

EN

PUROTAP
by ELYSATOR™

Demineralised heating water
is perfect for every system

PUROTAP disposable cartridge

Installation
Function
Operation
Service



NEW: now also
available in
premium quality
NEXION with pH
control

Minerals and salts in technical water circulations lead to corrosion and mineral deposits. PUROTAP filters aggressive materials out of the water and enables trouble-free operation.

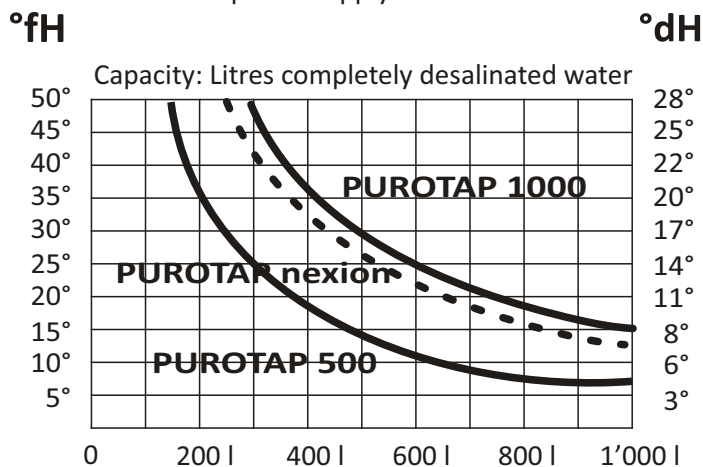
ELYSATOR 
engineering water

www.elysator.com

The function

The PUROTAP cartridge filters lime and aggressive dissolved substances such as sulfate, nitrate and chloride out of the fill-up water. The device operates on the basis of a mixed bed ion exchanger and provides demineralised water that has been completely desalinated. This method does not release any chemical additives into the water. The device operates without an external power supply.

The accompanying table shows the capacity of a full desalination cartridge as a function of the total hardness of the fill water. For example, at a hardness of 20 °fH/11 °dH, PUROTAP[®] 500 delivers approximately 375 litres of fully desalinated water, while PUROTAP[®] 1000 delivers 750 litres. PUROTAP[®] NEXION is suitable for systems with low operating temperatures and large water capacity. Removes carbon dioxide during demineralisation and thus increases the pH value without the use of additives.



Simple system filling, without measuring

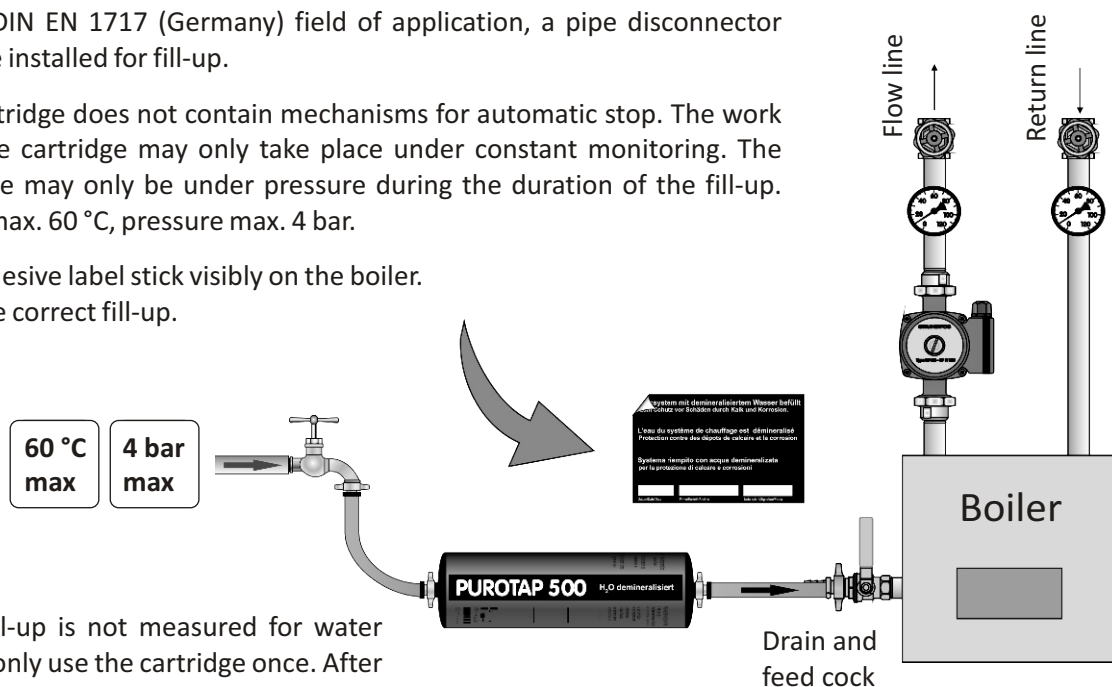
In the pressure area between 3 - 4 bar, the volume flow through the cartridge is approx. 10 l/min. This results in a maximum cartridge running time. If the cartridge is used without the use of measuring devices (water meter, conductivity measuring device), then the specified running times should not be exceeded. In order to monitor the effective performance more closely, use of a meter is optional.

