



Salt-Free Water Descaler System

Information Sheet

1. Introduction

This system is the ultimate eco-friendly solution for whole-house water treatment. Utilizing innovative physical and electrical treatment methods, the central water softener provides long-term scale inhibition without adding or removing any substances from the water. This retains substances beneficial to human health while effectively preventing solid scale and corrosion generated by hot and cold pipes and household appliances.

Key Value: Reduces energy waste and extends equipment lifespan by preventing new limescale and gradually dissolving existing deposits. This system delivers cleaner, scale-free water throughout your home while remaining completely maintenance-free, cost-effective, and environmentally friendly.

2. Product Features & Key Benefits

- **Advanced Catalytic Technology:** Utilizes a special Fluid Dynamics catalytic alloy made from semi-precious metals. As water passes through, natural conductivity generates a micro-electric field that transforms calcium and magnesium ions into tiny, non-adherent aragonite crystals.
- **Whole-House Protection & Large Flow:** Handles water mains up to 3 km long with a maximum flow rate of 4 m³/h. Achieves a scale inhibition rate as high as 86%.
- **Eco-Friendly & Sustainable:** Pure physical ion polarization bids farewell to chemical soft water. No electricity, magnetism, external power supply, salt, or consumables are required. This ensures zero carbon emissions and no environmental impact.
- **Durable & Maintenance-Free:** Features military-grade technology and an invention patent. Constructed from all stainless steel material that is durable, explosion-proof, and pressure-resistant (without fear of high temperature). The internal alloy releases electrons continuously for up to 10 years with no disassembly or servicing needed.
- **Universal Compatibility:** Works with any type of water heater and can be directly connected to copper pipes, PVC pipes, PEX, and other conventional water pipes. Eliminates the need to descale tank heaters.
- **Retains Essential Minerals (Health-Focused):** Unlike traditional salt-based softeners that strip water of natural minerals and add sodium, this system leaves healthy calcium and magnesium in the water, making it perfectly safe and beneficial for drinking.
- **Reverses Existing Scale Buildup:** Not only does it prevent new scale from forming, but the treated water actively helps to break down, dissolve, and flush out older, stubborn scale deposits already stuck inside your pipes and appliances.
- **Safe for Gardens & Pets:** Because it is 100% chemical-free and adds zero sodium to your water supply, it is completely safe for watering indoor plants, sensitive garden beds, and for your pets to drink

3. Core Technology & How It Works

Limescale occurs when hard water is heated, causing calcium carbonate to crystallize and stick to surfaces like pipes and heating elements. This descaler prevents and reverses that process through physical electrochemical treatment:

- **Conversion:** Converts calcium ions into insoluble, non-adherent aragonite crystals.
- **Prevention:** Flushes the aragonite crystals through the system, preventing new scale buildup.
- **Reversal:** Gradually dissolves existing limescale by increasing the water's natural solubility.

Note: The validity period of this product's softened water is three days. If the water in the pipeline has not been used for several days, please discharge the stagnant water in the pipeline first before use

4. Limitations & Water Quality Parameters

- **Conductivity & Hardness Limits:** The system functions in water with an electrical conductivity between 50 to 2000 $\mu\text{S}/\text{cm}^2$ (reflecting total dissolved ions). The upper hardness limit is around 500 ppm as CaCO_3 (based on typical natural water relationships between conductivity, TDS, and hardness).
- **Existing Scale Notice:** As treated (softened) water flows through previously calcified pipes, fixtures, and components, it can loosen old buildup over time. This natural descaling process helps restore efficiency but may initially release sediment or dislodged particles into the system. There may be an increase in water scale within a period of time at the beginning.
- **Filtration Disclaimer:** This product is not a filter and will not remove any suspended particles in the water. The presence of powder in a kettle does not mean the system is ineffective; it is transformed aragonite that can be easily wiped off with a rag or finger.
- **Prohibited Equipment:** The use of built-in ion converters (exchangers), electromagnetic systems, or equipment with external voltages is strictly prohibited in systems equipped with this whole-house central softener.

5. Installation Guidelines & Pre-Filtration

- **Simple & Flexible Installation:** Install horizontally or vertically on water pipes operating between 0 to 100°C. Standard PVC glue or threaded fittings can be used. No wiring, bonding, or special tools are needed.
- **Directional Flow Requirement:** The water flow direction of the water pipe must be consistent with the arrow on the equipment. Failure to comply will affect the normal operation and efficiency of the equipment.
- **Placement:** Place it on the main water supply line after any pre-filtration. Recommended size is a ¾" (22 mm) unit for most households.
- **Recommended Pre-Filtration:** To prevent impurity accumulation from affecting the scale inhibition effect, it is highly recommended to install a 100–150 micron pre-filter (such as a sediment filter) immediately before the descaler unit.
- **Portability:** Add isolation valves on both sides for easy removal and reinstallation (e.g., when moving house).
- **Maximizing Effectiveness:** In homes with long-standing hard water issues, thoroughly clean out the geyser (water heater) to remove accumulated sediment. Consider replacing the heating element simultaneously, as heavily scaled elements may not perform optimally even after descaling begins.

6. Applications, Warranty & Package Contents

Primary Applications:

- Boilers, hot water systems, and heating elements
- Power and electric showers
- Washing machines and dishwashers
- Fountains and decorative water features

Warranty Coverage:

- 6-months manufacturer warranty.
- Expected performance lifespan of up to 15 years, depending on local water quality

Product List (Included in Box):

- Whole house central softener (1)
- Operating manual, certificate of conformity, and warranty card (1)
- Product packaging (1)

Support & Maintenance: Please note that if you do not install the product correctly, it might void the warranty. When you encounter any problems during use, contact your local dealer directly, or call us on support@mwsolutionsgroup.co.za. Please keep this manual properly for reference if necessary. The information in this manual is subject to change without prior notice.