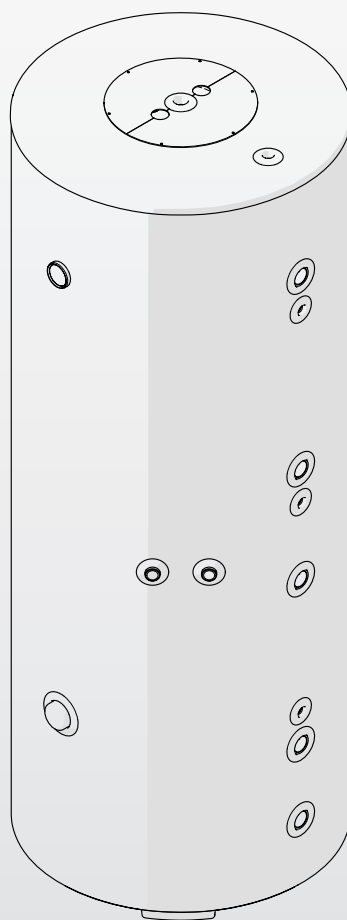




7200 Kombi Plus

EN INSTALLATION, OPERATION AND MAINTENANCE MANUAL

RIELLO

RANGE

Model	Code
7200.550 KOMBI PLUS	20090256

ACCESSORIES

For a complete list of accessories and details of their compatibility, refer to the Catalogue.

Dear Customer,

Thank you for choosing a **RIELLO** Combination cylinder. You have purchased a modern, quality product that is designed to give dependable and safe service and to provide comfort in the home for many years to come. Arrange for your **RIELLO** Combination cylinder to be serviced regularly by an authorised **RIELLO** service centre. Their personnel are specially trained to keep your Combination cylinder efficient and cheap to run. **RIELLO** service centres also stock any original spare parts that might be required.

This manual contains important instructions and precautions that must be observed to ensure the trouble-free installation and efficient functioning of your **RIELLO** Combination cylinder.

Please accept our renewed thanks for your purchase,

Riello S.p.A.

CONFORMITY

RIELLO combination cylinders conform to DIN 4753-3 and UNI EN 12897 standards.



This product must only be used for the purpose for which it is designed and made, as specified by **RIELLO**. **RIELLO** declines all responsibility, contractual or other, for damage to property or injury to persons or animals caused by improper installation, adjustment, maintenance or use.

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The following symbols are used in this manual:



CAUTION! = Identifies actions that require caution and adequate preparation.



STOP! = Identifies actions that you MUST NOT do.

1 GENERAL SAFETY INFORMATION

-  Check that the product is complete, undamaged and as ordered as soon as you receive it. Report any discrepancies or damage to the **RIELLO** dealer who sold it.
-  This product must be installed by a legally qualified heating engineer. On completion of the installation, the installer must issue the owner with a declaration of conformity confirming that the installation has been completed to the highest standards in compliance with the instructions provided by **RIELLO** in this instruction manual, and that it conforms to all applicable laws and standards.
-  This product must only be used for the purpose for which it is designed and made, as specified by **RIELLO**. **RIELLO** declines all responsibility, contractual or other, for damage to property or injury to persons or animals caused by improper installation, adjustment, maintenance or use.
-  The product must be serviced at least once a year. Servicing must be arranged in advance with the **RIELLO** Technical Assistance Service.
-  All servicing and repairs must be performed by a qualified heating engineer.
-  If water leaks from the storage cylinder, turn off the water supply and contact **RIELLO's** Technical Assistance Service or a qualified heating engineer immediately.
-  If the product is not going to be used for an extended period of time, contact the manufacturer's Technical Assistance Service to have at least the following operations performed:
 - Close the shut-off cocks for the domestic hot water circuit
 - Shut down the boiler connected to the storage cylinder as instructed in its own manual
 - Switch the storage cylinder OFF at the control panel (if fitted) and at the mains power switch
 - Drain the central heating circuit and domestic hot water circuit if there is any risk of freezing.
-  This instruction manual is an integral part of the product. It must be kept safe and must **ALWAYS** accompany the product, even if it is sold to another owner or transferred to another user or to another installation. If you lose this manual, order a replacement immediately.

2 PRECAUTIONS

The operation of any appliance that uses electrical power demands that a number of fundamental safety precautions be respected. In particular:

-  Never attempt to install the system without using suitable personal protection equipment and without following all applicable occupational safety standards.
-  Do not touch the product when barefoot or wet if it has any electrical accessories installed in it.
-  Never clean or service the storage cylinder without first turning the mains power switch OFF to disconnect all electrical accessories (if fitted) from the mains electricity supply.
-  Never pull, disconnect, or twist any electrical cables coming from the appliance even if it is disconnected from the mains electricity supply.
-  Do not expose the storage cylinder to the elements. It is not designed for use outdoors.
-  If the pressure in the solar collector circuit drops, do not top up with water alone, since this increases the risk of damage from freezing.
-  Do not use connections or safety devices or fittings (expansion vessels, pipes, insulation) that are not specifically designed and tested for use in solar water heating systems.
-  Do not allow children or infirm persons to operate the system unsupervised.
-  Do not dispose of packaging material into the environment, or leave it within the reach of children, since it can become a potential hazard. Dispose of packaging material in compliance with applicable legislation.

3 DESCRIPTION OF THE APPLIANCE

RIELLO 7200 Kombi Plus combination cylinders consist of a domestic hot water tank inside a buffer tank. They are specifically designed for domestic hot water production and heat integration in heating systems incorporating **RIELLO** CS25 solar collectors.

The most important technical features of these combination cylinders are:

- The cylinder and coils are specially designed and shaped for optimum performance in terms of stratification, heat exchange and replenishment times
- The vitrified lining of the DHW tank is bacteriologically inert for maximum hygiene, reduced lime scale deposits and easy cleaning
- Water fittings are available at different heights, permitting different hot water generators to be used without reducing the stratification effect
- CFC-free polyurethane insulation and an elegant external casing reduce heat loss and improve efficiency
- A flange is provided for easy cleaning and maintenance of the anti-corrosion magnesium anode
- Excellent flexibility permits use in both high and low temperature systems
- Dimensions are extremely compact thanks to the combination of buffer tank and DHW tank.

RIELLO 7200 Kombi Plus combination cylinders can be equipped with a special solar controller and can be integrated in solar heating systems in which **RIELLO** boilers or water heaters provide supplementary heat.

4 IDENTIFICATION

RIELLO 7200 Kombi Plus combination storage cylinders are identified by:



If these plates or any other means of clearly identifying the product are defaced, removed or lost, proper installation and servicing may be rendered difficult.

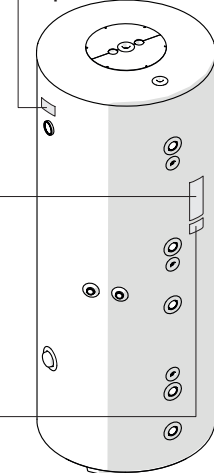
Data plate

This lists the technical specifications and performance of the product.

RIELLO		RIELLO S.p.A. Via Ing. Placido Rinaldo 7 37040 Legnago (VR) - ITALY		CE
COMBINATION STORAGE CYLINDER - KOMBISPEICHER				
Model	Serial number			
Code	Year of manufacture			
Serial number	Design			
DHW coil capacity	Inhalt der Warmwasserspirale			l
Inertial storage cylinder capacity	Inhalt des Pufferspeichers			l
Power absorbed by top coil (Primary T = 80°C)	Leistungsaufnahme oben Rohrwärmer (T Primärseite 80°C)			kW
DHW production, continuous draw (ΔT 35°C)	Warmwasserherstellung bei durchgehender Abzapfung (ΔT 35°C)			l/h
Maximum working pressure (DHW)	Max. Druck Warmwasserbetrieb			bar
Maximum working temperature (DHW)	Max. Temp. Warmwasserbetrieb			°C
Maximum working pressure of inertial storage cylinder	Max. Druck Pufferspeicher-Betrieb			bar
Maximum working temperature of inertial storage cylinder	Max. Temp. Pufferspeicher-Betrieb			°C
Electrical consumption	Stromaufnahme			W
Power supply	Stromversorgung			V-Hz
Heat loss according to EN 12897	Verluste nach EN 12897			kWh/24h
Obligatory ground connection - Erdschluss ist Vorschrift				