This connection variant is not suitable for surface heating systems that can only be de-aerated through purging. The delivery rate of the ion exchanger is insufficient for purging air from a horizontal line. In these cases, we recommend filling with untreated water and subsequently demineralising using a cleaning system (see following page).

⚠ In the DIN EN 1717 (Germany) field of application, a pipe disconnecter must be installed for fill-up.

The cartridge does not contain mechanisms for automatic stop. The work with the cartridge may only take place under constant monitoring. The cartridge may only be under pressure during the duration of the fill-up. Temp. max. 60 °C, pressure max. 4 bar.

The adhesive label stick visibly on the boiler.
Affix the correct fill-up.



If the fill-up is not measured for water quality, only use the cartridge once. After use, dispose of in household waste.

Cleaning system with auxiliary pump

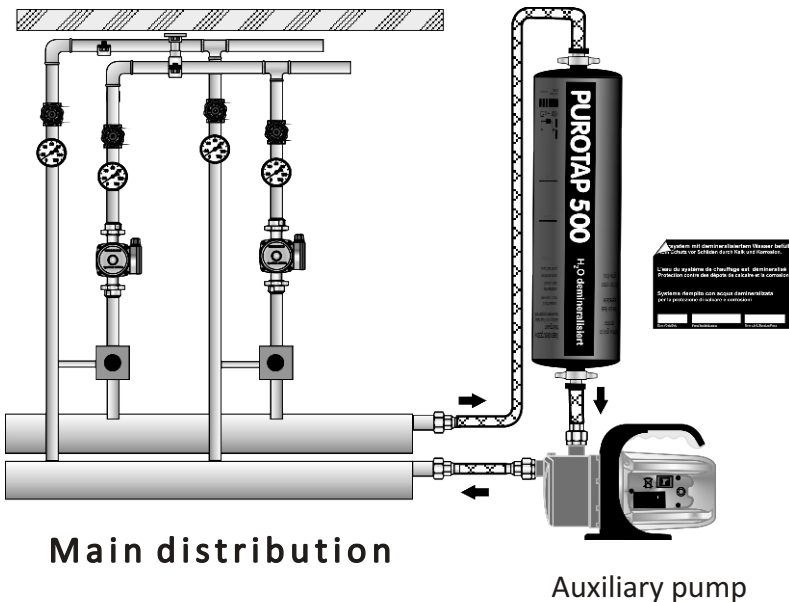
Directly filling via the ion exchanger is not suitable for surface heating systems that can only be de-aerated through purging. The delivery rate is insufficient enough for purging air from a horizontal line. In these cases, we recommend filling up with untreated water and subsequently demineralising using a cleaning system.

This procedure is also suitable for subsequently demineralising systems with too much salt content according to the boiler manufacturer's specifications or guidelines.

In doing so, the ion exchanger is integrated into the heating system circulation with the help of a separate pump (e.g. jet pump, impeller pump, centrifugal pump) and two reinforced hoses. The type of adapter used here is of less importance; instead, it is more important that the circulation pumps are operating and all valves are open enabling the system water to be mixed thoroughly.

! The temperature of the cartridge may be a maximum of 60 °C for a short period. It must be connected to a return line with the lowest possible temperature. Only hoses that are sufficiently pressure and temperature resistant should be used (reinforced hoses). The work may only take place with monitoring.

The pump must be connected behind the cartridge, no pump pressure on the cartridge!



Run the cartridge until it is exhausted. Determine the number or size of the required cartridges based on the system content and the capacity diagram on page 2.

