

# Guidance on Treatment Maintenance

Private water supply treatment systems must be 'point of entry' to ensure all water for human consumption (including personal hygiene) is effectively disinfected.

Such systems normally comprise a 25 or 30 micron filter followed by a further 5 micron filter. These filters remove suspended solids thereby reducing the turbidity and improving the effectiveness of the next stage of treatment, namely ultra violet (UV) disinfection.

UV disinfection involves passing pre filtered water over a quartz sleeve which contains a UV lamp. The UV radiation created from the lamp destroys the bacteria by attacking the vital DNA. Disinfection will only be effective where a sufficient dose of UV radiation is applied. UV intensity will be diminished by ageing of the lamp, clouding of the quartz sleeve by deposits or absorption of the radiation by particulate contaminants.

**To assist the effectiveness of your treatment system the maintenance steps below must be followed:**

- Replace the ultraviolet bulb at the timings suggested by the manufacturer of the equipment. The unit should also be checked to ensure it is operating correctly as electrical faults are not uncommon on these devices.
- Clean the quartz sleeve around the bulb regularly. Where the source water is very contaminated or coloured this may be required e.g. every month or so, depending on the volume of water used at the property. Disinfection will be greatly impaired if this sleeve is dirty as the ultraviolet light will not fully penetrate the bacteria within the water.
- Replace the 5 micron particle filtration element (commonly resembles wound string). These are not washable; you must fit a new one. Where the source water is very contaminated or coloured this may be required e.g. every month or so, depending on the volume of water used at the property. The particle filtration immediately prior to any Ultraviolet disinfection unit should always be 5 micron or smaller.
- Replace/clean the 30 micron particle filtration. Most 30 micron filters are washable, but you may not be able to use them indefinitely and you should ensure that you are not damaging them in the cleaning process. Where the source water is very contaminated or coloured cleaning may be required on a daily basis, depending on the volume of water used at the property. The filter should be replaced regularly e.g. after 6 cleanings.
- Automatic backwashing devices should be professionally maintained and checked at the intervals stipulated by the manufacturer.
- All treatment systems and premises internal pipework should be subject to chemical disinfection at least annually and also if the ultraviolet disinfection unit has been switched off e.g. during power cuts.
- All tanks should be cleaned at least annually. Storage tanks should allow some settlement time; this decreases the sediment load in the water and ensures maximum life from particle filtration devices.
- It is strongly recommended that you retain spare filters and UV lamp so that you can ensure continuous treatment to the water supplied to your premises.

Note: Extra maintenance may be required during adverse weather conditions, e.g. thunderstorms and flooding incident.