For the heating engineer

Operating and Installation Manual

uniSTOR, auroSTOR, geoSTOR

Bivalent DHW Cylinder for Solar Systems	VIH S 300 VIH S 400 VIH S 500
DHW Cylinder for Heating Systems	VIH R 300 VIH R 400 VIH R 500
DHW Cylinder for Heat Pumps	VIH RW 300

EXP

Contents

1 Notes on the documentation

The following instructions are intended to guide you throughout the entire documentation. Further documents apply in combination with this installation instructions.

We accept no liability for any damage caused by non-observance of these instructions.

Other applicable documents

When installing the cylinder, please observe all installation instructions for components of the system. These manuals are included with the individual parts of the installation and ancillary components.

1.1 Storing the documents

Pass these installation instructions and all other applicable documents and, if necessary, any required aids to the system operator. Whose responsibility it is to ensure the manuals and auxiliary material are available whenever required.

1.2 Symbols used

Take note of the safety information in this manual when installing the equipment.

The symbols used in the manual are explained below:

Danger!
Immediate risk of serious injury or death!

Danger!
Danger of burning or scalding!

Caution!
Potentially dangerous situation for the product and environment!

Note!
Useful information and instructions.

- Symbol for a necessary task

2 Description of the appliance

2.1 Construction and function

Vaillant VIH S 300/400/500 solar cylinders are used as indirectly heated DHW cylinders for solar-assisted hot water generation.
Vaillant VIH R 300/400/500 cylinders are indirectly heated DHW cylinders.
Vaillant VIH RW 300 cylinders are indirectly heated DHW cylinders intended specifically for heat pumps.

The cylinders and the pipe coils are enamelled on the DHW side to ensure long service lives. Each tank has a magnesium sacrificial anode for additional corrosion protection. A maintenance-free external current anode is available as an accessory.
The CFC-free EPS insulation provides the best thermal insulation.

Furthermore, an electric heating element (accessory) can be installed in the cylinders (except for the VIH RW 300) to support post-heating, so that post-heating by the boiler can be completely dispensed with in summer operation.

The heat is transferred by means of one (VIH R, RW) or two (VIH S) welded-in coiled pipes.

The cylinder is connected to the water mains via the cold water connection and to the draw-off points via the hot water connection. If hot water is run from one of the draw-off points, cold water will flow into the cylinder where it is heated up to the temperature set on the cylinder temperature controller.

VIH S only
In VIH S type solar cylinders, the heating takes place in two separate circuits.
The solar heat exchanger is located in the lower, cold area. The relatively low water temperatures in the bottom area ensure optimum heat transfer from the solar circuit to the storage water even if there is only a low level of solar radiation.
In contrast to solar heating, the hot water is post-heated by the boiler or circulation water heater in the upper, warmer zone of the cylinder. The standby volume for post-heating is about a third of the cylinder volume.

2.2 Conformity with Directives

We confirm that our product is manufactured in accordance with the EU Pressure Equipment Directive.

2.3 Model overview

The cylinders are available in the following sizes:

VIH S	Cylinder volume
VIH S 300	289 litres
VIH S 400	398 litres
VIH S 500	484 litres

Table 1.1 VIH S model overview

VIH R	Cylinder volume
VIH R 300	295 litres
VIH R 400	404 litres
VIH R 500	496 litres

Table 1.2 VIH R model overview

VIH RW	Cylinder volume
VIH RW 300	285 litres

Table 2.3 VIH RW model overview

2.4 Identification plate

An identification plate has been fixed to the top of the casing at the factory.

3 Safety instructions and regulations

Vaillant VIH S, VIH R and VIH RW cylinders are constructed using state-of-the-art technology in accordance with recognised safety regulations. Nevertheless, there is still a risk of injury or death to the user or others or of damage to the unit and other property in the event of improper use or use for which they are not intended.

Caution!
The units may only be used to heat up drinking water. Damage to the appliance due to corrosion cannot be excluded if the water does not correspond to the specifications of the drinking water ordinance.

3.1 Safety instructions

The VIH S 300/400/500 solar cylinders and VIH R 300/400/500 and VIH RW 300 cylinders must be installed by a qualified heating engineer, who is responsible for compliance with existing regulations, rules and directives.
We only honour the manufacturer's warranty if the installation is performed by an approved qualified servicing company which is also responsible for the inspection/maintenance of, and repairs and alterations to the cylinders.

Safety valve and blow-off line
The water volume is increased each time the hot water is heated in the cylinder, which is the reason why each cylinder must be equipped with an expansion relief valve and an exhaust line.

Water escapes from the blow-off line during heating (Exception: an expansion tank for domestic water is available).
The blow-off line must be fed to an appropriate drain point where nobody can be put at risk.
Therefore do not block the expansion relief valve or the blow-off line.

Danger!
Danger of scalding due to hot water!
With the VIH S solar cylinder, the outlet temperatures at the taps can be up to 85 °C.

Danger of frost!
The cylinder must be completely drained if its is to be shut down for a long period of time in an unheated room (e. g. winter holidays etc.).

Alterations
You must not make any alterations to the cylinder or its control system, the water and electricity supply lines (if installed), the blow-off line or the expansion relief valve for the cylinder water.

Leaks
In the event of a leak in the hot water line area between the cylinder and extraction point, please close the cold water shut-off valve at the cylinder and have the leak repaired by a suitably qualified heating engineer.

3.2 Intended use
Vaillant VIH S, VIH R and VIH RW cylinders are used solely to supply households and industry with domestic hot water at up to 85 °C in accordance with the drinking water ordinance.
They may only be used for this purpose. Any improper use is forbidden.
The cylinders must be used in combination with Vaillant boilers and circulation water heaters.
VIH S solar cylinders must be used with the Vaillant solar system.
The VIH RW 300 must be used with a geoTHERM heat pump.

The cylinders can be integrated without problems into any Vaillant or other water-based central heating installation, in which case this manual must be observed.

However, the VIH S and VIH R cylinders can also be supplied with remote heat from a transfer station. In this case, other performance data will have to be taken into consideration.
This unit is not intended for use by persons (including children) with physical, sensory or mental impairments or who have inadequate experience and/or knowledge, unless they are supervised by a person responsible for their safety or have been given instructions by this person regarding the operation of the unit.
Children must be supervised to ensure they do not play with the unit.
Any other or additional use is considered to be improper. The manufacturer or supplier is not liable for any resulting damage. The user alone bears the risk.
Intended use includes observing the operating and installation manual and adhering to the care and inspection conditions.

