

Operating instructions
ELYSATOR®
types 50c - 100c

Installation
Function
Operation
Service



Table of contents

1. Safety instructions	4
2. Function	5
3. Standard delivery	5
4. Specification	
4.1. Device description	6
4.2. Dimensions	7
4.3. Performance data	7
5. Installation	
5.1. Determining the installation position	8
5.2. Connection	8
6. Commissioning	
6.1. Filling/venting	9
6.2. Setting the throughput with a flow control valve	9
7. Operation	
7.1. System water	10
7.2. Checking the condition of the anodes	10
8. Maintenance	
8.1. Interpreting the indicator and actions required	10
8.2. Sludge removal	11
8.3. Replacing the anodes	12
8.4. Checking and assessing the condition of the anodes	13
8.5. Replacing the wear indicator and the control button	13
9. Spare parts	14

1. Safety instructions



Not drinking water



Maximum 100 °C



Maximum 10 bar pressure

2. Function

ELYSATOR® devices provide your heating system with sustainable protection from corrosion. The following functions are combined into one device:

- pH regulation by means of a sacrificial anode
- Micro gas bubble separator
- Magnetic flow filter

3. Standard delivery

- 1 × ELYSATOR® device
- 2 × plugs 1" (red brass)
- 2 × reducer twin connectors 1" - 3/4" (red brass)
- 1 × assembled flow control valve incl. 2 × couplings 3/4"
- 1 × air vent ELYSATOR® air-vent INOX
- 1 × operating instructions

4. Specification

4.1. Device description

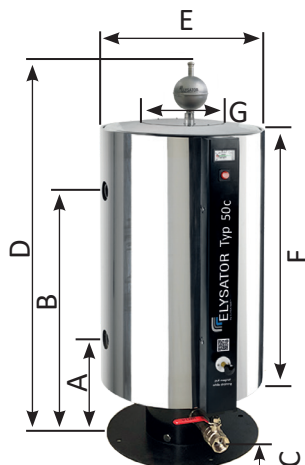


- 1 Cylinder with insulation
- 2 Indicator
- 3 Drain valve
- 4 Air vent with gasket and coupling
- 5 Elbow (2x)
- 6 Flow control valve
- 7 Shut-off valve (2x)
- 8 Coupling
- 9 Magnet
- 10 Cover plate (2-part)
- 11 Input 1" (2x)
- 12 Output 1" (2x)
- 13 Switch
- 14 Duct

4.2. Dimensions

Cylinder material: INOX 1.4435 / AISI 316L / SS 2353
 Insulation: PU foam with stainless steel, polished cover plate
 Cover plate: INOX 1.4301 / AISI 304 / SS 2333

Dimensions		ELYSATOR® types 50c - 100c
A	Input height	290 mm
B	Output height	680 mm
C	Drain height	76 mm
D	Overall height	1045 mm
E	Cylinder diameter	420 mm
F	Cylinder height	685 mm
G	Flange diameter	140 mm
	Input/output connection	1" (fem.)
	Drain connection	1" (fem.)



4.3. Performance data

	ELYSATOR® type 50c	ELYSATOR® type 75c	ELYSATOR® type 100c
System volume	< 15 m³	< 25 m³	< 35 m³
Max. throughput	5 - 8 l/min	8 - 10 l/min	10 - 13 l/min
Pmax	10 bar	10 bar	10 bar
Tmax	100 °C	100 °C	100 °C
Weight	45 kg	46.5 kg	47.5 kg

ELYSATOR® type 75c will only be produced until the end of 2023. Replacement would be either type 100c or the more modern H₂O GUARD 60v device.

5. Installation

5.1. Determining the installation position

Bear in mind the following points when selecting the installation position of an ELYSATOR®:

- The entire system water content should flow through the ELYSATOR® at regular intervals.
- To ensure that the oxygen can be separated out efficiently, an installation position close to the diffusion point (underfloor heating) should be selected.
- The appliances in the ELYSATOR® industrial series are designed for installation in a secondary circuit.

IMPORTANT NOTE

Selecting the correct installation position for an ELYSATOR® is the responsibility of a heating contractor. We are happy to provide the contractor with assistance.

