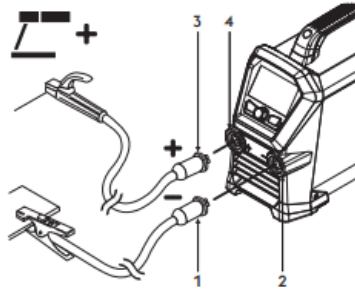


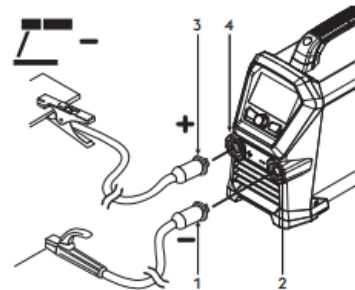
3.4 Installation

3.4.1 Connection for MMA welding



- 1 Earth clamp connector
- 2 Negative power socket (-)
- 3 Electrode holder clamp connector
- 4 Positive power socket (+)

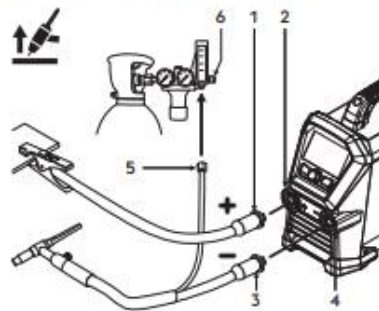
- ▶ Connect the earth clamp to the negative socket (-) of the power source. Insert the plug and turn clockwise until all parts are secured.
- ▶ Connect the electrode holder to the positive socket (+) of the power source. Insert the plug and turn clockwise until all parts are secured.



- 1 Electrode holder clamp connector
- 2 Negative power socket (-)
- 3 Earth clamp connector
- 4 Positive power socket (+)

- ▶ Connect the electrode holder cable connector to the negative (-) socket of the generator. Insert the plug and turn clockwise until all parts are secured.
- ▶ Connect the earth clamp to the positive socket (+) of the power source. Insert the plug and turn clockwise until all parts are secured.

3.4.2 Connection for TIG welding

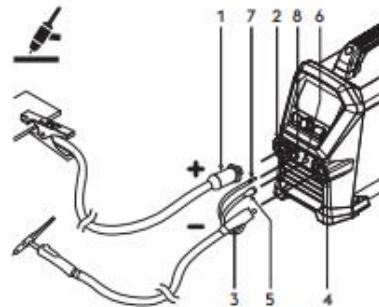


- 1 Earth clamp connector
- 2 Positive power socket (+)
- 3 TIG torch fitting
- 4 Negative power socket (-)
- 5 Gas pipe connector
- 6 Pressure reducer

- ▶ Connect the earth clamp to the positive socket (+) of the power source. Insert the plug and turn clockwise until all parts are secured.
- ▶ Connect the TIG torch coupling to the torch socket of the power source. Insert the plug and turn clockwise until all parts are secured.

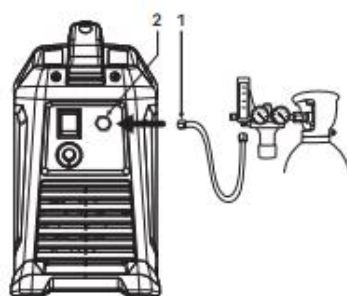
The protection gas flow can be adjusted using the tap normally found on the torch.

- ▶ Separately connect the torch gas hose connector to the gas main.



- 1 Earth clamp connector
- 2 Positive power socket (+)
- 3 TIG torch fitting
- 4 Torch socket
- 5 Torch signal cable
- 6 Connector
- 7 Torch gas tube
- 8 Connection-union

- ▶ Connect the earth clamp to the positive socket (+) of the power source. Insert the plug and turn clockwise until all parts are secured.
- ▶ Connect the TIG torch connector to the negative socket (-) of the power source. Insert the plug and turn clockwise until all parts are secured.
- ▶ Connect the signal cable of the torch to the appropriate connector.
- ▶ Connect the gas hose of the torch to the appropriate union/connection.

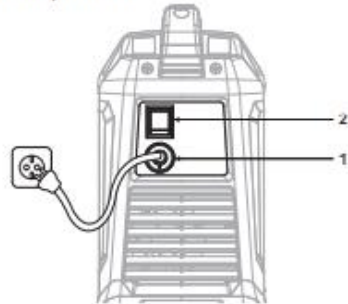


- 1 Gas tube
- 2 Rear gas connection

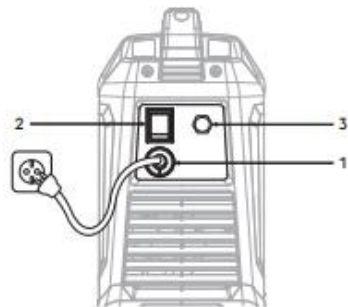
- ▶ Connect the gas hose from the cylinder to the rear gas connection. Adjust the gas flow from 5 to 15 l/min.

