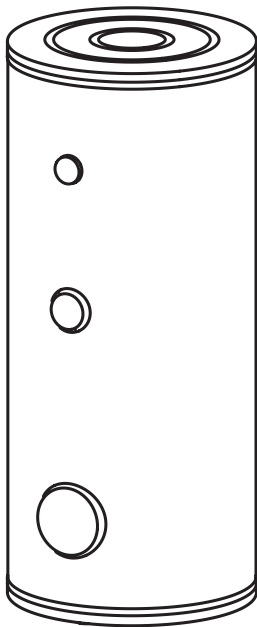


Domestic Hot Water Cylinder



- SWW
- SWWZ

- SBW
- SBWZ

Safety instructions

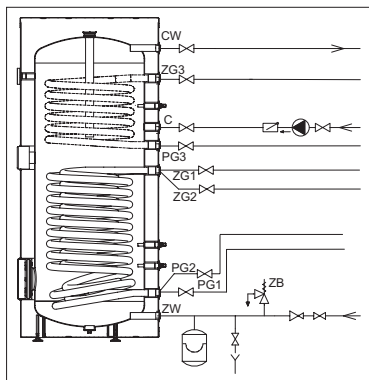
1. Read and strictly follow this installation and operating instructions to ensure a long life and reliable cylinder operation.
2. The manufacturer of this cylinder will not be liable for any damages due to the failure to follow the installation and operation instructions.
3. The cylinder must not be installed in rooms where the temperature may drop below 0°C.
4. The cylinder installation and the initial start-up, as well as all electrical and hydraulic work must be performed by a qualified professional installer.
5. The cylinder is designed for vertical installation only (screw on feet).
6. The device must be installed in such a place and in such a way in order not to flood the room in case of the emergency water leak.
7. Connections to water supply system, central heating system, and solar collectors must be made in accordance with the diagram in this installation instruction. Failure to follow the installation instruction invalidate the warranty and may cause cylinder's damage.
8. A connection to water supply system must be made in accordance with legally binding norms.
9. The cylinder is a pressure appliance designed for connection to the water supply system where the water pressure doesn't exceed 0,6 MPa. If the water pressure exceeds 0,6 MPa, the pressure reducing valve before cylinder must be fitted.
10. A small leak from the safety valve through the outlet pipe may occur- it's a normal operating state of the appliance. The outlet pipe has to remain open. Do not clog it, as a clogged outlet may lead to the breakdown of the cylinder.
11. Do not use the cylinder if you suspect that the safety valve may be faulty.
12. The tank is equipped with magnesium anode- an additional protection against corrosion. The anode is an operating part, therefore, it is exposed to wear.
The condition of the magnesium anode should be controlled every 12 months. The anode must be replaced once every 18 months.
13. Rated temperature of water in the cylinder should not exceed 80°C.

The cylinder is suitable for fitting an immersion heater with thermostat e.g. GRW 1.4, GRW 2.0. The immersion heater must be fitted in lieu of cork 1½".

A maximum length of immersion heater:

- 550 mm (Cylinders of 300 litres),
- 670 mm (Cylinders of 500 litres).

Connection to the central heating system



Cylinder must be fitted to the central heating system by pipe unions 1". A cut-off valves must be installed before the pipe unions. A flow rate of heating water must be high enough to maximise cylinder efficiency (see 'Technical data' table). It concerns the forced circulation installation (with a central heating water pump).

SWW cylinder is equipped with two heating coils in the bottom part of the storage.

SBW cylinder is equipped with two heating coils in the bottom part of the storage and one in the upper part.

SWWZ and SBWZ cylinders are equipped with additional connections intended for the external heat exchanger.

Connection to the water system

Connection to the water system must be performed according to binding norms of hydraulic installation. The cylinder is a pressure appliance designed for connection to the water supply system where the water pressure doesn't exceed 0,6 MPa. If the water pressure exceeds 0,6 MPa, the pressure reducing valve must be fitted before the cylinder.

Please follow water connection instructions below:

- install the T-connection with 6 bar safety valve (e.g. ZB-4) and the drain valve to the fitting of cold water inlet [ZW]. It's forbidden to install a cut-off valve (or any flow reducer) between the tank and the safety valve and on its outlet. The safety valve must be installed in such a place as to quickly let you notice the outgoing water,
- install the cylinder equipped with the safety valve to the water system,
- install the cut-off valve on cold water supply pipe.

Hot water outlet should be led to the connections 3/4" in the upper part of the cylinder. Every cylinder is equipped with connection 3/4" intended for its installation to the DHW circulation.

Cylinder's construction

SWW; 300l; 500l

SBW; 300l; 500l

[6] - sensor pipe

[9] - immersion heater connection (cork 1½")

[10] - lower heating coil (internal)

[11] - lower heating coil (external)

[12] - upper heating coil

[13] - magnesium anode

[14] - thermometer

[15] - thermal insulation

[16] - upper lid

[17] - lower lid

[18] - feet

[20] - access hole ø 150 / 115

[21] - access hole cover

[22] - magnesium anode

ZW - cold water

CW - hot water

C - circulation

ZG1 - heating medium supply (lower external coil)

ZG2 - heating medium supply (lower internal coil)

ZG3 - heating medium supply (upper coil)

ZG4 - supply from the external heat exchanger (SWWZ, SBWZ)

PG1 - heating medium return (lower external coil)

