



# TP 220 EVO



Instruction manual

**EN** ENGLISH

Translation of the original  
instructions in Italian

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## Foreword

Before configuring and operating the new product, read the "General Prescriptions for Use" included in the packaging, paying special attention to the safety information.



## Description

The TP 220 EVO is a compact, microprocessor-controlled multi-process welding inverter, suitable for MIG-MAG (standard: manual, synergic, and pulsed), TIG-DC, and MMA welding. The 4.3" display graphically displays all welding parameters, ensuring the settings are immediate and intuitive. In synergic/pulsed MIG-MAG welding, the microprocessor ensures quick and easy program setup, always guaranteeing optimal arc stability and high welding quality. The TP 220 EVO is suitable for professional use, medium-light carpentry, metal furniture manufacturing, automotive and industrial bodywork, and maintenance. Excellent arc control ensures high-quality deposits. The user can save customised welding settings that can be recalled based on the type of work being performed. Easy updates thanks to the USB interface.



## Installation



**DANGER!**

**Lifting**

**and**

**Positioning**

Read the warnings indicated by the following symbols in the “General Prescriptions for Use”.

## Positioning the generator

Follow these guidelines to position your cutting system correctly:

- In places free from dust and moisture;
- At temperatures between 0° and 40°C;
- In places protected from oil, steam and corrosive gases;
- In places not subject to particular vibrations or quakes;
- In places protected from sunlight and rain;

Make sure that no obstacles obstruct the flow of cooling air from the front and rear openings of the machine.

- Provide a clearance of at least 5 m around the machine.
- Whenever it is necessary to move the machine, always unplug it from the socket and pick up any pipes and hoses to prevent them from being damaged by passing over them.



**Make sure the welding area is adequately ventilated. Inhaling welding fumes can be dangerous.**

## Connection to the line



**DANGER! Disconnect the equipment from the mains before performing any assembly operations. Closing the power switch does not guarantee disconnection from the mains.**

Before making any electrical connection, check that the supply voltage and the available frequency correspond to those indicated on the generator nameplate.

The mains voltage should be within  $\pm 10\%$  of the rated line voltage. Too low a voltage may result in poor performance; too high a voltage may, on the other hand, cause overheating and, as a consequence, the failure of some components.

The welding machine must be:

- Installed correctly, possibly by qualified personnel;
- Connected correctly, in accordance with local regulations;
- Connected to a socket of suitable capacity.

Connect the power cable to a standardised plug (2P + T) with the correct capacity.

Follow these instructions to connect the power cable to the plug:



- the brown wire must be connected to the terminal marked L1
- the blue or grey wire must be connected to the terminal marked L2
- the yellow/green wire (earth) must be connected to the terminal marked PE or featuring the plug symbol 

In all cases, the yellow/green earth wire must be connected to the PE terminal  in such a way that if the power cable is pulled from the plug, it is the last to be disconnected.

**The socket to which the generator will be connected must be equipped with suitable protective fuses or a circuit breaker.**

Notes:

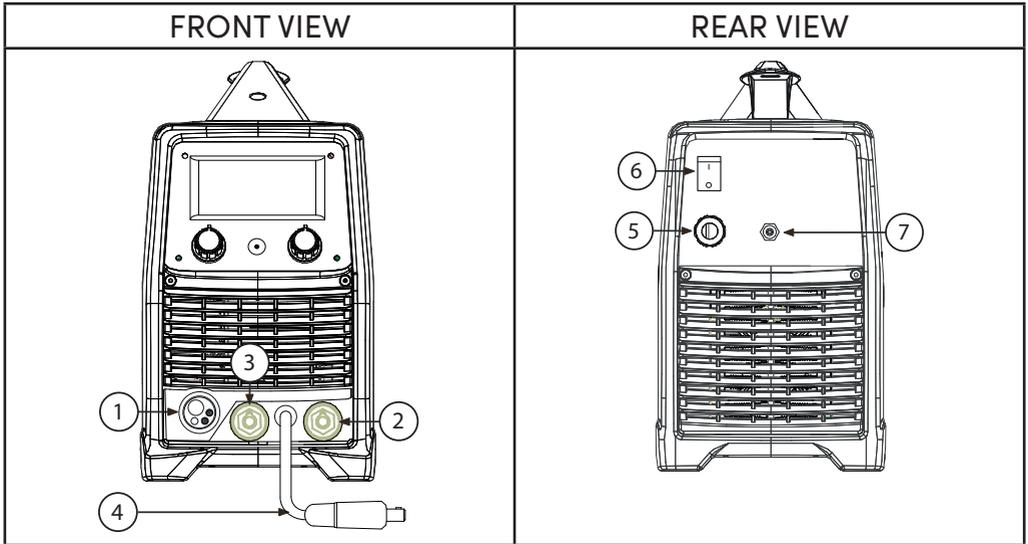
- The power cable must be regularly checked for signs of damage or ageing. If it is not found to be in good condition, do not use the machine but have it repaired at a service centre.
- Do not tug on the power cable to disconnect it from the socket.
- Never run over the power cable with other machinery: you may damage it and there is a risk of electric shock.
- Keep the power cable away from heat sources, oils, solvents and sharp edges.
- When using an extension cable with a suitable cross-section, unwind the cable completely otherwise it might overheat.



## ASSEMBLY

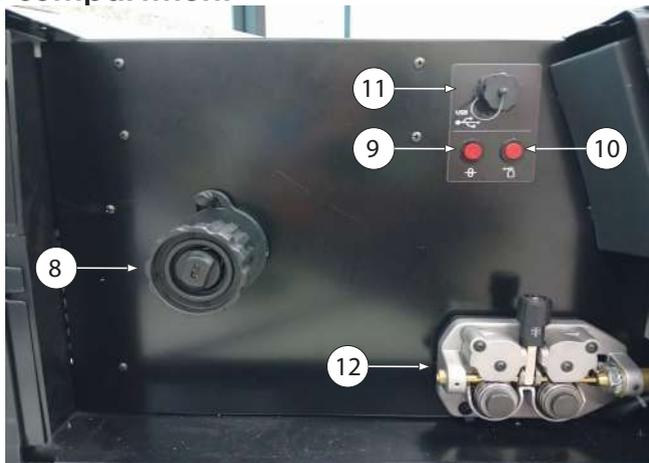
### Connections and sockets

TP 220 EVO



1. MIG/MAG TORCH attachment
2. POSITIVE socket
3. NEGATIVE socket
4. Polarity change socket
5. Power cable
6. ON-OFF switch
7. GAS inlet

### Wire feeder compartment





8. Reel holder for 100 and 200mm diameter reels of wire
9. Wire threading key
10. GAS test key
11. USB port
12. 4-roller wire feed unit

## Preparation for MIG/MAG welding earth cable connection socket

Make sure that the machine is switched off and/or disconnected from the power supply. Connect the work cable clamp to the workpiece or metal support table, ensuring good contact.

