

MANUAL
USER'S

Instruction and recommendation booklet **EN**



JULIUS 11 4 ERP
JULIUS 14 4 ERP



Dear Customer,

Our compliments for having chosen a top-quality Immergas product, able to assure well-being and safety for a long period of time. As an Immergas customer you can also count on a qualified after-sales service, prepared and updated to guarantee constant efficiency of your water heater. Read the following pages carefully: you will be able to draw useful suggestions regarding the correct use of the appliance, the respect of which, will confirm your satisfaction for the Immergas product.

For assistance and scheduled maintenance contact Authorised After-Sales centres: they have original spare parts and are specifically trained directly by the manufacturer.

General recommendations

All Immergas products are protected with suitable transport packaging.

The material must be stored in dry environments protected against bad weather.

The instruction book is an integral and essential part of the product and must be consigned to the new user also in the case of transfer or succession of ownership.

It must be stored with care and consulted carefully, as all of the warnings provide important safety indications for installation, use and maintenance stages.

This instructions manual provides technical information for installing Immergas water heaters. As for the other issues related to water heater installation (e.g. safety in the work site, environment protection, injury prevention), it is necessary to comply with the provisions of the regulations in force and the principles of good practice.

Installation and maintenance must be performed in compliance with the regulations in force, according to the manufacturer's instructions and by an authorised company, which has specific technical expertise in the system sector, as required by Law.

Improper installation or assembly of the Immergas appliance and/or components, accessories, kit and devices can cause unexpected problems to people, animals and objects. Read the instructions provided with the product carefully to ensure a proper installation.

Maintenance must be carried out by an authorised company. The Authorised After-sales Service represents a guarantee of qualification and professionalism.

The appliance must only be destined for the use for which it has been expressly declared. Any other use will be considered improper and therefore potentially dangerous.

If errors occur during installation, operation and maintenance, due to non compliance with technical laws in force, standards or instructions contained in this book (or however supplied by the manufacturer), the manufacturer is excluded from any contractual and extra-contractual liability for any damages and the appliance warranty is invalidated.

For further information regarding legislative and statutory provisions relative to the installation of gas heat generators, consult the Immergas site at the following address: www.immergas.com.

CE DECLARATION OF CONFORMITY

(according to ISO/IEC 17050-1)

The company **IMMERGAS S.p.A.**, with registered office in via Cisa Ligure 95 42041 Brescello (RE) whose design, manufacturing, and after sale assistance processes comply with the requirements of standard **UNI EN ISO 9001:2008**,

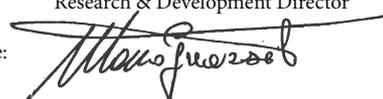
DECLARES that:

JULIUS 11 4 ERP AND 14 4 ERP water heaters comply with the following European Directives and Delegated European Regulations: "Eco-design" Directive 2009/125/EC, "Energy labelling" Directive 2010/30/EC, EU Regulation 812/2013, EU Regulation 814/2013, "Gas Appliance" Directive 2009/142/EC.

Mauro Guareschi

Research & Development Director

Signature:



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1 WATER HEATER INSTALLATION

1.1 INSTALLATION RECOMMENDATIONS.

The Julius water heater has been designed for wall installation. It must be used for the production of domestic hot water and similar purposes. In the case of wall installation the wall surface must be smooth, without any protrusions or recesses enabling access to the rear part. They are not designed to be installed on plinths or floors (Fig. 1-1).

The place of installation of the appliance and relative Immergas accessories must have suitable features (technical and structural) such to allow (always in safety, efficiency and comfortable conditions):

- installation (according to the provisions of the technical legislation and technical regulations);
- maintenance operations (including scheduled, periodic, routine and special maintenance);
- removal (to outdoors in the place for loading and transporting the appliances and components) as well as their eventual replacement with appliances and/or equivalent components.

Only professionally enabled companies are authorised to install Immergas gas appliances. Installation must be carried out according to regulation standards, current legislation and in compliance with local technical regulations and the required technical procedures.

Before installing the appliance, ensure that it is delivered in perfect condition; if in doubt, contact the supplier immediately. Packing materials (staples, nails, plastic bags, polystyrene foam, etc.) constitute a hazard and must be kept out of the reach of children.

If the appliance is installed inside or between cabinets, ensure sufficient space for normal servicing; therefore it is advisable to leave clearance of at least 3 cm between the water heater casing and the vertical sides of the cabinet. Leave adequate space above the water heater for possible water and flue removal connections.

Keep all flammable objects away from the appliance (paper, rags, plastic, polystyrene, etc.). It is recommended not to position household appliances under the water heater because they could undergo damage in the case of leaks from the hydraulic fittings. If this is not the case, the manufacturer cannot be considered liable for any damage caused to the household appliances. For the aforementioned reasons, we recommend not placing furnishings, furniture, etc. under the water heater.

In the event of malfunctions, faults or incorrect operation, turn the appliance off and contact an authorised company (e.g. the Authorised Technical Assistance centre, which has specifically trained staff and original spare parts). Do not

attempt to modify or repair the appliance alone. Failure to comply with the above implies personal responsibility and invalidates the warranty.

- Installation regulations:

- “Julius” water heaters cannot be installed:
- in bedrooms or bathrooms;
 - in areas with a risk of fire (for example: garages) - this provision also applies for flue ducts;
 - on the vertical projection of hobs;
 - in places/environments that constitute common parts of office condominiums such as stairs, cellars, entrance halls, attics, lofts, escape routes, etc. if they are not located inside technical compartments under the responsibility of each individual building and only accessible to the user (for the features of the technical compartments, see the technical standards in force).

Moreover, open chamber water heaters must not be installed in places where commercial, artisan or industrial activities take place, which use products that may develop volatile vapours or substances (e.g. acid vapours, glues, paints, solvents, combustibles, etc.), as well as dusts (e.g. dust deriving from the working of wood, coal fines, cement, etc.). These may be damaging for the components of the appliance and jeopardise functioning.

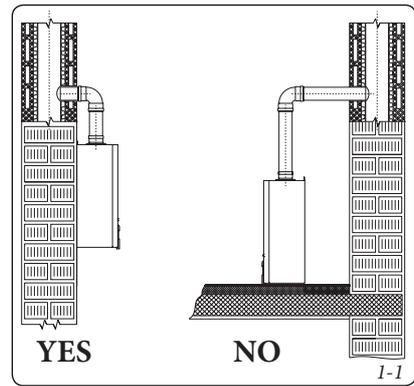
It is also appropriate that they are not installed in places where wood-burning heat generators are present (open fires), which are not sealed with respect to the installation environment.

Attention: wall mounting of the water heater must guarantee stable and efficient support for the generator

The plugs (standard supply) are to be used only in conjunction with the mounting brackets or fixing template to fix the water heater to the wall; they only ensure adequate support if inserted correctly (according to technical standards) in walls made of solid or semi-hollow brick or block. In the case of walls made from hollow brick or block, partitions with limited static properties, or in any case walls other than those indicated, a static test must be carried out to ensure adequate support.

N.B.: the hex head screws supplied in the blister pack are to be used exclusively to fix the relative mounting bracket to the wall.

These appliances are used to heat water to below boiling temperature in atmospheric pressure. They must be connected to a DHW distribution network suited to their performance and power. They must also be installed in an environment in which the temperature cannot fall below 0°C. They must not be exposed to atmospheric agents.



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1.2 MAIN DIMENSIONS.

Height (mm)	Width (mm)	Depth (mm)	D (mm)	P (mm)
630	350	230	Julius 11 4 ERP Ø 110	Julius 11 4 ERP 103
			Julius 14 4 ERP Ø 130	Julius 14 4 ERP 120
CONNECTIONS				
GAS	DOMESTIC HOT WATER			
G	U	E		
3/4"	1/2"	1/2"		

Key:
 AC - Domestic hot water outlet
 AF - Domestic cold water inlet
 G - Gas supply

1.3 GAS CONNECTION.

Our water heaters are designed to operate with methane gas (G20) and LPG. Supply pipes must be the same as or larger than the 3/4" G water heater fitting. Before connecting the gas line, carefully clean inside all the fuel feed system pipes to remove any residue that could impair water heater efficiency. Also make sure the gas corresponds to that for which the water heater is prepared (see water heater data-plate). If different, the water heater must be converted for operation with the other type of gas (see converting appliance for other gas types). The dynamic gas supply (methane or LPG) pressure must also be checked according to the type used in the water heater, which must comply with the technical standards in force, as insufficient levels can reduce generator output and cause malfunctions. A type-approved and certified gas cut-off cock must be inserted on the gas pipe before connection to the appliance. Ensure correct gas cock connection. The gas supply pipe must be suitably dimensioned according to current regulations in order to guarantee correct gas flow rate to the burner even in conditions of maximum generator output and to guarantee appliance efficiency (technical specifications). The coupling system must conform to technical standards in force.

