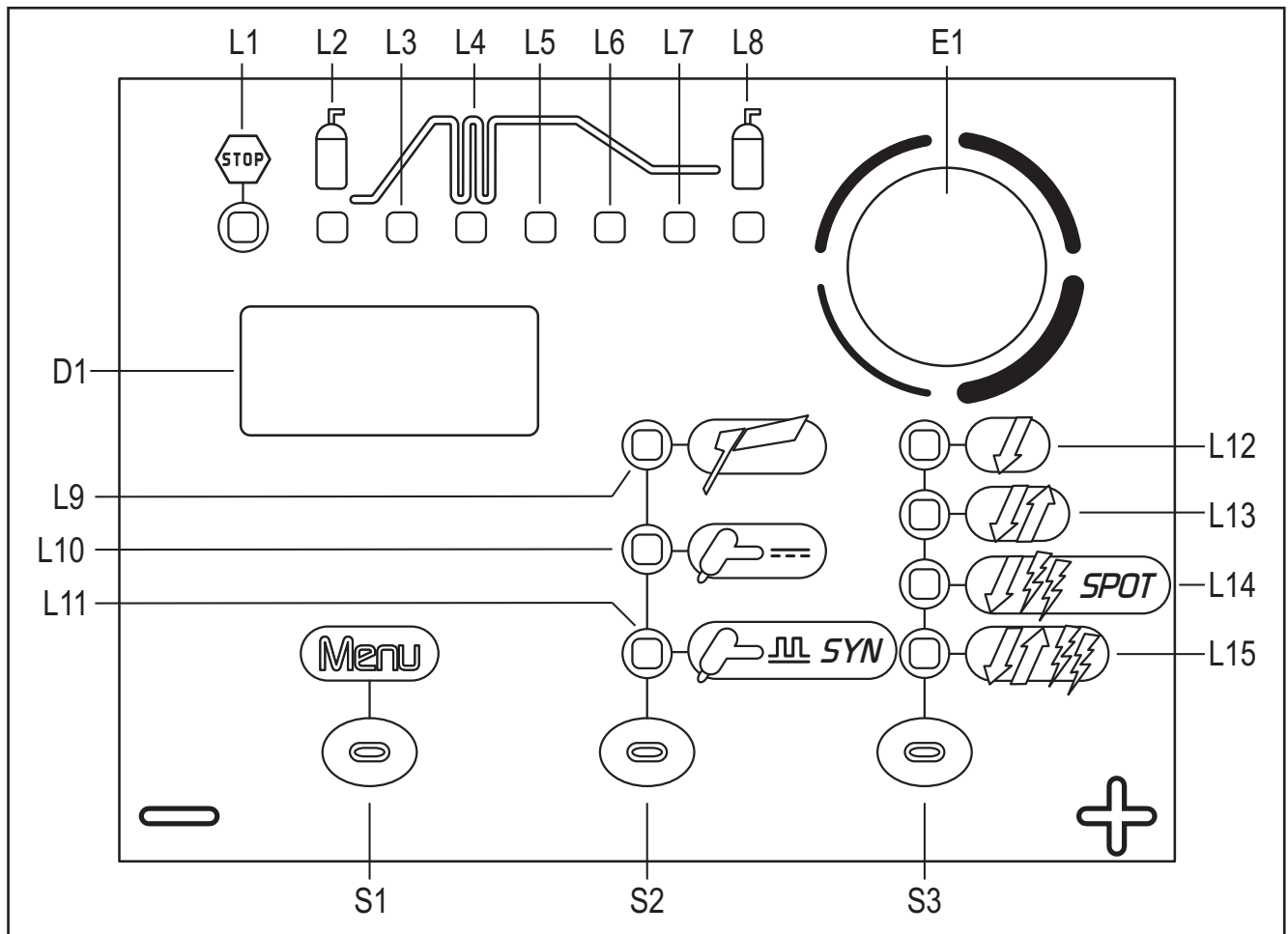


2.5 PREPARING FOR TIG WELDING










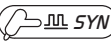





1. Set the welding power source ON/OFF switch to “O” (unit de-energized).
 2. Plug the power cable plug into a mains socket outlet.
 3. Connect the gas hose from the welding gas cylinder to the rear gas connection.
 4. Open the cylinder gas valve.
 5. Connect the gas hose of the welding torch to the front gas connection.
 6. Connect the electrode holder clamp plug to the following welding socket: Negative pole welding socket.
 7. Choose the electrode based on the type of material and thickness of the workpiece to be welded.
 8. Insert the electrode in the TIG torch.
 9. Connect the earth clamp plug to the following welding socket: Positive pole welding socket.
 10. Connect the earth clamp to the workpiece being processed.
 11. Set the welding power source ON/OFF switch to “I” (unit powered).
 12. Select the following welding mode on the user interface: DC TIG
 13. Press the torch trigger with the torch well clear of any metal parts. This serves to open the gas solenoid valve without striking the welding arc.
 14. Use the flow control valve to adjust the flow of gas as required while the gas is flowing out.
 15. Set the required welding parameter values on the user interface.
- The system is ready to start welding.



3 USER INTERFACE



CODE	SYMBOL	DESCRIPTION
L1		Overheating alarm. Indicates tripping of the welding power source thermal protection. Leave the unit running so that the overheated components cool as rapidly as possible. When the unit has cooled, the welding power source will reset automatically. - Make sure that the power required by the welding process is lower than the maximum rated power output. - Check that the operating conditions are in compliance with the welding power source data plate specifications. - Check for the presence of adequate air circulation around the welding power source.
L2		When this LED illuminates the following parameter can be set: PRE-GAS TIME
L3		When this LED illuminates the following parameter can be set: SLOPE UP
L4		When this LED illuminates the following parameter can be set: PULSED CURRENT FREQUENCY
L5		When this LED illuminates the following parameter can be set: WELDING CURRENT

L6		When this LED illuminates the following parameter can be set: DOWN SLOPE
L7		When this LED illuminates the following parameter can be set: FINAL CURRENT
L8		When this LED illuminates the following parameter can be set: POST GAS TIME
L12		Illumination shows that the following function has been activated: 2 stroke procedure.
L13		Illumination shows that the following function has been activated: 4 stroke procedure.
L14		Illumination shows that the following function has been activated: 2 stroke procedure + high frequency arc strike (HF). A flashing signal means the following function has been activated: 2 stroke spot procedure + high frequency arc strike (HF).
L15		Illumination shows that the following function has been activated: 4 stroke procedure + high frequency arc strike (HF).
L9		This LED illuminates to show that the following welding mode is selected: MMA
L10		This LED illuminates to show that the following welding mode is selected: TIG DC CONTINUOUS
L11		This LED illuminates to show that the following welding mode is selected: PULSED DC TIG A flashing signal means the following welding mode is selected: SYNERGIC PULSED DC TIG
D1		The display shows the value of the selected parameter.
S1		Press the button to select the parameter to be set. Hold down the button for 3 seconds to gain access to the second level menu.
S2		This button selects the welding mode.
S3		This button selects the torch trigger procedure.
E1		The encoder sets the value of the selected parameter.

4 UNIT POWER-UP

Set the welding power source ON/OFF switch to “I” to switch on the unit.

FX.X The message appears on the following display: **D1**.

x.x= software version

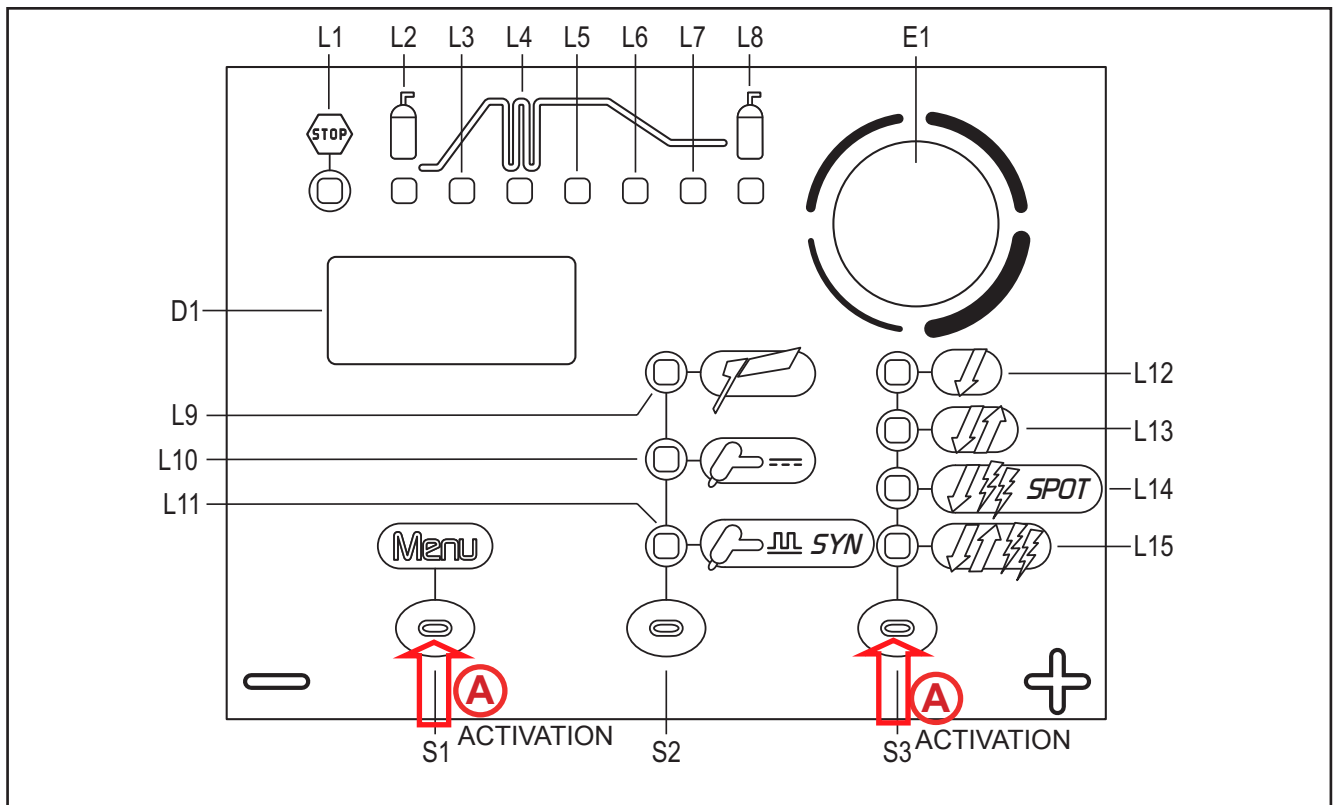
First power-up or power-ups following a RESET procedure