4. SYSTEM PRESENTATION

4.1 Rear panel

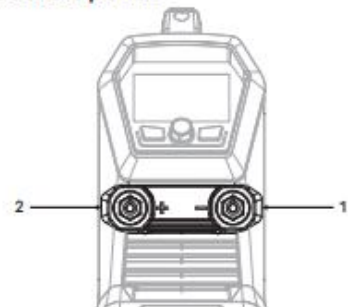


- 1 **Power supply cable**
Connects the system to the mains.
- 2 **Off/On switch**
Turns on electric power.
It has two positions, "O" off, and "I" on.

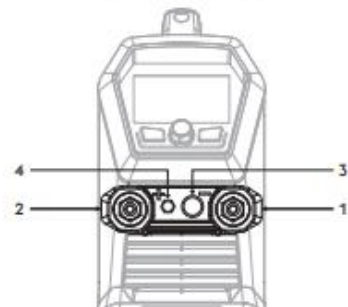


- 1 **Power supply cable**
Connects the system to the mains.
- 2 **Off/On switch**
Turns on electric power.
It has two positions, "O" off, and "I" on.
- 3 **Gas fitting**

4.2 Sockets panel



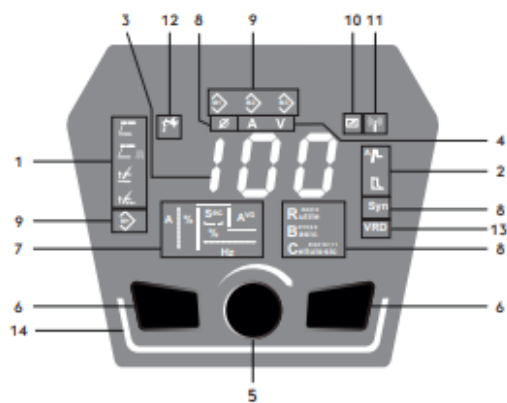
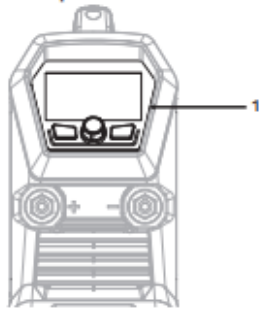
- 1 **Negative power socket (-)**
Process MMA: Connection earth cable
Process TIG: Torch connection
- 2 **Positive power socket (+)**
Process MMA: Connection electrode torch
Process TIG: Connection earth cable



- 1 **Negative power socket (-)**
Process MMA: Connection earth cable
Process TIG: Torch connection
- 2 **Positive power socket (+)**
Process MMA: Connection electrode torch
Process TIG: Connection earth cable
- 3 **Gas fitting**
- 4 **Torch button connection**

4.3 Front control panel

1 Front control panel



1 Selector of the welding process

Allows the selection of the welding procedure.

- MMA welding process
- Pulsed MMA welding process
- TIG LIFT welding process
- TIG LIFT spot welding process

2 Functions

Let you select the various system functions:

- Hot start
- Arc force

3 888 7-segment display

Allows the general welding machine parameters to be displayed during start-up, settings, current and voltage readings, while welding, and encoding of the alarms.

4 Measurements selector

Allows to view the actual welding current or voltage on the display.

- Amperes
- Volts

5 Main adjustment handle.

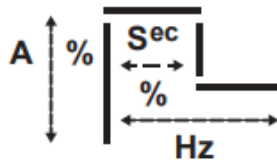
Allows the welding current to be continuously adjusted.

6  **Function keys**

Let you select the various system functions:


7 **Welding parameters**

The graph on the panel allows the selection and adjustment of the welding parameters.



8 **Syn** Material type synergy


Allows selection of the desired welding mode.

 Electrode diameter synergy


R^{E6013}
Rutile


B^{E70XX}
Basic

C^{E6010/11}
Cellulosic

9  **Program storage**

Allows the storage and management of 3 jobs which can be personalised by the operator.

10  **External devices (RC)**

11  **External devices (wireless)**

12  **Maintenance warning**

13 **VRD** VRD (Voltage Reduction Device)

Voltage Reduction Device






Allows output voltage to be reduced within the limits set by regulations for use in harsh environments.