## Connecting the torch

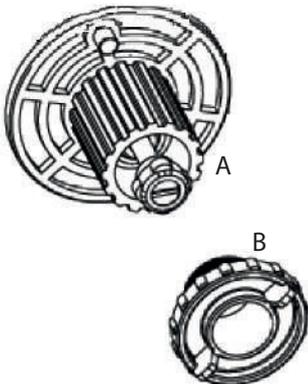
Make sure that the machine is switched off and/or disconnected from the power supply.

Connect the MIG torch to the centralised connection – 1 – on the front of the welding machine, taking care not to damage the contacts, then tighten the torch locking ring.

## Loading the wire

Make sure that the machine is switched off and/or disconnected from the power supply.

Remove the nozzle and wire guide tip before starting the following operations.



- Open the side panel of the coil compartment.
- Unscrew the coil handwheel (B).
- Insert the coil onto the reel.
- Retighten the handwheel. Adjust the braking system so that the wire is not under excessive tension during feeding and so that the coil stops immediately upon stopping, without unwinding excess wire.

	<ul style="list-style-type: none"> <li>• Check that the correct rolls for the type of wire to be used are installed. The diameter of the roller groove and the wire to be used must be the same.</li> <li>• The roller must be of an appropriate shape based on the composition of the material.</li> <li>• Slide the wire between the wire feed rollers and insert it into the punch of the MIG/MAG TORCH attachment.</li> <li>• Make sure the wire is correctly seated in the roller grooves.</li> </ul>
	<ul style="list-style-type: none"> <li>• Adjust the pressure system so that the arms press the wire with a force that does not deform it and that ensures slippage-free advancement:</li> <li>• CARBON STEEL 2.5 to 3.5</li> <li>• STAINLESS STEEL 2.5 to 3.5</li> <li>• BRAZING WIRE 2.5 to 3.5</li> <li>• ALUMINIUM 1 to 2</li> <li>• CORED WIRES 2 to 3</li> </ul>
	<ul style="list-style-type: none"> <li>• Press the threading key to feed the wire until it exits the tip of the torch. Alternatively, press the torch trigger. After holding the torch trigger down for three seconds, the wire will begin to feed more quickly to speed up its loading into the lance. When the wire exits the lance, release the torch trigger.</li> </ul>

## Connecting the GAS cylinder and pressure reducer

Make sure that the machine is switched off and/or disconnected from the power supply.

**ATTENTION: The cylinders are under pressure. Handle them with caution. Improper handling or use of compressed gas cylinders can cause serious accidents. Do not drop, overturn, or expose them to excessive heat, flames, or sparks. Do not knock against other cylinders.**

The gas cylinder (not supplied) must be placed near the machine so that it cannot fall. For safety and economy reasons, make sure the pressure regulator is closed when not welding and when connecting and disconnecting the coil.



- Turn the regulator adjustment knob counterclockwise to ensure the valve is closed.
- Screw the regulator onto the cylinder valve and tighten securely.
- Connect the gas hose to the pressure regulator, securing it with the supplied clamp, and to the rear hose connector.
- Open the cylinder valve and adjust the gas flow to approximately 5 to 15 L/min.
- Press the torch or gas test key to ensure gas flows from the torch.

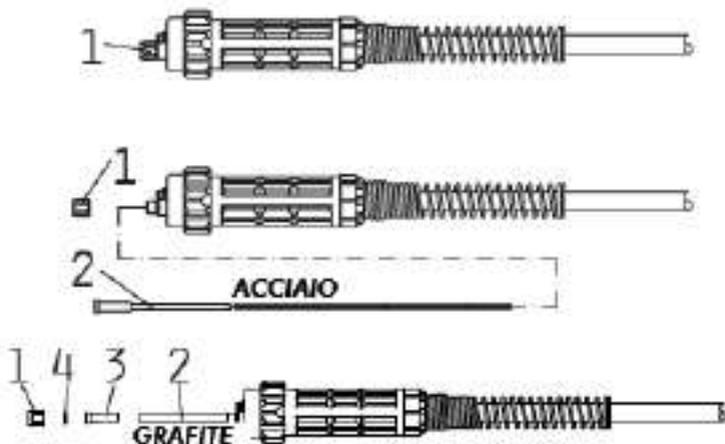
## Choosing and replacing the thread guide sheath

Make sure that the machine is switched off and/or disconnected from the power supply.

Choose the appropriate wire guide sheath to install. Wire guide sheaths are essentially divided into two types:

- Steel sheaths. They can be coated and uncoated. Coated sheaths are used on gas-cooled torches. Uncoated sheaths are used on water-cooled torches.
- Teflon/graphite sheaths. They are particularly suitable for welding aluminium and stainless steel, as they offer maximum smoothness when feeding the wire.

COLOUR	BLUE	RED	YELLOW
DIAMETER	0.6 - 0.9	1.0 - 1.2	1.2 - 1.6



- Disconnect the torch from the machine.
- Place it on a flat surface and carefully remove the brass nut (1).
- Remove the sheath (2).
- Insert the new sheath and refit the brass nut (1).
- Connect the torch to the machine and reload the wire.

If you need to install a Teflon or graphite sheath, follow these instructions:

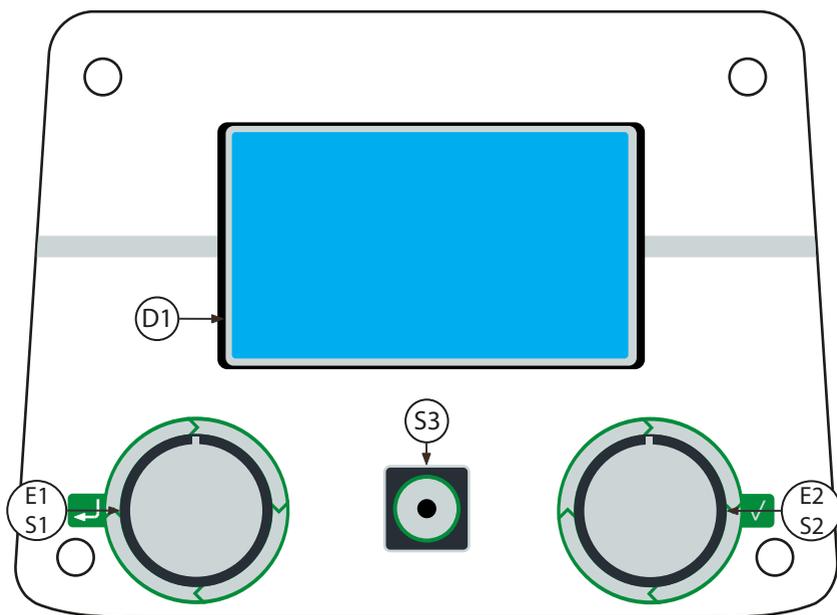


- 
- Insert the sheath, insert the sheath locking head (3) and the O-ring (4), and reassemble the brass nut (1).
  - The Teflon sheath must protrude at least 8 cm from the brass nut (1).
  - Remove the brass pin from the Euro fitting (keep it for use with torches with iron sheath).
  - Being careful not to damage the sheath, install the torch in the Euro fitting and secure it firmly.
  - Cut the Teflon sheath so that it remains approximately 1 mm from the roller.
  - Load the wire.



## USER INTERFACE

### Control panel



ACRONYM	DESCRIPTION
D1	The display shows the menus to set the generator and its functions. During welding: The display shows the actual welding parameters.
E1/S1	ENCODER WITH KEY When welding: the encoder changes the value of the active parameter. On the menu pages: The encoder scrolls through the list of parameters/settings. Press the encoder (ENCODER KEY) to select the highlighted setting.
E2/S2	ENCODER WITH KEY When welding: the encoder changes the value of the active parameter. On the menu pages: The encoder scrolls through the list of parameters/settings. Press the encoder (ENCODER KEY) to select the highlighted setting.
S3	MENU key: Press and release: the key to enter the MAIN MENU



## Switching on the system

Set the generator power switch to "I" to switch on the equipment. The Helvi brand, machine model, SW code, and version appear on the screen.

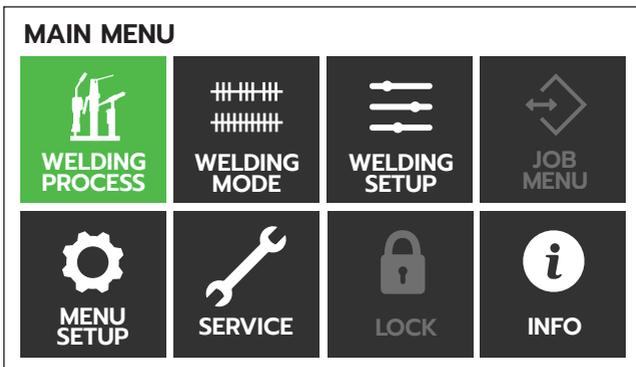


When switching on for the first time or after the RESET procedure: The generator is set up with the preset factory values.

Subsequent power-ups: The power generator is set up in the last configuration set before it was switched off.

## Main Menu

Press S3 to enter the MAIN MENU. Use Encoder E2 to select the desired item. Press S2 to confirm the selection.



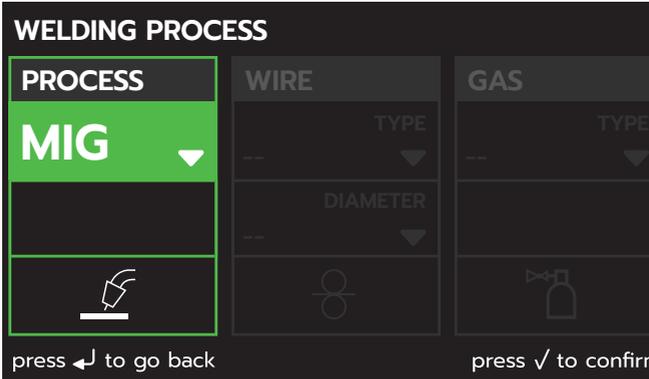
Press S1 to exit.



## Welding Process

From the MAIN MENU>WELDING PROCESS, use S2 to select the PROCESS selection box. Use Encoder E2 to select the desired item from the following options:

- MMA
- MIG



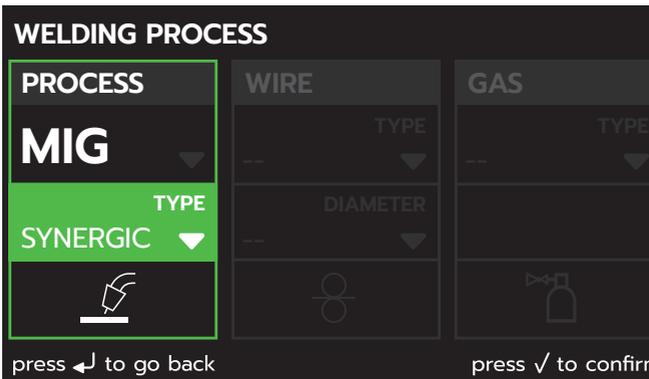
Press S2 to confirm the selection.

Press S1 to exit without confirming.

## MIG/MAG Process

If the MIG process is confirmed, use the Encoder E2/S2 key to select the PROCESS>TYPE selection box. Use Encoder E2 to select the desired item from the following options:

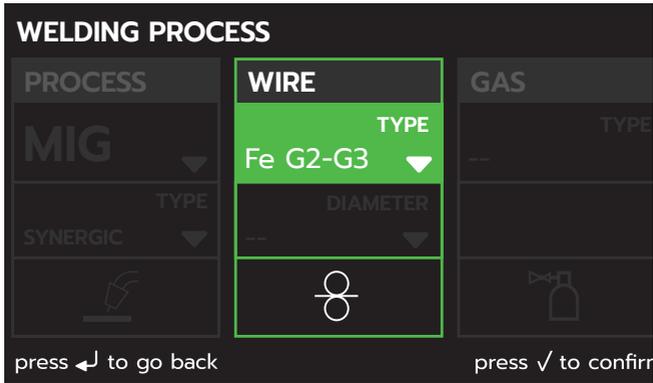
- MANUAL
- SYNERGIC
- PULSED



Press S2 to confirm the selection.