The welding power source sets up for welding with the factory preset values.

Subsequent power-ups

The welding power source sets up for welding in the latest stable welding configuration that was active at the time of power-off.

5 RESET (LOAD FACTORY SETTINGS)









The reset procedure involves complete restoration of the default values, parameters and memory settings set in the factory.

All memory locations will be reset and hence all your personal welding settings will be lost!

The reset procedure is useful in the following cases:

- Too many changes made to the welding parameters so user finds it difficult to restore defaults.
- Unidentified software problems that prevent the welding power source from functioning correctly.

	<ul style="list-style-type: none"> ○ Set the welding power source ON/OFF switch to "O" to switch the unit off. ○ Keeping both the S1  and S3  buttons pressed, set the generator power source switch to "I" to turn on the equipment [ SIMULTANEOUS ACTIONS] ○ Press both buttons S1  and S3  <ul style="list-style-type: none"> ➔ FAC: The message will appear on display D1 <ul style="list-style-type: none"> - Wait for the memory clear procedure to terminate. This action will automatically close the menu.
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6 ALARM MANAGEMENT

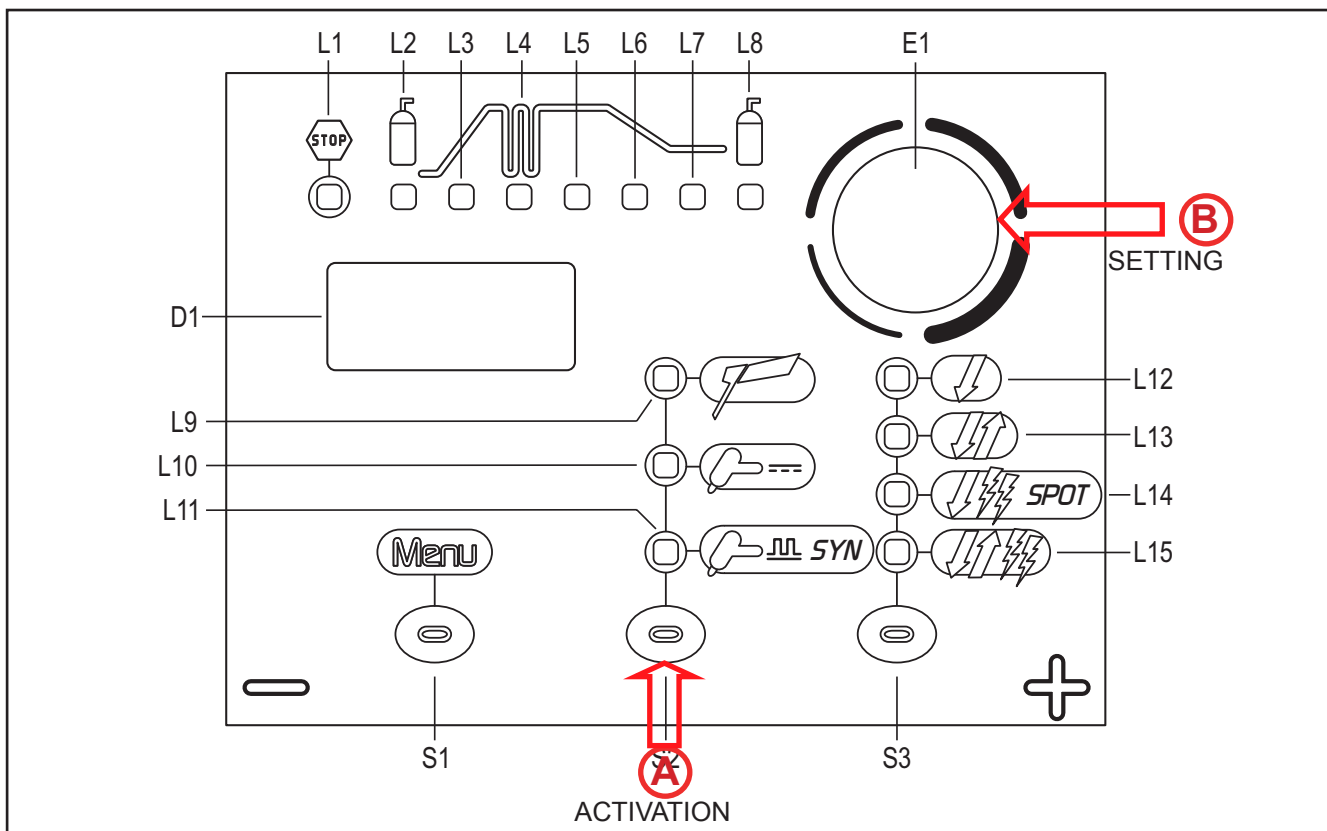
This LED illuminates if an incorrect operating condition occurs.
 An alarm message will appear on display **D1**.


Tab. 1 - Alarm messages

MESSAGE	MEANING	EVENT	CHECKS
AL. H.	<p>Overheating alarm Indicates tripping of the welding power source thermal protection. Leave the unit running so that the overheated components cool as rapidly as possible. When the unit has cooled, the welding power source will reset automatically.</p>	<p>All functions disabled.</p> <p><u>Exceptions:</u></p> <ul style="list-style-type: none"> Cooling fan. 	<ul style="list-style-type: none"> Make sure that the power required by the welding process is lower than the maximum rated power output. Check that the operating conditions are in compliance with the welding power source data plate specifications. Check for the presence of adequate air circulation around the welding power source.

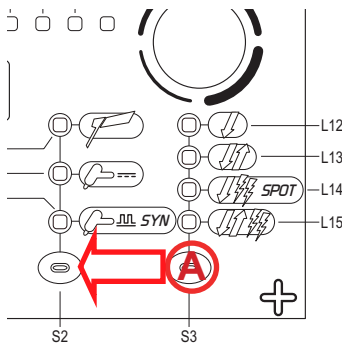
7 MMA WELDING

7.1 MMA WELDING - FIRST LEVEL MENU




○ Press the **S2**  button to activate the MMA mode.

(A)



L9 **MMA**

○ Using the **encoder E1**  to edit the value of the selected setting.

(B)

Tab. 2 - Parameters of 1st level menu: mode

SETTING	MIN	DEFAULT	MAX	NOTES
WELDING CURRENT	5 A	80 A	150 A	
HOT-START	-	50 %	-	Set by the manufacturer. Not user-adjustable. Not displayed.
ARC FORCE	-	50 %	-	Set by the manufacturer. Not user-adjustable. Not displayed.

WELDING CURRENT

Output current value during welding.

HOT-START

This parameter aids electrode melting at the time of arc striking.

