

# DOMESTIC WATER SOFTENERS

- Save money
- Prevent scale build up
- Protect heating systems
- Reduce detergent consumption
- Wide range of sizes/specifications
- Economical
- Reliable
- Time clock or meter controlled

## What is Hard Water?

The original source of all the water we use is rain, which itself is soft. Once it falls however, it dissolves mineral salts (such as Calcium and Magnesium) from the local rock. In many areas, the water coming from the tap is a solution of these salts. This is known as HARD WATER due to the hard deposits of scale formed in the water systems in which it is used. The scale forms because of the effects of heat making the salts turn back to their original form (i.e. the rock from where they came).

## The Problem with Hard Water

The scale formed is akin to a concrete layer forming a thick coating on heating elements in boilers, kettles and hot water tanks and pipes. Soaps and detergents do not work as well with hard water, so larger quantities are needed, and the effect of hardness also causes scum deposits which are difficult to remove. Dishwashers and washing machines fed with hard water need significantly more maintenance and cleaning to work efficiently.

## An Answer to the Problems

One cost-effective way to solve these problems is to remove the dissolved calcium and magnesium from the water. This can be done using one of our range of automatic water softeners, from compact models which fit under worktops to large high capacity units. We offer a choice of timer or meter controlled softeners to give the best performance in every case.



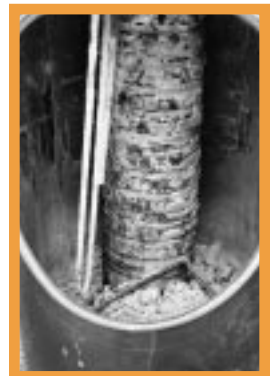
Typical Titan Softener illustrated (without hood)

## The Bonus of Softened Water

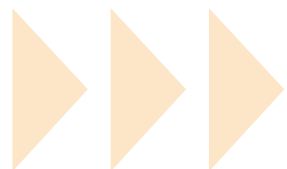
Not only do machines and heating systems work better and for longer without attention, but also softened water saves money. For instance, consumption of soaps and cleaning chemicals can usually be reduced by half! The energy cost to produce hot water can be cut by as much as 40%! People who have experienced the luxury of softened water for baths and showers do not willingly go back to hard water.

## Heating Efficiency Impaired

Scale build up on heating elements reduces their efficiency because of the time taken for the heat to get through to the water. Thicker scale means higher energy costs. Scale also insulates the elements from the water causing them to overheat and burn out more quickly.



**The Right Product**  
**...At the Right Price**  
**...At the Right Time**



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### Health

Individuals with sensitive skin benefit from softened water due to the reduced amount of soap required for washing - less soap means less drying of the skin by the removal of natural oils. Drinking softened water has now been acknowledged as harmless and in some cases can prove beneficial. We would however, recommend that a hard water drinking supply should be available in each household.

### How do water softeners work?

Our water softeners work by passing the incoming hard water through a high quality resin column which removes the hard minerals and exchanges them for soft ones. When the resin becomes exhausted it is regenerated by drawing a solution of common salt - called brine - through the column. The hard minerals are then released from the resin and flushed down the drain with the excess brine. This 'exchange' process is repeated as often as necessary.

### Capacity

The capacity of any softener is a function of the amount of resin in the column, the hardness of the water supply and the amount of salt used at each regeneration. The output will therefore increase or decrease according to local circumstances and the salt dosage rate. It is more efficient to regenerate frequently with a minimal amount of salt.

### Dimensions & Capacities

Model Number	TT7	TT10	TT14	TT20	TT25	TT30
'People days' at 20° Clark*	7	10	14	20	25	30
Height (mm) to top of hood	650	650	790	820	1150	1150
Height to top of valve - Fleck	620	620	760	790	1090	1090
Height to top of valve - Autotrol	630	630	770	800	1100	1100
Width (mm)	270	270	270	270	270	270
Depth including overflow (mm)	490	490	520	520	520	520
Capacity at 20° Clark* (286 ppm)						
Litres	1227	1753	2455	3507	4384	5260
Gallons	270	385	540	772	964	1157
Salt storage capacity (Kg)	35	35	50	50	75	75
Salt consumption per regeneration (Kg)	1.0	1.4	2.0	2.8	3.5	4.2
(Lbs)	2.2	3.2	4.4	6.4	8.0	9.6
Shipping weight (Kg)	12	16	20	30	40	45

\*Please note, output in 'people days' is based on the British Water (Quality Water Group) defined average consumption of 160 litres (35.2 Imperial Gallons) per person per day, and in our table is calculated at an average hardness of 20° Clark (286 ppm). Maximum water temperature 50° Celcius. Water Pressure minimum 20 PSI (1.4 Bar), maximum 100 PSI (7 Bar).

### Maintenance

The range of softeners we produce will give years of reliable operation. The only attention generally required from the user is to check on the level of salt in the brine tank from time to time and top it up as required.

### Choice of Valves

The heart of any automatic water softener is the valve head assembly which controls regeneration and normal service. We use a wide range of valves and your local water treatment specialist will advise on the most suitable for your application. Each type is available with a standard time clock controller or as a meter controlled valve which measures the softened water used and regenerates the softener only when necessary.



Alternative Cabinet (T.R. Range)

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