DIGITECH vision PULSE 3200

EN *Operator's manual*

READ CAREFULLY

WELDING TOGETHER

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Introduction

This manual describes the functions of the software operating the following control panels:

- **DH 32** **VS 32**
- **DH 33 + HT5** **VS 33 + HT5**
- **DH 40 + HT5** **VS 40 + HT5**
- **DH 50 + HT5** **VS 50 + HT5**

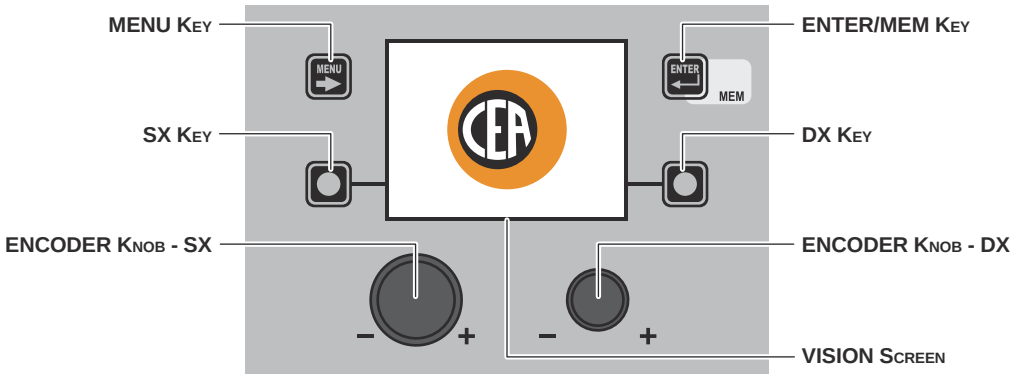
Functioning of the panels listed above is identical (the functions are the same but the characteristics differ depending on the type of machine they are fitted on (e.g.: current regulation field).

General notes

- **Any adjustments/changes made on the welder control panel are also displayed automatically on the drag-and-drop control panel and vice versa, the images on the displays of both weld system components could however differ one from the other, as the displays are consistent with adjustments/changes but also independent as far as visualization is concerned.**
- **The adjustments / changes made are immediately available to the operator, unless indicated otherwise in the manual.**

Welding machine control panel

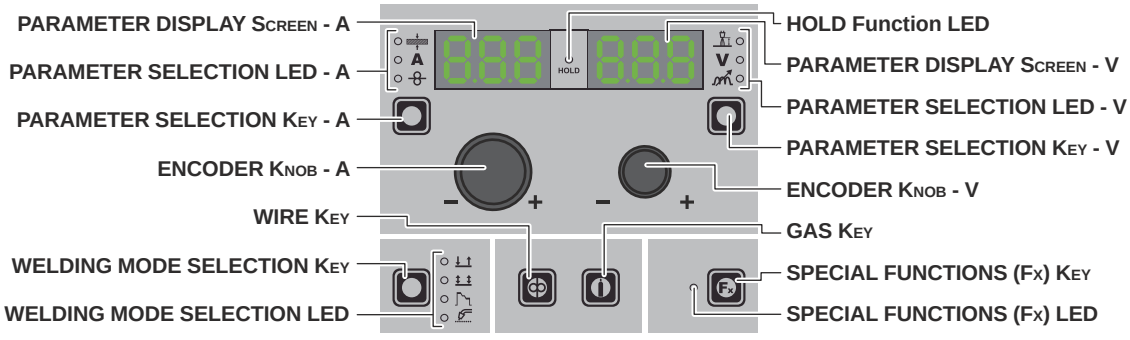
The panel on the generator has four keys, two encoders, and a colour display. The figure below shows the panel. The figure below shows the image of the panel.



“DH” / “VS” CONTROL PANEL

Wire feeder control panel (not used with DH 32 and VS 32)

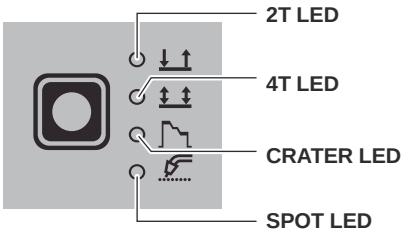
The **HT5** wire feeder panel has 2 keys, 2 encoders and 7 LEDs in the upper section and 4 keys and 5 LEDs in the lower section. The figure below shows the panel. The figure below shows the image of the panel.



“HT5” CONTROL PANEL

WELDING MODE SELECTION Key (not used with DH 32 and VS 32)

Each time this is pushed the following welding modes can be selected (only for pulsed and double pulsed MIG, synergic and manual welding processes) on the feeder (on the welding machine the welding mode is selected using a specific menu - see the appropriate paragraphs) according to a specific sequence:



WELDING MODE SELECTION LED

TWO STROKE (2T)	2T LED ( ) switched on
Pressing the TORCH TRIGGER starts the welding cycle, which will stop when it is released.	
FOUR STROKE (4T)	4T LED ( ) switched on
1) Pressing and releasing the TORCH TRIGGER will start the welding cycle. 2) Pressing and releasing the TORCH TRIGGER will stop the welding cycle.	
CRATER 2T	2T LED ( ) switched on - CRATER LED ( ) switched on
1) When the TORCH TRIGGER is pushed the arc ignites and the parameters assume the values for the “initial crater” for a time set by means of the INITIAL CRATER DURATION (F10) function. After that the parameter values become those for “welding” for a time defined by the INITIAL SLOPE (F11) function. 2) When the TORCH TRIGGER is released the parameters take on the “final crater” values for a time set by means of the FINAL CRATER TIME (F15) function, for a period of time set using the FINAL SLOPE (F12) function.	
CRATER 4T	4T LED ( ) switched on - CRATER LED ( ) switched on
1) When the TORCH TRIGGER is pushed the arc ignites and the parameters assume the values for the “initial crater”. 2) When the TORCH TRIGGER is released the parameters take on the “welding” values for a time set using the INITIAL SLOPE (F11) function. 3) When the TORCH TRIGGER is pushed again the parameters take on the “final crater” values for a time defined using the FINAL SLOPE (F12) function. 4) Releasing the TORCH TRIGGER will end the welding cycle.	
SPOT WELDING	2T LED ( ) switched on - SPOT LED ( ) switched on
This is used so that on pressing the TORCH TRIGGER spot welding is done for a time period set beforehand (in seconds), after which the arc switches off automatically.	
STITCH WELDING	2T LED ( ) switched on - SPOT LED ( ) flashing
To begin stitch welding: 1) Press the TORCH TRIGGER to start the welding current and wire feed. At this point the welding machine automatically carries out a succession of welded portions followed by a pause, according to the times entered previously. This procedure stops automatically only when the TORCH TRIGGER is released. 2) When the TORCH TRIGGER is pushed again the torch begins a new interval welding cycle.	
CYCLE	4T LED ( ) switched on - CRATER LED ( ) flashing
■ **STANDARD** 1) When the TORCH TRIGGER is pushed the arc ignites and the parameters assume the values for the “initial crater”. 2) When the TORCH TRIGGER is released the parameters take on the “welding” values for a time set using the INITIAL SLOPE (F11) function. 3) When the TORCH TRIGGER is pushed and released within **1** second, the parameters activated are those set for the “cycle” functions. The operation can be repeated by switching between the “cycle” level and the “welding” level an infinite number of times. 4) When the TORCH TRIGGER is pushed and held down for a period of time of **more than 1** second, the parameters activated are those with the values for the “final crater” for a period of time defined using the FINAL SLOPE (F12) function. Releasing the TORCH TRIGGER will end the welding cycle. ■ **ADVANCED** In ADVANCED operating mode, in addition to the settings described above, the welder is able to set the up “slope” (FIRST SLOPE (F18)) and down “slope” (SECOND SLOPE (F21)) for the “cycle” level.	

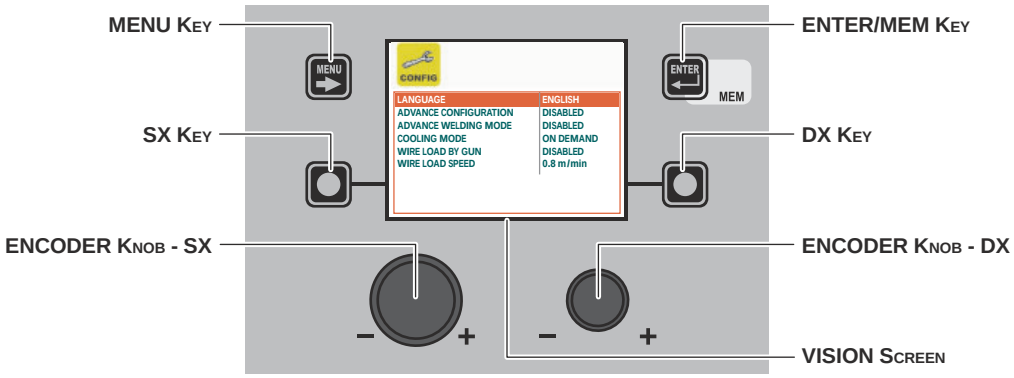
Switching on the welding machine

When the unit is switched on the welding machine's VISION SCREEN, shows the logo as shown below:

VISION Screen

During this operation, on the DH / VS panel:
- All the keys and all the encoders are disabled.

Language selection



"DH" / "VS" CONTROL PANEL

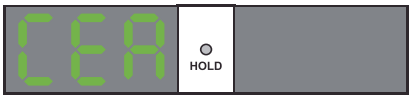
On the VISION SCREEN the DEFAULT language set by is ENGLISH.
To select another language, proceed as follows:
- Open the *SETUP Menu* by holding the SX KEY down for at least **5** consecutive seconds.
- Select the *CONFIG Menu* by rotating the ENCODER KNOB - SX until the correct icon is reached.
- Push the ENTER/MEM KEY to open the *CONFIG Menu*.
- Select the *LANGUAGE Sub-menu* by rotating the ENCODER KNOB - SX.
- Select the language required by rotating the ENCODER KNOB - DX.
- Push the MENU KEY to close the *CONFIG Menu*.
- Push the MENU KEY to close the *SETUP Menu*.

Once this has closed, the VISION SCREEN will show the various text / screens in the language selected.

Screen saver

After a pause or period of inactivity of the welding machine:
- The VISION SCREEN shows the SCREEN SAVER.
- On both the HT5 displays for the wire feeder, "CEA" appears and scrolls continuously.

VISION Screen



Display HT5 (not used with DH 32 and VS 32)

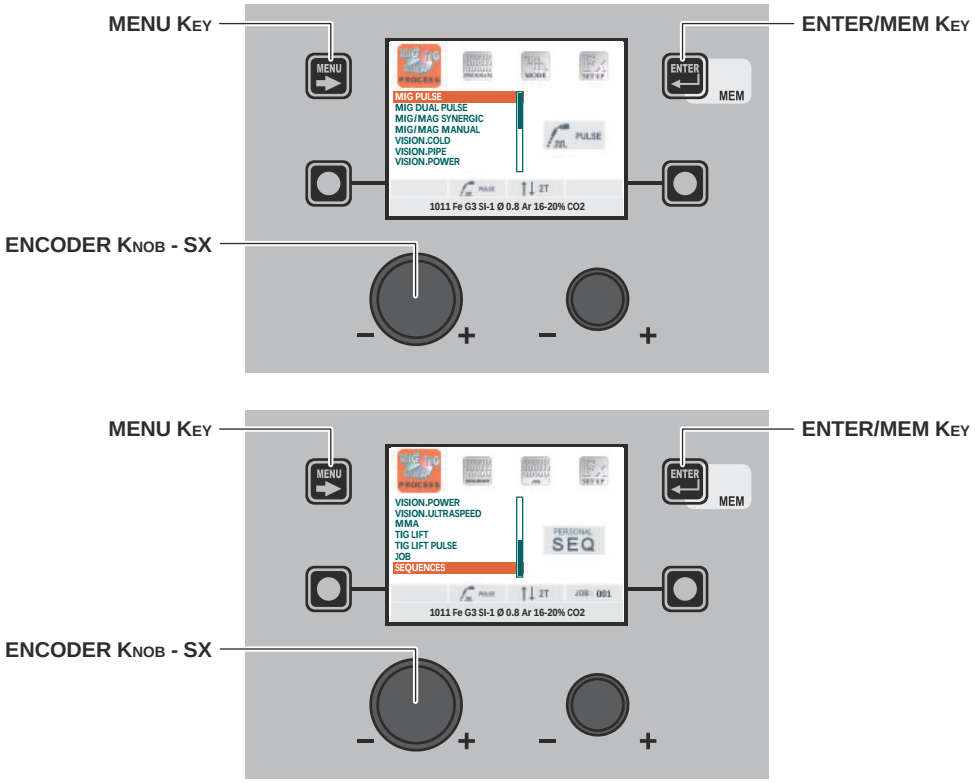
The *SCREEN SAVER* mode can be exited in one of the following ways:
- By pushing any key or moving any knob on the welding machine's panel or that of the wire feeder.
- Starting the welding process, in which case the welding is activated in context.
- Moving a remote control.

When the *SCREEN SAVER* is exited, the welding machine goes back to the working condition prior to activation of the screen saver.

WELDING PROCESS SELECTION Menu (PROCESS)

"DH" / "VS" CONTROL PANEL

To access the *PROCESS SELECTION Menu (PROCESS)* push the MENU KEY.



MENU KEY	Provides access to the next menus.
ENCODER KNOB - SX	Select the welding process.
ENTER/MEM KEY	This key is used to access *PRE-SETTING* for the process selected.

The following processes are available:
- MIG PULSE (only DH)
- MIG DUAL PULSE (only DH)
- MIG-MAG SYNERGIC
- MIG-MAG MANUAL
- VISION.COLD (if activated)
- VISION.PIPE (if activated)
- VISION.POWER (if activated)
- VISION.ULTRASPEED (if activated)
- MMA
- TIG LIFT
- TIG LIFT PULSE
- JOB (if JOBS have been created)
- SEQUENCES (if SEQUENCES have been created)

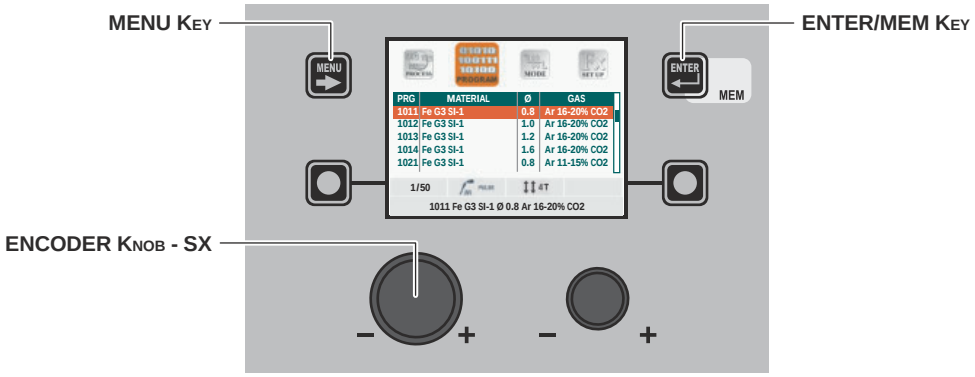
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)

It is not possible to access the *PROCESS SELECTION Menu (PROCESS)* via the HT5 control panel.

1 - PROGRAM SELECTION Menu (PROGRAM)

"DH" / "VS" CONTROL PANEL

To access the *PROGRAM SELECTION Menu (PROGRAM)* push the MENU KEY.



MENU KEY	Used to access subsequent menus if there are any.
ENCODER KNOB - SX	Select the welding program.
ENTER/MEM KEY	Used to access *PRE-SETTING* of the program selected.

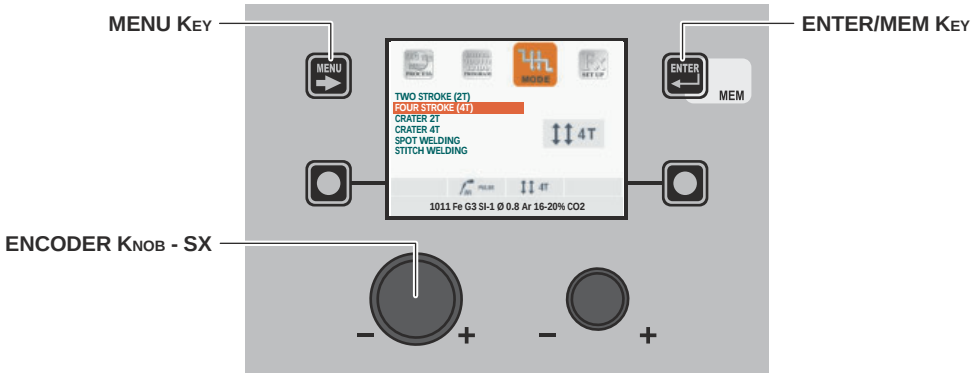
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)

It is not possible to access the *PROGRAM SELECTION Menu (PROGRAM)* via the HT5 control panel.

2 - WELDING MODE SELECTION Menu (MODE)

"DH" / "VS" CONTROL PANEL

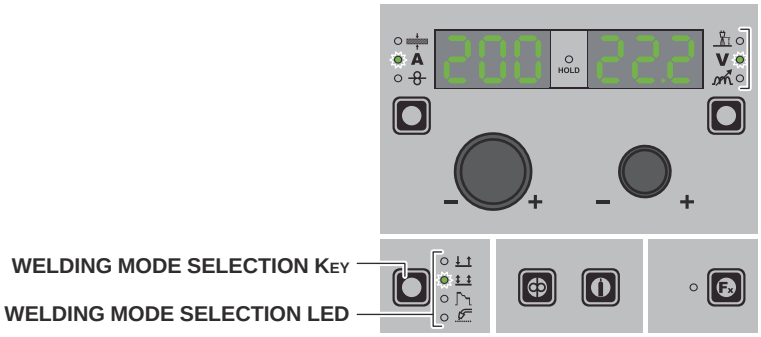
To access the *WELDING MODE SELECTION Menu (MODE)* push the MENU KEY.



MENU KEY	Used to access subsequent menus if there are any.
ENCODER KNOB - SX	Select the welding mode.
ENTER/MEM KEY	Used to access the *PRE-SETTING* for the program selected beforehand, in the *MODE* chosen.

“HT5” CONTROL PANEL (not used with DH 32 and VS 32)

To access the *WELDING MODE SELECTION Menu (MODE)* push the WELDING MODE SELECTION KEY.

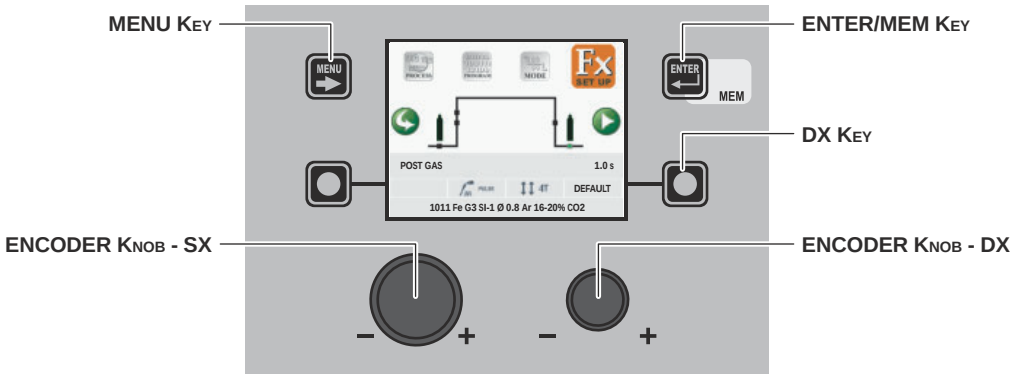


WELDING MODE SELECTION KEY	Scrolls the various welding modes available in succession.
WELDING MODE SELECTION LED	Displays the welding mode selected.

3 - SPECIAL FUNCTIONS Menu (SET UP Fx)

“DH” / “VS” CONTROL PANEL

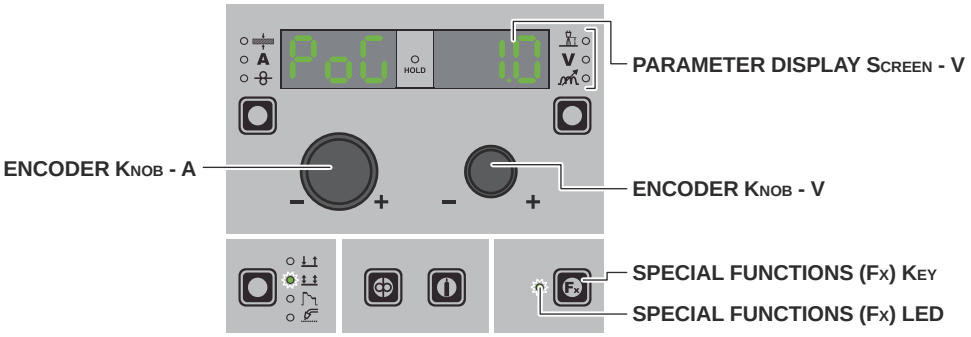
To access the *SPECIAL FUNCTIONS Menu (SET UP Fx)* push the MENU KEY.



MENU KEY	Used to access subsequent menus if there are any.
ENCODER KNOB - SX	Used to select the various *SPECIAL FUNCTIONS (Fx)*.
ENTER/MEM KEY	Used to access the *PRE-SETTING* for the program selected beforehand, in the *MODE* chosen and with the changes made to the *SPECIAL FUNCTIONS (Fx)*.
DX KEY	If held down for **2** seconds it makes it possible to return the value for the *SPECIAL FUNCTION (Fx)* selected to the DEFAULT value.
ENCODER KNOB - DX	Used to change the selected *SPECIAL FUNCTION (Fx)* value.

"HT5" CONTROL PANEL (not used with DH 32 and VS 32)

To access the *SPECIAL FUNCTIONS Menu (SET UP Fx)* push the SPECIAL FUNCTIONS (Fx) Key.



PARAMETER DISPLAY Screen - A	Displays the selected *SPECIAL FUNCTION (Fx)*.
ENCODER Knob - A	Used to select the various *SPECIAL FUNCTIONS (Fx)*.
PARAMETER DISPLAY Screen - V	Displays the value for the selected *SPECIAL FUNCTION (Fx)*.
ENCODER Knob - V	Used to change the selected *SPECIAL FUNCTION (Fx)* value.
SPECIAL FUNCTIONS (Fx) Key	Only enables entering and exit afterwards from the *SPECIAL FUNCTIONS Menu (SET UP Fx)* on the HT5 panel and not on the DH/VS panel.
SPECIAL FUNCTIONS (Fx) LED	The operator must press the SPECIAL FUNCTIONS (SET UP Fx) Key for it to light up and be included in the *SPECIAL FUNCTIONS Menu (SET UP Fx)*.

