

ATLAS ULTRA VIOLET DISINFECTION UNIT



OPERATING AND MAINTENANCE

ULTRASONIC NOZZLES & AIR ATOMISERS

DUST SUPPRESSION - HUMIDIFICATION - ATOMISING - FOGGING



GENERAL INFORMATION

An **Ultra Violet Disinfection System** is a versatile unit designed to kill waterborne bacteria using the proven method of exposure to ultra violet light.

The unit is made from a tubular quartz sleeve in which a UV lamp is inserted. Both components are housed in a stainless steel outer chamber called a reactor. Water is disinfected as it passes through the reactor and is exposed to a high intensive UV light that penetrates and deactivates bacterial cells.

The outer of bacteria and viruses differ in thickness and it is this thickness of skin which determines the amount of UV light exposure to prevent their reproduction, rendering them dead.

UV systems should be installed with pre-filtration down to 5 micron. This prevents an effect called shadowing where micro-organisms could hide behind particles in the water.

LOCATION

The steriliser should be mounted in a location allowing sufficient room at the end of the unit to withdraw the lamp and quartz sleeve. If this is not possible use a flexible hose set allowing the chamber to be unclipped from its mounting bracket(s) for service and lamp change. Where possible the unit should be installed to treat all the water as it enters the system. If treated water is to be stored, the storage tank should be fitted with a close fitting lid and the overflow protected with a fly screen (Water by-law 30). Tanks should only hold sufficient water for a few hours use.

LAMP LIFE

The lamp will continue to emit sufficient ultra violet for efficient operation of the unit for a period of 4,000 hours. The lamp must always be replaced at this interval although a safer recommendation usage period is one year or 2,000 hours. Failure to change the lamp will result in insufficient UV dosage for bacteria killing.

Never operate the unit if the lamp is outside the chamber.

Never stare at the light source.

Exposure to ultra violet light can cause conjunctivitis and erythema.

ELECTRICAL INSTALLATION

All metal components should be earth bonded. Ensure the earth wire from the power supply is connected to the earth point located at the one end of the chamber. To avoid possible electric shock, special care should be taken since water is present near electrical equipment.

PLUMBING INSTALLATION

Although the chamber can be mounted at any angle, the outlet connection should always be uppermost to prevent airlocks in the chamber - the ideal installation is vertical. Good quality pre filtration is essential for correct operation. Replace filters as required and always fit new elements, never wash a dirty filter.

QUARTZ SLEEVE

The quartz sleeve should be checked and cleaned periodically. When cleaning the quartz sleeve ensure the unit is isolated from the electrical supply and check the water supply is also turned off prior to servicing.

OPERATING AND MAINTENANCE INSTRUCTIONS

Caution: Prior to performing any work on the disinfection system, always disconnect the power supply first

To replace the lamp, it is not necessary to disconnect the system from the water supply, or to drain the water from the reactor chamber. Lamp replacement is a quick and simple procedure requiring only standard hand tools. The UV lamp must be replaced every 2000 hours of operation (approximately one year) in order to ensure adequate disinfection.

The Atlas range of UV units are supplied with a ballast controller interface and features a user friendly colour LCD display which provides meaningful user feedback messages, including remaining lamp life and total days operation.

Each controller requires a lamp key to be inserted into the lower RHS of the unit and one is supplied with each new lamp. It is important to change the key every time a new lamp is fitted as they are supplied as a matched pair with information linked to each other.

1. Disconnect the main power supply and allow the unit to power down.

Remove the earthing screw from the small tab located at the top rim of the reactor chamber.

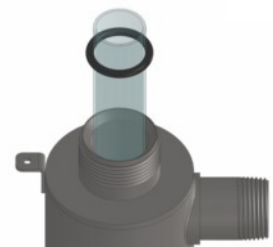


2. Gently push down and twist the lamp connector a quarter turn anti-clockwise and the bayonet fitting will release the lamp holder from the Gland Nut. The lamp will lift due to the spring which is loosely located in the bottom of the quartz sleeve.

Lift the lamp clear of the reactor chamber and quartz sleeve and remove the lamp from the connector by holding the green ceramic end and gently pulling the lamp clear.



3. Nip the rim of the quartz sleeve and ease it free from the reactor chamber by carefully twisting and pulling until it releases from the spring clip at the bottom of the chamber. If the sleeve appears to be clean, wash it in warm, soapy water and replace it into the chamber taking care not to lose the spring and o-ring.



4. When handling a new lamp, the use of cotton gloves is recommended. Remove the lamp from its packaging and set aside the lamp key which can be found on the top end of the lamp. Fit the new lamp into the connector by holding the ceramic end and noting the keyed format which ensures correct connection.



5. Insert the lamp back into the quartz sleeve until the spring resists further travel. Gently push down and twist the lamp connector a quarter turn clockwise - the bayonet fitting will hold the lamp holder in place.



6. Insert the lamp key into the ballast controller.



7. Reconnect the earth wire to the chamber tab.



INITIATE LAMP COUNTDOWN SEQUENCE

After changing the lamp on the system, the controller must be reset in order for the system to begin its countdown function on a newly installed lamp. To perform this reset, firmly depress the button on the front of the controller and then manually power up the unit.

Keep holding down the button for five seconds until the controller has reset the internal timer. Release the button and the lamp countdown feature has now been reset. An audible chirp will be heard as well as the “lamp life reset” screen.

