RemaSol-2

EN

Solar hot water calorifer

200...500C-2S

L000540-B

Installation, User and Service Manual

7652081-001-02

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Contents

1 Safety instructions

1.1 Safety instructions

DANGER

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

CAUTION

1. Turn off the domestic cold water inlet.
2. Open a hot water tap on the installation.
3. Open a safety unit valve.
4. When the water stops flowing, the appliance has been drained.

CAUTION

Pressure limiter device

- The pressure limiter device (safety valve or safety unit) must be operated regularly in order to clear out any limescale deposits and ensure that it is not blocked.
- The pressure limiter device must be connected to a discharge pipe.
- As water may flow from the discharge pipe, it must be kept open to the air, in a frost-free environment, in a continuous downward gradient.

For the type, characteristics and connection of the pressure limiter device, please refer to the section entitled Connecting the domestic hot water tank to the drinking water network in the installation and service manual for the domestic hot water tank.

The user guide and the installation manual can also be found on our internet site.

CAUTION

Allowance must be made for a means of disconnection in the fixed pipes in accordance with the regulations on installations.

CAUTION

If a power cord is provided with the appliance and it turns out to be damaged, it must be replaced by the manufacturer, its after sales service or persons with similar qualifications in order to obviate any danger.

CAUTION

Respect the maximum water inlet pressure to ensure correct operation of the appliance, referring to the chapter "Technical Specifications".

CAUTION

Before any work, switch off the mains supply to the appliance.

CAUTION

In order to limit the risk of being scalded, the installation of a thermostatic mixing valve on the domestic hot water flow piping is compulsory.

1.2 Recommendations

CAUTION

Do not neglect to service the appliance. Service the appliance regularly to ensure that it operates correctly.

WARNING

Only qualified professionals are authorised to work on the appliance and the installation.

WARNING

- The heating water and the water-propylene-glycol mixture must not come into contact with the domestic hot water.
- The domestic hot water must not circulate through an exchanger.
- Solar installations can be protected against lighting and must be earthed or connected to an equipotential connection.

To take advantage of the guarantee, no modifications must be made to the appliance. Only remove the covers for maintenance and breakdown repair operations and put the covers back in place after the maintenance and breakdown repair operations.

Instructions stickers

The instructions and warnings affixed to the appliance must never be removed or covered and must remain legible during the entire lifespan of the appliance. Immediately replace damaged or illegible instructions and warning stickers.

WARNING

Never cut the power to the solar control system, even during extended absences. The control system protects the installation against overheating in summer when it is running.

WARNING

Do not modify the control system parameters unless fully conversant with them.

During extended absences, we recommend lowering the set point temperature in the solar DHW calorifier to 45°C. When the user is present, the set point must be set to 60°C.

1.3 Liabilities

1.3.1. Manufacturer's liability

Our products are manufactured in compliance with the requirements of the various applicable European

Directives. They are therefore delivered with CE marking and all relevant documentation.

In the interest of customers, we are continuously endeavouring to make improvements in product quality. All the specifications stated in this document are therefore subject to change without notice.

Our liability as the manufacturer may not be invoked in the following cases:

- Failure to abide by the instructions on using the appliance.
- Faulty or insufficient maintenance of the appliance.
- Failure to abide by the instructions on installing the appliance.

1.3.2. Installer’s liability

The installer is responsible for the installation and commissioning of the appliance. The installer must respect the following instructions:

- Read and follow the instructions given in the manuals provided with the appliance.
- Carry out installation in compliance with the prevailing legislation and standards.
- Perform the initial start up and carry out any checks necessary.
- Explain the installation to the user.
- If a maintenance is necessary, warn the user of the obligation to check the appliance and maintain it in good working order.
- Give all the instruction manuals to the user.

1.3.3. User’s liability

To guarantee optimum operation of the appliance, the user must respect the following instructions:

- Read and follow the instructions given in the manuals provided with the appliance.
- Call on qualified professionals to carry out installation and initial start up.
- Get your installer to explain your installation to you.
- Ensure the Appliance is serviced in accordance with the manufacturer’s instructions by a suitable qualified person.
- Keep the instruction manuals in good condition close to the appliance.

2 About this manual

2.1 Symbols used

2.1.1. Symbols used in the manual

In these instructions, various danger levels are employed to draw the user's attention to particular information. In so doing, we wish to safeguard the user's safety, highlight hazards and guarantee correct operation of the appliance.

DANGER

Risk of a dangerous situation causing serious physical injury.

WARNING

Risk of a dangerous situation causing slight physical injury.

CAUTION

Risk of material damage.

Signals important information.

Signals a referral to other instructions or other pages in the instructions.

2.1.2. Symbols used on the equipment

Before installing and commissioning the device, read carefully the instruction manuals provided.

Dispose of the used products in an appropriate recovery and recycling structure.

2.2 Abbreviations

- **CFC**: Chlorofluorocarbon
- **DHW**: Domestic hot water

2.3 Homologations

2.3.1. Directive 97/23/EC

This product conforms to the requirements of european directive 97 / 23 / EC, article 3, paragraph 3, on pressure equipment.

3 Technical description

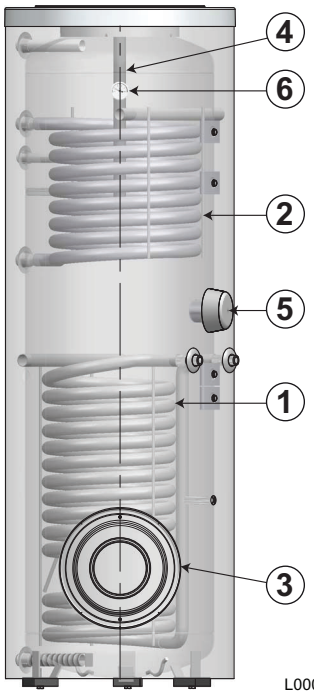
3.1 General description

200...500C-2S domestic hot water calorifiers are connected to solar collectors by a solar station. 200...500C-2S domestic hot water calorifers can use a boiler, a heat pump or an electrical resistor as back-up.

Main parts:

- The tanks are made of high quality steel lined with food quality standard enamel vitrified at 850°C, which protects the tank from corrosion.
- The heat exchangers welded into the tank are made of smooth piping, the external surface of which, in contact with the drinking water, is enamelled.
- The appliance is highly insulated with CFC-free polyurethane foam, which reduces thermal losses to a minimum.
- The external casing is made of ABS.
- The tanks are protected against corrosion by several magnesium anodes.

3.2 Solar domestic hot water calorifier



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All components are checked for leaks and tested in the factory.

200...500C-2S

①	Solar exchanger
②	Back-up exchanger
③	Anode - Side inspection plate
④	Anode - Top inspection trap
⑤	Electrical back-up (Option)
⑥	Thermometer

All components are checked for leaks and tested in the factory.