Product identification plate

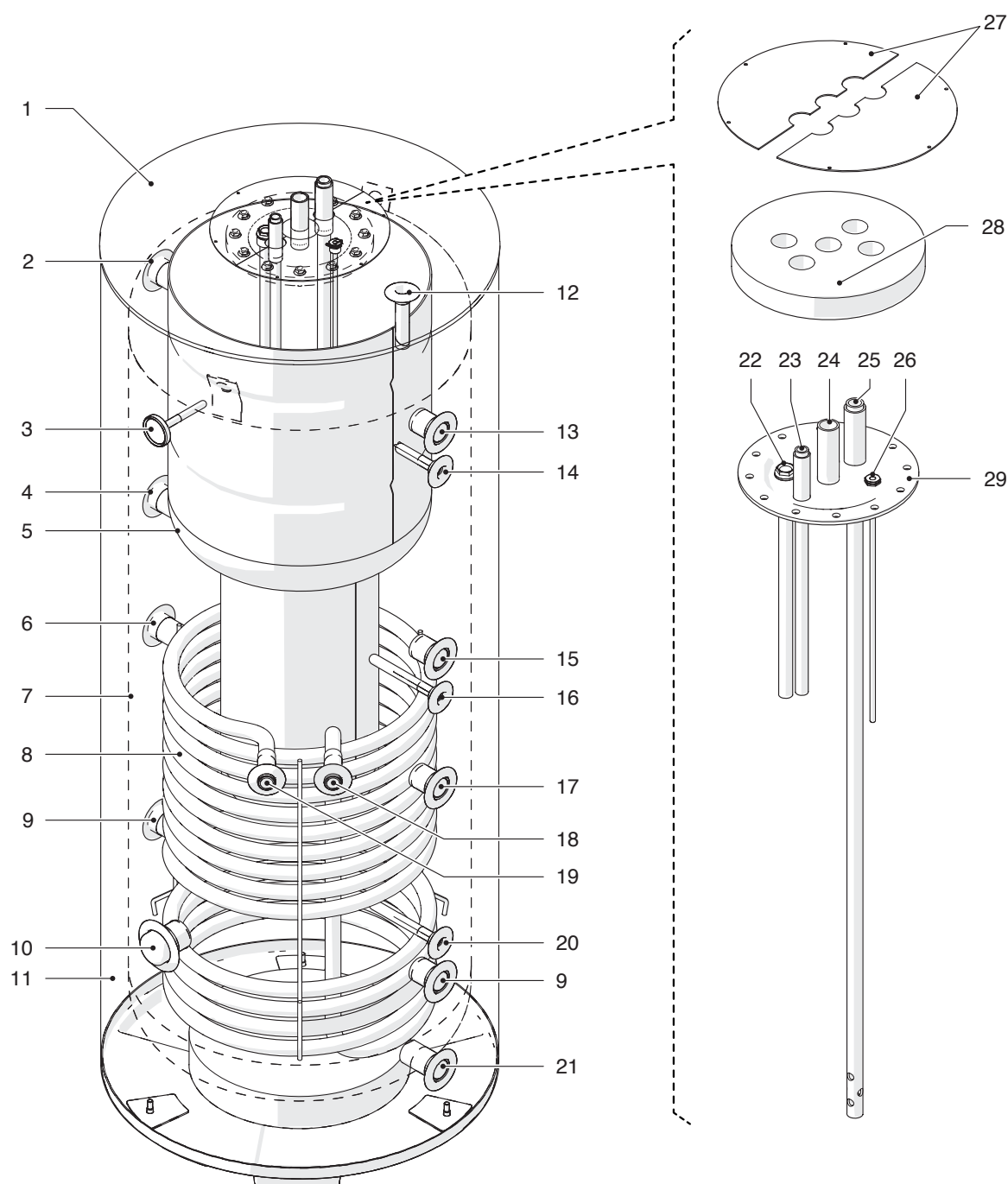
This states the name of the product.



Serial number plate

This specifies the serial number, model, consumption and capacity.

5 SYSTEM LAYOUT



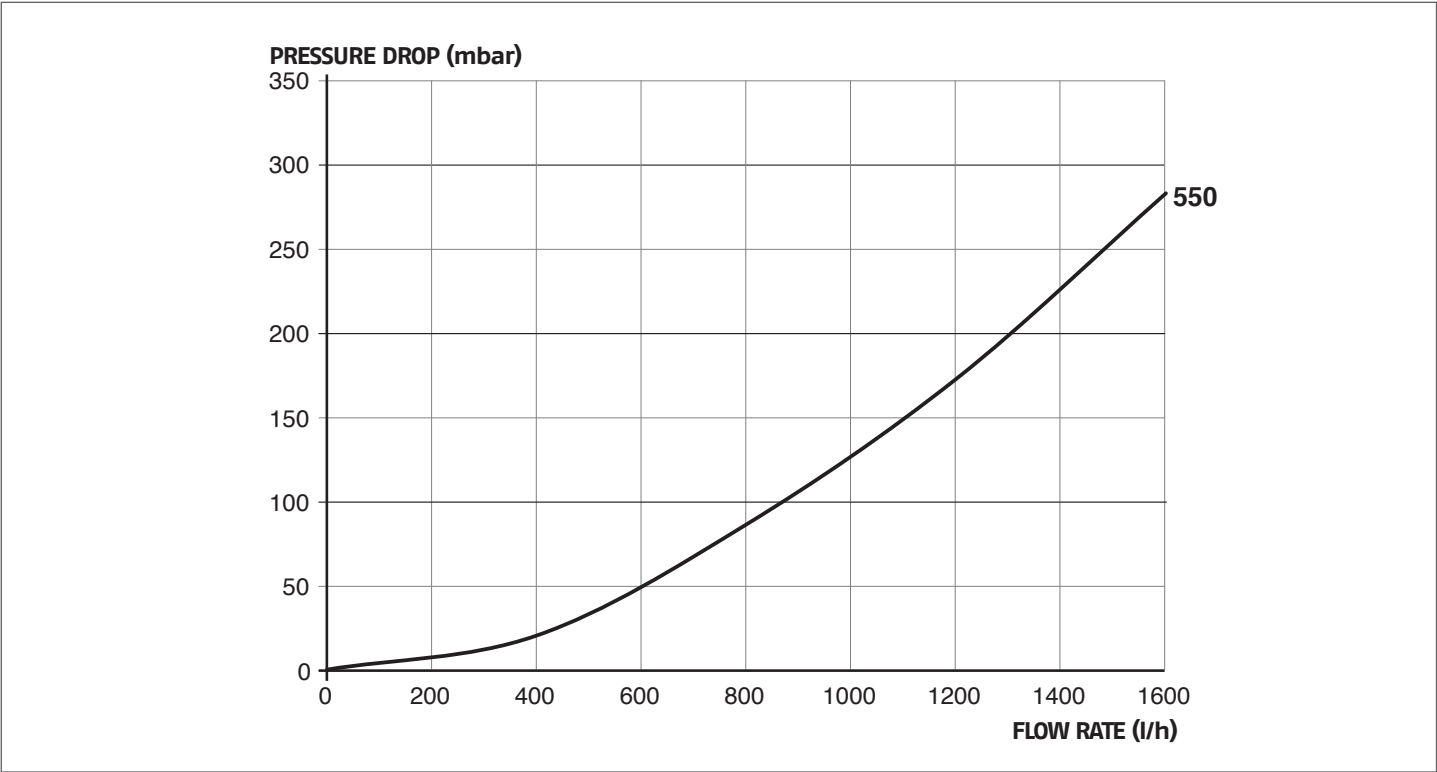
- | | | | |
|----|--|----|--|
| 1 | Cover panel | 16 | Auxiliary temperature sensor socket |
| 2 | Flow from boiler 2 (high temperature) | 17 | High temperature system return |
| 3 | Temperature gauge | 18 | Return to solar collector |
| 4 | Central heating flow | 19 | Flow from solar collector |
| 5 | DHW tank | 20 | Solar controller temperature sensor socket |
| 6 | LT return to boiler 1 / LT return to heat pump | 21 | LT central heating return. Inertial storage cylinder drain |
| 7 | Buffer tank | 22 | Magnesium anode |
| 8 | Supplementary coil | 23 | DHW circulation |
| 9 | 30°C water return / Return to boiler 2 | 24 | Domestic hot water outlet |
| 10 | Sleeve for electric heating element (not supplied) | 25 | Domestic cold water inlet |
| 11 | Insulation | 26 | DHW temperature sensor socket |
| 12 | Vent valve fitting | 27 | Flange cover |
| 13 | HT return to boiler 1 / HT return to heat pump | 28 | Flange insulation |
| 14 | Boiler temperature sensor socket | 29 | Flange |
| 15 | Flow from boiler 1 / Flow from heat pump | | |

