

INSTALLATION, COMMISSIONING & MAINTENANCE INSTRUCTIONS

FOR THE WATER-KING WK4 ELECTRONIC WATER SOFTENER

DESCRIPTION

The Water-King WK4 is a water conditioner / electronic water softener which removes existing limescale deposits and prevents further encrustation. Once treated water has been heated, it will have a lower level of residual calcium bicarbonate than untreated water and will therefore be effectively softer.

The unit has four aerials arranged in two pairs giving the unit the capability of treating either a single service or two adjacent services.

The standard 7 metre aerials will allow fifteen turns around a 105 mm. diameter pipe.

The signal generated by the aerials travels through the water irrespective of whether the water is flowing or not.

The signal travels both up and downstream of the unit and will treat static water in a storage tank if fitted to the down service.

LOCATION

When selecting the location where the device is to be installed the following points have to be considered:

- The wound aerials occupy between 60 cm and 80 cm of piping.
- the aerials should be wrapped round the cold feed. In the case of a plate and frame heat exchanger better results can be obtained by fitting one pair of aerials to the cold feed and the other pair of aerials to the hot discharge.
- Do not install the unit immediately before a pump or booster set.
- the control box should be installed within 45 cm of the pipe being treated.
- ensure that any earth bonds are upstream of the unit.
- do not fix to flexible pipes.

FIXING THE CONTROL BOX

On the back of the control box there is a top hanging bracket. A further two side screw slots are located behind the bottom cover.

Water-King WK4

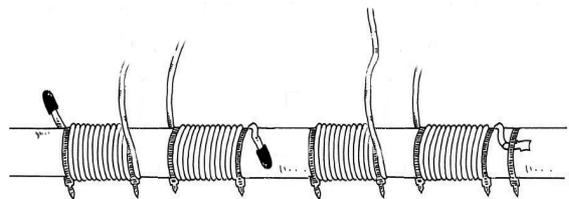
The unit is manufactured to IP 65 standard.



AERIAL WINDING

The four aerials are arranged as two pairs. The two aerials on the left of the box make up one pair and the two aerials on the right make up the other pair. Each aerial of each pair 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 should pass in front of the pipe. Secure each end of the aerial with a cable tie.

Repeat the process with the other pair of aerials. If you are installing on two adjacent pipes, use one pair on each pipe.



Do not allow gaps between windings or between the aerals and the pipe. Windings must be tight and close together.

Make as many windings per aerial (a minimum of 15) as the wire permits.

You do not need to have the same number of windings on all aerals.

If there is going to be surplus aerial wire, ensure it is at the end with the cap rather than the end with the plug. Surplus aerial wire can be cut off.

Leave a gap of at least 2 cm between each aerial.

You can wind the aerals either side of a “T” junction or elbow, on a horizontal or a vertical pipe.

GROUNDING AN AERIAL

Water-King performs significantly better when one aerial is grounded to a metal pipe and we recommend this is done to enhance the unit’s performance.

Select one of the four aerals. Remove the black end cap and strip 1 cm of insulation leaving the wire exposed. Secure it with a cable tie to the pipe, ensuring there is good electrical contact by scraping off any paint so the bare metal is exposed. Never ground more than one aerial .

POWER SUPPLY

The unit is supplied with an internal transformer wired to 2 metres of external cable. If a longer mains cable is to be fitted, then the bottom cover can be removed to allow access to the mains terminal block. The input power supply can be either 230 or 110 Volts indicated by the rating plate. The incoming supply is fused at 1 Amp, the fuse being accessible externally.

COMMISSIONING

To commission the unit, open the enclosure door by pressing in the catch on the right hand edge. Switch on the mains power supply and the LCD will display

WATERKING WK4, INITIATING.

The unit goes through an initial checking sequence and then cycles through each of the outputs in turn.

MAINTENANCE

Once installed, the WK4 requires no maintenance. However, a routine inspection to check that the lights are still flashing is recommended. If they are not flashing sequentially then re-boot the system by switching the unit off at the mains supply and leave for 1 minute. Switch the unit on again and the system should re-set itself. Under normal circumstances the extra Guard chip built into the unit will reset the system automatically if the program is upset by a power spike.

While the guard chip ensures resetting of the output signal in all normal circumstances, it is possible for the Liquid Crystal Display (LCD) to jam in which case rebooting the system either at the on off switch or loosening the fuse should reset it.

FUSE

20 mm 1 Amp.T. (time delay)

BMS

The BMS socket connection detects the presence of a power supply to the unit. If the fuse fails the BMS will detect no power supply.

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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.