Caution!
Any improper use is forbidden.

3.3 Regulations and guidelines
Observe all applicable national regulations and guidelines.
Before the installation, check if there are further local regulations.

4 Operation

The VIH S solar cylinder can be controlled by all Vaillant solar controllers.
The VIH R cylinder can be combined with various controllers and boilers.
The VIH RW cylinder is controlled by the heat pump controllers.
In each case, the temperature of the water in the cylinder is set and read on the assigned control unit.

4.1 Filling and draining the DHW cylinder
Proceed as follows when putting your cylinder into service (e. g. after switching off and draining the appliance due to a long period of absence):

- Before heating water for the first time, open a hot water draw-off point (tap) to check whether the vessel is filled with water and that the stop valve in the cold water supply pipe is not closed.
- Check that the heat source is ready for operation.
- Set the temperature for the water in the VIH cylinder on the controller or on the boiler.
- You can read the temperature that has been reached on the controller or on the boiler.

Note!
When heating up for the first time or after long shut-down breaks, the full output of the cylinder is only available after a waiting period.

Note!
For reasons of economy and hygiene, we recommend setting the cylinder temperature to 60 °C and to 55 °C on the VIH RW 300 heat pump cylinder, owing to the low system temperatures. This ensures the most efficient use in terms of the energy saving law (EnEG) and slows down the deposition of limescale in the cylinder.

Proceed in the reverse sequence when taking the cylinder out of service and also drain the cylinder if necessary (e.g. if there is a risk of frost).

Danger!
Do not block the expansion relief valve or the blow-off line - this could cause the overpressure in the cylinder to build up to more than 10 bar.

4.2 Care

A damp cloth soaked with soap solution is all you need to clean the outer parts of the cylinder.
To avoid damage to the casing of your appliance, please do not use any abrasive or solvent cleaning agents (any type of abrasive, petrol, etc.)

4.3 Inspection and maintenance

The prerequisite for permanent operational readiness, reliability and a long service life is that regular inspections/maintenance work are performed on the cylinder by the technician.

Caution!
Never try to carry out maintenance work on your appliance of your own accord. Use an approved qualified servicing company for this work.

We recommend making a maintenance agreement with an approved qualified servicing company.

Danger!
The operational reliability of the appliance can be impaired, resulting in damage to property or personal injury, if inspections or maintenance work are not carried out.

We recommend periodic de-scaling if the water is very calcareous.

5 Installation

Caution!
The appliance may only be installed and put into service by a suitably qualified heating engineer. The engineer also assumes responsibility for professional and approved installation and initial commissioning.

A sign that reads as follows must be mounted near the blow-off line for the expansion relief valve:
"For safety reasons, water escapes from the blow-off line of the expansion relief valve while the cylinder is heated. Do not block the line."

5.1 Installation location

The DHW cylinder should be installed in the immediate vicinity of the heat source. Unnecessary heat losses can be avoided as a result.

When choosing the installation site, take the weight of the filled cylinder into account. Choose the installation site for the cylinder so that the pipes on both the hot water and the heating and solar side can be laid conveniently.

The DHW cylinder must be installed in a frost-protected room.
To prevent energy losses, thermal insulation should be fitted on all hydraulic pipes in accordance with the heating systems ordinance.