The *SPECIAL FUNCTIONS (Fx)* related to the *MIG-MAG synergic*, *MIG pulsed*, *MIG double pulsed*, *Vision.PIPE*, *Vision.COLD*, *Vision.POWER*, and *Vision.ULTRASPEED* processes, correspond to the feeder (when fitted) as follows:

Table A

Fx ADJUSTABLE SPECIAL FUNCTIONS

Special function	PARAMETER DISPLAY Screen - A	PARAMETER DISPLAY Screen - V		Welding mode							
		Default	Range	TWO STROKE (2T)	FOUR STROKE (4T)	CRATER 2T	CRATER 4T	SPOT WELDING	STITCH WELDING	CYCLE STANDARD	CYCLE ADVANCED
PRE GAS	PrG	0.1s	(0.0 - 2.0)s	●	●	●	●	●	●	●	●
STARTING SPEED	StS	0	-30 - +30	●	●	●	●	●	●	●	●
HOT START	Hot	0	-30 - +30	●	●	●	●	●	●	●	●
STITCH TIME	F05	1.0s	(0.1 - 20.0)s						●		
STITCH PAUSE	F06	1.0s	(0.1 - 20.0)s						●		
SPOT TIME	F07	3.0s	(0.1 - 20.0)s					●			
INITIAL CURRENT	F08	20%	-50% - +100%			●	●			●	●
INITIAL ARC LENGTH	F09	0	-30 - +30			● (*)	● (*)			● (*)	● (*)
INITIAL CRATER TIME	F10	1.0s	(0.0 - 20.0)s			●					
INITIAL SLOPE	F11	1.0s	(0.0 - 20.0)s			●	●			●	●
FINAL SLOPE	F12	1.0s	(0.0 - 20.0)s			●	●			●	●

(continued)

Fx ADJUSTABLE SPECIAL FUNCTIONS

Special function	PARAMETER DISPLAY Screen - A	PARAMETER DISPLAY Screen - V		Welding mode							
		Default	Range	TWO STROKE (2T)	FOUR STROKE (4T)	CRATER 2T	CRATER 4T	SPOT WELDING	STITCH WELDING	CYCLE STANDARD	CYCLE ADVANCED
FINAL CURRENT	F13	-30%	-100% - +50%			●	●			●	●
FINAL ARC LENGTH	F14	0	-30 - +30			● (*)	● (*)			● (*)	● (*)
FINAL CRATER TIME	F15	0.0s	(0.0 - 20.0)s			●					
BURN BACK	bub	0	-30 - +30	●	●	●	●	●	●	●	●
POST GAS	PoG	1.0s	(0.0 - 10.0)s	●	●	●	●	●	●	●	●
FIRST SLOPE (I1 TO I2)	F18	0.05s	(0.00 - 2.00)s								●
CYCLE CURRENT	F19	20%	-99% - +100%							●	●
CYCLE ARC LENGTH	F20	0	-30 - +30							●	●
SECOND SLOPE (I2 TO I1)	F21	0.05s	(0.00 - 2.00)s								●
FIRST SLOPE (I1 TO I2)	F22 *	5	(0 - 100)	● (°)	● (°)	● (°)	● (°)	● (°)	● (°)	● (°)	● (°)
DUAL PULSE DELTA CURRENT	F23 *	50%	-100% - +200%	●	●	●	●	●	●	●	●
DUAL PULSE ARC LENGTH	F24 *	0	-30 - +30	● (°)	● (°)	● (°)	● (°)	● (°)	● (°)	● (°)	● (°)
DUAL PULSE BALANCE	F25 *	0%	-40% - +40%	●	●	●	●	●	●	●	●
DUAL PULSE FREQUENCY	F26 *	2.7Hz	(0.1 - 5.0)Hz	●	●	●	●	●	●	●	●
SECOND SLOPE (I2 TO I1)	F27 *	5	(0 - 100)	● (°)	● (°)	● (°)	● (°)	● (°)	● (°)	● (°)	● (°)
SLOPE JOB	F28	0.5s	(0.1 - 20.0) s	●	●	●	●	●	●	●	●
DYNAMICS	din **	0	-30 - +30	●	●	●	●	●	●	●	●

* Only for the *MIG double pulsed* process.
** Only for the *Vision.ULTRASPEED* process.

WARNING:
- The STANDARD or ADVANCED welding CYCLE mode can only be activated by opening the *ADVANCED SETUP Menu - ADVANCED MODE - CYCLE* (for further explanations, see the relevant paragraph).
- (*) This *SPECIAL FUNCTION* is only to be found if the *ADVANCED CRATER* function has been activated by accessing the *ADVANCED SETUP Menu - ADVANCED MODE - CRATER - ADVANCED* (for further explanations, see the relevant paragraph).
- (°) These *SPECIAL FUNCTIONS* can only be activated for all the welding machine's welding modes but going to the *ADVANCED SETTINGS Menu - ADVANCED MODE - DOUBLE PULSED - ADVANCED* (for further explanations, see the relevant paragraph).
- It is possible to access editing of the *SPECIAL FUNCTIONS (Fx)* during welding.
- Some of the values edited will be used immediately by the operator, while others will be active from when the next welding task begins.
- The *HOLD* function is not active within the *SPECIAL FUNCTIONS Menu (SET UP Fx)*.

The *SPECIAL FUNCTIONS (Fx)* for the *MIG-MAG manual* process correspond to the feeder (when fitted) as follows:

Table B

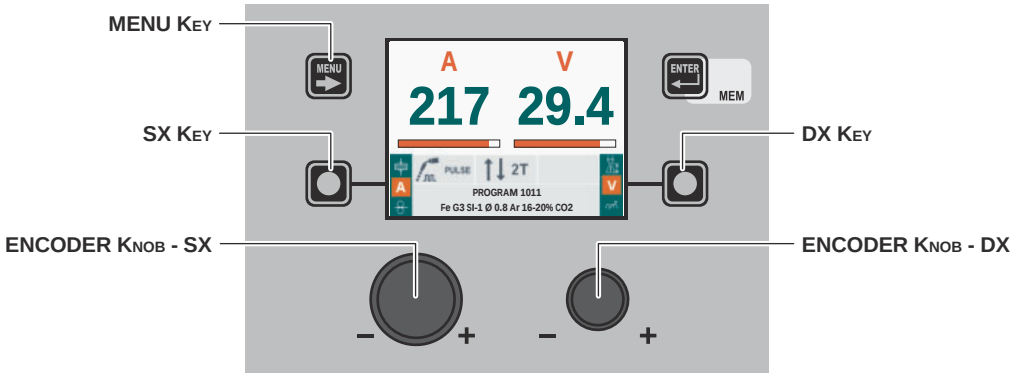
Fx ADJUSTABLE SPECIAL FUNCTIONS

Special function	PARAMETER DISPLAY Screen - A	PARAMETER DISPLAY Screen - V		Welding mode							
		Default	Range	TWO STROKE (2T)	FOUR STROKE (4T)	CRATER 2T	CRATER 4T	SPOT WELDING	STITCH WELDING	CYCLE STANDARD	CYCLE ADVANCED
PRE GAS	PrG	0.1s	(0.0 - 2.0)s	●	●	●	●	●	●	●	●
STARTING SPEED	StS	0	-30 - +30	●	●	●	●	●	●	●	●
HOT START	Hot	0	-30 - +30	●	●	●	●	●	●	●	●
STITCH TIME	F05	1.0s	(0.1 - 20.0)s						●		
STITCH PAUSE	F06	1.0s	(0.1 - 20.0)s						●		
SPOT TIME	F07	3.0s	(0.1 - 20.0)s					●			
INITIAL WIRE SPEED	F08	5.0m/min	(0.6-MAX)m/min			●	●			●	●
INITIAL VOLTAGE	F09	25.0V	(10 - MAX)V			●	●			●	●
INITIAL CRATER TIME	F10	1.0s	(0.0 - 20.0)s			●					
INITIAL SLOPE	F11	1.0s	(0.0 - 20.0)s			●	●			●	●
FINAL SLOPE	F12	1.0s	(0.0 - 20.0)s			●	●			●	●
FINAL WIRE SPEED	F13	5.0m/min	(0.6-MAX)m/min			●	●			●	●
FINAL VOLTAGE	F14	25.0V	(10 - MAX)V			●	●			●	●
FINAL CRATER TIME	F15	0.0s	(0.0 - 5.0)s			●					
BURN BACK	bub	0	-30 - +30	●	●	●	●	●	●	●	●
POST GAS	PoG	1.0s	(0.0 - 10.0)s	●	●	●	●	●	●	●	●
FIRST SLOPE (I_1 TO I_2)	F18	0.05s	(0.00 - 2.00)s								●
CYCLE WIRE SPEED	F19	5.0m/min	(0.6-MAX)m/min							●	●
CYCLE VOLTAGE	F20	25.0V	(10 - MAX)V							●	●
SECOND SLOPE (I_2 TO I_1)	F21	0.05s	(0.00 - 2.00)s								●
SLOPE JOB	F28	0.5s	(0.1 - 20.0) s	●	●	●	●	●	●	●	●

WARNING:
- The STANDARD or ADVANCED welding CYCLE mode can only be activated by opening the *ADVANCED SETUP Menu - ADVANCED MODE - CYCLE* (for further explanations, see the relevant paragraph).
- It is possible to access editing of the *SPECIAL FUNCTIONS (Fx)* during welding.
- Some of the values edited will be used immediately by the operator, while others will be active from when the next welding task begins.
- The *HOLD* function is not active within the *SPECIAL FUNCTIONS Menu (SET UP Fx)*.

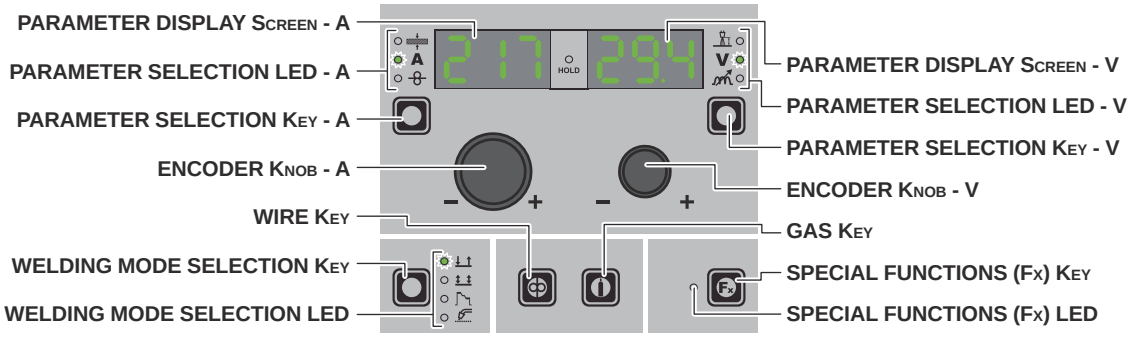
4 - PRE-SETTING

"DH" / "VS" CONTROL PANEL



MENU KEY	Used to access the *PROCESS SELECTION Menu (PROCESS)* and subsequent menus, as applicable.
SX KEY	Scrolls in succession *THICKNESS OF WELDED ITEM* (⏤) - *WELDING CURRENT* (**A**) - *WIRE SPEED* (⊖) only on the VISION SCREEN (this operation is activated when the key is released).
ENCODER KNOB - SX	Adjusts the parameter selected using the SX KEY.
DX KEY	Scrolls in succession *ARC LENGTH ADJUSTMENT* (⏧) - *WELDING VOLTAGE* (**V**) - *ELECTRONIC INDUCTANCE* (⏦) only on the VISION SCREEN (this operation is activated when the key is released).
ENCODER KNOB - DX	Adjusts the parameter selected using the DX KEY.

"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



PARAMETER DISPLAY SCREEN - A	Shows the value for the parameter indicated by the PARAMETER SELECTION LED - A.
PARAMETER SELECTION LED - A	The LED unit shows the welding parameter selected using the PARAMETER SELECTION KEY - A.
PARAMETER SELECTION KEY - A	Scrolls in succession *THICKNESS OF WELDED ITEM* (⏤) - *WELDING CURRENT* (**A**) - *WIRE SPEED* (⊖).
ENCODER KNOB - A	Adjusts the parameter displayed by the PARAMETER DISPLAY SCREEN - A.
WIRE KEY	Activates loading of the wire.
WELDING MODE SELECTION KEY	Scrolls the various welding modes in succession.
WELDING MODE SELECTION LED	The LED unit indicates the welding mode selected according to the VISION SCREEN.
PARAMETER DISPLAY SCREEN - V	Shows the parameter indicated by the PARAMETER SELECTION LED - V.
PARAMETER SELECTION LED - V	The LED unit indicates the welding parameter selected using the PARAMETER SELECTION KEY - V.
PARAMETER SELECTION KEY - V	Scrolls in succession *ARC LENGTH ADJUSTMENT* (⏧) - *WELDING VOLTAGE* (**V**) - *ELECTRONIC INDUCTANCE* (⏦).

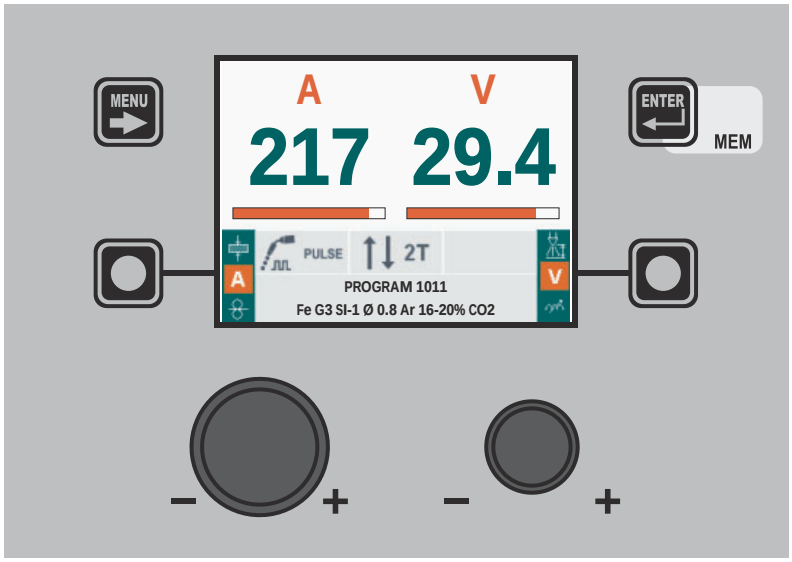
(continued)

ENCODER KNOB - V	Adjusts the parameter displayed by the PARAMETER DISPLAY SCREEN - V.
GAS KEY	Activates the flow of gas.
SPECIAL FUNCTIONS (FX) KEY	Only enables entering and exit afterwards from the *SPECIAL FUNCTIONS Menu (SET UP Fx)* on the HT5 panel and not on the DH panel.

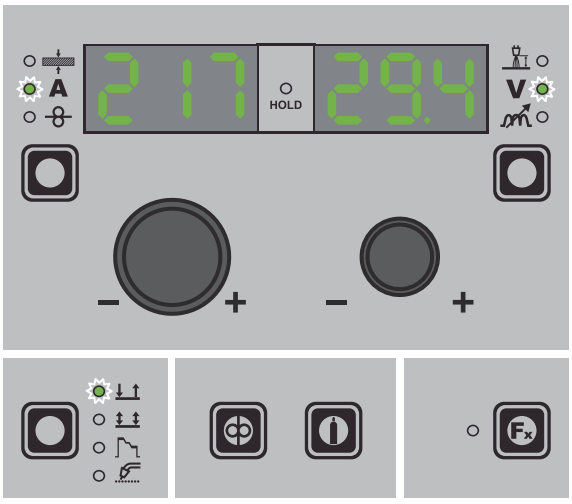
5 - WELDING

When welding takes place the fields in the displays show the same values as those included for pre-setting **with the difference that now they are those measured**.

"DH" / "VS" CONTROL PANEL



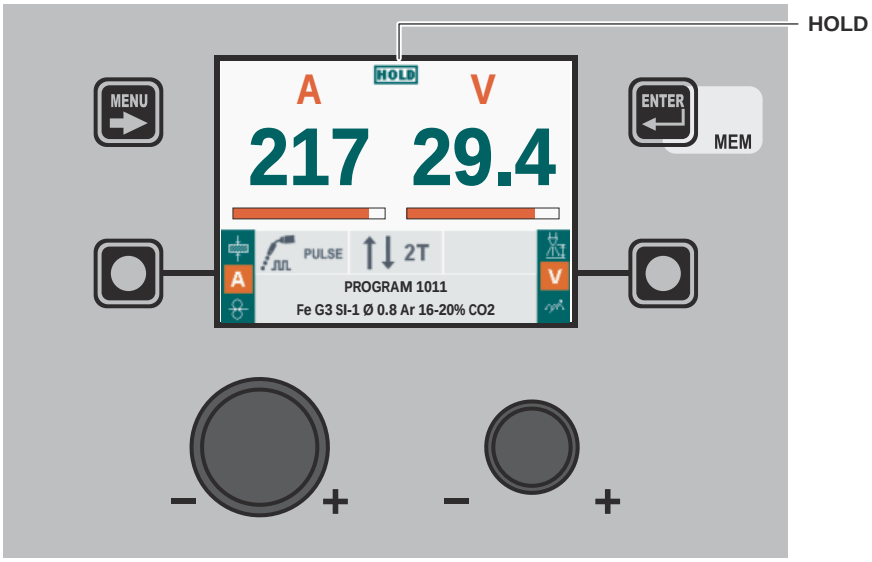
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



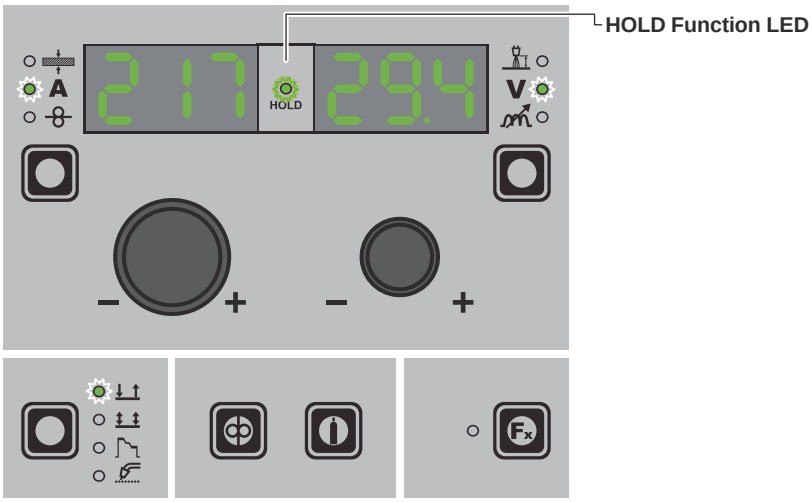
6 - HOLD

When welding ends the fields in the display must show the same values that were displayed during welding, with the difference that they are now values defined as *HOLD*. In this phase the VISION SCREEN shows the *HOLD* box highlighted, while on the HT5 panel the HOLD FUNCTION LED flashes until the end of the *HOLD Function*. If the *HOLD Function* is Interrupted via a panel (e.g. DH), it will also be interrupted automatically on the other (HT5) and vice-versa.

"DH" / "VS" CONTROL PANEL

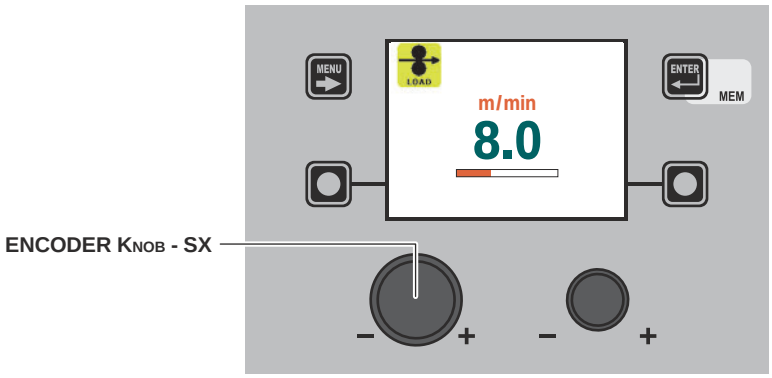


"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



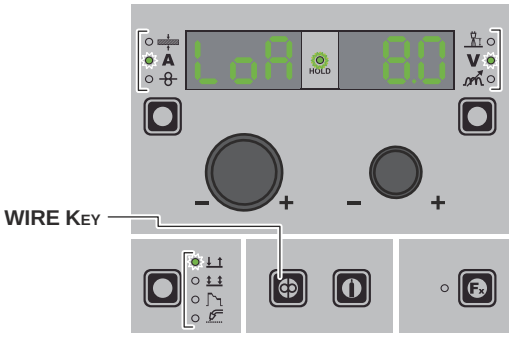
7 - WIRE LOADING

The purpose of this menu it to allow the operator to load the welding wire and set the loading speed, **only when welding is not is progress**. If the wire loading function is activated (also see the CONFIG menu), to enable it hold the torch button or the loading button on the feeder down for 4 seconds.



Rotate the ENCODER KNOB - SX the wire loading speed can be changed from 1,0 to 22,0 (default 8,0). The other keys and knobs are not active.
When the torch button or the wire loading key on the HT5 feeder are released, the machine goes back to its previous status. **For models not fitted with an HT5 feeder, that is DH 32 and VS 32, loading is done by pushing the relevant (wire test / gas test) button, located in the space in which the wire coil is housed.**

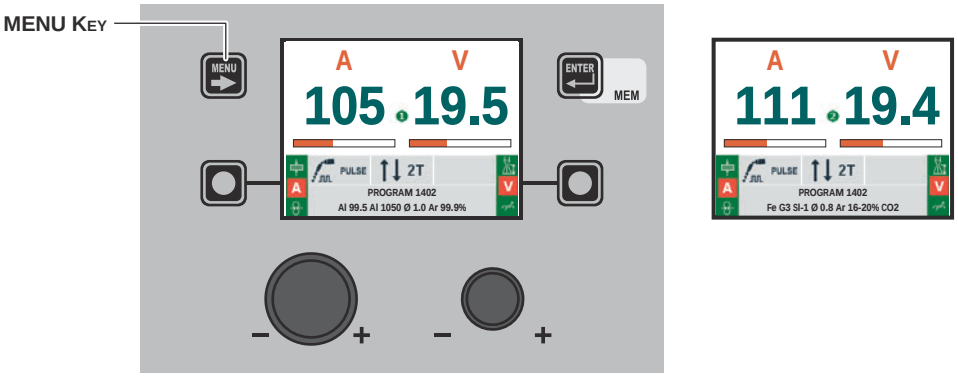
NOTE: *Wire loading cannot be accessed when their are errors on the machine or in the set-up procedure.*



Rotate the ENCODER KNOB - SX the wire loading speed can be changed from 1,0 to 22,0 (default 8,0). The other keys and knobs are not active.

8 - DOUBLE FEEDER

Two feeders can be connected to the same generator simultaneously. Once everything has been configured correctly, as indicated in the HT5 operator's manual and set as indicated in the equipment layout section, the machine's display shows one of the following two images.
The number ❶ or ❷ on the display indicates that the feeder in use at that time is number 1 or 2. If no number is displayed, this means that only one feeder has been configured.