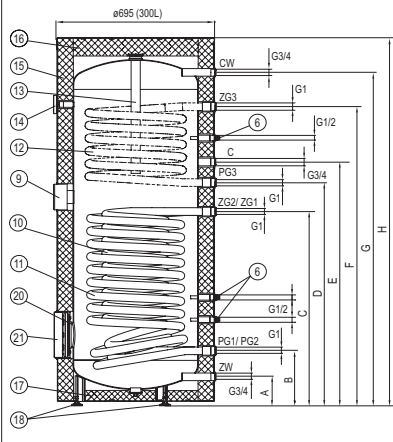
PG2 - heating medium return (lower internal coil)

PG3 - heating medium return (upper coil)

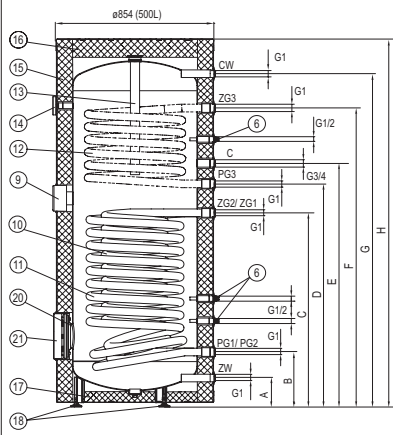
PG4 - heating medium return- external heat exchanger (SWWZ, SBWZ)

A-I - dimensions described in the diagram

Cylinder's construction SWW; SBW 300l



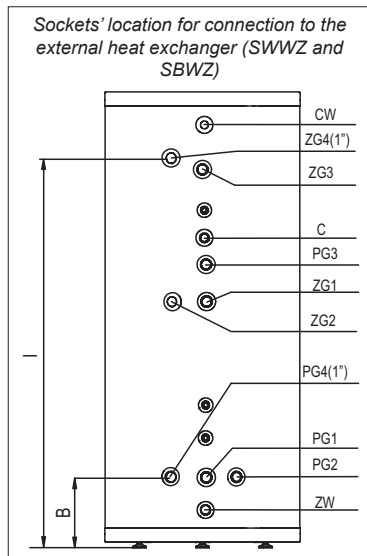
Cylinder's construction SWW; SBW 500l



Dimensions	SWW; SWWZ		SBW; SBWZ	
	300 L	500 L	300 L	500 L
A	108	112	108	112
B	222	242,5	222	242,5
C	834	966	834	966
D	-	-	961	1091
E	934	1196	1052	1196
F	-	-	1294	1424
G	1445	1560	1445	1560
H	1521	1650	1521	1650
I	1331	1429,5	1331	1429,5

Start up

Sockets' location for connection to the external heat exchanger (SWWZ and SBWZ)



Before the start-up make sure that the installation procedures have been carried out in accordance with the regulations included in this manual.

Cylinder must be filled with water:

- turn on the valve on cold water supply pipe,
- turn on the hot water outlet valve (water outflow without the air bubbles indicates that the tank is full),
- turn off the outlet valves.

Turn on the valves connecting cylinder with the central and the solar collector heating system. Check for water and heating medium leaks. Check out the safety valve performance in accordance with valve manufacturer's instruction.

Operation

Follow the guidelines below for safety and trouble-free cylinder operation:

- Check out the safety valve performance once every 14 days. Do not use the cylinder if the water does not come out (it indicates that the valve is broken).
- Clean inside of the cylinder periodically. The frequency of cleaning depends on the degree of water hardness. The cleaning should be done by a qualified person. Always tighten the lid's screws [21] to the correct torque of 18-22Nm.
- The wear condition of the anode must be inspected annually.
- The anode must be replaced once every 18 months.
 - anode rod replacement [13]: take off upper lid [16], take out an insulation ring, turn off the cut-off valve on cold water supply pipe, turn on the hot water valve (mixer tap), turn the drain valve on, drain as much water as you need to easily unscrew the anode rod (avoiding room flooding). Remove the cork and unscrew the anode rod.
 - anode rod replacement [22] (500l cylinder): empty the storage tank in accordance with, 'Cylinder emptying' section, remove access hole cover [21] and unscrew the anode rod.
- Heat up the water above 70°C periodically for hygiene reasons.
- Failures or malfunctions notify to the seller.
- Insulate the outlet pipe and heating coil connection pipes to minimise the heat loss (recommended).

Above activities are beyond of the scope of warranty service (should be done by the user).

Cylinder emptying

In order to empty the cylinder:

- turn off the valves which connect cylinder with central heating system,
- turn off the valve on the cold water inlet,
- turn on the drain valve.

Technical data

Domestic Hot Water Cylinder		SWW; SWWZ		SBW; SBWZ		
Storage capacity		l	300	500	300	500
Rated pressure	storage	MPa	0,6			
	coil		1			
Rated temperature		°C	80			
Surface area of upper coil		m ²	-		0,8	1,04
Capacity of upper coil		dm ³	-		5	6,4
Power of upper coil		kW	-		24* 7,5**	30* 9**
Efficiency of upper coil		l/h	-		600* 190**	750* 225**
Surface area of lower coil	internal	m ²	1,0	1,55	1,0	1,55
	external		1,5	2,25	1,5	2,25
Capacity of lower coil	internal	dm ³	4,3	10,3	4,3	10,3
	external		9,1	13,7	9,1	13,7
Power of lower coil	internal	kW	30* 9**	45* 14**	30* 9**	45* 14**
	external		45* 14**	65* 21**	45* 14**	65* 21**
Efficiency of lower coil	internal	l/h	750* 225**	1120* 350**	750* 225**	1120* 350**
	external		1120* 350**	1620* 520**	1120* 350**	1620* 520**
Weight (without water)		kg	115	188	130	205
Magnesium anode ø40		mm	500	2 x400	500	2 x 400

*80/10/45°C } - heating water temp./ supply water temp./ domestic water temperature; flow
 **55/10/45°C } rate of heating water through the coil - 2,5m³/h.