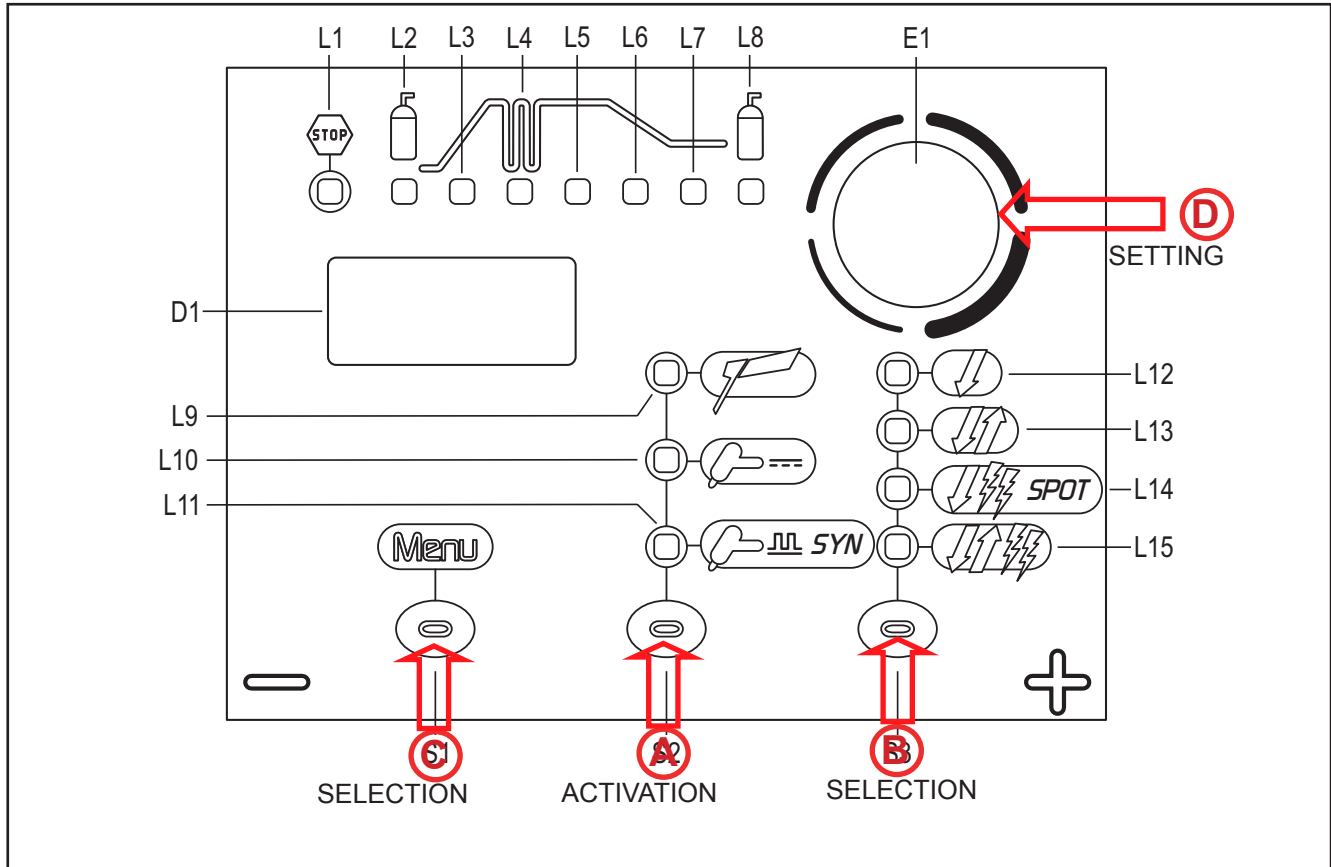
ARC FORCE

This parameter helps to avoid electrode sticking during welding.

During electrode fusion low conductivity parts of the coating become detached and tend to become interposed between the electrode tip as it is fusing and the workpiece. This condition results in an interruption of the arc. In addition, it may occur that the electrode comes into contact with the workpiece creating a short circuit and consequent quenching of the arc. To avoid arc quenching the power source therefore delivers instantaneous peak currents in correspondence with preset arc voltage thresholds.

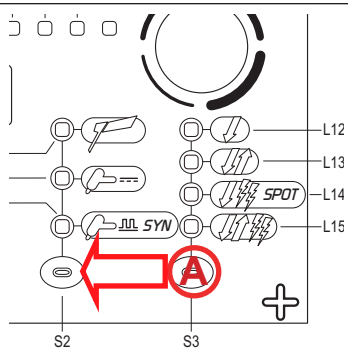
8 DC TIG WELDING

8.1 DC TIG WELDING - FIRST LEVEL MENU



- o Press the **S2** button to activate the TIG mode.

A



L10 CONTINUOUS TIG DC
L11 PULSED TIG DC / SYNERGIC TIG DC

○ Press the **S3** button to select the operation of the desired torch button.

B

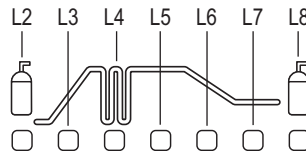
L12 2 STROKE LIFT-ARC (2T)
L13 4 STROKE LIFT-ARC (4T)
L14 2T SPOT / 2T SPOT + HF
L15 4 STROKE + HF (4T HF)

○ Press the **S1** button to scroll the list of settings to edit.
 ● The value associated with the selected setting appears on display **D1**.

In this diagram the LED relative to the setting to be edited illuminates.

○ Using the **encoder E1** , edit the value of the selected setting.

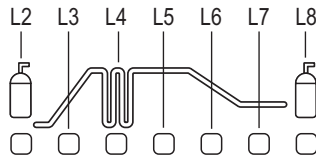
Press any button (except **S1**) to save the setting and quit the menu.



Tab. 3 - Parameters of the 1st level menu: CONTINUOUS DC TIG mode

LED	SETTING	MIN	DEFAULT	MAX	NOTES
L2	PRE-GAS TIME	0.0 s	0.0 s	3.0 s	
-	STARTING CURRENT	-	-	-	Set by the manufacturer. Not user-adjustable. Not displayed.
L3	SLOPE UP	0.0 s	0.0 s	20.0 s	
L5	WELDING CURRENT	5 A	80 A	160 A	
L6	DOWN SLOPE	0.0 s	0.0 s	20.0 s	
L7	FINAL CURRENT	5 A	5 A	160 A	
L8	POST GAS TIME	0.0 s	3.0 s	25.0 s	

ENGLISH



Tab. 4 - Parameters of the 1st level Menu in TIG DC PULSED mode.

LED	SETTING	MIN	DEFAULT	MAX	NOTES
L2	PRE-GAS TIME	0.0 s	0.0 s	3.0 s	
-	STARTING CURRENT	-	-	-	Set by the manufacturer. Not user-adjustable. Not displayed.
L3	SLOPE UP	0.0 s	0.0 s	20.0 s	
L5	WELDING CURRENT	5 A	80 A	160 A	
L4	PULSED CURRENT FREQUENCY	0.5 Hz	125 Hz	500 Hz	
L6	DOWN SLOPE	0.0 s	0.0 s	20.0 s	
L7	FINAL CURRENT	5 A	5 A	160 A	
L8	POST GAS TIME	0.0 s	3.0 s	25.0 s	

Tab. 5 - Parameters of the 1st level Menu in TIG DC SYNERGIC PULSED mode.

LED	SETTING	MIN	DEFAULT	MAX	NOTES
L2	PRE-GAS TIME	0.0 s	0.0 s	3.0 s	
-	STARTING CURRENT	-	-	-	Set by the manufacturer. Not user-adjustable. Not displayed. This parameter is set as a percentage referred to the value of the following parameter: WELDING CURRENT
L3	SLOPE UP	0.0 s	0.0 s	20.0 s	
L5	WELDING CURRENT	5 A	80 A	160 A	
L4	PULSED CURRENT FREQUENCY	0.5 Hz	125 Hz	500 Hz	
L6	DOWN SLOPE	0.0 s	0.0 s	20.0 s	
L7	FINAL CURRENT	5 A	5 A	160 A	
L8	POST GAS TIME	0.0 s	3.0 s	25.0 s	

WELDING CURRENT

Output current value during welding.

PRE-GAS TIME

Time of gas delivery before the arc strike.

This adjustment is required when fixing points must be created or when welding in hard-to-reach positions that call for the presence of inert atmospheres before striking the arc.

Consequences of a higher value:

- This parameter allows a shielded environment to be created, thereby eliminating contaminants at the start of the welding pass.

STARTING CURRENT

Unit current output value immediately after the arc strike.

SLOPE UP

Time during which the current changes from the starting value to the welding value by means of a slope. This setting is used to avoid damaging the edges of the joint with excessively high current values at the moment of arc striking. The value of the main welding current is increased gradually in order to control the uniformity of material deposition and weld penetration.

PULSED CURRENT FREQUENCY

Consequences of a higher value:

- Slower melt speed.
- Reduction of heat-affected zone.

DOWN SLOPE

Time during which the current changes from the welding value to the end value by means of a slope.

FINAL CURRENT

During electrode welding the parameter makes it possible to obtain a uniform deposit of filler material from the start to the end of the welding process, closing the deposition crater with a current such as to deposit a final droplet of filler material.

By keeping the torch trigger pressed during the 3rd time, the crater filler current is maintained thereby ensuring optimal crater filling, until the post gas time is started by releasing the torch trigger (4th time).

POST GAS TIME

Time of post gas delivery when the welding arc is extinguished.

Consequences of a higher value:

- More effective pickling (improved appearance of workpiece at the end of the welding pass).
- Higher gas consumption.

Consequences of a lower value:

- Lower gas consumption.
- Oxidation of electrode tip (more difficult arc strike).

SPOT TIG TIME

When the torch trigger is pressed the welding arc persists for the time set in the parameter.

Press the torch trigger again to resume the welding process.

The arc strike procedure is as follows:

Positioning of the torch with the electrode on the workpiece.