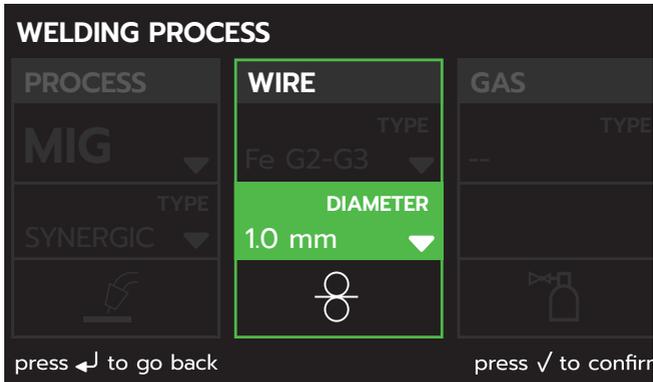


If PROCESS>TYPE>SYNERGIC or PULSED is selected, use the Encoder E2/S2 key to select the WIRE>TYPE selection box. Use Encoder E2 to select the wire type:



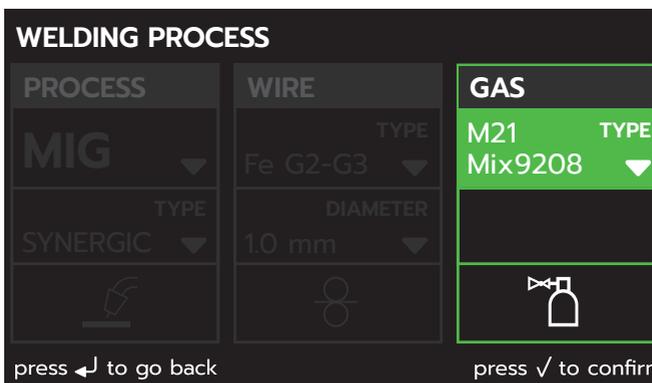
Press S2 to confirm the selection.

Use the Encoder E2/S2 key to select the WIRE>DIAMETER box. Use Encoder E2 to select the wire diameter:



Press S2 to confirm the selection.

Use the Encoder E2/S2 key to select the GAS box. Use Encoder E2 to select the gas type:



Press S2 to confirm the selection.

Use the Encoder E2/S2 key to confirm the selected curve ✓

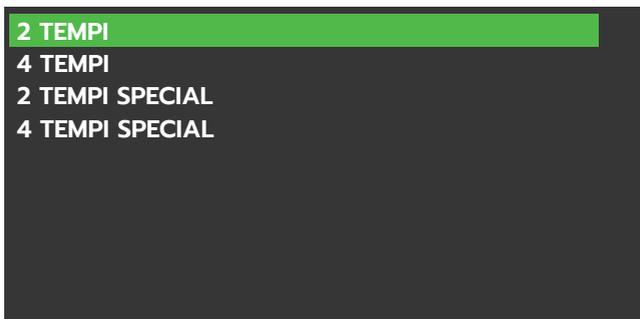
Press S1 to exit without confirming.

## Welding MODE

From the MAIN MENU>WELDING MODE, use Encoder E2 to select the desired item from the following options:

- 2 STEPS
- 4 STEPS

### WELDING MODE



Pressing S2 confirms your selection and goes to the previous screen.

Press S1 to exit without confirming.

## Welding SETUP

From the MAIN MENU > WELDING SETUP, use Encoder E2 to select the desired item from the following options:

- WELDING PARAMETERS
- B-LEVEL



- SPOT/PAUSE
- DOUBLE PULSATION

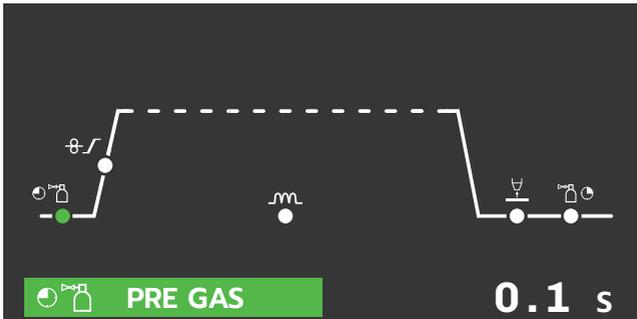
## WELDING SETUP

- **WELDING PARAMETERS**
- B-LEVEL
- SPOT/PAUSE
- DOUBLE PULSATION

## Welding PARAMETERS MIG/MAG (SYN-PULSE 2/4 STEPS)

Use S2 to select the desired item and use Encoder E2 to change the value.

## WELDING SETUP



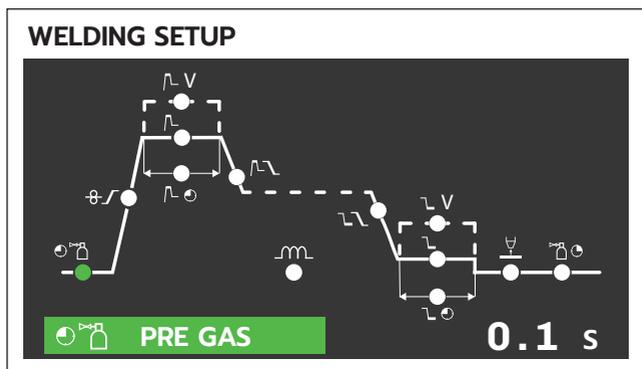
Press S1 to exit.

PARAMETER	MIN	MAX	DEF
PRE-GAS	0.0s	10.0s	0.0s
MOTOR SLOPE	0.00s	1.00s	0.10s
BBT	1	100	10
POST-GAS	0.0s	10.0s	1.0s
DYNAMIC	-20%	+20%	0%



## MIG/MAG (SYN-PULSE 2 STEPS SPECIAL)

Use S2 to select the desired item and use Encoder E2 to change the value.

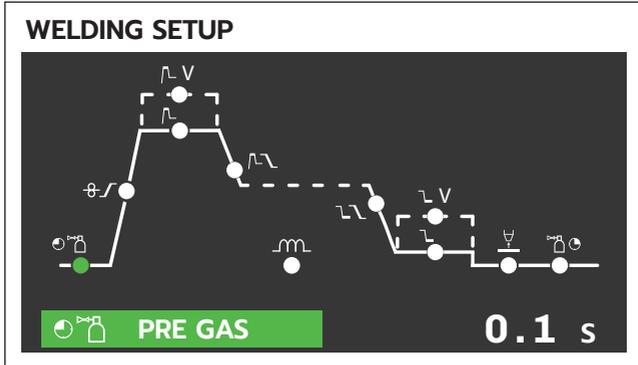


Press S1 to exit.