5.2 Dimensions

5.2.1 Tilting dimensions for VIH S, VIH R and VIH RW

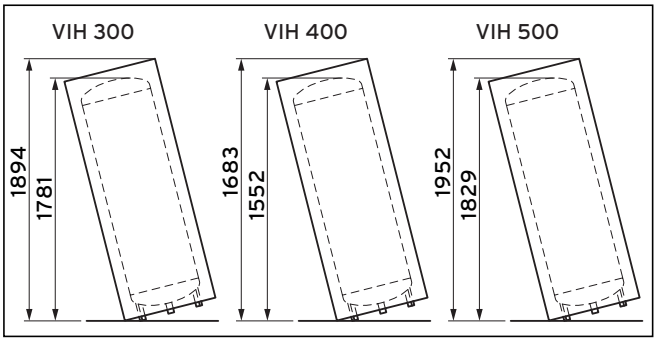

Fig. 5.1 Tilting dimensions for VIH S, VIH R and VIH RW

5.2.2 Unit and connection dimensions VIH S

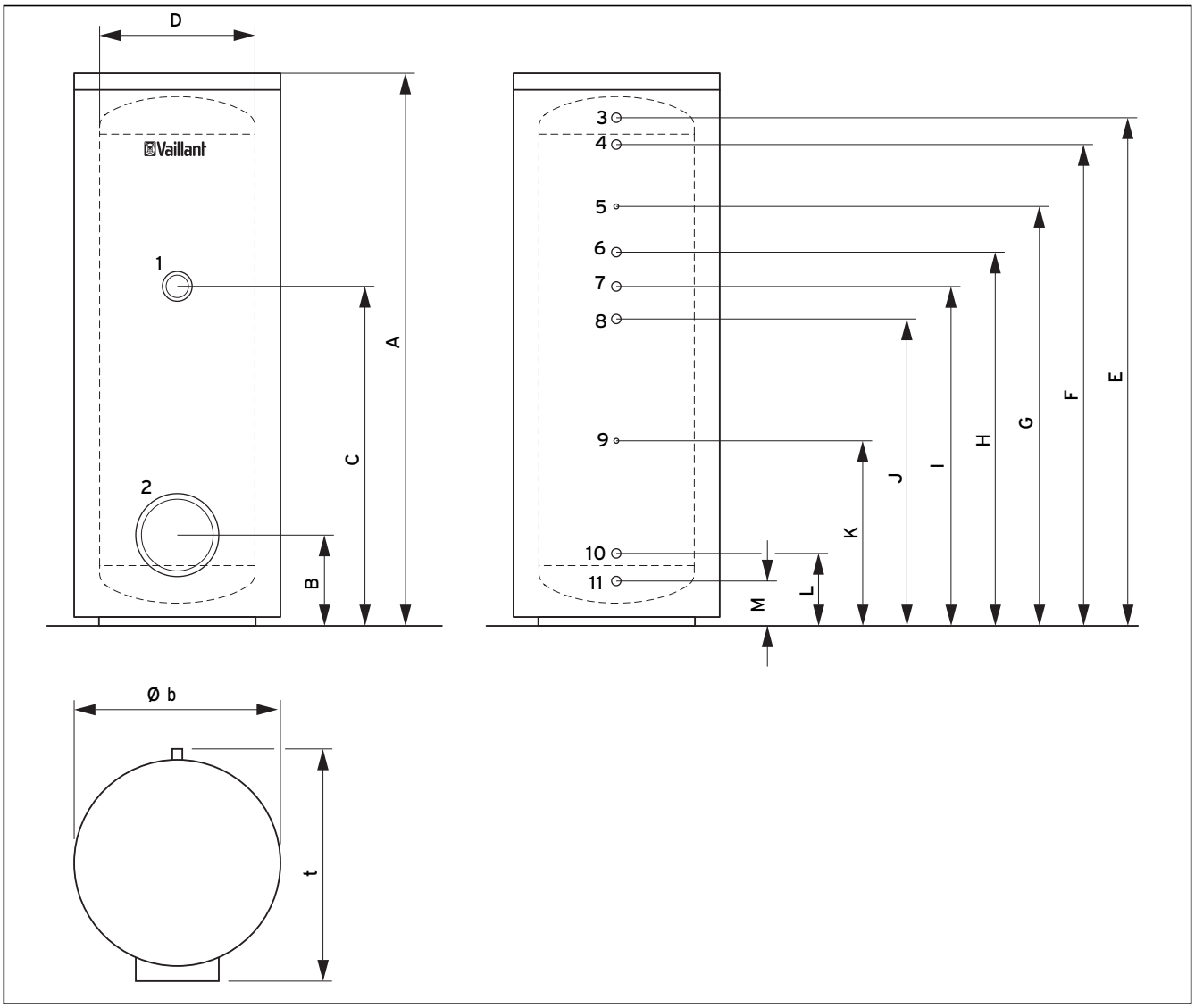

Fig. 5.2 Unit and connection dimensions VIH S

Key to Fig. 5.2

1 Connection for heating element (G1 1/2)
2 Inspection opening (Ø120)
3 Hot water connection (R1)
4 Heating flow (R1)
5 Pocket for heating sensor (Ø12)
6 Heating return (R1)
7 Circulation connection (R3/4)
8 Solar flow (R1)
9 Pocket for solar sensor (Ø12)
10 Solar return (R1)
11 Cold water connection (R1)

Type	Units	VIH S 300	VIH S 400	VIH S 500
A	mm	1775	1470	1775
B	mm	279	308	308
C	mm	1086	862.5	1062.5
D	mm	500	650	650
E	mm	1632	1301	1601
F	mm	1546	1215	1515
G	mm	1346	1065	1315
H	mm	1196	965	1165
I	mm	1086	862.5	1062.5
J	mm	981	760	960
K	mm	581	510	610
L	mm	216	245	245
M	mm	130	159	159
b	mm	660	810	810
t	mm	725	875	875

Table 5.1 VIH S unit dimensions

5.2.3 Unit and connection dimensions VIH R

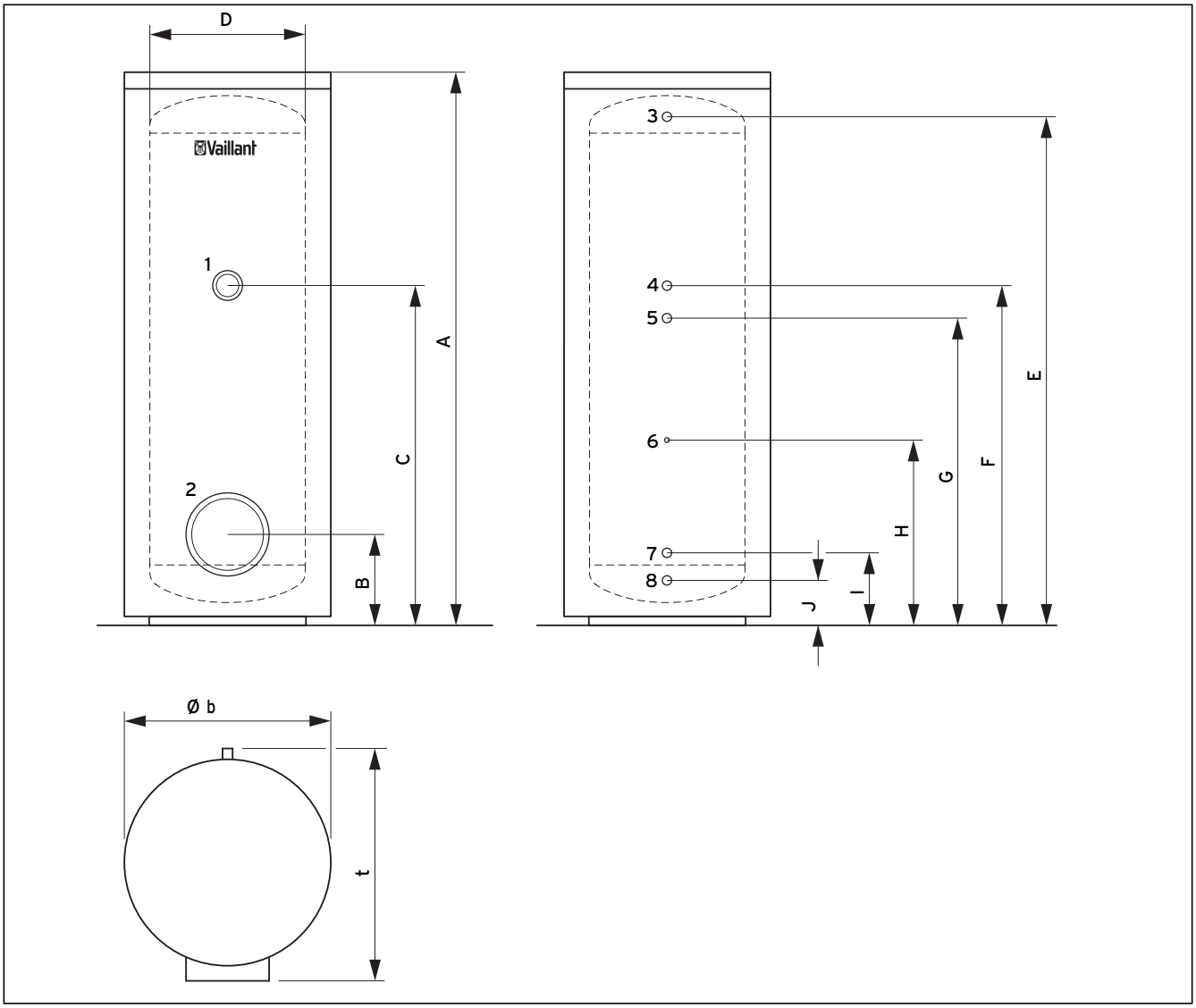

Fig. 5.3 Unit and connection dimensions VIH R

Key to Fig. 5.3
1 Connection for heating element (G1 1/2)
2 Inspection opening (Ø120)
3 Hot water connection (R1)
4 Circulation connection (R3/4)
5 Heating flow (R1)
6 Pocket for heating sensor (Ø12)
7 Heating return (R1)
8 Cold water connection (R1)