Press the torch trigger and keep it pressed.

Lift the torch slightly.

As soon as the electrode is lifted then the HF ignition starts.

The arc ignites for few hundredths of a second (time can be set up).

The result of this is a very precise, not oxidized welding spot without any plastic deformation of the sheet.

BASE CURRENT

Pulsed wave minimum current.

Consequences of a higher value:

- Faster creation of weld pool.
- Increase of heat-affected zone.

ENGLISH

PEAK TIME

Time for which the current pulse is at the maximum value.

Consequences of a higher value:


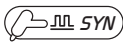










- Greater weld penetration.
- Facility to make deeper cuts.

Consequences of a lower value:

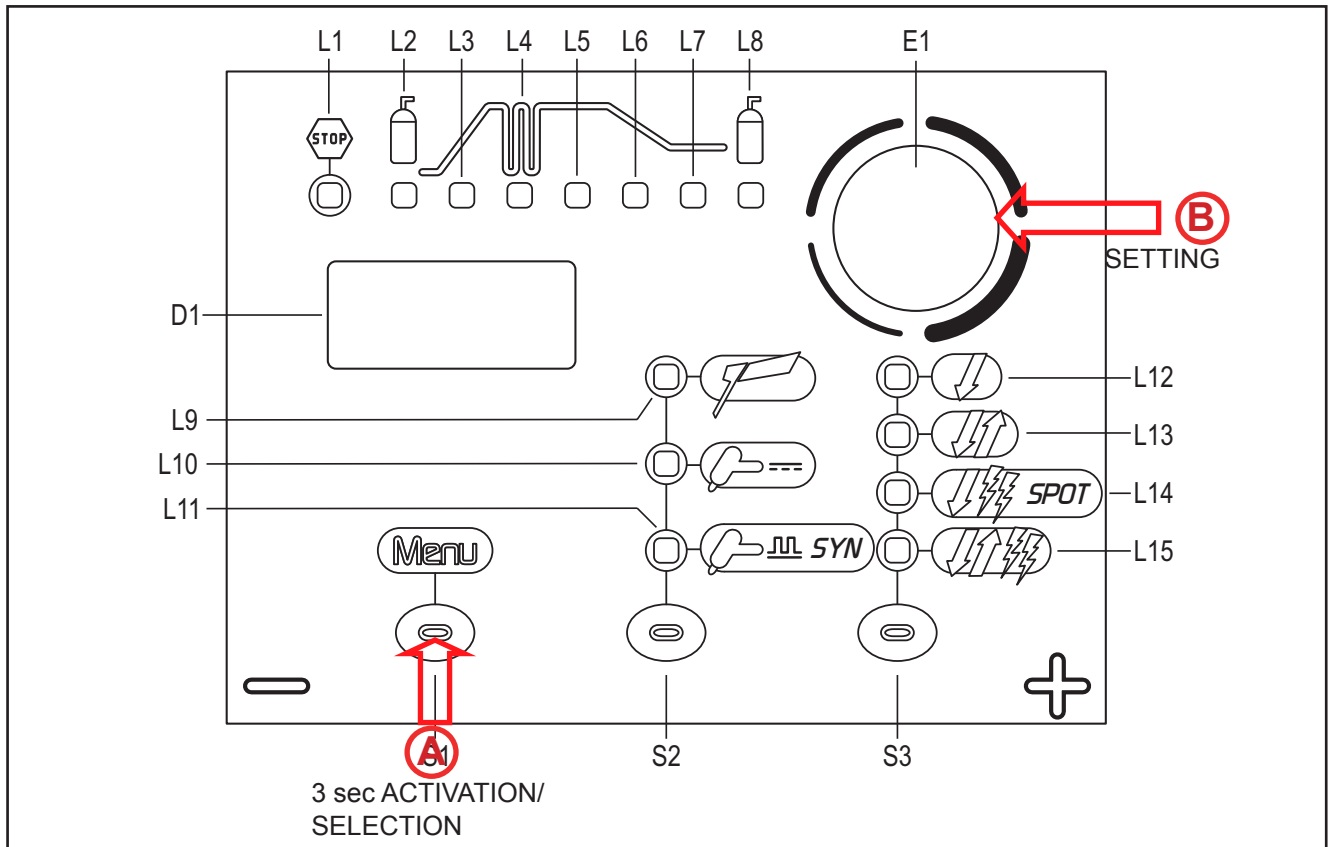
- Reduction of heat-affected zone.
- Difficult to create a weld pool.

The welding parameters are available in accordance with the selected welding mode and procedure. The table shows the settings required to enable each parameter.

Tab. 6 - Table showing enabled Welding Parameters

MENU ↓	MODE →										
	PROCEDURE →										
	PARAMETER ↓										
1°	WELDING CURRENT	X	X	X	X	X	X	X	X	X	X
1°	PRE-GAS TIME		X	X		X		X	X		X
1°	STARTING CURRENT	X	X	X	X	X	X	X	X	X	X
1°	SLOPE UP	X	X	X	X	X	X	X	X	X	X
1°	PULSED CURRENT FRE- QUENCY						X	X		X	X
1°	DOWN SLOPE	X	X	X	X	X	X	X	X	X	X
1°	FINAL CURRENT	X	X	X	X	X	X	X	X	X	X
1°	POST GAS TIME	X	X	X	X	X	X	X	X	X	X
2°	SPOT WELDING TIME			X					X		
2°	BASE CURRENT						X	X	X	X	X
2°	PEAK TIME						X	X	X	X	X

8.2 TIG DC WELDING - SECOND LEVEL MENU



- (A)**
 - Hold down the **S1** button for 3 seconds to access the 2nd level menu.
 - Use the **encoder E1** to scroll the list of settings to be edited.
 - ➡ The acronym relative to the selected setting is shown on display **D1**.
 - Press the **S1** button to confirm.
 - ➡ The value associated with the selected setting appears on display **D1**.
- (B)**
 - Using the **encoder E1** to edit the value of the selected setting.

Press any button (except **S1**) to save the setting and quit the menu.

Tab. 7 - Parameters of the 2nd level menu: CONTINUOUS DC TIG mode

ACRONYM	SETTING	MIN	DEFAULT	MAX
SPt	SPOT WELDING TIME	0.01 s	0.1 s	10.0 s

Tab. 8 - Parameters of the 2nd level menu: PULSED TIG DC mode

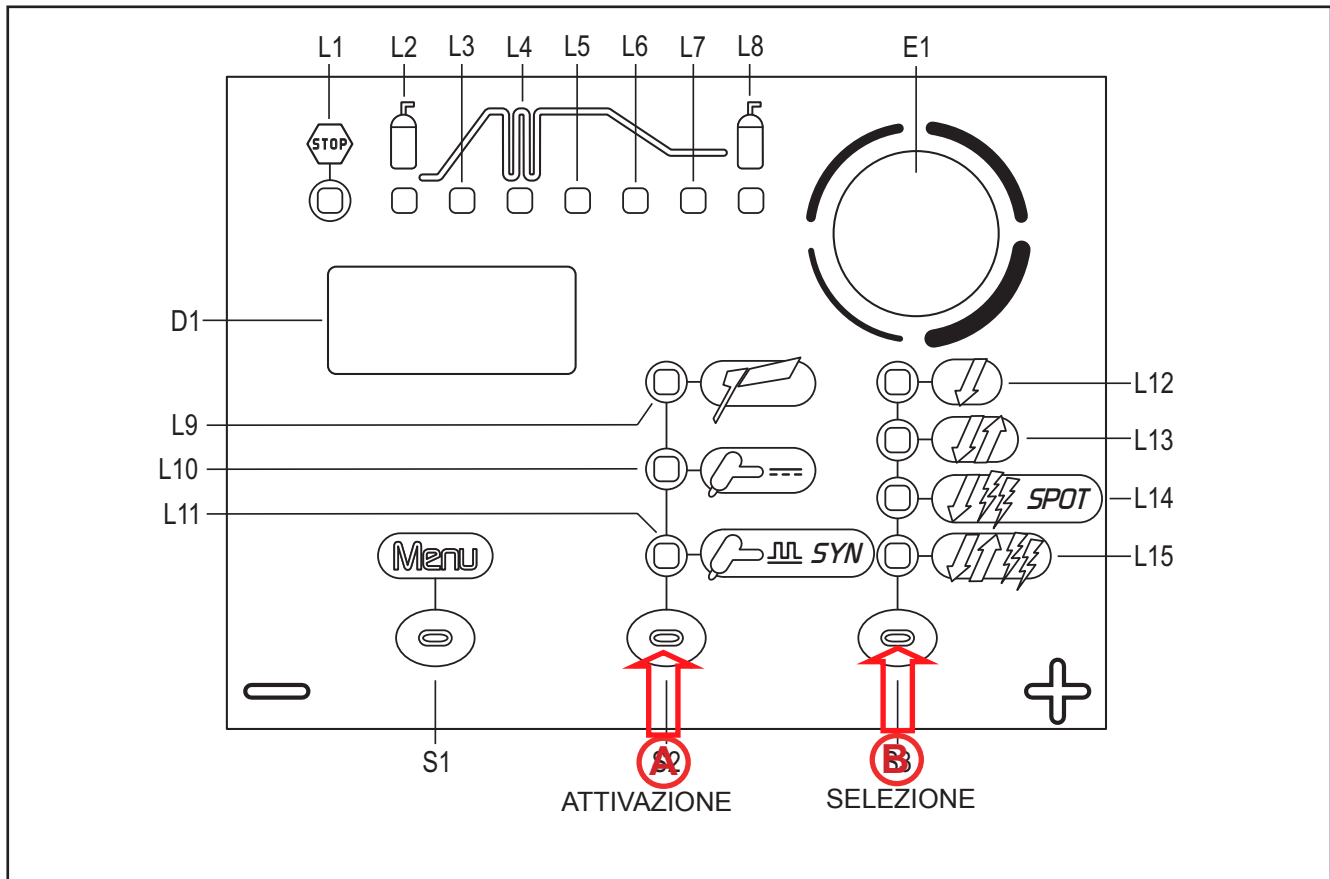
ACRONYM	SETTING	MIN	DEFAULT	MAX
SPt	SPOT WELDING TIME	0.01 s	0.1 s	10.0 s
b.Cu.	BASE CURRENT	1%	40%	200%
PE.t.	PEAK TIME	1%	50%	99%