Fuel gas quality. The appliance was designed to operate with combustible gas free of impurities; otherwise it is advisable to fit special filters upstream of the appliance to restore the purity of the fuel.

Storage tanks (in case of supply from LPG depot).

- New LPG storage tanks may contain residual inert gases (nitrogen) that degrade the mixture delivered to the appliance causing functioning anomalies.
- Due to the composition of the LPG mixture, layering of the mixture components may occur during the period of storage in the tanks. This can cause a variation in the heating power of the mixture delivered to the appliance, with subsequent change in its performance.

1.4 HYDRAULIC CONNECTION.

Attention: before connecting the water heater and so as not to make the warranty null and void on the DHW heat exchanger, wash the system thoroughly (piping, etc.) in a way to remove any residue that could compromise the good functioning of the water heater. Water connections must be made in a rational way following the set-up of the water heater couplings on the.

Attention: to preserve the duration and the efficiency features of the appliance, in the presence of water whose features can lead to the deposit of scale, installation of the "polyphosphate dispenser" kit is recommended.

1.5 ELECTRIC POWER SUPPLY.

This water heater is powered by direct current via one or two 1.5 V "LR 20" alkaline batteries. The use of one or two batteries varies functioning autonomy. The batteries are housed in a relevant compartment organised in the lower left area, near to the hydraulic couplings (Fig. 1-3).

N.B.: The appliance is supplied by Immergas with one battery placed horizontally on the battery compartment and therefore not connected. In the ignition phase, it is therefore necessary to connect it, setting it up in the correct position.

Attention: water heater pipes must never be used to earth the electric or telephone lines. Ensure that this does not occur before the batteries are inserted.

1.6 VENTILATION OF THE ROOMS.

In the room in which the water heater is installed it is necessary that at least as much air flows as that requested for by normal combustion of the gas and ventilation of the room. Natural air flow must take place directly through:

- permanent openings in the walls of the room to be ventilated that lead towards the outside;
- ventilation pipes, individual or branched type.

The air used for ventilation must be withdrawn directly from outside, in an area away from sources of pollution. Natural air flow is also

allowed indirectly by air intake from adjoining rooms. For further information relative to ventilation of the rooms follow that envisioned in the current technical regulation.

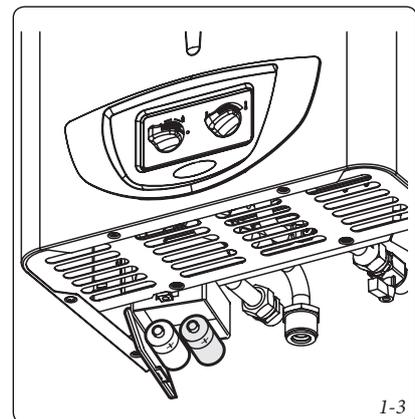
Evacuation of foul air. In the rooms where the gas appliances are installed it may also be necessary, as well as the intake of combustion agent air, to evacuate foul air, with consequent intake of a further equal amount of clean air. This must be realised respecting the provisions of the technical regulations in force.

1.7 FLUE DUCTS.

The gas appliances with attachment for the flue gas discharge pipe must have direct connection to chimneys or safely efficient flues. The combustion products can be discharged directly outside only if these are missing, as long as the current technical regulations for the flue terminal are respected as well as the existing laws.

Connection to chimneys or flues. The connection of the appliances to a chimney or flue takes place by means of flue ducts.

In the event of fittings with pre-existing flues, these must be perfectly clean because the detachment of any waste from the walls during functioning, could block the passage of flue gases, thus causing



extremely dangerous situations for the user.

The flue ducts must be connected to the chimney or flue in the same room in which the appliance is installed or, at most, in the adjoining room and must comply with the requirements indicated by the current technical regulations (Fig. 1-4).

1.8 FLUES/CHIMNEYS.

For the appliances with natural draught individual chimneys and branched flues can be used.

Individual chimneys. The individual flues must be dimensioned with respect to the standard in force.

Branched flues. In buildings with lots of floors, branched flues can be used for the natural draught evacuation of combustion products. New flues must be designed following the calculation method and provisions of the regulation.

Chimney caps. The chimney cap is a device positioned on the top of an individual chimney or branched collective flue. This device promotes the dispersion of combustion products, even in adverse weather conditions, and prevents the deposit of foreign bodies. It must satisfy the requisites set forth in the relative regulation.

The outlet quota, corresponding to the top of the chimney/flue, independently of any caps, must be out of the "respect area", in order to prevent the formation of counter-pressures that impede the free discharge of the combustion products into the atmosphere. It is therefore necessary to use the minimum heights indicated in the figures stated in current technical regulations.

Direct exhaust outside. The natural draught appliances, envisioned to be connected to a chimney or a flue, can discharge the combustion products directly to the outside, through a pipe passing through the perimeter walls of the building. In this case discharge takes place through an flue duct, which is connected to a draught terminal at the outside.

Positioning the draught terminals. The draught terminals must:

- be installed on external perimeter walls of the building;
- be positioned according to the minimum distances specified in current technical standards.

Combustion products exhaust of natural draught or fan assisted appliances in open-top closed environments. In spaces closed on all sides with open tops (ventilation pits, courtyards etc.), direct flue gas exhaust is allowed for natural or forced draught gas appliances with a heating

power range from 4 to 35 kW, provided the conditions as per the current technical standards are respected.

Important: it is prohibited to put the fumes exhaust control device out of order voluntarily. Every piece of this device must be replaced using original spare parts if they have deteriorated. In the case of repeated interventions of the fumes exhaust control device, check the fumes exhaust flue and the ventilation of the room in which the water heater is located.

1.9 GAS SYSTEM START-UP.

To start up the system, refer to the technical standard in force: This divides the systems and therefore the start-up operations into three categories: new systems, modified systems, re-activated systems.

In particular, for new gas systems:

- open windows and doors;
- avoid presence of sparks or open flames;
- bleed all air from the pipelines;
- check that the internal system is properly sealed according to the specifications set forth by technical regulations in force;

1.10 APPLIANCE START-UP (IGNITION).

In order to issue the Declaration of Conformity required by the laws in force, the following requirements must be fulfilled to commission the water heater (the operations listed below must only be performed by a qualified firm and without any unauthorised persons):

- check that the internal system is properly sealed according to the specifications set forth by technical regulations in force;
- ensure that the type of gas used corresponds to water heater settings;
- Check that there are external factors that may cause the formation of fuel pockets;
- switch the appliance on and check correct ignition;
- make sure that the gas flow rate and relevant pressure values comply with those given in the manual (see par. 3.8);
- check the correct ventilation of the rooms;
- check the existing draught during normal functioning of the appliance, e.g. a draught gauge positioned at the exit of the appliance combustion products;
- check that there is no backflow of combustion products into the room, even during functioning of fans;

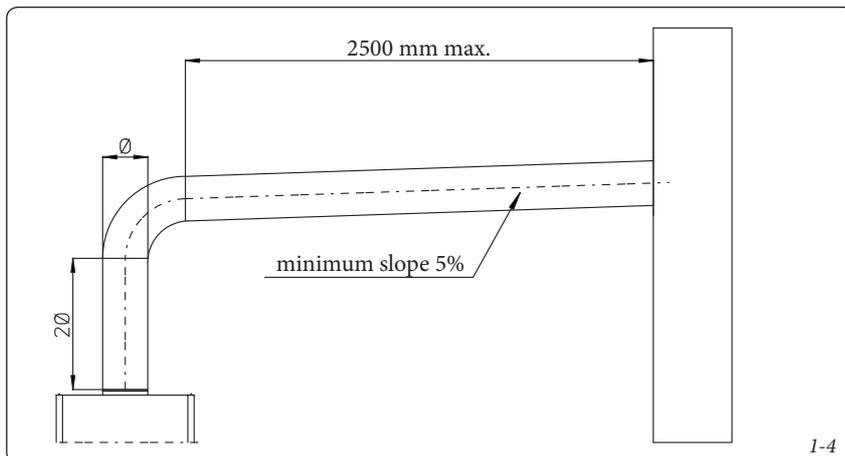
- ensure that the chimney safety device intervenes in the event of gas supply failure and check the relative intervention time;

The water heater must not be started up even if only one of the checks should be negative.

