

Operating instructions **H₂O DESAL® harion 55** for use in the PUROTAP® leader

Installation Function Operation Service



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1. Safety instructions



Not drinking water



Maximum 4 bar up to 20 °C



Maximum 2.5 bar up to 40 °C



Operation under supervision



Recyclable or



Household waste



Throughput 20 l/min

2. Function

The H₂O DESAL[®] harion 55 cartridge set softens the circulating water and thereby effectively prevents the build-up of scale, which impairs the transfer of heat. The hardness-forming substances calcium (Ca) and magnesium (Mg) are removed (descaling).

The additional filtering eliminates solids.

Features:

- Prevents limescale deposits: Softening prevents scale formation and ensures the optimum transfer of heat, as well as a long system service life.
- Suitable for "saline operation". Complies with the VDI 2035 guidelines, and is also recommended by a number of well-known heat generator manufacturers.
- The solids depth filter ensures clear water; the H₂O DESAL[®] harion 55 can therefore also be used for subsequent circuit desalination.



Pre-rinsing necessary

3. Standard delivery

- H₂O DESAL[®] harion 55 cartridge set
- Operating instructions
- Total hardness test strips (5 pce)

The set must be used in accordance with the original packaging (marked top, centre, bottom), otherwise the effectiveness may be reduced.

PUROTAP[®] leader must be used or must be ordered separately.

4. Specification

4.1. Device description

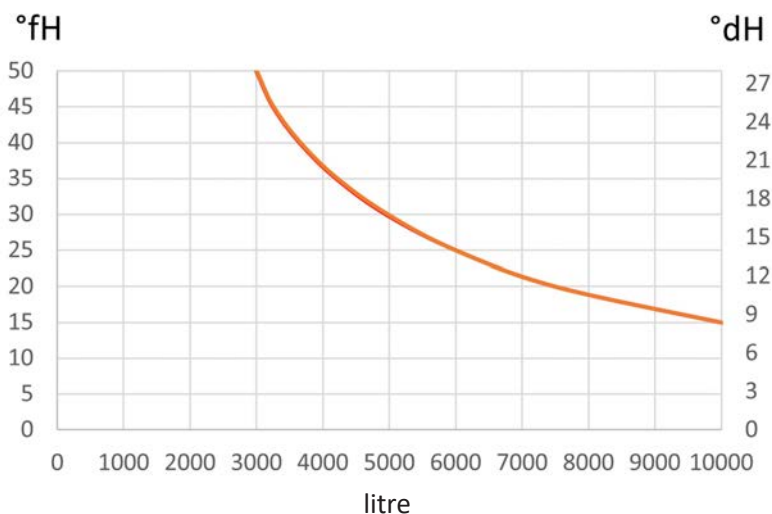
The PUROTAP® leader operating instructions can be found here:



4.2. Performance data of the H₂O DESAL® harion 55 cartridge set

This table shows the capacity of the H₂O DESAL® harion 55 cartridge set for softening the circulating water as a function of the total hardness.

Example: At a hardness level of 20 °fH / 11 °dH, the cartridge set provides approx. 7500 litres of softened water; at 15 °fH / 8 °dH, it provides approx. 10,000 litres.



4.3. Dimensions

H ₂ O DESAL® harion 55	Dimension
Height of the cartridge set	50 cm
Diameter	25 cm
Weight	approx. 13 kg

5. Operation

5.1. H₂O DESAL® harion 55 cartridge set

The H₂O DESAL® harion 55 replaceable cartridge is inserted into the PURO-TAP® leader for operation of this device. The complete cartridge set (3 individual cartridges) must be used in order to operate the device.



Before use, the cartridge must be pre-rinsed with clean water (drinking water or, better still, softened water) until clear water flows out of the device. The pre-rinse water can be safely discharged into the drain.

5.2. Connection version for system filling

This connection version is suitable for filling heating systems with softened water.