Active function (Green)

Default: OFF (icon light off)

Contact the Service Dpt. to request activation instructions (eq-service@voestalpine.com).

14 **LED bars**

-  System in standby (White)
-  System switched on and arc ignited (Green)
-  System in error alarm (Red)
-  System in warning alarm (Orange) (=25% duty cycle remaining)
-  System in wireless configuration (Blue)

5. EQUIPMENT USE

5.1 Main Screen



Main Screen

1. Welding process symbol
 - Process selected (Green).
 - Process available (White).
 2. Function symbol
 - Function enabled (White).
 - Selection and adjustment of the required parameter (Green.)
 3. Selector of the welding process.
 4. They allow adjustment of the welding parameters. (press to scroll and select the parameters to change).
- Allows the regulation of the welding current. (turn to change the value).

5.2 MMA process main screen



Welding process selection

1. Select the desired process by pressing the button.
 2. Process selected (Green).
 3. Function symbol
 - Function enabled (White).
 - Selection and adjustment of the required parameter (Green.)
 4. They allow adjustment of the welding parameters. (press to scroll and select the parameters to change).
- Allows the regulation of the welding current. (turn to change the value).

Welding current

Minimum	Maximum	Default
20 A	Imax	100 A

Parameter setting: Hot start

1. Select the required parameter by pressing the encoder button.
2. Selected function for parameter adjustment (Green).
3. Adjust the value of the selected parameter by rotating the encoder.

Welding parameters

4. Start current.
5. Start time.

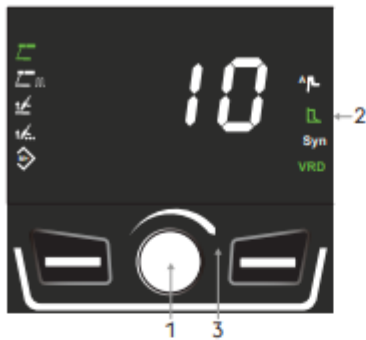
Start current

Minimum	Maximum	Default
50%	200%	120%

Start time

Minimum	Maximum	Default
0s	3s	0.5s





Parameter setting: Arc force

1. Select the required parameter by pressing the encoder button.
2. Selected function for parameter adjustment (Green).
3. Adjust the value of the selected parameter by rotating the encoder.

Welding parameters

Arc force

Minimum	Maximum	Default
-10	+10	0

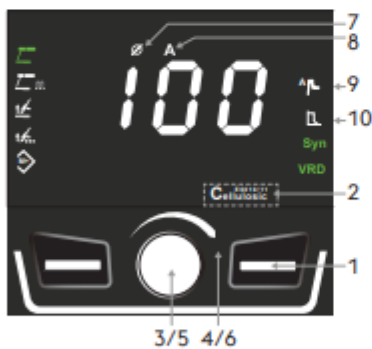
5.3 Selecting synergy parameters

 Function only available in the MMA process.



Synergy enabling

1. Press and hold the button for 3 seconds to enable synergy functions.
2. Function enabled (Green).
3. Synergic programs (White).



Parameter setting

1. Press the button to select the desired electrode
 - \emptyset : active diameter selection.
 - Turn the encoder to select the desired diameter.
 - Welding current adjustment becomes available again after 3 seconds.
2. Select the required program by pressing button..
3. Synergy
4. Press the encoder button to select the electrode diameter parameter.
5. Turn the encoder to select an electrode diameter value.
 - A pre-selection of welding parameter values will be loaded automatically.

Welding parameters can be further adjusted:

6. Press the encoder button to activate adjustment of the desired parameter.
7. Adjust the value of the selected parameter by rotating the encoder.

Welding parameters

8. Electrode diameter synergy.
9. Welding current.
10. Hot start.
11. Arc force.

Rutile electrode

Diameter	Welding current	Hot start	Arc force
2.0	40A	100% 0s	-5
2.5	60A	100% 0s	-5
3.2	100A	100% 0s	-5
4.0	135A	100% 0s	-5

Table of default values

Basic electrode

Diameter	Welding current	Hot start	Arc force
2.0	65A	120% 0,5s	3
2.5	90A	120% 0,5s	3
3.2	130A	120% 0,5s	3
4.0	160A	120% 0,5s	3

Cellulosic electrode

Diameter	Welding current	Hot start	Arc force
2.0	55A	120% 0,5s	7
2.5	75A	120% 0,5s	7
3.2	110A	120% 0,5s	7
4.0	130A	120% 0,5s	7