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# alternative to water softening



An in-line water conditioner for whole-house performance thanks to a unique, food-grade catalytic core treatment method. Protecting water outlets and household appliances such as boilers, showers, hot water tanks, washing machines, dishwashers and kettles.

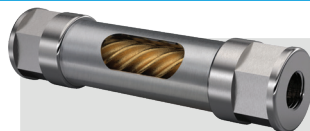


Installation is straightforward and can be connected to any type of pipe – copper, pvc, galvanized, etc. Can be installed vertically or horizontally. BSP threaded connections - conditioner can be installed to any pipework system and any material, including plastic. Doesn't require bonding or earthing.

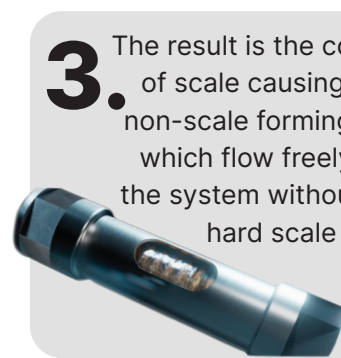
## How does it work?



**1.** A unique aerator screen which optimises turbulation and helps separate the bicarbonate (which causes scale).



**2.** Pioneering spiral alloy core combined with innovative surface chemistry composition to create a powerful catalytic reaction and long-lasting treatment.



**3.** The result is the conversion of scale causing ions into non-scale forming crystals which flow freely through the system without leaving hard scale deposits.

**Removes Limescale | Reduces Bills | Prolongs Equipment**

## Powered by chemistry, not chemicals

Catalytic technology proven & refined through rigorous R&D since 1973

- The power of treatment comes from the Catalytic Alloy Core - manufactured using a precise & structured composition of precious & semi-precious metals.
- The spiral shape of the core is intentional - this creates a steep increase in turbulence as water passes over the core & through the treatment chamber. Creating a change in pressure, a key component of effective conditioning

## From 'calcite' to 'aragonite' crystals:

### STAGE 1 Untreated Water

- When dissolved calcium carbonate in hard water is exposed to a change in pressure (or temperature), it precipitates to its solid carbonate states - calcium carbonate ( $\text{CaCO}_3$ ) calcite depositing on nearby surfaces.
- These calcium carbonate crystals are in 'calcite' form and adhere to one another & to surfaces due to their composition and shape - forming limescale despoths.

### STAGE 2 Treated Water

- The Monarch SI conditioner, via the spiral alloy core, creates turbulence to trigger the precipitation process, this combined with the surface chemistry of the alloy creates a catalytic reaction which changes the physical characteristics of the calcium carbonate ( $\text{CaCO}_3$ ).
- The calcium carbonate is still present in the water (remember: nothing is removed or added to the water), but now in a more stable / permanent form - an 'aragonite'  $\text{CaCO}_3$  crystal.
- Due to the smoother crystal form  $\text{CaCO}_3$  in 'aragonite' form flows through the system without depositing as scale or adhering to surfaces.



#### How long does the water stay treated for?

\*Results published by Dublin University show, that stored water following catalytic treatment using this unique conditioning technology, the colloidal calcium carbonate crystal remained in its treated form for the entire test period of 3 months - compared to standalone magnetically treated water which can revert back after 24-48 hours.



Suitable for households of 1-4 people



Suitable for households of 4-5 people



Suitable for households of 6+ people



Model	Dims Length x Ø (mm)	Connection Size	Spanner Size	Material	Max Pressure (bar)*	Temp Range (°C)	Optimum Flow Range (lpm)
SI-15	180 x 44	1/2" BSP Parallel Female	38.1mm / 1 1/2" AF	Stainless Steel	16	1-99	4-21
SI-22	180 x 44	3/4" BSP Parallel Female	38.1mm / 1 1/2" AF	Stainless Steel	16	1-99	18-41
SI-28	210 x 49.5	1" BSP Parallel Female	42.87mm / 1 11/16" AF	Stainless Steel	16	1-99	34-62

\*we recommend a PLV for all water pressures over 5 bar.

## Applications

Point of System	Mains inlet (whole house treatment)	Coffee Machines	Boilers	Hot Water Cylinder	Commercial	Garden Hoses
Point of Use			Dishwashers			