PARAMETER	MIN	MAX	DEF
PRE-GAS	0.0s	10.0s	0.0s
MOTOR SLOPE	0.00s	1.00s	0.10s
HOT-START	10%	200%	130%
HOT-START CORRECTION	-9.9 V	+9.9 V	0.0 V
HOT-START TIME	0.0s	10.0s	0.5s
HOT-START RAMP	0.1s	10.0s	0.5s
CRATER RAMP	0.1s	10.0s	0.5s
CRATER	10%	200%	80%
CRATER CORRECTION	-9.9 V	+9.9 V	0.0 V
CRATER TIME	0.0s	10.0s	0.5s
BBT	1	100	10
POST-GAS	0.0s	10.0s	1.0s
DYNAMIC	-20%	+20%	0%

## MIG/MAG (SYN-PULSE 4 STEPS SPECIAL)

Use S2 to select the desired item and use Encoder E2 to change the value.



Press S1 to exit.

PARAMETER	MIN	MAX	DEF
PRE-GAS	0.0s	10.0s	0.0s
MOTOR SLOPE	0.00s	1.00s	0.10s
HOT-START	10%	200%	130%
HOT-START CORRECTION	-9.9 V	+9.9 V	0.0 V
HOT-START RAMP	0.1s	10.0s	0.5s
CRATER RAMP	0.1s	10.0s	0.5s
CRATER	10%	200%	80%
CRATER CORRECTION	-9.9 V	+9.9 V	0.0 V
BBT	1	100	10
POST-GAS	0.0s	10.0s	1.0s
DYNAMIC	-20%	+20%	0%

## MMA

Use S2 to select the desired item and use Encoder E2 to change the value.



## WELDING SETUP



Press S1 to exit without confirming.

PARAMETER	MIN	MAX	DEF
HOT-START	0%	100%	50%
ARC-FORCE	0%	100%	30%

## B-Level

### MIG/MAG (SYN-PULSE 4 STEPS)

From the MAIN MENU>WELDING SETUP>B-LEVEL, use Encoder E2 to select the value of the B-Level parameter.

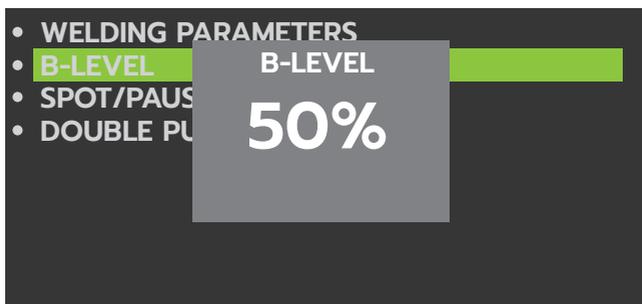
This parameter enables the torch trigger to function. Quickly pressing and releasing the torch trigger while welding (in the 2nd step) switches from the main current to a secondary current.

Pressing and releasing the torch trigger again switches from the secondary current to the main current.

This switch can be performed as many times as the operator desires.

To end the welding cycle (3rd step), press and hold the torch trigger. When released, the welding cycle ends (4th step).

## WELDING SETUP





Press S1 to exit.

PARAMETER	MIN	MAX	DEF
B-LEVEL	10%	90%	OFF

## SPOT/PAUSE

### MIG/MAG (SYN-PULSE 2/4 STEPS)

From the MAIN MENU>WELDING SETUP>SPOT/PAUSE, use Encoder E2 to select the Spot Time and Pause Time parameter values.

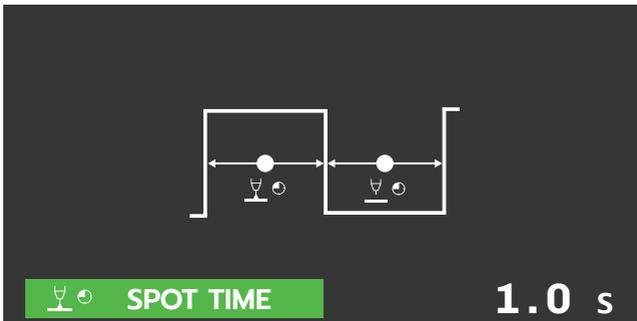
#### SPOT TIME

If different from OFF, pressing the torch key causes the welding arc to last for the time set with the Spot Time parameter. The torch key must be pressed again to start a new weld.

#### PAUSE TIME

This parameter sets the pause time after the spot time.

## SPOT/PAUSE



Press S1 to exit.

PARAMETER	MIN	MAX	DEF
SPOT TIME	0.1s	25.0s	OFF
PAUSE TIME	0.1s	25.0s	OFF

## Double Pulsed

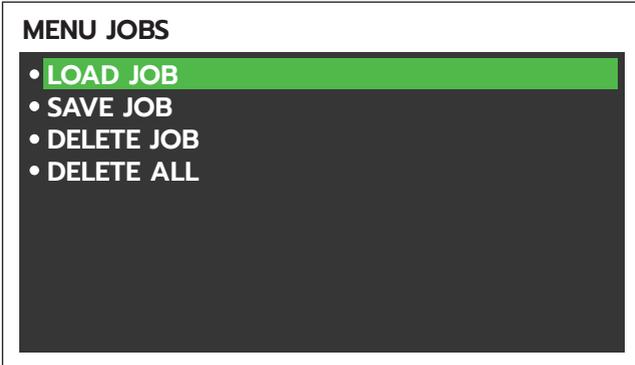
### MIG/MAG (SYN-PULSE 2/4 STEPS)

From the MAIN MENU>WELDING SETUP>DOUBLE PULSED, use Encoder E2 to select the Double Pulse parameter values.

#### PULSE FREQUENCY

This parameter activates/deactivates the double pulse and adjusts the frequency with which the two wire feed speeds set with the PULSATION DELTA parameter alternate.

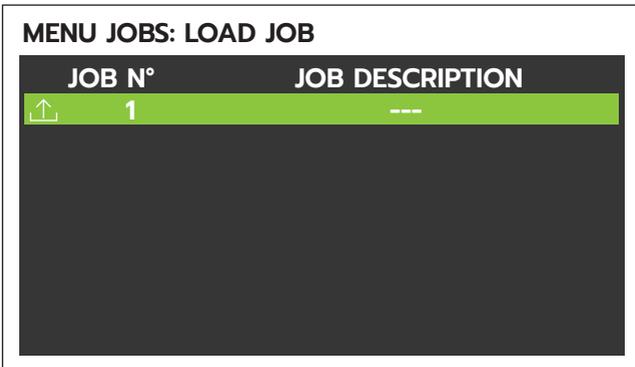




Press S2 to confirm the selection.  
Press S1 to exit without confirming.

## Load JOB

From the MAIN MENU>JOB MENU>LOAD JOB, use Encoder E2 to select the desired JOB from those previously saved.



Press S2 to confirm the selection. The loaded JOB and its description appear on the main screen.



Press S1 to exit without confirming.