3.3 Technical specifications

3.3.1. Solar domestic hot water calorifier

		200C-2S	300C-2S	400C-2S	500C-2S
Primary circuit: Solar exchanger					
Maximum operating temperature	°C	110	110	110	110
Maximum operating pressure	Mpa (bar)	1 (10)	1 (10)	1 (10)	1 (10)
Exchanger capacity	litres	5.6	8.1	10.1	12.8
Exchange surface	m^2	0.84	1.2	1.5	1.9
Primary circuit: Back-up exchanger					
Maximum operating temperature	°C	110	110	110	110
Maximum operating pressure	bar (MPa)	1 (10)	1 (10)	1 (10)	1 (10)
Exchanger capacity	litres	5.1	5.1	5.1	5.1
Exchange surface	m^2	0.76	0.76	0.76	0.76
Pressure drop at 2 m^3/Time	kPa	4	4	4	4
Secondary circuit (domestic water)					
Maximum operating temperature	°C	95	95	95	95
Maximum operating pressure	Mpa (bar)	1 (10)	1 (10)	1 (10)	1 (10)
Water content	litres	225	300	400	500
Top up volume	litres	75	105	150	160
Solar volume	litres	150	195	250	340
Weight					
Shipping weight - DHW calorifier package	kg	106	129	156	188
Performance Primary circuit: **Back-up exchanger**					
Power exchanged	kW	24	24	24	24
Performance					
Flow per hour (ΔT = 35 °C) (1)	litres per hour	590	590	590	590
Transfer capacity over 10 minutes (ΔT = 30°C)(2)	litres per 10 min.	150	200	270	305
Maintenance consumption (ΔT=45K)(3)	kWh/24h	1.80	2.20	2.60	3.00

(1) Primary temperature: 80 °C - Domestic cold water inlet: 10 °C - Domestic hot water outlet: 45 °C - Primary flow rate: 2 m^3/h
(2) Primary temperature: 80 °C - Domestic cold water inlet: 10 °C - Domestic hot water outlet: 40 °C - Domestic hot water storage: 65 °C
(3) Satisfies the requirements of the EN 12977–1 standard

4 Installation

4.1 Regulations governing installation

CAUTION

Installation of the appliance must be done by a qualified engineer in accordance with prevailing local and national regulations.

CAUTION

France: The installation must comply in all matters to the standards and rules which govern the work and interventions in individual and collective homes, and other constructions.

DANGER

Temperature limit at draw-off points: we would remind you that the maximum domestic hot water temperature at the draw-off point is subject to particular regulations in the various countries where the appliance is sold in order to protect the consumer. Such regulations must be observed when installing the appliance

4.2 Package list

4.2.1. Standard delivery

The delivery includes:

- A DHW calorifier.
- An installation, use and service manual.

4.2.2. Accessories

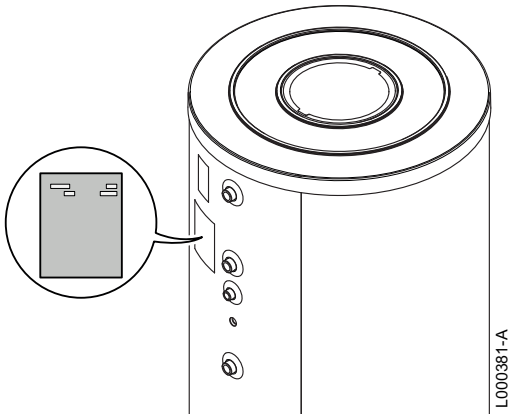
Various options are available depending on the configuration of the installation:

Description	Pack no.
Solar station	ER710
Solar station connection accessories	ER414
Sol AEL solar regulator	ER401
18-litre expansion vessel - 10 bar (1 MPa)	EG117
25-litre expansion vessel - 10 bar (1 MPa)	EG118

Description	Pack no.
Domestic hot water thermostatic mixing valve	EC60
Connection kit for thermostatic mixing valve and calorifier with safety unit 7 bar (0.7 MPa)	ER404
1500 W electrical resistor with PT1000 temperature sensor	ER392
3000 W electrical resistor with PT1000 temperature sensor	ER394

4.3 Choice of the location

4.3.1. Type plate



The type plate must be accessible at all times.
The type plate identifies the product and provides the following information:

- DHW calorifier type
- Manufacturing date (Year - Week)
- Serial number.

4.3.2. Positioning of the appliance

CAUTION

Put the appliance in a frost-free location.

- Place the appliance as close as possible to draw-off points in order to minimise energy losses through the pipes.
- Place the appliance on a base frame to facilitate cleaning of the premises.
- Install the appliance on a solid, stable structure able to bear its weight.

4.3.3. Main dimensions

■ **Legend**

① Domestic hot water outlet G1"
② Circulation G¾"
③ Exchanger inlet G1"
④ Domestic hot water sensor
⑤ Exchanger outlet G1"

⑥ Domestic cold water inlet + Drain opening G1"

⑦ Solar exchanger inlet G3/4"

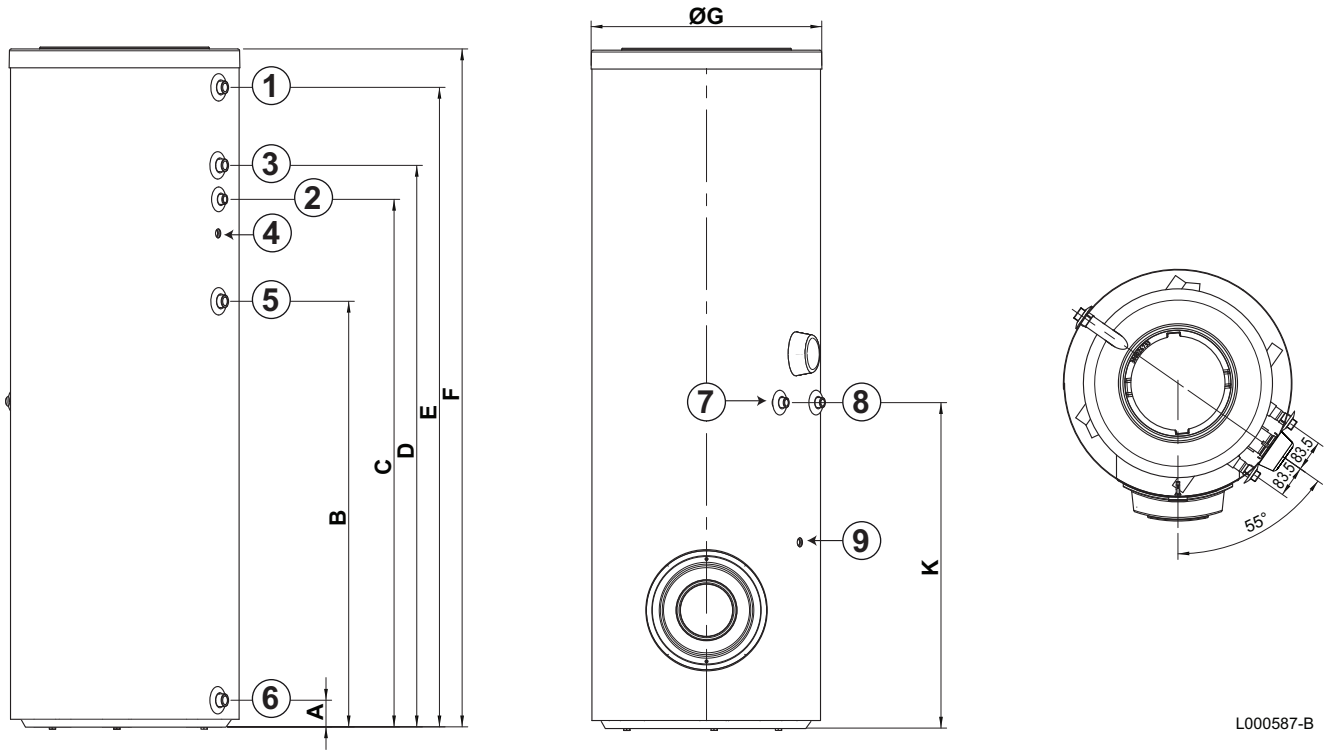
⑧ Solar exchanger outlet G3/4"

