Instantaneous gas-fired water heater for domestic use

MINI OF VA

USER, INSTALLATION AND SERVICING INSTRUCTIONS

EN

It is compulsory to read the instructions.

Visit our website:
www.sime.it

Fonderie SIME S.p.A.

6333532 - 04/2026 - R9

TRANSLATION OF THE ORIGINAL ITALIAN INSTRUCTIONS

WARNINGS

- After having removed the packaging make sure that the product supplied is integral and complete in all its parts. If this is not the case, please contact the Dealer who sold the appliance.
- The appliance must be used as intended by **Sime** who is not responsible for any damage caused to persons, animals or things, improper installation, adjustment, maintenance and improper use of the appliance.
- In the event of water leaks, disconnect the appliance from the mains power supply, close the water mains and promptly inform professionally qualified personnel.
- Regularly check that the operating pressure of the hydraulic system, when cold, **equals 0.3 bar** (the minimum water flow rate is 2.5 l/min), so that the system can be used in residential areas with a low water pressure. If this is not the case, contact professionally qualified personnel.
- If the appliance is not used for a long period of time, at least one of the following operations must be carried out:
  - *set the main system switch to "OFF";*
  - *close the gas and water valves for the water heating system.*
  - *drain the system if there is the risk of freezing.*
- In order to ensure optimal appliance operations **Sime** recommends that maintenance and checks are carried out **ONCE A YEAR**.
- The system's power connection is of the "Y" type, so the power cable may only be replaced by the manufacturer or the service department.
- The concentration of CO in combustion by-products must always comply with the installation regulations of the country where the appliance is installed.

WARNINGS

- **It is recommended that all operators** read this manual carefully in order to use the appliance in a safe and rational manner.
- **This manual** is an integral part of the appliance. It must therefore be kept for future reference and must always accompany the appliance in the event the appliance is transferred or sold to another Owner or User or is installed on another system.
- **Installation and maintenance** of this appliance must be carried out by a qualified company or by a professionally qualified technician in accordance with the instructions contained in the manual. Once the work is complete, the company or technician will issue a declaration of conformity with national and local technical standards and legislation in force in the country where the appliance will be used.
- **Any repairs on the appliance** must be carried out solely by professionally qualified personnel, using original spare parts only. Failure to comply with these instructions can jeopardise the appliance's safety and void the warranty with immediate effect.
- **Fonderie SIME S.p.A.** reserves the right to make improvements to its products at any time without prior notice, without compromising their essential characteristics. The graphic illustrations and/or images in this document may show optional accessories that vary according to the country in which the appliance is used.
- **The installer must explain to the User** the appliance's operation and the safety instructions. Moreover, the installer must hand the use and maintenance instructions to the User after completing the installation.

PROHIBITION

- Do not allow children under the age of 8 to use the appliance. The appliance can be used by children no younger than 8 years old, by people with physical or cognitive disabilities, and by people lacking experience or the necessary knowledge, provided that they are supervised or have been instructed on how to use the appliance safely and that they understand the risks associated with it.
- Do not allow children to play with the appliance.
- Do not allow unsupervised children to perform user maintenance and cleaning.
- Do not use electrical devices or appliances such as switches, electrical appliances etc if you can smell fuel. If this should happen:
  - *open the doors and windows to air the room;*
  - *close the gas isolation device;*
  - *promptly call for professional assistance.*
- Do not touch the appliance with bare feet or with any wet part of the body.
- Do not carry out any technical intervention or cleaning operation before having disconnected the appliance from the mains power by setting the main switch to "OFF", and closing the gas supply.
- Do not modify the safety or adjustment devices without authorization and instructions from the manufacturer.

PROHIBITION

- Do not modify or plug the condensate outlet (if present).
- Do not pull, detach or twist the electrical cables coming out of the appliance even if the appliance is disconnected from the mains power supply.
- To expose the appliance to atmospheric agents: it is not designed for operating outdoors and is not equipped with automatic anti-freeze systems. If it risks freezing up, the water heater must be emptied of all the water contained in it.
- Do not block or reduce the size of the ventilation openings of the room where the appliance is installed, if present.
- Do not remove the mains power and gas supply from the appliance if the external temperature could fall below ZERO (risk of freezing).
- Do not leave containers with flammable substances in the room where the appliance is installed.
- To drink the water in the water heater. The water contained in the water heater is not drinkable.
- Do not dispose of the packaging material irresponsibly as it could be dangerous. Packaging must be disposed of as specified by the legislation in force in the country where the appliance will be used.
- Do not modify or intervene on sealed components.

LIST OF ABBREVIATIONS USED IN THE MANUAL

Below is a list of abbreviations that can be used in the diagrams in the manual.

ABBREVIATION	DESCRIPTION
*	Optional
0/10V	0/10 V input
ACS	Domestic hot water
AIN	Inertial storage
AL	Power supply
ALIM	Power supply
APDC	Heat pump power supply
AR	Remote alarm
ARM	Cabinet
ASF	Flame signal amplifier
AUX	Auxiliary output
BK	Black
BL	Blue
BO	Tank
BR	Brown
BRU	Burner
C	Domestic hot water recirculation attachment
CAA	Boiler air inlet duct
CALDAIA	Boiler
CI	System filling
CMI	Microprocessors controller
CN	Connector
COID	Hydraulic manifold / hydraulic disconnector
COMP	Compressor
COND	Capacitor
COS	Solar collector
CPDC	Heat pump controller
CR	Remote control / command
CRI	Heater consent
CSFU	Smoke outlet duct
CSFUC	Coaxial flue gas exhaust duct
CSFUS	Separate flue gas exhaust duct
CTP	Programmer timer-controlled thermostat
DA	Active dehumidifier
DAL	Alarm device
DF	Dirt separator
DP	Polyphosphate dosing unit
DPS	Overvoltage protection device
E	Domestic hot water inlet
E/I	Summer / Winter switch
EA	Electrode on
EAR	Ignition / detection electrode
EL	Electrical connections
EMC	Boiler emergency activation at boiler TA2
ER	Flame detection electrode
EV	Solenoid valve
EVAT	High-temperature solenoid valve
EVC	Fuel solenoid valve
EVCA	Automatic charging solenoid valve
EVD	Diverter solenoid valve
EVG	Gas solenoid valve

ABBREVIATION	DESCRIPTION
EVMS	DHW mix solenoid valve
EVZ	Zone solenoid valve
EXP	Expansion card
FA	Noise filter
FAST	Combined boiler (instantaneous DHW + technical water)
FE	Ferrite ring
FL	Flow switch
FLM	Flow meter
FR	Line filter
FU	Fuse
FV	Photovoltaic
FY	Y Filter
G	Gas supply
GI	Expansion joint
GN	Green
GR	Grey
GS	Solar unit
GSM	Phone dialler
HiT2	Cascade manager
HP	HP high pressure switch
HYBW	Hybrid Wall
I	Inductance
ID	Digital input configurable
IDFV	Photovoltaic digital input
IG	Main switch
IMP	System
INAIL	INAIL safety unit
JP	Jumper
KA	Relè
KAP	Circulator relay
KARA	DHW heating element relay
KARI	System heating element relay
KAV	Fan relay
KIT HYBRID	Hybrid kit
L	Line / Live
LBL	Light Blue
LGR	Refrigerant gas line
LP	HP low pressure switch
LR	Refrigerant fluid line
M	System delivery
MA	Pressure gauge
MB	Hot water tank delivery
MCA	Boiler delivery
MCB	Magneto-thermal switch
MEQ	Terminals external to panel
MIQ	Terminal block inside the panel
MMI	Control interface
MO	Generic motor
MODBUS	Connections for MOD-BUS input
MPDC	Delivery from heat pump
MR	Terminal block
MSOL	Solar delivery

ABBREVIATION	DESCRIPTION
MV	Fan motor
MVG	Gas valve modulator
N	Neutral
NC	Condensate neutraliser
OP	Mechanical timer
OR	Orange
OT	OpenTherm communication protocol
OV	Thermostatic diverter mixer valve
P	Circulator
PAC	Water pressure switch
PAR	Air pressure switch
PB	Calorifier circulator
PCP	Main control panel
PDC	Heat pump
PE	Earth Protection
PFU	Smoke pressure switch
PGM	Gas low pressure switch (methane / LPG)
PI	System circulator pump
PIAT	High-temperature circulator
PIBT	Low-temperature system circulator pump
PK	Pink
PM	System modulating circulator
Pmax	High pressure switch
Pmin	Low pressure switch
PR	Re-starter circulating pump
PRC	Recirculation circulator
PRIACS	Domestic hot water instantaneous preparer
PS	Domestic hot water circulator
PSAUX	Auxiliary DHW storage tank circulating pump
PSOL	Solar system circulator
PSRO	Burner remote unlock button
PUFFER	Puffer
PUFW	Puffer Wall
QE	Electrical panel
QE MEM	MEM electrical panel
R	System return
RB	Hot water tank return
RC	Recirculation
RCA	Boiler return
RCO	Fuel return
RD	Red
RDT	Radiator
RE	Electrical resistance
REACS	DHW heating element
REAG	Anti-freeze heating element
REimp	System heating element
RGPDC	Heat pump regulator
RGSOL	Solar controller
RISCO	Fuel heater
RPDC	Return to heat pump

ABBREVIATION	DESCRIPTION
RPSOL	Solar circulator return
RRF	Radio-frequency receiver
RSOL	Solar return
S	Generic temperature sensor
SA	Voltage indicator light
SAE	External air intake probe
SAUX	Auxiliary sensor
SB	Calorifier drainage outlet
SBB	Burner lock-out indicator light
SBL	Calorifier sensor (DHW)
SBLA	Storage Tank High Sensor ACS
SBLAUX	Auxiliary hot water storage tank sensor
SBLB	Storage Tank Low Sensor ACS
SBS	Solar hot water tank sensor
SBT	Low temperature sensor
SC	Condensate outlet
SCC	Boiler board
SCI	Hydronic board
SCM	Control board
SCMM	Master control board
SCV	Fan control probe
SDE	Junction box
SE	Outdoor air temperature probe
SEP	Pressure sensor
SF	Flame sensor
SFU	Smoke flue gas probe
SGR	Refrigerant gas sensor
SI	System drainage outlet
SIA	Air inlet probe
SID	Hydraulic separator
SL	Level sensor
SLB	Battery liquid sensor
SM	Delivery sensor
SMC	Boiler delivery sensor
SMCA	Cascade delivery probe
SMG	Generators delivery probe
SMI	System delivery sensor
SP	Plate heat exchanger
SPAC	Water pressure switch activation indicator light
SPS	Domestic hot water preheating sensor
SPU	Puffer probe (technical water - no DHW)
SR	Return sensor (SR)
SRC	Boiler return sensor
SRE	Relay board
SRE2	2-relay board
SRI	System return probe
SRRF	Radiofrequency sensor