6 TECHNICAL SPECIFICATIONS

DESCRIPTION	7200 Kombi Plus	
	550	
Type of storage cylinder	Vitrified	
Type of inertial storage cylinder	Non vitrified	
Storage cylinder layout	Vertical	
Heat exchanger layout	Vertical	
Inertial storage cylinder capacity	388	l
Storage cylinder capacity	160	l
Diameter with insulation	755	mm
Diameter of storage cylinder without insulation	650	mm
Insulation thickness	50	mm
Magnesium anode	22x400	Øxmm
Flange diameter (external/internal)	280/205	mm
Sensor socket diameter	16	mm
Coil water capacity	12,8	l
Coil heat exchange surface area	2,10	m ²
Continuous domestic hot water production (*)	660	l/h
Water draw in 10 minutes with mean ΔT of 35°C and primary buffer tank at:	80°C	415
	70°C	340
	60°C	300
Maximum operating pressure of storage cylinder	6	bar
Maximum continuous operating temperature, DHW side	70	°C
Maximum working pressure of inertial storage cylinder	3	bar
Maximum working temperature of inertial storage cylinder	80	°C
Maximum operating pressure of coil	6	bar
Maximum temperature, heating side	99	°C
Net weight	192	kg
Heat loss according to EN 12897:2006 at $\Delta T=45$ °C	95	W
Energy efficiency class	C	
Useful non-solar volume (Vbu)	150	l

- (*) With $\Delta T= 35^{\circ}\text{C}$ and primary temperature = 80 °C.
 Performance achieved with collector circuit pump delivering 3000 l/h, and using a boiler of suitable power.

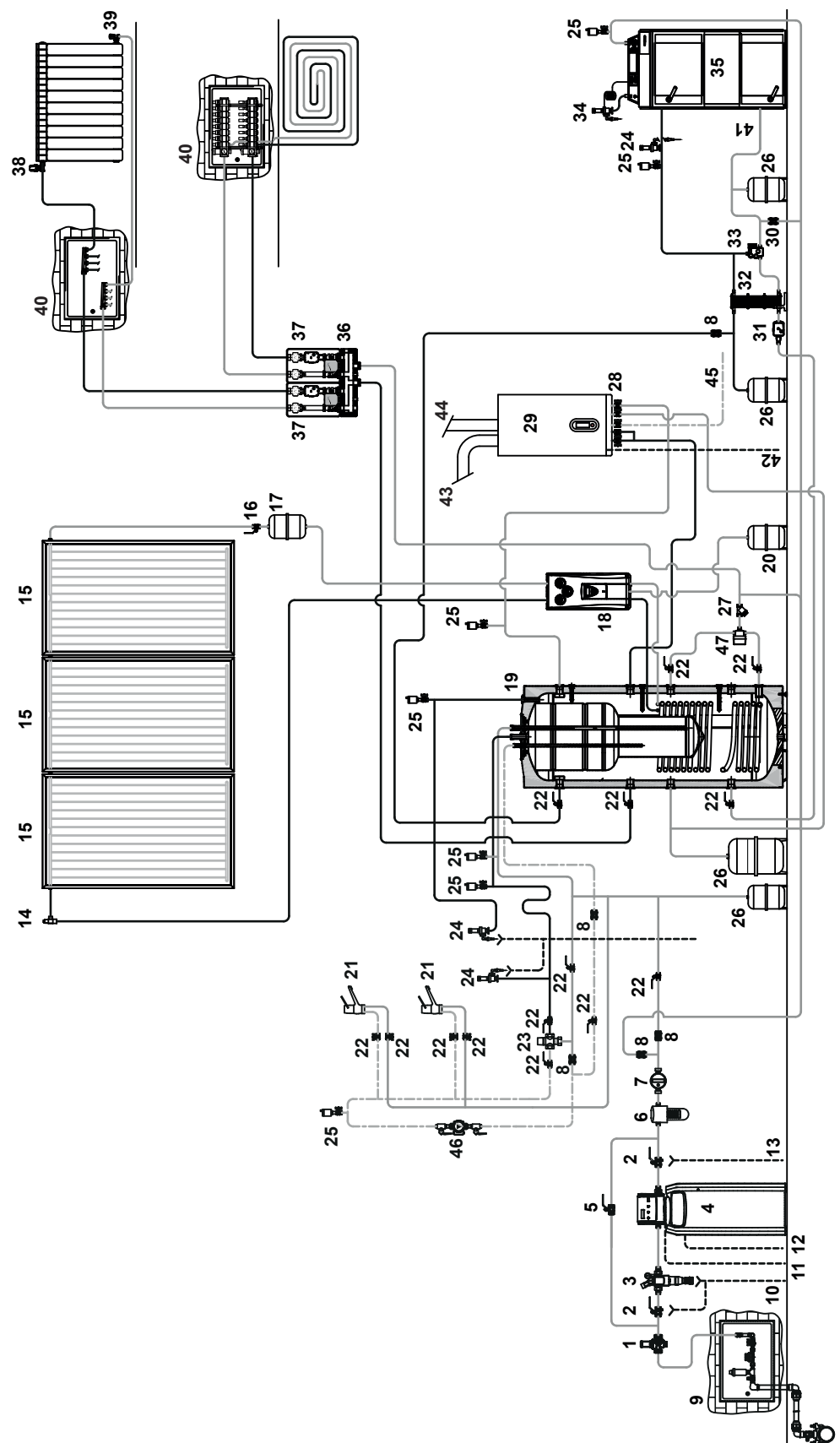
Coil pressure drop



7 TYPICAL WATER SYSTEM SCHEMATICS

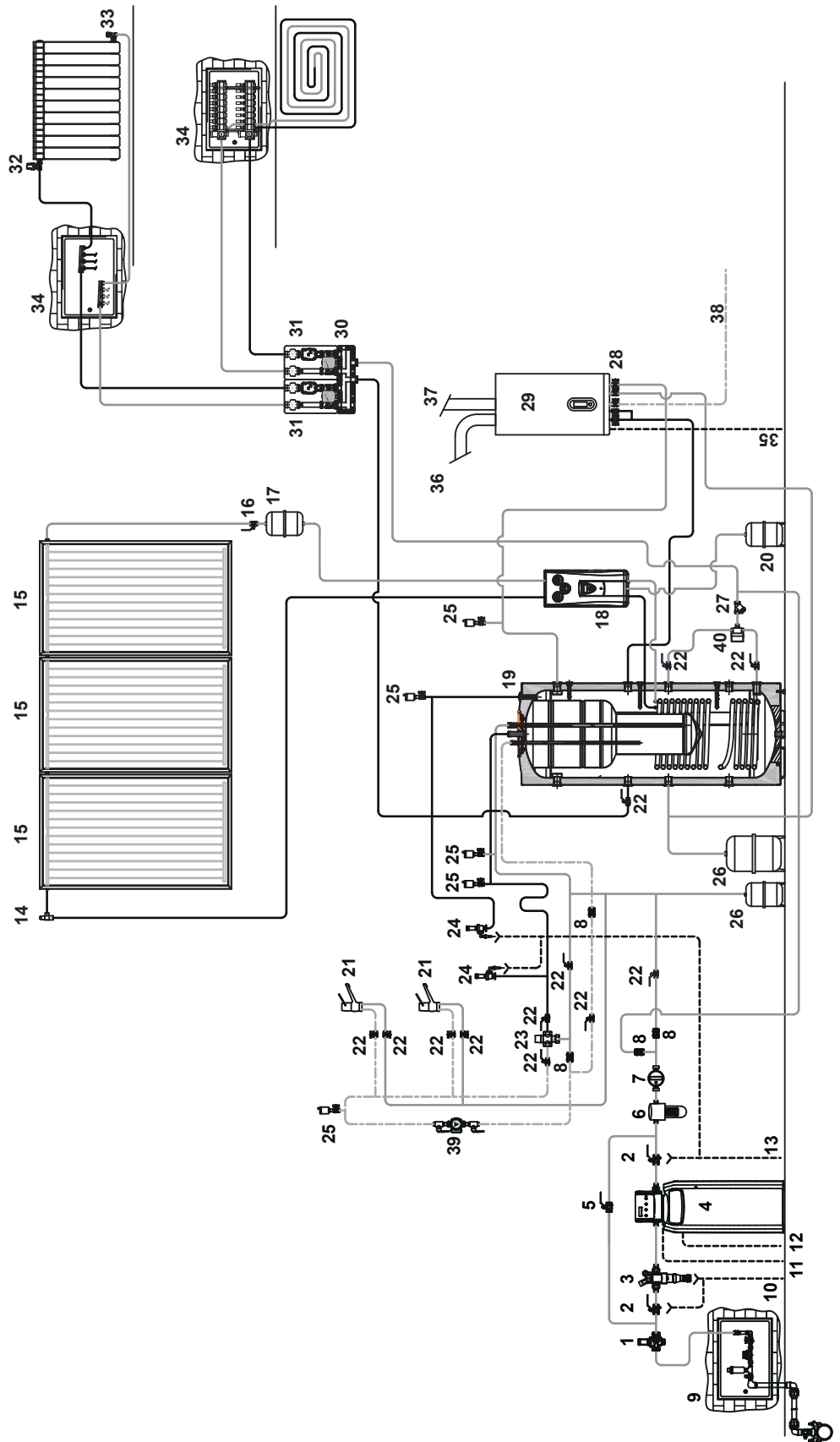
EXAMPLE 1: Water circuit with conventional boiler and biomass fuelled boiler