⑨ Position solar sensor

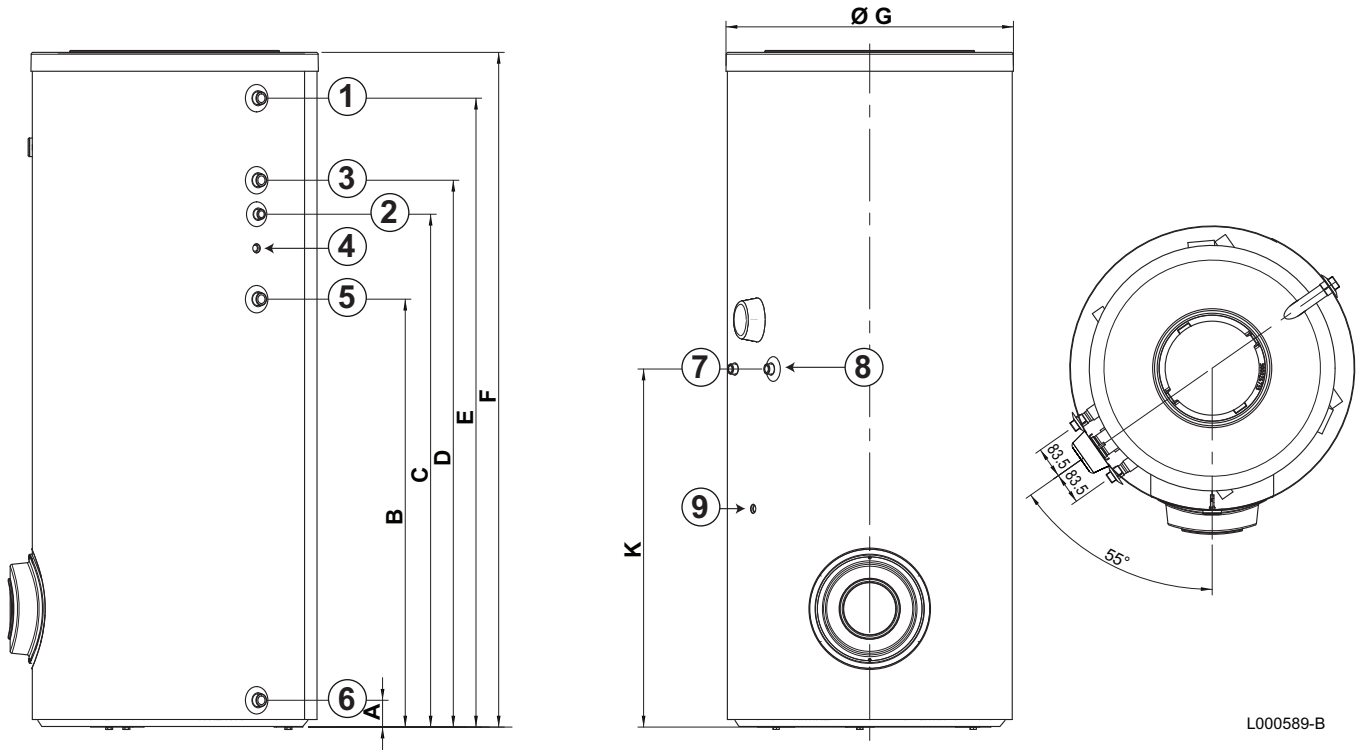
G : Exterior cylindrical threading, sealed by sheet gasket

	200C-2S	300C-2S	400C-2S	500C-2S
A	70	70	66	71
B	912	1127	992	1133
C	1092	1307	1172	1313
D	1182	1397	1262	1403
E	1324	1694	1558	1666
F	1422	1796	1672	1787
G (Ø)	605	605	705	755
K	682	862	812	948

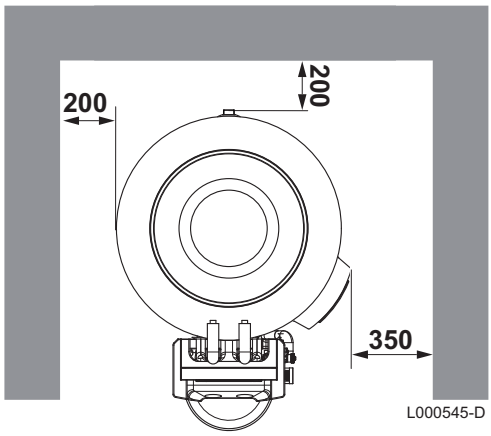
■ 200C-2S - 300C-2S



■ **400C-2S - 500C-2S**



4.4 Positioning the appliance

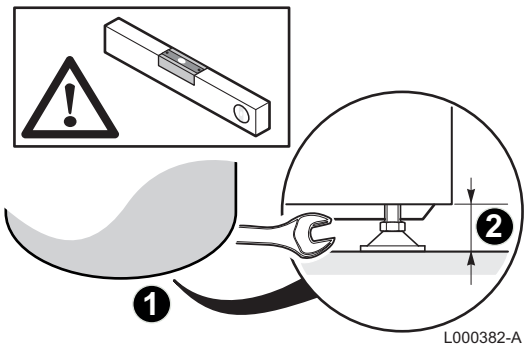


CAUTION

- Have 2 people available.
- Handle the appliance with gloves.

1. Remove the packaging from the DHW calorifier, leaving the calorifier on the pallet used for transport.
2. Remove the protective packaging.
3. Remove the 3 screws securing the calorifier to the pallet.
4. Lift the DHW calorifier and place it in its final position, respecting the distances shown on the diagram.

4.5 Levelling



The DHW calorifier is levelled using the 3 feet (delivered in the instructions pack) to be screwed to the bottom of the DHW calorifier.

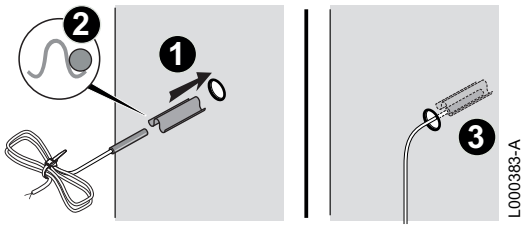
1. Mount the 3 adjustable feet under the appliance.
2. Level the appliance using the adjustable feet.

- Adjustment range: 10 mm.
- Use metal blocks under the feet of the calorifier if necessary.

CAUTION

Do not place the blocks on the exterior sides of the domestic hot water calorifier.