Tab. 9 - Parameters of the 2nd level menu: SYNERGIC DC TIG mode

ACRONYM	SETTING	MIN	DEFAULT	MAX
SPT	SPOT WELDING TIME	0.01 s	0.1 s	10.0 s
b.Cu.	BASE CURRENT	1%	*SYN	200%
PE.t.	PEAK TIME	1%	*SYN	99%

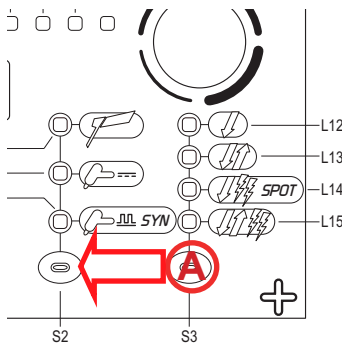
***SYN:** This code indicates that parameters control is synergic. The optimal value of this parameter is set automatically by the microprocessor on the basis of the preset welding current value.

8.3 TORCH TRIGGER PROCEDURE




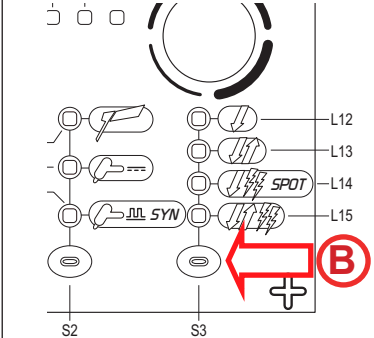
o Premere il tasto S2 (⊖) per attivare la modalità TIG desiderata.

A



L10 TIG DC CONTINUO
L11 TIG DC PULSATO / TIG DC SINERGICO

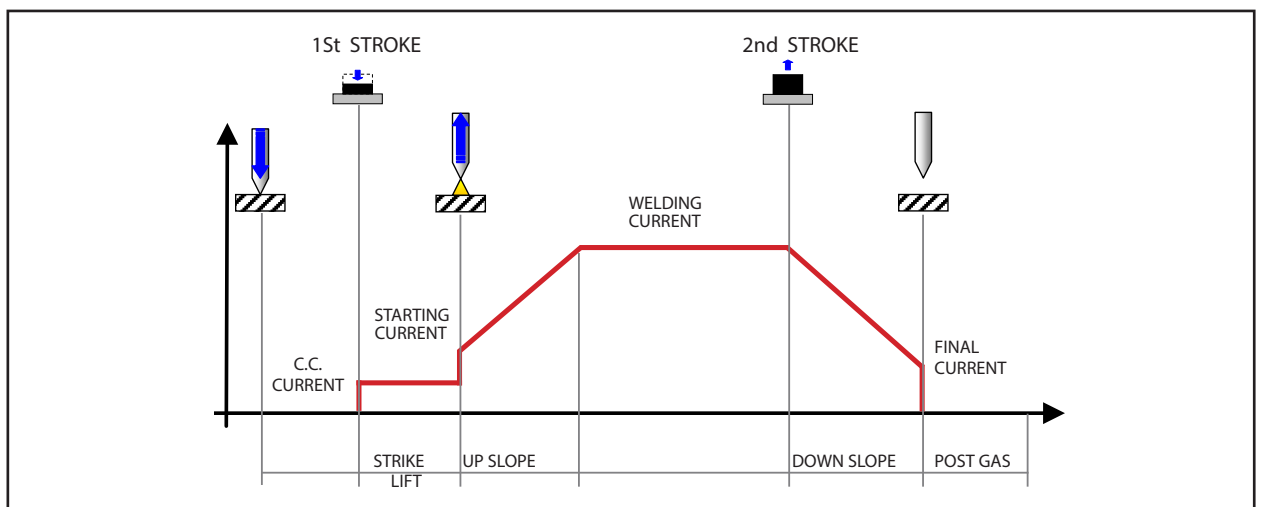
○ Premere il tasto **S3**  per selezionare il funzionamento del pulsante torcia desiderato.



L12 2 TEMPI LIFT-ARC (2T)
L13 4 TEMPI LIFT-ARC (4T)
L14 2T SPOT /2T SPOT + HF
L15 4 TEMPI + HF (4T HF)

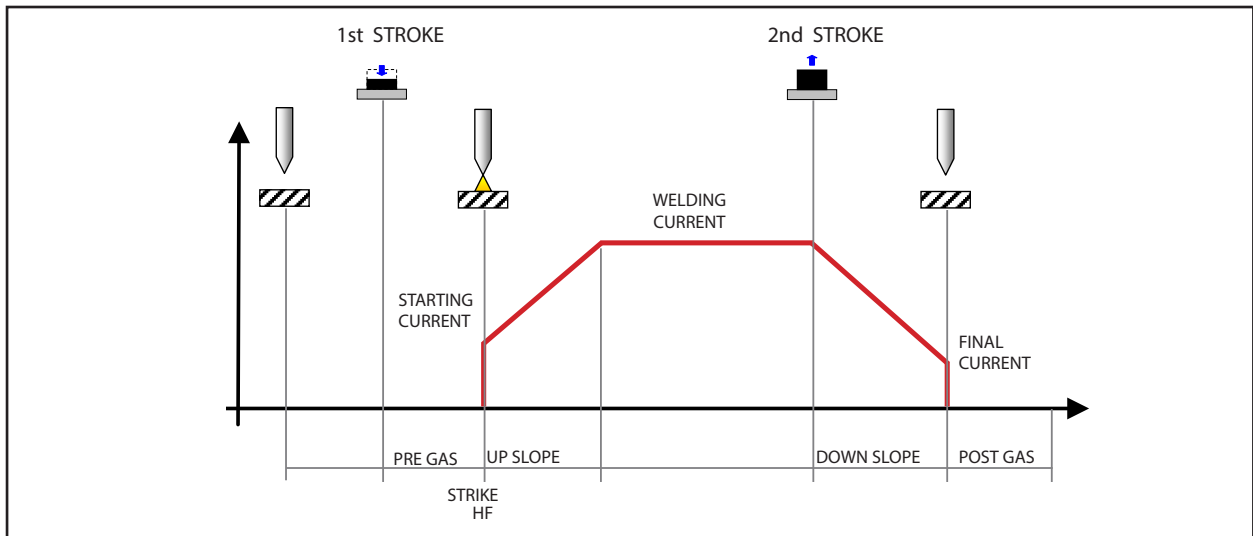
- 2 STROKE LIFT:

- Touch the workpiece with the torch electrode.
- Press (1T) and keep the torch trigger pressed.
- Slowly lift the torch to strike the arc.
- The welding current reaches the preset value, by way of a up slope time, if programmed.
- Release (2T) trigger to start the weld completion procedure.
- The current reaches the end current value in the time set in the down slope time parameter.
- The arc is extinguished.
- Gas delivery continues for the time set in the post gas parameter.