- 1 Pressure reducer-stabiliser
- 2 Ball valve with sampling cock
- 3 Sand filter
- 4 Water softener
- 5 Bypass pipe (normally closed)
- 6 Polyphosphate dosing unit (DHW)
- 7 Sanitary water meter
- 8 Non-return valve
- 9 Mains water inlet
- 10 Filter and valve drain
- 11 Resin wash drain
- 12 Overflow drain
- 13 Filter and valve drain
- 14 Manual bleed valve
- 15 Solar collector
- 16 Solar circuit disconnect valve
- 17 Safety tank
- 18 Solar module with solar controller
- 19 7200 Kombi Plus
- 20 Solar circuit expansion vessel
- 21 DHW user
- 22 Isolating valve
- 23 Thermostatic mixer valve
- 24 Safety valve
- 25 Bleed valve
- 26 DHW circuit expansion vessel
- 27 Filter
- 28 System cocks
- 29 Boiler with built-in pump
- 30 Non-return valve
- 31 Pump
- 32 Plate heat exchanger
- 33 Laddomat 21
- 34 Thermal drain valve
- 35 Biomass fuelled boiler
- 36 Distribution manifold
- 37 MIX module
- 38 Thermostatic valve
- 39 Detent
- 40 Distribution manifold
- 41 Valve drain
- 42 Condensate outlet
- 43 Air inlet
- 44 Exhaust flue duct
- 45 Gas supply connection
- 46 DHW circulation module
- 47 Motorised diverter valve (stratification control)



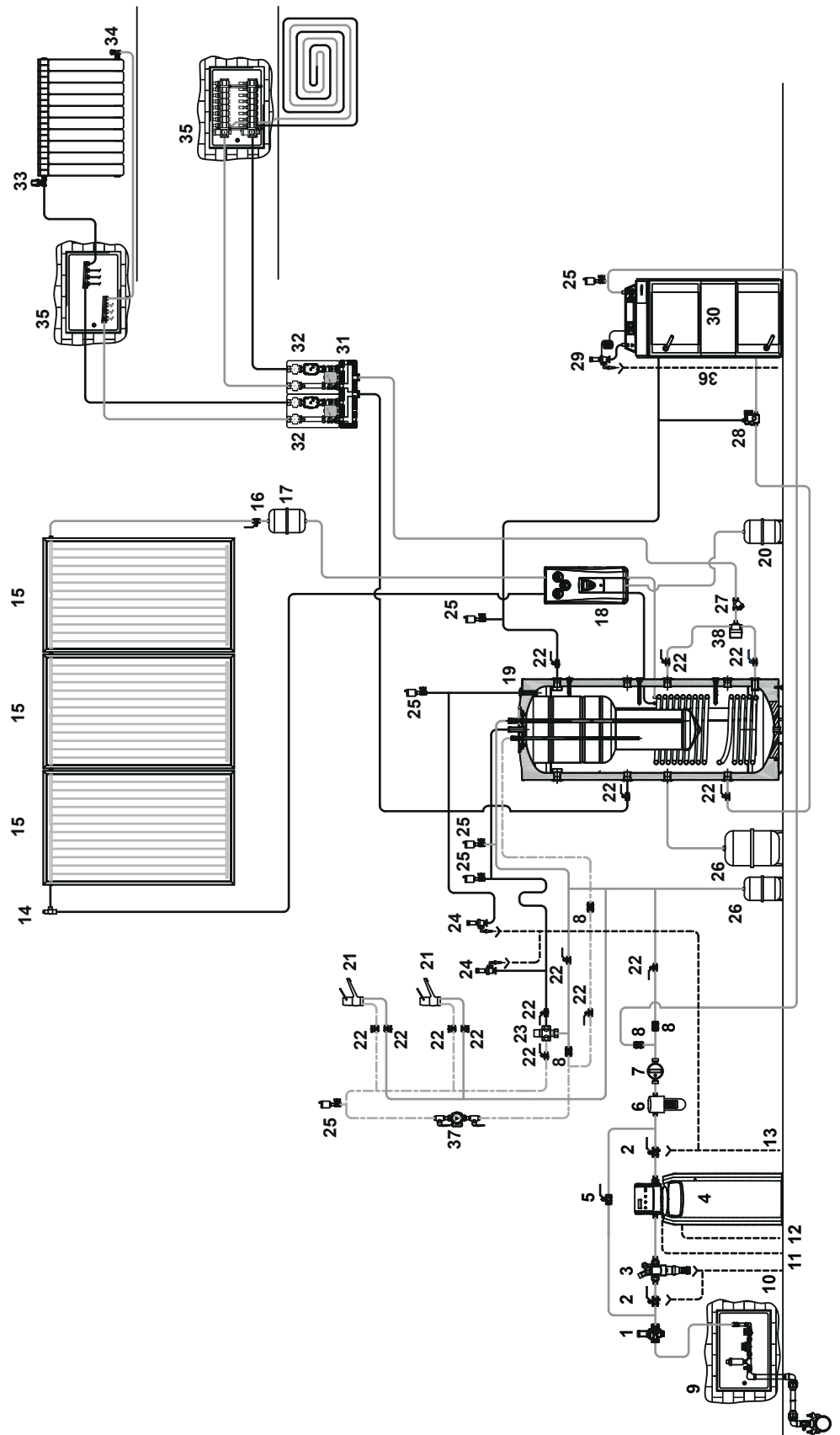
EXAMPLE 2: Water circuit with conventional boiler

- 1 Pressure reducer-stabiliser
- 2 Ball valve with sampling cock
- 3 Sand filter
- 4 Water softener
- 5 Bypass pipe (normally closed)
- 6 Polyphosphate dosing unit (DHW)
- 7 Sanitary water meter
- 8 Non-return valve
- 9 Mains water inlet
- 10 Filter and valve drain
- 11 Resin wash drain
- 12 Overflow drain
- 13 Filter and valve drain
- 14 Manual bleed valve
- 15 Solar collector
- 16 Solar circuit disconnect valve
- 17 Safety tank
- 18 Solar module with solar controller
- 19 7200 Kombi Plus
- 20 Solar circuit expansion vessel
- 21 DHW user
- 22 Isolating valve
- 23 Thermostatic mixer valve
- 24 Safety valve
- 25 Bleed valve
- 26 DHW circuit expansion vessel
- 27 Filter
- 28 System cocks
- 29 Boiler with built-in pump
- 30 Distribution manifold
- 31 MIX module
- 32 Thermostatic valve
- 33 Detent
- 34 Distribution manifold
- 35 Condensate outlet
- 36 Air inlet
- 37 Exhaust flue duct
- 38 Gas supply connection
- 39 DHW circulation module
- 40 Motorised diverter valve (stratification control)