## Save JOB

From the MAIN MENU>JOB MENU>SAVE JOB, use Encoder E2 to select the desired JOB.

MENU JOBS: SAVE JOB	
JOB N°	JOB DESCRIPTION
 1	---
2	---
3	---
4	---
5	---
6	---
7	---
8	---

Press S2 to confirm the selection.

MENU JOBS: SAVE JOB	
JOB N°	JOB DESCRIPTION
 1	---
CONFIRM ?	
YES	NO

The screen appears with the keyboard for entering the description (max 20 characters):

JOB MENU	
DESCRIPTION	
q	w e r t y u i o p
a	s d f g h j k l
z	x c v b n m , . -
↑	123 [ ] ← 

Press  to save the description.

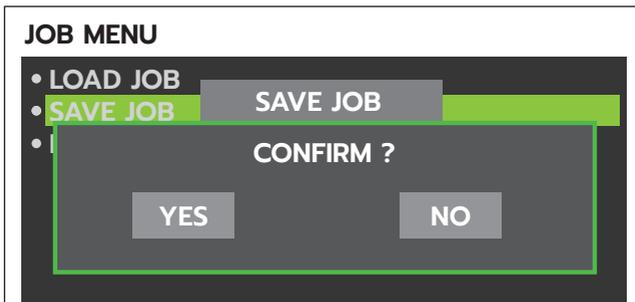
Press S1 to exit without confirming.



If the selected JOB has already been saved previously, the JOB number appears in red.



Press S2 to confirm the selection. The confirmation screen appears.

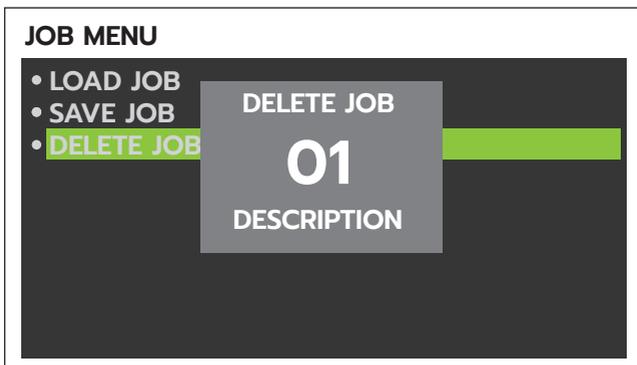


If the overwrite is confirmed, the keyboard screen appears for entering the description (max 20 characters)

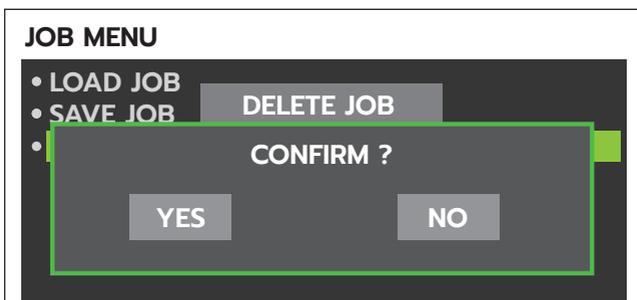
Press S1 to exit without confirming.

## Delete JOB

From the MAIN MENU>JOB MENU>DELETE JOB, use Encoder E2 to select the desired JOB from those previously saved.



Press S2 to confirm the selection. The confirmation screen appears.



Press S1 to exit without confirming.

## Delete ALL JOB

From the MAIN MENU>JOB MENU>DELETE ALL using the E2 Encoder it is possible to delete all previously saved JOBS

Press S2 to confirm the selection. The confirmation screen appears.



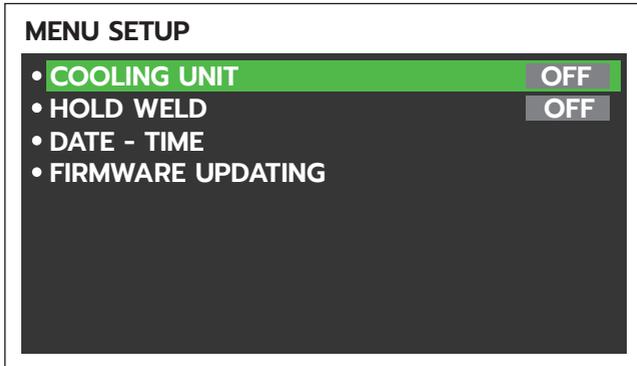
Press S1 to exit without confirming.



## Setup Menu

From the MAIN MENU>SETUP MENU, use Encoder E2 to select the desired item from the following options:

- COOLING UNIT
- HOLD WELD
- DATE - TIME
- FIRMWARE UPDATING



Press S2 to confirm the selection.

Press S1 to exit without confirming.

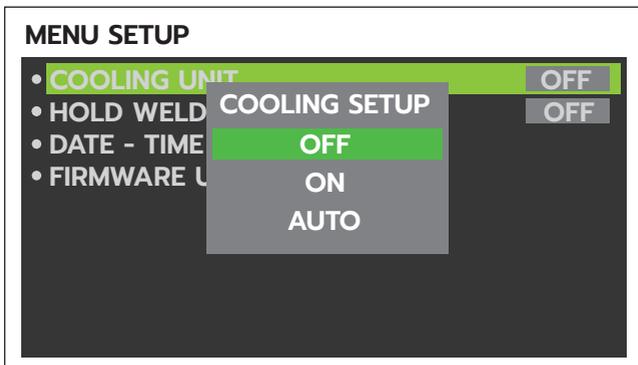
## Cooling Unit

From the SETUP MENU>COOLING UNIT, use Encoder E2 to select the desired item.

**AUTO:** When the machine is switched on, the unit is switched on for 30s. During welding, the unit remains constantly on. At the end of welding, the unit remains on for 90 seconds plus a number of seconds that depends on the average welding current.

**ON:** The cooling unit is always on when the power source is also switched on.

**OFF:** The cooling unit is always disabled.



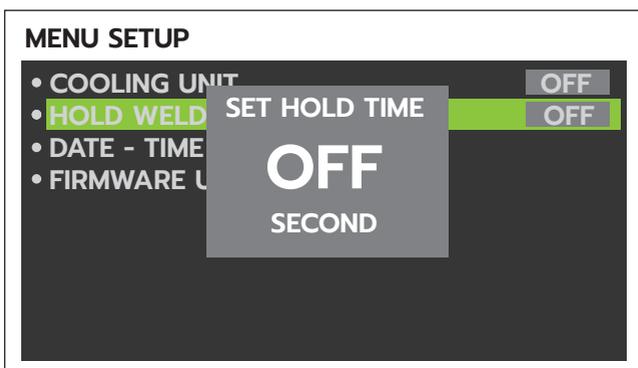
Pressing S2 confirms your selection and goes to the previous screen. The box next to the item displays the selection made.