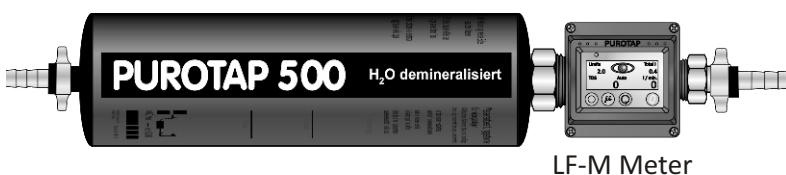
The adhesive label stick visibly to the boiler. Affix the correct fill-up.

The use of measuring devices makes reliable system cleaning easier.

The LF-M meter enables flow rate and water quality monitoring. The cartridge can be completely used up and then replaced at the appropriate time.

The cartridge can easily be used several times with the LF-M meter for smaller amounts of water until it is exhausted.

Use of the LF-M Meter



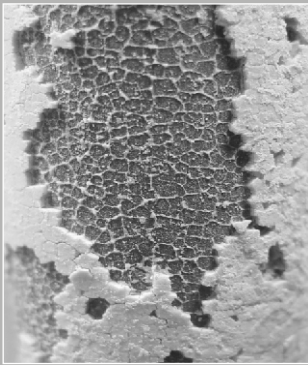
! General safety instructions

The resin from the cartridge must not enter the heating system. Before each use, the retention sieves on both sides of the cartridge must be checked. The work with the cartridge may only take place with monitoring.

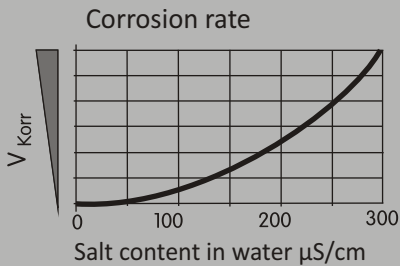
It is recommended to do a test run of the system and purge the oxygen and carbon dioxide gases that are normally present in tap water.



Over heating, stress crack



Lime precipitation in the boiler

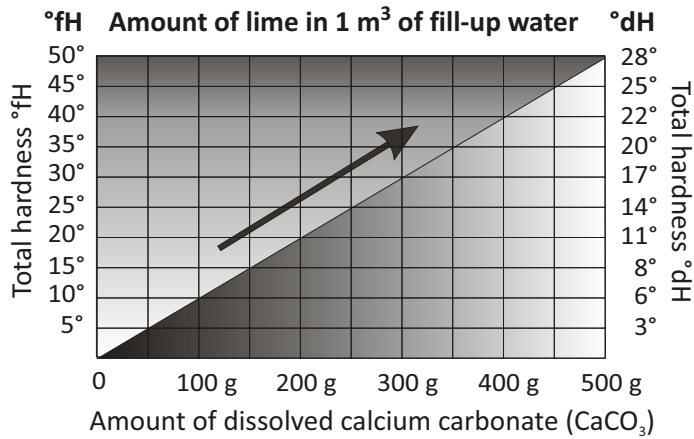


Localised corrosion for high levels of salt

Combat lime precipitation in the boiler and heat exchanger

Completely desalinated water no longer contains any substances that can damage or settle in boilers and heat exchangers.

The following table shows the amount of lime that accumulates as a result of filling the heating system once with untreated water.



According to many manufacturer specifications and technical guidelines, fill-up water must normally be demineralised (completely desalinated) for heating systems.

Practice has shown that modern devices such as wall-mounted gas boilers, heat pumps and solar systems are damaged by lime precipitation even at lower water hardness levels.

In contrast to softened water, demineralised water no longer contains salt. It is almost non-conductive and is thus corrosion-resistant.

Combat corrosion

Complete desalination also removes all neutral salts such as chloride, sulfate and nitrate that are known for causing corrosion above a certain concentration and in a specific inter-action.

According to current standards

It has always been clear among experts that completely desalinated water is perfectly suitable for the fill-up water in heating systems and thus, the service life of all components is extended. Today, this technology is very user-friendly and affordable, making it ideal for practical application.

The complete desalination (demineralisation) procedure is best suited to fulfil the water quality requirements from the following guidelines and standards:

- VDI guideline 2035
- SWKI BT 102-01
- ÖNORM 5195-1
- DIN 50930

Updates may be made without notice.
Web version supercedes print version.