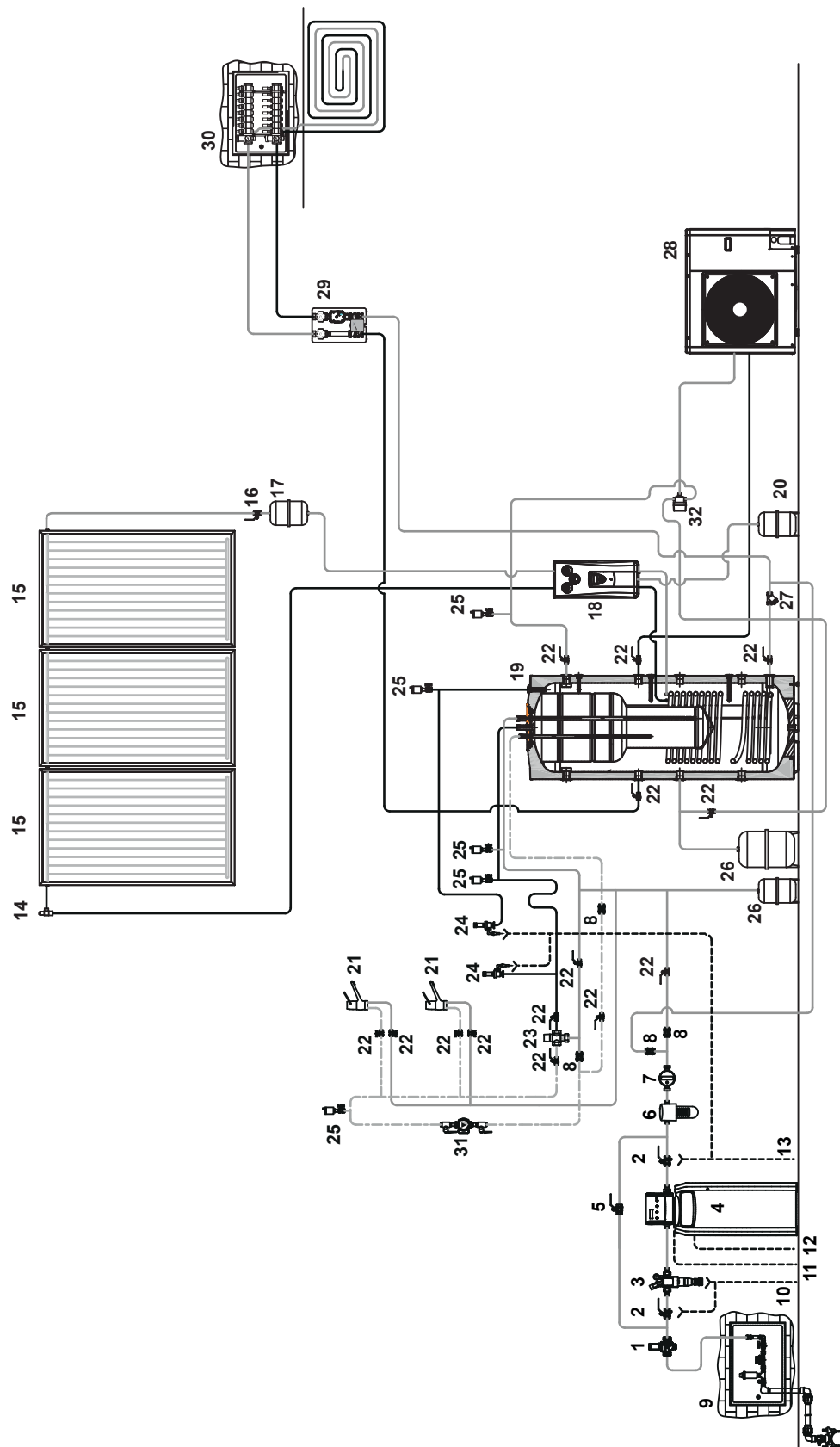
EXAMPLE 3: Water circuit with biomass fuelled boiler

- 1 Pressure reducer-stabiliser
- 2 Ball valve with sampling cock
- 3 Sand filter
- 4 Water softener
- 5 Bypass pipe (normally closed)
- 6 Polyphosphate dosing unit (DHW)
- 7 Sanitary water meter
- 8 Non-return valve
- 9 Mains water inlet
- 10 Filter and valve drain
- 11 Resin wash drain
- 12 Overflow drain
- 13 Filter and valve drain
- 14 Manual bleed valve
- 15 Solar collector
- 16 Solar circuit disconnect valve
- 17 Safety tank
- 18 Solar module with solar controller
- 19 7200 Kombi Plus
- 20 Solar circuit expansion vessel
- 21 DHW user
- 22 Isolating valve
- 23 Thermostatic mixer valve
- 24 Safety valve
- 25 Bleed valve
- 26 DHW circuit expansion vessel
- 27 Filter
- 28 Laddomat 21
- 29 Thermal drain valve
- 30 Biomass fuelled boiler
- 31 Distribution manifold
- 32 MIX module
- 33 Thermostatic valve
- 34 Detent
- 35 Distribution manifold
- 36 Condensate outlet
- 37 DHW circulation module
- 38 Motorised diverter valve (stratification control)



EXAMPLE 4: Water circuit with conventional boiler and heat pump

- 1 Pressure reducer-stabiliser
- 2 Ball valve with sampling cock
- 3 Sand filter
- 4 Water softener
- 5 Bypass pipe (normally closed)
- 6 Polyphosphate dosing unit (DHW)
- 7 Sanitary water meter
- 8 Non-return valve
- 9 Mains water inlet
- 10 Filter and valve drain
- 11 Resin wash drain
- 12 Overflow drain
- 13 Filter and valve drain
- 14 Manual bleed valve
- 15 Solar collector
- 16 Solar circuit disconnect valve
- 17 Safety tank
- 18 Solar module with solar controller
- 19 7200 Kombi Plus
- 20 Solar circuit expansion vessel
- 21 DHW user
- 22 Isolating valve
- 23 Thermostatic mixer valve
- 24 Safety valve
- 25 Bleed valve
- 26 DHW circuit expansion vessel
- 27 Filter
- 28 Heat pump with integrated hydronic unit
- 29 MIX module
- 30 Distribution manifold
- 31 DHW circulation module
- 32 Motorised diverter valve (stratification control)



⚠ RIELLO 7200 Kombi Plus combination storage cylinders are delivered without pumps. Suitably rated pumps must be provided and installed separately. Flow rate from the solar collector circuit depends on the type and number of collectors installed. For further information, consult the manual for the collectors.

⚠ The domestic hot water system **MUST INCLUDE** an expansion vessel, safety valve, automatic vent valve and combination storage cylinder drain cock.

⚠ Safety valves must be connected to a suitable collection and drain system. The manufacturer declines all responsibility for damage caused by water escaping from the safety valve.

⚠ The choice of system components and the method of their installation are left up to the heating engineer installing the system. Installers must use their expertise to ensure proper installation and functioning in conformity to all applicable legislation.

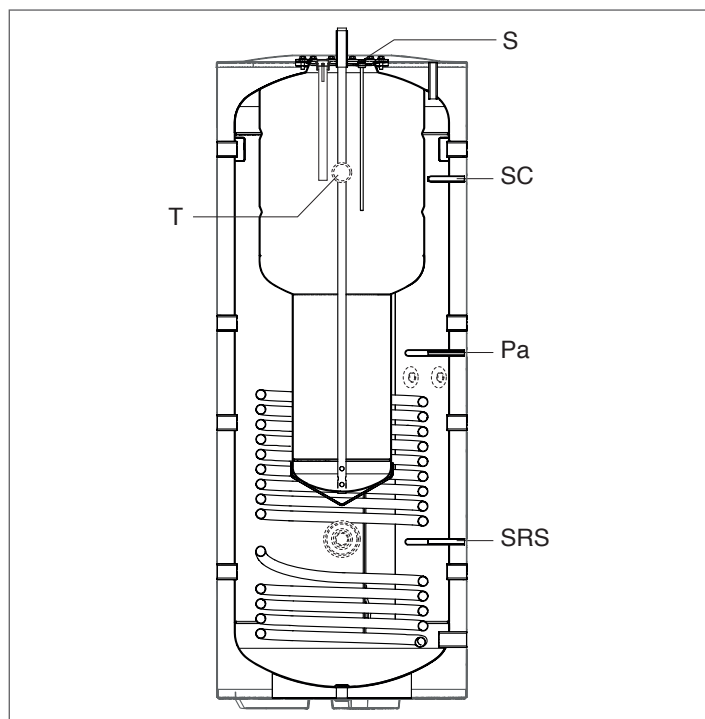
⚠ Circuits filled with anti-freeze must be fitted with water disconnectors.

8 LOCATION OF SENSORS

RIELLO 7200 Kombi Plus combination storage cylinders incorporate sockets for solar controller and boiler sensors. Make sure that these sensors are pushed firmly home into the sockets.

⚠ Remove the two flange covers to access the socket for the domestic hot water temperature sensor (drill a hole for the cable if necessary).

⚠ The installer is responsible for making all necessary connections to the boiler and solar collectors. Installers must use their expertise to ensure proper installation and functioning in compliance with all applicable legislation.