This connection version is not suitable in systems with surface heating systems, which can only be vented by means of flushing. The capacity of the ion exchanger is not sufficient to expel air from a horizontal line. In these cases, we recommend filling with raw water and then softening/demineralisation via system flushing (see next page).



The equipment includes a non-return valve. If the connection is incorrect/reversed, the raw water cannot flow through the device.

Rinse water can be safely discharged into the drain.



- Insert replaceable cartridge with ion exchange resin (see 5.4. Inserting and replacing the set)
- Where DIN EN 1717 is applicable, a pipe separator must also be installed upstream of the filling station. Observe the water supply utilities' regulations.
- PUROTAP® leader does not contain any mechanism for automatic shut-off when the required pressure is reached. If system filling is not continuously monitored, a pressure reducing valve must be connected upstream to prevent damage to the heating system due to overpressure at the end of filling.
- PUROTAP® leader may be pressurised for the duration of the filling process. Temperature max. 60 °C, pressure max. 4 bar.

5.3. Connection version for system flushing

The H₂O DESAL[®] harion 55 should only be used in the bypass flow (partial flow process) at the coldest point of the system. This process is also suitable for subsequently softening systems with an excessively high salt content according to boiler manufacturer specifications or guidelines.



Using a separate pump (e.g. jet pump, impeller pump, centrifugal pump) and 3 reinforced hoses, the ion exchanger is integrated into the main circuit of the heating system. Which connectors are used is less important than ensuring that the circulation pumps are operating and that all valves are open and enable thorough mixing of the system water.

The information unit/display can only be used for the throughput (litres/minute) and the total litre throughput (TOTAL or Job). To assess the condition of the cartridge set, the total hardness must be measured.

Immerse the test strip briefly (1 second), shake it off slightly and read after 1 minute.



0 - 5 °fH / 3 °dH → OK



> 7 °fH / 4 °dH → Replace

The equipment includes a non-return valve. If the connection is incorrect/reversed, the raw water cannot flow through the device.

Connect the PUROTAP® leader on the pressure side of the auxiliary pump.



- Insert replaceable cartridge with ion exchange resin (see 5.4. Inserting and replacing the set)
- If this flushing version is carried out during heating operation, the temperature on the device may temporarily be maximum 60 °C. Connect the device on a return line with the lowest possible temperature.
- Always use sufficiently pressure and temperature resistant hoses (reinforced hoses). The ion exchanger (vessel) should not be unsupervised while pressurised.

5.4. Inserting and replacing the H₂O DESAL® harion 55 cartridge set

1. Stop the water supply
2. Release the pressure
3. Detach hoses from the head if necessary
4. Unlock the head with the release lever, open it with a ¼ turn anti-clockwise and remove it
5. Remove the spent H₂O DESAL® harion 55 cartridges
6. Make sure the lip seal (orange/red) on the tank base is seated properly
7. Insert new H₂O DESAL® harion 55 cartridge set
8. If necessary, lubricate O-rings on cartridges and head with silicone grease

9. Replace the head and close it with a $\frac{1}{4}$ turn clockwise
10. Connect the inlet hose to the fresh water (or even better, demineralised water)
11. Route the outlet hose to a drain
12. Pre-rinse the H₂O DESAL® harion 55 with clean water until the water runs clear

The spent cartridges can be recycled or disposed of with household waste.

6. Recycling



You can now return this product to selected trade partners or directly to ELYSATOR Engineering AG.

We'll recycle for you!



Scan the QR code for more information about recycling.

7. Maintenance

7.1. Replacing the H₂O DESAL® harion 55 cartridge set

See 5.4.

7.2. Draining the water

To reduce the weight for transportation, we recommend draining the water after use.



At colder times of year, it is essential to fully drain the water from the device, as otherwise frost damage could occur.

8. Consumables

Item no.	Designation
102 926	H ₂ O DESAL [®] harion 55 cartridge set

9. Options

Item no.	Designation
102 310	MF-21 particle filter (magnetic dirt filter)
101 728	PURROTAP [®] leader, filling device