4.6 Installing the temperature sensors

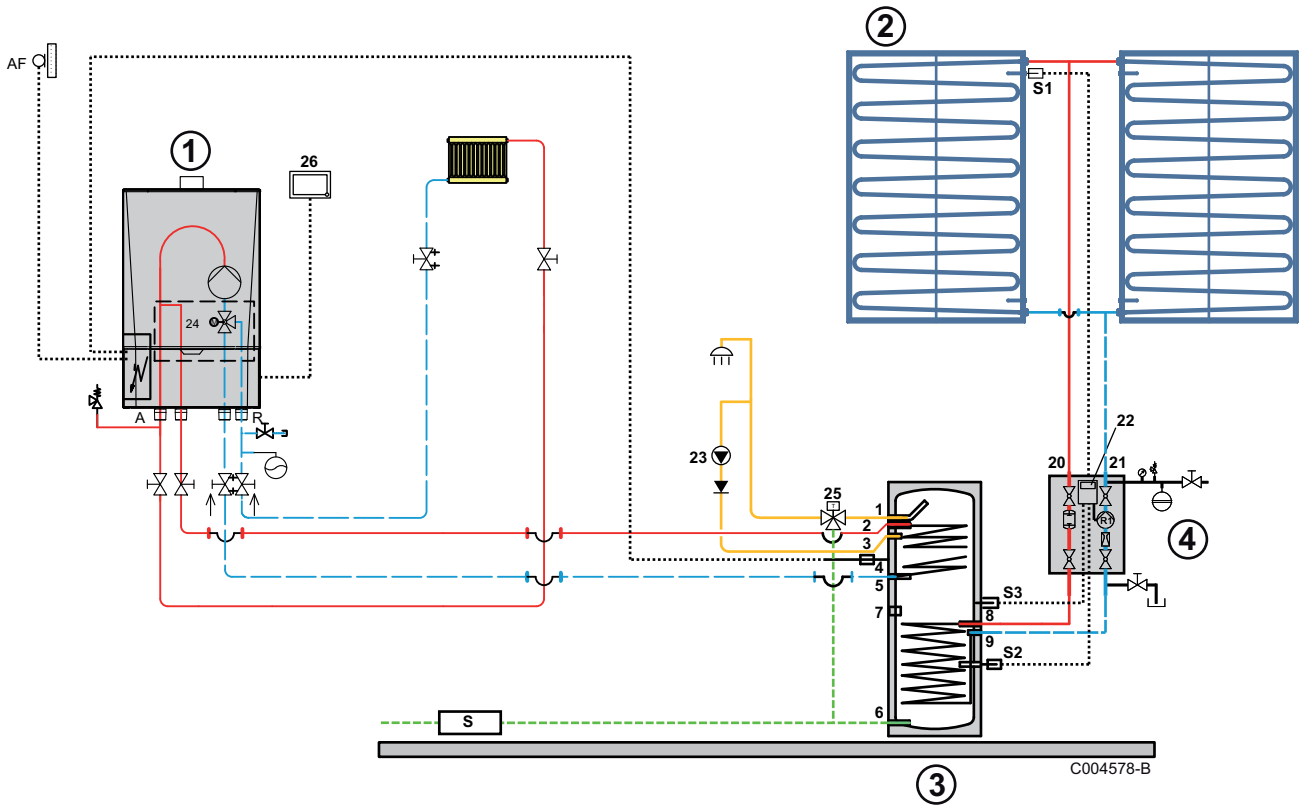


See sensor location: "Main dimensions", page 14

1. Insert the sensor into the sensor tube with the help of the sensor tube separator.
   The sensor tube separator is provided in the instructions bag.
2. Check that the sensors are correctly positioned in the sensor tube.
3. Check the mounting of the sensor tube separator.

4.7 Hydraulic installation diagram

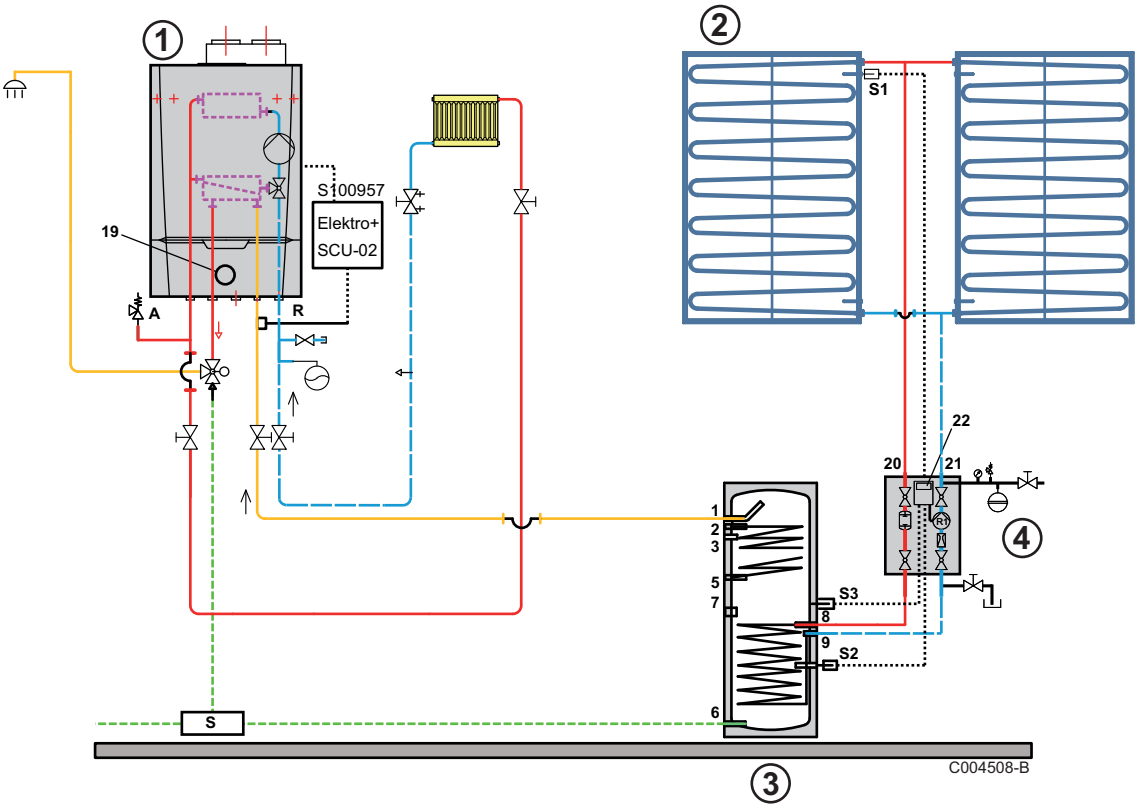
4.7.1. Boiler for heating only (Output <45 kW) + 200...500C-2S



①	Wall-hung gas boiler (Calenta)
②	2 collectors running in parallel
③	Domestic hot water tanks 200...500C-2S
④	Solar station
1	Domestic hot water outlet
2	DHW calorifier exchanger primary inlet
3	Domestic hot water circulation loop return
4	Domestic hot water sensor
5	DHW calorifier heat exchanger primary outlet
6	Domestic cold water inlet
7	Integration option
8	DHW calorifier exchanger primary inlet
9	DHW calorifier heat exchanger primary outlet
20	Solar flow
21	Solar return
22	Solar regulator SOL AEL
23	D.H.W. loop back pump

25	Domestic hot water thermostatic mixing valve
26	iSense
S	Safety unit
S1	Solar sensor probe
S2	Solar domestic hot water calorifier sensor
S3	Sensor option
AF	Optional outside sensors
R1	Primary solar circuit pump
A	Boiler flow (Calenta solo)
R	Boiler return (Calenta solo)