1.11 KITS AVAILABLE ON REQUEST.

- Polyphosphate dispenser kit (on request). The polyphosphate dispenser reduces the formation of lime-scale and preserves the original heat exchange and domestic hot water production conditions. The water heater is prepared for application of the polyphosphate dispenser kit.
- Gas interception cock kit (on request). The water heater is set-up for installation of the gas interception cock to be inserted on the fuel supply pipe. The gas cock is indispensable and must be type-approved for the pre-fixed use.
- Gas pressure stabiliser kit. The water heater is set-up for installation of the gas pressure stabiliser kit to be inserted on the fuel supply pipe, which allows to have the supply at a constant pressure, maintaining the water heater performance unaltered.

The above-mentioned kits are supplied complete with instructions for assembly and use.

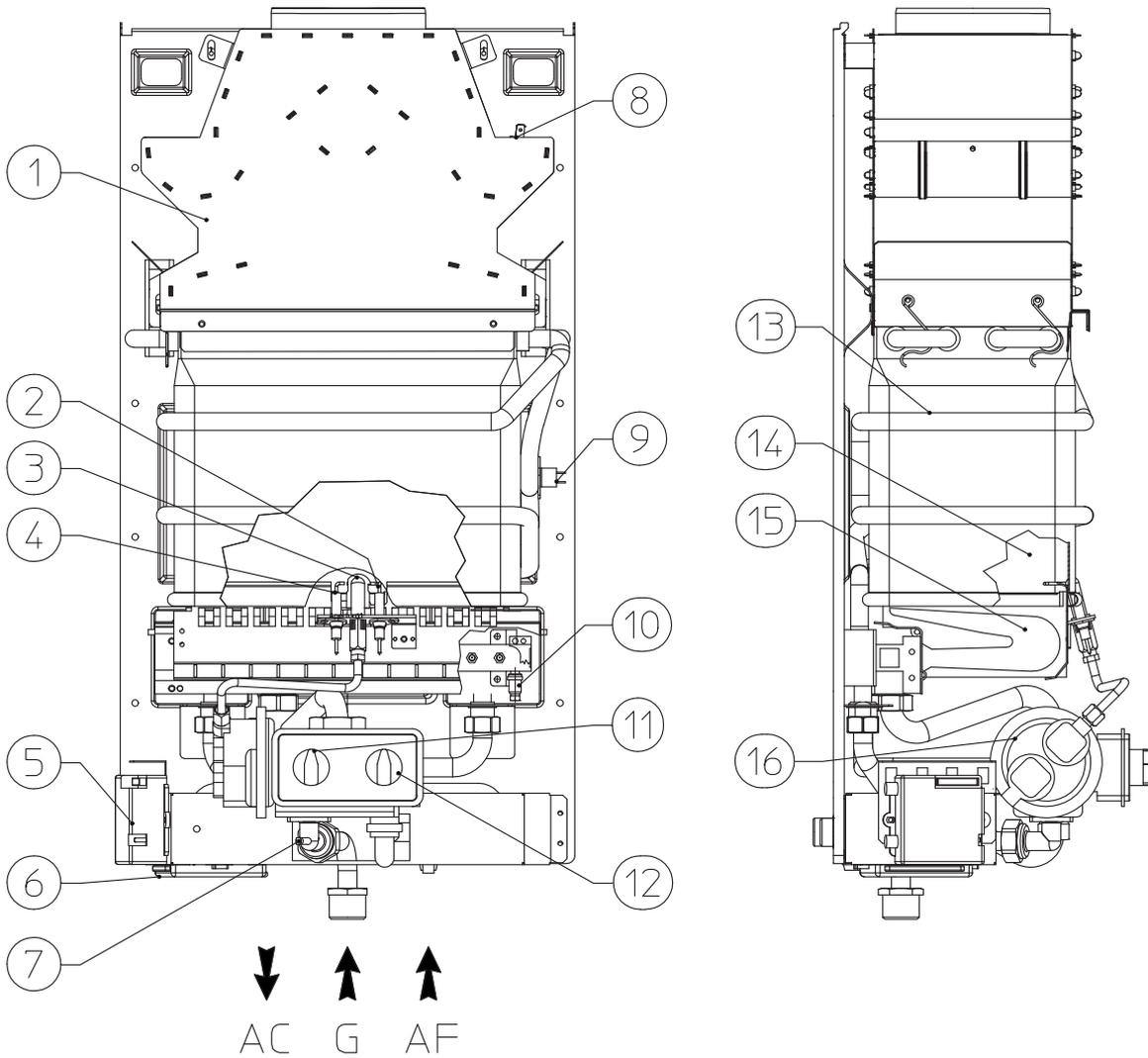


1.12 WATER HEATER COMPONENTS.

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Key:

- 1 - Fumes hood
- 2 - Detection electrode
- 3 - Pilot burner
- 4 - Ignition electrode
- 5 - Ignition and flame control P.C.B.
- 6 - battery compartment
- 7 - Connection pipe pressure point
- 8 - Chimney safety thermostat

- 9 - Overheating safety thermostat
- 10 - Valve/burner pipe pressure point
- 11 - Gas selector
- 12 - Temperature selector switch
- 13 - DHW heat exchanger
- 14 - Combustion chamber
- 15 - Burner
- 16 - Water/gas valve

2 USE AND MAINTENANCE INSTRUCTIONS

2.1 CLEANING AND MAINTENANCE.

The appliance must be serviced every year. This ensures that the optimal safety, performance and operating features that distinguish the appliance remain unchanged over time.

2.2 VENTILATION OF THE ROOMS.

In the room in which the water heater is installed it is necessary that at least as much air flows as that requested for by normal combustion of the gas and ventilation of the room. The provisions relative to ventilation, the flue ducts, chimneys and caps are stated in paragraphs 1.4, 1.5 and 1.6. If in doubt regarding correct ventilation, contact an authorised company.

2.3 GENERAL WARNINGS.

Never expose the wall-mounted appliance to direct vapours from a hob.

Use of the water heater by unskilled persons or children is strictly prohibited.

Whenever temporary deactivation of the water heater is decided, disconnect the batteries and the water and gas supplies must be interrupted. In the event of work or maintenance to structures near ducting or flue extraction devices and their accessories, switch off the appliance and on completion of the operations ensure an authorised

company verifies the efficiency of the ducting or the devices.

Never clean the appliance or connected parts with easily flammable substances.

Never leave containers or flammable substances in the same environment as the appliance.

It is prohibited and dangerous to obstruct the air intake, even partially, for the ventilation of the room in which the water heater is installed. Due to the danger, functioning is also prohibited in the same room as suction devices or any other device/appliance that can put the room into depression at the same time as the water heater unless there are additional openings dimensioned in a way to satisfy the further necessity for air.

For the dimensioning of these additional openings, refer to qualified technical staff and to current technical.

• **Attention:** using any components that use electrical power requires some fundamental rules to be observed:

- never pull electrical cables or leave the appliance exposed to weathering (rain, sunlight, etc.);

- if the appliance is not to be used for a certain period, it is good practice to disconnect the power supply batteries.

