



DEMIN-1500 PORTABLE DEMINERALIZATION UNIT INSTALLATION AND OPERATING INSTRUCTIONS



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DEMIN-1500

portable demineralization unit

The DEMIN-1500 demineralization unit is used to demineralize the filling water of heating and cooling systems. The unit can be used for one-time charging of the system or for permanent installation within the specified technical parameters.

The unit is used to supply the heating system with demineralized water, not for permanent installation.

DEMIN-1500 complies with the current state of the art and the requirements of European standards.



Characteristics

- It is designed to treat the filling water of heating and cooling systems.
- 1000 l water capacity at 15°dH / 27°FH inlet water hardness.
- Possibility to check the depletion of the demineralizing resin charge.

Complies with EN14868 standard

Specifications

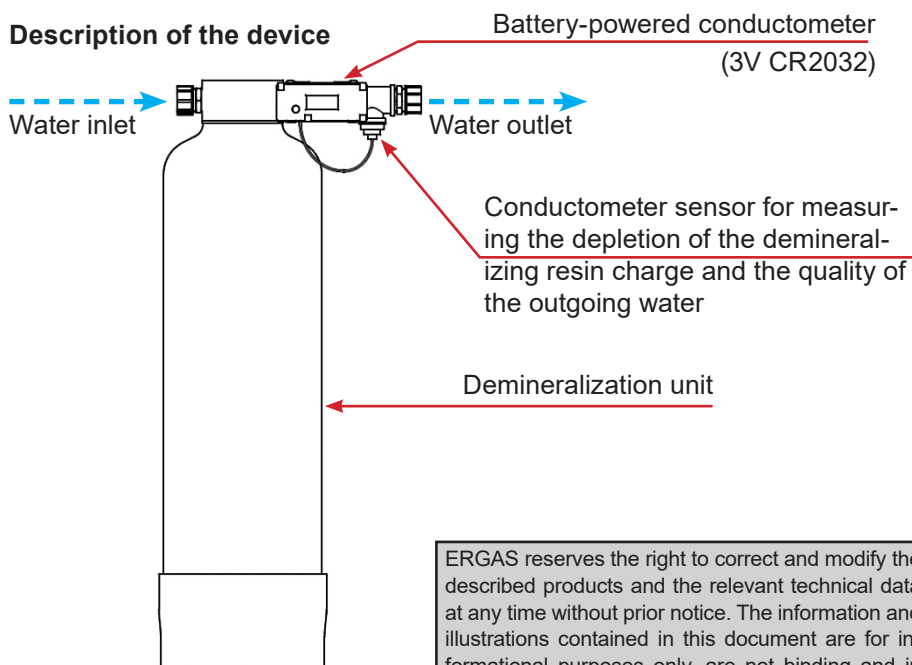
The DEMIN-1500 demineralization unit is a cylindrical pressure vessel made of polypropylene. At the top of the vessel there is a manifold to connect the water inlet and outlet, which is provided with an external thread. Inside the vessel is a water distribution system with a filter nozzle. The filter bed of the demineralization unit consists of a demineralizing insert - mixed ion exchange resin.

By treating the water on a mixing bed in the demineralization unit, the conductivity of the treated water can be 1-5 µS/cm depending on the quality of the inlet water and the operating conditions.

The unit includes a conductivity meter and a ball valve on the bypass. It is recommended to install a protective pre-filter with a fineness of 100 µm before the demineralization unit.

Technical data of DEMIN-1500		
Connection size	3/4"	
Conductivity of treated water	1-5 µs/cm	
Maximum volume flow rate	1 m³/h	
Maximum operating pressure	6 bar	
Max. operating temperature	45°C	
Demineralization performance in liters depending on the degree of water hardness	6°dH / 11°fH	2540 l
	10°dH / 18°fH	1530 l
	15°dH / 27°fH	1020 l
	20°dH / 36°fH	760 l
	25°dH / 45°fH	610 l
The volume of the demineralization cartridge	10 l	
Height	660 mm	
The diameter of the unit	190 mm	

Description of the device



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Installing the device

Before putting the device into use, the unit must be filled with a demineralizing resin charge. The procedure in detail: *Procedure for replacing the filter insert*

The unit must be built on a level foundation that can support its weight.

On the connection part of the device, the water inlet and outlet are marked with arrows. The unit can also be used for permanent installation in addition to observing the operating parameters.

The table shows the maximum volume flow of each demineralization unit, which must be set so as not to be exceeded.

The conductivity value of the treated water is displayed on the conductometer display. This value also shows the exhaustion of the resin charge. If the recommended limit values (pressure, volume flow) are exceeded, the demineralization process is of poor quality and may result in insufficient treatment of the water.

Procedure for replacing the filter insert

If the conductivity value at the output of the demineralization unit (the value on the "OUT" conductometer) rises above 10 $\mu\text{S}/\text{cm}$, then the demineralization resin charge starts to run out, at which point it must be replaced with a new one.

