

# INSTALLATION, COMMISSIONING & MAINTENANCE INSTRUCTIONS FOR THE WATER-KING WK3

## DESCRIPTION

The Water-King WK3 unit has four aerials arranged in two pairs giving the unit the capability of treating either a single pipe or two adjacent pipes.

The 4 metre aerials will allow at least fifteen turns around a 67 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 upstream 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 aerials occupy between 60 cm and 80 cm of piping.
- In the case of a plate and frame heat exchanger, better results can be obtained by fitting one pair of aerials to the flow after the pump and the other pair of aerials to the return. If the pump is too close to the heat exchanger, fit all four aerials to the return.
- Do not install the unit before a cold water cistern, pump or booster set.
- Ensure that any earth bonds are upstream of the unit.
- Avoid fixing to flexible pipes.

**See the Water-King Specifiers Guide or check the quote supplied by Lifescience Products for specific locations on selected applications.**

**Downloads are available at [www.lifescience.co.uk](http://www.lifescience.co.uk)**

## FIXING THE CONTROL BOX

The control box should be installed within 45 cm of the pipe being treated. It can be hung from pipes, support brackets or fixed



to a wall. The unit is supplied with four fixing plates that can be attached to the backplate.

## 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 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.

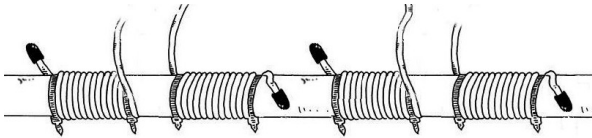
If there is going to be surplus aerial wire, ensure it is at the end with the cap rather than the end with the plug. Surplus aerial wire can be cut off. Leave a gap of at least 2 cm between each

aerial.

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

### **DO NOT GROUND ANY AERIAL**

**When you have finished it should look like this :-**



### **POWER SUPPLY**

The unit is supplied with an internal transformer wired to 2 metres of external cable. The input power supply can be either 230 or 110 Volts indicated by the rating plate. The plug can be removed and the unit can be hard wired to a 3 amp fused outlet to avoid the risk of it being inadvertently unplugged.

### **COMMISSIONING**

To commission the unit plug it in and switch it on.

At switch on the Liquid Crystal Display (LCD) will show:-

“ INITIALISING “  
" PLEASE WAIT..."

This displays until all outputs have been checked. Then, if no fault has been found:-

"ALL OUTPUTS O.K."  
"TESTING OUTPUT X"

X will change after each test.

If there has been any failure the top line reports:

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"FAULT - OUTPUT X"

where X varies as above whilst the lower line reports the continuing test number as before. Should there be multiple faults the unit will report the first one it finds then, when that is cleared, any other.

### **MAINTENANCE**

Once installed, the WK3 requires no maintenance. 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 LCD to jam in which case rebooting the system at the on off switch should reset it.

### **BMS**

The BMS socket connections are provided to connect to a Building Management System (BMS) to report 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.

**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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