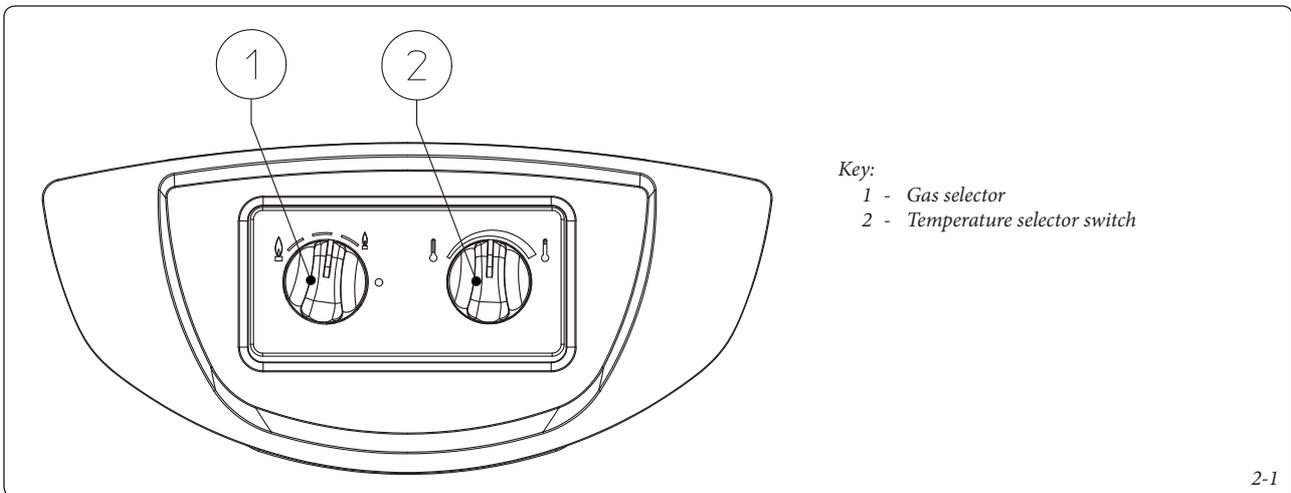
At the end of its service life the appliance must not be disposed of like normal household waste nor abandoned in the environment, but must be removed by a professionally authorised company. Contact the manufacturer for disposal instructions.

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2.4 CONTROL PANEL.



2-1

2.5 USE OF THE WATER HEATER.

Ignition of the water heater. Before ignition, check that the DHW inlet valve is open.

- Open the gas cock upstream from the water heater.
- Turn the gas selector (1) taking it to the position relative to the power desired (Turning the gas selector anti-clockwise the power increases and clockwise the power decreases).

N.B.: with the selector at “●” the gas supply to the water heater is closed, which thus cannot ignite.

From this moment the water heater functions automatically. While there is no request for the

production of DHW, the water heater stays in the “stand-by” function mode. At every withdrawal of DHW, the burner ignites and a power that depends on the size of the withdrawal, with a maximum value limited by the gas selector (1).

Regulation of the domestic hot water temperature. The temperature of the hot water supplied depends on the position of the water selector (2). By turning the selector clockwise the temperature increases and anti-clockwise it decreases.

2.6 DESCRIPTION OF THE ANOMALIES.

Ignition block. The water heater ignites automatically with each demand for hot water production. If this does not occur within a determined burner ignition time, the appliance goes into "ignition block" (the discharge ends on the pilot unit). To eliminate the "ignition block", just stop the withdrawal of DHW and then restore it. If this phenomenon occurs frequently, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Service).

Overheating thermostat block. During normal functioning, if a fault causes excessive overheating internally, the water heater goes into overtemperature block. After suitable cooling, eliminate the "overtemperature block", interrupting and then restoring the DHW withdrawal. If this phenomenon occurs frequently, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Service).

Chimney thermostat block. During operation, if the flue gas evacuation pipe does not function correctly, the flue safety thermostat intervenes blocking the water heater. The latter can only re-start after suitable cooling, if normal conditions are restored and in correspondence of a new request for DHW. If this phenomenon occurs frequently, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Service).

2.7 SWITCHING OFF THE WATER HEATER.

Disconnect the batteries and close the gas valve upstream from the appliance. Never leave the water heater powered if left unused for prolonged periods.

2.8 REPLACING THE BATTERIES.

The batteries that power this appliance are housed in the lower part of the water heater, near to the hydraulic connections. To replace the batteries, open the relevant compartment by pulling the lid down and removing the batteries present. Insert the new batteries respecting the polarities indicated on the internal wall of the lid itself.

N.B.: only use new "LR20" 1.5V alkaline batteries. Dispose of the batteries replaced according to the indications supplied by the manufacturer. Do not use re-chargeable batteries as they could limit functioning of the water heater.

- If there are leaks of substances from the battery, avoid contact with the skin.
- If the liquid escaping from the battery comes into contact with the eyes, rinse thoroughly with water and contact a doctor.
- If the liquid comes into contact with the skin, rinse thoroughly with water and soap.
- Contact the manufacturer of the batteries for further information.
- Do not throw the batteries in the fire.
- Remove the batteries if the water heater remains unused for a long period.
- Use a dry, rough cloth to clean the battery housing, every time they are replaced.
- Contact the local authorities for information regarding the disposal of the batteries.

2.9 EMPTYING THE WATER HEATER.

To empty the water heater, close the cold water inlet valve and open the hot water valve lower down in the water network in the room.

2.10 PROTECTION AGAINST FREEZING.

If the appliance remains inactive, in places at risk of freezing, it must be emptied to prevent possible breakage of the hydraulic circuit.

To do this, see the previous paragraph (emptying the water heater)

2.11 CASE CLEANING.

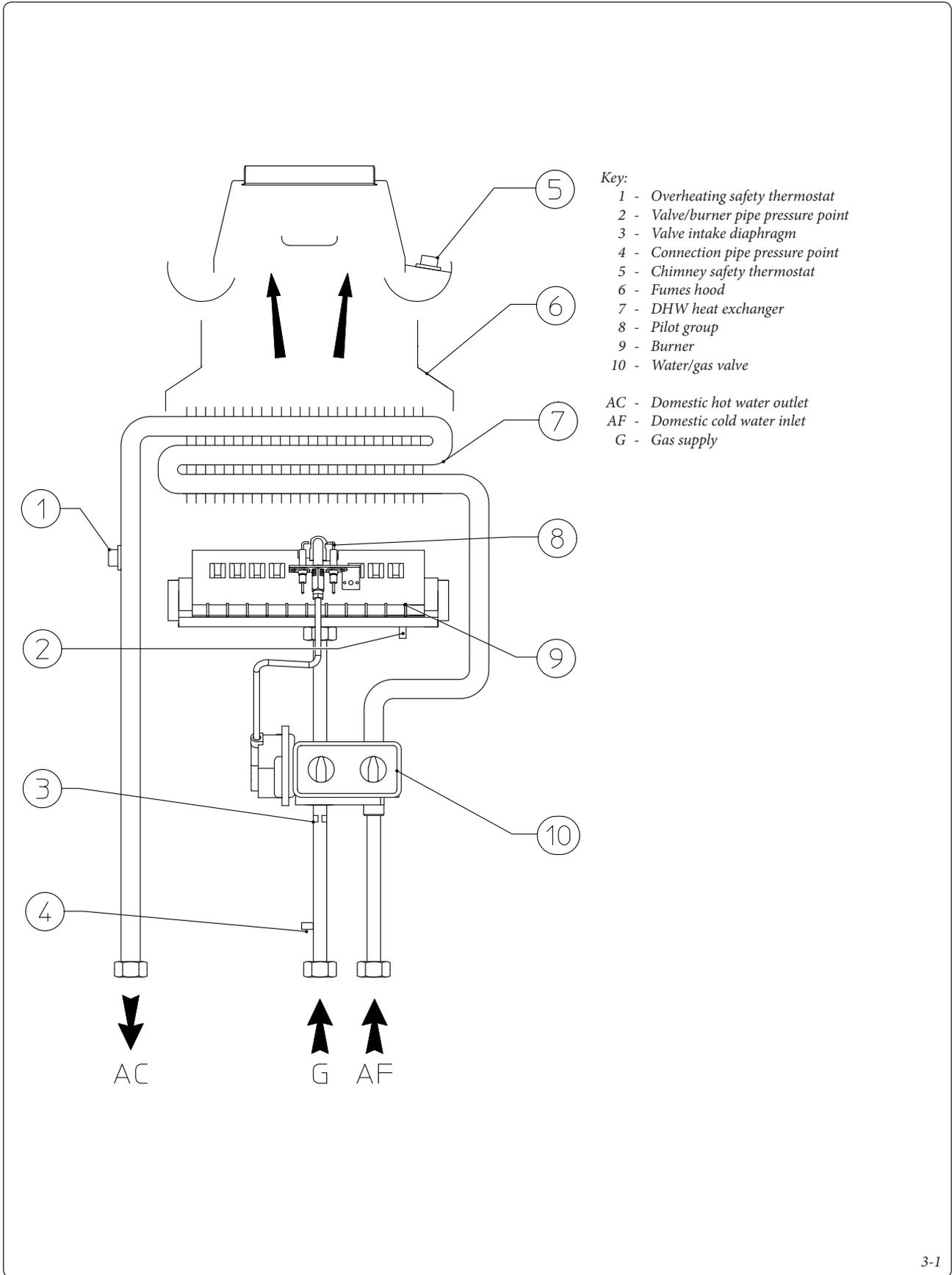
Use damp cloths and neutral detergent to clean the water heater casing. Never use abrasive or powder detergents.

