

Loose chunks of scale may become trapped in the shower head which will require cleaning. You may find deposits of grit blocking very fine shower heads. Scale particles left as a condensate will appear on shower screens but should be much easier to wipe away.

### Thermostats

Because of the increased efficiency of the heating system, you may need to turn down the thermostat to reduce the chance of scalding. You should expect energy savings to occur.

### Water softeners

If you have been using a conventional salt filled water softener you should switch over to by-pass. You may notice an initial deterioration of water quality. **Be patient!** Water-King can reduce the amount of dissolved calcium in hot water and it will feel softer. The water will not be slippery or as soft as conventionally softened water but it will be softer than normal and safe to drink as the healthy hardness minerals have been retained in suspension. Most people are perfectly satisfied with the level of

softening achieved by Water-King.

### Eczema and Psoriasis

If you suffer from skin complaints such as Eczema or Psoriasis you may notice an improvement and even a complete cure. In a survey, 78% of customers with skin complaints reported improvement in their condition after installing a Water-King.

### MAINTENANCE

Water-King requires no maintenance or servicing, but do check occasionally that the lights are flashing. If the lights stop flashing first check that the power socket is functioning. If the transformer has failed it will be cold.

**If the unit fails to work, or you are not happy with the results, PLEASE CALL US FIRST FOR ADVICE BEFORE RETURNING THE UNIT.**

**LIFESCIENCE PRODUCTS LTD cannot accept responsibility for consequential loss as a result of the performance or otherwise of the Water-King unit.**

**100 Day Money Back Guarantee**  
If, for any reason whatsoever, you are dissatisfied with your Water-King product, you may return it at any time during the first 100 days after purchase and the purchase price will be reimbursed in full. Simply return it to wherever it was purchased, together with your full name and address and proof of purchase, showing the price paid.

**5 Year Manufacturer's Warranty**  
Lifescience Products Ltd guarantees to repair or to replace the Water-King treatment unit in the event that it suffers from any manufacturing defect during the first five years after purchase. The unit should be returned to us properly boxed and wrapped, together with the proof of purchase, showing the price paid. This warranty excludes external transformers.

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# INSTALLATION, COMMISSIONING & MAINTENANCE INSTRUCTIONS FOR WATER-KING WK2 & WK-SE

### LOCATION

Water-King is best installed on the cold supply to a water heater close to the appliance.

The signal generated by Water-King travels both upstream and downstream so the water in any connected pipework will be treated as far as the point where it encounters a pump or gravity feed storage tank. This applies whether the water is static or flowing.

For additional information on larger applications refer to the Specifiers Guide which can be downloaded from our website.

To protect individual appliances which have an integral cold water storage tank, or where the supply is via an air gap, solenoid valve or flexible connection, it is preferable to treat the hot outlet. If installed on the cold inlet then one aerial should be grounded directly to the heating tank or to the chassis of the appliance (see section on Grounding an Aerial). This is especially important for water boilers. For more detailed information, please refer to our commercial products website.

### EVAPORATIVE SYSTEMS

Where appliances are designed to work by, or cause evaporation, provision should be made for automatic blow down or regular cleaning to remove residual deposits.

### PUMPS

Booster pumps reduce the effectiveness of treated water. On a re-circulating system, we recommend treatment after the circulation pump and always after booster sets.

### HEAT EXCHANGERS

Plate heat exchangers with close coupled pumps should have treatment applied to the outlet of the domestic hot water supply. The signal will travel back into the heat exchanger at its hottest point

### PIPE MATERIAL

**Water-King works on all pipe materials except lead. Attachment to flexible hoses should be avoided if possible.**

### MAIN EARTH BOND

If there is a main earth bond close to the point of installation, make sure the aerials are downstream (after) the earth bond.

### PIPE BENDS & STOP COCKS

Aerials can be wound either side of a bend or either side of a stop cock. (For a WK2 or WK-SE the minimum 12 windings per aerial plus grounding requires about 45 mm of pipe run - only one aerial should be grounded).

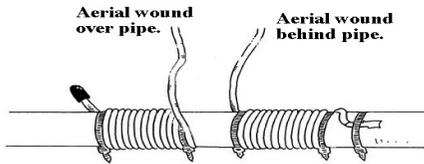


## INSTALLATION

Locate the Water-King control box close to the pipe where the aerials are to be wrapped. The length of free wire between the unit and the wrapped portion of the pipe should not exceed 45 cm. The WK2 is supplied with fixing plates. Remove two of the screws from the backplate before attaching the fixing plates to the backplate with the same screws. The WK-SE has pre-drilled fixing holes on the back plate.