5.2. Connection

Version 1:



Version 2:



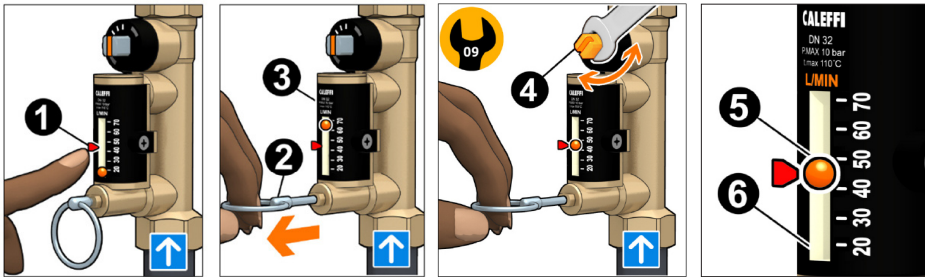
6. Commissioning

6.1. Filling/venting

The ELYSATOR® can be filled with demineralised water via the drain valve. To do so, the air vent on the device must be unscrewed. The two shut-off valves must be closed. Once water starts to come out of the top of the ELYSATOR®, the air vent can be screwed back on and the shut-off valves opened again. It is also possible to fill the entire system by expelling the air.

6.2. Setting the throughput with a flow control valve

Set the throughput according to the values in the chart in chapter 4.3.



- A. On indicator (1), mark the reference value for setting the valve.
- B. Pull ring (2) to open the slide valve that blocks the throughput of fluid through flow meter (3) during normal operating conditions.
- C. Hold the slide valve open and use a special spanner to make the adjustment on valve regulating spindle (4). The reading is indicated by a metal ball (5) on a measuring scale in l/min on transparent cylinder (6).
- D. After completing the adjustment, release ring (2) of the flow meter slide valve. An integral spring automatically returns the slide valve to the closed position.

7. Operation

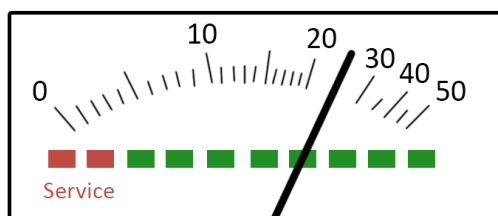
7.1. System water

The quality of the heating water must comply with the general guidelines (VDI 2035, Parts 1 & 2, SWKI BT 102-01, ÖNORM 5195-1), unless the system manufacturer requests different values. The ELYSATOR® must not be operated with water that has been enriched with chemical substances.

7.2. Checking the condition of the anode

During operation, the ELYSATOR® function must be checked every 6 months. This is shown on the wear indicator on the duct.

As long as the wear indicator is in the green zone, the anode is operating normally (exemplary illustration, the scale may show different values). If the indicator is in the red zone (Service), refer to chapter "8. Maintenance".



8. Maintenance

8.1. Interpreting the wear indicator and actions required

8.1.1. Needle deflection is in the green zone

Normal operation; the lower the wear indicator reading, the less work the anode needs to do.

8.1.2. Needle deflects to maximum for more than one heating season

The anode is working hard. The ELYSATOR® may be undersized or the water quality may be poor. A water analysis is recommended.

8.1.3. Needle deflection is close to the red zone

Check the wear indicator by pressing the button. If pressing the button causes the wear indicator reading to change, the wear indicator is functioning correctly. If the needle does not move, the wear indicator is likely to be faulty and needs to be replaced. If the wear indicator is functioning correctly, a barrier layer may have formed on the anode, leaving it unable to function properly. Remove sludge from the ELYSATOR® and fill it with tap water. If after one day (with the shut-off valves closed) the wear indicator reads a higher value than before, then the system is OK. The ELYSATOR® can then be re-filled with demineralised water and put back into operation. Otherwise the ELYSATOR® must be opened and inspected as the anode may need to be replaced.

8.1.4. Needle is in the red zone

The anode has been consumed or is coated with a barrier layer and therefore no longer functions properly. The ELYSATOR® must be opened and inspected as the anode may need to be replaced.