MENU KEY	To switch from one feeder to the other, hold down the MENU KEY. (*)

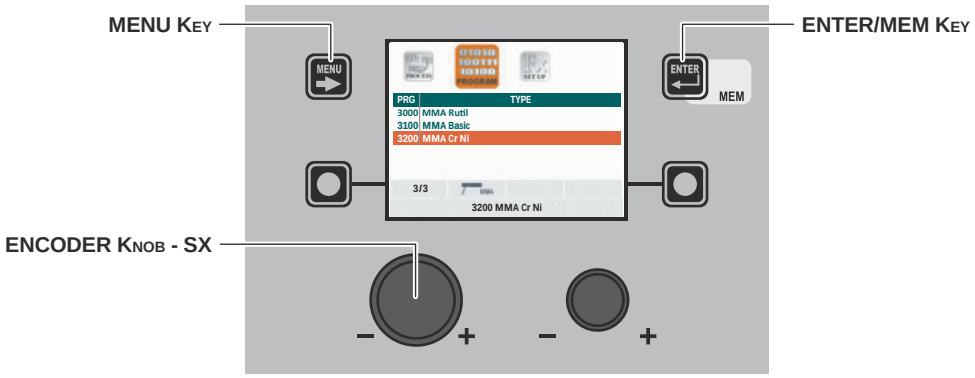
(*) Switching from one feeder to the other can also be done by pushing the relevant torch button.

Select the MMA welding process by using the MENU KEY as explained on page 7.

1 - PROGRAM SELECTION Menu (PROGRAM) MMA

"DH" / "VS" CONTROL PANEL

To access the *PROGRAM SELECTION Menu (PROGRAM)* push the MENU KEY.



MENU KEY	Used to access subsequent menus if there are any.
ENCODER KNOB - SX	Select the welding program.
ENTER/MEM KEY	Used to access *PRE-SETTING* of the program selected.

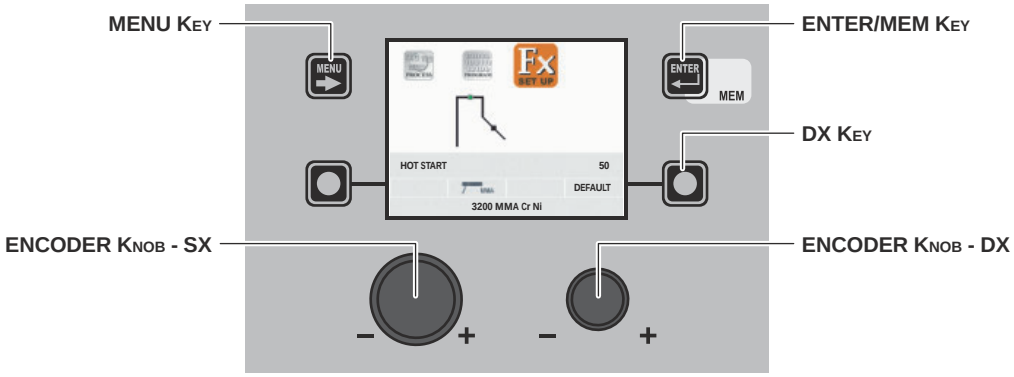
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)

It is not possible to access the *PROGRAM SELECTION Menu (PROGRAM)* via the HT5 control panel.

2 - SPECIAL FUNCTIONS Menu (SET UP Fx) MMA

"DH" / "VS" CONTROL PANEL

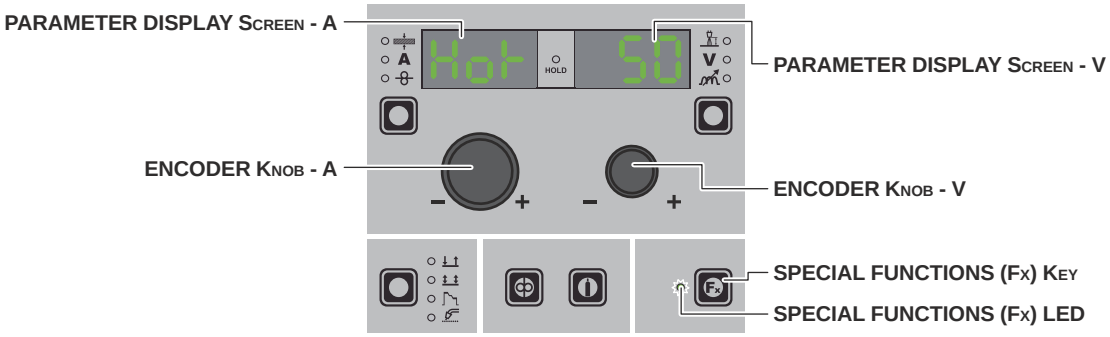
To access the *SPECIAL FUNCTIONS Menu (SET UP Fx)* push the MENU KEY.



MENU KEY	Used to access subsequent menus if there are any.
ENCODER KNOB - SX	Used to select the various *SPECIAL FUNCTIONS (Fx)*.
ENTER/MEM KEY	Used to access the *PRE-SETTING* with the changes made to the *SPECIAL FUNCTIONS (Fx)*.
DX KEY	If held down for **2** seconds it makes it possible to return the value for the *SPECIAL FUNCTION (Fx)* selected to the DEFAULT value.
ENCODER KNOB - DX	Used to change the selected *SPECIAL FUNCTION (Fx)* value.

"HT5" CONTROL PANEL (not used with DH 32 and VS 32)

To access the *SPECIAL FUNCTIONS Menu (SET UP Fx)* push the SPECIAL FUNCTIONS (Fx) Key.



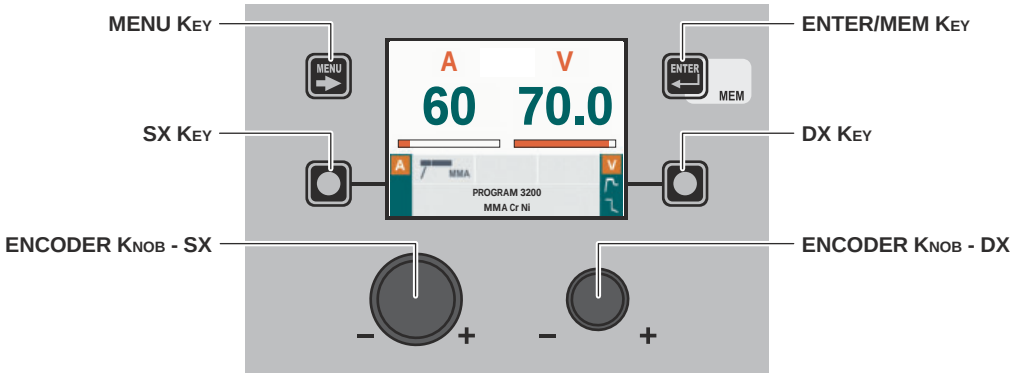
PARAMETER DISPLAY Screen - A	Displays the selected *SPECIAL FUNCTION (Fx)*.
ENCODER Knob - A	Used to select the various *SPECIAL FUNCTIONS (Fx)*.
PARAMETER DISPLAY Screen - V	Displays the value for the selected *SPECIAL FUNCTION (Fx)*.
ENCODER Knob - V	Used to change the selected *SPECIAL FUNCTION (Fx)* value.
SPECIAL FUNCTIONS (Fx) Key	Only enables entering and exit afterwards from the *SPECIAL FUNCTIONS Menu (SET UP Fx)* on the HT5 panel and not on the DH/VS panel.
SPECIAL FUNCTIONS (Fx) LED	The operator must press the SPECIAL FUNCTIONS (SET UP Fx) Key for it to light up and be included in the *SPECIAL FUNCTIONS Menu (SET UP Fx)*.

The *SPECIAL FUNCTIONS (Fx)* related to the *MMA* process correspond as follows to those on the wire feeder:

Fx ADJUSTABLE SPECIAL FUNCTIONS			
Special function	PARAMETER DISPLAY Screen - A	PARAMETER DISPLAY Screen - V	
		Default	Range
HOT START	Hot	50	(0 - 100)
ARC FORCE	ArC	50	(0 - 100)

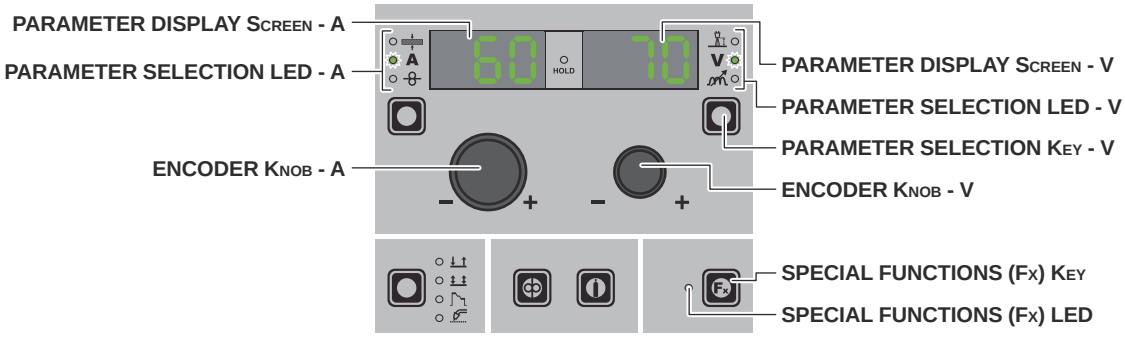
WARNING:
- It is possible to access editing of the *SPECIAL FUNCTIONS (Fx)* during welding.
- Some of the values edited will be used immediately by the operator, while others will be active from when the next welding task begins.
- The *HOLD* function is not active within the *SPECIAL FUNCTIONS Menu (SET UP Fx)*.

"DH" / "VS" CONTROL PANEL



MENU KEY	Used to access the *PROCESS SELECTION Menu (PROCESS)* and subsequent menus, as applicable.
ENCODER KNOB - SX	Adjust the value of the parameter *WELDING CURRENT* (**A**).
DX KEY	Scrolls in succession *WELDING VOLTAGE* (**V**) - *HOT START* (⎍) - *ARC FORCE* (⎍) only on the VISION SCREEN (the operation is activated when the key is released).
ENCODER KNOB - DX	Adjusts the parameter selected using the DX KEY (only *HOT START* (⎍) - *ARC FORCE* (⎍)).

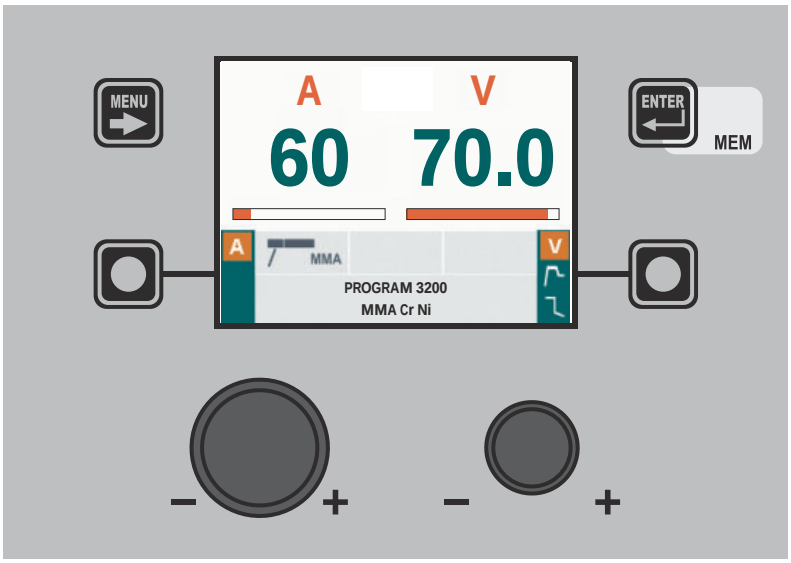
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



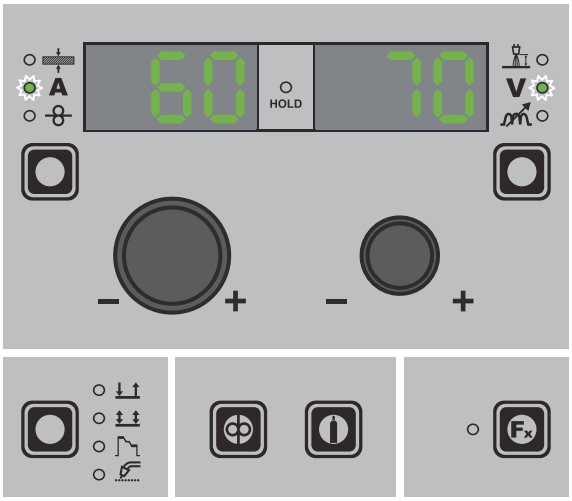
PARAMETER DISPLAY SCREEN - A	Displays the value of the parameter *WELDING CURRENT* (**A**).
PARAMETER SELECTION LED - A	The LED unit shows the *WELDING CURRENT* (**A**) switched on.
ENCODER KNOB - A	Adjust the value of the parameter *WELDING CURRENT* (**A**).
PARAMETER DISPLAY SCREEN - V	Shows the parameter indicated by the PARAMETER SELECTION LED - V. The *WELDING VOLTAGE* shown is the measured voltage.
PARAMETER SELECTION LED - V	The LED unit indicates the welding parameter selected using the PARAMETER SELECTION KEY - V.
PARAMETER SELECTION KEY - V	Scrolls in succession the parameters *HOT START* (⎍) - *WELDING VOLTAGE* (**V**) - *ARC FORCE* (⎍).
ENCODER KNOB - V	Adjusts the parameter displayed by the PARAMETER DISPLAY SCREEN - V.
SPECIAL FUNCTIONS (FX) KEY	Only enables entering and exit afterwards from the *SPECIAL FUNCTIONS Menu (SET UP Fx)* on the HT5 panel and not on the DH/VS panel.

When welding takes place the fields in the displays show the same values as those included for pre-setting **with the difference that now they are those measured**.

“DH” / “VS” CONTROL PANEL



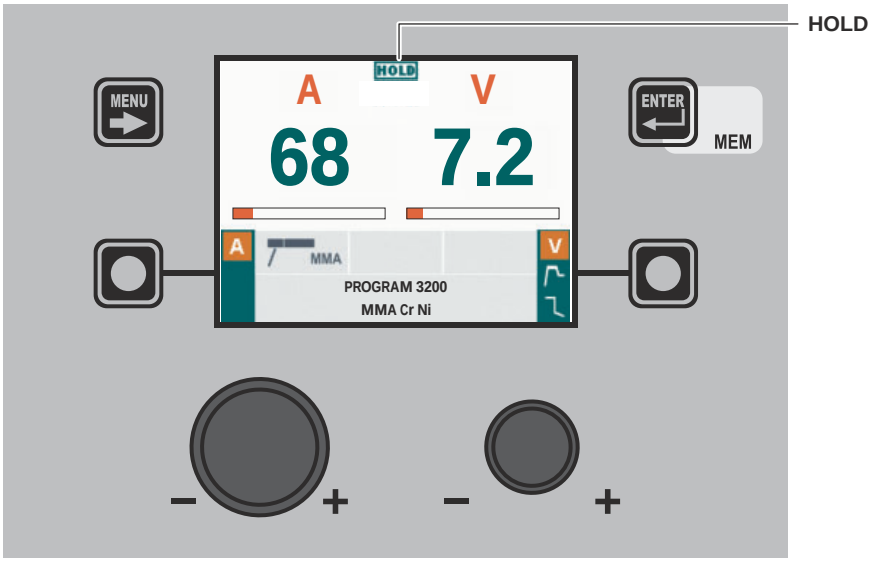
“HT5” CONTROL PANEL (not used with DH 32 and VS 32)



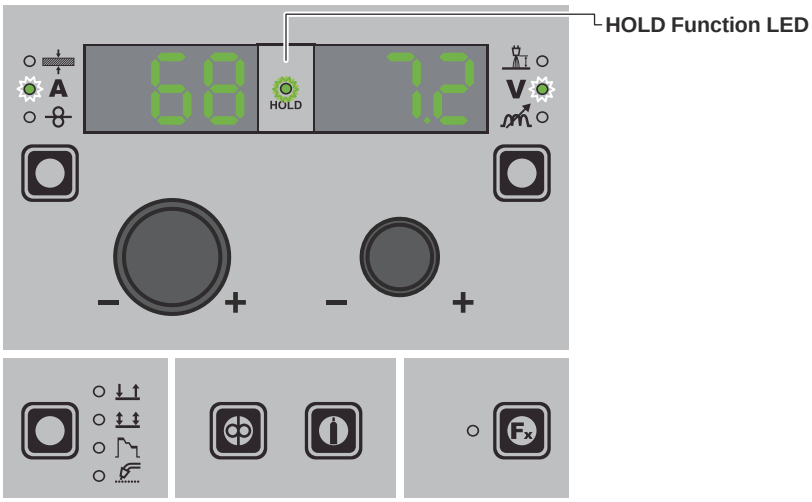
5 - HOLD MMA

When welding ends the fields in the display must show the same values that were displayed during welding, with the difference that they are now values defined as *HOLD*. In this phase the VISION SCREEN shows the *HOLD* box highlighted, while on the HT5 panel the HOLD FUNCTION LED flashes until the end of the *HOLD Function*. If the *HOLD Function* is Interrupted via a panel (e.g. DH), it will also be interrupted automatically on the other (HT5) and vice-versa.

"DH" / "VS" CONTROL PANEL



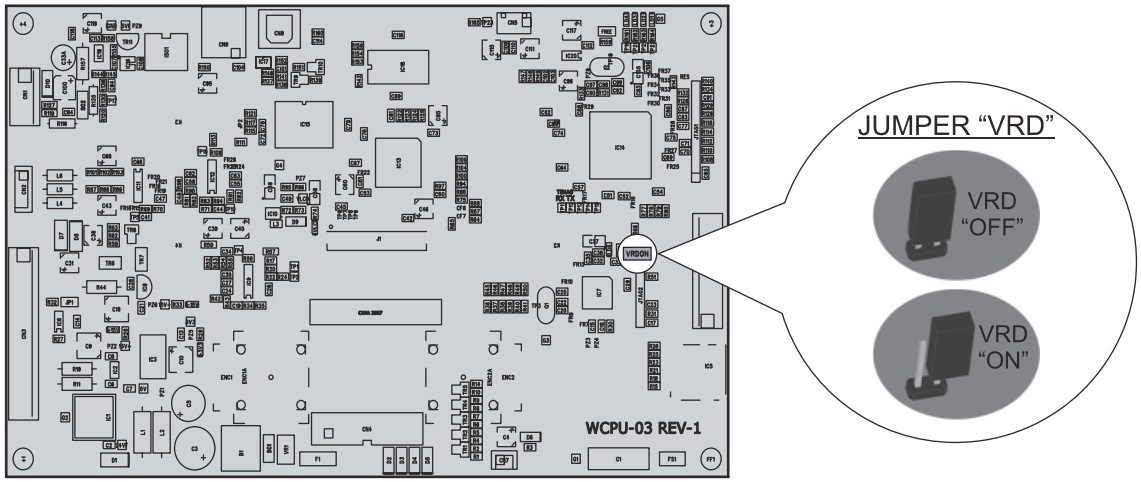
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



6 - ACTIVATING THE VRD DEVICE MMA

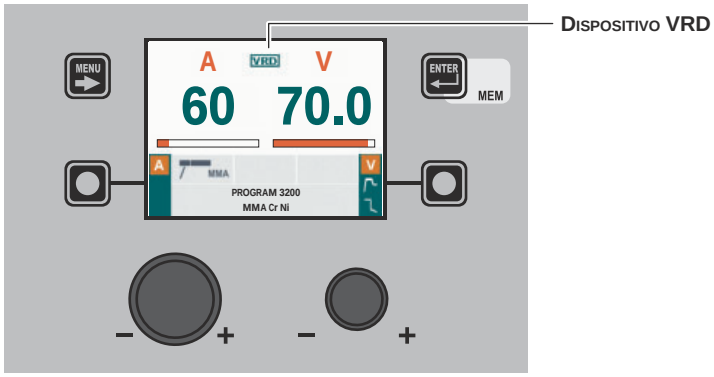
The Voltage Reduction Device (VRD) is a safety device that reduces voltage. It prevents voltages forming on the output terminals that may pose a danger to people. The standard settings and those defined beforehand by do not provide for the VRD to be active on the welding machine and so the VISION SCREEN does not normally provide any indication.

If the operator wishes to weld in MMA using the VRD device (which must be done with the welding machine switched off), they must:
1) Use a suitable screwdriver to unscrew the 4 screws that fix the DH/VS control panel to the welding machine.
2) Remove the “VRD” JUMPER on the DIGITAL INTERFACE PCB (see figure).



3) Use a suitable screwdriver to tighten the 4 screws that fix the DH/VS control panel to the welding machine.
4) Start the welding machine by turning the switch on the rear panel to position I.

When it switches on, but with the machine in stand-by, the DH/VS control panel shows that the VRD device is active (indication on the VISION SCREEN green colour - see enclosed image: MMA - PRE-SETTING).



During the welding phase the VRD device is activated (indication on the VISION SCREEN red colour (does not indicate malfunctioning of the welding machine) - see enclosed image: MMA - WELDING) and when welding is ended the voltage will be reduced within a maximum time of **0,3** seconds.

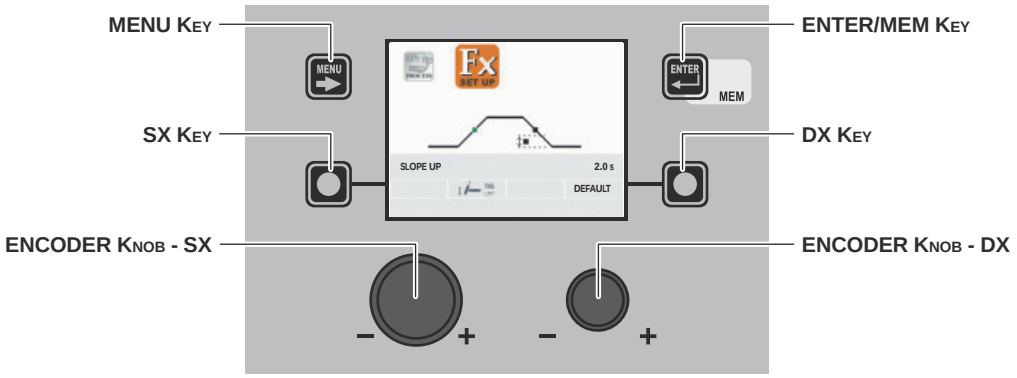
TIG LIFT

Select the TIG LIFT welding process by using the MENU KEY as explained on page 7.

1 - SPECIAL FUNCTIONS Menu (SET UP Fx) TIG LIFT

"DH" / "VS" CONTROL PANEL

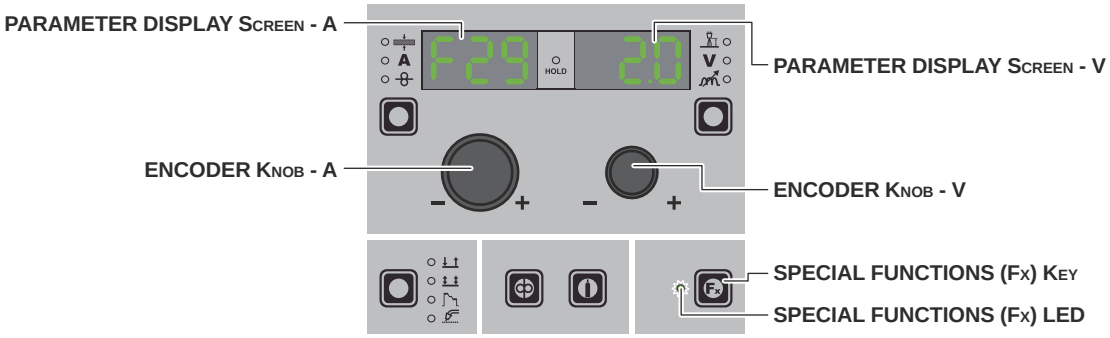
To access the *SPECIAL FUNCTIONS Menu (SET UP Fx)* push the MENU KEY.



