

# INSTALLATION & MAINTENANCE INSTRUCTIONS FOR THE WATER-KING WK5 ELECTRONIC WATER SOFTENER

## DESCRIPTION

The Water-King WK5 is an 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 therefore will be softer.

The six aerials arranged in three pairs give the unit the capability of treating either a single main supply or three adjacent supplies.

The standard 9 metre aerials will allow fifteen turns around a 159 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.

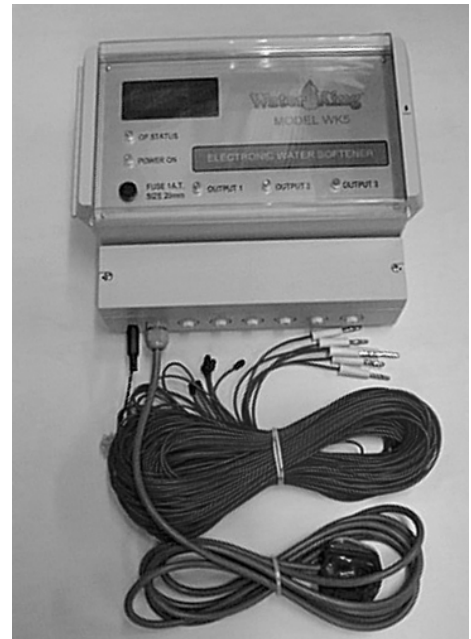
## LOCATION

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

- The wound aerials occupy between 80 cm and 100 cm of piping.
- the aerials should be wrapped round the cold feed
- 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.
- Insulation may be applied over the top of the aerials.

## Water-King WK5

The unit is manufactured to IP 65 standard.



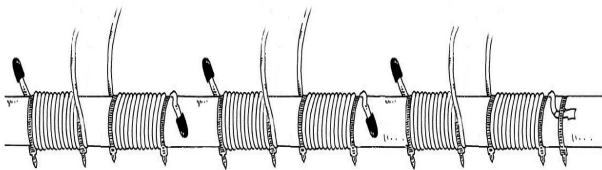
## FIXING THE CONTROL BOX

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.

## AERIAL WINDING

The six aerials are arranged as three pairs. The two aerials on the left of the box make up one pair, the two aerials on the right make up another pair and the two aerials in the centre make up the third 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 adjacent pipes, use one pair on each pipe.



**Do not** allow gaps between windings or between the aerials 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 aerials.

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.

Leave a gap of at least 2 cm between each group of aerials.

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

### POWER SUPPLY

The unit is supplied with two internal transformers wired to 2 metres of external cable. The incoming supply is fused at 1 Amp, the fuse being accessible externally. 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 standard input is 230 Volts. Special units can be supplied for a power supply of 110 Volts.

### OPERATION

To commission the unit, plug in to the mains supply and switch on at the mains. Switch on the “Mains On” switch on the front panel. The Alpha-numeric character display will show 'INITIATING, PLEASE WAIT', the red POWER ON light will illuminate, the L.V. POWER ON and the yellow OUTPUT lights will begin to flash.

After the unit has gone through internal checks and initiation successfully, the OP STATUS green light will illuminate and the BMS contacts will close.

Thereafter, the unit will continue to cycle through all outputs and perform checks. The display will report what is happening throughout.

In the unlikely event of one of the outputs failing, the other outputs will continue to function but the OP STATUS light will switch off and the BMS contact will open. Please note, the signal generating circuits are independent and operate at differing frequencies consequently the OUTPUT lights will start by flashing in synchronism but will drift apart in time.

The output levels are set at the optimum level to maximise the effectiveness of the unit.

### MAINTENANCE

Once installed, the WK5 requires no maintenance. The unit has a self checking “guard chip” which re-boots the system automatically if it detects a divergence from the normal program activity caused by a power spike or other upset.

#### 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.

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

## 5 Year Manufacturer's Warranty

Lifescience Products Ltd guarantees to repair or to replace the Water-King WK5 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.