Press S1 to exit without confirming.

## Hold Weld

From the SETUP MENU>HOLD WELD, use Encoder E2 to select the desired item.

**OFF:** After welding, the average HOLD welding values are not displayed. **VALUE:** After welding, the average welding values for the selected HOLD time are displayed.

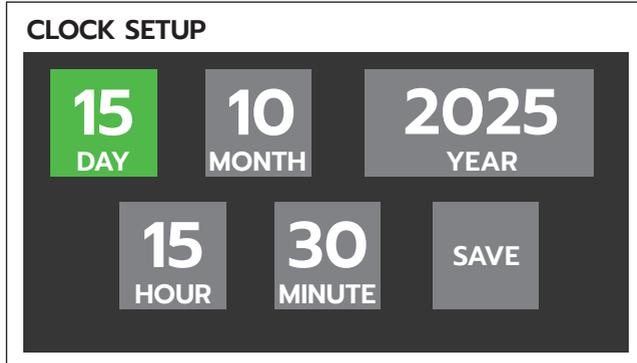
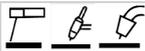


Pressing S2 confirms your selection and goes to the previous screen. The box next to the item displays the selection made.

Press S1 to exit without confirming.

## Date - Time

From the SETUP MENU>DATE - TIME, use the Encoder E2/ S2 key to select the selection box to set the DATE and TIME.

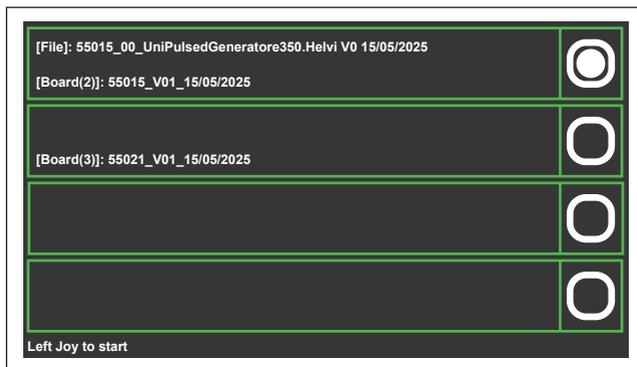


Pressing **SAVE** confirms your selection and returns you to the previous screen.  
Press **S1** to exit without confirming.

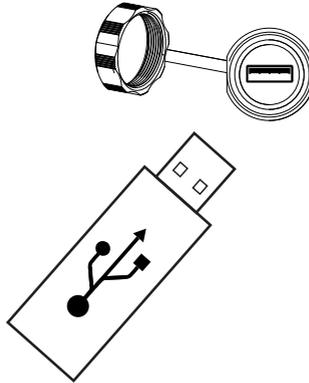
## Firmware Updating

From the **SETUP MENU>FIRMWARE UPDATING**, press **S2** to proceed with the machine's **FIRMWARE UPGRADE**.

The screen displays the firmware versions of the various boards:



The USB connector is located in the coil compartment. Insert the USB pen drive with the firmware loaded into the appropriate port.



Use Encoder E2 to select the board to be updated and press S2 to begin the upgrade. The update message and the update percentage appear at the bottom of the screen. When the update is complete, the message Updated appears. Remove the USB pen drive, switch the generator off and then on again.

## Service Menu

From the MAIN MENU>SERVICE MENU, use Encoder E2 to select the desired item from the following options:

- FIRMWARE VERSION
- FACTORY RESET
- CALIBRATION VALIDATION
- LOGIN

### MENU SERVICE

- **FIRMWARE VERSION**
- FACTORY RESET
- CALIBRATION VALIDATION
- LOGIN

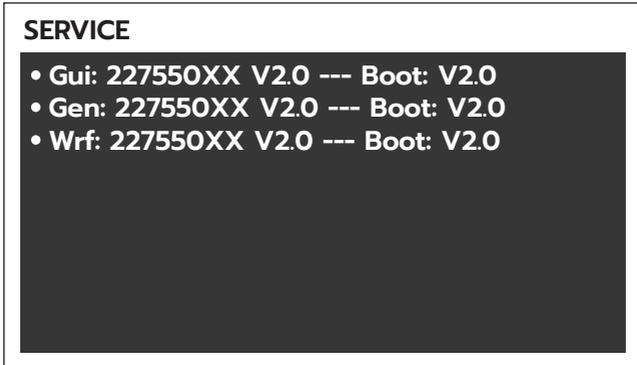
Press S2 to confirm the selection.  
Press S1 to exit without confirming.

## Firmware Version

From the MAIN MENU>SERVICE MENU>FIRMWARE VERSION, the screen appears with



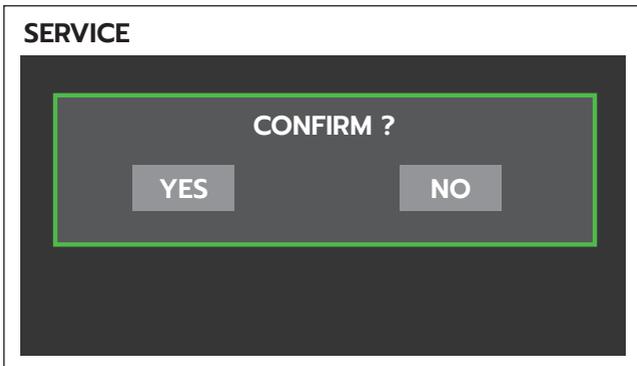
the firmware and bootloader versions on the device's boards.



Press S1 to exit without confirming.

## Factory Reset

From the MAIN MENU>SERVICE MENU>FACTORY RESET, the screen for performing a Factory Reset appears. Use the Encoder E2/S2 key to select the desired box.



Press S1 to exit without confirming.

## Calibration Validation

From the MAIN MENU>SERVICE MENU>CALIBRATION VALIDATION, the screen with the calibration values saved on the device appears.



## SERVICE

- Q Dac = 89
- M Dac = 1265
- Q Adc Vo = 203
- M Adc Vo = 16348
- Q Adc lo = 84
- M Adc lo = 13450

Press S1 to exit without confirming.

## Login

From the MAIN MENU>SERVICE MENU>LOGIN, the screen for entering the login password appears:

## LOGHIN

ENTER LOGHIN PASSWORD			
7	8	9	<
4	5	6	↩
1	2	3	
	0		

This area is reserved for authorised personnel.

Press S1 to exit without confirming.

