

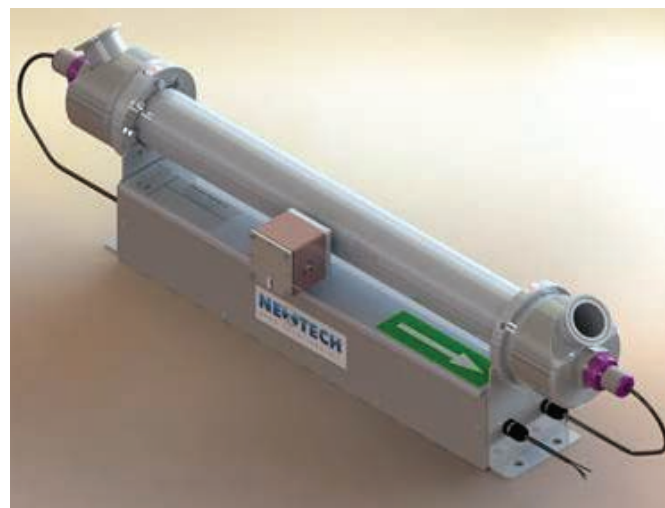
NeoTech™

Low Energy UV Water Disinfection, crypto' protection & TOC reduction for potable, industrial and leisure applications

Bluewater Bio is a provider of proven, high performance innovative water treatment products, which now includes a patented UV technology that enables savings in operating costs (energy, lamps, cleaning chemicals) and capital. The technology is certified for potable water disinfection in the US and is installed in nearly 300 industrial water installations for disinfection and TOC destruction in food, beverage, pharmaceuticals and electronics applications.

The technology has been validated to internationally - recognised water standards for UV disinfection, including US EPA and US NSF for drinking water and for pools and spas. The technology utilises patented UV-reflective coatings to achieve 99.8% active reflectance of functional UV wavelengths in the water reactor, a vast improvement compared to conventional stainless steel. This is because stainless steel is a poor reflector of the UV wavelengths responsible for inactivating organisms and destroying TOC.

This exponential increase in reflected UV enables a much higher UV dose (fluence, mJ/cm^2) per watt of energy input: by a factor between 10 to 50 times compared to conventional UV systems with polished stainless steel reflectors. The flow rate through the current range of small municipal units is up to $90\text{m}^3/\text{h}$ and can achieve 3 log inactivation of *Cryptosporidium* with a UV intensity of $12.5\text{mW}/\text{cm}^2$ and 96% UV transmission (UVT), with only 300 watts of power consumed.



This range of UV reactors can be assembled with one to ten reactors per skid, hence treating up to $900\text{m}^3/\text{h}$ ($21,000\text{m}^3/\text{d}$ or 21 mega litres/day MLD) per skid, with much larger units in development. Bluewater Bio would like to present this technology to demonstrate the benefits and to gain traction in the global markets for disinfection and TOC destruction in potable water, tertiary sewage treatment, water reuse, pools, spas, waterparks, aquaculture and a wide range of industrial uses.

BwB NeoTech™ Key Applications:

- Pools and Spas (NSF 50)
- Pharmaceutical / medical
- Food and beverage
- Microelectronics
- Remediation
- Drinking Water (EPA ETV)
- Municipal Wastewater

NEOTECH
AQUA SOLUTIONS
FROM BLUEWATER BIO

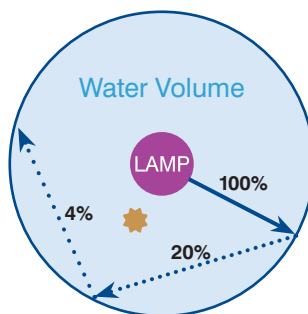
BwB NeoTech™ Low Energy UV Disinfection

Treats more for less...

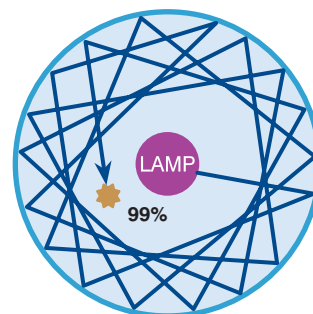
- **WHY:** to reduce energy & UV lamp costs by 50-90% 5-10x performance with same footprint and energy
- **HOW:** patented UV chamber reflects >99% of UV – conventional stainless chamber reflects <30%
- **Certified NSF USA:** UV dose & 3-4 log crypto reduced – ideal for pools/spas, potable, food & pharma
- 100% UV dose monitoring and lamp monitoring
- Tolerates zero flow periods without overheating
- First municipal drinking water projects started USA
- Industrial / municipal range: 8-100m³/h per unit
- Large scale municipal range 690-4500 m³/h per unit

Reflective Cross Section Comparison

Conventional Polished Stainless Chamber wall
Reflects <30% of UV



NeoTech™ Patented UV Reflector
Reflects >99% of UV



Summary Benefits of UV and NeoTech™

The benefits of UV technology include:

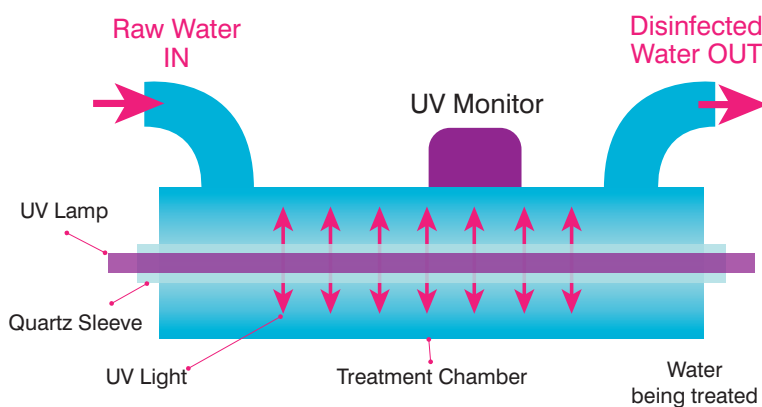
- UV is proven in thousands of installations worldwide for disinfection of all microbes, including Cryptosporidium which is resistant to chlorine disinfection
- UV has minimal effect on water chemistry and by-product formation, but removes organic TOC
- Relatively low operating and maintenance costs
- Fully automatic and cannot be over dosed
- UV is a non-hazardous, green technology
- Treats full recirculating flow
- Vastly improved water quality, low chlorine and a more pleasant bathing environment in pools and spas
- Eliminates need for high chlorine dose and contact tanks in potable and industrial applications
- Increased microbiological safety eliminating chlorine resistant pathogens.

The benefits of a Neotech UV system include:

- Technology is ultra-efficient: Low power consumption, low operating cost
- Simple and easy to maintain
- 100% Validated system performance for UV dose
- Systems require little maintenance, typically once per year
- Systems are fully monitored to ensure the correct dose of UV
- Range of products to suit different sizes and specifications
- Technology is ultra-compact in design and require minimal space
- Systems approved by NSF50 validated to the USEPA Disinfection Guidance Manual
- Enable cost-effective high dose UV.

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