ABBREVIATION	DESCRIPTION
SS	Domestic hot water sensor
SSC	Compressor discharge sensor
SSIC	Boiler inlet DHW probe
SSOL	Solar manifold probe
SSP	Plate heat exchanger liquid temperature probe
SSR	Solid state relay
STC	Condenser temperature sensor
SUA	Water outlet sensor
SVB	Tank relief valve
SVI	System relief valve drainage outlet
SVS	Safety valve outlet
T	Thermometer
TA	Room thermostat
TA230	Room thermostat 230 V
TAC	Heating room thermostat
TACS	Domestic water thermostat
TAF	Cooling room thermostat
TAZ	Zone room thermostat
TBL	Hot water tank thermostat
TC	Boiler thermostat
TFU	Smoke thermostat
TFUS	Thermal fuse
TL	Temperature-limit thermostat
TMIN	Minimum-temperature thermostat
TPAC	Water pressure transducer
TR	Heating thermostat
TRA	Ignition transformer
TS	Safety thermostat
U	Domestic hot water output
UE	External unit
UG	Nozzle
UI	Internal unit
UR	Humidistat
V	Fan
V3W	3-way valves
V4W	4-way valve
V5W	5-way valve
VBP	By-pass valve
VC	Automatic filling valve
VCC	Fan coil unit (heating only)
VCF	Fan coil unit (heating/ cooling)
VD	Diverter valve

ABBREVIATION	DESCRIPTION
VD I/E	Summer / Winter diverter valve
VDAUX	DHW storage tank diverter valve
VDCF	Hot/cold diverter valve
VEE	Electronic expansion valve
VEM	Mechanical expansion valve
VES	Expansion vessel
VESOL	Solar expansion vessel
VF	Fan coil unit (cooling only)
VGP	Pilot gas valve
VI	Violet
VIC	Fuel shut-off valve
VMIX	System mixer valve (no DHW)
VMIXS	DHW mixer valve
VP	Pressostatic valve
VR	Check valve
VS	Relief valve
VSA	Automatic bleed valve
VT	Thermal flywheel
VZ	Zone valve
W1	Remote Control Connector (CR)
W2	Connector for Room Thermostat (TA2) - External Probe (SE)
W3	Power supply connector
W4	Boiler connector (gas side) – Main control panel
W5	HP-main control panel connector
WH	White
WIFI	WiFi antenna board
Y	Yellow
YG	Yellow/Green
ZBT	Low-temperature zone (heating only)
ZBTC	Low-temperature zone (heating only)
ZBTF	Low-temperature zone (cooling only)

Dear Customer,
Thank you for purchasing a gas-fired water heater **Sime MINI OF VA**, a new-generation device endowed with technical and performance features that allow you to satisfy your instant domestic hot water requirements with the utmost safety and limited running costs.
We suggest getting **Sime MINI OF VA** started within 30 days from the date of installation by professionally qualified personnel, so that you can benefit from both the legal warranty and the conventional **Sime** warranty included at the end of this manual.

RANGE

Model	Code
MINI 11 OF VA (Methane)	8112638
MINI 11 OF VA (Lpg)	8112639
MINI 14 OF VA (Methane)	8112640
MINI 14 OF VA (Lpg)	8112641

CAUTION
Any optional accessories can be ordered separately. The relevant codes and technical specifications can be found in the current price list.

MANUAL STRUCTURE

This manual is organized as follows.

COMPLIANCE

- Gas Appliances EU Regulation 2016/426
- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU
- Ecodesign Directive 2009/125/EC
- Regulations (EU) Nos. 812/2013 - 814/2013
- Energy labelling Regulation (EU) No. 2017/1369

CE 0063/24

Please refer to the technical data plate for the serial number and year of manufacture.

SYMBOLS

WARNING
To indicate actions which, if not carried out correctly, can result in injury of a general nature or may damage or cause the appliance to malfunction; these actions therefore require particular caution and adequate preparation.

ELECTRICAL HAZARD
To indicate actions which, if not carried out correctly, could lead to injury of an electrical nature; these actions therefore require particular caution and adequate preparation.

PROHIBITION
To indicate actions which MUST NOT BE carried out.

CAUTION
To indicate particularly important and useful information.

USER INSTRUCTIONS

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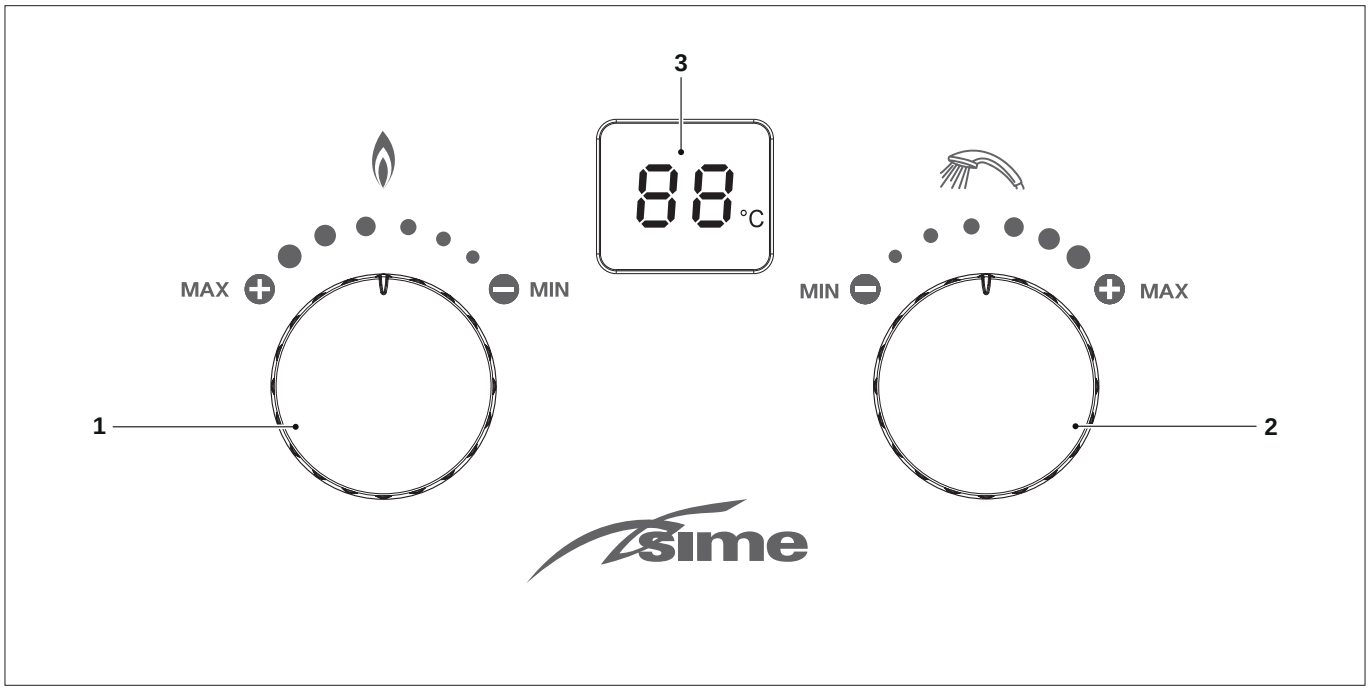
1 OPERATING WITH THE WATER HEATER

1.1 Presentation

Sime MINI OF VA is a domestic gas instantaneous water heater with low pollutant emissions and a nominal heat input (Hi) of 22 and 28 kW. Interface with LED display. Compact water-cooled burner with electronic ignition, featuring battery power supply for installation without electrical connections. This appliance must be installed in a room separate from inhabited rooms (e.g. a balcony), where there is good ventilation, but not subject to strong wind. Digital control to automatically maintain a constant outgoing water temperature. Self-monitoring system protection, auto-switching off protection, overheating protection and excessive temperature protection. The ignition of the pilot valve guarantees correct ignition.

Control panel



KNOBS

1 **Adjustment of the gas flow** supplying the burner.
2 **Adjustment of the water flow** that is heated by the heat exchanger.

DISPLAY

3 **Indication of the water temperature**.
During the water heater's normal operation, it shows the temperature of the water leaving the water heater. In case of abnormal operation, the error code is displayed.

1.2 Preliminary checks

WARNING

- Should it be necessary to access the areas in the bottom part of the appliance, make sure that the system components and pipes are not hot (risk of burning).
- Before replenishing the heating system, put on protective gloves.

The initial start-up of **Sime MINI OF VA** water heater must be carried out by professionally qualified personnel, after which the water heater can function automatically. It may be necessary for the User to restart the appliance automatically, without contacting the technician; for example, after a holiday.

Preliminary operations upon start-up:
- make sure that the gas used matches the one indicated on the appliance's label;
- make sure that the ventilation holes are open
- check that the fuel and water circuit shut-off valves are open
- check that the batteries are correctly inserted inside their housing and sufficiently charged for water heater operation. If batteries need to be replaced, see paragraph "**Replacing the batteries**".

1.3 Ignition

WARNING

During the appliance operation, the temperature near the flame viewing window could be high. Avoid any contact because there may be the risk of burns.

After completing the preliminary checks, to start up the water heater:
- open one or two domestic hot water taps
- the appliance will be immediately ready for operating whenever domestic hot water is drawn.

To adjust domestic hot water temperature, see item "**Water temperature adjustment**".

CAUTION

If the appliance does not work, make sure that gas and/or cold water valves are open. Make sure that the appliance is on and that the batteries are correctly inserted inside their housing and sufficiently charged for water heater operation. When closing the gas valve, the appliance automatically switches off.

1.4 Gas flow adjustment

The knob can be used to select the gas flow: minimum, maximum or intermediate positions, depending on how much power the burner must deliver.
Turning the knob anticlockwise causes the appliance to work at maximum power. If the temperature of the water coming out of the taps is too high, for example in summer, or when a lower water flow is required at a lower temperature, turn the knob clockwise. This will reduce the power and, consequently, the gas consumption.
In the **MAX** position, the burner operates at 100% of its capacity (with maximum gas consumption). In the **MIN** position, the appliance operates at the minimum of its capacity (with minimum gas consumption).

1.5 Water flow adjustment

To increase or decrease the water flow rate, turn the knob clockwise to increase the flow (more water comes out) and anticlockwise to decrease it (less water comes out).

1.6 Water temperature adjustment

To adjust the temperature of the hot water coming out of the taps, turn the gas flow valve and the water flow valve until you read the desired temperature on the display.

WARNING

Water at temperature above 50 °C causes severe burns. Always check water temperature before use.

CAUTION

The temperature shown on the screen is the setting temperature, while the water output temperature can vary depending on the length of the piping and the seasonal conditions. It is therefore always necessary to refer to the actual water temperature.

1.7 Operation

Opening the hot water valve

Once you have made the adjustments indicated above, the water heater will be ready for operation in fully automatic mode.
When the hot water tap is opened, an intermittent discharge is generated on the ignition electrode, which causes the burner to ignite.
After a few seconds hot water will start coming out. The display will show the output water temperature setting.

Adjusting the temperature during hot water delivery

During use, it is possible to adjust the temperature of the outgoing hot water using knobs or .
After opening the hot water valve and waiting for the water heater to start, set the temperature as described in "**Water temperature adjustment**".

CAUTION

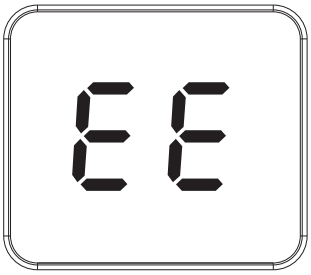
If the hot water tap is opened but only cold water comes out, turn the knob to select the gas flow rate and the knob to set the DHW flow rate. If after this operation cold water continues to come out, contact the Service Centre.

Closing the hot water valve

The water heater switches off when the hot water tap is shut. When the hot water valve is re-opened, the appliance will display the latest temperature set.

1.8 Fault e malfunction codes

If a malfunction/fault is detected during water heater operation, the display will show the malfunction code (e.g. "EE").