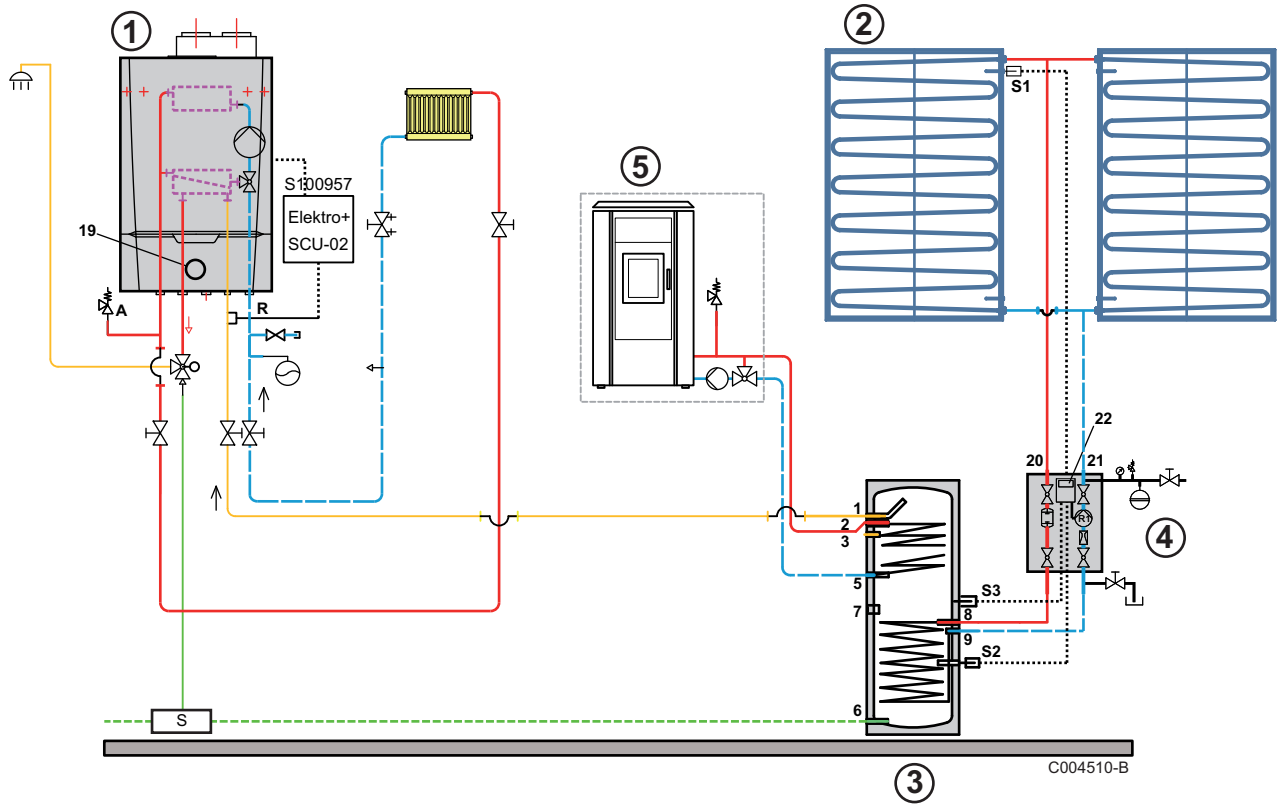
4.7.2. Combi boiler + 200...500C-2S



①	Combi boiler (Calenta)
②	2 collectors running in parallel
③	Domestic hot water tanks 200...500C-2S
④	Solar station
1	Domestic hot water outlet
3	Domestic hot water circulation loop return
5	DHW calorifier heat exchanger primary outlet
6	Domestic cold water inlet
7	Integration option
8	DHW calorifier exchanger primary inlet

9	DHW calorifier heat exchanger primary outlet
19	Connection kit for the solar tank
20	Solar flow
21	Solar return
22	Solar regulator SOL AEL
S	Safety unit
S1	Solar sensor probe
S2	Solar domestic hot water calorifier sensor
S3	Sensor option
AF	Optional outside sensors
R1	Primary solar circuit pump
A	Boiler flow (Calenta)
R	Boiler return (Calenta)

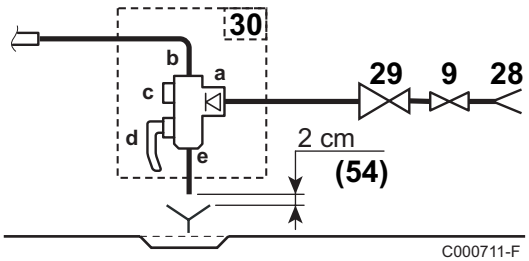
4.7.3. Combi boiler + Additional heating (Output <45 kW) + 200...500C-2S



①	Combi boiler (Calenta)
②	2 collectors running in parallel
③	Domestic hot water tanks 200...500C-2S
④	Solar station
⑤	Additional heat source (output <45 kW)
1	Domestic hot water outlet

2	Flow to external heat source
3	Circulation piping connection (optional)
5	Tank return to external heat source
6	Domestic cold water inlet
7	Integration option
8	DHW calorifier exchanger primary inlet
9	DHW calorifier heat exchanger primary outlet
19	Connection kit for the solar tank
20	Solar flow
21	Solar return
22	Solar regulator SOL AEL
S	Safety unit
S1	Solar sensor probe
S2	Solar domestic hot water calorifier sensor
S3	Sensor option
R1	Primary solar circuit pump
A	Boiler flow (Calenta)
R	Boiler return (Calenta)

4.7.4. Safety unit



9	Isolating valve
28	Domestic cold water inlet
29	Pressure reducer
30	Safety unit
54	End of the discharge pipe free and visible 2 to 4 cm above the flow funnel
a	Cold water inlet with an integrated non-return valve
b	Connection to the DHW calorifer cold water inlet
c	Stop cock
d	All countries except Germany: 0.7 MPa safety valve (7 bar) Germany: 10 bar safety valve (1 MPa) maximum
e	Drain opening

4.8 Hydraulic connections

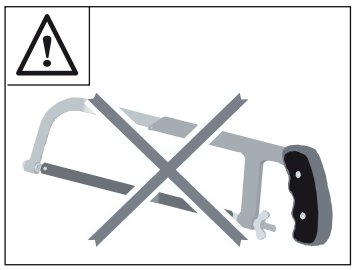
4.8.1. Primary solar circuit

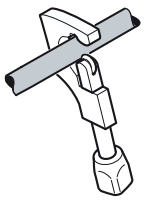
☞ See solar station installation and service manual.

■ Connecting

CAUTION

Soft soldering is not authorized.
The use of flux promotes corrosion conditions in systems operating with propylene glycol as heat transfer fluid. In all cases the inside of the pipes must be flushed.





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- Use of a hacksaw is prohibited.
- Pipe connections by compression fittings.
- Hard soldering: Hard soldering: hard soldering filler metal without flux in accordance with DIN EN 1044, e.g. L-Ag2P or L-CuP6.
- Pipe fittings: can only be used if they are resistant to glycol, pressure (6 bar) depending on version) and temperature (-30 °C, 180 °C) (manufacturer's data).
- Sealing material: Hemp.
- Press fitting (6 bar, 140 °C).

4.8.2. Primary heating circuit

Before connection, rinse the primary circuit to evacuate any particles that may damage certain devices (safety valve, pumps, valves, etc.).

- Hydraulically isolate the primary and secondary circuits using stop valves to facilitate maintenance operations on the unit. The valves make it possible to carry out maintenance on the calorifer and its components without draining the entire installation.
- Carry out installation in compliance with the prevailing legislation and standards.

4.8.3. Connecting the calorifer to the domestic water circuit (secondary circuit)

When making the connections, it is imperative that the standards and corresponding local directives are respected. To reduce heat losses as much as possible, insulate the pipes.

Belgium: Make the connections in accordance with Belgaqua technical instructions.

■ Specific precautions

Before making the connection, **rinse the drinking water inlet pipes** in order not to introduce metal or other particles into the appliance's tank.

■ Provision for Switzerland

Make the connections according to the instructions of the Société Suisse de l'Industrie du Gaz et des Eaux. Comply with local instructions from water distribution plants.

■ Safety valve

CAUTION

In accordance with safety rules, a safety valve calibrated to 7 bar (0.7 MPa) is mounted on the tank's domestic cold water inlet.

Germany: 10 bar safety valve (1.0 MPa) maximum.

France: We recommend NF-marked hydraulic membrance safety control units.

- Integrate the safety valve in the cold water circuit.
- Install the safety valve close to the calorifer in a place which is easy to access.