MENU KEY	Used to access subsequent menus if there are any.
ENCODER KNOB - SX	Used to select the various *SPECIAL FUNCTIONS (Fx)*.
ENTER/MEM KEY	Used to access the *PRE-SETTING* with the changes made to the *SPECIAL FUNCTIONS (Fx)*.
DX KEY	If held down for **2** seconds it makes it possible to return the value for the *SPECIAL FUNCTION (Fx)* selected to the DEFAULT value.
ENCODER KNOB - DX	Used to change the selected *SPECIAL FUNCTION (Fx)* value.

"HT5" CONTROL PANEL (not used with DH 32 and VS 32)

To access the *SPECIAL FUNCTIONS Menu (SET UP Fx)* push the SPECIAL FUNCTIONS (FX) KEY.



PARAMETER DISPLAY SCREEN - A	Displays the selected *SPECIAL FUNCTION (Fx)*.
ENCODER KNOB - A	Used to select the various *SPECIAL FUNCTIONS (Fx)*.
PARAMETER DISPLAY SCREEN - V	Displays the value for the selected *SPECIAL FUNCTION (Fx)*.
ENCODER KNOB - V	Used to change the selected *SPECIAL FUNCTION (Fx)* value.
SPECIAL FUNCTIONS (FX) KEY	Only enables entering and exit afterwards from the *SPECIAL FUNCTIONS Menu (SET UP Fx)* on the HT5 panel and not on the DH/VS panel.
SPECIAL FUNCTIONS (FX) LED	The operator must press the SPECIAL FUNCTIONS (SET UP FX) KEY for it to light up and be included in the *SPECIAL FUNCTIONS Menu (SET UP Fx)*.

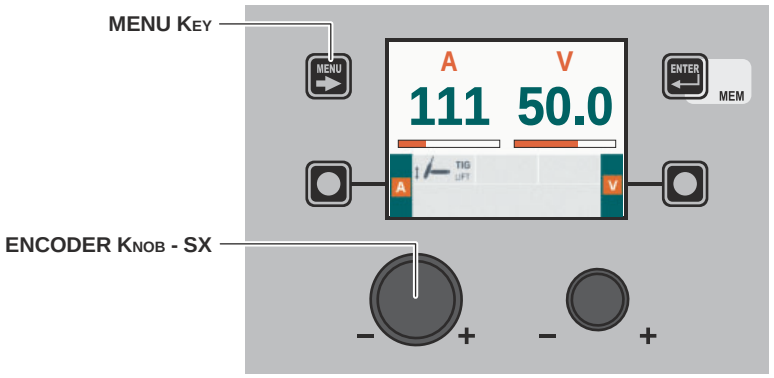
The *SPECIAL FUNCTIONS (Fx)* related to the *TIG LIFT* process correspond as follows to those on the wire feeder:

Fx ADJUSTABLE SPECIAL FUNCTIONS			
Special function	PARAMETER DISPLAY Screen - A	PARAMETER DISPLAY Screen - V	
		Default	Range
UP SLOPE	F29	0.0s	(0.0 - 5.0)s
DOWN SLOPE	F30	2.0s	(0.0 - 8.0)s
TIG PULSE DELTA CURRENT	F23	-50%	(-100 ÷ 1000)%
TIG PULSE BALANCE	F25	0	(-40 ÷ 40)%
TIG PULSE FREQUENCY	F26	100.0Hz	(0.1 ÷ 500.0)Hz
SWS VOLTAGE THRESHOLD	F31	0	-30 - +30

WARNING:
- It is possible to access editing of the *SPECIAL FUNCTIONS (Fx)* during welding.
- Some of the values edited will be used immediately by the operator, while others will be active from when the next welding task begins.
- The *HOLD* function is not active within the *SPECIAL FUNCTIONS Menu (SET UP Fx)*.

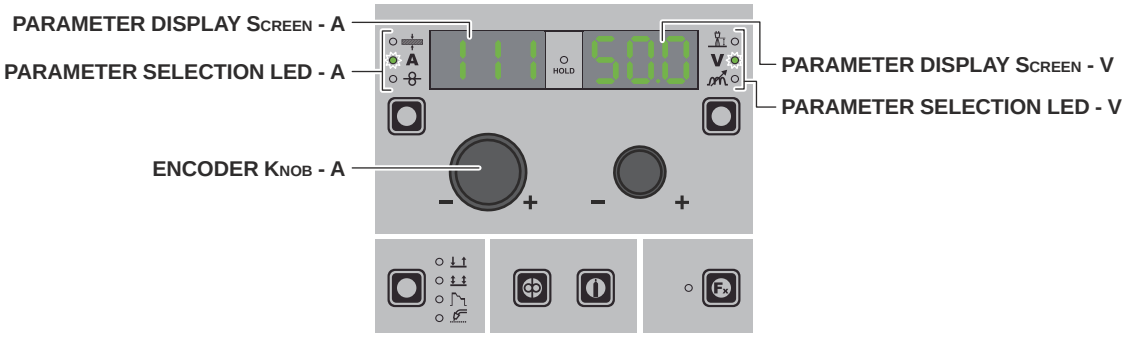
2 - PRE-SETTING — TIG LIFT

"DH" / "VS" CONTROL PANEL



MENU KEY	Used to access the *PROCESS SELECTION Menu (PROCESS)* and subsequent menus, as applicable.
ENCODER KNOB - SX	Adjust the value of the parameter *WELDING CURRENT* (**A**).

"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



PARAMETER DISPLAY SCREEN - A	Displays the value of the parameter *WELDING CURRENT* (**A**).
PARAMETER SELECTION LED - A	The LED unit shows the *WELDING CURRENT* (**A**) switched on.

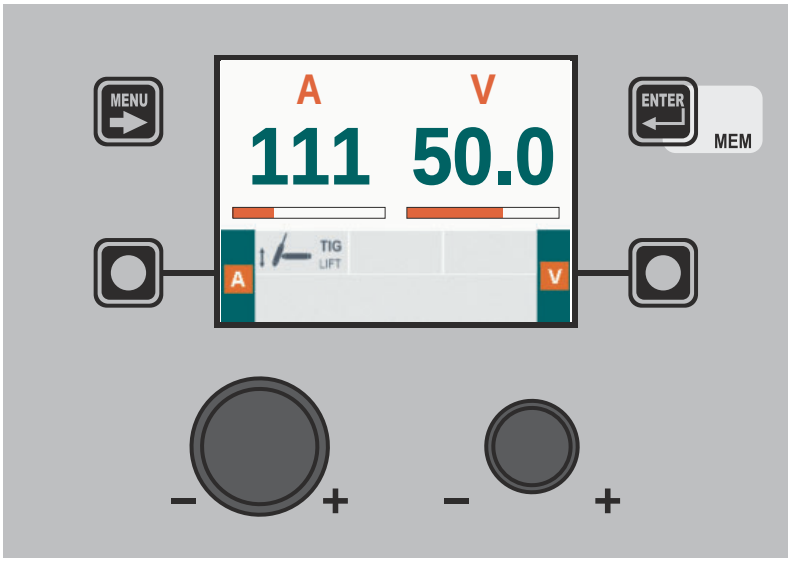
(continued)

ENCODER KNOB - A	Adjust the value of the parameter *WELDING CURRENT* (**A**).
PARAMETER DISPLAY SCREEN - V	Displays the value of the parameter *WELDING VOLTAGE* (**V**). The *WELDING VOLTAGE* shown is the measured voltage.
PARAMETER SELECTION LED - V	The LED unit shows the *WELDING VOLTAGE* (**V**) switched on.

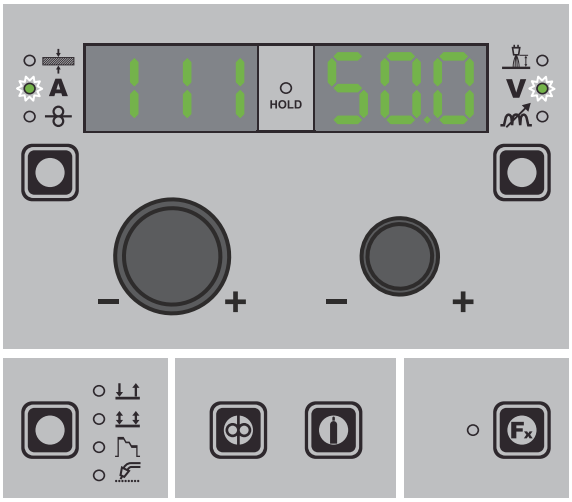
3 - WELDING — TIG LIFT

When welding takes place the fields in the displays show the same values as those included for pre-setting **with the difference that now they are those measured**.

"DH" / "VS" CONTROL PANEL



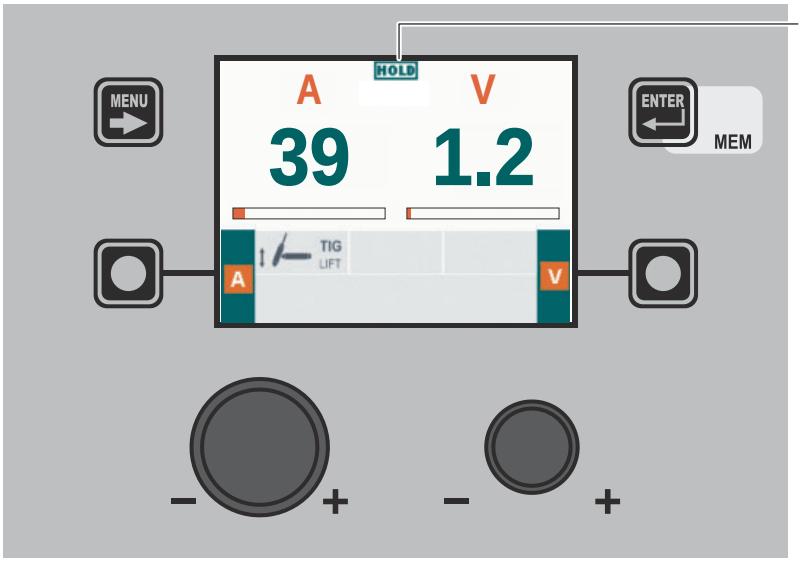
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



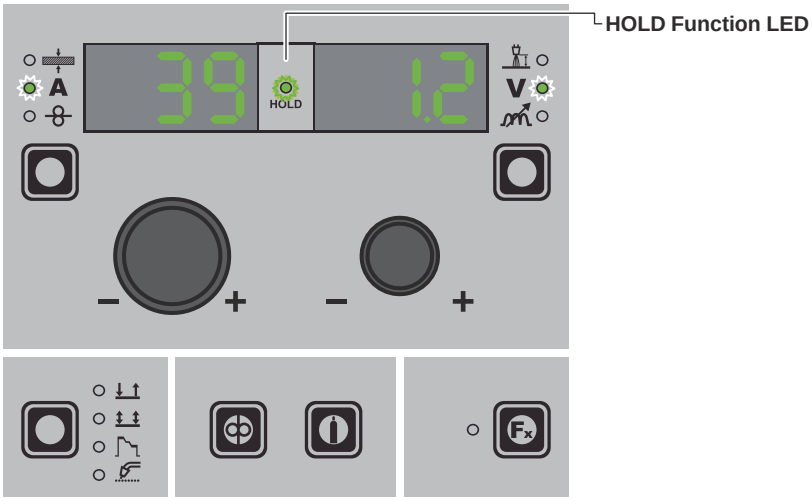
4 - HOLD TIG LIFT

When welding ends the fields in the display must show the same values that were displayed during welding, with the difference that they are now values defined as *HOLD*. In this phase the VISION SCREEN shows the *HOLD* box highlighted, while on the HT5 panel the HOLD FUNCTION LED flashes until the end of the *HOLD Function*. If the *HOLD Function* is Interrupted via a panel (e.g. DH), it will also be interrupted automatically on the other (HT5) and vice-versa.

"DH" / "VS" CONTROL PANEL

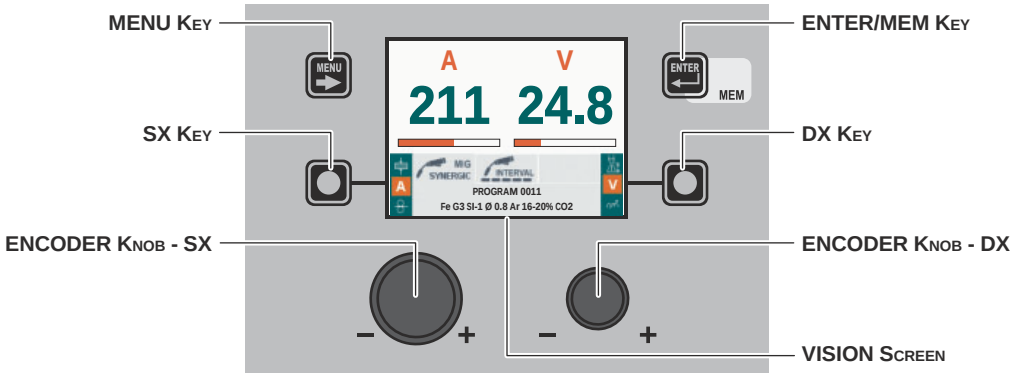


"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



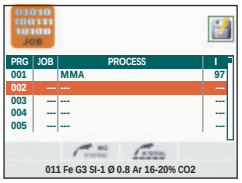
1 - Creating and saving / editing and overwriting a JOB/SEQUENCES (*) JOB/SEQUENCES

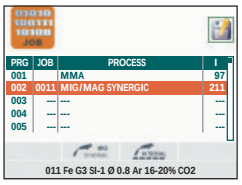
"DH" / "VS" CONTROL PANEL



(*) For the sequences, see the relevant paragraph in the settings menu.

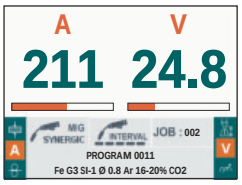
CREATING AND SAVING A JOB

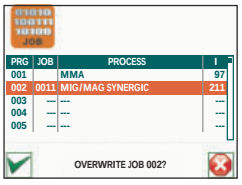




To create and save a *JOB* (automatic welding point) proceed as follows:
- During any welding process and at any time, once you have acquired the necessary parameters, hold the ENTER/MEM KEY down for **3** consecutive seconds.
- The VISION SCREEN automatically goes to the first free position in the *JOB* table.
- Choose the position in which the *JOB* is to be saved by rotating the ENCODER KNOB - SX.
- Push the ENTER/MEM KEY to confirm and finalise saving of the *JOB* created.

EDITING AND OVERWRITING A JOB





To edit and/or overwrite a *JOB* proceed as follows:
- During any welding process and at any time push the MENU KEY to exit the welding phase.
- Select the welding process *JOB* by rotating the ENCODER KNOB - SX.
- Push the MENU KEY to open the *JOB* table.
- Select the *JOB* to be edited by rotating the ENCODER KNOB - SX.
- Push the ENTER/MEM KEY to view the settings on the VISION SCREEN for the *JOB* to be edited.
- Hold down the ENTER/MEM KEY for about **3** consecutive seconds, until the VISION SCREEN loads all the parameters / data for the *JOB* onto the screen (making them available to the operator).
- Acquire the parameters necessary for editing the *JOB*.
- Hold down the ENTER/MEM KEY for **3** consecutive seconds.
- The VISION SCREEN automatically goes to the first free position in the *JOB* table.
- Choose the free position in which the edited *JOB* is to be saved, or a position already occupied in which the edited *JOB* will be overwritten, by rotating the ENCODER KNOB - SX.
- Push the ENTER/MEM KEY to confirm the operation.
- Push the SX KEY to confirm the overwriting operation or the DX KEY to cancel it.

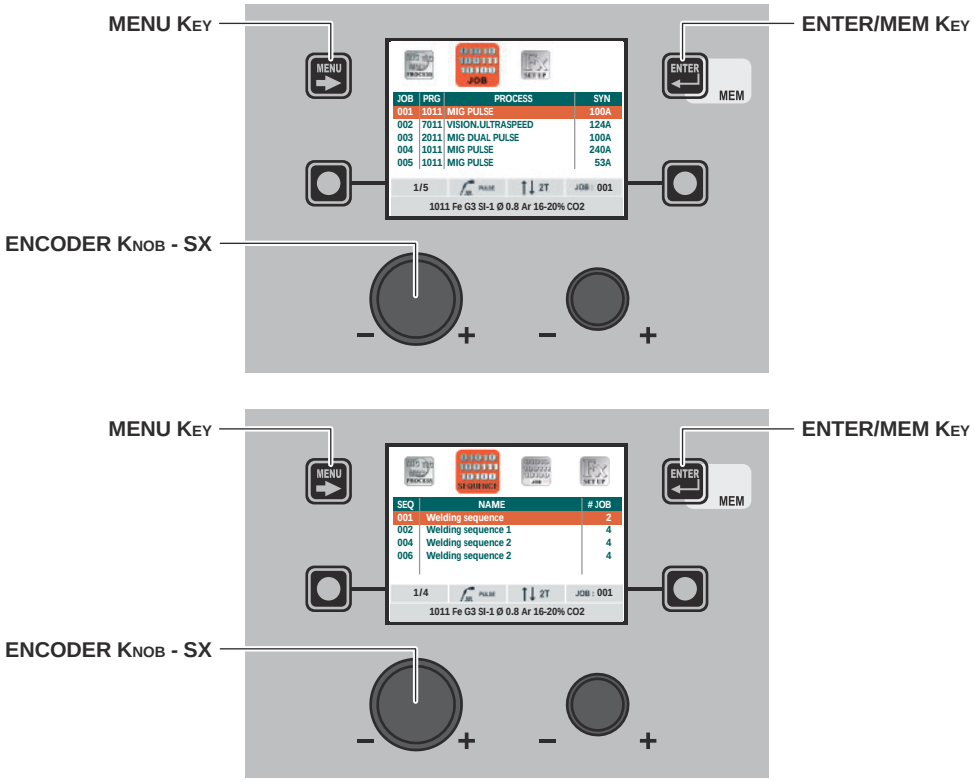
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)

It is not possible to create, save, edit or overwrite a *JOB/SEQUENCE* using the "HT5" control panel.

WARNING: *All the parameters saved within a JOB/SEQUENCE (including SPECIAL FUNCTIONS (Fx)) can be viewed but not edited!*

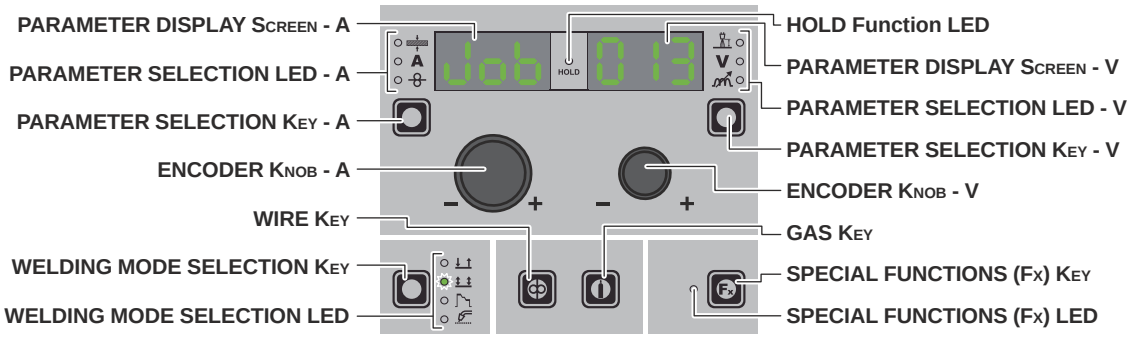
"DH" / "VS" CONTROL PANEL

To access the *JOB/SEQUENCES SELECTION Menu* push the MENU KEY.



MENU KEY	Used to access subsequent menus.
ENCODER KNOB - SX	Used to scroll and select a *JOB/SEQUENCES*.
ENTER/MEM KEY	Used to select the *JOB/SEQUENCE* displayed.

"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



PARAMETER DISPLAY SCREEN - A	Shows the JOB term or value of the parameter indicated by the PARAMETER SELECTION LED - A.
PARAMETER SELECTION LED - A	The LED unit shows the welding parameter selected using the PARAMETER SELECTION KEY - A.
PARAMETER SELECTION KEY - A	Scrolls the active parameters in succession, based on the type of welding process saved in the *JOB* selected.
WIRE KEY	Activates loading of the wire.

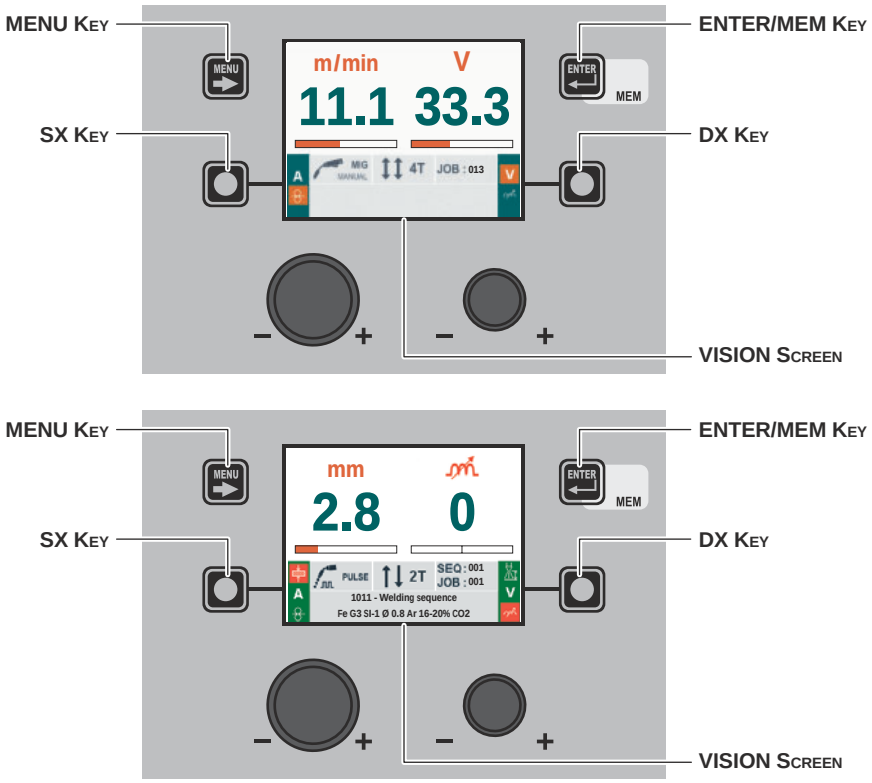
(continued)

WELDING MODE SELECTION LED	The LED unit indicates the welding mode saved in the *JOB* selected, which is coherent with the VISION SCREEN.
PARAMETER DISPLAY SCREEN - V	Displays the *JOB* number also selected in the *SEQUENCES* or the value for the parameter indicated by the PARAMETER SELECTION LED - V.
PARAMETER SELECTION KEY - V	Scrolls the active parameters in succession, based on the type of welding process saved in the *JOB* selected.
ENCODER KNOB - V	Used to scroll through the *JOBS* in the *SEQUENCES* as well.
GAS KEY	Activates the flow of gas.
SPECIAL FUNCTIONS (FX) KEY	Used to access displaying of the *SPECIAL FUNCTIONS (Fx)* saved in the *JOB* selected.