Type	Units	VIH R 300	VIH R 400	VIH R 500
A	mm	1775	1470	1775
B	mm	279	308	308
C	mm	1086	862.5	1062.5
D	mm	500	650	650
E	mm	1632	1301	1601
F	mm	1086	862.5	1062.5
G	mm	981	760	960
H	mm	581	510	610
I	mm	216	245	245
J	mm	130	159	159
b	mm	660	810	810
t	mm	725	875	875

Table 5.2 VIH R unit dimensions

5.2.4 Unit and connection dimensions VIH RW

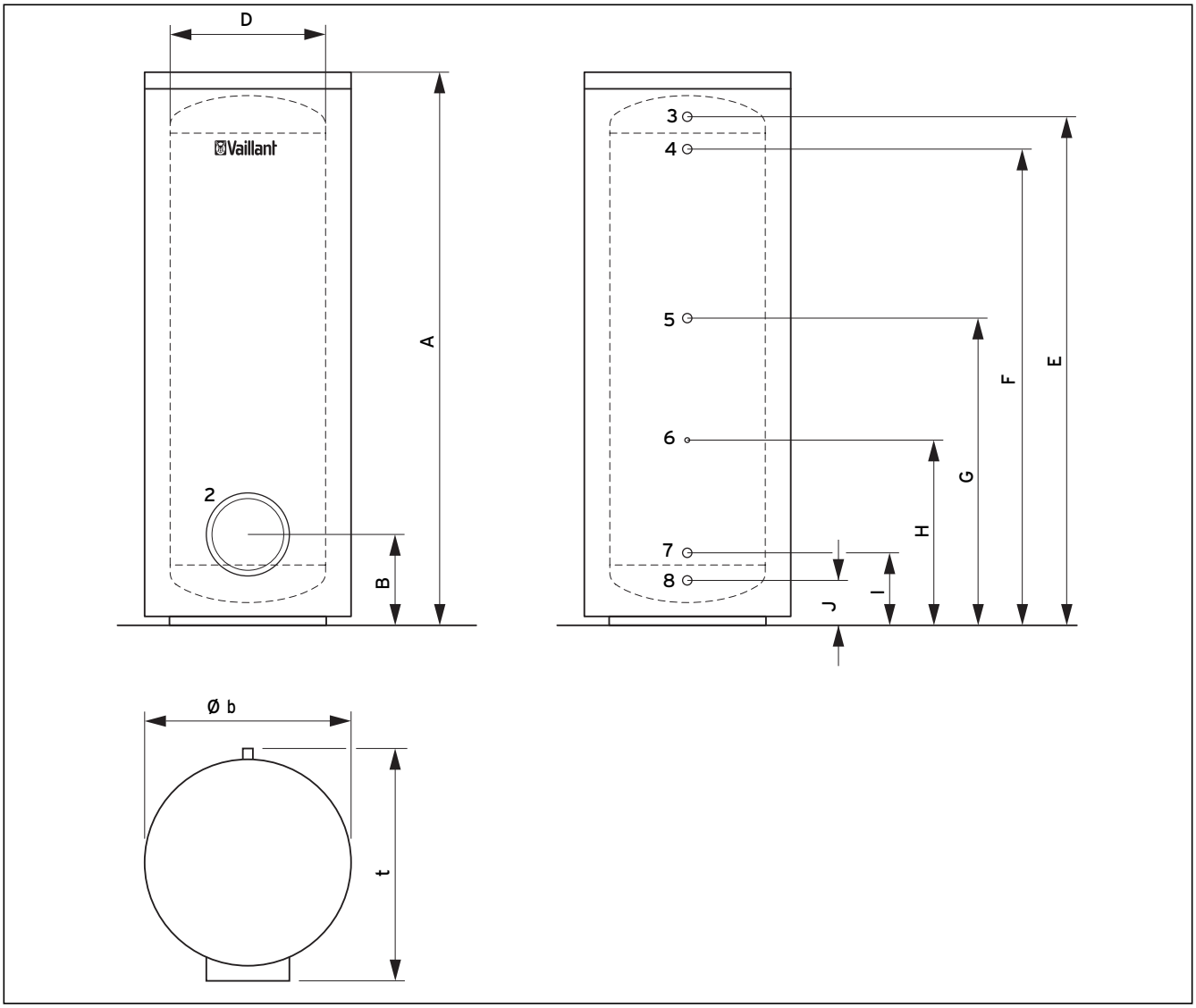

Fig. 5.4 Unit and connection dimensions VIH RW

Key to Fig. 5.4
2 Inspection opening (Ø120)
3 Hot water connection (R1)
4 Heating flow (R1)
5 Circulation connection (R3/4)
6 Pocket for heating sensor (Ø12)
7 Heating return (R1)
8 Cold water connection (R1)

Type	Units	VIH RW 300
A	mm	1775
B	mm	279
D	mm	500
E	mm	1632
F	mm	1546
G	mm	1086
H	mm	581
I	mm	216
J	mm	130
b	mm	660
t	mm	725

Table 5.3 VIH RW unit dimensions

5.3 Transport to the installation location

The cylinder is delivered fully assembled.
You have various options for transport to the installation site.

- Complete in the packaging, if possible at the customer side
- Without packaging, completely assembled, if the transport route permits it
- Without casing or insulation, for narrow doorways or to protect the casing

Note!
To remove and refit the casing and insulation takes 1 person approx. 10 minutes.

Note!
The installation can optionally be carried out with or without the insulation / casing.

Note!
If necessary, use the transport aids from the accessories.

Caution!
Damage to the cylinder.
If the cylinder is brought to the installation location on a trolley or carried there, pay attention to the insulation on the base of the cylinder. It must not be damaged.