■ Size

- The diameter of the safety unit and its connection to the calorifer must be at least equal to the diameter of the domestic cold water inlet on the calorifer.
- There must be no cut-off element between the valve or the safety unit and the domestic hot water calorifer.
- The outlet pipe in the valve or safety assembly must not be blocked.

To avoid restricting the flow of water in the event of overpressure:

- The discharge pipe from the safety unit must have a continuous and sufficient gradient.
- The cross section of the discharge pipe from the safety unit must be at least equal to the cross section of the opening of the safety unit outlet.

Germany: Define the dimensions of the safety valve in accordance with the DIN 1988 standard.

Calorifer capacity (litres)	Minimum inlet connection size of the safety valve	Heating output (kW) (max)
< 200	R or Rp 1/2	75
200 to 1000	R or Rp 3/4	150

- Fit the safety valve above the calorifer to avoid draining the tank during servicing.
- Install a drainage valve at the lowest point on the calorifer.

■ Isolating valves

Hydraulically isolate the primary and secondary circuits using stop valves to facilitate maintenance operations on the unit. The valves make it possible to carry out maintenance on the calorifer and its components without draining the entire installation.

These valves are also used to isolate the calorifer unit when conducting a pressurised check on the leak tightness of the installation if the test pressure is greater than the admissible operating pressure.

CAUTION

If the mains pipes are made of copper, fit a sleeve made of steel, cast iron or any other insulating material between the tank's hot water outlet and the pipes to prevent corrosion to the connection.

■ Connecting the domestic cold water

Make the connection to the cold water supply according to the hydraulic installation diagram.

The components used for the connection to the cold water supply must comply with the prevailing standards and regulations in the country concerned.

- Install a water drain in the boiler room and a funnel-siphon for the safety unit.
- Fit a one-way valve to the domestic cold water circuit.

■ Pressure reducer

If the mains pressure exceeds 80% of the calibration of the valve or safety unit (e.g. 8 bar (0,8 MPa) for a safety unit calibrated to 10 bar (1,0 MPa)), a pressure reducer must be installed upstream of the appliance. Install the pressure reducer downstream the water meter in such a way as to ensure the same pressure in all of the installation pipes.

■ Domestic hot water circulation loop

To guarantee the availability of hot water as soon as the taps are turned on, a circulation loop between the draw-off points and the recirculation pipes in the DHW calorifer can be installed. A non-return valve must be included in this loop.

Run the domestic hot water circulation loop via the boiler control system or an additional timer program to optimse energy consumption.

■ Measures to take to prevent hot water flow return

Fit a one-way valve to the domestic cold water circuit.

4.9 Filling the DHW calorifer

CAUTION

Initial commissioning must be done by a qualified professional.

1. Flush the domestic circuit and fill the calorifer through the cold water inlet tube.
2. Open a hot water tap.
3. Completely fill the domestic hot water calorifer via the cold water inlet pipe, leaving the hot water valve open.
4. Close the hot water valve when the water flow is regular, without noise in the pipes.
5. Carefully vent all of the DHW pipes by repeating steps 2 to 4 for each hot water tap.

Venting the domestic hot water calorifer and the mains network helps to prevent noises and banging caused by trapped air moving through the pipes during draw-off.

6. Vent the tank exchanger circuit using the bleed valve provided for this purpose.
7. Check the safety devices (particularly the valve or safety unit), referring to the instructions provided with these components.

CAUTION

During the heating process, a certain amount of water may flow through the valve or safety unit, this is caused by water expansion. This phenomenon is completely normal and must in no event be hindered.

4.9.1. Drinking water quality

In regions where the water is very hard (TH > 20 °f), we recommend fitting a softener.
The hardness of the water must always be between 12 °f and 20 °f to be capable of providing effective protection against corrosion.
The softener does not bring about derogation of our warranty, provided that the softener is:
- approved and set in accordance with the codes of practice and the recommendations given in the instruction manual for the softener
- regularly inspected
- regularly serviced

4.10 Filling the primary solar circuit

See installation and commissioning instructions for the solar station.

4.11 Filling the heating circuit

☞See the installation and service manual for the boiler.

5 Commissioning

5.1 Check points before commissioning

CAUTION

If the temperature in the solar collectors is higher than 130°C, the control system operates in safety mode. Wait until the evening before start-up or cool down (cover) the solar collectors.

5.1.1. Domestic hot water calorifer

1. Before start-up, the heating installation must be completely emptied and rinsed.
2. Make sure that all valves on the circuit are opened.
3. Fill the installation with water and check hydraulic tightness.

5.1.2. Primary solar circuit

See installation and commissioning instructions for the solar station.

5.1.3. Primary heating circuit

See boiler installation instructions

5.1.4. Electrical connection

Check the electrical connections, particularly the earth.

5.2 Commissioning procedure

WARNING

- Initial commissioning must be done by a qualified professional.
- During the heating process, water can flow through the bleed circuit to guarantee the safety of the installation. This phenomenon is perfectly normal and must in no circumstances be hindered.

5.2.1. Secondary circuit (domestic water)

Set the domestic hot water thermostatic mixing valve to the required temperature to avoid scalding when running domestic hot water.

WARNING

The thermostatic mixing valve must be set to maximum at 60°C.

■ **Protection against legionnella (Only for the 500 L model)**

WARNING

It is compusory that DHW calorifers with a capacity of more than 400 litres abide by the Order on "Protection against legionella" (France: Order of 30 November 2005 - Germany: TrinkwV 2011 - Order of 01 November 2011 on water quality – Other countries: Abide by prevailing regulations)

Apply one of these 2 instructions:

- The domestic hot water must at be at a temperature of more than or equal to 55°C at the appliance outlet at all times.
- The domestic hot water must be brought up to a minimum temperature for a minimum duration at least once every 24 hours. See table below:

Minimum temperature maintenance time (minutes)	Water temperature (°C)
2	more than or equal to 70
4	65
60	60

5.2.2. Primary solar circuit

☞See installation and commissioning instructions for the solar station.

6 Checking and maintenance

6.1 General instructions

CAUTION

- Maintenance operations must be done by a qualified engineer.
- Only original spare parts must be used.

6.2 Safety valve or safety unit

The safety valve or unit on the domestic cold water inlet must be operated at least **once a month** to ensure proper operating and to prevent from any overpressure which may that may damage the domestic hot water calorifier.

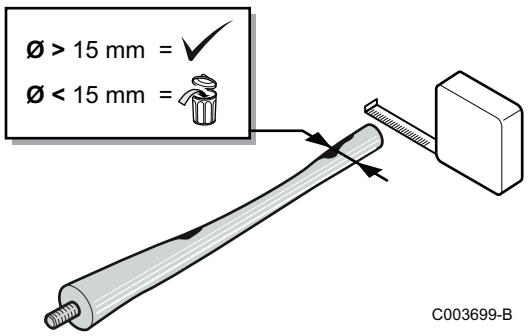
WARNING

Failure to abide by this maintenance rule may damage the domestic hot water calorifier and void its warranty.

6.3 Cleaning the casing material

Clean the outside of appliances using a damp cloth and a mild detergent.

6.4 Checking the magnesium anode



Check the condition of the anodes at the end of the first year. It is necessary to determine the periodicity of subsequent checks as of the first check, according to wear and tear on anodes. Magnesium anodes must be checked at least every 2 years.

1. Remove the inspection hatches.
   See chapter: "Removing the inspection hatches", page 30.
2. Descale the calorifier if necessary.
3. Measure the diameter of the anode.
   Replace the anode if its diameter is less than 15 mm.
4. Reassemble the anode/inspection hatch unit.
   See chapter: "Remounting the inspection hatches", page 31.