It is possible to proceed as follows:
- close the hot water tap and re-open it
- move the knob to **MIN** until the appliance switches off, then switch it back on by turning the knob anticlockwise
- close the gas valve and remove the batteries, then insert the batteries again and open the gas valve.

If this operation is not successful, **ONLY ONE MORE ATTEMPT** can be made, therefore:
- close the gas isolation valve
- remove the batteries, refer to paragraph "**Replacing the batteries**"
- contact the Qualified Technical Personnel.

CAUTION

For the complete list of malfunction codes, refer to section "**Malfunctions and possible solutions**".

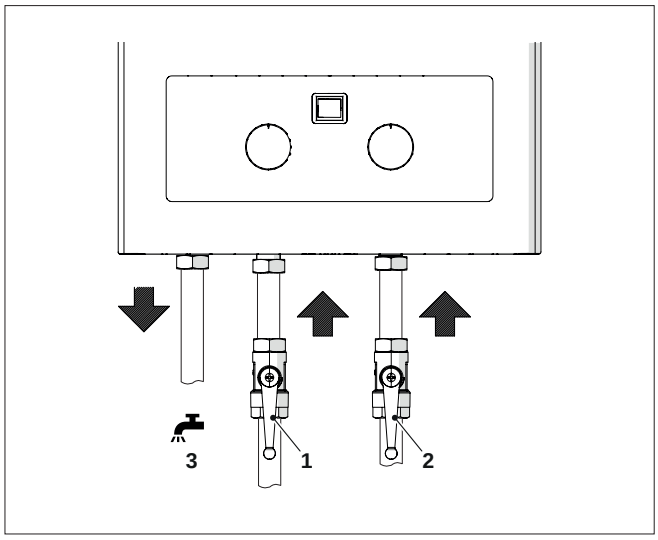
CAUTION

Should you see an alarm not described here, contact a qualified technical professional.

2 SAFETY PRECAUTIONS

CAUTION

To prevent possible accidents and damages to the appliance, the User must rigorously observe the following safety precautions!



2.1 Anti-freeze prevention

If the appliance is installed in a place where the piping could potentially freeze and the ambient temperature is near or below 0°C, we recommend draining the appliance to prevent ice from building up.
Proceed as follows:
- remove the batteries, refer to paragraph "**Replacing the batteries**"
- close the gas supply valve (1) present on the line
- close the water circuit shut-off valves (2)
- open the valve on the hot water outlet (3).

To fill the appliance again, open the shut-off valves of the water circuit and open the hot water taps until water comes out.

2.2 Preventing fires due to gas leaks

WARNING

If there is a gas leak, open the windows and door of the room. In this situation:
- strictly avoid starting flames
- do not press the switch of any electrical device
- do not insert or pull out any power plug

Any flame or spark could cause an explosion.

If the appliance is not used for a long period, it must be switched off as described in chapter "**Shutdown**".

To prevent any fire caused by gas leaks, perform the following checks as described in paragraph "**Periodic checks**":
- check that the gas connectors are not subject to leakages;
- check the gas pipe and, if necessary, replace it to prevent potential gas leaks.

2.3 Fire prevention

- Do not leave the water heater unsupervised while it is running.
- Do not leave containers with flammable substances in the room where the appliance is installed.
- Do not place towels or clothing above the water heater.
- If the mains water supply is interrupted, close the gas valve (1) and the water valves of the water circuit (2).
- If a gas cylinder is used, it must not be tilted or turned over as the gas can easily flow into the water heater and trigger a fire.

WARNING

Prevent any alterations to the watertight components sealed by the Manufacturer: a fire or explosion can cause damage to objects, personal injury or death.

2.4 Preventing carbon monoxide poisoning

To prevent possible carbon monoxide poisoning, have the following checks carried out by professionally qualified personnel, as described in paragraph "**Periodic checks**":
- inspection and cleaning of the combustion air discharge and inlet pipes;
- removal of dust and carbon encrustations present on the heat exchanger.

2.5 How to damage abnormal situations

In the event of abnormal combustion (e.g. flame return, switching off or black smoke, etc.), unusual smells, noise or other abnormal conditions, keep calm and close the gas valve. Subsequently, contact professionally qualified personnel or the gas supply company for the necessary repairs or adjustments.

2.6 Preventing burns

- Be careful not to get burned by excessively hot water when opening the valve.
- To prevent burns during use, and immediately afterwards, do not touch any part of the water heater, in particular the flame inspection window or the front panel, with the exception of the knob and control panel.

3 SHUTDOWN

3.1 Temporary shutdown

If the user is away temporarily, for a weekend, short trip etc and if the outside temperature is above ZERO:
- close the gas valve;
- check that the burner flame is off.

CAUTION
If the outdoor temperature can fall below ZERO, since the appliance does NOT have an "antifreeze function":
- complete the entire shutdown procedure described above
- fully drain the water present in the water heater circuit, refer to item "**Refilling or emptying**".

3.2 Shutting down for long periods

If the water heater is to be left unused for a long period, the following operations need to be carried out:
- turn the knob to **MIN**
- close the gas valve
- check that the burner flame is off
- close the domestic water system shut-off valves
- drain the domestic system if there is the risk of freezing, refer to item "**Refilling or emptying**".

CAUTION
Contact the Qualified Technical Personnel if the procedure described above cannot be easily carried out.

4 MAINTENANCE

4.1 Adjustments

For the appliance to operate correctly and efficiently it is recommended that the User calls upon the services of a Professionally Qualified Technician to carry out **ANNUAL** maintenance.

CAUTION
Maintenance interventions must ONLY be carried out by professionally qualified personnel who will follow the indications provided in the INSTALLATION AND MAINTENANCE MANUAL.

4.2 External cleaning

WARNING
- Should it be necessary to access the areas in the bottom part of the appliance, make sure that the system components and pipes are not hot (risk of burning).
- Before performing any maintenance, put on protective gloves.

4.2.1 Cleaning the cladding

When cleaning the cladding, use a cloth dampened with soap and water or alcohol for stubborn marks.

PROHIBITION
Do not use abrasive products.

5 DISPOSAL

5.1 Disposal of the equipment (European Directive 2012/19/EU)

The product and electrical and electronic equipment coming from households may not be disposed of as normal mixed urban waste at the end of their service life but must be disposed of, pursuant to Directives 2012/19/EU and Italian Legislative Decree 49/2014, in appropriate withdrawal and collection facilities. For more information on authorised collection centres, please contact your local municipality or your retailer. Each country may also define specific rules for the treatment of electrical and electronic waste. Before disposing of the device, refer to the regulations in force in your country.

DESCRIPTION OF THE APPLIANCE

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6 DESCRIPTION OF THE APPLIANCE

6.1 Characteristics

Sime MINI OF VA is a domestic gas instantaneous water heater with low pollutant emissions and a nominal heat input (Hi) of 22 and 28 kW. Interface with LED display. Compact water-cooled burner with electronic ignition, featuring battery power supply for installation without electrical connections. This appliance must be installed in a room separate from inhabited rooms (e.g. a balcony), where there is good ventilation, but not subject to strong wind. Digital control to automatically maintain a constant outgoing water temperature. Self-monitoring system protection, auto-switching off protection, overheating protection and excessive temperature protection. The ignition of the pilot valve guarantees correct ignition.

Automatic operation
- To obtain hot water, simply turn the hot water tap or the shower tap. When the tap is closed, the flame dies out automatically.
- Independent control of the water and gas flows facilitates the regulation of the water temperature.

Innovative design
- Elegant shape and easy to install.
- The advanced energy-saving combustion technology favours efficient combustion in particular.
- The appliance also switches on with a low water pressure (0,3 bar), to adapt to the needs of people living in tall buildings.
- The ignition of the pilot valve guarantees correct ignition.

Other distinctive features of **Sime MINI OF VA** water heaters include:
- **Installation flexibility.** Particularly compact dimensions, especially depth-wise, which make them suited to any available space.
- **Maximum comfort.** Automatic electronic ignition and flame modulation based on the water flow to obtain a correct and constant temperature, even with pressure variations in the network. The LCD indicates the water temperature that can be selected, between 35°C and 65°C, and the possible malfunctions.
- **Maximum safety.** The **Sime MINI OF VA** water heater is equipped with various safety protections.
- **Configuration for combination with solar thermal collector.** The **Sime MINI OF VA** water heater can receive preheated water from a solar system with a temperature between 35°C and 65°C. Depending on the selected setpoint and the water inlet temperature, the power is modulated to achieve maximum comfort, avoiding unnecessary ignitions.

6.2 Supply

Sime MINI OF VA appliances are delivered in a single package protected by cardboard packaging.

The plastic bag found inside the packaging contains the following:
- instruction manual
- energy efficiency label
- Bag containing:
  - screws and wall plugs
  - gas fitting with seal
  - no. 2 type-D batteries
  - no. 1 adhesive aluminium foil roll.

6.3 Symbols on the appliance

The appliance may display the following symbols:

SYMBOL	DESCRIPTION
	Indicates the presence of particularly dangerous zones in the appliance.
	Indicates the presence of live electrical parts in the appliance.
	Indicates that information concerning the appliance is available, for example the instruction manual.
	Indicates that personnel assigned to perform maintenance on the appliance must operate in accordance with the instruction manual.
	Indicates that the instruction manual must be read.
	Indicates that the appliance must be connected to an earthing system.

6.4 Check and safety devices

Sime MINI OF VA water heaters are equipped with the following safety devices:
- thermostat controlling the smoke outlet temperature: in case of high temperatures, the burner turns off automatically
- IC flame sensor: if the flame dies out suddenly, the sensor stops the supply of gas
- protection in case of insufficient water flow pressure
- protection in case of dry burning: the gas valve turns off automatically
- protection in case of obstruction of the gas exhaust pipe: the gas valve turns off automatically (with a pre-set delay).

