

## Soft Water And Water Softeners

Water softeners are an established method of reducing limescale, but it is worth considering the drawbacks associated with their use. Firstly, let's look at what is meant by the terms "soft water" and "softened" water

### **"Soft water" and "softened" water**

Not all "soft water" is the same. Naturally soft water is found in lakes and rivers. The artificially "softened" water that a water softener produces is a result of the supply being treated with salt brine to remove the "hard water" causing chemicals. The water that comes out of a water softener filter is high in sodium compounds (salt).

### **Claimed advantages of softened water**

- More pleasant to wash with: feels smoother; no soap scum; few skin problems (from wet shaving, for example)
- No scaling of pipes, kettles, tanks, baths, showers etc.
- Less washing powder, washing-up liquid, cleaning materials etc. required
- Tea tastes better and concentrated soft drinks can be diluted more

### **Disadvantages of softened water**

- It is not recommended that softened water is consumed by those on a low sodium diet, and for this reason the cold tap in the kitchen is usually connected to the unsoftened supply, or a third tap is fitted. There is a long-running debate about the pros and cons of drinking softened water, but sodium carbonate is not a dangerous substance. Softened water should not be used on pot plants either.
- Some people do not like washing with soft/softened water because it is harder to rinse-off soap.
- Many boiler manufacturers require a separate (non-softened) supply to fill the heating system.

### **Requirements of Water Softeners**

- Water softeners are fairly bulky, occupying most of a 60 cm base unit if they are installed in the kitchen.
- Access is required to add salt and for maintenance. This will vary according to model/usage.
- Salt usually comes in either heavy bags or solid blocks. Space required for salt storage and handling can be awkward.
- Most soft water installations require a (low current) electricity supply to operate valves and timers.

- A soft water filter requires an overflow, with a free fall to the outside, and a drain – all have to meet strict water authority requirements.
- Softeners increase water consumption through their backwashing and regeneration actions.
- Most water softener models require electricity to operate.

#### **Water treatment products at-a-glance**

- **Scale Prevention Devices** – a scale prevention device prevents calcium and magnesium carbonate depositing themselves inside pipes, tanks and shower heads. These are small plumbed-in devices that use chemical, electrolytic or magnetic methods to accomplish this. Combimate which is a hard water scale inhibitor and is therefore included in this group of products.
- **Water Softeners** – A water softener is a larger electrical/mechanical device that removes the chemicals in hard water areas which cause scaling (calcium and magnesium carbonate). These devices turn hard water to soft water.
- **Water Filters** – A water filter removes bacteria, chlorine, pesticide residues, etc. Water filters mostly come in the form of handheld filter jugs with disposable cartridges for potable use.