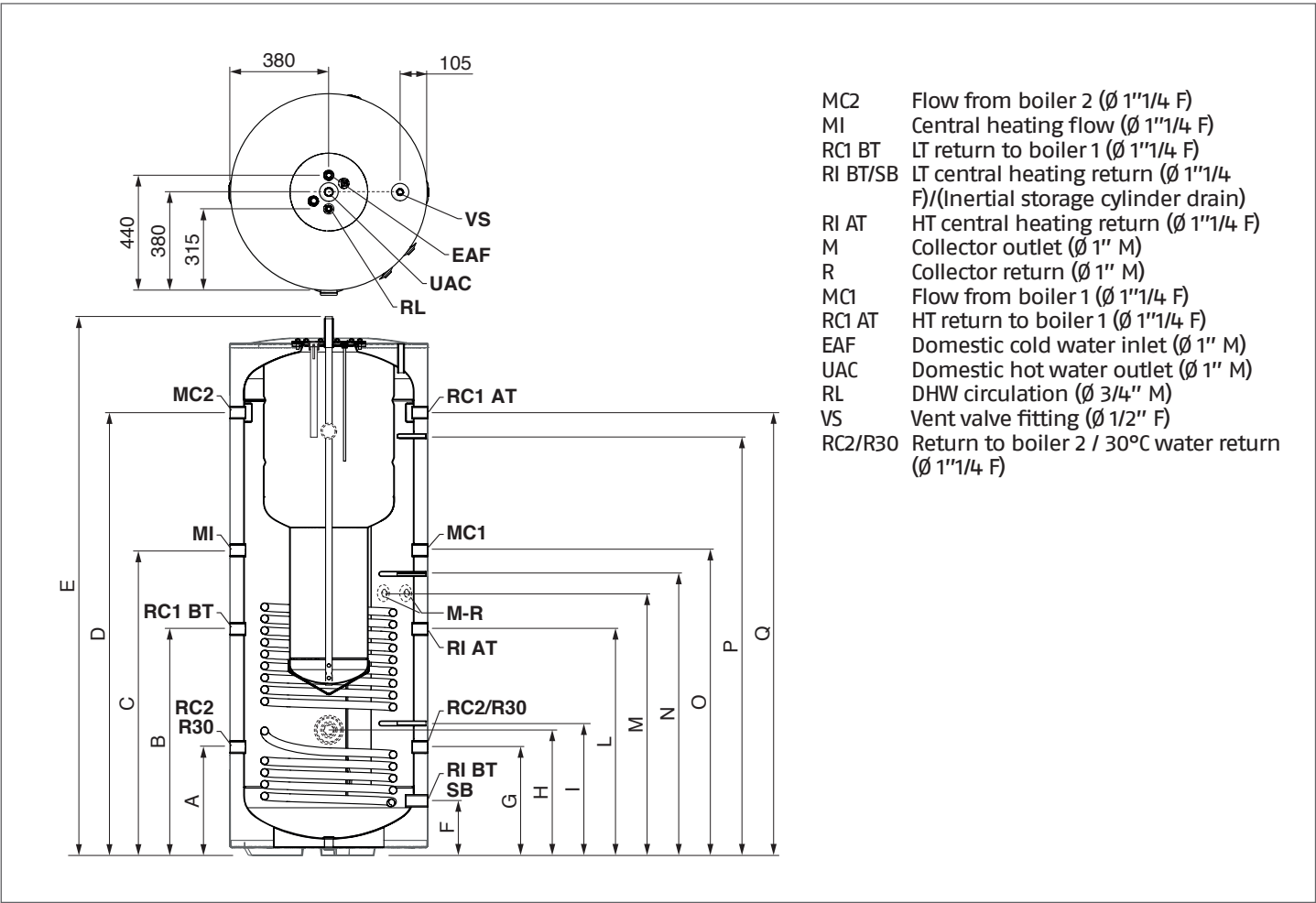


T	Temperature gauge socket (10 mm)
SC	Boiler temperature sensor socket (16 mm)
S	DHW temperature sensor socket (16 mm)
SRS	Solar controller temperature sensor socket (16 mm)
Pa	Auxiliary temperature sensor socket (16 mm)

⚠ Joins between temperature sensor cables and control panel extension cables must be soldered and protected by sheaths or other forms of electrical insulation.

9 OVERALL DIMENSIONS AND WATER FITTINGS

RIELLO 7200 Kombi Plus combination cylinders can also be connected to previously installed hot water sources provided heat output is suitable and care is taken to ensure correct water flow directions. They can also be easily integrated in **RIELLO** solar water heating systems based on CS 25 R solar collectors with fixing system, water control group, expansion vessel and thermostatic mixer valve. Water fittings have the following specifications:



DESCRIPTION	7200 Kombi Plus	
	550	
A	413	mm
B	863	mm
C	1163	mm
D	1688	mm
E	2055	mm
F	208	mm
G	413	mm
H	496	mm
I	503	mm
L	863	mm
M	960	mm
N	1073	mm
O	1163	mm
P	1598	mm
Q	1688	mm

! We recommend that you install isolating valves in the outlet and return lines.

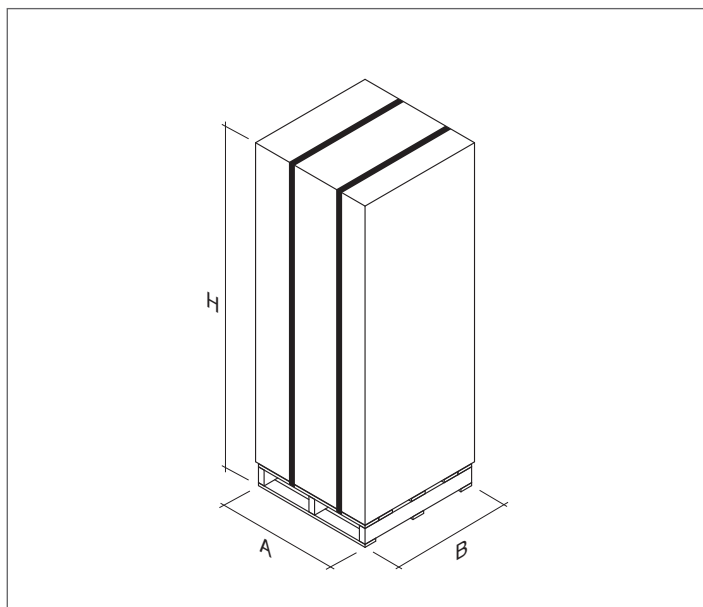
! Check the efficiency of the seals when filling/refilling the buffer tank.

10 UNPACKING THE PRODUCT

RIELLO 7200 Kombi Plus combination cylinders are delivered in a single package, protected by a triple wall cardboard box and loaded on a wooden pallet.

The following items are delivered in a plastic bag inside the packaging:

- Instruction manual
- Hydraulic test certificate
- Certificate of warranty and label with bar code

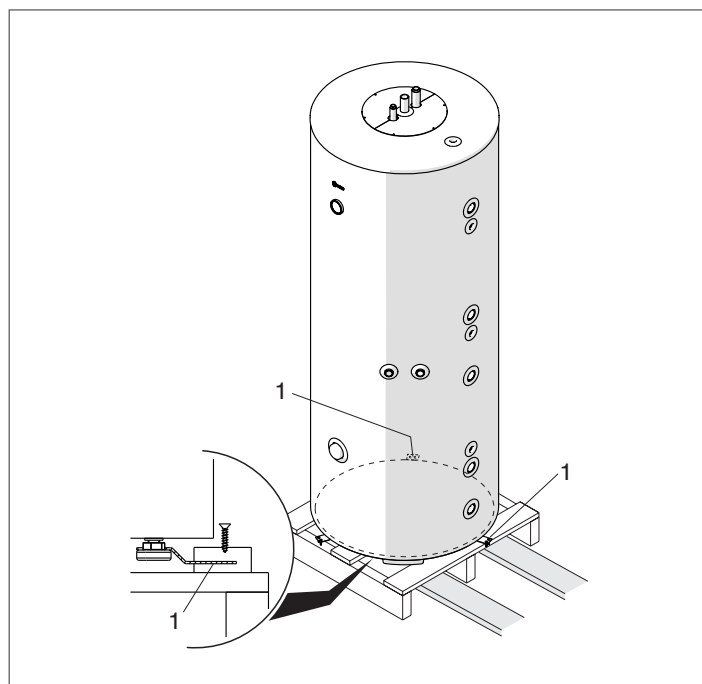


DESCRIPTION	7200 Kombi Plus	
	550	
A	850	mm
B	850	mm
H	2188	mm

11 HANDLING

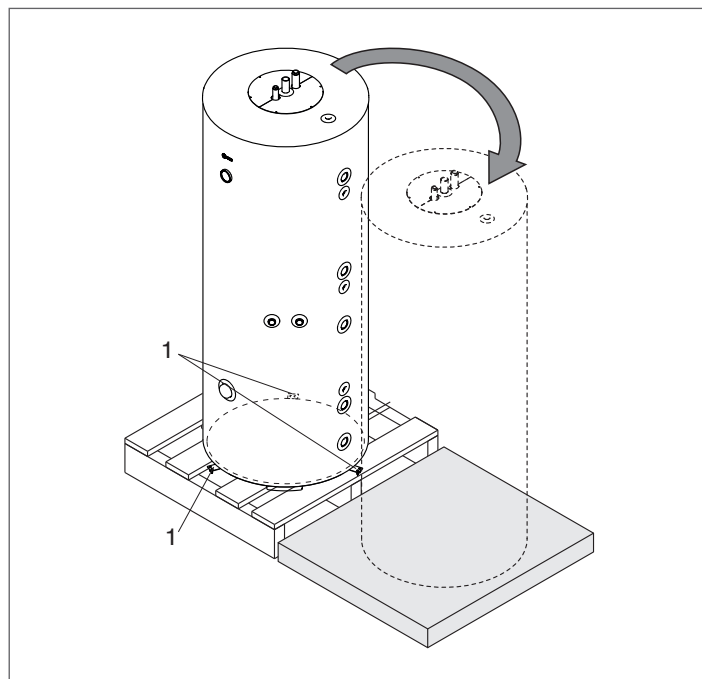
Make sure that any lifting equipment is of adequate capacity to lift and move the combination cylinder.