3 - PRE-SETTING JOB/SEQUENCES

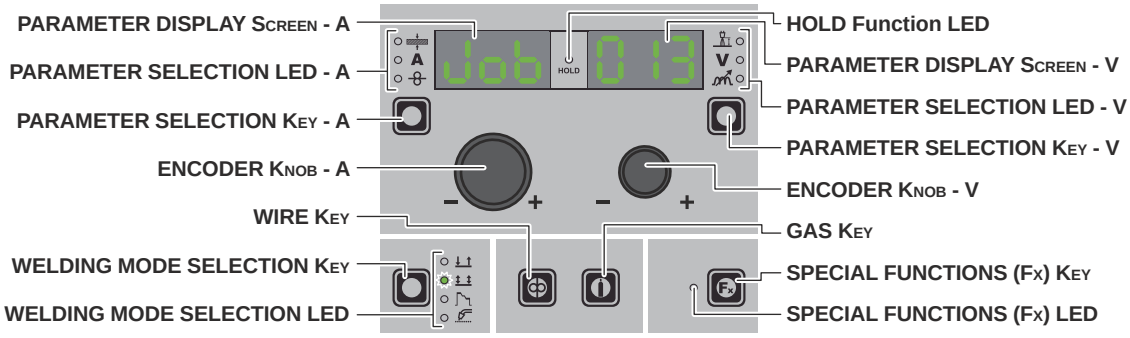
WARNING: *All the parameters saved within a JOB (including SPECIAL FUNCTIONS (Fx)) can be viewed but not edited!*

"DH" / "VS" CONTROL PANEL



MENU KEY	Used to access the *PROCESS SELECTION Menu (PROCESS)* and subsequent menus, as applicable.
SX KEY	Scrolls the active parameters in succession, based on the type of welding process saved in the *JOB* selected.
ENTER/MEM KEY	If held down for a period of about **3** consecutive seconds, this key allows the VISION SCREEN to load all the parameters for the *JOB* onto the screen (making them available to the operator).
DX KEY	Scrolls the active parameters in succession, based on the type of welding process saved in the *JOB* selected.

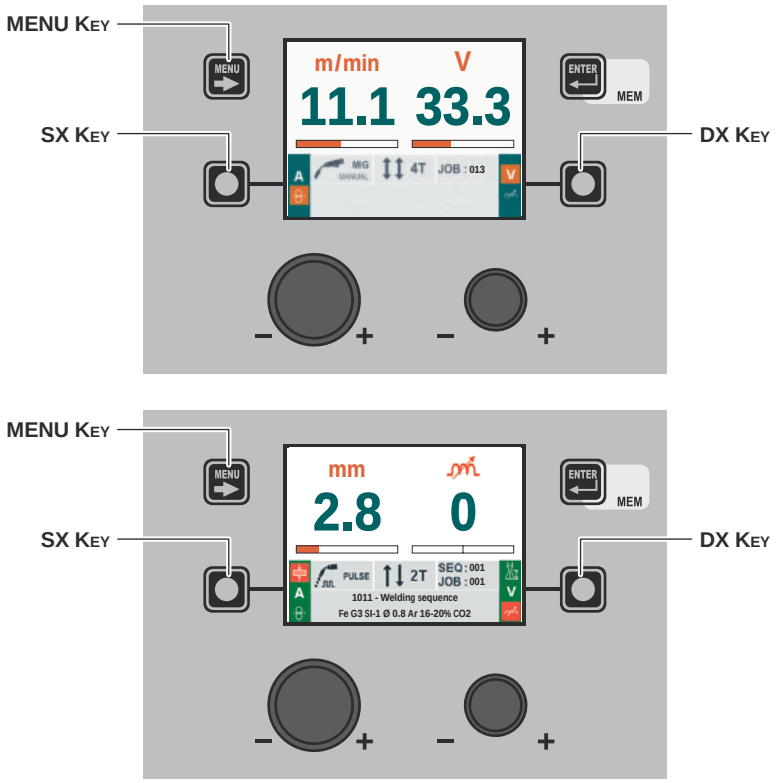
“HT5” CONTROL PANEL (not used with DH 32 and VS 32)



PARAMETER DISPLAY SCREEN - A	Shows the JOB term or value of the parameter indicated by the PARAMETER SELECTION LED - A.
PARAMETER SELECTION LED - A	The LED unit shows the welding parameter selected using the PARAMETER SELECTION KEY - A.
PARAMETER SELECTION KEY - A	Scrolls the active parameters in succession, based on the type of welding process saved in the *JOB* selected.
WIRE KEY	Activates loading of the wire.
WELDING MODE SELECTION LED	The LED unit indicates the welding mode saved in the *JOB* selected, which is coherent with the VISION SCREEN.
PARAMETER DISPLAY SCREEN - V	Displays the *JOB* number also selected in the *SEQUENCES* or the value for the parameter indicated by the PARAMETER SELECTION LED - V.
PARAMETER SELECTION LED - V	The LED unit indicates the welding parameter selected using the PARAMETER SELECTION KEY - V.
PARAMETER SELECTION KEY - V	Scrolls the active parameters in succession, based on the type of welding process saved in the *JOB* selected.
ENCODER KNOB - V	Used to scroll through the *JOBS* in the *SEQUENCES* as well.
GAS KEY	Activates the flow of gas.
SPECIAL FUNCTIONS (FX) KEY	Used to access the *SPECIAL FUNCTIONS (Fx)* saved in the *JOB* selected.

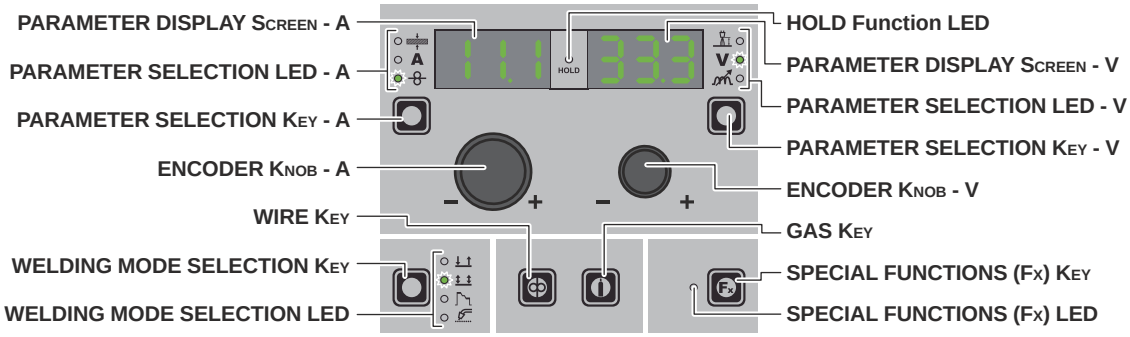
WARNING: *All the parameters saved within a JOB (including SPECIAL FUNCTIONS (Fx)) can be viewed but not edited!*

"DH" / "VS" CONTROL PANEL



MENU KEY	Used to access the *PROCESS SELECTION Menu (PROCESS)* and subsequent menus, as applicable.
SX KEY	Scrolls the active parameters in succession, only on the VISION SCREEN, based on the type of welding process saved in the *JOB* selected. In this case, where possible, the values displayed will be those measured.
DX KEY	Scrolls the active parameters in succession, only on the VISION SCREEN, based on the type of welding process saved in the *JOB* selected. In this case, where possible, the values displayed will be those measured.

"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



PARAMETER DISPLAY SCREEN - A	Shows the JOB term or value of the parameter indicated by the PARAMETER SELECTION LED - A.
PARAMETER SELECTION LED - A	The LED unit shows the welding parameter selected using the PARAMETER SELECTION KEY - A.
PARAMETER SELECTION KEY - A	Scrolls the active parameters in succession, based on the type of welding process saved in the *JOB* selected. In this case, where possible, the values displayed will be those measured.

(continued)

WELDING MODE SELECTION LED	The LED unit indicates the welding mode saved in the *JOB* selected, which is coherent with the VISION SCREEN.
PARAMETER DISPLAY SCREEN - V	Displays the *JOB* number also selected in the *SEQUENCES* or the value for the parameter indicated by the PARAMETER SELECTION LED - V.
PARAMETER SELECTION LED - V	The LED unit indicates the welding parameter selected using the PARAMETER SELECTION KEY - V.
PARAMETER SELECTION KEY - V	Used to access displaying of the *SPECIAL FUNCTIONS (Fx)* saved in the *JOB* selected.
ENCODER KNOB - V	Used to scroll through the *JOBS* in the *SEQUENCES* as well, only if these are coherent. (*)
SPECIAL FUNCTIONS (FX) KEY	Used to access the *SPECIAL FUNCTIONS (Fx)* saved in the *JOB* selected.

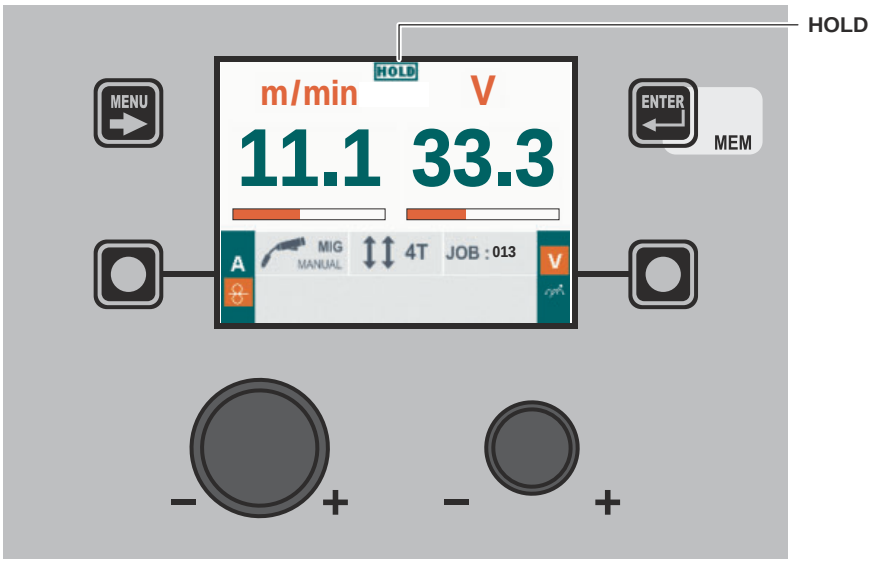
(*) The JOBS included in the SEQUENCES as well as considered to be coherent when the last three figures (wire type, gas, wire diameter) are equal. WHEN THIS IS THE CASE JOBS CAN BE CHANGED DURING WELDING WITHOUT INTERRUPTION.

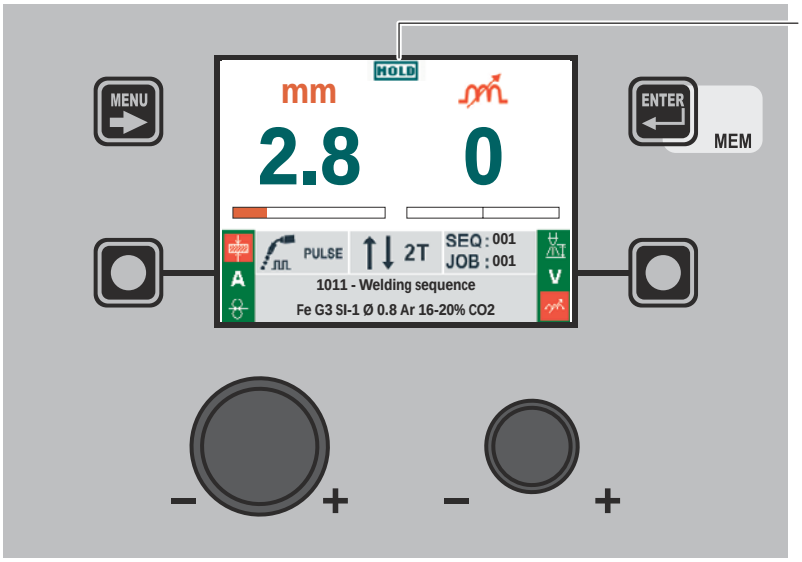
5 - HOLD JOB/SEQUENCES

When welding ends the fields in the display must show the same values that were displayed during welding, with the difference that they are now values defined as *HOLD*. In this phase the VISION SCREEN shows the *HOLD* box highlighted, while on the HT5 panel the HOLD FUNCTION LED flashes until the end of the *HOLD Function*. If the *HOLD Function* is Interrupted via a panel (e.g. DH), it will also be interrupted automatically on the other (HT5) and vice-versa.

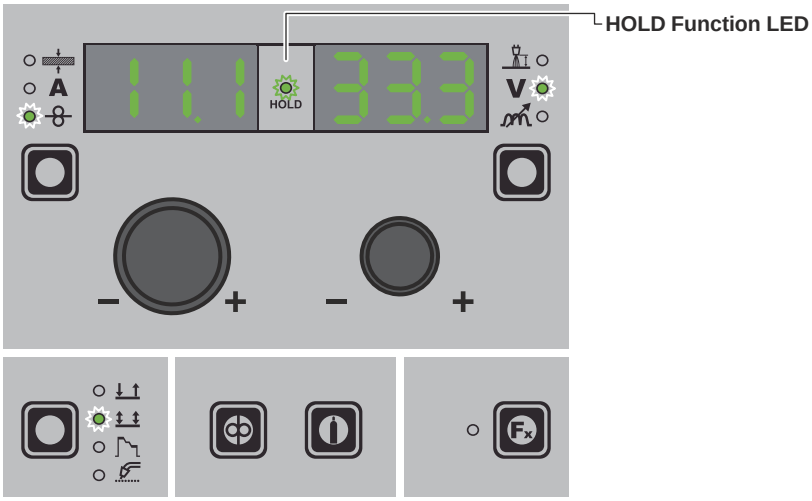
WARNING: *All the parameters saved within a JOB (including SPECIAL FUNCTIONS (Fx)) can be viewed but not edited!*

"DH" / "VS" CONTROL PANEL





“HT5” CONTROL PANEL (not used with DH 32 and VS 32)

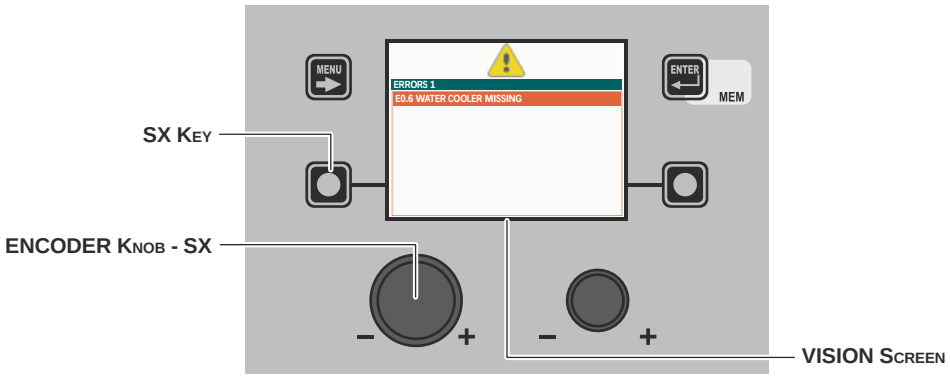


Error condition

WARNING: *Under normal conditions of use it is not possible to open the "ERROR LOG Menu" display since the alarm message appears instantaneously on the* VISION SCREEN *as soon as the problem arises on the welding plant.* ***At this stage it is not possible to weld!***

As soon as the error message appears:

"DH" / "VS" CONTROL PANEL



SX KEY	If held down for a period of about **5** consecutive seconds it takes the VISION SCREEN to the *SETUP Menu*.
ENCODER KNOB - SX	Used to scroll the alarms activated.
VISION SCREEN	Shows the alarm signal (⚠), number of the errors that have occurred (e.g. ERRORS 1) and an indication of what happened (e.g. E.06 WATER COOLER MISSING) of the welding machine.

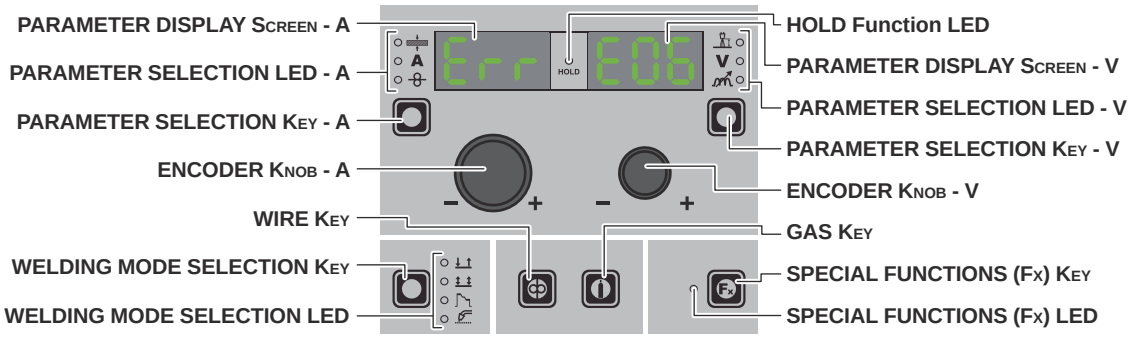
In the case of an **Automatically reset error** once the alarm condition has ended (reinstatement completed correctly), the welding plant is once again ready and the operator can recommence welding! The alarm state disappears and the VISION SCREEN returns to precisely the same point at which it was operating previously.

PLEASE NOTE: *After resetting has been completed, during normal operation of the machine, the* VISION SCREEN *will still show the error signal to inform the operator of the event (⚠), but this can be removed visually from the display by simply pushing the* MENU KEY. **WARNING:** *This only removes the visual error indication but not the history of what happened!*

In the case of **NON automatically reset errors**, to remove the alarm status and reinstate correct operation of the machine, the welding plant must be switched off.
When it is switched on again, the machine will be working again and the operator can weld again!

PLEASE NOTE: ***If, when switching on, the error status presents itself again, immediately contact's Technical Assistance Department.***

"HT5" CONTROL PANEL (not used with DH 32 and VS 32)



PARAMETER DISPLAY SCREEN - A	Displays the error message (e.g. Err.).
PARAMETER DISPLAY SCREEN - V	Shows the alarm code (e.g. E0.6) of in succession, the codes for the alarms in succession if there are a number of errors.

In the case of an **Automatically reset error** once the alarm condition has ended (reinstatement completed correctly), the welding plant is once again ready and the operator can recommence welding! The alarm state disappears and the VISION SCREEN returns to precisely the same point at which it was operating previously.

PLEASE NOTE: *After resetting has been completed, during normal operation of the machine, the* VISION SCREEN *will still show the error signal to inform the operator of the event (⚠), but this can be removed visually from the display by simply pushing the* MENU KEY. **WARNING:** *This only removes the visual error indication but not the history of what happened!*

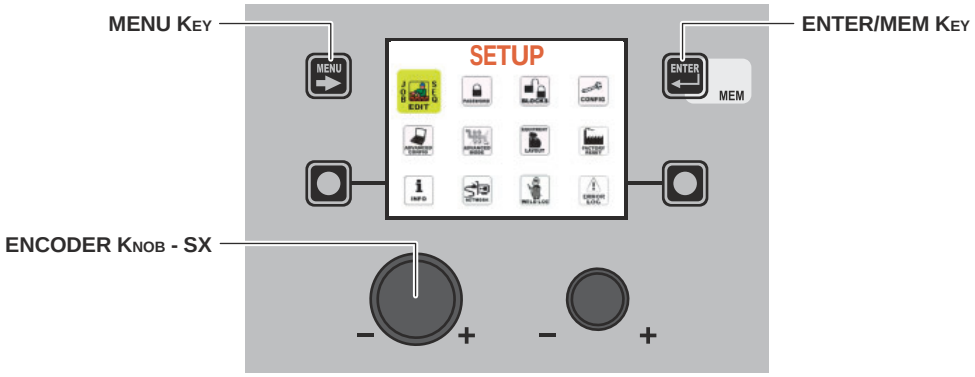
If an **Error NOT automatically resettable** arises, to eliminate the alarm state and reinstate correct functioning of the machine, switch the plant off and then on again, or hold down the DX KEY.
When it is switched on again, the machine will be working again and the operator can weld again!

PLEASE NOTE: ***If, when switching on, the error status presents itself again, immediately contact Technical Assistance Department.***

SETUP Menu

"DH" / "VS" CONTROL PANEL

To access the *SETUP Menu* hold down for at least **5** consecutive seconds the SX KEY.



MENU KEY	Used to exit the *SETUP Menu* and take the VISION SCREEN back to the entry phase.
ENCODER KNOB - SX	Used to scroll the various icons (sub-menus) in the menu and then select them.
ENTER/MEM KEY	Used to access the menu related to the icon selected.

WARNING:
- It is impossible to weld!
- If the VISION SCREEN is protected by a password, access to this menu will only be allowed by entering the correct password.

The icons (sub-menus) available and that can be viewed within the *SETUP Menu* are:
- JOB EDIT
- PASSWORD
- BLOCKS
- CONFIG
- FACTORY RESET
- INFO
- NETWORK
- ERROR LOG

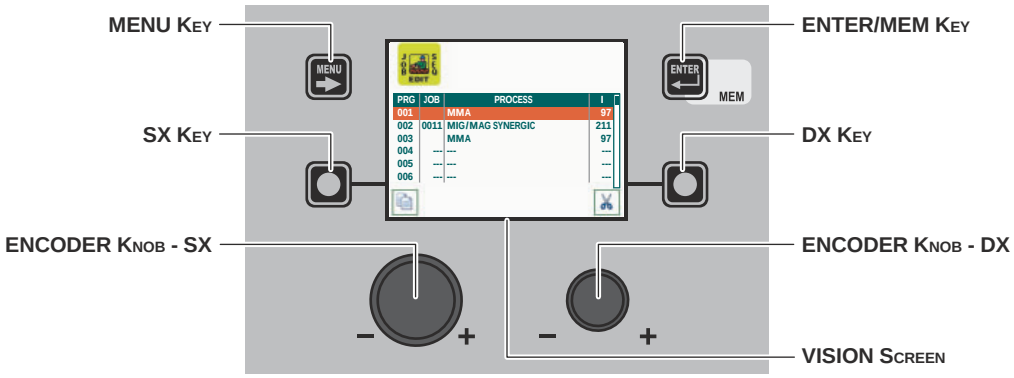
ACCESSING THE SUB-MENUS	
	To access the sub-menus included in the *SETUP Menu*, you must: • Turn the ENCODER KNOB - SX to select the desired icon. • Push the ENTER/MEM KEY.