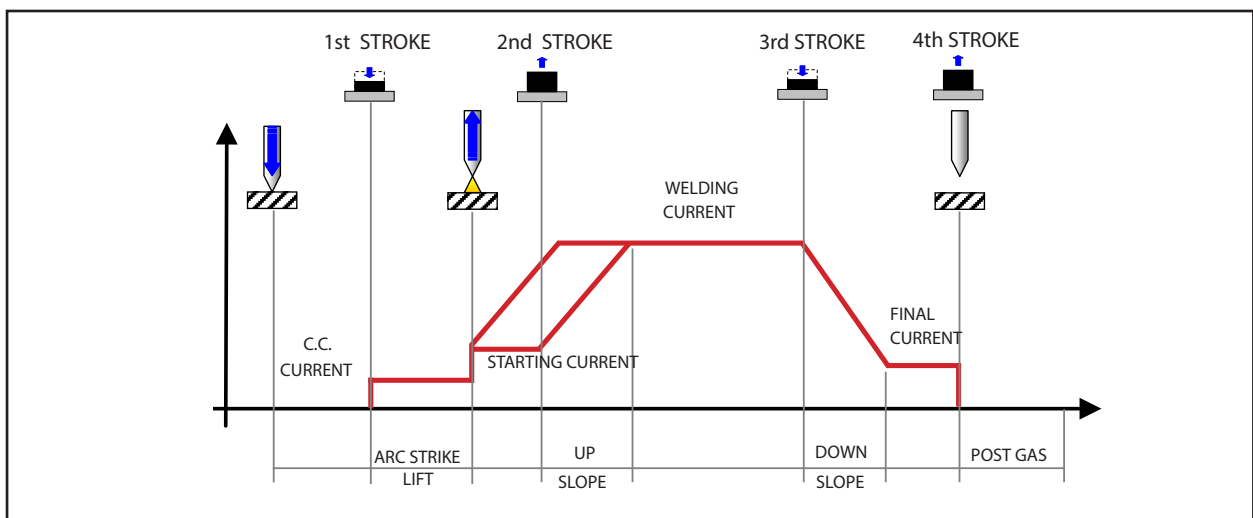
- 2 STROKE + HF

- Bring the torch up to the work until the electrode tip is approximately 2 or 3 mm away.
- Press (1T) and keep the torch trigger pressed.
- The arc strikes without contact with the workpiece and the voltage discharges (HF) cease automatically.
- The welding current reaches the preset value, by way of a up slope time, if programmed.
- Release (2T) trigger to start the weld completion procedure.
- The current reaches the end current value in the time set in the down slope time parameter.
- The arc is extinguished.
- Gas delivery continues for the time set in the post gas parameter.



- 4 STROKE LIFT:

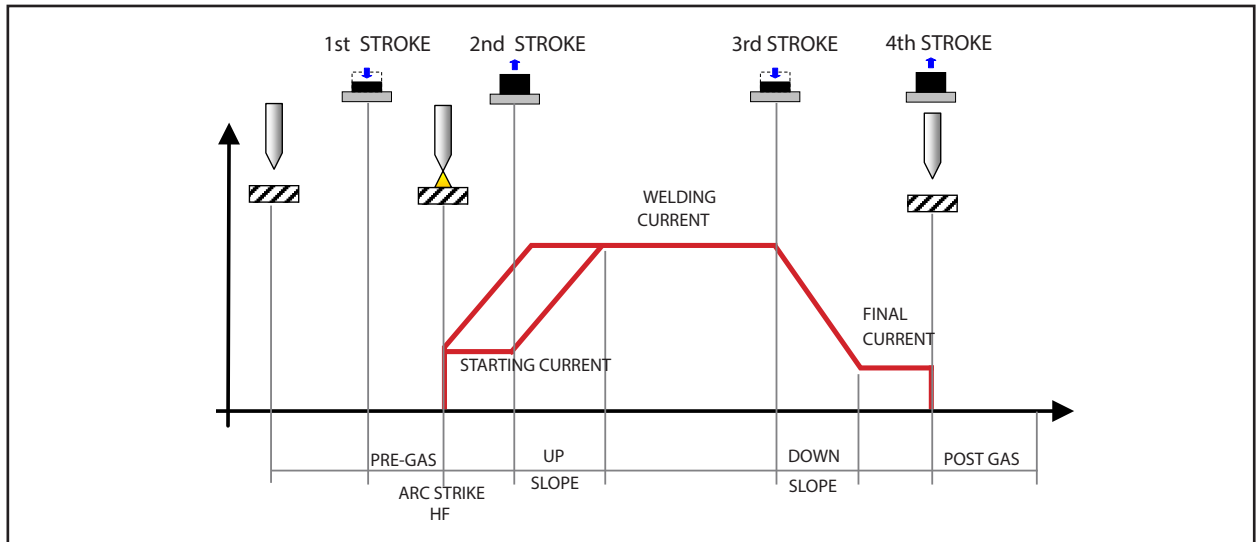
- Touch the workpiece with the torch electrode.
- Press (1T) and keep the torch trigger pressed.
- Slowly lift the torch to strike the arc.
- The arc strikes, the welding current assumes the pilot current value. (if activated from the SET UP menu.)
- Release (2T) the torch trigger.
- The welding current reaches the preset value, by way of a up slope time, if programmed.
- Press (3T) trigger and keep it pressed to start the weld completion procedure.
- The current reaches the end current value in the time set in the down slope time parameter.
- The arc continues and the current output will be the value set in the end current parameter.
- In these conditions the weld pool can be closed (crater filler current).
- Release (4T) trigger to extinguish the arc.
- Gas delivery continues for the time set in the post gas parameter.



- 4 STROKE + HF

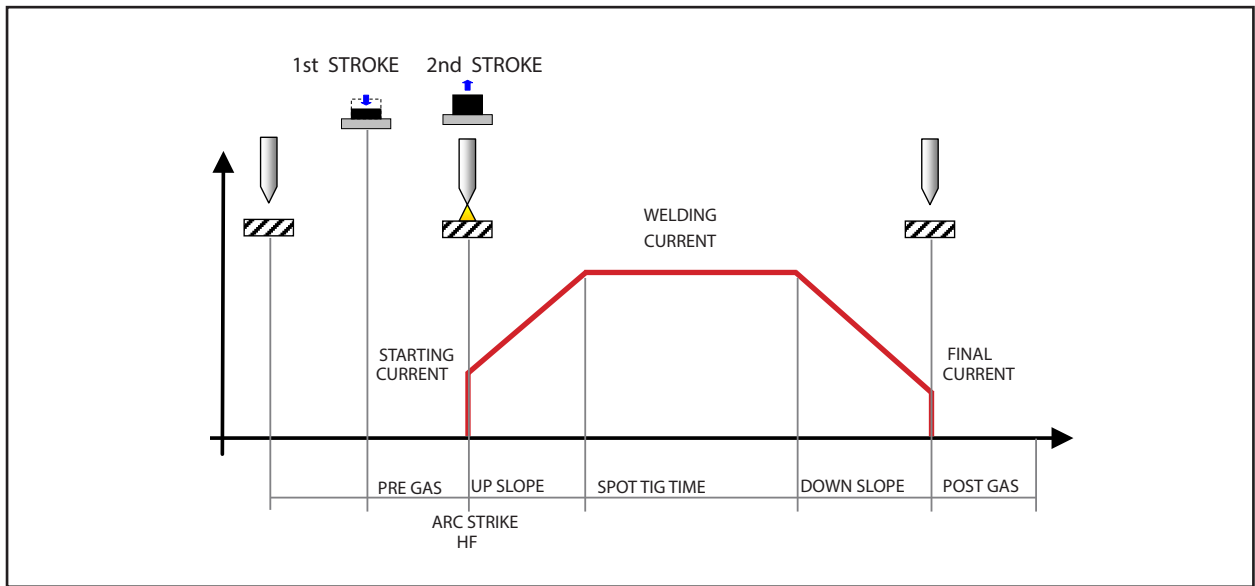
- Bring the torch up to the work until the electrode tip is approximately 2 or 3 mm away.
- Press (1T) and keep the torch trigger pressed.
- The arc strikes without contact with the part and the voltage discharges (HF) cease automatically, the welding current will assume the pilot current value. (if activated from the SET UP menu.)

- Release (2T) torch trigger.
- The welding current reaches the preset value, by way of a up slope time, if programmed.
- Press (3T) trigger and keep it pressed to start the weld completion procedure.
- The current reaches the end current value in the time set in the down slope time parameter.
- The arc continues and the current output will be the value set in the end current parameter.
- In these conditions the weld pool can be closed (crater filler current).
- Release (4T) the trigger to extinguish the arc.
- Gas delivery continues for the time set in the post gas parameter.









- 2 STROKE SPOT HF:

- Bring the torch up to the work until the electrode tip is approximately 2 or 3 mm away.
- Press (1T) torch trigger.
- The arc strikes without contact with the workpiece and the voltage discharges (HF) cease automatically.
- Release (2T) torch trigger.
- The welding current reaches the preset value, by way of a up slope time, if programmed.
- The welding procedure continues, at the preset current, for the time set with the spot time parameter.
- The current reaches the end current value in the time set in the down slope time parameter.
- The arc is extinguished.
- Gas delivery continues for the time set in the post gas parameter.