The upper part of the blue pressure vessel of the demineralization unit has a 2 1/2" thread into which the distributor head can be screwed. When changing the charge, the distributor head must be unscrewed from the pressure vessel. Below the distribution head, a central tube with a lower nozzle is inserted into the pressure vessel of the demineralization unit.

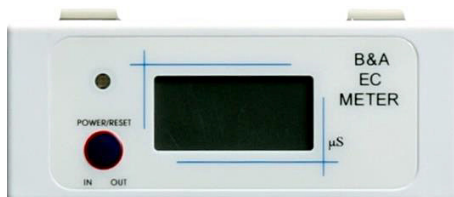
When replacing the resin cartridge, the following steps must be followed:

1. Unscrew the distributor head together with the upper nozzle of the filter and remove the filter together with the middle pipe containing the lower nozzle.
2. Empty the used filter insert (mixed bed) from the pressure vessel.
3. Place the center tube in the empty pressure vessel. Fit the plug from the charging kit onto the center tube. **WARNING** - filter material must not enter the middle pipe, otherwise the filter will not work! The pipe must be placed at the deepest point of the pressure vessel so that the end of the pipe is level with the top of the vessel, it must not protrude from the vessel.
4. If the tube protrudes from the tank, the dispensing head cannot be screwed back on. The middle pipe must be located in the middle of the container - the position of the pipe cannot be corrected after filling the filter insert.
5. Using the funnel from the filling kit, begin filling the pressure vessel with the new filter cartridge - mixed resin. **ATTENTION** - the middle tube must always be kept exactly in the middle of the filling hole, otherwise the distributor head will not fit!
6. Remove the plug from the center tube.
7. Clean the surface of the tank from the rest of the filter material, place the filter basket with the distribution head on the central tube and screw it onto the pressure vessel. The head should turn with a tear on the tank. Then tighten the distributor head. Do not use tools to tighten, hand force is sufficient.

Electronic conductometer

Description of the device

1. POWER - power button with automatic shutdown
2. AFTER field - the value of the conductivity of the treated water (conductivity measuring sensor for measuring the effluent water)



Method of use

1. Turn on the "POWER" button for commissioning.
2. The conductivity value of the outgoing/demineralized water is displayed in the "AFTER" field.
3. The display turns off automatically after about 30 seconds.

Comment: The LED indicator function cannot be used with this type of demineralization unit. Changing the color of the LED display does not affect the water treatment and its operation.

Replacing the battery

1. Remove the battery cover and take out the old battery.
2. Insert a new 3V CR2032 battery, making sure the battery is inserted correctly, with the positive "+" side facing up.
3. Close the battery cover. Press the button to test the meter. "BEFORE" and "AFTER" should appear on the LCD in both fields. If it does not light up, check the location and voltage of the battery. Then repeat the power-on check.
4. Replace the battery if the LCD display is dim and the numbers are difficult to read.

Recycling of equipment components

Electronic and electrical products must not be disposed of with household waste. Dispose of the waste at the end of the device's useful life in accordance with the relevant legal provisions.

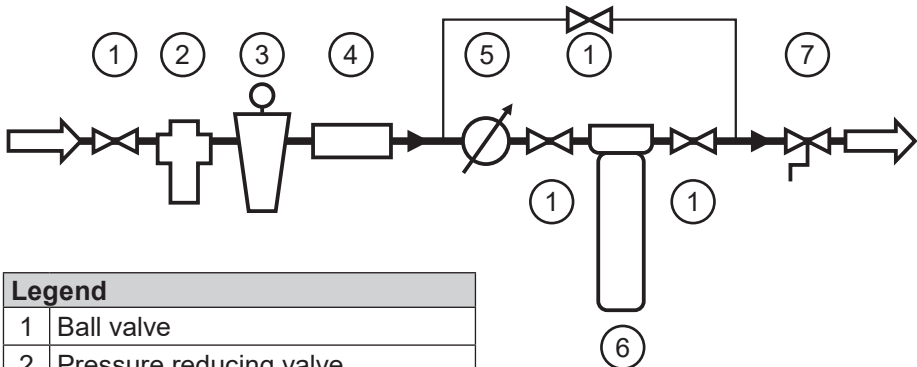
The used and exhausted resin charge can be returned to the supplier.

The package includes the following

- a) DEMIN-1500 demineralization unit (unit body, distributor head, middle pipe)
- b) charging kit
- c) resin filling

Permanent deployment scheme

The installation scheme is just an example. Assembly must be carried out in accordance with valid standards and a suitable mechanical plan.



Legend	
1	Ball valve
2	Pressure reducing valve
3	Mechanical filter with manometer
4	Check valve
5	Water meter
6	DEMIN-1500 unit
7	Sampling valve