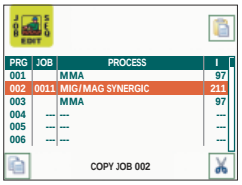
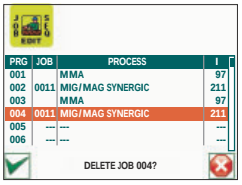
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)

It is not possible to access the *SETUP Menu* and all the related sub-menus using the "HT5" control panel.

The purpose of this menu is to allow the operator to copy or delete a *JOB* (automatic welding point) entered previously.

To access the *JOB EDIT Menu* from the *SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.

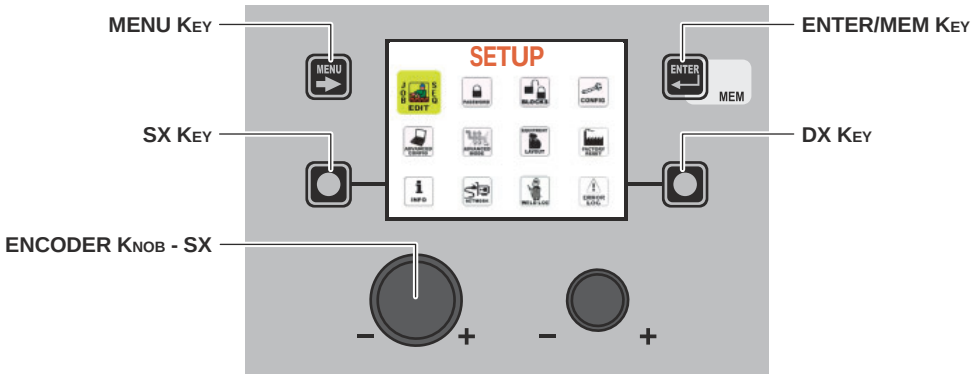


COPYING THE JOB SELECTED	
	To copy the *JOB* selected, proceed as follows: • Select the *JOB* to be copied by rotating the ENCODER KNOB - SX. • Push the SX KEY. • Choose the position to which the *JOB* selected is to be copied (or overwritten *) by rotating the ENCODER KNOB - SX. • Push the ENTER/MEM KEY to confirm and finalise copying of the *JOB* selected. * In the case of overwriting, confirmation will be requested.
DELETING THE JOB SELECTED	
	To delete the *JOB* selected, proceed as follows: • Select the *JOB* to be deleted by rotating the ENCODER KNOB - SX. • Push the DX KEY. • Push the SX KEY to confirm and finalise deletion of the *JOB* selected. • To cancel the operation of deleting the *JOB* selected, push the DX KEY.

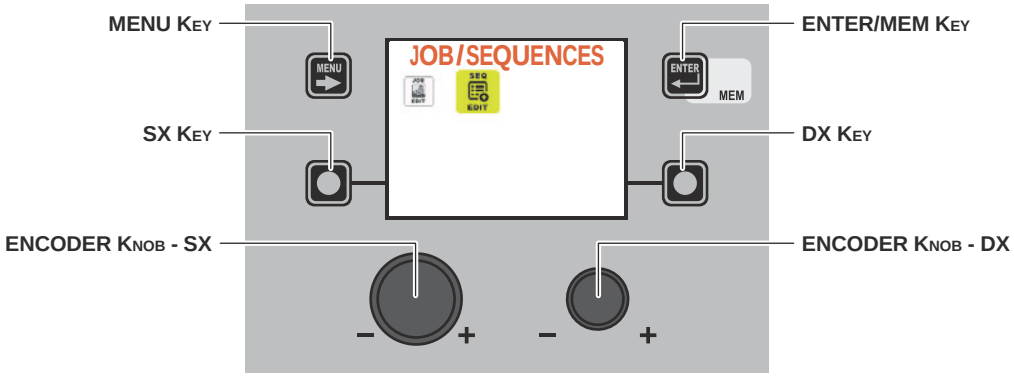
To exit the *JOB EDIT Menu* and go back to the *SETUP Menu*:
- Push the MENU KEY.

The purpose of this menu is to allow the operator to create, copy, overwrite, or delete a welding sequence.

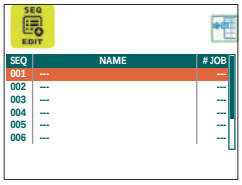
To access the *SEQ EDIT Menu* from the *SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.

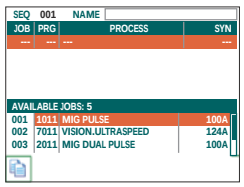
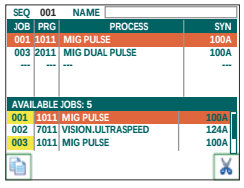


- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.

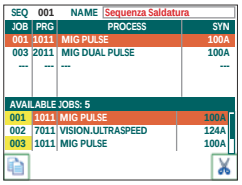
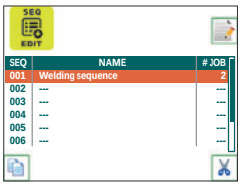
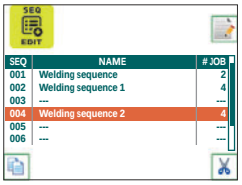
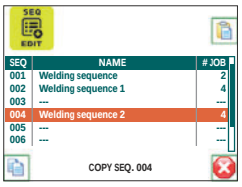
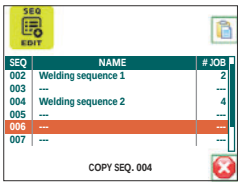
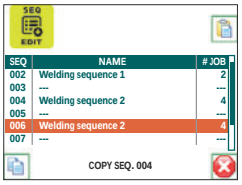
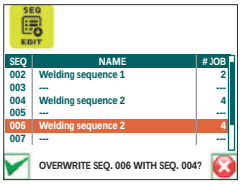
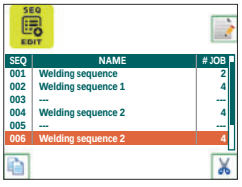


The following image appears:

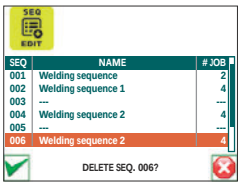
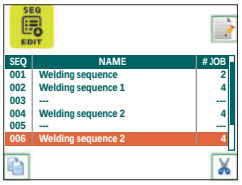


CREATING A SEQUENCE	
	Use the ENTER/MEM KEY to create a new sequence.
	Use the SX KEY to add the JOB selected using the ENCODER KNOB - DX to the section of the sequence selected using the ENCODER KNOB - SX. The image shows the two jobs (001 and 003) added to the sequence. The yellow colour indicates that the JOBS have already been used. The JOBS already used can be used again in other sections of the sequence.

(continua)

	Use the DX KEY to remove the JOB from the section of the sequence selected using the ENCODER KNOB - SX. Push the ENTER/MEM KEY to be able to edit the sequence name.
	Use the ENCODER KNOB - DX and the ENCODER KNOB - SX SX respectively to select the which of the characters available is required, and to move to the position of the next or the previous character. Once creation of the sequence has been completed, push the MENU KEY to save it. As you can see, the sequence number is shown on the left, the name of the sequence in the centre, and the total number of jobs used for the sequence on the right. Once the welding sequence has been created, the SX KEY can be used to copy it, the DX KEY to delete it, or the ENTER/MEM KEY to edit it.
COPYING A SEQUENCE	
	Select the sequence to be copied using the ENCODER KNOB - SX and push the SX KEY.
	The copy sequence 004 message displayed indicates that sequence 4 has been selected.
	Select the position of the sequence to be added, using the ENCODER KNOB - SX (e.g. in this case, position 6). Until the DX KEY is pushed of a new sequence is selected using the SX KEY, sequence 004 can be added in all the positions it is required.
	Push the ENTER/MEM KEY to copy the sequence.
	If the sequence position chosen is already in use, when the ENTER/MEM KEY is pushed the image to the left is displayed. Push the SX KEY and sequence4 6 will be replaced by sequence 4, whereas the DX KEY cancels everything.
DELETING A SEQUENCE	
	Select the sequence to be deleted using the ENCODER KNOB - SX and push the SX KEY.

(continua)

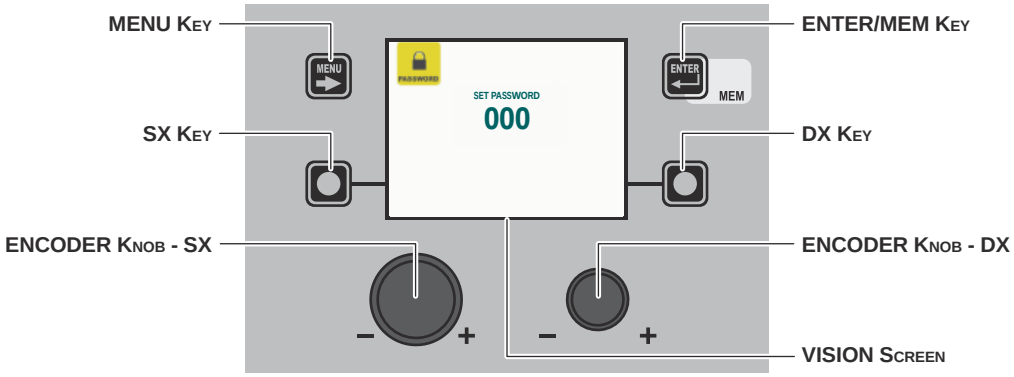
	Confirm using the SX KEY or cancel using the DX KEY.
EDITING A SEQUENCE	
	Select the position of the sequence to be edited using the ENCODER KNOB - SX and push the ENTER/MEM KEY. The sequence to be edited will be displayed, with all already described for creating the sequence.

To exit the *JOB EDIT Menu* and go back to the *SETUP Menu*:
- Push the MENU KEY.

PASSWORD — SETUP Menu

The purpose of this menu is to allow the operator to enter a *PASSWORD* for accessing the *SETUP Menu*.

To access the *PASSWORD Menu* from the *SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.

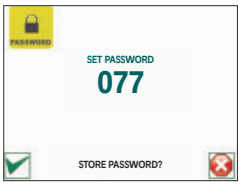


The VISION SCREEN can have various configurations, the meaning of which is indicated in the table below.

Diaplay VISION DESCRIPTION	Meaning
000	The *SETUP Menu* **ARE NOT** protected by any *PASSWORD*.
***	The *SETUP Menu* **ARE** protected by any *PASSWORD*.
Number between 001 and 999	The *SETUP Menu* **ARE** protected by a *PASSWORD* and this can be seen by the operator only because they are working inside the *SETUP Menu*.

ENTERING A NEW PASSWORD	
	To enter a new *PASSWORD* proceed as follows: • Make sure that the VISION SCREEN displays the text **000**. • Choose the new *PASSWORD* to be entered by rotating the ENCODER KNOB - DX. • Push the ENTER/MEM KEY to confirm the operation of entering the *PASSWORD*. • Push the SX KEY to confirm and finalise entering of the new *PASSWORD*. • To cancel the operation of entering a *PASSWORD* push the DX KEY.

(continued)

EDITING THE EXISTING PASSWORD	
	**WARNING:** *This operation is only possible after having accessed the SETUP Menu using the password you wish to edit!* To edit the existing *PASSWORD* proceed as follows: • Make sure the VISION SCREEN shows the *PASSWORD* entered previously (**a number that must be between 001 and 999**). • Choose the new *PASSWORD* to be entered by rotating the ENCODER KNOB - DX. • Push the ENTER/MEM KEY to confirm the operation of editing the *PASSWORD*. • Push the SX KEY to confirm and finalise editing of the *PASSWORD*. • To cancel the operation of editing a *PASSWORD* push the DX KEY.
DELETING THE EXISTING PASSWORD	
	WARNING: *This operation is only possible after having accessed the SETUP Menu using the password you wish to delete!* To delete the existing *PASSWORD* proceed as follows: • Make sure the VISION SCREEN shows the *PASSWORD* entered previously (**a number that must be between 001 and 999**). • Take the VISION SCREEN to number **000** by rotating the ENCODER KNOB - DX. • Push the ENTER/MEM KEY to confirm the deletion of the *PASSWORD*. • Push the SX KEY to confirm and finalise deleting of the *PASSWORD*. • To cancel the operation of deleting a *PASSWORD* push the DX KEY.

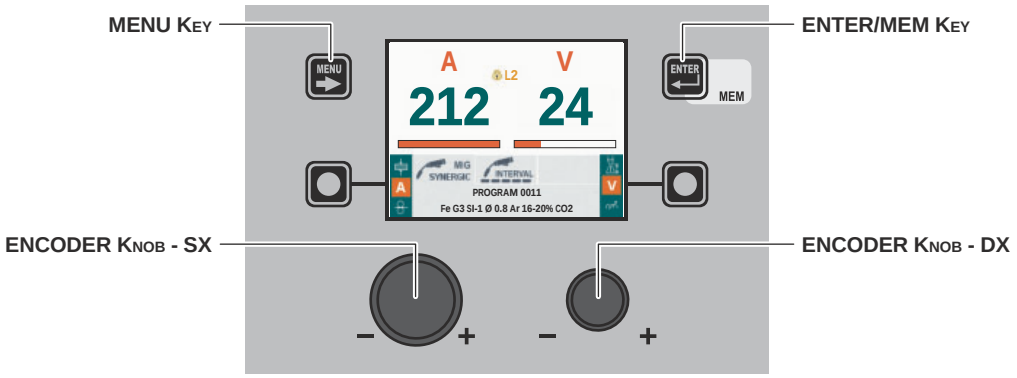
To exit the *PASSWORD Menu* and go back to the *SETUP Menu*:
• Push the MENU KEY.

BLOCKS — SETUP Menu

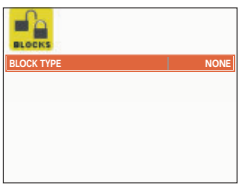
The purpose of this menu is to allow the operator to block or limit use of the welding machine and/or certain welding parameters / functions.

To access the *BLOCKS Menu* from the *SETUP Menu*:
• Turn the ENCODER KNOB - SX to select the desired icon.
• Push the ENTER/MEM KEY.

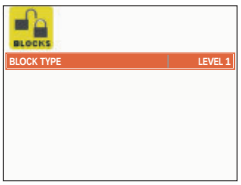
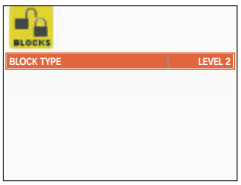
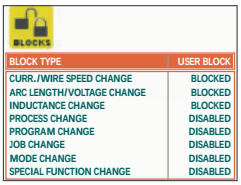
The image graphically shows how the type of block is shown on the VISION SCREEN when the welding machine is operating normally.



Within the *BLOCKS Menu* it is possible to select, by rotating the ENCODER KNOB - DX, the block required **(this operation does not require confirmation)** from the **4** options available:

Block type	Description
NONE 	BLOCK ABSENT or RELEASE MACHINE Does not allow any block to be activated on the welding machine, but allows the operator to release the machine if its was blocked previously.

(continued)

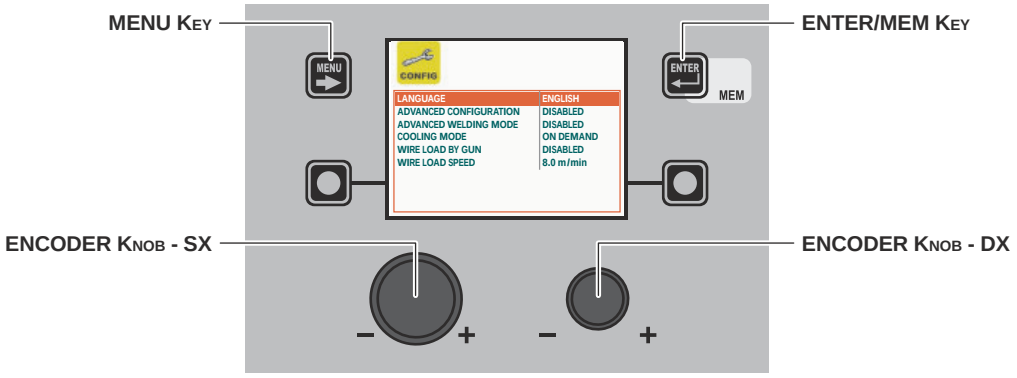
Block type	Description
LEVEL 1 	PARTIAL BLOCK The operator can weld using the parameters set prior to the block and may make adjustments and/or changes to the welding parameters using the knobs on the control panels on the welding machine and the wire feeder (if fitted).
LEVEL 2 	TOTAL BLOCK The operator can weld only using the parameters set prior to the block and cannot adjust and/or edit the welding parameters.
USER BLOCK 	PERSONALISED BLOCK Used to block or limit some adjustments and/or functions of the welding machine.

To exit the *BLOCKS Menu* and go back to the *SETUP Menu*:
- Push the MENU KEY.

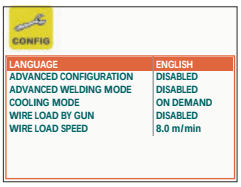
CONFIG — SETUP Menu

The purpose of this menu is to allow the operator to select the language used for the VISION SCREEN, change the *SETTINGS menu* to *ADVANCED SETTINGS menu*, enter advanced welding mode, set how cooling is managed, and set wire loading via the torch button.

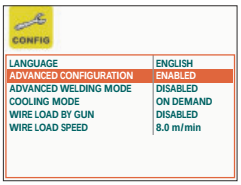
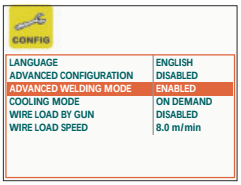
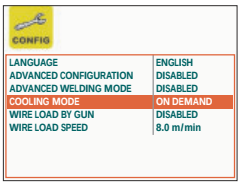
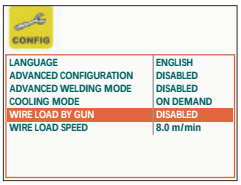
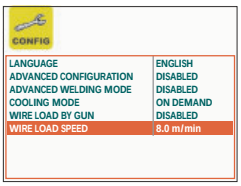
To access the *CONFIG Menu* from the *SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.



When the *CONFIG Menu* is open, the ENCODER KNOB - SX can be rotated to select the which of the 6 functions available is required. This can be enabled (**the operation does not require confirmation**) by rotating the ENCODER KNOB - DX.

Advanced function	Description
LANGUAGE 	Indicates the languages that can be set for the VISION SCREEN. As regards the procedure for selecting a language on the VISION SCREEN see the relevant paragraph in the manual (“Language Selection”).

(continued)

Advanced function	Description
ADVANCED CONFIGURATION 	If enabled, this configuration offers the welder the following additional menus (the following icons will be created in the *ADVANCED SETUP Menu*): • ADVANCED CONFIG • WELD LOG
ADVANCED WELDING MODE 	If enabled, this configuration allows the welder to have further welding modes available to them (the following icons will be created in the *ADVANCED SETUP Menu*): • ADVANCED MODE
COOLING MODE 	This configuration allows the welder to set cooling as follows: • WHEN REQUESTED. IIn this case, cooling is managed in relation to the welding done. • ALWAYS ON. In this case, cooling comes on when the machine is switched on, and stays on until the machine is switched off. Cooling only stops when an alarm is activated.
WIRE LOAD BY GUN 	This configuration allows the welder to enable or disable the type of wire loading from the torch: • ACTIVE. In this case wire loading is activated from the torch (also see relevant section). • NOT ACTIVE. In this case, wire loading can only be done using the relevant button on the feeder.
WIRE LOAD SPEED 	The parameter is used to set the loading speed, both for the torch (if active) and for the feeder. The range for this parameter is 1,0 m/min to 22,0 m/min.

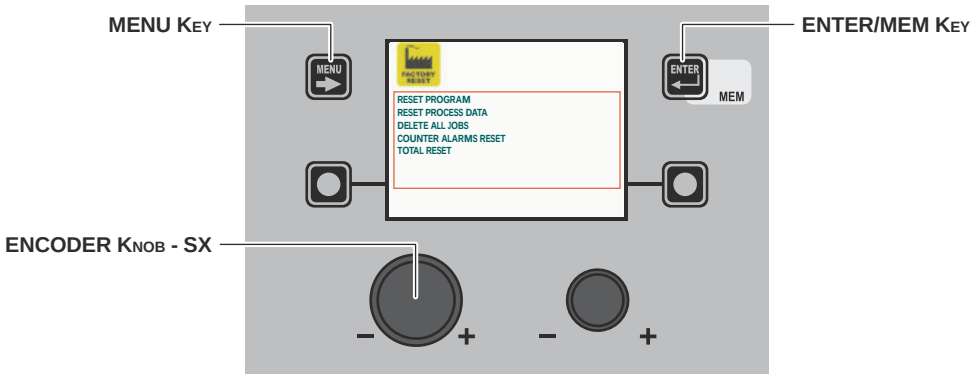
WARNING: *The additional menus are explained in the manual, in the "ADVANCED SETUP Menu" paragraph.*

To exit the *CONFIG Menu* and go back to the *SETUP Menu*:
• Push the MENU KEY.

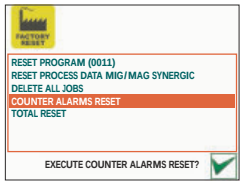
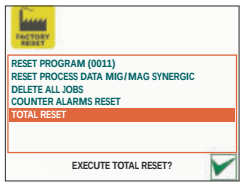
FACTORY RESET — SETUP Menu

The purpose of this menu is to allow the operator to return the welding machine partially or totally to the factory settings.

To access the *FACTORY RESET Menu* from the *SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.



Within the *FACTORY RESET Menu* it is possible, by rotating the ENCODER KNOB - SX, to select the individual *RESET* required, from the **5** functions available:

Function	Description
RESET PROGRAM	Used to return the *Special functions (Fx)* of the PROGRAM that the operator is using to their DEFAULT settings (only for welding processes for which welding programs are set beforehand). **NOTE:** *The welding PROGRAM NUMBER for which the Special Functions (Fx) are to be returned to the factory settings is indicated on the* VISION SCREEN.
RESET PROCESS DATA	Used to return the *Special functions (Fx)* of the welding PROCESS the operator is using to their DEFAULT settings. **NOTE:** *The welding PROCESS for which the Special Functions (Fx) are to be returned to the factory settings, is indicated on the* VISION SCREEN.
DELETE ALL JOBS	Used to delete all the *JOBS* saved previously by the operator. **WARNING:** *Remember that, when it leaves the factory the welding machine DOES NOT HAVE any JOB saved in it!*
COUNTER ALARMS RESET 	Used to reset the counters for all the alarms (Curr. - Tot. ---- see *ERROR LOG Menu*) that have occurred in the welding plant. **WARNING:** *This operation resets the counters for the alarms but does not delete the individual alarms!*
TOTAL RESET 	Used to return the welding plant to the factory settings. **WARNING:** ***Resetting will take place as soon as the key is released to confirm the operation!***

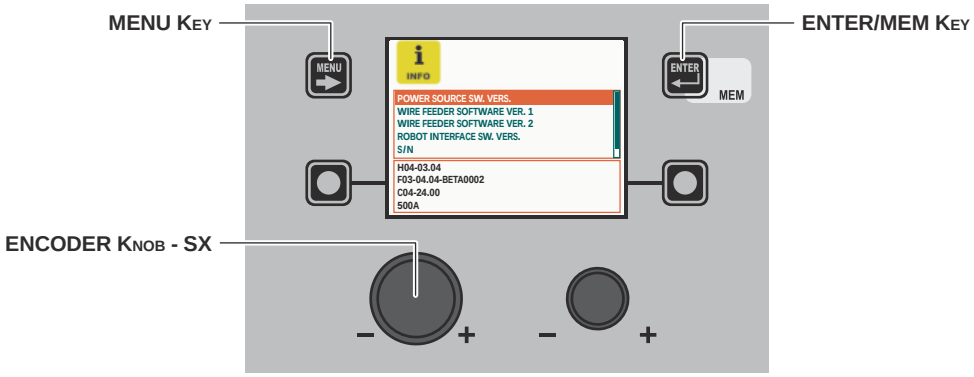
All the functions included in this menu can be used as follows:
- Choose the function (e.g. RESET PROCESS DATA) that you intend to use by rotating the ENCODER KNOB - SX.
- EXECUTE PROCESS DATA RESETTING by pushing the DX KEY.
- PROCEED by finalising the reset by pushing the SX KEY or cancel the operation by pushing the DX KEY.