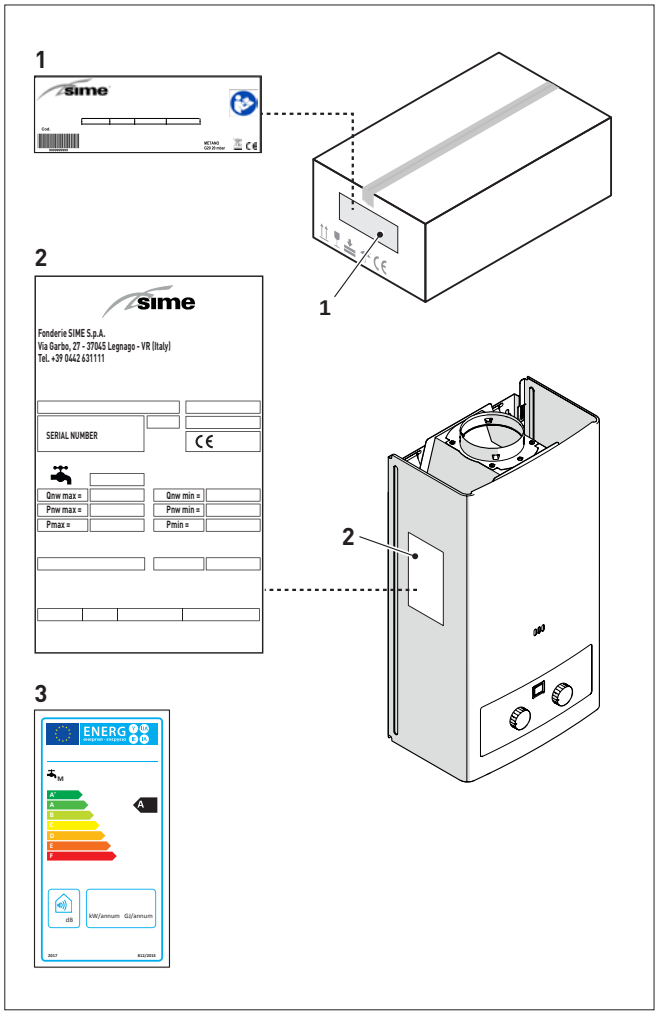
6.5 Identification

Sime MINI OF VA water heaters can be identified through:

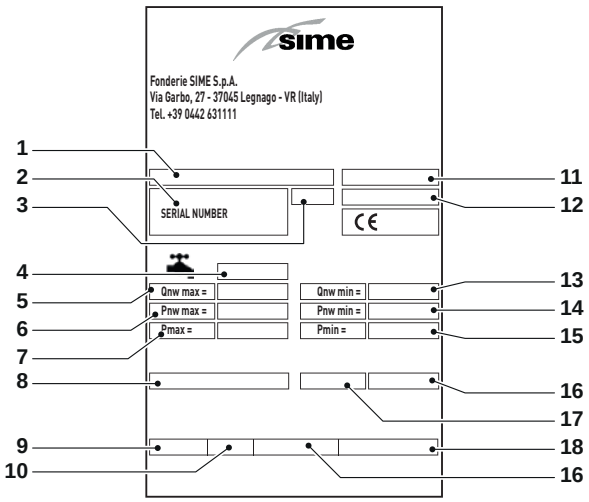
1 **Packaging label:** it is located on the outside of the packaging and includes the code, serial number of the water heater and the barcode.

2 **Technical Data Plate:** it is located on the side of the appliance and includes the technical data, appliance performance data and any other information required by the legislation in force the country where the appliance is used.

3 **Energy Efficiency Label:** it is contained in the document bag and indicates to the User the energy saving and lower environmental pollution levels that the appliance reaches.



6.6 Technical Data Plate

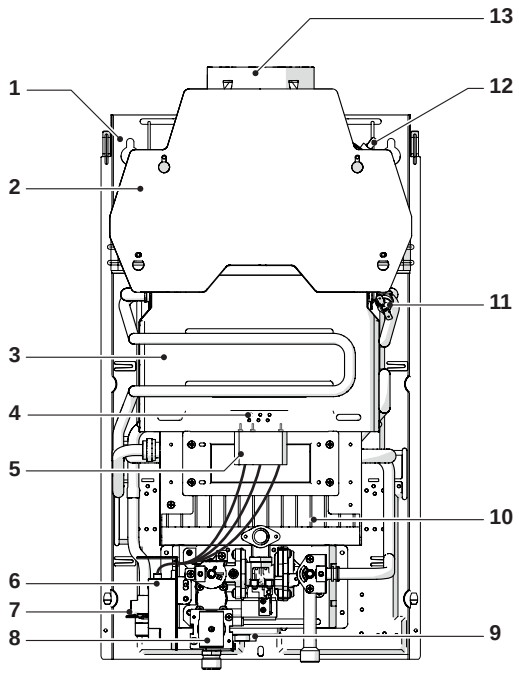


1 *First name*
2 *Serial number*
3 *Year of manufacture*
4 *DHW content*
5 *Max DHW heat input*
6 *Max DHW useful power*
7 *Maximum DHW operating pressure*
8 *Power supply-maximum absorbed power*
9 *Country of intended installation*
10 *Appliance category*
11 *Code*
12 *PIN no.*
13 *Min DHW heat input*
14 *Min DHW useful power*
15 *Minimum DHW operating pressure*
16 *Type of gas and supply pressures*
17 *Electrical protection degree*
18 *Appliance classification*

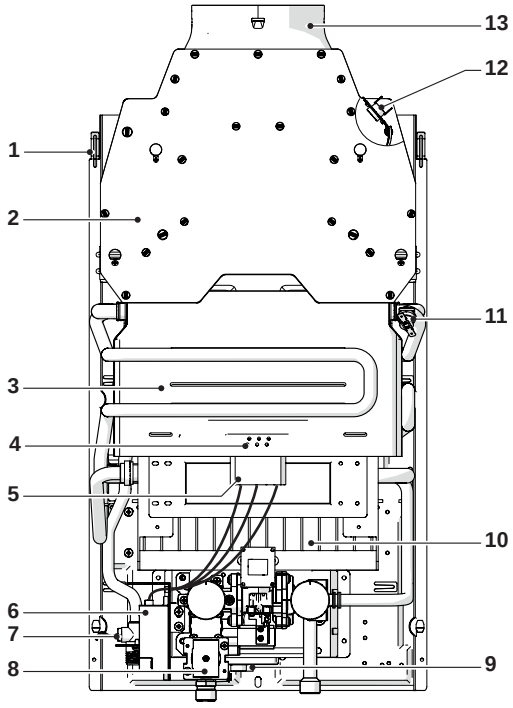
CAUTION
Tampering with, removing or failing to display the identification plate or carrying out any other operation which does not allow safe identification of the product or which may hinder installation and maintenance operations.

6.7 Functional elements of the appliance

MINI 11 OF VA



MINI 14 OF VA

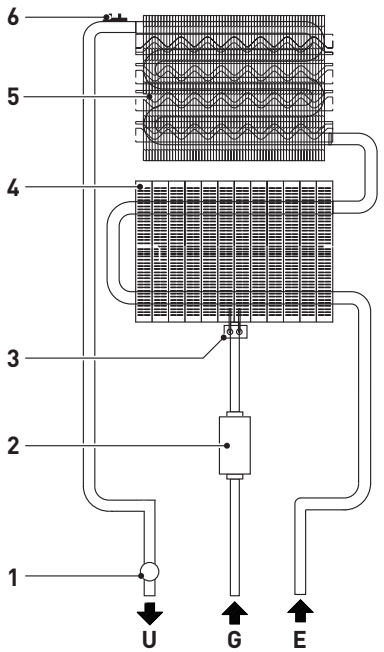


1 *Rear frame*
2 *Smoke chamber*
3 *Exchanger*
4 *Flame viewing window*
5 *Ignition / detection electrodes*
6 *Main P.C.B.*
7 *Hot water outlet sensor*
8 *Gas valve*
9 *Battery*
10 *Burner*
11 *Safety thermostat*
12 *Smoke thermostat*
13 *Smoke outlet*

6.8 Technical features

DESCRIPTION			MINI OF VA	
CERTIFICATIONS			**11**	**14**
Country of intended installation			IT – ES – HR – GR – GB – CZ – PT – PL – AT	
Fuel			2H – G20 – 20 mbar 3P – G31 – 37 mbar	
PIN number			1336DN039	
Category			II2H3P	
Appliance classification			B11BS	
DHW PERFORMANCES				
Rated heat input (Hi)	kW		22	28
Rated heat input (Qnw max)	kW	G20	19,2	24,5
		G31	19,2	24,1
Minimum heat input (Qnw min)	kW	G20	8,5	10,2
		G31	9	10,5
Minimum heat output	kW	G20	7,5	9
		G31	7,9	9
Continuous DHW flow rate (ΔT 25°C)	l/min		11	14
Max / Min DHW pressure (Pmw)	bar		10 / 0,3	10 / 0,3
ELECTRICAL DATA				
Type of power supply			2 dry batteries	
Power supply voltage	Vac		3	
Power-up method			Automatic power-up with impulse controlled directly by the opening of the water	
COMBUSTION DATA				
Fume mass flow rate	g/s	G20	16	19
		G31	15	21
Average temperature of combustion by-products	°C	G20	145	162
		G31	155	170
PIPE COUPLINGS				
Gas inlet			1/2" G	1/2" G
Cold water inlet			1/2" G	1/2" G
Hot water outlet			1/2" G	1/2" G
Combustion gas outlet	mm		Ø110	Ø130

6.9 Main water circuit



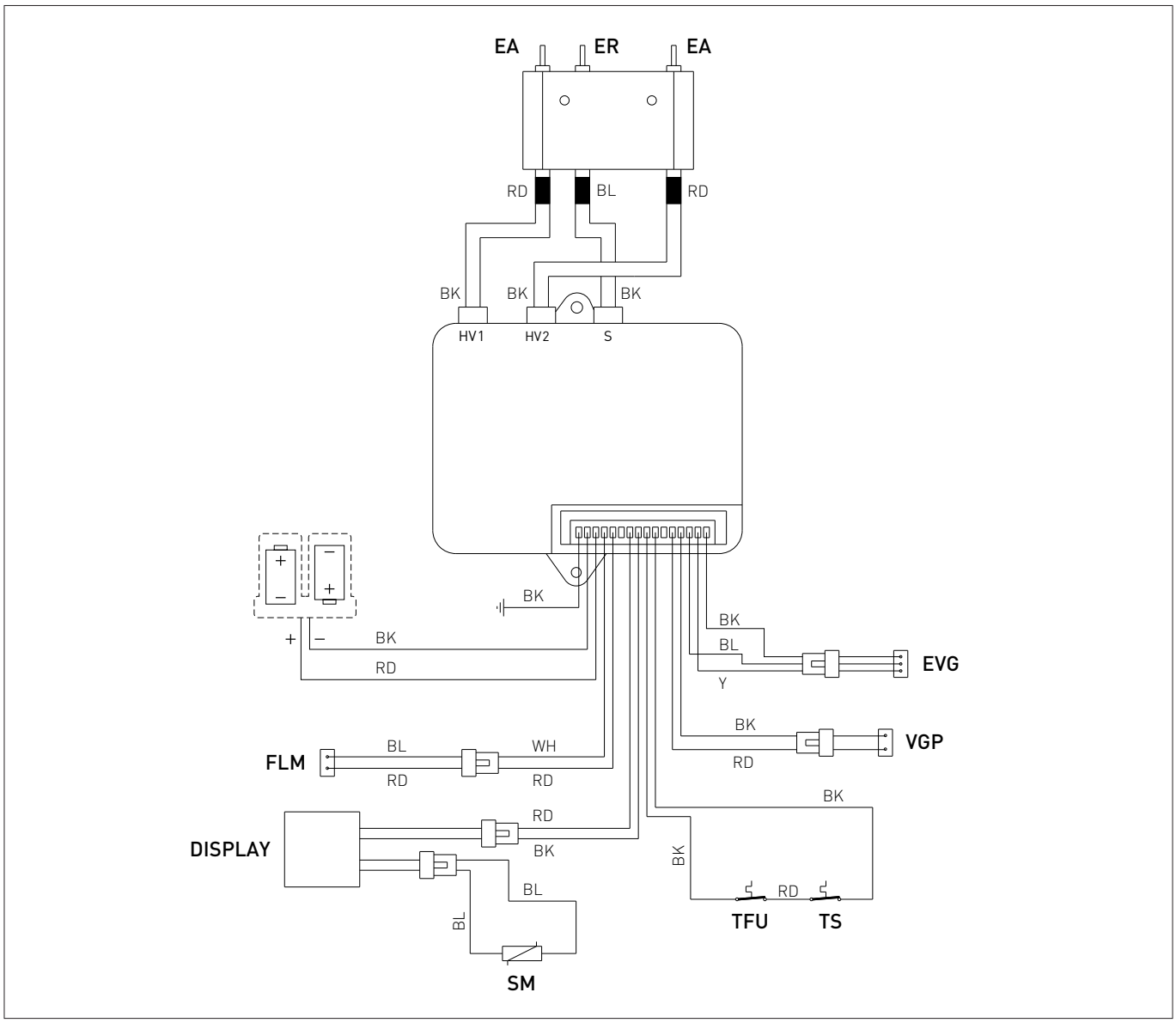
KEY:

1 *Domestic hot water outlet sensor*
2 *Gas valve*
3 *Ignition / Detection electrode*
4 *Burner*
5 *Primary heat exchanger*
6 *Overtemperature thermostat*

U *Domestic hot water output*
E *Domestic hot water inlet*
G *Gas supply*

6.10 Wiring diagram

NOTE: *see the legend at the beginning of the manual in the specific paragraph "**LIST OF ABBREVIATIONS USED IN THE MANUAL**".*



CAUTION
Users must:

- To mount an omnipolar residual-current circuit breaker conforming to EN standards **that allows for completely disconnecting the system in overvoltage category III conditions (that is, with a gap of at least 3 mm between the open contacts)**.
- Keep the power cables always separate from the signal cables. To avoid interference problems, always use shielded signal cables.
- Respect the connections L (Line) - N (Neutral).
- Connect the earth wire to an effective earthing system.