2.12 DECOMMISSIONING.

In the event of permanent shutdown of the water heater, contact an authorised company for the procedures and ensure that the batteries are disconnected and the water and gas supply lines are shut off.

3 CHECKS AND MAINTENANCE

3.1 HYDRAULIC DIAGRAM.

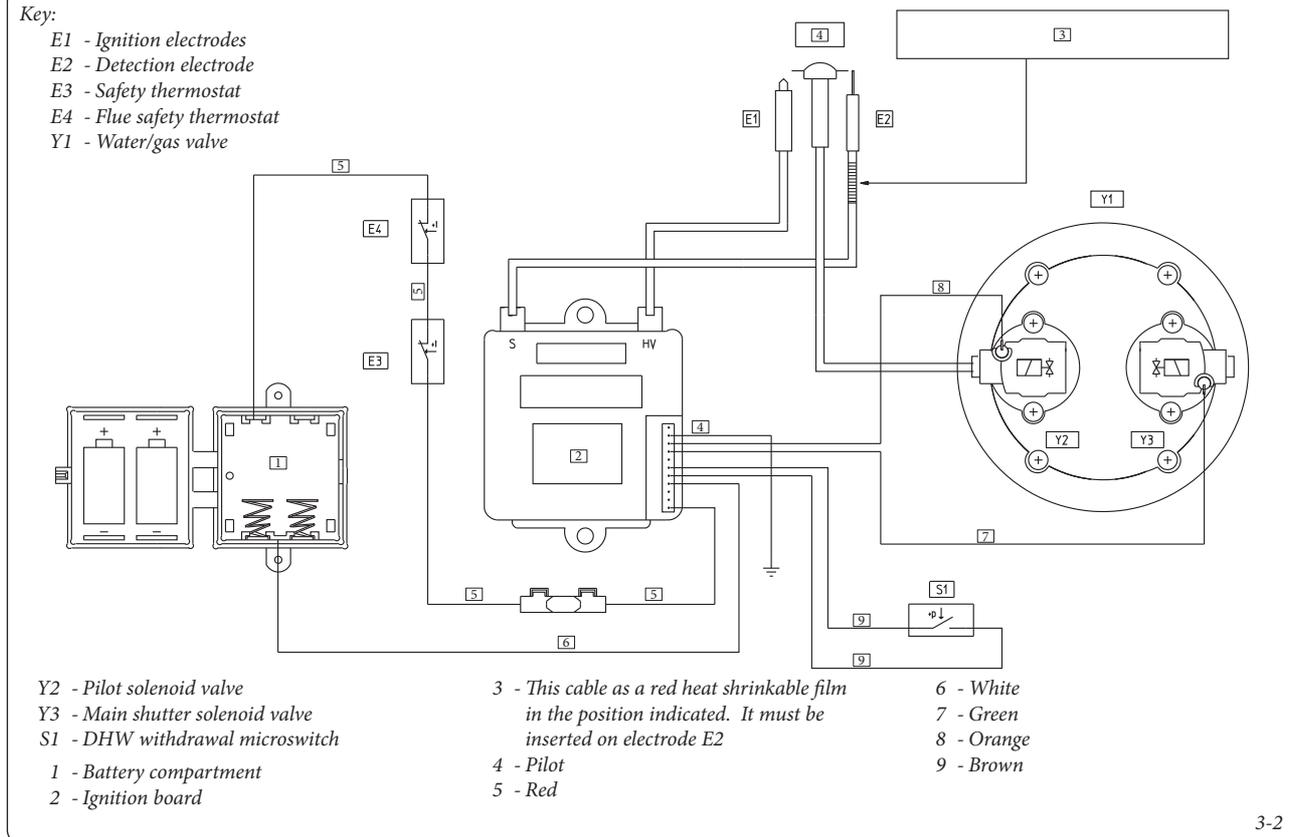


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3.2 WIRING DIAGRAM.



3.3 TROUBLESHOOTING.

N.B.: Maintenance operations must be carried out by an authorised company (e.g. Authorised After-Sales Technical Assistance Service).

- Smell of gas. Caused by leakage from gas circuit pipelines. Check sealing efficiency of gas intake circuit.
- Irregular combustion (red or yellow flame). When the burner is dirty or the water heater lamellar pack is blocked. Clean the burner or the lamellar pack.
- The water heater produces condensate. This can be caused by obstructions of the chimney or flues with height or section not proportioned to the appliance. It can also be determined by functioning at water heater temperatures that are excessively low. In this case, make the water heater run at higher temperatures.
- Intervention of the overheating thermostat. It can depend on an anomaly at the water-gas valve or on the clogged heat exchanger.
- Ignition block and Chimney thermostat block. See par. 2.6.
- Frequent interventions of the chimney safety thermostat. Can be due to:
 - obstructions on the flue gas circuit. Check the flue. The latter can be blocked or not have a suitable height/section for the water heater.
 - Insufficient ventilation (see par. 1.4).
- Poor water flow: if, as a result of lime scale (calcium and magnesium), the domestic hot water system does not work properly contact an authorised company for descaling e.g. Authorised After-Sales Technical Service according to good practice. To preserve integrity and efficiency of the heat exchanger, a non corrosive descaler

must be used. Cleaning must be carried out without the use of tools which can damage the heat exchanger.

3.4 CONVERTING THE WATER HEATER TO OTHER TYPES OF GAS.

If the appliance has to be converted to a different gas type to that specified on the data plate, request the relative conversion kit for quick and easy conversion.

The gas conversion operation must be carried out by an authorised company (e.g. Authorised Technical After-Sales Service).

3.5 POSSIBLE ADJUSTMENTS.

- Regulation of the water heater heat output (see par. 2.5).