8.1.5. Needle shows the same reading over a long period

Check the wear indicator by pressing the button. If pressing the button causes the wear indicator reading to change, the wear indicator is functioning correctly. If the needle does not move, the wear indicator is likely to be faulty and needs to be replaced.

8.2. Sludge removal

De-sludge the ELYSATOR® regularly. Exactly how often this is required depends on the amount of sludge. We recommend sludge removal once a year.

Procedure:

1. Close valve (7) in the supply line
2. Close valve (7) in the output line
3. Unscrew air vent (4)
4. Remove the cap from drain valve (3)
5. If required, connect a hose and route it to a bucket or drain
6. Pull out magnet (9)
7. Open drain valve (3) (if blocked, use a screwdriver or wire to clear it)
8. Release the vacuum by pressing on the air valve on air vent connection (4)
9. Connect drain (3) to the fresh water supply
10. Fill with fresh water (press on the air valve on air vent connection (4))
11. Drain the ELYSATOR® as described in steps 1-8
12. Repeat the procedure until the water comes out clean when draining
13. Fill the ELYSATOR® with demineralised water via drain valve (13), as described in steps 9-10
14. Close drain valve (3) and screw on the cap
15. Screw on air vent (4)
16. Open supply and output valves (7)

8.3. Replacing the anodes

1. Drain the ELYSATOR® (see chapter "*Sludge removal*", steps 1-8)
2. Remove top cover plates (10)
3. Remove contact blade (3) from the blade terminal
4. Remove screw (4) (size 17 spanner)
5. Remove the remaining flange screws (7 ×)
6. Withdraw the flange with anodes and retainer upwards
7. Secure insulating screw (5) using a size 17 open-ended spanner
8. Loosen and unscrew anode cone screw (7) using a size 10 open-ended spanner
9. Slide the anodes out from the anode tree
10. Slide new anodes into the anode tree
11. Screw new anodes onto the isolating screw

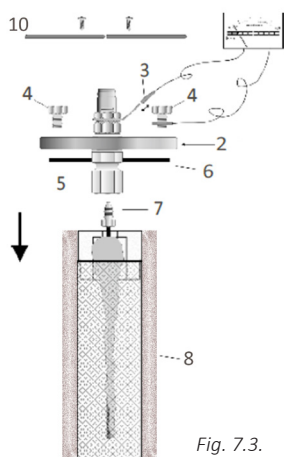


Fig. 7.3.

12. Insert new flange gasket (6)
13. Insert the flange with anodes and the anode tree
14. Insert first screw (4) together with cable connection
15. Insert remaining screws (4)
16. Evenly tighten all screws diagonally
17. Check the insulation screws and retighten if necessary
18. Reconnect contact blade (3) to the blade terminal
19. Refit flange cover (10) with screws

The ELYSATOR® type 50c and the ELYSATOR® type 100c are fitted with 3 anodes; the ELYSATOR® type 75c with 2 anodes.

8.4. Checking and assessing the condition of the anodes

The sacrificial magnesium anode is located inside the strainer and can be checked visually.

- Anode has a diameter < 10 mm or only a thin steel wire can be seen -> Replace the anode.
- Anode still has a diameter > 10 mm but is covered with a layer of dirt -> Replace the anode.
- Anode still has a diameter > 10 mm -> You can continue to use the anode.

8.5. Replacing the wear indicator and the control button (Fig. 7.3.)

1. Remove top cover plates (10)
2. Remove contact blade (3) from the blade terminal
3. Loosen flange screw (4) with cable connection
4. Remove self-tapping screws from duct (14)
5. Remove duct (14)
6. Replace wear indicator (2) or control button (13) as appropriate

7. Refit duct (14) and replace the screws
8. Tighten flange screw (4) with cable connection
9. Replace contact blade (3)
10. Refit top cover plates (10) using the screws

9. Spare parts

Designation	ELYSATOR® type 50c	ELYSATOR® type 75c	ELYSATOR® type 100c
Anode fittings	101043	101044	101043
Flange gasket	101240	101240	101240
Air vent	100402	100402	100402
Wear indicator	100277	100277	100277
Control button	100704	100704	100704

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