5.3.1 Transport in the packaging

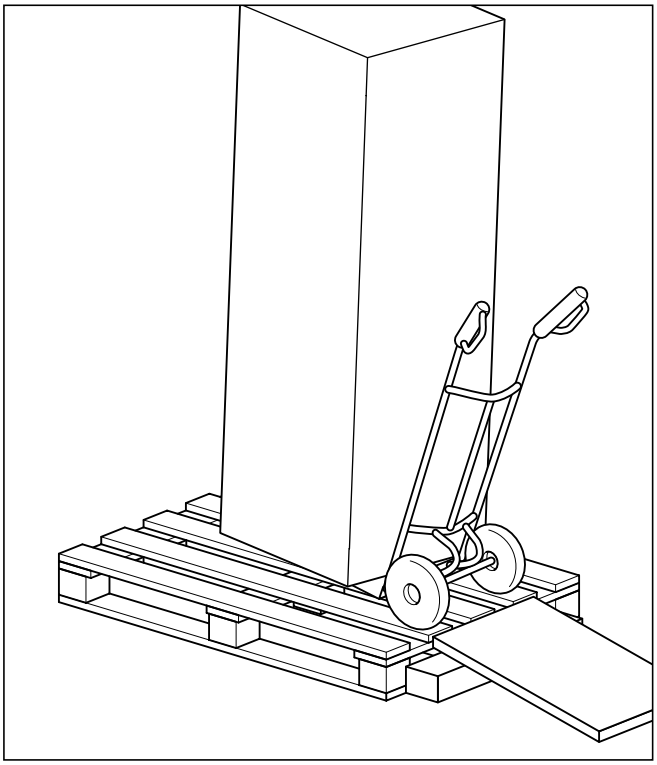

Fig. 5.5 Transport in the packaging, consisting of top and bottom styrofoam pads and a cardboard sleeve carton

5.3.2 Transport without packaging

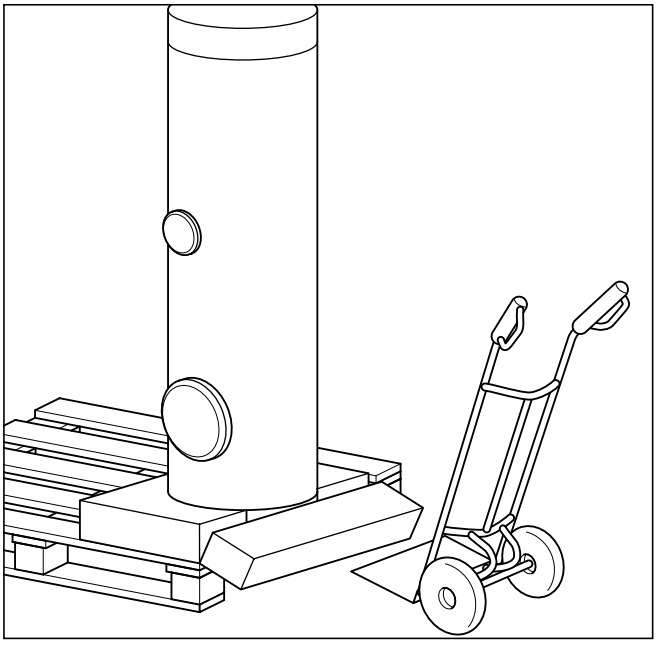

Fig. 5.6 Transport without packaging

- Remove the top pad and the cardboard sleeve carton.
- Pull the cylinder on the bottom pad over the edge of the pallet until you can break off the bottom pad at the intended point with your foot.
- Position the hand cart in front of the pallet and load the cylinder on to it.

5.3.3 Transport without cladding

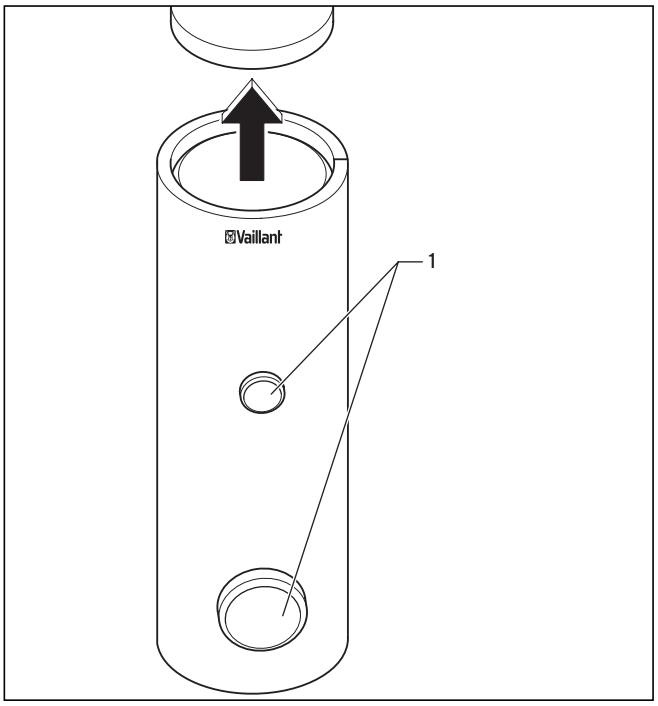

Fig. 5.7 Removing the top cap and covers

- Remove the top cap from the cylinder.
- Pull the two covers (**1**) off the front of the cylinder.

300l variant:

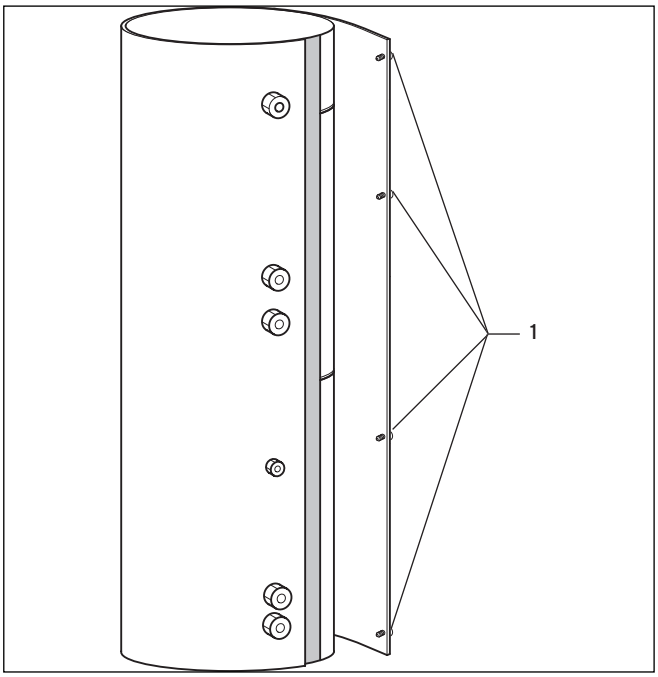

Fig. 5.8 Releasing the jacket

- Unfasten the 6 screws (1) at the rear of the cylinder.
- Take the jacket in your hand and walk once round the tank so that the jacket rolls up.