CAUTION
Users must:

- The system's power connection is of the "Y" type, so the power cable may only be replaced by the manufacturer or the service department.

CAUTION
The manufacturer is not responsible for any damage caused by failure to earth the appliance or failure to observe the information provided in the wiring diagrams.

PROHIBITION
Do not use water pipes for earthing the appliance.

INSTALLATION AND SERVICING INSTRUCTIONS

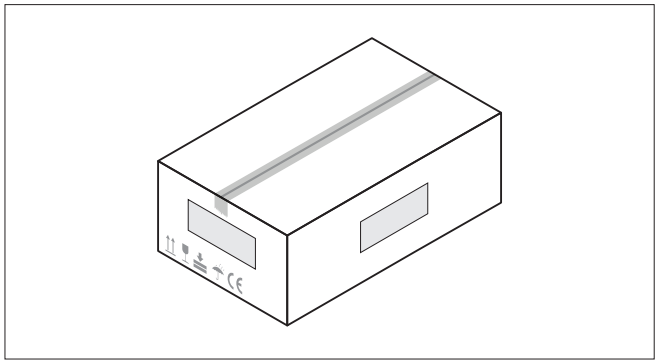
TABLE OF CONTENTS

7 INSTALLATION

WARNING
The appliance must only be installed by qualified professionals **who MUST wear** suitable protective safety equipment.

7.1 Receiving the product

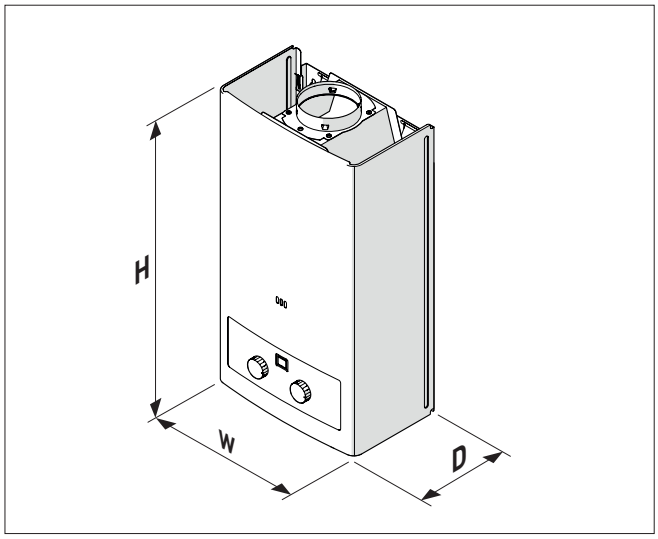
MINI OF VA appliances are delivered in a single unit protected by cardboard packaging.



The plastic bag found inside the packaging contains the following:
- installation, user and maintenance manual
- gas fitting with seal
- energy efficiency label
- screws and wall plugs
- no. 1 adhesive aluminium foil roll.

PROHIBITION
Do not leave packaging material around or near children since it could be dangerous. Dispose of it as prescribed by legislation in force.

7.2 Dimensions and weight

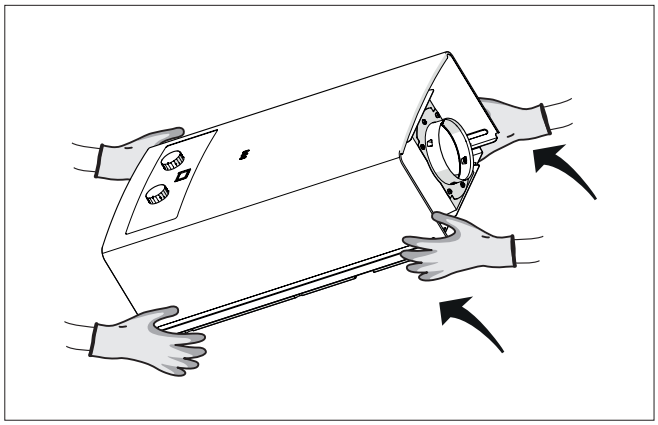


Description	MINI OF VA	
	11	14
W (mm)	350	370
D (mm)	225	
H (mm)	636	696
Weight (kg)	12.4	13.9

Dimensional data are purely indicative. Refer to the actual product.

7.3 Handling

Once the packaging has been removed, the appliance is moved manually by tilting and lifting it, gripping the "solid" parts such as the base and structure as indicated in the figure.



WARNING
Use suitable tools and accident protection when removing the packaging and when handling the appliance. Observe the maximum weight that can be lifted per person.

7.4 Installation room

The room where the appliance is to be installed must comply with the Technical Regulations and Legislation in force.
The installation room must be properly ventilated and have a surface area greater than 7,5 m^3. The wall must include a ventilation hole and a hole for expelling the combustion gases; the ventilation hole must not be smaller than the dimensions indicated in the following table.

Heat output (kW)	Ventilation hole (cm^2)
<12	100
12~16	130
16~28	400

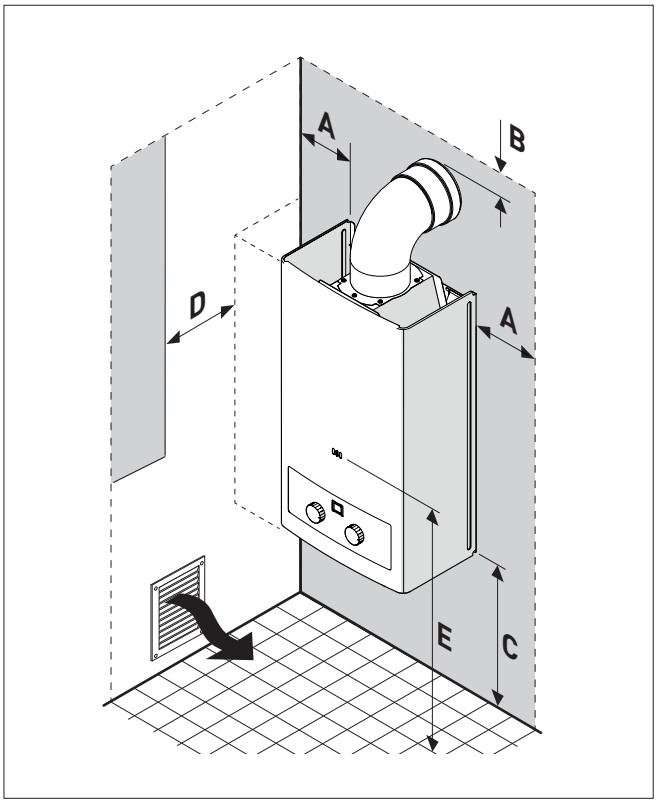
WARNING
If an aspirator is mounted, it must be installed above the water heater, while the ventilation hole must be below it.

PROHIBITION

- Do not install the water heater in points exposed to strong winds, as this may cause the flame to die out and/or incomplete combustion.
- Install the appliance in bedrooms, basements, bathrooms or in any poorly ventilated place.
- Install the water heater in places where special chemicals are used, such as laundry rooms, laboratories, etc. This could cause rust to form and reduce the water heater's life or prevent its normal operation.

7.5 Safety distances

To define the correct positioning of the appliance:
- keep the gas-fired water heater far from combustible substances
- the horizontal distances between the water heater and any electrical systems must be greater than 400 mm
- do not position the appliance above a cooker or other cooking system, so as to prevent fat from the kitchen vapours from depositing on it, which would cause it to function poorly
- the appliance must never be closed in a cabinet or niche, but must be at a certain minimum distance from side walls, so as to facilitate maintenance operations.



Description	Minimum safety distances (from flammable materials)
A - Side (mm)	50 (150)
B - Upper (mm)	50 (150)
C - Lower (mm)	300 (-)
D - Front (mm)	450
E - Flame viewing window (mm)	1550 ÷ 1650

CAUTION

The water heater's flame viewing window must be at eye level (roughly 1.55 m - 1.65 m from the floor) to facilitate inspection of the flame and prevent possible accidents.

CAUTION

Remember to consider the space needed in order to access the safety/adjustment devices and to carry out maintenance interventions.

WARNING

Heat-sensitive walls (for example wooden walls) must be protected with adequate insulation.

7.6 Installing the water heater

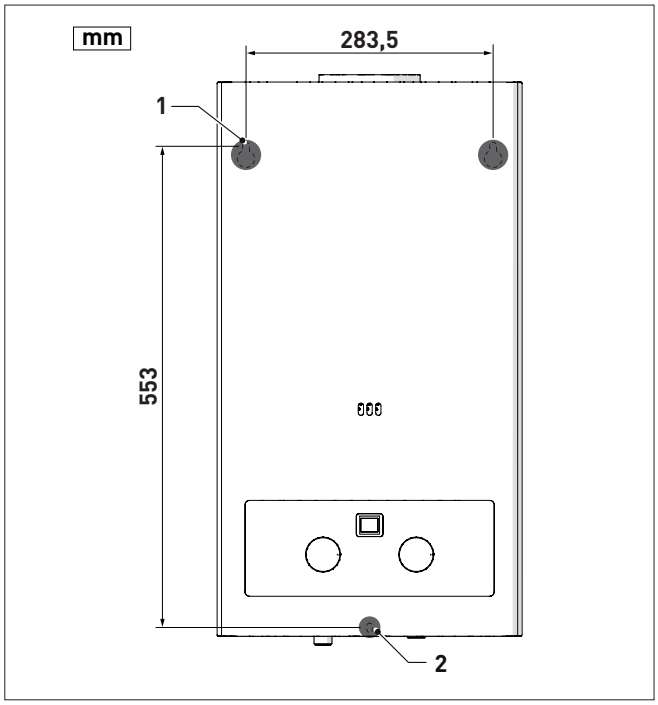
CAUTION

It is important that the device is perfectly vertical and horizontal. Use a spirit level or other suitable tool to check that it is perfectly vertical and horizontal. Where necessary, insert suitable spacers to install the unit in the correct working position.

CAUTION

- Make sure that the appliance is protected against direct sunlight, the weather and damp and wet conditions.
- Before assembling the appliance, the installer **MUST** make sure that the wall supports the weight.
- Remember to consider the space needed in order to access the safety/adjustment devices and to carry out maintenance interventions.