6.5 Descaling

In regions with hard water, annual descaling of the appliance is recommended in order to maintain its performance.

1. Remove the inspection hatches.
   See chapter: "Removing the inspection hatches", page 30.
2. Check the magnesium anode each time the hatch is opened.
   See chapter: "Checking the magnesium anode", page 29.
3. Remove limescale deposits in the form of sludge or strips in the bottom of the tank. On the other hand, do not touch limescale adhering to the walls of the tank as it provides effective protection against corrosion and improves the insulation of the DHW calorifier.
4. Remove limescale deposits from the exchanger to guarantee its performance.
5. Fit the unit together.
   See chapter: "Remounting the inspection hatches", page 31.

6.6 Removing and remounting the inspection hatches

CAUTION

To guarantee tightness, the gasket unit must be replaced each time the hatch is opened.

- Use a new lip gasket and retainer ring for the top inspection hatch.
- Have a new gasket on hand for the side inspection hatch.

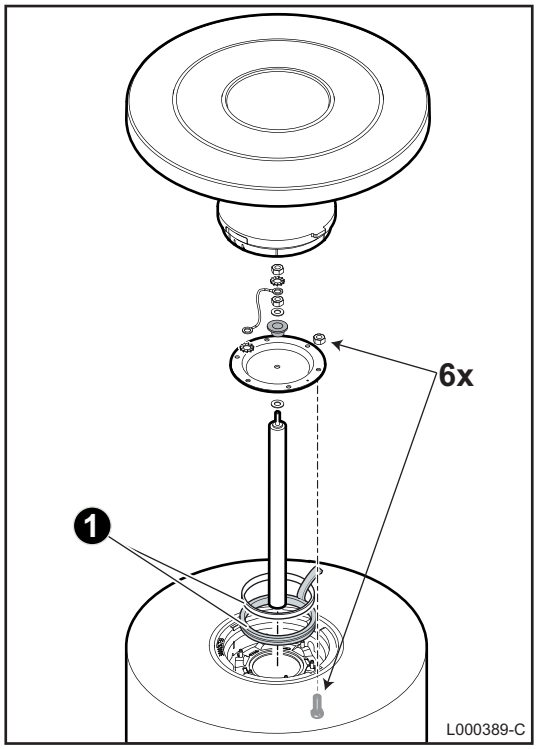
6.6.1. Removing the inspection hatches

1. Turn off the domestic cold water inlet.
2. Drain the calorifier.

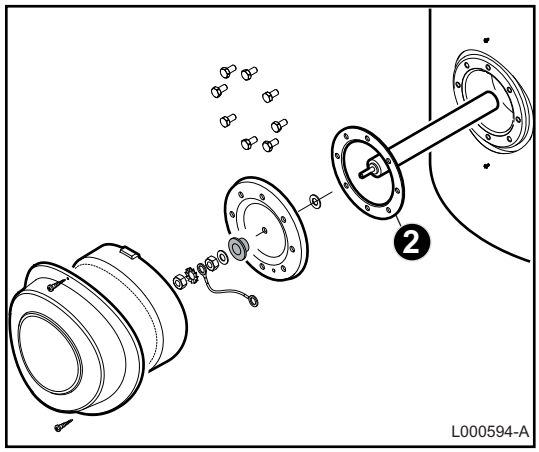
The domestic cold water inlet is also the drain opening.

3. Remove the inspection hatches.

6.6.2. Remounting the inspection hatches



1. Replace the lip gasket + retainer ring unit and place it in the inspection opening, taking care to position the tab on the lip gasket outside the domestic hot water calorifier.



2. Replace the sheet gasket.

3. Fit the unit together.

CAUTION

Use a torque wrench.

Torque applied to the anode: 8 N·m.
The flange mounting bolts must not be excessively tight.

Flange	Torque load
Lip gasket	6 N·m +1/-0
Sheet gasket	15 N·m

Approximately 6 N·m is obtained by manipulating the box spanner with the small lever and 15 N·m by manipulating it with the large lever.

4. After reassembly, check the watertightness of the lateral flange.

5. Switch on.
See chapter: "Commissioning procedure", page 28.

6.7 Inspection and maintenance of the solar circuit

6.7.1. Maintenance operations to be performed

WARNING

Use only the same fluid as for refilling. Do not mix different fluids.

1. Check the level of the heat transporting fluid. Top up the solar fluid if necessary.
2. Check the antifreeze protection.
3. Check the pressures of the installation and the expansion vessel.
4. As the heat transporting fluid leaks much more readily than water, carry out a visual check on the tightness of all fittings and gaskets.
5. Check operation of the installation.

6.7.2. Adding heat transporting fluid

See solar station installation and service manual.

7 Spare parts

7.1 General

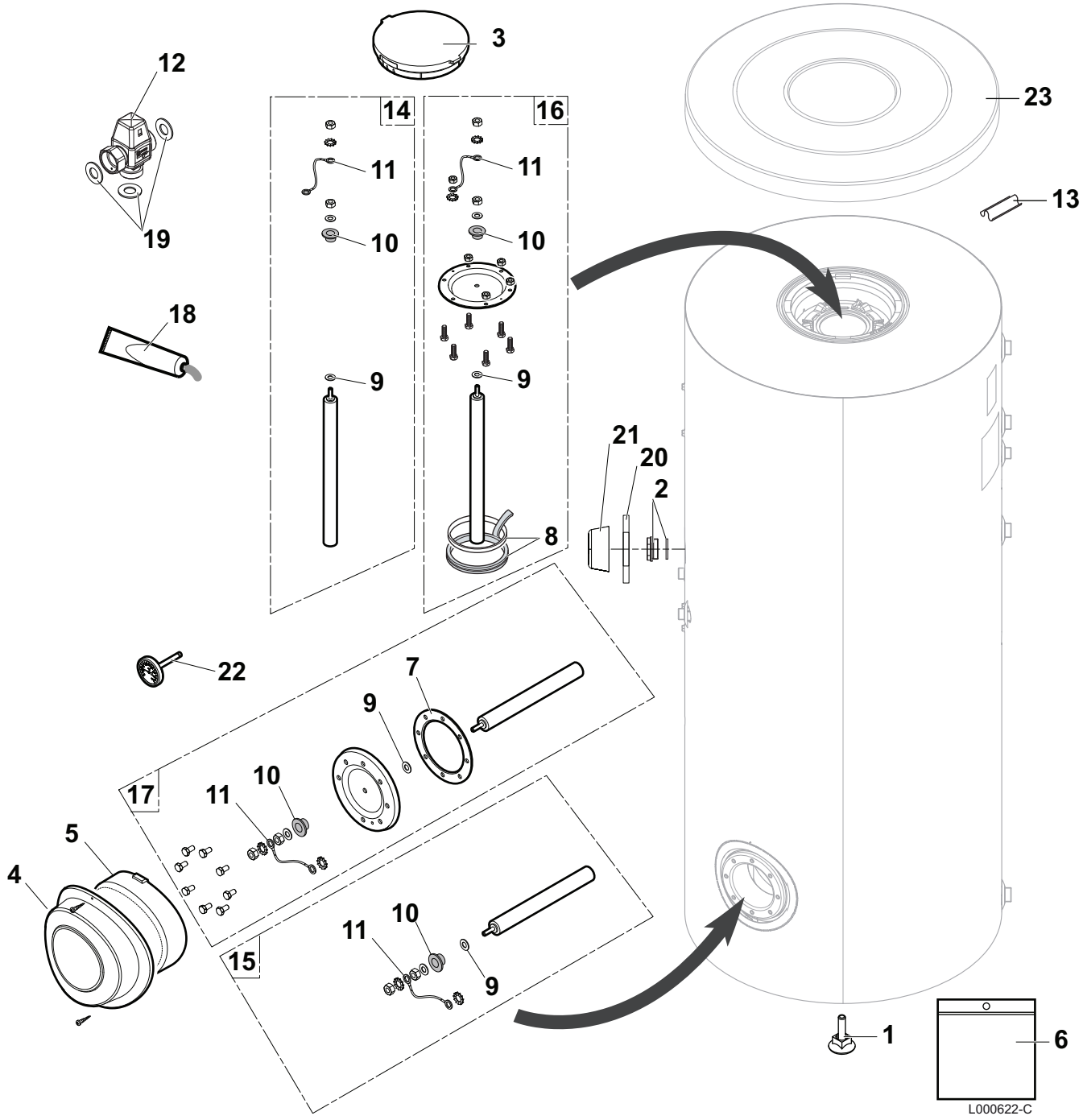
When it is observed subsequent to inspection or maintenance work that a component in the appliance needs to be replaced, use only original spare parts or recommended spare parts and equipment.