Remove the brackets (1) to free the combination cylinder from the pallet.

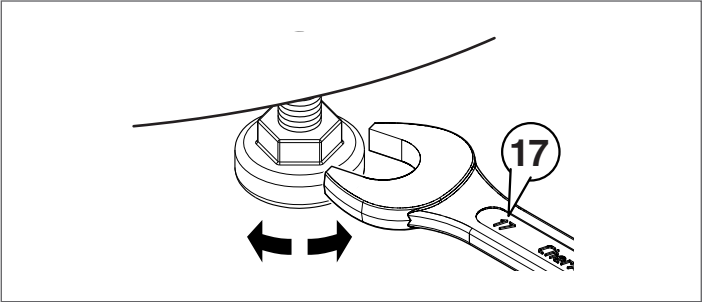


Proceed as follows to remove the combination cylinder from the pallet.

- Place a platform of about half the height of the pallet near the combination cylinder. Make sure the platform is able to support the weight of the combination cylinder
- Remove the brackets (1) then carefully rotate and slide the combination cylinder off the pallet on to the platform
- Make sure that the combination cylinder is perfectly stable, and then remove the pallet
- Carefully rotate and slide the combination cylinder off the platform on to the floor
- Remove the platform and position the combination cylinder as required.



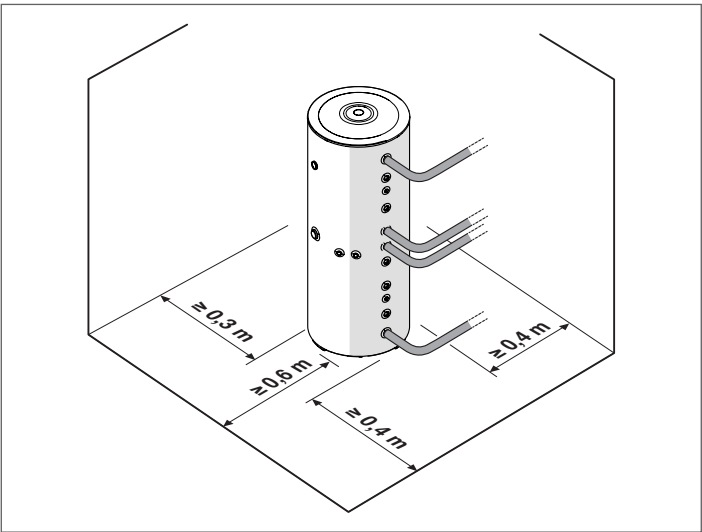
Adjust the feet to ensure that the storage cylinder is perfectly level.



-  Wear suitable personal protective equipment and use suitable safety devices.
-  Do not dispose of packaging material into the environment, or leave it within the reach of children, since it can become a potential hazard. Dispose of packaging material in compliance with applicable legislation.

12 PLACE OF INSTALLATION

RIELLO 7200 Kombi Plus combination storage cylinders can be installed in any room where there is no specific requirement for an electrical protection rating higher than IP X0D.



-  Respect the minimum specified installation distances to ensure correct installation and access for maintenance.

13 INSTALLATION IN OLDER SYSTEMS AND SYSTEMS REQUIRING MODERNISATION

When installing **RIELLO 7200 Kombi Plus** combination storage cylinders in old systems or systems requiring modernisation, always perform the following checks.

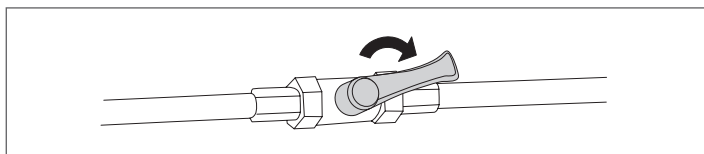
- Make sure that the system is fitted with safety and control devices in accordance with applicable legislation and standards
- Make sure that the central heating circuit has been flushed out to remove all sludge and lime scale, and has been vented and seal tested
- Make sure that a suitable water treatment system is installed if the quality of the supply/recirculation water so demands (refer to the reference values listed in the table alongside).

REFERENCE VALUES	
pH	6-8
Electrical conductivity	less than 200 µS/cm (25°C)
Chlorine ions	less than 50 ppm
Sulphuric acid ions	less than 50 ppm
Total iron	less than 0.3 ppm
Alkalinity M	less than 50 ppm
Total hardness	less than 35°F
Sulphur ions	none
Ammonia ions	none
Silicon ions	less than 30 ppm

14 PUTTING INTO SERVICE

It is essential to perform the following checks before starting up or testing the functioning of the combination cylinder. In particular, check that:

- The supply cocks in the domestic water circuit are all open

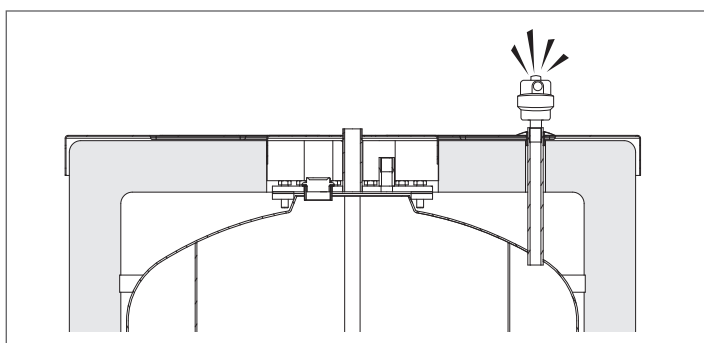


- The water connections to the boiler and solar collectors have been made correctly
- All the pipes in the water circuit have been insulated in conformity to relevant standards
- The solar collector circuit has been correctly flushed out and filled with water-glycol mix, and all air has been bled out of the circuit (see the manual for the solar collectors)
- Start up the combination cylinder's auxiliary heating boiler (if installed) as instructed in its own manual
- Put the solar collectors into service. See the manuals for the solar collectors and associated accessories.

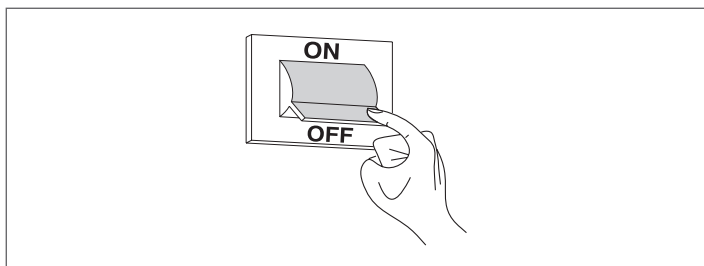
⚠ The domestic hot water tank must be filled and pressurised before the buffer tank is filled.

Once the system has been started up, perform the following checks.

- Make sure that all pumps are free and rotate in the right direction
- Make sure that all circuits have been bled.



- Make sure that the boiler and solar collectors connected to the system shut down correctly when their mains power switches are turned OFF.



Provided the above checks have been completed satisfactorily, restart the system and verify its performance.

15 TEMPORARY SHUTDOWN

If you are going away for a short period of time like a weekend or a short holiday, etc., and outdoor temperatures are going to remain above ZERO, proceed as follows.