## Info

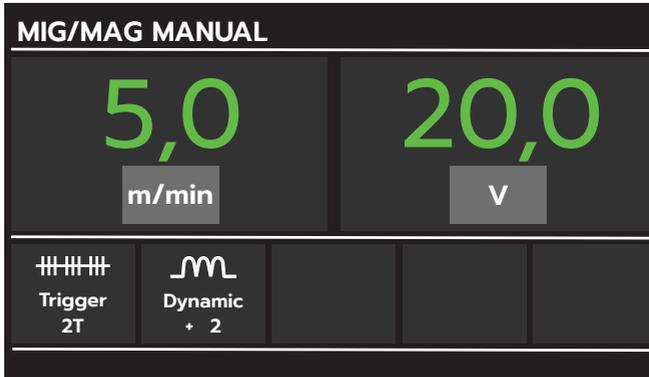
From the MAIN MENU>INFO, you can view the QR code for the Helvi.com website, where the product pages are located.

Press S1 to exit.

## MIG/MAG WELDING

### MANUAL MIG/MAG Process

From the MAIN MENU>WELDING PROCESS, if the MANUAL MIG process is confirmed, the following screen appears:



Use Encoder E1 to set the wire feed speed in m/min.

Use Encoder E2 to set the volts.

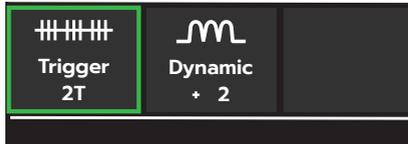
Pressing S2 highlights the first Position at the bottom: The positions are as follows:

- DEF 1 -> TRIGGER MODE (DEFAULT)
- DEF 2 -> DYNAMIC MODE (DEFAULT)

Use Encoder E2 to select the desired item:

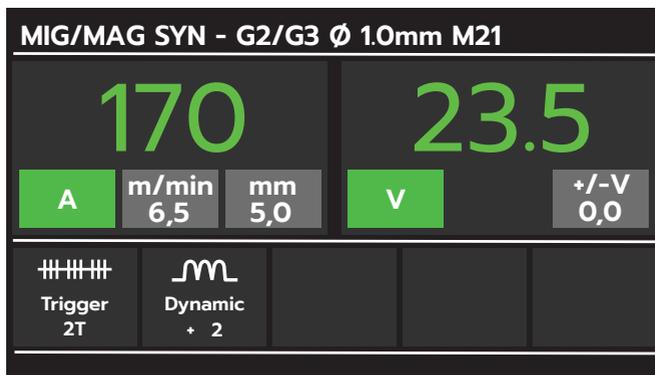


Use S2 to select the item to be modified. Use Encoder E2 to change the value.



## SYNERGIC/PULSED MIG/MAG Process

From the MAIN MENU>WELDING PROCESS, if the MIG SYNERGIC or PULSED MIG process is confirmed, you access the following screen:



Use Encoder E1 to set the synergic curve.

Use Encoder E2 to set the arc correction in volts.

Press S1 for 3 seconds to select the synergic display type:

- AMPERE (A)
- WIRE SPEED (m/min)
- THICKNESS (mm)

Use Encoder E1 to select the desired item and press S1 to confirm.

Press S2 for 3 seconds to select the arc correction display type:

- VOLTS (V)
- ARC CORRECTION (V)

Use Encoder E2 to select the desired item and press S2 to confirm.

Pressing S2 highlights the first Position at the bottom: The positions are as follows:

- DEF 1 -> TRIGGER MODE (DEFAULT)
- DEF 2 -> DYNAMIC MODE (DEFAULT)

Use Encoder E2 to select the desired item:

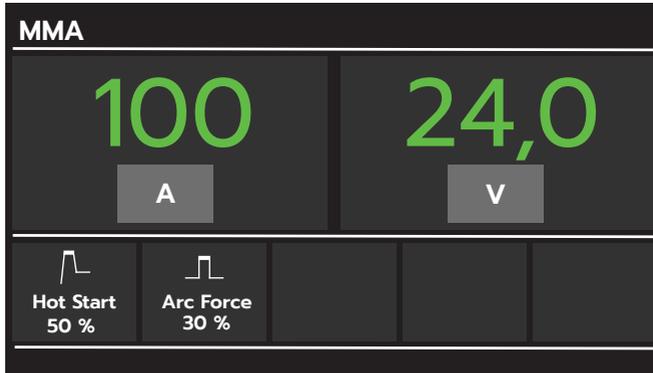


Use S2 to select the item to be modified. Use Encoder E2 to change the value.



## MMA Process

From the MAIN MENU>WELDING PROCESS, if the MMA process is confirmed, you access the following screen:



Use Encoder E1 to set the welding current.

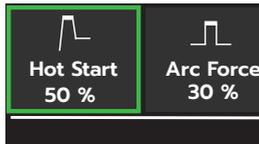
Pressing S2 highlights the first Position at the bottom: The positions are as follows:

- DEF 1 -> HOT START (DEFAULT)
- DEF 2 -> ARCFORCE (DEFAULT)

Use Encoder E2 to select the desired item:



Use S2 to select the item to be modified. Use Encoder E2 to change the value.





## TECHNICAL DATA

Construction Standards	EN 60974-1; EN 60974-10 Class A
Implemented Directives 1	2014/30/EU (EMC)
	2014/35/EU (LVD)
	907/2006 (REACH)
	2011/65/EU (RoHS2)
	2009/125/EU (Ecodesign)

## TP 220 EVO

Mains voltage	(1ph) 230V 50/60 Hz		
Process	MIG/MAG	MMA	TIG
Max power	7.6 KVA	8.6 KVA	6 KVA
Maximum current	33 A	37.5 A	26.5 A
Efficient current	21 A	21.5 A	14.5 A
No-load voltage	35 V	65 V	65 V
Min-Max amperage	20 - 200 A	20 - 200 A	5 - 200 A
Work cycle	200A @ 35%	200A @ 35%	200A @ 35%
	160A @ 60%	150A @ 60%	150A @ 60%
	140A @ 100%	120A @ 100%	120A @ 100%
Insulation class	H		
Protection rating	IP 23S		
Dimensions (LxWxH)	230x400x400 mm (gen.)		





[www.helvi.com](http://www.helvi.com)



**Helvi S.p.A.**

Viale Galileo Galilei 123, - 36066 - Sandrigo (VI) Italy

Tel. (+39) 0444 666999 - Fax (+39) 0444 750 070

[www.helvi.com](http://www.helvi.com) - [info@helvi.com](mailto:info@helvi.com)

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