



Osmotic Solutions

Engineered Water Treatment Systems

UV is now a tried and tested technology across a wide spectrum of applications. This not only covers disinfection, but can also be used for TOC/Ozone and free chlorine destruction as an alternative to media based systems

UV has several limiting factors, it must be specified accurately to meet the systems flowrate and temperature, and is best suited to applications where water will remain clean and clear, free of colour and suspended solids. For this reason, UV is widely used on drinking water and high purity applications where chemicals are not the preferred option

UVC can however be generated artificially, using a mercury arc lamp, generating light at wavelengths of approximately 254 nm, known as the "Germicidal Region". This small wavelength band of UV is exceptionally efficient at destroying a range of bacteria and viruses providing transmittance and intensity is such that adequate dosage is received. A recent outdoor system is pictured to the right.



UV light attacks at the very core of these organisms, causing mutations in the DNA or RNA resulting in the inability to create proteins essential for replication. It is worth noting that although UV may kill bacteria and viruses, this will lead to the formation of endotoxins (pyrogens) which in many instances can themselves give rise to health issues in the vulnerable. Should this be considered an issue, a filter cartridge rated at 0.04 micron should be considered immediately after the UV.