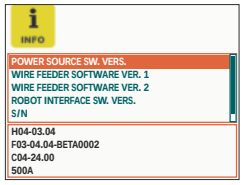
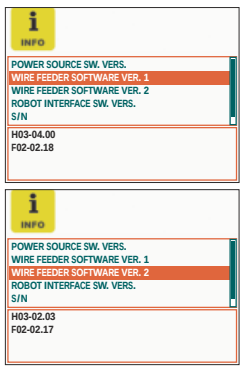
To exit the *FACTORY RESET Menu* and go back to the *SETUP Menu*:
- Push the MENU KEY.

INFO — SETUP Menu

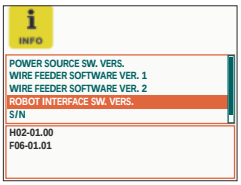
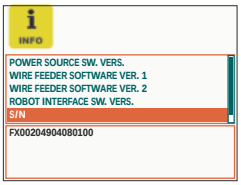
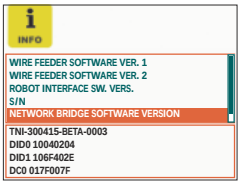
The purpose of this menu is to allow the operator to know what version of the software has been loaded into each component that is part of the welding plant.

To access the *INFO Menu* from the *SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.

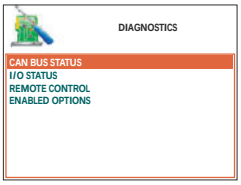
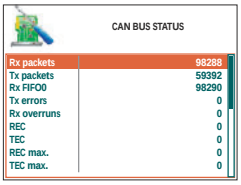
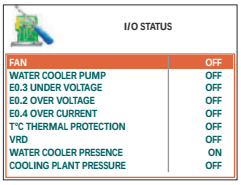
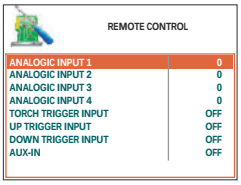


Software	Description
POWER SOURCE SW. VERS. 	Indicates the version of the software loaded into the welding machine.
WIRE FEEDER SOFTWARE VERS. 1/2 	This indicates the software version loaded in feeder 1/2, if applicable.

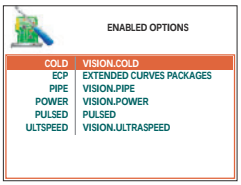
(continued)

Software	Description
ROBOT INTERFACE SW. VERS. 	This indicates the software version loaded in the robot interface board, if applicable.
S/N 	This indicates the serial number for the microprocessor contained in the digital interface board. This is the serial number required for loading special functions at additional cost.
NETWORK BRIDGE SOFTWARE VERSION 	This indicates the network interface software version loaded in the board. There are also identity codes that are only required for assistance, and can be requested if the network malfunctions.

A diagnostics menu can also be accessed by holding down the DX KEY and the DX KEY for three seconds.

Software	Descrizione
DIAGNOSTICS MENU 	This menu has 4 diagnostics windows: • CAN BUS STATUS • I/O STATUS • REMOTE CONTROLS STATUS • ENABLED OPTIONS
CAN BUS STATUS 	Number of packages transmitted and received (Rx.. and TX..) and the number of transmission errors.
I/O STATUS 	The status of the inputs and outputs on the generator.
REMOTE CONTROLS STATUS 	The status of the inputs: • ANALOGUE INPUT 1 (synergic remote control input) • ANALOGUE INPUT 2 (arc length remote control input) • ANALOGUE INPUTS 3 & 4 not connected • TORCH BUTTON • UP AND DOWN BUTTONS on the torch • AUX-IN not connected

(continua)

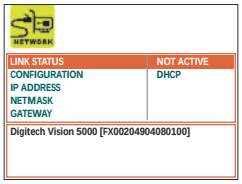
Software	Descrizione
ENABLED OPTIONS 	The special programs enabled, specifically: • PULSED • ECP estended curves package • VISION.COLD • VISION.PIPE • VISION.POWER • VISION.ULTRASPEED

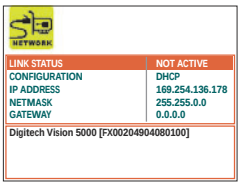
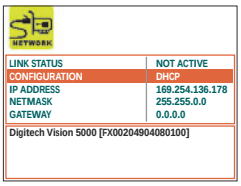
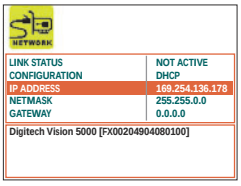
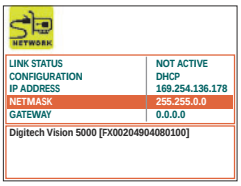
The contents of thus menu are for information only, the operator cannot change anything they can only read the information contained by scrolling the various options available in the menu by rotating the ENCODER KNOB - SX.

To exit the *INFO Menu* and go back to the *SETUP Menu*:
- Push the MENU KEY.

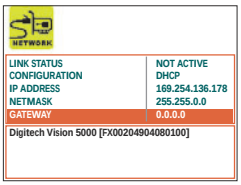
NETWORK — SETUP Menu

This menu is used to view the settings for the Ethernet network if connected. If not, the following image is displayed:



Function	Description
LINK STATUS 	This indicates that the welding machine has an active connection to the Ethernet network.
CONFIGURATION 	This indicates the type of network configuration used. The DHCP protocol is obligatory.
IP ADDRESS 	This indicates the IP address to which the welding machine has been assigned.
NETMASK 	This indicates the sub-network template number to which the welding machine has been assigned.

(continued)

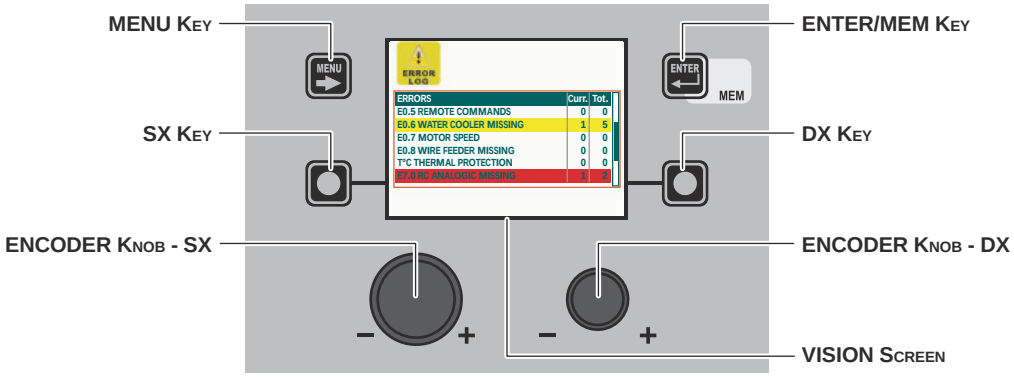
Function	Description
GATEWAY  	This indicates the gateway number to which the welding machine has been assigned.

To exit the *DATA IN-OUT Menu* and go back to the *SETUP Menu*:
- Push the MENU KEY.

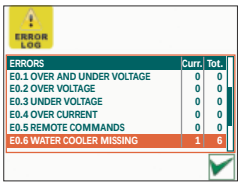
ERROR LOG — SETUP Menu

The purpose of this menu is to allow the operator to know, interpret, and understand error conditions that have occurred or may be encountered on the welding plant.

To access the *ERROR LOG Menu* from the *SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.



Within the menu the following is indicated for each individual error:
- Its code (e.g. E1.0).
- A short description (e.g. no configuration file).
- The number of times this has occurred since the last time the machine was switched on (Curr).
- The number of times this has occurred since the last ALARM COUNTER RESET or TOTAL RESET (Tot.) of the welding machine.
- Errors that have occurred on the welding plant and subsequently been corrected, but not yet partially reset, are highlighted in yellow.
- Errors that have occurred on the welding machine, but that have not yet been resolved and so are still active, are highlighted in red.

RESET Curr (RESET PARTIAL ERROR COUNT)	
 	The counter that indicates how many times a error or alarm has occurred since the last time the machine was switched on is part of this menu, and can be zeroed as follows: • Choose the error for which the partial counter (Curr) must be reset by rotating the SX - ENCODER KNOB. • The VISION SCREEN displays an icon in the bottom right corner (see image) that indicates that you can proceed with resetting. • Hold down the DX KEY until resetting of the (Curr) counter has been completed.

Within the menu, by rotating the ENCODER KNOB - SX it is possible to scroll the errors (also indicated in the table below), view them and select them.

Error condition	Error code	Error description and possible diagnosis
Err	E0.0	POWER SUPPLY FAILURE **NON automatic reset error.** This error can only arise when switching on and not when the welding plant is working normally. Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.

(continued)

Error condition	Error code	Error description and possible diagnosis
Err	E0.1	OVER AND UNDER VOLTAGE Automatic reset error.
Err	E0.2	OVER VOLTAGE Automatic reset error.
Err	E0.3	UNDER VOLTAGE Automatic reset error.
Err	E0.4	OVER CURRENT Automatic reset error.
Err	E0.5	REMOTE COMMANDS No feed for remote commands. **NON automatic reset error.**
Err	E0.6	WATER COOLER MISSING **NON automatic reset error.** Check that the WATER COOLER SYSTEM - OBLIGATORY function is included within the *ADVANCED SETUP Menu* / *EQUIPMENT LAYOUT*. After this initial check you need to know that this error can only occur in the following cases: • Water cooler system not connected to the welding machine. • The welding machine does not recognise the water cooler system, even though it is connected correctly. • Water cooler system disconnected when the machine is operating normally. Once the water cooler system has been reactivated, this error condition **resets itself automatically**! If the alarm occurs even when the WATER COOLER SYSTEM - OPTIONAL function is included in the *ADVANCED SETUP Menu* / *EQUIPMENT LAYOUT*, **call Technical Assistance Department immediately**.
Err	E0.7	MOTOR FAULT **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E0.8	WIRE FEEDER MISSING **NON automatic reset error.** Check that the WIRE FEEDER - OBLIGATORY function is included within the *ADVANCED SETUP Menu* / *EQUIPMENT LAYOUT*. After this initial check you need to know that this error can only occur in the following cases: • Wire feeder not connected to the welding machine. • The welding machine does not recognise the wire feeder, even though it is connected correctly. • Wire feeder disconnected when the machine is operating normally. Once the wire feeder has been reactivated, this error condition **resets itself automatically**! If the alarm occurs even when the WIRE FEEDER - OPTIONAL function is included in the *ADVANCED SETUP Menu* / *EQUIPMENT LAYOUT*, **call Technical Assistance Department immediately**.
Err	E0.9	CAN INTERNAL ERROR Faulty communication between the generator and the feeder. **NON automatic reset error.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	T°C	THERMAL PROTECTION The welding stops due to an excessively high temperature (thermostat activated). Automatic reset error.
Err	H20	COOLER PRESSURE The fluid in the cooling system is at low pressure. **NON automatic reset error.**
Err	E1.0	CONFIG. FILE MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E1.1	USER FILE MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E1.2	TORCH FILE MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.

(continued)

Error condition	Error code	Error description and possible diagnosis
Err	E1.3	CALIBRATION FILE MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E1.6	MMA DEFAULTS MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E1.7	TIG DEFAULTS MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E1.8	MIG DEFAULTS MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E1.9	WELDER DEFAULTS MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E2.0	FILE SYSTEM ERROR **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E3.2	STICKING This error is displayed when a short-circuit has been formed between the machine's output terminals for more than 1.2 seconds. **NON automatic reset error.** To remove the error state, eliminate the short circuit so that the voltage on the torch goes above the threshold value again. At this stage the error condition disappears and the welding machine goes back to the mode prior to the sticking. If the torch trigger is still pushed, it must be released and pressed again to begin welding again.
Err	E3.3	MOTOR SPEED FAULT **NON automatic reset error.** Check that the rollers on the wire feeder mechanism are not stuck and that the welding wire comes out correctly, otherwise **contact Technical Assistance Department immediately**.
Err	E4.0	LAST SETUP NOT VALID **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E4.1	JOBS WRONG **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E4.2	MIG SYN SPECIAL FUNCTION (Fx) WRONG **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E4.3	MIG MAN SPECIAL FUNCTION (Fx) WRONG **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E4.4	SPECIAL PULSED MIG FUNCTIONS (Fx) NOT VALID **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E4.5	SPECIAL DOUBLE PULSED MIG FUNCTIONS (Fx) NOT VALID **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.

(continued)

Error condition	Error code	Error description and possible diagnosis
Err	E5.0	MIG PROGRAMS MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E5.1	PULSED MIG WELDING PROGRAMMES MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E5.3	MMA PROGRAMS MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E5.4	TIG PROGRAMS MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E5.5	MIG MANUAL PROGRAMS MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.** Error visible on VISION SCREEN ONLY in the event of a fault and NOT in the *ERROR LOG Menu*.
Err	E6.0	HT5 CAN LINK MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.**
Err	E6.1	ROBOT LINK MISSING **NON automatic reset error.** **Immediately contact technical assistance dept.**
Err	E6.5	NO ROBOT INTERFACE Automatic reset error.
Err	E7.0	RC ANALOGIC MISSING **NON automatic reset error.** Check that the ANALOGIC RC - OBLIGATORY function is included within the *ADVANCED SETUP Menu / EQUIPMENT LAYOUT*. After this initial check you need to know that this error can **only** occur in the following cases: • ANALOGIC RC remote control not connected to the relevant connector. • The welding plant does not recognise the ANALOGIC RC remote control, even though it is connected correctly. • The ANALOGIC RC remote control disconnected when the welding plant is working normally. As soon as the remote control is connected again this error condition **resets itself automatically!** If the alarm occurs even when the ANALOGIC RC - OPTIONAL function is included in the *ADVANCED SETUP Menu / EQUIPMENT LAYOUT*, **call Technical Assistance Department immediately.**
Err	E8.3	NO GAS FLOW Error reset by a command from the robot's board (see robot interface manual).
Err	E8.4	NO H2O FLOW Error reset by a command from the robot's board (see robot interface manual).
Err	E8.7	NO WELDING WIRE Error reset by a command from the robot's board (see robot interface manual).
AUT	ADJ	POWER LIMITATION This alarm appears if the power limit is exceeded. The alarm alternates with the standard display every 1.5 seconds, despite which the machine continues to weld, supplying limited power, but complying with the values shown on the data plate.

The table provides a simple summary of all the error conditions that may arise on the welding plant and, if possible, what the operator must do to attempt to resolve the problem.
The table includes **2** types of errors:

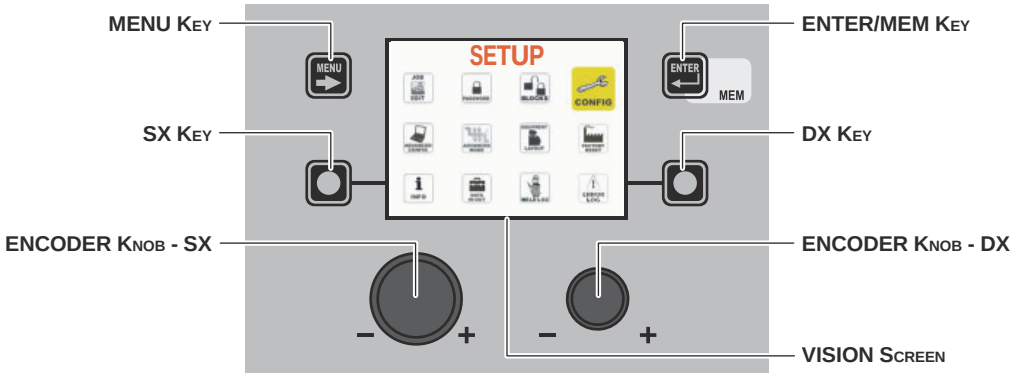
- **Automatic reset error:** Once the alarm condition has been resolved the welding machine starts working again and the operator can weld again! The VISION SCREEN goes back to exactly the same point it was at prior to signalling the alarm!
  PLEASE NOTE: *After resetting has been completed, during normal operation of the machine, the* VISION SCREEN *will still show the error signal to inform the operator of the event (⚠), but this can be removed visually from the display by simply pushing the* MENU KEY.
  WARNING: *This only removes the visual error indication but not the history of what happened!*
- **NON automatic reset error:** To remove the alarm status and reinstate correct operation of the machine, the welding plant must be switched off.
  The machine will then be working again and the operator can weld again!

PLEASE NOTE: ***If, when switching on, the error status presents itself again, immediately contact Technical Assistance Department***.
This is necessary so that our technical assistance dept (**that must be contacted each time the error messages appear on the welding machine's operator interface**) is able to resolve the problems more easily and as quickly as possible, thanks to the reports by the user, and also because, in the meantime the welding machine does not allow the operator to do their work.

To exit the *ERROR LOG Menu* and go back to the *SETUP Menu*:
- Push the MENU KEY.

ADVANCED SETUP Menu

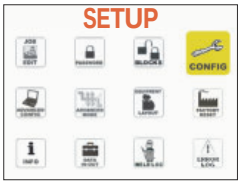
"DH" / "VS" CONTROL PANEL



To access the *ADVANCED SETUP Menu* from any point on the control panel:
- Open the *SETUP Menu* by holding the SX KEY down for at least **5** consecutive seconds.
- Open the *CONFIG Menu* by rotating the ENCODER KNOB - SX until the icon required is reached, and then push the ENTER/MEM KEY.
- Access the ADVANCED CONFIGURATION function by rotating the ENCODER KNOB - SX and select ACTIVATE by rotating the ENCODER KNOB - DX.
- Access the ADVANCED WELDING MODE function by rotating the ENCODER KNOB - SX and select ACTIVATE by rotating the ENCODER KNOB - DX.
- Access the PLANT CONFIGURATION function by rotating the ENCODER KNOB - SX and select ACTIVATE by rotating the ENCODER KNOB - DX.
- Exit the *CONFIG Menu* by pushing the MENU KEY.
- At this stage the *SETUP Menu* has been transformed into the *ADVANCED SETUP Menu* and the VISION SCREEN displays the following additional icons:
  - ADVANCED CONFIG
  - ADVANCED MODE
  - EQUIPMENT LAYOUT
  - WELD LOG

MENU KEY	Used to exit the *ADVANCED SETUP Menu* and take the VISION SCREEN back to the welding phase.
ENCODER KNOB - SX	Used to scroll the various icons (sub-menus) in the menu and then select them.
ENTER/MEM KEY	Used to access the menu related to the icon selected.

WARNING:
- It is impossible to weld!
- If the VISION SCREEN is protected by a password, access to this menu will only be allowed by entering the correct password.

ACCESSING THE SUB-MENUS	
	To access the sub-menus included in the *ADVANCED SETUP Menu*, you must: • Turn the ENCODER KNOB - SX to select the desired icon. • Push the ENTER/MEM KEY.

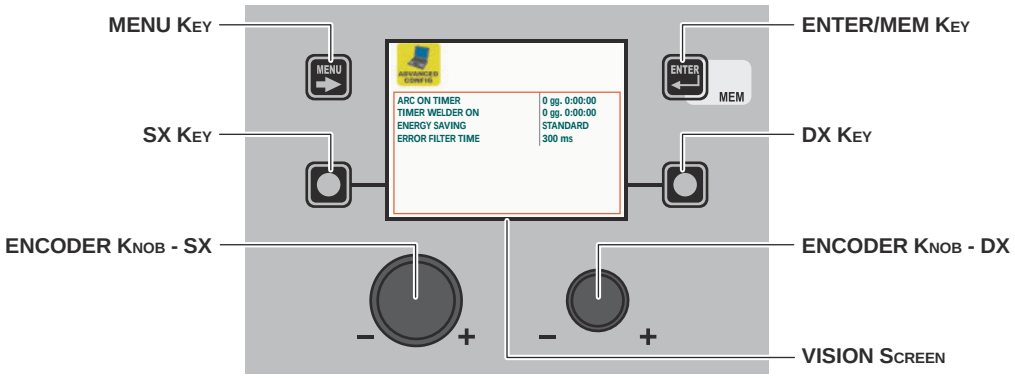
"HT5" CONTROL PANEL (not used with DH 32 and VS 32)

It is not possible to access the *ADVANCED SETUP Menu* and all the related sub-menus using the "HT5" control panel.

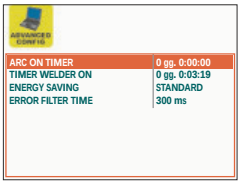
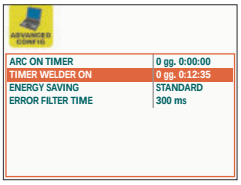
ADVANCED CONFIG — ADVANCED SETUP Menu

The purpose of this menu is to allow the operator to know the actual working time and operation of the welding machine, to configure the ENERGY SAVING mode in the best way to allow the best energy saving on the welding plant, and to be able to enable an analogue output on the welding plant that can be used for connecting total remote controls equipped with automatic self-recognition.

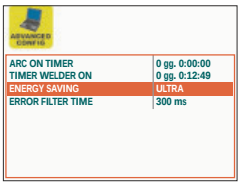
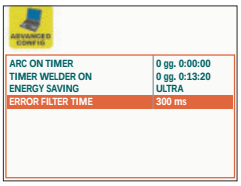
To access the *ADVANCED CONFIG Menu* from the *ADVANCED SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.



Within the *ADVANCED CONFIG Menu* the operator can view:

Advanced function	Description
ARC ON TIMER 	Indicates the actual time the machine is used for welding. **WARNING:** *This time can only be zeroed by means of a TOTAL RESET (see the relevant paragraph) of the welding plant*.
TIME WELDER ON 	Indicates the actual time the machine works, even when the screen saver is activated. **WARNING:** *This time can only be zeroed by means of a TOTAL RESET (see the relevant paragraph) of the welding plant*.