- Drill no.3 holes as shown in the figure and insert the expansion plugs supplied. In the upper holes (1) use the two larger plugs, in the lower hole (2) use the smaller plug.
- Mount the water heater first on the upper plugs, after checking that it is perfectly vertical, then tighten the screws on the lower expansion plug.



7.7 Plumbing connections

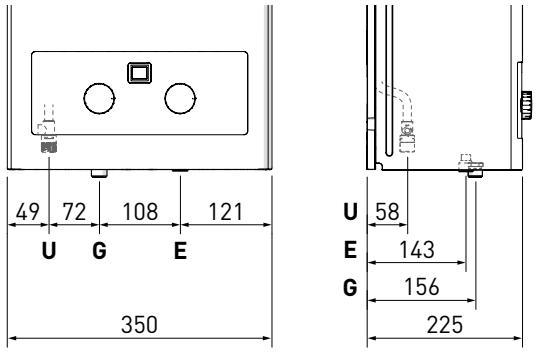
Connect the appliance to the water mains and insert a water shut-off valve upstream of the appliance (available on request).

Cold water inlet:
- the water distribution pipes can be made of different materials to copper, but we recommend using copper pipes for at least 0.92 m before and after the water heater
- use a water inlet pipe having a diameter not inferior to 1/2" to ensure the full flow rate
- there must be enough water pressure to activate the water heater when the hot water tap is opened on the highest floor
- 1/2" copper or brass fittings work optimally if they are connected to connectors. With this type of joint do not use waterproofing paints for pipes or sealing tapes for threading
- make sure that the pipe does not contain dust particles or dirt.

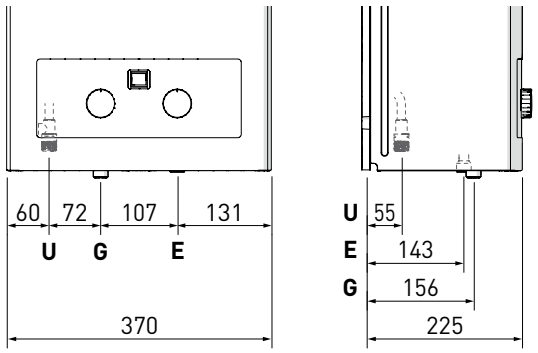
Hot water outlet:
- use a hose or pipe for connection to water jet without tap. If the jet is connected to a tap or switch, the outlet pipe must be made of materials capable of withstanding pressure and heat.

The plumbing connections have the following characteristics and dimensions.

MINI 11 OF VA



MINI 14 OF VA



Description	MINI OF VA
E - Domestic hot water inlet	Ø 1/2"
U - Domestic hot water output	Ø 1/2"
G - Gas supply	Ø 1/2"

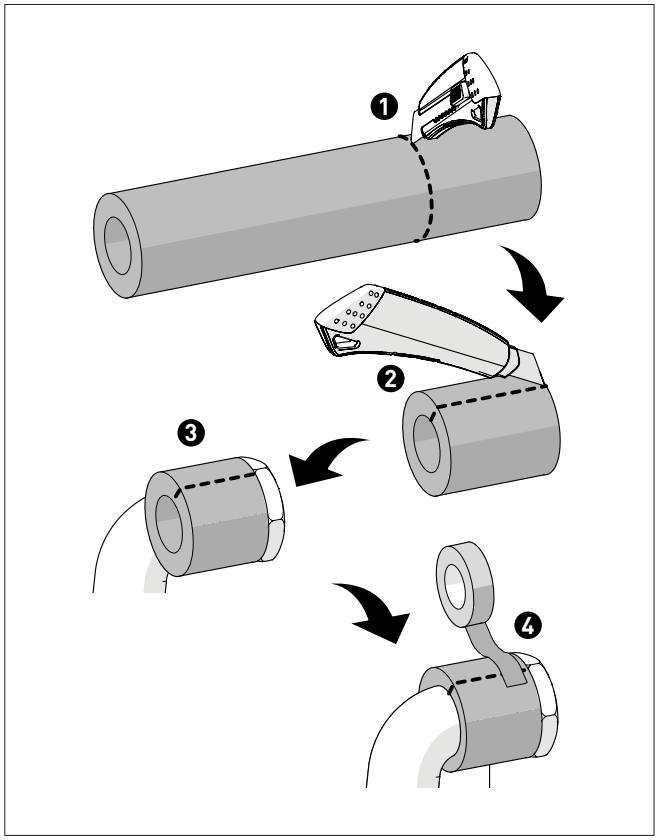
WARNING
- **Do not activate the device without the filter**.

CAUTION
- **The maximum pressure of the appliance is 10 bar**; should this not be the case, fit a pressure reducer.
- Make sure that the water supply pressure is not lower than 0,3 bar.
- If the cold and hot water connections are inverted, the water heater will **NOT** work.

PROHIBITION
To use the water system's pipes as earthing outlets for the electrical or telephone system. They are absolutely unsuitable for this type of use. Serious damage to pipes and the appliance could occur within a short time.

7.8 Thermal insulation of pipes

CAUTION
Once the installation operations have been completed, the exposed parts of pipes and fittings must be isolated using a suitably sized thermal insulation pipe.



7.9 Gas supply

CAUTION
The appliance must be connected to the gas supply in compliance with the installation standards in force in the country where the appliance is used.

CAUTION
If changing the type of gas to be used, carry out the entire procedure described in paragraph "**Gas conversion**".

Before connecting the boiler to the gas mains, the user must ensure that:
- the type of gas and the fuel flow rate comply with those for which the appliance was designed
- the fuel supply pressure falls within the values specified on the data plate
- the pipes are clean
- the gas supply pipe is of equal or greater size than that of the appliance fitting and with a pressure drop lower than or equal to that provided for between the gas supply and the appliance.

WARNING
- Once installation has been completed, check that the joints are air tight as indicated in the installation Standards.
- If gas leaks are detected, close the gas supply. After checking the gas leak, tighten the appropriate fittings.

PROHIBITION
- Introduce into the appliance substances other than air, carbon dioxide or nitrogen.
- Check for gas leaks using matches or flames.

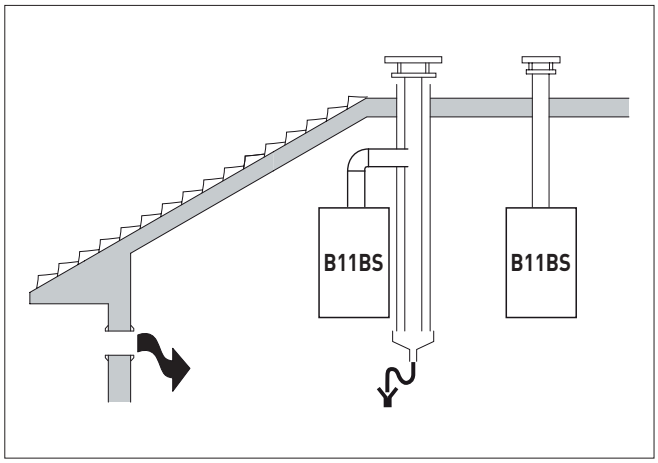
CAUTION
It is recommended that the gas line has a suitable filter.
For use with LPG, we recommend inserting a 0,6 m^3/h pressure reducer.

CAUTION
- All pipes must be new and must not have been used before for purposes other than the supply of gas.
- The pipes must be in good condition and must not have any obstructions inside them.
- Any burred ends must be bored to the exact diameter of the pipe.
- All fittings must be made of malleable iron, yellow brass or approved plastic.

7.10 Smoke outlet and combustion air inlet

Sime MINI OF VA water heaters must be equipped with appropriate flue gas outlet and combustion air inlet ducts.

Permitted outlets



B11
Combustion air inlet into the atmosphere and flue gas outlet to open air.
BS
Device for controlling the correct expulsion of combustion products.

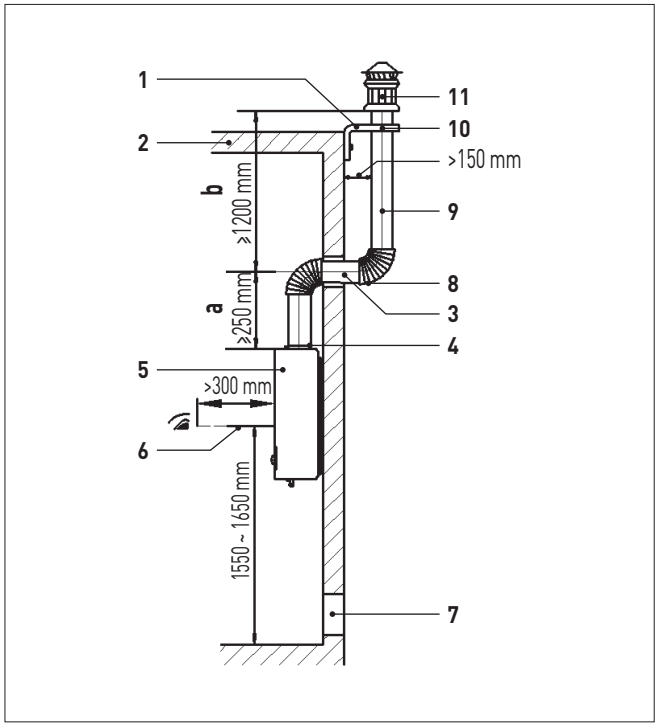
WARNINGS
- The smoke flue and the connection to the flue pipe must be in compliance with the national and local standards and legislation in force in the country where the appliance will be used.
- The use of rigid ducts which are resistant to temperature, condensate, mechanical stress and are air-tight is compulsory.
- Outlet ducts which are not isolated are a risk of danger.
- The flue ducts can be made of aluminum or stainless steel.

WARNINGS
If an aspirator is mounted, it must be positioned above the water heater, while the ventilation hole must be located below it.

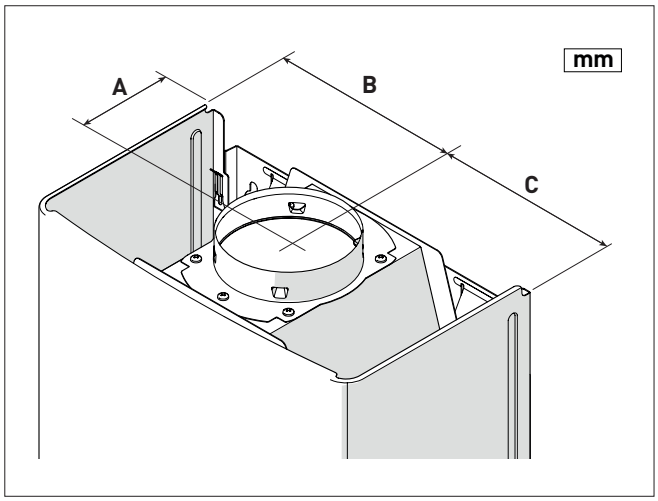
Requirements for correct installation

When installing a combustion gas discharge pipe, the following requirements listed below must be fulfilled:

- the main body of the gas exhaust pipe must be made of an anti-rust metal material
- position the fixed outlet in the hole in the wall then insert the elbow in the water heater's combustion gas outlet so that it does not encounter any obstacles
- the shorter the horizontal distance of the combustion gas discharge pipe the better the result
- the horizontal section of the combustion gas exhaust pipe must have a 1% inclination towards the outside; there must also be a Ø10 mm hole on the lower part of the vertical section of the pipe outside the room to drain the water droplets
- the distance between the discharge pipe and any combustible materials must be greater than 150 mm
- wrap the pipe with thermal insulation material thicker than 20 mm if the pipe crosses a layer of combustible material or a wall
- the outlet of the combustion gas exhaust pipe must be fitted with a waterproof cap which must never be obstructed
- do not insert cement between the combustion gas discharge pipe and the wall, to avoid hindering maintenance operations
- fasten the discharge pipe firmly. For the connection it is possible to use a self-adhesive film to prevent exhaust fumes from returning into the room.
- to protect the exhaust pipe against obstructions, the pipe must be installed as shown in the Figure. It is very important to maintain the dimensions of 1450 mm ≤a + b≤1850 mm.