3.6 YEARLY APPLIANCE CHECK AND MAINTENANCE.

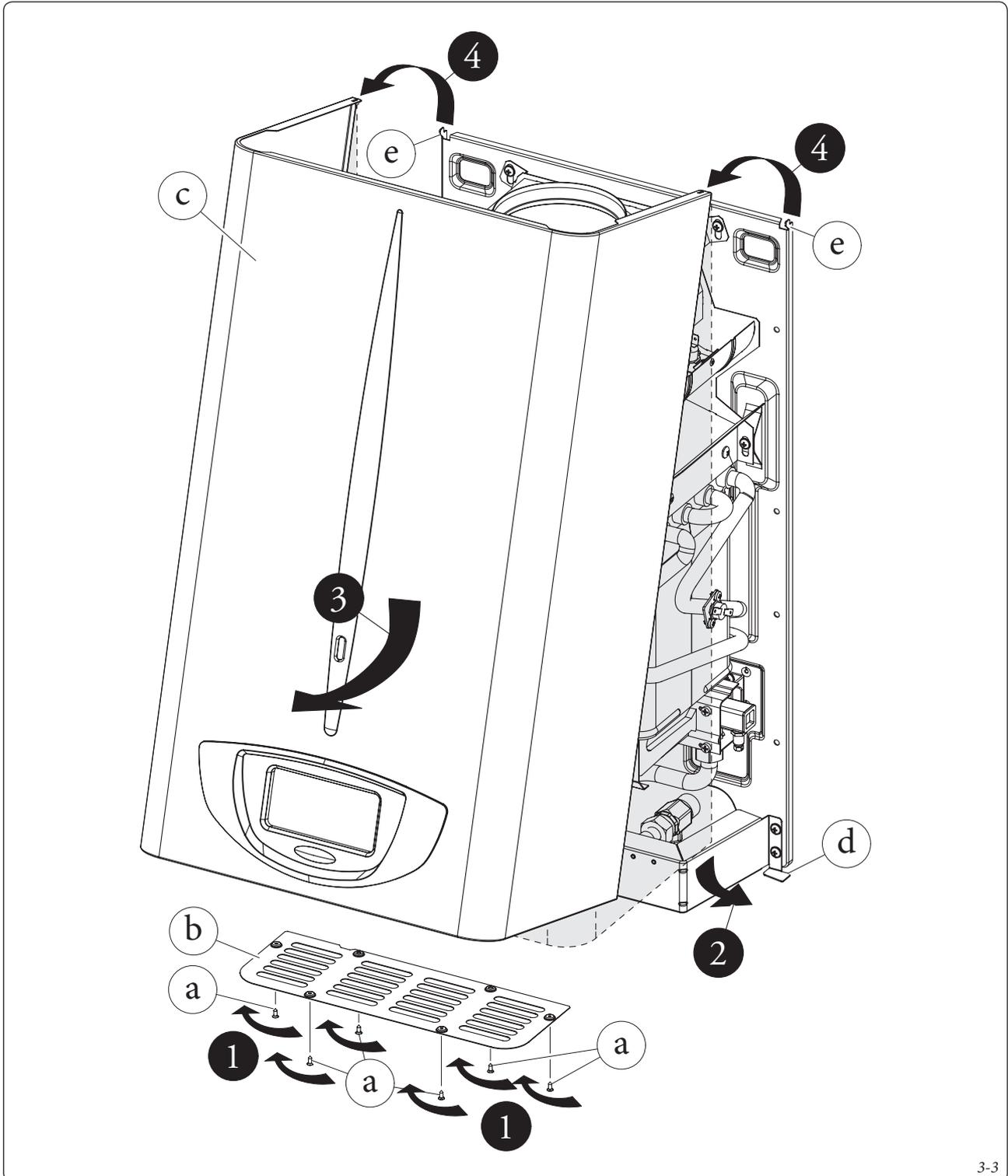
The following checks and maintenance should be performed at least once a year.

- Clean the flue side of the heat exchanger.
- Clean the main burner.
- Clean the pilot burner.
- Visually check the draught-breaker/anti-wind device for deterioration or corrosion.
- Check ignition and operation.
- Check correct burner calibration.
- Check correct operation of control and adjustment devices.
- Check that the internal system is properly sealed according to technical regulations in force;
- Check the intervention of the device against no gas carried out by the ionisation flame control:
- Visually check for water leaks or oxidation from/on connections.
- Visually check that the safety and control devices have not been tampered with and/or shorted, in particular:
 - temperature safety thermostat;
 - flue exhaust control thermostat.
- Check the condition and integrity of the electrical system and in particular:
 - supply voltage cables must be inside the fairleads;
 - there must be no traces of blackening or burning.

3.7 REMOVING THE CASING.

To facilitate water heater maintenance the casing can be completely removed as follows:

- 1) Loosen the lower screws (a) that fix the lower protection grid (b) and the casing (c).
- 2) Release the casing (c) from the lower brackets (d) pulling the sides slightly outwards.
- 3) Pull the casing towards you in the lower side.
- 4) Push the casing upwards in a way to be able to extract it from the upper hooks (e).



3-3

3.8 VARIABLE HEAT OUTPUT.

N.B.: gas flow rates refer to heating power below a temperature of 15°C and pressure of 1013 mbar. Burner pressure values refer to use of gas at 15°C.

		METHANE (G20)			BUTANE (G30)			PROPANE (G31)		
THERMAL POWER	THERMAL POWER	BURNER GAS FLOW RATE	PRESS. BURNER NOZZLES		BURNER GAS FLOW RATE	PRESS. BURNER NOZZLES		BURNER GAS FLOW RATE	PRESS. BURNER NOZZLES	
(kW)	(kcal/h)	(m ³ /h)	(mbar)	(mm H ₂ O)	(kg/h)	(mbar)	(mm H ₂ O)	(kg/h)	(mbar)	(mm H ₂ O)
20.1	17286	2.41	10.50	107.1	1.80	24.90	253.9	1.77	31.80	324.3
19.5	16770	2.35	10.00	101.9	1.75	23.79	242.6	1.73	30.37	309.7
18.5	15910	2.24	9.16	93.4	1.67	21.94	223.8	1.65	27.98	285.4
17.5	15050	2.13	8.33	84.9	1.59	20.11	205.1	1.56	25.62	261.3
16.5	14190	2.02	7.51	76.6	1.50	18.30	186.6	1.48	23.29	237.5
15.5	13330	1.90	6.71	68.4	1.42	16.52	168.5	1.39	21.01	214.2
14.5	12470	1.78	5.92	60.4	1.33	14.78	150.7	1.31	18.77	191.4
13.5	11610	1.66	5.16	52.6	1.24	13.09	133.5	1.22	16.60	169.3
12.5	10750	1.54	4.43	45.1	1.15	11.46	116.8	1.13	14.51	148.0
11.5	9890	1.41	3.72	37.9	1.06	9.88	100.8	1.04	12.50	127.5
10.5	9030	1.29	3.04	31.0	0.96	8.38	85.5	0.95	10.58	107.9
9.5	8170	1.16	2.40	24.5	0.87	6.95	70.9	0.85	8.76	89.3
8.5	7310	1.04	1.80	18.4	0.78	5.60	57.1	0.76	7.04	71.8
7.8	6708	0.95	1.40	14.3	0.71	4.70	47.9	0.70	5.90	60.2

		METHANE (G20)			BUTANE (G30)			PROPANE (G31)		
THERMAL POWER	THERMAL POWER	BURNER GAS FLOW RATE	PRESS. BURNER NOZZLES		BURNER GAS FLOW RATE	PRESS. BURNER NOZZLES		BURNER GAS FLOW RATE	PRESS. BURNER NOZZLES	
(kW)	(kcal/h)	(m ³ /h)	(mbar)	(mm H ₂ O)	(kg/h)	(mbar)	(mm H ₂ O)	(kg/h)	(mbar)	(mm H ₂ O)
24.4	20984	2.89	11.30	115.2	2.15	24.98	254.7	2.12	31.93	325.6
24.0	20640	2.84	10.96	111.7	2.12	24.35	248.3	2.08	31.17	317.9
23.0	19780	2.72	10.12	103.2	2.03	22.82	232.7	2.00	29.30	298.8
22.0	18920	2.60	9.31	94.9	1.94	21.35	217.7	1.91	27.49	280.3
21.0	18060	2.49	8.54	87.0	1.86	19.92	203.1	1.83	25.73	262.4
20.0	17200	2.37	7.79	79.5	1.77	18.54	189.1	1.74	24.03	245.0
19.0	16340	2.25	7.08	72.2	1.68	17.21	175.5	1.65	22.38	228.2
18.0	15480	2.14	6.39	65.2	1.60	15.93	162.5	1.57	20.78	211.9
17.0	14620	2.02	5.74	58.5	1.51	14.70	149.9	1.48	19.23	196.1
16.0	13760	1.91	5.12	52.2	1.42	13.52	137.9	1.40	17.73	180.8
15.0	12900	1.79	4.52	46.1	1.34	12.38	126.3	1.31	16.28	166.1
14.0	12040	1.67	3.96	40.3	1.25	11.29	115.1	1.23	14.89	151.8
13.0	11180	1.56	3.42	34.9	1.16	10.25	104.5	1.14	13.54	138.0
12.0	10320	1.44	2.91	29.7	1.07	9.25	94.3	1.06	12.24	124.8
11.0	9460	1.32	2.44	24.8	0.99	8.30	84.6	0.97	10.99	112.0
10.0	8600	1.20	1.99	20.3	0.90	7.39	75.4	0.88	9.78	99.8
9.8	8428	1.18	1.90	19.4	0.88	7.22	73.6	0.87	9.55	97.4

