

# Why Soften?

## Benefits of Water Treatment...

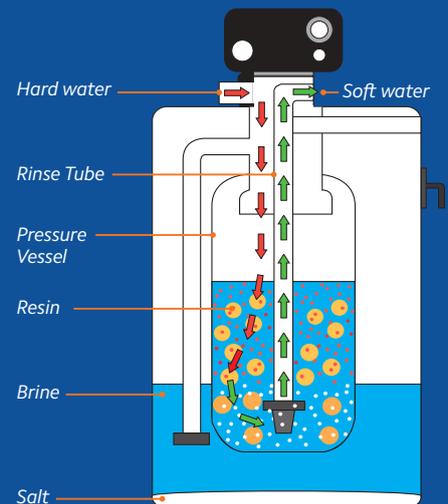
The increased levels of calcium and magnesium found in hard water will lead to premature scaling if left untreated. Problems such as early and increased replacement of heating elements, pipework and valves can often be costly and unpredictable but this can be reduced by installing a softener or conditioning system.

- ✓ **Improved system efficiencies**
- ✓ **Extended equipment lifespan protection**
- ✓ **Reduced business operational costs**
- ✓ **Low start up and running costs**
- ✓ **Prevents scaling**
- ✓ **RO Membrane protection**
- ✓ **Fewer engineer callouts**
- ✓ **Less chemical use**
- ✓ **Reduced energy consumption**



## The Softening Process

Softening is the process of removing dissolved calcium and magnesium salts that cause hardness in water. It is achieved either by adding chemicals that form insoluble precipitates or by ion exchange. Ion exchange is accomplished by passing the water through columns of a natural or synthetic resin that trades sodium ions for calcium and magnesium ions. Ion-exchange columns must eventually be regenerated by washing with a brine solution.



# System Protection and Regeneration

## Pre-Filtration

In order to help prolong the life of the internal components of a softener, in particular the valve, pre-filtration is highly recommended. This will help to maintain maximum system efficiency and remove unwanted particulate from water.

**Housing**  
*SPECTRUM housing systems are supplied as a kit which include; a wall mounting bracket, gauges and a bowl removal tool.*

Part Number	Recommended	
	Housing	Pre-Filter
SWS-0.5M	EFHS-PK-10-¾	PSP-5-93/4
SWS-2.2M	EFH-PK-1-20LD-1	PSP-5-20LD
SWS-5.0M	SFH-SPC-3-10-2-GP-ML	PSP-5-93/4
SWS-12.5M	SFH-SPC-3-20-2-GP-ML	PSP-5-20
PWS-2.5M	EFH-PK-1-20LD-1	PSP-5-20LD
PWS-5.0M	SFH-SPC-3-10-2-GP-ML	PSP-5-93/4
PWS-12.5M	SFH-SPC-3-20-2-GP-ML	PSP-5-20

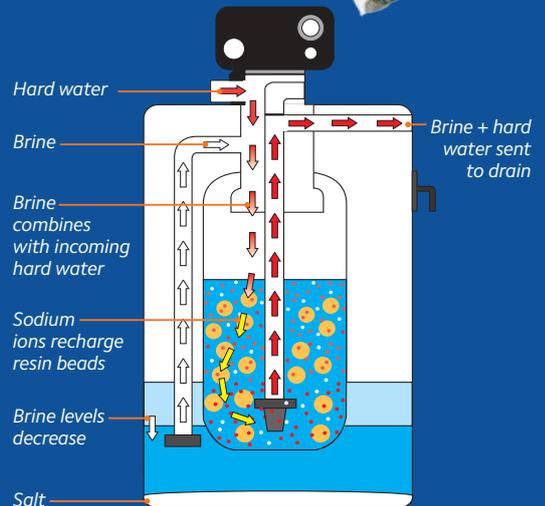


**PSP**  
*Polypropylene depth filters offer excellent protection against particulate ingress in a mains water application.*

**Hydrosoft Salt**  
*This delivers consistent brining for easy and long term use.*

## The Regeneration Cycle

The regeneration cycle is important to ensure running costs are kept in line. At some point, resin beads will become saturated, preventing the production of soft water. To ensure process continuity, two options are available: either change the resin or regenerate it through a brine solution. The latter option is not only easier to perform but is also much more cost effective. The SWS and PWS systems use a regeneration cycle to regenerate the resin, a process which is triggered and controlled by the valve.