## AERIAL WINDING

Aerials on all Water-King units are paired. They must be wound in opposite directions from a central point. When facing the pipe, one aerial should start by passing behind the pipe and the other aerial should pass in front. Secure each end of the aerials with a cable tie provided.



## GROUNDING AN AERIAL

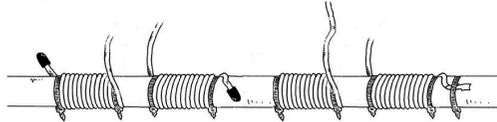
Water-King WK2 and WK-SE can perform better when **one** aerial is grounded to a **metal** pipe. To ground an aerial, remove the black end cap and strip 1 cm of insulation leaving the wire exposed. Secure it with a cable tie ensuring that there is good electrical contact by scraping off any paint from the pipework so that bare metal is exposed. **Never ground more than one aerial.**

## WK2 / WK-SE

Both the WK2 and WK-SE have two adjacent pairs of aerials. For the WK2

these can be fitted to a single pipe or to two separate pipes. Each pair of aerials operates independently. The WK-SE is designed specifically for high output electrical water heaters and should always be fitted to a single pipe on the cold feed.

**Never ground more than one aerial on either unit.**



## ALL MODELS

**Don't** allow gaps between windings or between the aerials and the pipe. Windings must be tight and close together.

**Do** maximise the number of windings per aerial, with a minimum of 12.

**You** do not need to have exactly the same number of windings on both aerials providing there are at least 12 windings on each.

**If there** is going to be surplus aerial wire, arrange for it to be at the end with the cap rather than the end nearest the Water-King. Surplus wire at the end can be cut off and the cap replaced.

**Make sure** the two aerials are not touching each other, a gap of 2-3 cm is sufficient.

**You** can wind the aerials either side of a "T" junction or elbow, on a horizontal or vertical pipe.

## POWER SUPPLY

**The load for both units is below two watts.**

## WK2 & WK-SE

These units have internal transformers and require mains supply at 230V with a 3 amp fuse in the plug. If the plug is cut off the unit may be wired directly to a fused spur outlet using a 3 amp fuse.

## WK2C

The WK2 can be supplied with an external transformer 230/9V ac plug transformer with integral fuse upon request. The low voltage lead from the plug transformers can be extended as required by splicing in extra cable. European two pin plugs or 110V transformers are also available on request.

## OPERATING LIGHTS

**WK2:** Two orange lights will flash independently.

**WK-SE:** One orange light will flash.

## Guard Chip

All Water-King units have a built in "Guard chip" which senses any irregularity in the micro-chip performance and re-sets the system automatically. No manual intervention or re-setting is required in the event of surges or outages.

## COMMISSIONING

Connect the unit to the power source and switch it on. Check the lights are flashing. The unit is now functioning and no other action is required.

## WHAT WILL YOU NOTICE?

Within three to four weeks, existing scale should become softer and be easy to break off or wipe away. You may notice cloudy water coming from the

hot taps and some loose scale deposits, sometimes even sand may appear in the bath or basin. This is an indication that de-scaling is taking place. This process will last for about six weeks and the water may feel harder during this period.

If the system is already severely scaled, an increase in hot water flow may be observed. You may notice the water becoming hotter more rapidly, with better lathering and the water feeling softer with more foam when using bathing products.

## De-scaling existing systems

You may find that chunks of scale break away from within the pipe work and these, in rare circumstances, can block pipes and heat exchangers. Be aware that this may happen and can reduce flow until the blockage is cleared.

**Filters and strainers on appliances and blending valves should be checked on a regular basis. Direct fired water heaters should be checked for loose scale within three months of a Water-King being fitted.**

## Kettles

Occasionally you should empty the kettle and brush away soft or loose scale.

## Dishwashers

You should still operate the dishwasher as if no softener has been installed. Salt, rinse aid and detergent must be used as normal.

## Shower heads and screens

Encrustation of scale will be reduced. Shower heads will be cleaner and will require less frequent or no de-scaling.