3.9 COMBUSTION PARAMETERS.

		G20	G30	G31
Julius 11 4 ErP				
Gas nozzle diameter	mm	1.30	0.77	0.77
supply pressure	mbar (mm H ₂ O)	20 (204)	29 (296)	37 (377)
Pilot nozzle diameter	mm	0.26	0.22	0.22
Gas cone seats	mm	9.0	7.0	7.0
Gas cone inlet	code	0864	0681	0681
Gas cone outlet	code	0870	0679	0679
Gas inlet valve diaphragm	mm	4.70	4.70	4.70
Flue flow rate at nominal heat output	kg/h	46	46	47
Flue flow rate at min heat output	kg/h	39	38	39
CO ₂ at Q. Nom./Min.	%	7.10 / 3.15	8.32 / 3.75	8.00 / 3.60
CO with 0% O ₂ at Nom./Min. Q. Nom./Min.	ppm	70 / 50	110 / 56	52 / 69
NO _x at 0% of O ₂ at Q. Nom./Min.	mg/kWh	205 / 135	270 / 149	235 / 142
Flue temperature at nominal output	°C	183	189	184
Flue temperature at minimum output	°C	126	130	126
Julius 14 4 ErP				
Gas nozzle diameter	mm	1.35	0.80	0.80
supply pressure	mbar (mm H ₂ O)	20 (204)	29 (296)	37 (377)
Pilot nozzle diameter	mm	0.26	0.22	0.22
Gas cone seats	mm	9.0	9.0	9.0
Gas cone inlet	code	0855	0881	0881
Gas cone outlet	code	0863	0884	0884
Gas inlet valve diaphragm	mm	5.8	5.8	5.8
Flue flow rate at nominal heat output	kg/h	55	55	58
Flue flow rate at min heat output	kg/h	53	48	49
CO ₂ at Q. Nom./Min.	%	7.15 / 2.85	8.20 / 3.70	7.80 / 3.55
CO with 0% O ₂ at Nom./Min. Q. Nom./Min.	ppm	60 / 45	86 / 76	37 / 124
NO _x at 0% of O ₂ at Q. Nom./Min.	mg/kWh	195 / 150	282 / 153	250 / 150
Flue temperature at nominal output	°C	153	156	150
Flue temperature at minimum output	°C	111	122	119

INSTALLER

USER

MAINTENANCE TECHNICIAN

3.10 TECHNICAL DATA.

		Julius 11 4 ErP	Julius 14 4 ErP
Nominal heat input	kW (kcal/h)	22.8 (19621)	27.3 (23446)
Minimum heat input	kW (kcal/h)	9.0 (7725)	11.1 (9588)
Nominal heat output (useful)	kW (kcal/h)	20.1 (17286)	24.4 (20984)
Minimum heat output (useful)	kW (kcal/h)	7.8 (6708)	9.8 (8428)
Heat loss at case with burner On	%	1.5	2.0
Chimney losses with burner On	%	10.4	8.5
Appliance water content	l	0.9	1.0
Domestic hot water adjustable temperature ΔT	K	25 - 50	25 - 50
Min. dynamic pressure ON (in ascent) $\Delta T = 50$ K	l/min	2.87	3.25
Min. dynamic pressure ON (in ascent) $\Delta T = 25$ K	l/min	5.63	5.9
Domestic hot water circuit max. operating pressure	bar	10.0	10.0
Maximum flow rate $\Delta T = 50$ °C	l/min	5.75	6.80
Maximum flow rate $\Delta T = 25$ °C	l/min	12.00	14.00
Full water heater weight	kg	12.0	14.0
Empty water heater weight	kg	11.1	13.0
Electric power supply	Battery	2 Batteries x LR20 1.5 V Alkaline	
Type of appliance	B11 _{RS}		
Category	II2H3+		

- Flue gas temperature values refer to an air inlet temperature of 15°C.

- The data relevant to domestic hot water performance refer to a dynamic inlet pressure of 2 bar and an inlet temperature of 15°C; the values are measured directly at the water heater outlet considering that to obtain the data declared mixing with cold water is necessary.

- The max. sound level emitted during water heater operation is <55 dBA. The sound level value is referred to semianechoic chamber tests with water heater operating at max. heat output, with extension of flue gas exhaust system according to product standards.

3.11 KEY FOR DATA NAMEPLATE.

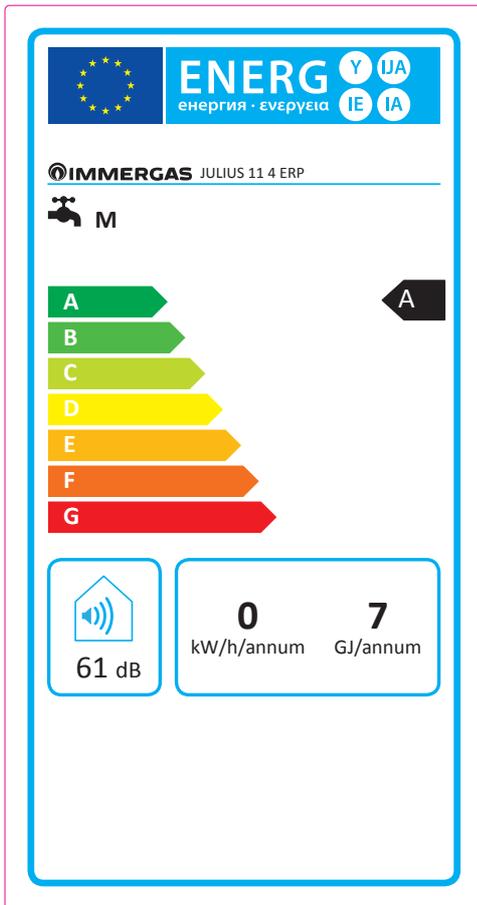
Md		Cod. Md	
Sr N°	CHK	Cod. PIN	
Type			
Q _{nw} /Q _n min.	Q _{nw} /Q _n max.	P _n min.	P _n max.
	PMW	D	TM
NO _x Class			

N.B.: the technical data is provided on the data plate on the water heater.

	EN
Md	Model
Cod. Md	Model code
Sr N°	Serial Number
CHK	Check
Cod. PIN	PIN code
Type	Type of installation (ref. CEN TR 1749)
Q _{nw} min.	Minimum DHW heat input
Q _n min.	CH minimum heat input
Q _{nw} max.	DHW maximum heat input
Q _n max.	CH maximum heat input
P _n min.	Minimum heat output
P _n max.	Maximum heat output
PMW	Maximum domestic hot water pressure
D	Specific flow rate
TM	Maximum operating temperature
NO _x Class	NO _x Class

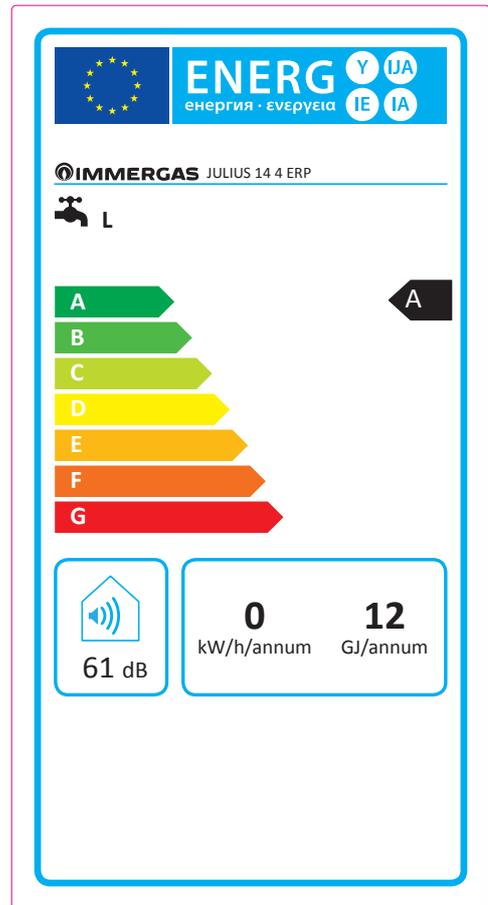
3.12 PRODUCT FICHE (IN COMPLIANCE WITH REGULATION 812/2013).