# Which System Fits Your Needs?

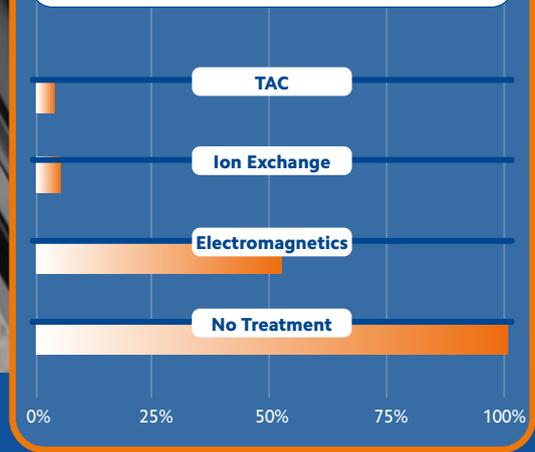
Let us help you decide

	EWS Cartridge	SWS Cabinet	SWS Simplex	PWS Duplex
<b>Water Flow (lpm)</b>				
up to 15	✓			
up to 45				
up to 57		✓		
up to 116			✓	✓
<b>Water Usage (lpd)</b>				
up to 5,000		✓		
up to 12,500				
up to 21,000	✓			
up to 50,000			✓	✓
<b>Contaminants</b>				
Hardness	✓	✓	✓	✓
Heavy Metals	✓			
<b>At a Glance</b>				
Point-of-use applications	✓	✓		
Continuous 24h treated water	✓			✓
Silent running valve (<30db)		✓		
Fully integrated user interface		✓		
Wall mountable	✓			
Blending valve		✓	✓	
<b>Organics &amp; colour treatment</b>				
Integral pre-filtration	✓			
No regeneration downtime	✓			✓

# Scale Reduction Without Regeneration



## Residual Scale Levels After Treatment



## EWS Cartridge Systems Up to 15 litres per minute

So you thought scale control was only achievable through the conventional ion exchange process? EWS units incorporate Crystalite, an advanced Template Assisted Crystallisation (TAC) media. Crystalite media provides the first effective chemical-free scale prevention method. It converts hardness causing minerals, through a catalytic reaction, into non-scaling crystals (known as soft scale), which are formed on the resin surface and then released in to water. It is highly efficient, saves money and water as no regeneration is required. EWS systems are supplied with Copper Guard technology which effectively removes copper and other heavy metals to prevent premature media fouling

### Independently Tested

*(German DVGW-W512 protocol; results show Template Assisted Crystallisation (TAC) is as efficient as ion exchange at preventing scale formation)*



## Key Features

- System supplied complete with pre-filtration, Crystalite media cartridge, wall mounting bracket and bowl removal spanner
- Suitable for continuous use as no regeneration is required
- Easy maintenance and cartridge changeout
- Environmentally better than traditional softeners
- Produces a softened form of water you can drink



**EWS-4K**  
3/4" Ports



**EWS-10K**  
1" Ports



**EWS-21K**  
1" Ports



## Specification

Temperature Range 4 - 38°C

Operating Pressure Range 1.4 - 6.2 bar

pH 6.5 - 8.5 Max Hardness 1300 mg/l

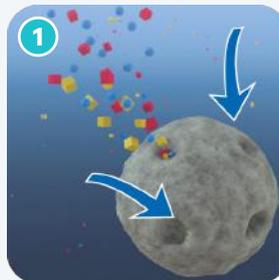
Max Chlorine 3mg/l Max Iron 0.3mg/l

Max Manganese 0.05mg/l

Oil & Polyphosphates Treat before EWS

Hydrogen Sulfide Treat before EWS

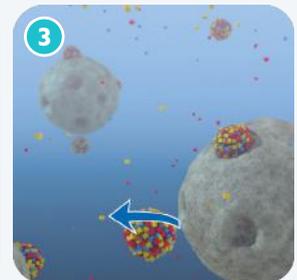
## Crystalite TAC Technology



Crystalite media attracts hardness molecules.



Converting them to non-scaling crystals.



Before releasing them back into the water.

## Part Number

## Flow Rate

Part Number	Optimal Flow Rate (lpm)	Consumable Cartridges	Life (Months)
EWS-4K	3	OSP-10SR+	12-36
EWS-10K	8	OSP-10JR+	12-36
EWS-21K	15	OSP-20JR+	12-36