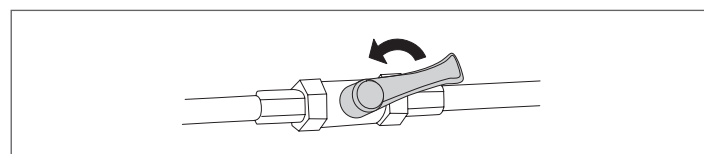
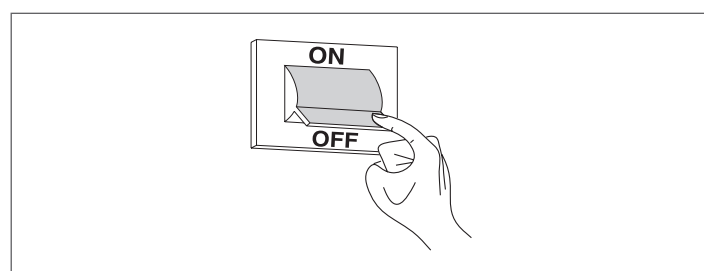
- Adjust the combination storage cylinder's thermostat to its minimum setting.

⚠ If outdoor temperature may drop below ZERO (risk of freezing) perform the operations described in the "Preparing for extended periods of disuse" section.

16 PREPARING FOR EXTENDED PERIODS OF DISUSE

If the combination storage cylinder is not going to be used for an extended period of time, prepare it for shut-down as follows:

- Switch the electricity supply to the storage cylinder and to any associated boiler OFF at the main switch and at the control panel (if present)
- Close the shut-off cocks for the domestic hot water circuit.



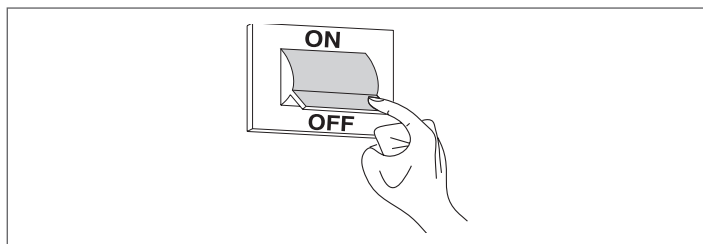
⚠ Drain the central heating circuit and domestic hot water circuit if there is any risk of freezing.

17 MAINTENANCE

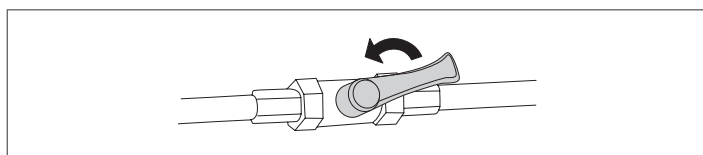
Scheduled maintenance is essential for the safety, efficiency and long working life of your combination storage cylinder. Proper maintenance also reduces energy consumption and ensures reliability over time. Have your combination storage cylinder serviced either by the manufacturer's Technical Assistance Service or by a qualified heating engineer at least once a year.

Perform the following operations before beginning any maintenance:

- Switch the electricity supply to the storage cylinder's valve group and to any associated boiler OFF at the main switch and at the control panel (if present)



- Close the shut-off cocks for the domestic hot water circuit



- Empty the combination storage cylinder.

18 CLEANING THE COMBINATION CYLINDER AND REMOVING INTERNAL COMPONENTS

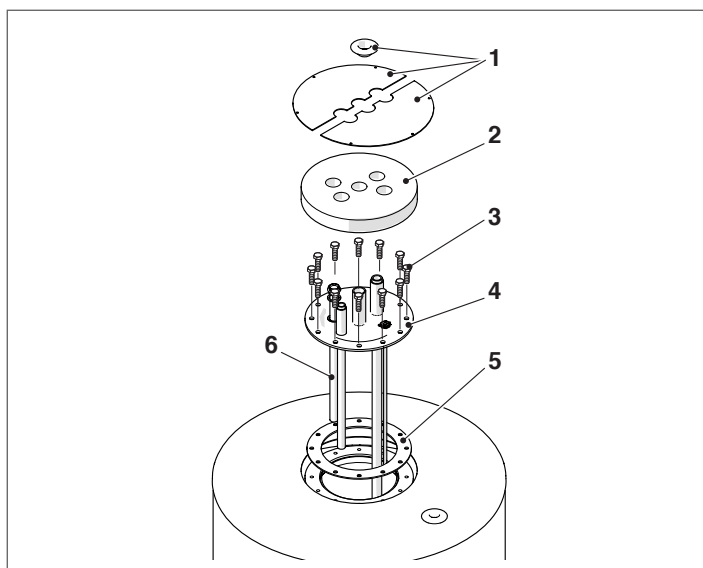
EXTERNAL CLEANING

Clean the outside of the combination storage cylinder's insulation with a soft cloth dampened in soapy water. To remove stubborn marks, use a cloth dampened in a 50% mix of water and denatured alcohol or a suitable cleaning product. Dry the combination storage cylinder after cleaning it.

 Do not use abrasive products, petrol or triethylene.

INTERNAL CLEANING

- Unscrew the fixing screws, then remove the flange insulation (1) and the flange covers (2)
- Use a wrench to unscrew the bolts (3) fixing the flange (4) in place, and remove the flange taking care not to damage the seal (5) and magnesium anode (6)
- Clean inside the storage cylinder and remove any residues through the access hole
- Check the magnesium anode (6) for wear and replace it if necessary.



On completion of cleaning, follow the above steps in the reverse order to refit all removed parts.

 Tighten the bolts (4) fixing the flange (5), proceeding diagonally around the flange to apply pressure uniformly around the seal.

- Fill the combination cylinder's secondary circuit and check that there are no leaks from the seals.
- Check the performance of the storage cylinder.

19 RECYCLING AND DISPOSAL

At the end of its useful working life, do not abandon the combination storage cylinder in the environment, but dispose of it in accordance with applicable legislation.

20 TROUBLESHOOTING

SUPPLEMENTARY HEATING CIRCUIT

FAULT	CAUSE	SOLUTION
The buffer tank functions incorrectly or irregularly	Flow rate too high	– Fit a pressure limiter – Fit a flow reducer
	There are blockages or deposits in the domestic hot water circuit	– Check and clean as necessary
	The pump is malfunctioning	– Check the pump
	The water temperature from the boiler is too low	– Check the temperature setting
	There is air in the primary circuit	– Bleed the circuit

SOLAR COLLECTOR CIRCUIT

FAULT	CAUSE	SOLUTION
The buffer tank functions incorrectly or irregularly	There is air in the circuit	– Bleed the circuit
	The flow rate is too low or too high	– Check the flow rate of the collector circuit
	Pressure is too low	– Check that circuit pressure is approximately 3 bar when cold
	There is lime scale or sludge in the cylinder	– Check and clean as necessary
The storage cylinder loses a lot of heat overnight	There is natural circulation to the collectors	– Make sure that the non-return valve is efficient and closes properly. Replace if necessary

END USER INSTRUCTIONS

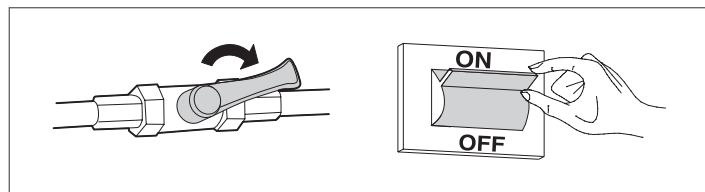
Refer to the **GENERAL SAFETY INFORMATION** and **PRECAUTIONS** section for safety-related information.

21 START-UP

The combination storage cylinder must be put into service for the first time by personnel from the manufacturer's Technical Assistance Service.

Under certain circumstances, such as after long periods of disuse, the user may need to re-start it without involving the Technical Assistance Service. Before doing so, perform the following checks and operations.

- Check that the supply cocks in the domestic water circuit are all open
- Switch the electricity supply ON at the mains power switch and at control panel switch (if fitted).



22 TEMPORARY SHUTDOWN

To reduce impact on the environment and save energy, before leaving for the weekend or a short break, etc., provided outdoor temperatures will remain above ZERO, simply adjust the combination storage cylinder's temperature control device to its minimum setting.

! If outdoor temperature may drop below ZERO (risk of freezing) perform the operations described in the "Preparing for extended periods of disuse" section.

23 PREPARING FOR EXTENDED PERIODS OF DISUSE

If the combination storage cylinder is not going to be used for an extended period of time, ask the manufacturer's Technical Assistance Service to make the system safe.

24 EXTERNAL MAINTENANCE

Clean the cover, painted and plastic parts with a cloth dampened in soap and water. To remove stubborn marks, use a cloth dampened in a 50% mix of water and denatured alcohol or a suitable cleaning product.

! Do not use fuels, sponges impregnated with abrasive solutions or powder detergents.

RIELLO

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The manufacturer strives to continuously improve all products. Appearance, dimensions, technical specifications, standard equipment and accessories are therefore liable to modification without notice.