<p>1. Position the torch with the electrode on the workpiece.</p>	<p>2. Press the torch trigger and keep it pressed.</p>	<p>3. Lift the torch slightly. As soon as the electrode is lifted then the HF ignition starts.</p>	<p>4. The arc ignites for a few hundredths of a second (time can be set up).</p>	<p>5. The result of this is a very precise, not oxidized welding spot without any plastic deformation of the sheet.</p>

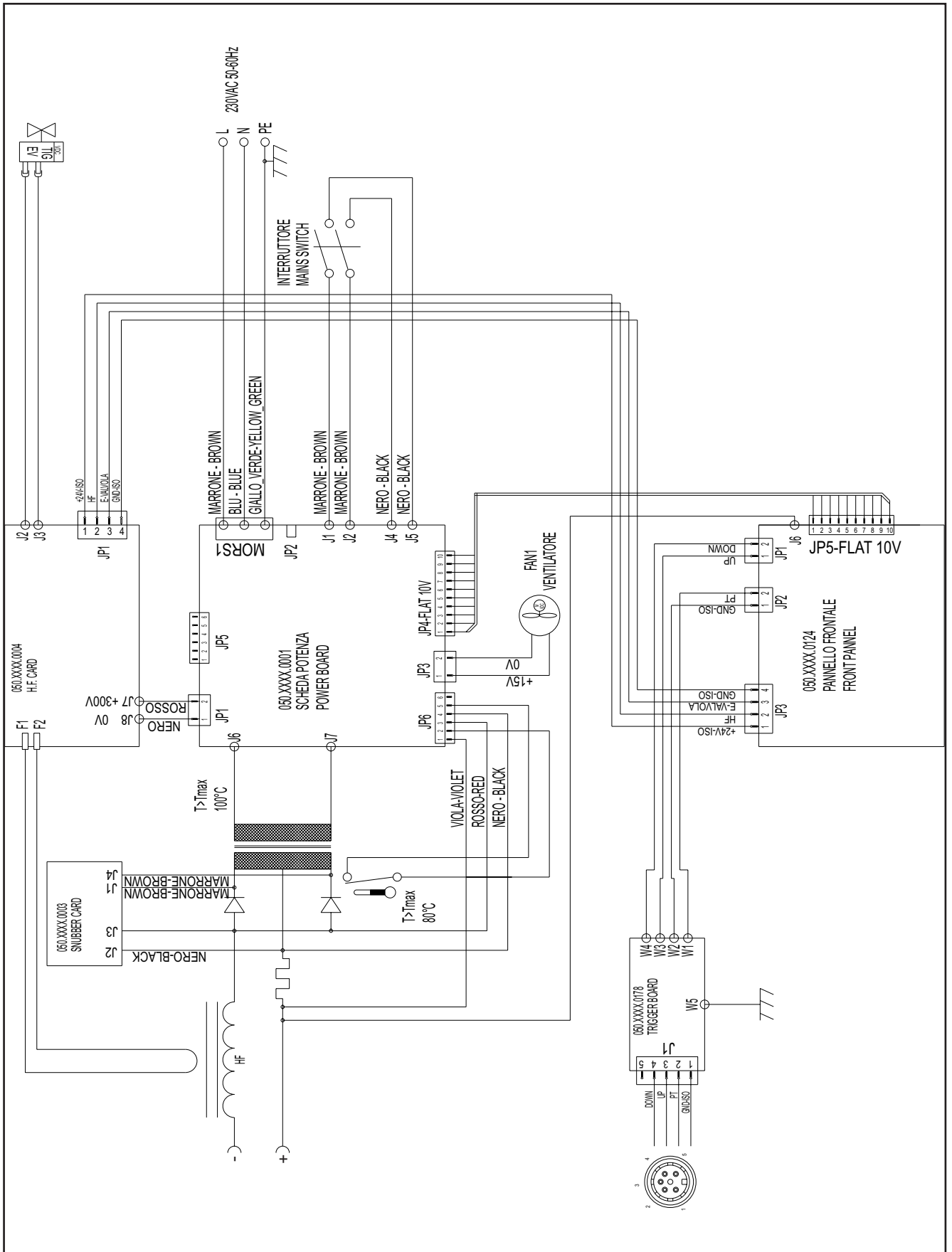
9 TECHNICAL DATA

Directives applied	Waste electrical and electronic equipment (WEEE)		
	Electromagnetic compatibility (EMC)		
	Low voltage (LVD)		
	Restriction of the use of certain hazardous substances (RoHS)		
Construction standards	EN 60974-1; EN 60974-3; EN 60974-10 Class A		
Conformity markings	 Equipment compliant with European directives in force		
	 Suitable in an environment with increased hazard of electric shock		
	 Compliant with WEEE directive		
	 Equipment compliant with RoHS directive		
Supply voltage	1 x 230 Va.c. ± 15 % / 50-60 Hz		
Mains protection	16 A Delayed		
Zmax	This equipment complies with IEC 61000-3-12 provided that the maximum permissible system impedance is less than or equal to 44 mΩ 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 maximum permissible system impedance less than or equal to 44 mΩ.		
Dimensions (L x D x H)	360 x 120 x 215 mm		
Weight	5.4 kg		
Insulation class	B		
Protection rating	IP23S		
Cooling	AF: Air-over cooling (fan assisted)		
Maximum gas pressure	0,5 MPa (5 bar)		
Static characteristic	MMA	 Falling characteristic	
	TIG	 Falling characteristic	
Welding mode		MMA	TIG
Current and voltage adjustment range		5 A / 20.2 V - 150 A / 26.0 V	5 A / 10.2 V - 160 A / 16.4 V
Welding current / Working voltage	25% (40° C)	---	160 A / 16.4 V
	30% (40° C)	150 A / 26.0 V	---
	60% (40° C)	115 A / 24.6 V	120 A / 14.8 V
	100% (40° C)	100 A / 24.0 V	100 A / 14.0 V
Maximum input power	25% (40° C)	---	4.9 kVA – 3.3 kW
	30% (40° C)	6.4 kVA – 4.6 kW	---
	60% (40° C)	4.8 kVA – 3.3 kW	3.2 kVA – 2.2 kW
	100% (40° C)	3.9 kVA – 2.8 kW	2.5 kVA – 1.7 kW
Maximum input current	25% (40° C)	---	21.4 A
	30% (40° C)	28.2 A	---
	60% (40° C)	20.6 A	14.0 A
	100% (40° C)	17.0 A	10.9 A

ENGLISH

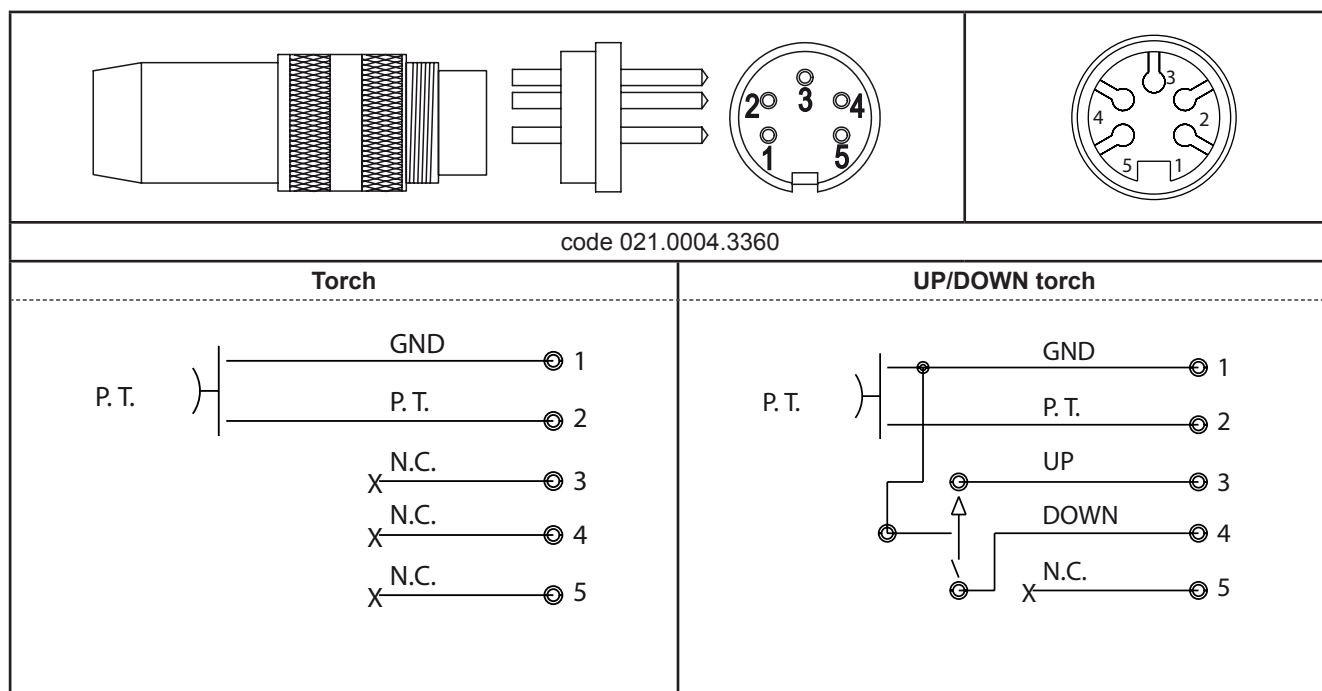
Actual input current	25% (40° C)	---	10.7 A
	30% (40° C)	15.4 A	---
	60% (40° C)	15.9 A	10.8 A
	100% (40° C)	17.0 A	10.9 A
No-load voltage (U₀)		54 V	54 V
Reduced no-load voltage (U_r)		9 V	9 V
Rated HF peak voltage (U_p)	11.3 kV Arc striking device designed to work with manual guided torch.		
Power source efficiency	Efficiency (150A / 26,0V): 85%		
	No-Load condition power consumption (U ₁ = 230 Va.c.): 13,3 W		
Essential raw materials	According to the information provided by our suppliers, this product does not contain essential raw materials in quantities greater than 1g per component.		