1 Exhaust pipe bracket
2 Roof
3 Horizontal pipe with 1% inclination towards the outside
4 Combustion gas exhaust pipe clamp
5 Water heater
6 Flame viewing window height
7 Ventilation hole
8 Discharge hole Ø 10 mm
9 Combustion gas exhaust pipe
10 Clamp
11 Terminal

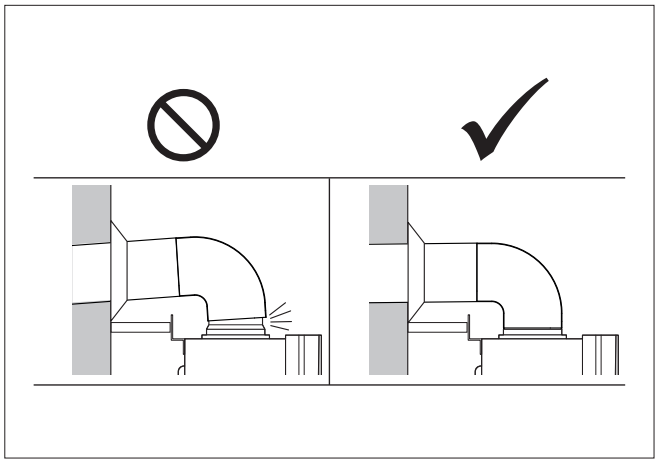


Description	MINI OF VA	
	11	14
A (mm)	104	
B (mm)	175	185
C (mm)	175	185

Precautions for correct installation

CAUTION
The discharge pipe must be installed correctly, or the combustion gases will flow back into the room creating a dangerous situation.

PROHIBITION
Use shared flue gas outlets or outlets in common with other combustion appliances.



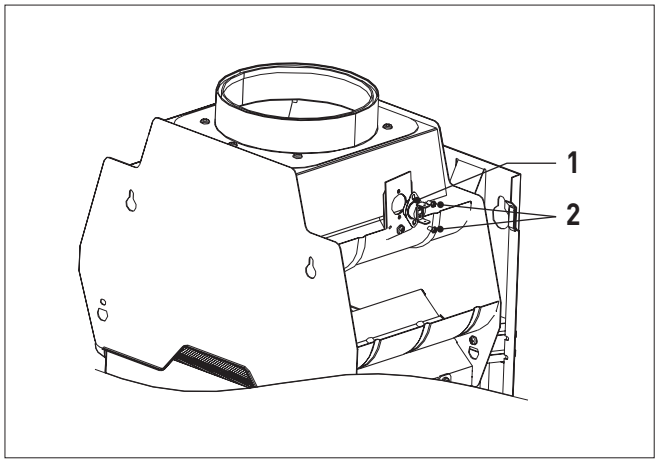
After connecting the pipe, it is necessary to check and ensure that it is properly airtight.

7.10.1 Smoke exhaust control device

PROHIBITION
Stop operation, do not work on the flue gas thermostat. Tampering with it could prevent correct flue gas discharge.

If, when the water heater is activated, the safety device is triggered, check the combustion gas outlet by checking the exhaust with a cold mirror or any other measuring device approved for this purpose.

In case of fault, only use original spare parts, or the safety device may not work properly.



1 Smoke outlet control thermostat
2 Fixing screws

CAUTION
- When the protection device of the outlet block activates, wait 2 or 3 minutes before resetting the thermostat and make sure that the room is adequately ventilated before switching the water heater back on. To restart the water heater, simply open the hot water tap.

CAUTION
- The flue gas thermostat must ONLY be replaced by professionally qualified personnel, who must proceed as described in "**Replacing the flue gas exhaust control device**".

7.11 Characteristics of the water

The water used in the system must fulfil the manufacturer's requirements with regard to the pH value, conductivity, hardness, alkalinity, concentration of chlorides, as inadequate values shall void the warranty; the values of the system's fluid must fall within those listed below:
- the content of soluble salts will not exceed 500 mg/l
- conductivity must not exceed 650 µS/cm
- the fluid pH, at a temperature of 20°, must be between minimum 6 and maximum 8.

The total water hardness must not exceed 30 °F.
We suggest treating the water when the fluid hardness exceeds the defined limits for total hardness, salinity, high conductivity (polyphosphates, softener, etc.).

7.12 Refilling or emptying

Before carrying out any interventions described:
- remove the batteries
- close the gas supply valve present on the line.

7.12.1 REFILL operations

- open the shut-off devices of the water supply system (mounted during installation)
- open one or more hot and cold water valves to fill and bleed the domestic hot water circuit
- once bleeding has been completed, close the hot water valves.

7.12.2 EMPTYING operations

- close the shut-off valve of the water supply system (mounted during installation)
- open two or more hot and cold water valves to bleed the domestic hot water circuit

At the end of the operations:
- open the gas supply valve present on the line
- insert the batteries removed previously.

8 COMMISSIONING

8.1 Preliminary operations

WARNING
The commissioning operations of the appliance must be carried out exclusively by Professionally Qualified Personnel with the **OBLIGATION to wear** adequate accident prevention protections.

Before commissioning the appliance, check that:
- the type of gas is correct for the appliance
- the gas and water circuit shut-off valves are open
- batteries are in their housing and correctly inserted, otherwise refer to paragraph "**Replacing the batteries**"
- the combustion by-product exhaust pipe is suitable and free from any obstructions
- any necessary vents inside the room are open.

8.2 Before commissioning

After completing the preliminary operations, to start up the water heater:
- open the gas valve and verify the tightness of the fittings, including those of the appliance, by verifying that the meter does not signal any passage of gas
- eliminate any gas leaks
- start the appliance by opening the domestic hot water valve

Water temperature check:
- turn the gas flow adjustment knob to check the burner flame, refer to paragraph "**Gas flow adjustment**"
- turn the water flow adjustment knob to check the water temperature, refer to paragraph "**Water flow adjustment**": decrease the water flow to increase its temperature (proceed slowly; if the flame goes out, restore it by increasing the water flow); increase the water flow to decrease its temperature
- the screen will display the hot water temperature, to adjust the temperature, see paragraph "**Water temperature adjustment**" in section INSTRUCTIONS FOR USE
- verify that the appliance works properly and that the flow and temperature of the hot water flowing out of the taps matches the settings on the water heater
- close the domestic hot water tap; the water heater stops working automatically
- perform several ignition and switch-off tests.

CAUTION
- Before use check the water temperature with your hand to avoid burns.

9 MAINTENANCE AND CLEANING

9.1 Warnings and preliminary operations

CAUTION

- The maintenance interventions described must ONLY be carried out the professionally qualified personnel **who MUST wear** suitable protective safety equipment.
- Make sure that the system components and pipes are not hot (risk of burning).

WARNING

Before carrying out any interventions described:

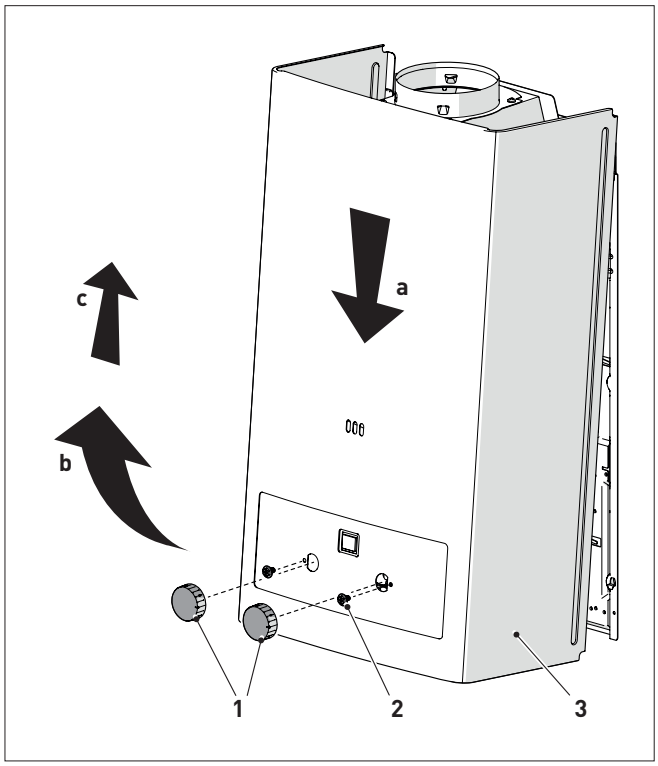
- remove the batteries
- close the gas valve
- make sure that no hot parts inside the appliance are touched.

9.2 Cleaning the inside of the appliance

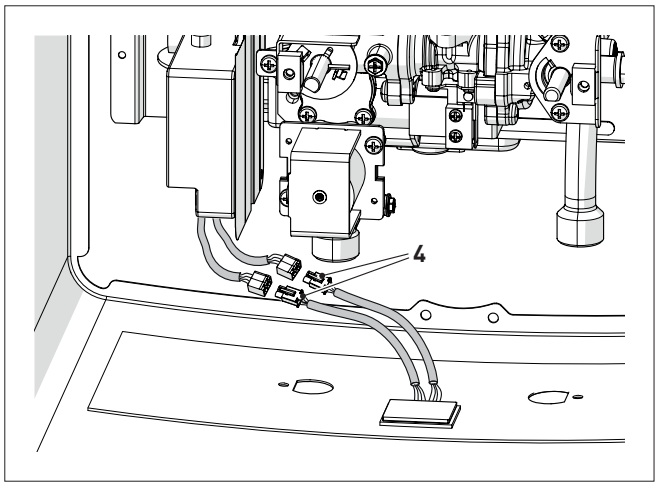
9.2.1 Removing the casing

To dismantle the shell, proceed as follows:

- remove the knobs (1) and loosen the two screws (2)
- lower the boiler casing (3) slightly, pull it forward and release it from the top by lifting it



- disconnect the display (4)



Once maintenance and cleaning operations have terminated:

- reconnect the display (4)
- refit the front panel (3) of the appliance by hooking it at the top, pushing it forwards and securing it by tightening the previously removed screws (2)
- refit the knobs (1).

9.2.2 Cleaning the heat exchanger

To clean the heat exchanger, proceed as follows:

- remove the casing, see chapter "**Removing the casing**"
- use compressed air or an equivalent means to clean the zone between the fins and the heat exchanger, taking care not to remove any other part of the heat exchanger
- mount the shell and tighten the relative screws.

