Shower heads and screens

Encrustation of scale will be reduced. Shower heads will be cleaner and will require little or no de-scaling. 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 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. 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 recent survey, 78% of customers with skin complaints reported improvement in their condition after installing a Water-King.

MAINTENANCE

The Water-King needs no maintenance or servicing, but do check occasionally that the lights are flashing or the LCD is functioning. If the Water-King stops working, 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, then **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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LSP35 04/09

INSTALLATION, COMMISSIONING & MAINTENANCE INSTRUCTIONS FOR WATER-KING WK1 - SENTRY - WK2 - WK3

LOCATION

A Water-King unit is best installed on the cold supply to a water heater close to the appliance. To avoid scaling of showers and thermostatic blending valves, the cold service also requires treatment.

The signal generated by Water-King treats the water irrespective of whether the water is flowing or not and travels both upstream and downstream wherever there is continuously connected pipework. A Water-King fitted to the cold down service will treat the water in an upstream storage tank. On a pressurised system, all the connected pipes will be treated. If only the cold supply to a storage tank is treated, the treatment in the tank will decay, sometimes quite rapidly.

To protect individual appliances which have an integral cold 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, especially the larger ones, should have treatment applied to both inlet and outlet. If a heat exchanger has a close coupled pump on the inlet and there is not enough space between the pump and the heat exchanger, then treat only the hot outlet.

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.

Water King™

PIPE BENDS & STOP COCKS

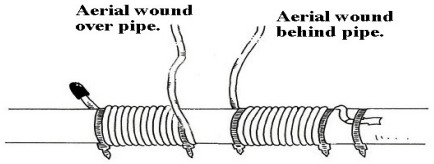
Aerials can be wound either side of a bend or either side of a stop cock. (For a WK1 or Sentry the minimum 12 windings plus grounding requires about 45 mm of pipe run)

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 WK1 and Sentry have fixing holes on the back plate. The WK2 and WK3 are supplied with fixing lugs. For the WK2, remove two of the screws from the backplate and attach the fixing lug to the backplate with the same screws.

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. All four aerials of the WK2 and WK3 must be wrapped around the pipe.



GROUNDING AN AERIAL

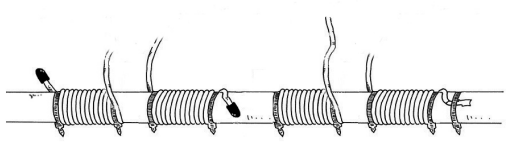
The Water-King performs better when **one** aerial is grounded to a **metal** pipe. To ground an aerial, remove the black end cap and strip one cm of insulation leaving the wire exposed. Secure it with a cable tie to the pipe ensuring that there is good electrical contact by scraping off any paint so the bare metal is exposed.

Never ground more than one aerial.

Do NOT ground aerials on the WK3

WK2 and WK3 MODELS

Each of these units have two adjacent pairs of aerials. These can be fitted to a single pipe, to two adjacent pipes or either side of a heat exchanger. Each pair of aerials operates independently but **never ground more than one aerial on the WK2, do NOT ground aerials on the WK3**



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, a minimum of 12. (WK3 minimum is 15). **You** do not need to have the same number of windings on both aerials.

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.

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 all units is less than one Watt.

WK1 and some WK2 and WK3
230/9V ac plug transformer with integral fuse. The low voltage lead from the plug transformers can be extended by up to 10 metres by splicing in extra cable. European two pin plugs or 110V transformers are available on request.

Sentry, and other WK2 and WK3
230V mains (3 amp fuse).

LED's
WK1 and **Sentry** One light will flash.

WK2 The two orange lights will flash independently

WK3 The LCD indicates the test status.

All 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.

BMS on WK3

The WK3 has an outlet jack to connect to a Building Management System which indicates power supply failure. The isolated BMS contact is rated for signal levels only. The maximum rating is 24V and 100mA. The contact remains closed during normal operation (fail-safe) and opens upon fault.

COMMISSIONING

Connect the unit to the power source and switch it on. Check the lights are flashing or LCD display. 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 was 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 in the bath.

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.