10 WIRING DIAGRAM

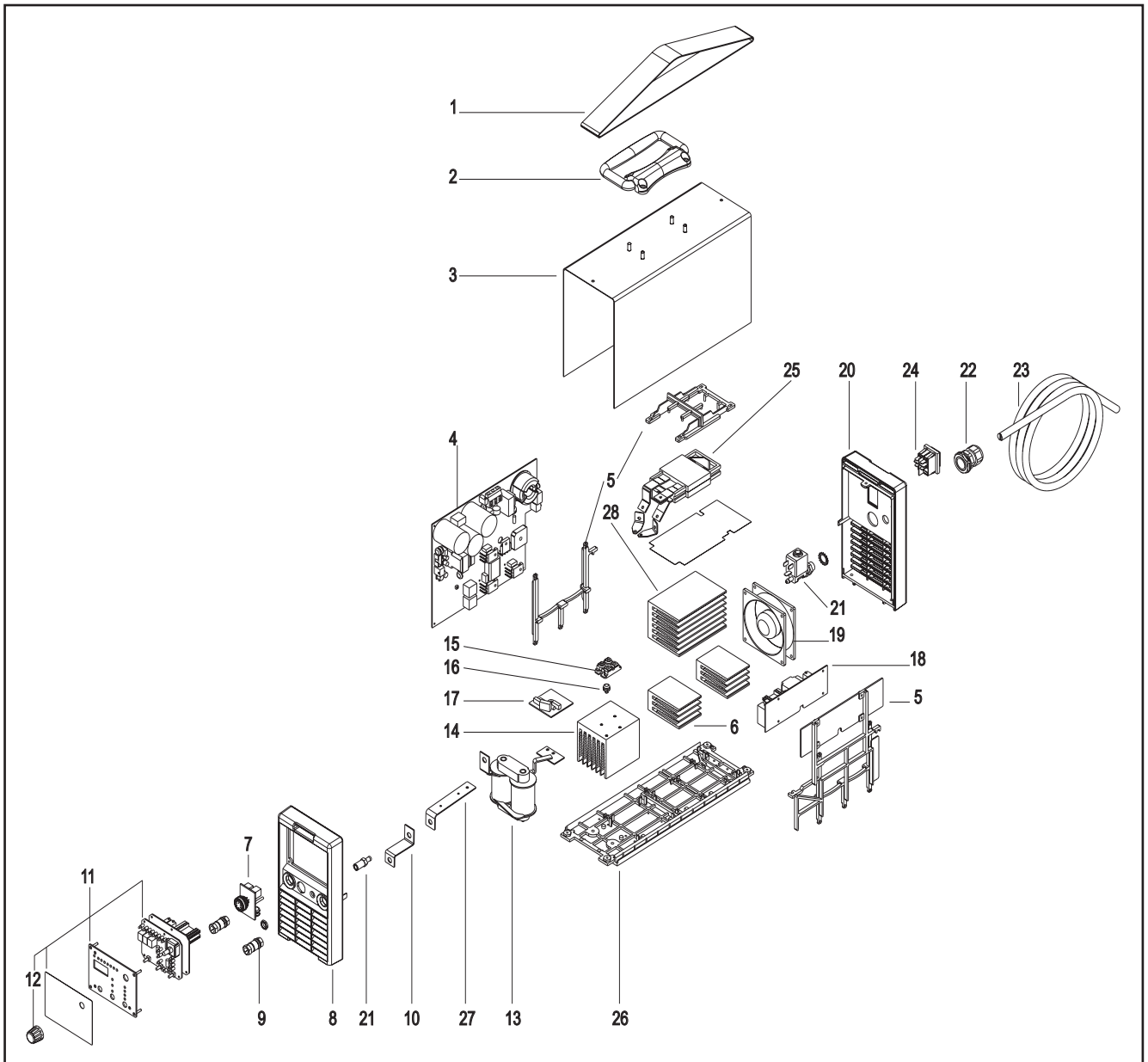


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10.1 TORCH CONNECTOR (front panel)



11 SPARES

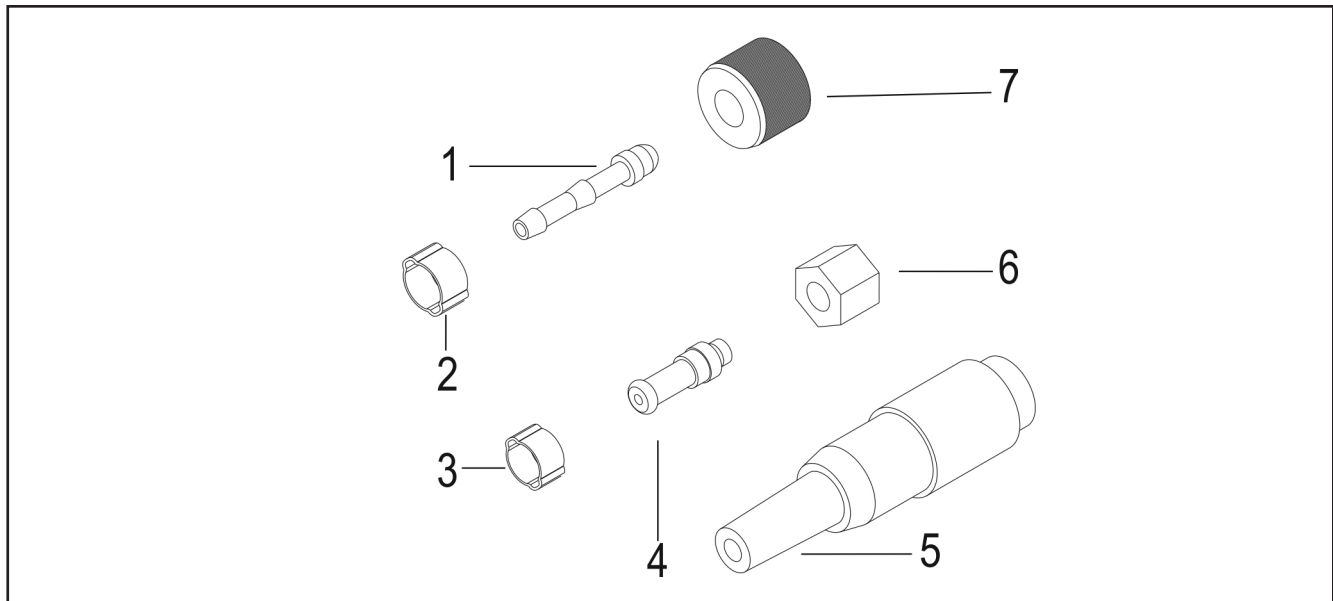


No.	CODE	DESCRIPTION
1	005.0001.0002	BELT
2	011.0006.0031	HANDLE
3	011.0000.0061	COVER PLATE
4	050.0006.0001	POWER BOARD
5	012.0001.0000	INTERNAL FRAMEWORKS
6	015.0001.0002	HEAT SINK L= 50 mm
7	050.0001.0178	TORCH CONNECTOR BOARD
8	010.0006.0040	FRONT PLASTIC PANEL
9	021.0001.1022	FIXED SOCKET 200 A
10	045.0006.0005	SHUNT/PLUG PLATE
11	050.5048.0000	FRONT PANEL

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No.	CODE	DESCRIPTION
12	014.0002.0002	KNOB WITH CAP
13	010.0002.0001	HF COIL
14	015.0001.0027	HEAT SINK L= 75 mm
15	032.0002.2403	ISOTOP DIODE
16	040.0003.1080	THERMAL CUT-OUT 80°C
17	050.0001.0003	SNUBBER BOARD
18	050.0001.0004	HF BOARD
19	003.0002.0002	FAN
20	010.0006.0006	COMPLETE REAR PLASTIC PANEL
21	017.0001.5542	COMPLETE SOLENOID VALVE
22	045.0000.0007	COMPLETE CABLE CLAMP
23	045.0002.0001	NEOPRENE CABLE
24	040.0001.0004	BI-POLE SWITCH
25	010.0007.0005	PLANAR TRANSFORMER
26	012.0002.0001	LOWER COVER
27	045.0005.0005	SHUNT
28	015.0001.0001	HEAT SINK L= 107mm

11.1 TORCH CONNECTORS COMPLETE KIT



No.	CODE	DESCRIPTION
	021.0000.0001	TORCH CONNECTORS COMPLETE KIT
1	016.5001.0822	SLEEVE HOSE ADAPTOR 1/4
2	016.0007.0001	HOSE CLAMPS Ø=11-13
3	016.0007.0709	HOSE CLAMP Ø=07-09
4	016.5001.0821	SLEEVE HOSE ADAPTER FOR RUBBER HOSE M10
5	021.0004.3360	AMPHT3360-001 M/5V. VOL. CONNECTOR
6	016.5001.1311	NUT M10
7	016.5001.0823	NUT 1/4





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