Julius 11 4 ErP



Parameter	value
Annual fuel consumption for the domestic hot water function (AFC)	7 GJ
Water heating energy efficiency (η_{wh})	66 %

Julius 14 4 ErP



Parameter	value
Annual fuel consumption for the domestic hot water function (AFC)	12 GJ
Water heating energy efficiency (η_{wh})	76 %

For proper installation of the appliance refer to chapter 1 of this booklet (for the installer) and current installation regulations. For proper maintenance refer to chapter 3 of this booklet (for the maintenance technician) and adhere to the frequencies and methods set out herein.

3.13 PARAMETERS FOR FILLING IN THE PACKAGE FICHE.

Should you wish to install an assembly, starting from the Julius (11 4 o 14 4) ErP water heater, use the package fiche in Fig. 3-6.

To fill it in correctly, enter the figures shown in table Fig. 3-5 (as shown in the package fiche facsimile Fig. 3-4).

The remaining values must be obtained from the technical data sheets of the products used to

make up the assembly (e.g. solar devices, integration heat pumps, temperature controllers). Use sheet fig. 3-6 for “assemblies” related to the domestic hot water function (e.g.: water heater + solar thermal system).

Facsimile for filling in domestic hot water production system package fiche.

Water heating energy efficiency of the water heater

¹
 %

Stated load profile:

Solar contribution

From the board of the solar device

Auxiliary electricity

$$(1,1 \times '1' - 10\%) \times '1' - \text{Auxiliary electricity} = + \text{} \%$$

Water heating energy efficiency of the set in average climate conditions

³
 %

Water heating energy efficiency class of the set in average climate conditions

	<input type="checkbox"/>									
	G	F	E	D	C	B	A	A ⁺	A ⁺⁺	A ⁺⁺⁺
<input type="checkbox"/> M	< 27 %	≥ 27 %	≥ 30 %	≥ 33 %	≥ 36 %	≥ 39 %	≥ 65 %	≥ 100 %	≥ 130 %	≥ 163 %
<input type="checkbox"/> L	< 27 %	≥ 27 %	≥ 30 %	≥ 34 %	≥ 37 %	≥ 50 %	≥ 75 %	≥ 115 %	≥ 150 %	≥ 188 %
<input type="checkbox"/> XL	< 27 %	≥ 27 %	≥ 30 %	≥ 35 %	≥ 38 %	≥ 55 %	≥ 80 %	≥ 123 %	≥ 160 %	≥ 200 %
<input type="checkbox"/> XXL	< 28 %	≥ 28 %	≥ 32 %	≥ 36 %	≥ 40 %	≥ 60 %	≥ 85 %	≥ 131 %	≥ 170 %	≥ 213 %

Water heating energy efficiency class in colder and hotter climate conditions

Colder: ³ - 0.2 x ² = %

Hotter: ³ + 0.4 x ² = %

The energy efficiency of the set of products indicated in this sheet may not reflect the actual energy efficiency after installation since such efficiency is affected by additional factors, such as the heat loss in the distribution system and the size of the products compared to the size and features of the building.

Parameters for filling in DHW package assembly chart.

Parameter	Julius 11 4 ErP	Julius 14 4 ErP
'I'	66	76
'II'	*	*
'III'	*	*

* to be determined according to Regulation 812/2013 and transient calculation methods as per Notice of the European Community no. 207/2014.

3-5

Domestic hot water production system package fiche.

Water heating energy efficiency of the water heater

%

Stated load profile:

Solar contribution

From the board of the solar device

Auxiliary electricity

$(1.1 \times \text{---} - 10\%) \times \text{---} - \text{---} = + \text{---} \%$

Water heating energy efficiency of the set in average climate conditions

%

Water heating energy efficiency class of the set in average climate conditions

	<input type="checkbox"/>									
	G	F	E	D	C	B	A	A⁺	A⁺⁺	A⁺⁺⁺
<input type="checkbox"/> M	< 27 %	≥ 27 %	≥ 30 %	≥ 33 %	≥ 36 %	≥ 39 %	≥ 65 %	≥ 100 %	≥ 130 %	≥ 163 %
<input type="checkbox"/> L	< 27 %	≥ 27 %	≥ 30 %	≥ 34 %	≥ 37 %	≥ 50 %	≥ 75 %	≥ 115 %	≥ 150 %	≥ 188 %
<input type="checkbox"/> XL	< 27 %	≥ 27 %	≥ 30 %	≥ 35 %	≥ 38 %	≥ 55 %	≥ 80 %	≥ 123 %	≥ 160 %	≥ 200 %
<input type="checkbox"/> XXL	< 28 %	≥ 28 %	≥ 32 %	≥ 36 %	≥ 40 %	≥ 60 %	≥ 85 %	≥ 131 %	≥ 170 %	≥ 213 %

Water heating energy efficiency class in colder and hotter climate conditions

Colder: $\text{---} - 0.2 \times \text{---} = \text{---} \%$

Hotter: $\text{---} + 0.4 \times \text{---} = \text{---} \%$

The energy efficiency of the set of products indicated in this sheet may not reflect the actual energy efficiency after installation since such efficiency is affected by additional factors, such as the heat loss in the distribution system and the size of the products compared to the size and features of the building.

3-6

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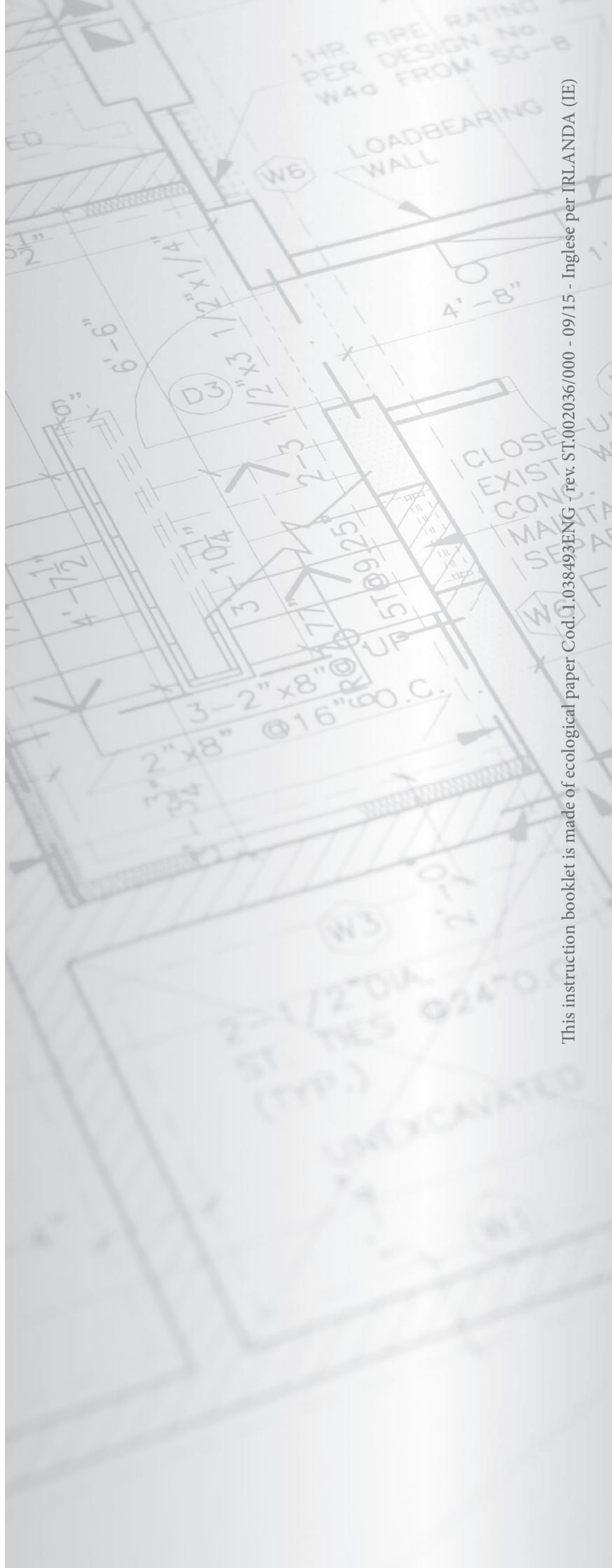
Immergas Italia



immergas.com

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Tel. 0522.689011
Fax 0522.680617

Certified company ISO 9001



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