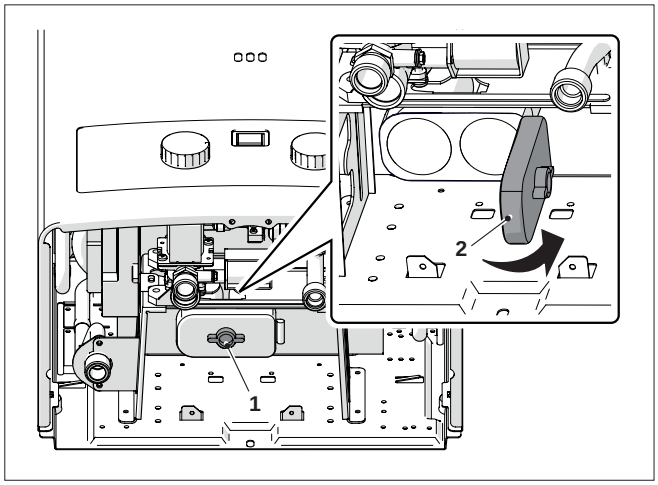
9.3 Replacing the batteries

Proceed as follows to replace the batteries:

- turn to the "open" position the locking device (1) located on the cover of the battery compartment (2)
- open the cover and take out the flat batteries
- insert the charged batteries.

WARNING

Be careful not to exchange the positive and negative terminals of the battery.

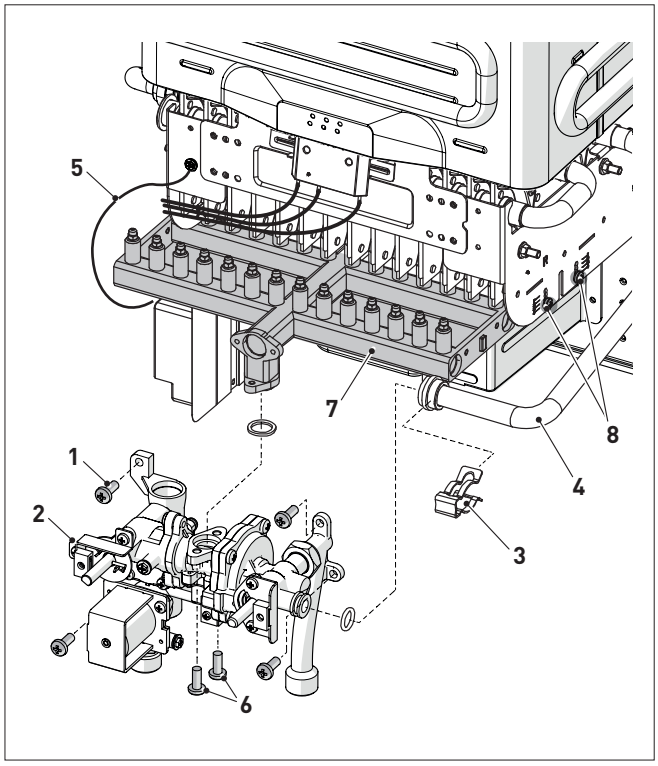


9.4 Gas conversion

CAUTION
The maintenance interventions described must ONLY be carried out the professionally qualified personnel.

WARNING
Before carrying out any interventions described:
- remove the batteries
- close the gas valve
- make sure that no hot parts inside the appliance are touched.

To convert the type of gas, proceed as follows:
- remove the casing, see chapter "**Removing the casing**"
- loosen the screws (1) between the water-gas valve (2) and its support, and remove the fixing clip (3) that secures the water valve to the pipe (4)
- remove the connecting cable for the water-gas valve and for the earthing system (5)
- loosen the screws (6) between the water-gas valve and the gas manifold (7)
- loosen the screws (8) fastening the gas manifold to the side brackets of the burner
- remove the gas manifold.



- mount the gas manifold and the water-gas valve present in the conversion kit.

CAUTION
Perform the gas conversion operations by taking care not to damage the seals and positioning them correctly. We suggest replacing them with new seals.

CAUTION
To proceed with the subsequent operations, it is necessary to:
- insert the batteries
- connect all the cables to the new components.

- verify the appliance's airtightness to ensure that there are no gas leaks
- adjust the gas and water flows and verify that combustion takes place normally
- mount the shell and tighten the relative screws
- insert the knobs.

Accessories table

MINI 11 OF VA			
Description	**Code**	**Type of gas**	**Technical specifications**
Gas manifold	6329558	G20	-
	6333407	G31	-
Water-gas valve	6333408	G20	-
	6333409	G31	-
Sealing ring	6329570	-	Ø18,4 X ø14 X 1,6

MINI 14 OF VA			
Description	**Code**	**Type of gas**	**Technical specifications**
Gas manifold	6333422	G20	-
	6333421	G31	-
Water-gas valve	6329578	G20	-
	6329577	G31	-
Sealing ring	6329570	-	Ø18,4 X ø14 X 1,6

CAUTION
- Check that the sealing ring on the gas control system is properly secured.
- Once the conversion kits have been replaced, attach the corresponding labels back onto the appliance.

9.5 Replacing the flue gas exhaust control device

CAUTION

- If the thermostat needs to be replaced, only use the manufacturer's original parts.
- The maintenance interventions described must ONLY be carried out the professionally qualified personnel.

Dismantle the device as follows:
- loosen the thermostat screws and dismantle the installation lines
- mount the installation lines on the thermostat and screw them.

After installation, disconnect the thermostat cable and check whether the gas-fired water heater switches on. Then reconnect the thermostat cable, open the tap and check whether the water heater operates properly. This procedure is required to ensure proper water heater operation.

9.6 Periodic checks

CAUTION

We recommend performing the following checks on the appliance, **at least once a year**.

- **Check the tightness of the hydraulic connections** and, if necessary, replace the seals to restore the tightness.
- **Check the tightness of the gas connections** and, if necessary, replace the seals to restore the tightness.
- **Visual check of the overall condition of the appliance**.
- **Visual check of the combustion** and, if necessary, disassembly and cleaning of the burner.
- If necessary, **Disassembly and cleaning of the combustion chamber** after Visual check of the overall condition of the appliance.
- If necessary, **Disassembly and cleaning of the burner and injector** after Visual check of the combustion.
- **Cleaning of the primary heat exchanger**.
- **Check the operation of the heating safety systems**: limit temperature safety device.
- **Check the operation of the gas part safety systems**: safety device for lack of gas or flame (ionisation).
- **Check the efficiency of domestic water production** (check the flow rate and temperature).
- **Cleaning of the cold water inlet filter**.

WARNING

The appliance must NOT be started up without the cold water inlet filter.

- **General check of the appliance operation**.
- **Removal of oxide residues from the detection electrode** using sandpaper.

10 MALFUNCTIONS AND POSSIBLE SOLUTIONS

10.1 Troubleshooting guide

Fault	Cause	Solution
The flame dies out during operation	Gas valve half open	Open the gas valve completely
	Presence of air in the gas manifold	Continue opening the water valve
	Inadequate (low) gas supply pressure	Contact a technician to check the pressure of the system's gas regulator
	Inlet water pressure too low	Contact a technician to have the water pressure checked
	Insufficient air supply	Improve the air renewal and let fresher air in
	Lack of power	Replace the batteries
	Nozzles clogged	Contact the Technical Assistance Centre
	Heat exchanger clogged	
	Malfunctioning of the water control device (flow meter)	
	Overheating protection	Set a lower water temperature Check that the heat exchanger is not obstructed
	The smoke thermostat has intervened or is broken	
	Excessively high external wind pressure	Turn off the water heater
The appliance fails to start after the water supply shut-off valve is opened	Gas valve closed	Open the gas valve fully or replace the gas valve
	Presence of air in the gas manifold	Continue opening the water valve
	Inadequate (low) gas supply pressure	Contact a technician to check the pressure of the system's gas regulator
	Water system shut-off valve closed	Open the water supply shut-off valve
	Ice build-up	Use the appliance once the ice has melted
	Inlet water pressure too low	Contact a technician to have the water pressure checked
	Lack of power	Replace the batteries
	Detachment of the ignition and/or detection electrode	Contact the Technical Assistance Centre
	Overheating protection	Set a lower water temperature
	Excessively high external wind pressure	Turn off the water heater
	The smoke thermostat has intervened or is broken	Check the flue pipe Contact the Technical Assistance Centre
Abnormal noise	Inadequate (high) gas supply pressure	Contact a technician to check the pressure of the system's gas regulator
	Insufficient air supply	Improve the air renewal and let fresher air in
	Nozzles clogged	Contact the Technical Assistance Centre
	Heat exchanger clogged	
	Detachment of the ignition and/or detection electrode	
Abnormal flame with strange odour	Inadequate (high) gas supply pressure	Contact a technician to check the pressure of the system's gas regulator
	Insufficient air supply	Improve the air renewal and let fresher air in
	Nozzles clogged	Contact the Technical Assistance Centre
	Heat exchanger clogged	
	Smoke outlet pipe obstructed	Remove the obstruction

Fault	Cause	Solution
Water still not hot when the knob is turned towards the high temperature position	Gas valve half open	Open the gas valve completely
	Inadequate (low) gas supply pressure	Contact a technician to check the pressure of the system's gas regulator
	Incorrect regulation of the water temperature	Turn the water flow adjuster knob appropriately
	Malfunctioning of the water control device (flow meter)	Contact the Technical Assistance Centre
Water too hot when the knob is turned towards the low temperature position	Incorrect regulation of the water temperature	Turn the water flow adjuster knob appropriately
	Malfunctioning of the water control device (flow meter)	Contact the Technical Assistance Centre
The flame dies out when the knob is turned towards the low temperature position	Inlet water pressure too low	Contact a technician to have the water pressure checked
	Inadequate (low) gas supply pressure	Contact a technician to check the pressure of the system's gas regulator
The flame does not die out when the water supply shut-off valve is closed	Inadequate (high) gas supply pressure	Contact a technician to check the pressure of the system's gas regulator
Flame has gone out and no reaction for a few minutes	Inlet water pressure too low	Contact a technician to have the water pressure checked
	Heat exchanger clogged	Contact the Technical Assistance Centre
	Smoke outlet pipe obstructed	Remove the obstruction
	Overheating protection	Set a lower water temperature

10.2 Error codes and possible solutions

No.	Description	Solution
EE	Failure or malfunctioning of the domestic hot water (DHW) sensor	Check the sensor's connections Replace the sensor
	Delivery water temperature too high	Set a lower water temperature
		Check that the heat exchanger is not obstructed

ANNEXES

PRODUCT DATA SHEET MINI OF VA (EU 812/2013)

Sime MINI OF VA	11	14
Stated domestic hot water profile	M	XL
Domestic hot water energy efficiency (%)	81,4	81,4
Energy efficiency class of DHW function	A	A
Annual fuel consumption AFC (GJ)	6	19
Annual electricity consumption AEC (KWh)	0	0
Sound power dB(A)	60	63
Specific precautions to be adopted during the appliance's assembly, installation or maintenance are contained in the water heater's instruction manual **Conforms to Annex 4 (point II) of Delegated Regulation (EU) No. 811/2013 which integrates Regulation (EU) No. 2017/1369**		

ERP DATA (EU 814/2013)

Sime MINI OF VA	11	14
Stated domestic hot water profile	M	XL
Daily gas consumption (corrected) (KWh)	7,581	24,731
Daily electricity consumption (corrected) (KWh)	0,0	0,0
NOx (mg/kWh)	19	16
Sound power dB(A)	60	63
Specific precautions to be adopted during the appliance's assembly, installation or maintenance are contained in the water heater's instruction manual **Conforms to Annex 4 (point II) of Delegated Regulation (EU) No. 811/2013 which integrates Regulation (EU) No. 2017/1369**		

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