400l and 500l variants:

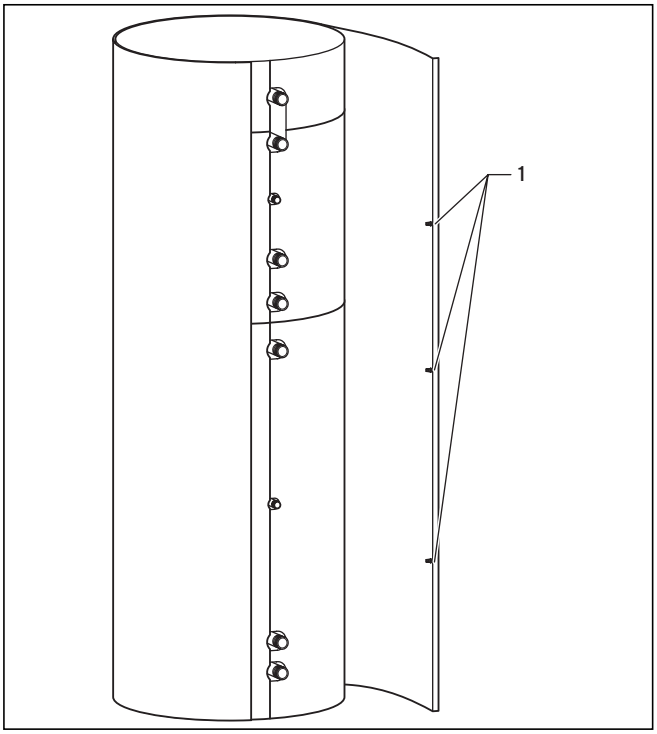

Fig. 5.9 Releasing the jacket

- On the rear of the cylinder, first unfasten the 3 plastic screws (**1**) on one side only of the aluminium strip (using, e.g., a coin).
- Grip the jacket by the aluminium rail and walk round the cylinder with it so that you are holding the jacket inside out in a droplet shape.
- Now unfasten the 3 plastic screws on the other aluminium rail, pull out the aluminium rail and clamp the two ends together with the enclosed clip.

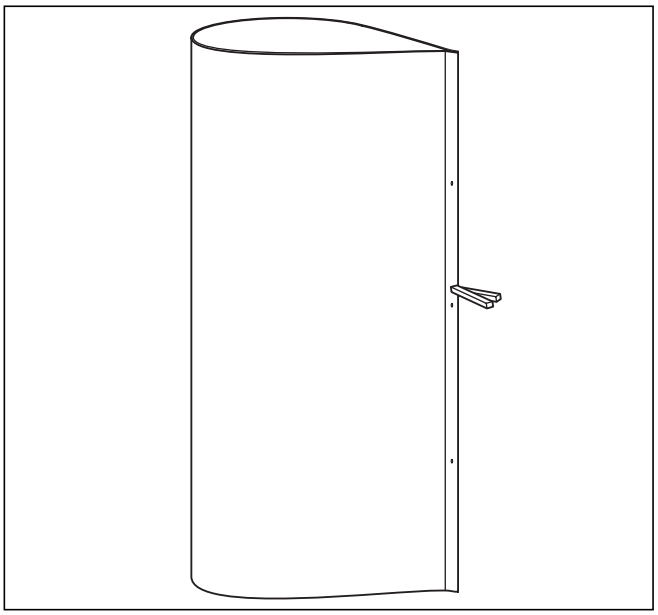

Fig. 5.10 Fastening the casing jacket with the clip

5.3.4 Transport without insulation

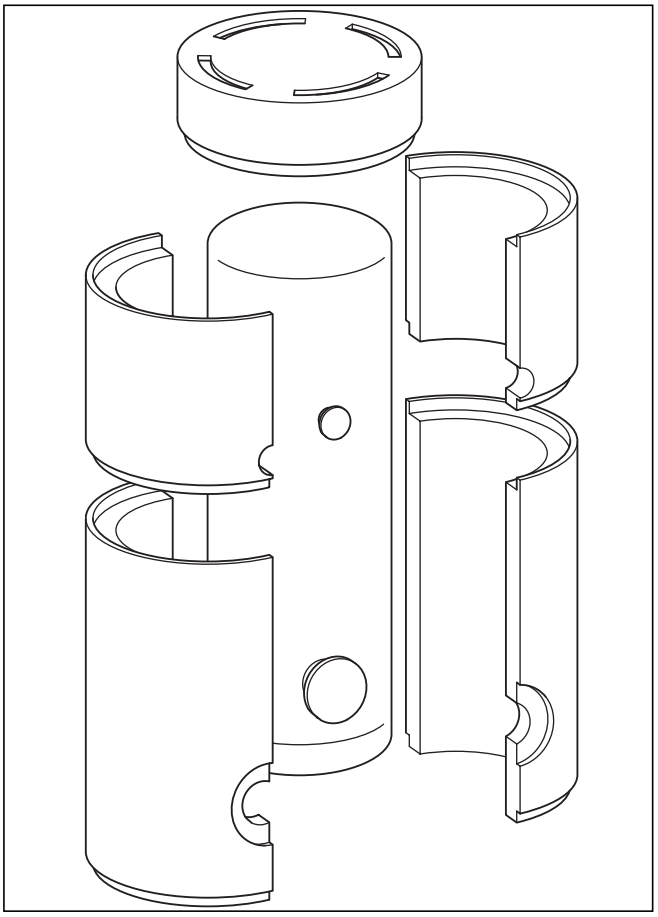

Fig. 5.11 Removing the insulation

- Using a knife, separate the adhesive film at the front and rear joints.
- First remove one of the lower half shells by pulling it to the side, then the other lower half shell.
- Depending on the size of the unit, now remove either the upper half shells or the cover cap.

5.3.5 Fitting the insulation and the casing

To fit the insulation and the casing, proceed in the reverse order:

- Fit the casing from top to bottom and fix the insulation sections with adhesive strips over the joint.

Note!
The adhesive strips are on a paper backing at the rear right hand side next to the joint.

