

Profi electronic scale inhibitor

Dear Customer,
Thank you for purchasing this product. Prior to using this device, it is recommended that you carefully read the Instructions for Use.

Warning!! Important safety information!!

- No liquids of any kind must be allowed to penetrate this device.
- The device must never be operated under adverse environmental conditions. Adverse environmental conditions include: ambient temperatures above 50° C, flammable gases, solvents, vapours, dust, relative humidity above 80 %.
- The device may only be operated in dry and enclosed areas.
- If it can be assumed that a safe operation is no longer possible, then the device must be stopped and switched off immediately, and preventive measures against an unintentional operation must be taken. A safe operation of the device can no longer be assumed if the device no longer provides any indication of functionality, if it shows visible signs of damage, if the electricity supply cable is damaged, in the event of transportation damage, or after the device has been stored under harmful conditions.
- Maintenance and repairs – maintenance and repair services may only be performed by authorized experts. Only certified spare parts may be used as replacements.

Intended use

Limescale in hard water results in a shorter life span of appliances such as dishwashers, washing machines and showers, whilst heating elements, showerheads, pipe work, valves, etc. easily become choked with scale causing poor heating efficiency and waterflow. This electronic scale inhibitor is intended for dissolving and preventing lime scale deposits in such water pipe systems.

Description

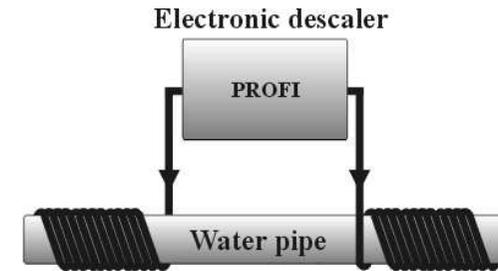
This device is intended for use in small size households with a pipe diameter of max. 3/4" (3/4 inch = approx. 19 mm) and for water consumption of up to 5 m³/h.

The Profi scale inhibitor transmits low frequency radio signals which are periodically changed by the built-in program of a microcontroller. These signals are transmitted to the water pipe via two aerial wires (coils) wrapped around the cold water pipe near the rising (incoming) main. All copper, plastic and iron pipes are suitable for the installation, except lead. This process does not affect the water quality. No intervention into the water pipework is necessary since the electromagnetic waves work through the wall of the pipe. The transmitted signals destabilise Calcium-Carbonate (CaCO₃) ions (limescale) forcing them to take up a new crystal structure. This mineral then loses its bonding characteristics so its tendency to get stuck to any surface is dramatically reduced. Already existing scale deposits are slowly being dissolved and flushed away. This change in structure lasts for a few days only. For applications where water has been treated yet remains static for more than 2-3 days (eg. garden pool), this method of descaling is not the best possible option. This is not only ecologically beneficial but also environmentally friendly as no chemical substances of any kind are being used. The professional electronic descaler is appropriate for all degrees of water hardness and can be adjusted individually. As a result of lime-free heating systems, you will also be able to reduce the energy requirements and the amount of detergents and dishwashing agents used.

Installation

The descaler unit is normally fitted at a point shortly after the cold water rising main enters the property. If the water system utilizes a large water storage tank that supplies all systems by gravity, the scale inhibitor is better installed on the water exit side of the tank. The installation should be made on a section of free pipe with a length of at least 25 cm, without sleeves etc. If there is a built-in filter, then the installation should be made ahead of the filter. Also, please be sure that there is a 230 V power outlet for the 9 V power supply unit (not included) in the vicinity of the installation site. Stick both of the adhesive tabs onto the back of the Profi descaler, the device now can be fastened directly onto the water pipe with the included plastic cable ties. You need to make sure that there is enough space – approximately 7 to 10 cm – for the coils at the left and right hand side of the descaler unit. Install the Profi scale inhibitor at an area that does not expose the unit to excessive moisture. The two wires must be wrapped tightly around the pipe, direction of the wind should be carefully observed (see figure). **Important notice!! Make sure that the winding direction of the two wires are as shown in the figure; otherwise, the effectiveness of the device might be impaired.** The distance between the coils is normally the length of the descaler housing itself (~15 cm), if you have lack of space you can bring the coils closer to each other but keep a min. of 5 cm between them. Secure the ends of the coils with cable ties, adhesive tape or hot glue to ensure they do not become unwound.

Warning!! When winding wire around metal pipes, make sure that the bare wire ends can not get in electrical contact with the metal pipe.



Parts and adjustment

1. "Frequenz" (Frequency) button

Basically the higher the frequency is, the more effective the electronic scale inhibitor will work.

Position 1 = approximately 500 Hz

Position 2 = approximately 1000 Hz

Position 3 = approximately 2000 Hz

2. ON/OFF switch - "Spannung" (Voltage) button

You can adjust the signal amplitude and turn the unit on or off with this switch.

Aus : Descaler switched off

⌋ : Low output voltage

⌋ : High output voltage

3. "Anpassung" (Rise time) button

You can adjust the rise time of the signal edge with this switch.

The adjustment of the rise time is the most important setting on your unit.

The harder the water is, the shorter the rise time should be.

Position 1 = long rise time

Position 2 = medium rise time

Position 3 = short rise time

Water is classified into four levels of hardness:

Hardness level	Water hardness (dH)	Description
1	up to 7	soft
2	7 - 14	medium
3	14 - 21	hard
4	more than 21	very hard

Please check with your local water supply utility regarding the water hardness. In order to test the water hardness in your household yourself, you can obtain the appropriate testing strips in a well-stocked drugstore.

Clean the shower heads and aerators in faucets more frequently at the beginning of the descaling process, since dissolved lime scale particles can impede the flow of water. Your Profi electronic scale inhibitor does not require maintenance.

Power supply

The Profi electronic descaler will require a 9Vdc power supply in order to operate, *it is not included with the unit.* Any universal 9Vdc power supply with a 3.5 mm jack output plug is suitable for this purpose. Make sure to select the positive pole for the middle of the plug in order to avoid reverse-polarity connection.

Technical specifications

Operating voltage: 230 Vac, Power consumption: 1.2 W, Dimensions: 132 x 90 x 32 mm, Weight: 216 g.