WARNING: *The content of the part of the menu described above is for information only, the operator cannot make any changes, they can only view and read the information available on the screen.*

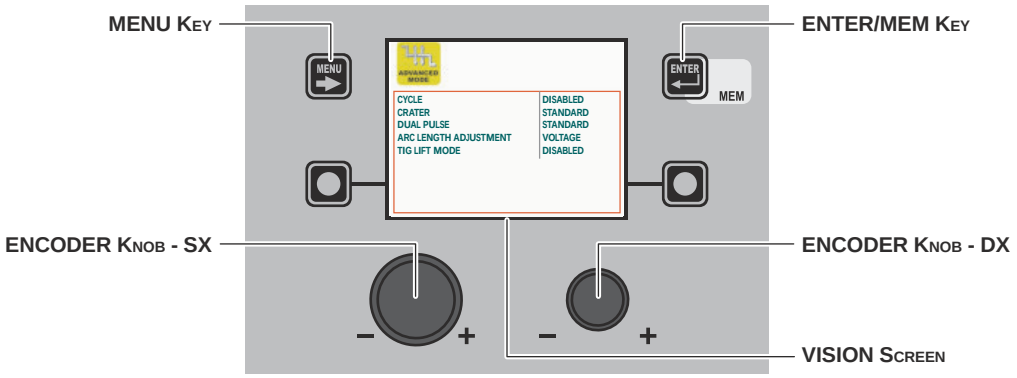
Advanced function	Description
ENERGY SAVING 	By rotating the ENCODER KNOB - DX (**this operation does not require confirmation**) it is possible to choose the energy saving mode you prefer from the **3** available for the welding plant: • **STANDARD -** Energy saving is achieved by the screen saver being activated for the screens on both the generator and the feeder after a set time that cannot be changed by the operator (see the relevant paragraph). • **ULTRA -** Energy saving is obtained by the screens on the generator and the feeder being switched off after a set time, equal to that for the screen saver, which cannot be changed by the operator. • **EXTRA -** Energy saving is obtained by the screens on the generator and the feeder switching off as soon as the machine is switched on.
ERROR FILTER TIME 	This is used to set the minimum time an alarm remains active before it is displayed.

To exit the *ADVANCED CONFIG Menu* and go back to the *ADVANCED SETUP Menu*:
• Push the MENU KEY.

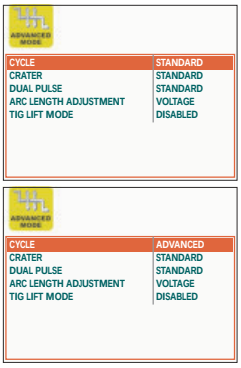
ADVANCED MODE — ADVANCED SETUP Menu

The purpose of this menu is to allow the operator to further refine adjustments to the welding parameters for the machine.

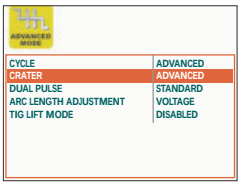
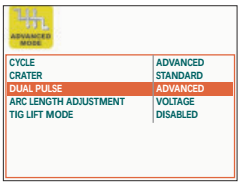
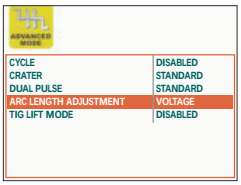
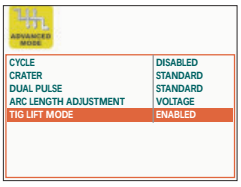
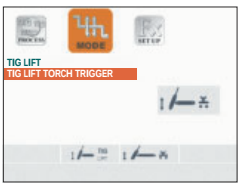
To access the *ADVANCED MODE Menu* from the *ADVANCED SETUP Menu*:
• Turn the ENCODER KNOB - SX to select the desired icon.
• Push the ENTER/MEM KEY.



Within the *ADVANCED MODE Menu* it is possible, by rotating the ENCODER KNOB - SX, to choose the advanced welding mode required from the **4** available (according to the welding process selected) and this can be ACTIVATED **(this operation does not require confirmation)** by rotating the ENCODER KNOB - DX.

Advanced function	Description
CYCLE 	If enabled, when operating in STANDARD or ADVANCED mode, this function provides the operator with a further welding mode (CYCLE) and the special functions associated with it, when using MIG (pulsed, double pulsed, synergic, or manual) welding processes: • CURRENT CYCLE, CYCLE WIRE SPEED (see TAB. A/B parameter F19). • CYCLE ARC LENGTH, CYCLE VOLTAGE (see TAB. A/B parameter F20). • FIRST SLOPE (from I1 to I2) see TAB. A/B parameter F18) - advanced cycle only. • SECOND SLOPE (from I2 to I1) (see TAB. A/B parameter F21) - advanced cycle only. The *WELDING MODE SELECTION Menu (MODE)* menu will therefore be changed. This function can only be activated, with the above procedure, on the VISION Display, whilst it can also be set on the HT5 drag-and-drop once it is activated. See the special “WELD MODE SELECTION Key” paragraph for correct functioning of the CYCLE welding mode.

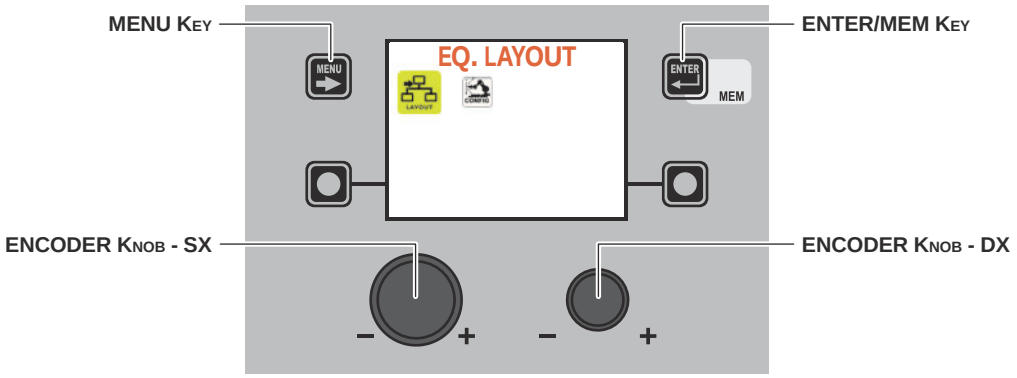
(continued)

Advanced function	Description
CRATER 	If enabled, when working in ADVANCED mode, this function provides the operator with further welding modes related to the CRATER as well as the **2** special functions explained below that make it possible to vary the length of the arc in the welding crater, when using MIG (pulsed, double pulsed, synergic, and manual) welding processes. • INITIAL ARC LENGTH, INITIAL VOLTAGE (see TAB. A/B parameter F09) • FINAL ARC LENGTH, FINAL VOLTAGE (see TAB. A/B parameter F14)
DOUBLE PULSED 	If enabled, when working in ADVANCED mode, this function provides the operator with the following special functions, when using the double pulsed MIG welding process: • DOUBLE PULSED ARC LENGTH (F24) Allows the welder to adjust the length of the arc on both double pulsed levels. • FIRST SLOPE (from I1 to I2) (see TAB. A parameter F22) • SECOND SLOPE (from I2 to I1) (see TAB. A parameter F27) These two special functions allow the welder to adjust the ramp for passing between the two double pulsed levels.
ARC LENGTH ADJUSTMENT 	This function allows an operator using the (pulsed, double pulsed, synergic and manual) MIG welding process to adjust the *ARC LENGTH ADJUSTMENT* ( ) parameter with the *WELDING VOLTAGE* (V) or the *WIRE SPEED* ( ).
TIG LIFT MODE  	If activated, this function makes an additional welding mode known as TIG LIFT TORCH TRIGGER available to an operator using the TIG LIFT welding process. In this mode the welder can control the *WELDING CURRENT* (A) parameter, using the button on the TIG torch. ***WARNING: To allow TIG LIFT WITH TORCH TRIGGER welding, the DIGITECH PULSE needs a specific female connector to be fitted on it (NON-STANDARD MACHINE) to which the corresponding male connector on the TIG torch is to be connected.*** Therefore, for the TIG LIFT welding process, a new menu will be created (see figure) named *WELDING MODE SELECTION Menu (MODE)*. **WELDING MODE SELECTION Menu (MODE)** To access the *WELDING MODE SELECTION Menu (MODE)* push the MENU KEY. **“DH” / “VS” CONTROL PANEL** MENU KEY - Used to access subsequent menus, where applicable. ENCODER KNOB - SX - Selects the welding mode. ENTER/MEM KEY - Used to access the *PRE-SETTING* for the program selected beforehand, with the welding *MODE* chosen. **“HT5” CONTROL PANEL** It is not possible to access the *WELDING MODE SELECTION Menu (MODE)* via the “HT5” control panel.

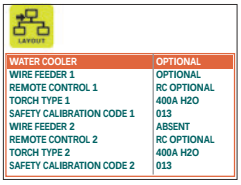
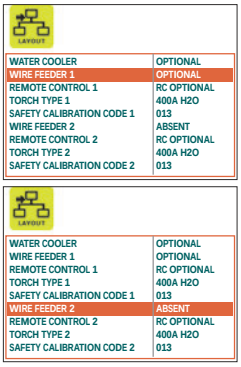
To exit the *ADVANCED MODE Menu* and go back to the *ADVANCED SETUP Menu*:
- Push the MENU KEY.

The purpose of this menu is to allow the operator to manage connections of components and accessories that are part of the welding plant.

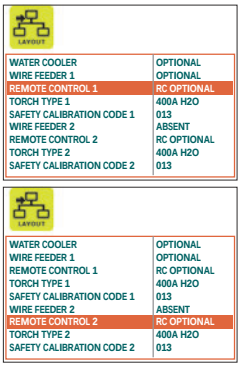
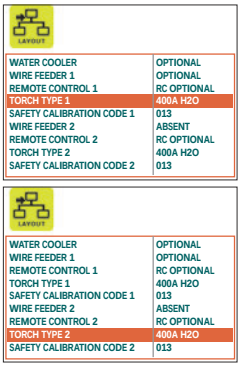
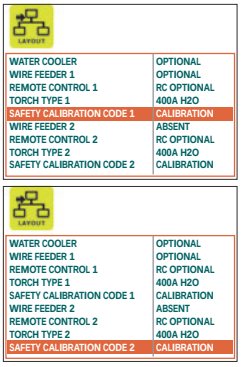
To access the *EQUIPMENT LAYOUT Menu* from the *SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.

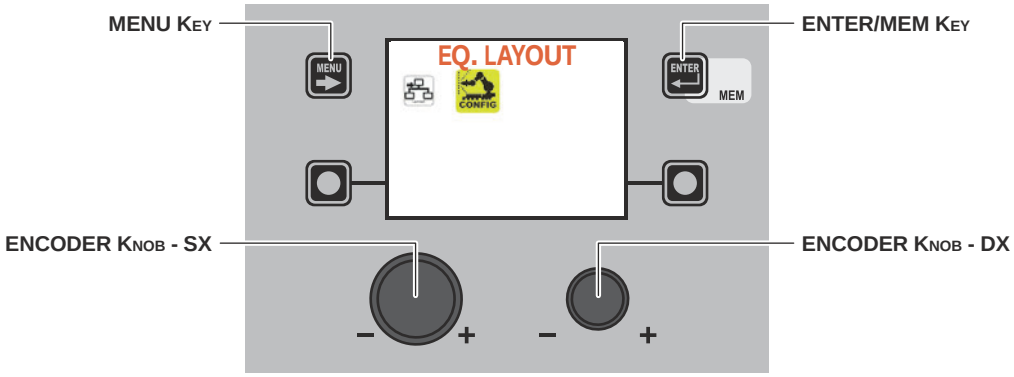


Within the *EQUIPMENT LAYOUT Menu*, it is possible, by rotating the ENCODER KNOB - SX, to select the component of the welding plant, while by rotating the ENCODER KNOB - DX, you can decide the type of connection required (e.g. Optional) or the type of component (e.g. Torch 400 A H2O) that is to be connected to the plant **(this operation does not require confirmation)**.

Advanced function	Description
WATER COOLER 	OPTIONAL - Means that the water cooler system may or may not be connected to the welding machine. OBLIGATORY - Means that it is obligatory for the water cooler system to be connected to the welding plant. A error condition is generated when: • Switching on or at any other time if the welding plant does not detect the presence. • During normal operation if the water cooler system is disconnected. Also see the CONFIG menu if it is necessary to keep the cooling system working continuously.
WIRE FEEDER 1 / WIRE FEEDER 2 	OPTIONAL - This means that FEEDER 1-2 can or cannot be connected to the welding plant. Once feeder 1-2 is detected when the plant is switched on, its presence becomes obligatory. OBLIGATORY - This means that it is obligatory for FEEDER 1-2 to be connected to the welding plant, even when the plant is switched on. A error condition is generated when: • When switched on, if the welding plant does not detect its presence. • During normal operation if the wire feeder is disconnected. MISSING - Means that feeder 2 must not be managed by the plant, even if it is connected up. **NOTE:** *If the second feeder is not connected up, all the settings relate to feeder 1.* **NOTE:** *The FEEDER 2 section must also be set to allow feeder 2 to work in a robotised plant.*

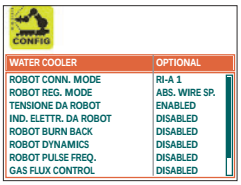
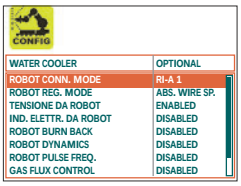
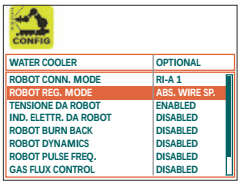
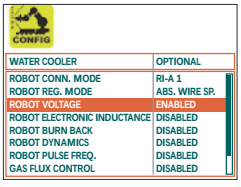
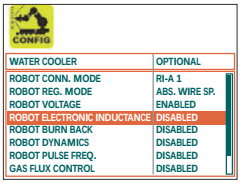
(continued)

Advanced function	Description
REMOTE CONTROL 1 / REMOTE CONTROL 2  	DISABLED - Means that REMOTE CONTROL 1-2 must not be managed by the plant, even if it is connected up. OPTIONAL - This means that REMOTE CONTROL 1-2 can or cannot be connected to the welding plant. If it is disconnected while the plant is running, no alarm is raised. OBLIGATORY - This means that it is obligatory for REMOTE CONTROL 1-2 to be connected to the welding plant, even when the plant is switched on. A error condition is generated when: • Switching on or at any other time if the welding plant does not detect the presence (only if set as obligatory). • During normal operation, if the remote control is disconnected. **WARNING:** *For indications on use and functioning of the ANALOGIC RC remote control see the manuals for the welding machine and the wire feeder, enclosed with the documentation*.
TORCH TYPE 1 / TORCH TYPE 2  	Used to set the TORCH TYPE 1/2 that will subsequently be connected to the welding plant. This operation must be done in order to size the plant correctly and as a result, the welding parameters.
SAFETY CALIBRATION CODE 1 / SAFETY CALIBRATION CODE 2  	By turning ENCODER KNOB - DX, go to CALIBRATION value to read and check instruments values (voltmeter and ammeter) of the power source. **NOTE:** *At the end of such operation, before restarting welding, you should put back the previous value by always turning the* ENCODER KNOB - DX*.*

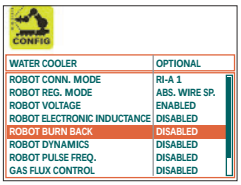
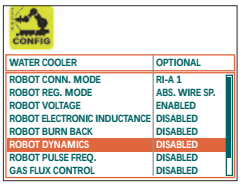
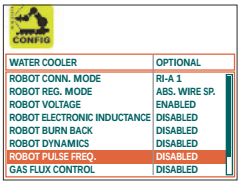
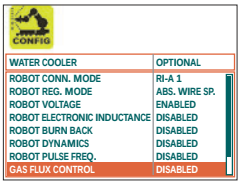
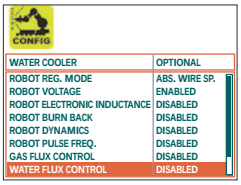
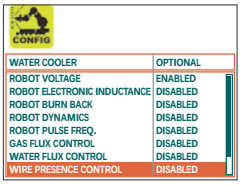
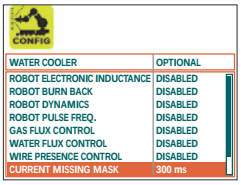


When in the *CONFIG menu*, rotate the ENCODER KNOB - SX to select activation of robot configuration.

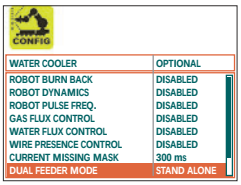
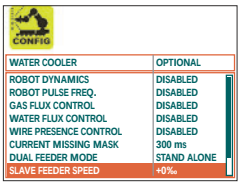
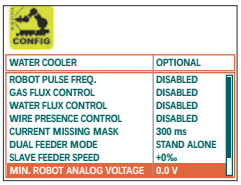
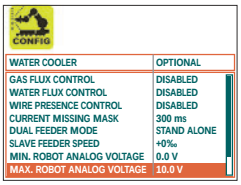
NOTE: *If robot configuration is activated when no robot interface is connected, an error message will be displayed and it will not be possible to weld.*

Advanced function	Description
ROBOT WELDING 	DISABLED - Means that manual welding is used. ENABLED - Means that welding is enabled with the robot interface board. Once this function has been selected, the welding plant will require the robot interface board to be connected correctly. If this is not the case, an error message will be displayed and it will not be possible to weld.
ROBOT CONN. MODE (ROBOT CONNECTION MODE) 	RI-A 1 - Means that the presence of an interface board for analogue / digital type robots is detected RI-D 2 - Means that the presence of an interface board for Device net type robots is detected ------- - Means that no type of robot board is detected
ROBOT REG. MODE (ROBOT REGULATION MODE) 	ASS. CURRENT - In this mode, a MINIMUM ROBOT ANALOGUE V - MAXIMUM ROBOT ANALOGUE V (*) input corresponds to a current supplied of 0-500A. REL. CURRENT - In this mode, a MINIMUM ROBOT ANALOGUE V - MAXIMUM ROBOT ANALOGUE V (*) input corresponds to extreme currents on the welding curve used. ASS. WIRE SPEED - In this mode, a MINIMUM ROBOT ANALOGUE V - MAXIMUM ROBOT ANALOGUE V (*) input corresponds to a wire speed of 0-25 m/min. REL. WIRE SPEED - In this mode, a MINIMUM ROBOT ANALOGUE V - MAXIMUM ROBOT ANALOGUE V (*) input corresponds to extreme wire speeds on the welding curve used. (*) These values can be set as described below.
ROBOT VOLTAGE 	NOT ACTIVE - In this mode, regulation of the ARC LENGTH is active, via the welding machine's panel. ACTIVE - In this mode, regulation of the ARC LENGTH is active, via the robot interface board.
ROBOT ELECTRONIC INDUCTANCE 	NOT ACTIVE - In this mode, regulation of the ELECTRONIC INDUCTANCE is active, via the welding machine's panel. ACTIVE - In this mode, regulation of the ELECTRONIC INDUCTANCE is active, via the robot interface board.

(continua)

Advanced function	Description
ROBOT BURN BACK 	NOT ACTIVE - In this mode, regulation of the BURN BACK is active, via the welding machine's panel. ACTIVE - In this mode, regulation of the BURN BACK is active, via the robot interface board.
ROBOT DYNAMICS 	NOT ACTIVE - In this mode, DYNAMIC regulation is active, via the welding machine's panel. ACTIVE - In this mode, DYNAMIC regulation is active, via the robot interface board.
ROBOT PULSE FREQ. (ROBOT PULSE FREQUENCY) 	NOT ACTIVE - In this mode, PULSATION FREQUENCY regulation is active, via the welding machine's panel. ACTIVE - In this mode, PULSATION FREQUENCY regulation is active, via the robot interface board.
GAS FLUX CONTROL 	NOT ACTIVE - In this mode the GAS FLOW input for the MCB-3 motor control box is ignored. ACTIVE - In this mode the GAS FLOW input for the MCB-3 motor control box is checked, and if necessary the relevant alarm is activated.
WATER FLUX CONTROL 	NOT ACTIVE - In this mode the WATER FLOW input for the MCB-3 motor control box is ignored. ACTIVE - In this mode the WATER FLOW input for the MCB-3 motor control box is tested, and if necessary the relevant WATER FAULT alarm is activated via the output of the box.
WIRE PRESENCE CONTROL 	NOT ACTIVE - In this mode the WIRE PRESENCE input for the MCB-3 motor control box is ignored. ACTIVE - In this mode the WIRE PRESENCE input for the MCB-3 motor control box is tested, and if necessary the relevant WIRE MISSING alarm is activated via the robot interface board.
CURRENT MISSING MASK 	XXX [ms] - During and on completion of welding, this indicates the time lapse between current zeroing and deactivation of the CURRENT SENSE digital output on the robot interface board.

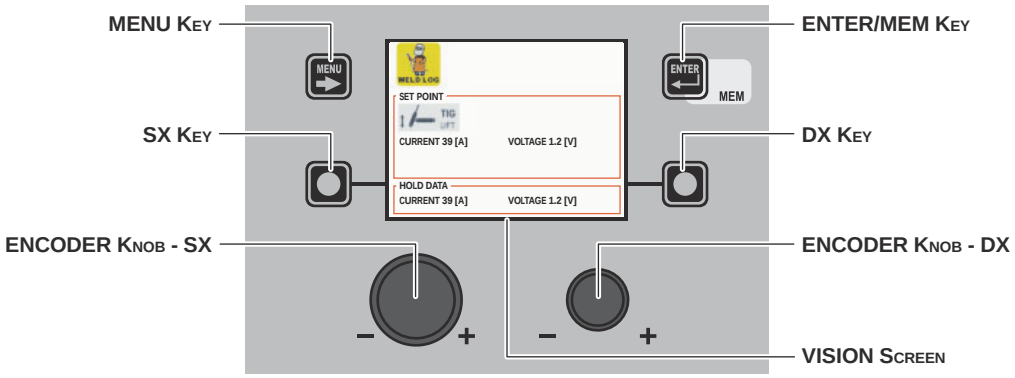
(continua)

Advanced function	Description
DUAL FEEDER MODE  	SEPARATE - If a double feeder is chosen in the EQUIPMENT LAYOUT menu, in this mode the second feeder operates separately from the first. SLAVED - If a double feeder is chosen in the EQUIPMENT LAYOUT menu, in this mode the second feeder operates simultaneously with and parallel to the first.
SLAVE FEEDER SPEED  	The parameter indicates the speed difference in ‰ for the slave feeder, compared to the main feeder.
MIN. ROBOT ANALOG VOLTAGE  MAX. ROBOT ANALOG VOLTAGE  	These parameters are used to set the maximum and minimum voltage settings used to control the robot board's analogue inputs. The settable values are: MINIMUM ROBOT ANALOGUE V from 0V to 2V MAXIMUM ROBOT ANALOGUE V from 5V to 14,5V

To exit the *EQUIPMENT LAYOUT Menu* and go back to the *ADVANCED SETUP Menu*:
- Push the MENU KEY.

The purpose of this menu is to allow the operator to know the latest welding parameters set on the machine, as well as the latest data saved on the machine.

To access the *WELD LOG Menu* from the *ADVANCED SETUP Menu*:
- Turn the ENCODER KNOB - SX to select the desired icon.
- Push the ENTER/MEM KEY.



The content of this menu is for information only, the operator cannot make any changes, they can only read the information available on the screen.

To exit the *WELD LOG Menu* and go back to the *ADVANCED SETUP Menu*:
- Push the MENU KEY.

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