300l variant:
- Fit the casing as follows:
  Lay the strip with the holes on the retaining pins and screw it down securely.

400l and 500l variants:
- Fit the jacket by positioning an aluminium rail with the holes on the locking pins and fastening it with the plastic screws. To do this, you need only snap in the screws, not turn them.
- After fastening the two aluminium rails, attach the cover cap and the front covers.

☞ **Note!**
Check that the front covers are correctly seated, to prevent heat loss.

- Align the cylinder vertically with the adjustable feet.

5.4 Connecting the cylinder

VIH S:
Proceed as follows when installing the cylinder (see Fig. 5.2):
- Connect the heating flow (**4**) and return (**6**) to the cylinder.
- Connect the solar flow (**8**) and return (**10**) to the cylinder.

☞ **Note!**
Observe the enclosed solar system manual!

- Install the cold water pipe (**11**) with the necessary safety devices:
  If the water pressure at the installation location is less than 10 bar, a proof-tested DN 25 safety group can be used.
- Install a T-piece in the cold water pipe between the cylinder connection and the safety group for draining the cylinder.
- Install the hot water pipe (**3**) and, if necessary, the secondary return (**7**).

VIH R:
Proceed as follows when installing the cylinder (see Fig. 5.3):
- Connect the heating flow (**5**) and return (**7**) to the cylinder.
- Install the cold water pipe (**8**) with the necessary safety devices:
  If the water pressure at the installation location is less than 10 bar, a proof-tested DN 25 safety group can be used.
- Install a T-piece in the cold water pipe between the cylinder connection and the safety group for draining the cylinder.
- Install the hot water pipe (**3**) and, if necessary, the secondary return (**4**).

VIH RW:
Proceed as follows when installing the cylinder (see Fig. 5.4):
- Connect the heating flow (**4**) and return (**7**) to the cylinder.
- Install the cold water pipe (**8**) with the necessary safety devices:
  If the water pressure at the installation location is less than 10 bar, a proof-tested DN 25 safety group can be used.
- Install a T-piece in the cold water pipe between the cylinder connection and the safety group for draining the cylinder.
- Install the hot water pipe (**3**) and, if necessary, the secondary return (**5**).

☞ **Note!**
As the use of a secondary return results in standby losses, it should only be connected if the hot water network is widely distributed.
If a secondary return is necessary, the circulation pump must be fitted with a time switch in accordance with the Heating Installation Ordinance.

- Fit stainless steel caps to the unused connections, ensuring they are pressure-tight.
- Carry out the electrical wiring if necessary.

☞ **Note!**
Connect all the supply lines with screw couplings.

Danger!
Risk of scalding!
Please note that a hot water thermostatic mixer must not be installed in any secondary return area that might be present, as the scalding protection would no longer be guaranteed. In such cases, install the hot water thermostatic mixer downstream of the secondary return area.

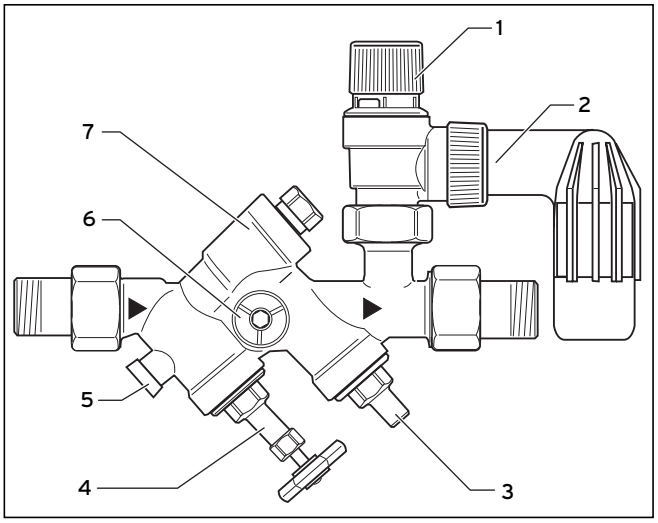

Fig. 5.12 Installing the safety groups

Key to Fig. 5.12
1 Venting knob
2 Blow-off line
3 Stop valve
4 Stop valve with hand wheel
5 Test plug
6 Pressure gauge connection point
7 Backflow preventer

6 Start-up

Once installation is complete, the cylinder must be filled on the heating and DHW sides. Proceed as follows to do this:
- VIH S only: Fill the solar circuit (see System Manual).
- Fill the heating side via the boiler filling and draining connection.
- Check the cylinder and system for leaks.
- Fill the DHW system via the cold water inlet and bleed the system at a hot water draw-off point.
- Check the function and correct setting of all control and monitoring devices.
- Program the timer or timer program, if present, on the controller (define the start of the enable time for cylinder charging).
- Put the boiler into operation.
- VIH S only: Put the solar system into operation.

6.1 Regulations

Observe all applicable national regulations and guidelines.
Before the installation, check if there are further local regulations.

7 Maintenance

7.1 Cleaning the internal tank

Make sure the cleaning devices and cleaning agents are in a hygienic condition, since the cleaning work is carried out in the inner tank of the cylinder within the drinking water area.
Proceed as follows when cleaning the inner tank:
- Drain the cylinder.
- Remove the flange cover on the cleaning eye.
- Clean the cylinder with a jet of water. If necessary, loosen any deposits with a suitable tool e.g. a wood or plastic scraper and flush them out.

Note!
Ensure that the enamelling of the heating coil and the inner tank is not damaged during the cleaning work.

- Replace the flange cover with its associated gaskets on the cleaning eye of the cylinder.
- Tighten the screws.

Note!
You must replace any old or damaged seals.

- Fill the cylinder and check for leaks.

Danger!
Risk of being scalded by hot water!
The blow-off line on the expansion relief valve fitted to the DHW cylinder must remain open at all times.
Check the function of the expansion relief valve during servicing by venting it.
If this is not done, the possibility of the cylinder bursting cannot be ruled out!

7.2 Servicing the magnesium sacrificial anode

The cylinder is fitted with a magnesium sacrificial anode which has an average service life of approx. 5 years.
To service the anode, the plastic cover must be removed and the anode released with a 27 mm AF box spanner or socket.

Visual inspection
- Remove the magnesium sacrificial anode (**1**) and check it for erosion.