Always ensure that your return package is accompanied by the completed return form, see attached example.

Customer						
Reference		Date				
Name						
Address						
Town/Postcode						
Telephone						
Contact person						
Order number						
Code no.	**Description**	**Serial number**(1)	**Type**	**Installation date**	**Reason for the exchange**	**Reference**
(1) This information can be found on the rating plate.						

7.2 Spare parts

7.2.1. Domestic hot water tanks



Markers	Reference	Description	200C-2S	300C-2S	400C-2S	500C-2S
1	180331	Adjustable foot M10 x 35	x	x	x	x
2	200022499	Plug 1" 1/2	x	x	x	x
3	300026994	Insulation, buffer tank	x	x	x	x
4	300026735	Side cover	x	x	x	x
5	300026876	Side insulation	x	x	x	x
6	200021501	Inspection trap screws	x	x	x	x
7	300026031	EPDM seal	x	x	x	x
8	126479	7 mm gasket + 5 mm retainer ring	x	x	x	x
9	603353	Seal ø 35 x 8.5 x 2	x	x	x	x
10	94974527	Nylon brace	x	x	x	x
11	124825	Anode earthing wire	x	x	x	x
12	200021489	Domestic hot water thermostatic mixing valve	x	x	x	x
13	121873	Contact spring for pocket	x	x	x	x
14	121119	Complete anode diameter 33 mm - length 330 mm (1x) - For top trap	x			
14	180112	Complete anode diameter 33 mm - length 420 mm (1x) - For top trap		x		
14	180321	Complete anode diameter 33 mm - length 450 mm (1x) - For top trap			x	x
15	124571	Complete anode diameter 33 mm - length 290 mm (1x) - For side trap	x	x		
15	180112	Complete anode diameter 33 mm - length 420 mm (1x) - For side trap			x	
15	180321	Complete anode diameter 33 mm - length 450 mm (1x) - For side trap				x
16	200022433	Complete top inspection trap with anode and gasket	x			
16	200022466	Complete top inspection trap with anode and gasket		x		
16	200007273	Complete top inspection trap with anode and gasket			x	x
17	200022440	Complete side trap with anode, gaskets and screws	x	x		
17	200022441	Complete side trap with anode, gaskets and screws			x	
17	200022463	Complete side trap with anode, gaskets and screws				x
18	181782	Grease for O-ring	x	x	x	x
19	122418	Green seal 30x21x2	x	x	x	x
20	7615385	Insulation	x	x	x	x
21	7622332	Cover	x	x	x	x
22	7605023	Thermometer	x	x	x	x
23	300027443	Cover	x	x		
23	300027700	Cover			x	
23	300026747	Cover				x

8 Warranty

8.1 General

You have just purchased one of our appliances and we thank you for the trust you have placed in our products.

Please note that your appliance will provide good service for a longer period of time if it is regularly checked and maintained.

Your installer and our customer support network are at your disposal at all times.

8.2 Warranty terms

France: The following provisions are not exlcusive of the buyer being able to benefit from the legal warranty stipulated in Articles 1641 to 1648 of the Civil Code.

Belgium: The following provisions regarding the contractual warranty are not exclusive of the buyer being able to benefit from the legal provisions applicable in Belgium regarding hidden defects.

Switzerland: The application of the warranty is subject to the terms and conditions of sale, delivery and warranty of the company marketing products.

Portugal: The following provisions do not adversely affect consumers' rights, as laid down in Decree-Law 67/2003 of 8 April amended by Decree-Law 84/2008 of 21 May, warranties relating to sales of consumer goods and other implementing rules.

Other countries: The following provisions are not exclusive of the buyer being able benefit from the legal provisions applicable regarding hidden defects in the buyer's country.

Starting from the purchase date shown on the original installer's invoice, your appliance has a contractual guarantee against any manufacturing defect.

The length of the guarantee is mentioned in the price catalogue. The manufacturer is not liable for any improper use of the appliance or failure to maintain or install the unit correctly (the user shall take care to ensure that the system is installed by a qualified engineer).

In particular, the manufacturer shall not be held responsible for any damage, loss or injury caused by installations which do not comply with the following:

- applicable local laws and regulations,
- specific requirements relating to the installation, such as national and/or local regulations,
- the manufacturer's instructions, in particular those relating to the regular maintenance of the unit,
- the rules of the profession.

The warranty is limited to the exchange or repair of such parts as have been recognised to be faulty by our technical department and does not cover labour, travel and carriage costs.

The warranty shall not apply to the replacement or repair of parts damaged by normal wear and tear, negligence, repairs by unqualified parties, faulty or insufficient monitoring and maintenance, faulty power supply or the use of unsuitable fuel.

Sub-assemblies such as motors, pumps, electric valves etc. are guaranteed only if they have never been dismantled.

The legislation laid down by european directive 99/44/EEC, transposed by legislative decree No. 24 of 2 February 2002 published in O.J. No. 57 of 8 March 2002, continues to apply.

Appendix

Information on the ecodesign and energy labelling directives

Contents

1 Specific information

1.1 Recommendations

Note
Only qualified persons are authorised to assemble, install and maintain the installation.

1.2 Ecodesign Directive

This product conforms to the requirements of European Directive 2009/125/EC on the ecodesign of energy-related products.

1.3 Technical data - Hot water storage tank

Tab.1 Technical parameters for hot water storage tank

			200C-2S	300C-2S	400C-2S	500C-2S
Storage volume	V	l	225	300	400	500
Standing loss	S	W	75	92	108	125

1.4 Disposal and Recycling

Note
Removal and disposal of the domestic hot water tank must be carried out by a qualified installer in accordance with local and national regulations.

1. Cut the electricity to the domestic hot water tank.
2. Disconnect the cables on the electrical components.
3. Close the domestic water inlet valve.
4. Drain the installation.
5. Dismantle all water connections fitted to the domestic hot water tank outlet.
6. Scrap and recycle the domestic hot water tank in accordance with local and national regulations.

1.5 Product fiche - Solar devices

Tab.2 Product fiche for solar devices

		200C-2S	300C-2S	400C-2S	500C-2S
Solar hot water storage tank - Energy efficiency class		C	C	C	D
Solar hot water storage tank - Standing loss	W	75	92	108	125
Solar hot water storage tank - Storage volume	l m^3	225 0.225	300 0.300	400 0.400	500 0.500

21/03/2016

7652081-001-02