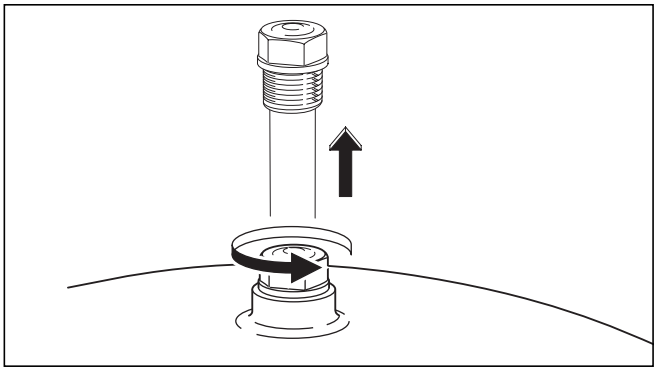

Fig. 7.1 Visual inspection of the magnesium sacrificial anode

The first check of magnesium sacrificial anode must be carried out after 2 years. After that, the check must be carried out annually.
If necessary, replace the sacrificial anode with a genuine replacement magnesium sacrificial anode. You can use a chain anode if there is little ceiling clearance.

Alternatively you can use a maintenance-free external current anode.

7.3 Replacement parts

Any spare parts which might be required are itemised in the respective valid spare parts catalogues.
Enquiries will be answered by the sales departments and the manufacturer's customer service.

8 Recycling and disposal

Both the cylinder and its transport packaging are made primarily of recyclable raw materials.

8.1 Unit

Neither the DHW cylinder nor its accessories should be disposed of as domestic waste. Make sure the old appliance and any existing accessories are disposed of properly.

8.2 Packaging

The specialist company that installed the unit is responsible for disposing of the transport packaging.

Note!
Please observe the applicable national legal regulations.

9 Vaillant Customer Service and warranty

Permanent operational readiness, reliability and a long service life of your DHW cylinder require regular inspection and maintenance by a heating engineer.

Danger!
Never attempt to perform maintenance or repairs on your water boiler by yourself. Use an approved qualified servicing company for this work. We recommend making a maintenance agreement. The operational reliability of the device can be impaired, resulting in damage to property or personal injury, if maintenance work is not carried out.

9.1 Vaillant customer service

For advice on repairs for heating engineers, see the address on the back page of this manual.

9.2 Manufacturer's warranty

We provide the owner of the unit with a manufacturer's warranty under certain conditions; you can find out what these are by contacting the address on the back page of this manual.

10 Technical data

10.1 Technical data for VIH S 300/400/500 and VIH R 300/400/500

	Units	VIH S			VIH R		
		VIH S 300	VIH S 400	VIH S 500	VIH R 300	VIH R 400	VIH R 500
Nominal cylinder capacity	l	300	400	500	300	400	500
Actual cylinder capacity	l	289	398	484	295	404	496
Maximum operating pressure – cylinder	bar	10	10	10	10	10	10
Maximum operating pressure - heating	bar	10	10	10	10	10	10
Max. hot water temperature	°C	85	85	85	85	85	85
Maximum hot water flow temperature	°C	110	110	110	110	110	110
Standby energy loss	kWh/d	1.9	2.1	2.3	1.8	2.0	2.2
Heating heat exchanger:							
Heating area of the heat exchanger	m^2	0.7	0.7	1.0	1.6	1.5	2.1
Heating water capacity of the heat exchanger	l	4.7	4.5	6.6	10.7	9.9	14.2
Pressure loss in the heat exchanger at max. hot water demand	mbar	11	11	16	75	75	125
Heating medium flow	l/h	900	900	1250	2000	2000	2700
Initial hot water output at 45/10 °C[1)]	l/10min	195	190	215	462	519	591
Continuous hot water output at a heating water temperature of 85/65 °C[2)]	kW	20	21	29	46	46	62
Continuous hot water output at a heating water temperature of 85/65 °C[2)]	l/h	491	516	712	1130	130	1523
Output characteristic figure[1)]	N_L	2.0	3.5	4.7	11.0	15.0	19.0
Solar heat exchanger:							
Heating area of the heat exchanger	m^2	1.6	1.5	2.1			
Heating water capacity of the heat exchanger	l	10.7	9.9	14.2			
Pressure loss in the heat exchanger in solar mode with solar fluid	mbar	< 10	< 10	< 10			
Solar fluid flow	l/h	200	300	500			
Connections							
Cold water and hot water connection	Thread	R1	R1	R1	R1	R1	R1
Secondary return connection	Thread	R$^3/_4$	R$^3/_4$	R$^3/_4$	R$^3/_4$	R$^3/_4$	R$^3/_4$
Flow and return connections	Thread	R1	R1	R1	R1	R1	R1
Cylinder dimensions:							
Width with casing	mm	660	810	810	660	810	810
Depth with casing	mm	725	875	875	725	875	875
Height	mm	1775	1470	1775	1775	1470	1775
Outer diameter of tank without insulation	mm	500	650	650	500	650	650
Weight (incl. packaging and insulation)	kg	150	169	198	125	145	165
Weight when filled and ready for operation	kg	439	567	682	420	549	661

Table 10.1 Technical data for VIH S 300/400/500 and VIH R 300/400/500

1) per DIN 4708, Part 3
2) Temperature difference between hot and cold water: 35 K

10.2 Technical data for VIH RW 300

	Units	VIH RW 300
Nominal cylinder capacity	l	300
Actual cylinder capacity	l	285
Maximum operating pressure – cylinder	bar	10
Maximum operating pressure - heating	bar	10
Max. hot water temperature	°C	85
Maximum hot water forward flow temperature	°C	110
Standby energy loss	kWh/d	1.8
Heating heat exchanger:		
Heating area of the heat exchanger	m^2	2.9
Heating water capacity of the heat exchanger	l	17.5
Pressure loss in the heat exchanger at max. hot water demand	mbar	124
Heating medium flow	l/h	2000
Initial hot water output at 10/45 °C and a cylinder temperature of 60 °C	l/10min	410
Continuous hot water output at 10/45 °C and a heating water temperature of 60/50 °C	kW	14
Continuous hot water output at 10/45 °C and a heating water temperature of 60/50 °C	l/h	345
Output characteristic figure	N_L	–
Connections		
Cold water and hot water connection	Thread	R1
Secondary return connection	Thread	$R^3/_4$
Flow and return connections	Thread	R1
Cylinder dimensions:		
Width with casing	mm	660
Depth with casing	mm	725
Height	mm	1775
Outer diameter of tank without insulation	mm	500
Weight (incl. packaging and insulation)	kg	155
Weight when filled and ready for operation	kg	440

Table 10.2 Technical data for VIH RW 300

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