xylem

Aquatics and recreational water

Filtration, UV disinfection, chemical control & accessories










About us

Neptune Benson and Xylem have been synonymous with best-in-class water filtration and disinfection equipment in the commercial aquatics industry since 1956. Built on a solid base of tens of thousands of installations, our comprehensive portfolio of solutions include proven and trusted offerings such as Defender® regenerative media filters, Wafer® ultraviolet disinfection systems, Legacy™ sand filters, Guardian™ and ProStrainer® strainers, Lawson Aquatics® accessories, AEGIS anti-entrapment shields, Dominion® butterfly valves, greenDrive™ VFDs and more.

Defender® regenerative media filter

Neptune Benson's Defender® regenerative media filter is simply the most efficient filtration system available today. The Defender filter is proven to be a cost-effective solution for a more sustainable future.

Removes particles down to 1 micron

Defender filters produce sparkling, crystal clear water by removing particles down to 1 micron at a much higher efficiency than typical sand filters. The difference in water clarity is like night and day. In addition, the dramatic reduction in turbidity improves transmission of UV light, which improves disinfection performance as well.†

Up to 90% water savings

Nobody likes backwashing. With Defender filters you don't have to! Defender filters automatically "bump"—regenerating media for a fresh start without wasting water to drain.

- Reduces footprint and operating weight
- Eliminates backwash holding tank
- Requires smaller waste line to sewer
- Addresses backwash flow rate restrictions

Up to 50% in energy, fuel and chemical savings

Eliminating backwashing* translates into significant operational savings. Consider the money that can be saved by not re-heating and chemically re-treating all of the water sent down the drain. Defender filters also operate at lower head pressures, reducing power demand and electrical costs.

Up to 75% space and construction savings

Running out of space in your mechanical room? The footprint of Defender filters can be up to 75% smaller than equivalently sized sand filters, saving both space and construction costs.

†Turbidity may be affected by factors other than particles
*Water is sent to drain during periodic media replacement

Cost savings analysis

In addition to superior water quality, Defender filters reduce water, energy and chemical consumption, which translates into significant bottom line savings. Some facilities have realized an ROI of less than one year. Our team of experienced aquatics experts are waiting to help quantify savings for your facility.



Latest innovation in RMF technology: Defender FP-series filter

An expanded portion of the aquatics market can now take advantage of the many benefits offered by regenerative media filters. The compact FP-Series RMF is designed for small to mid-size aquatics venues requiring flow rates between 107–300 gpm (24–68 m³/hr). The filter also features our revolutionary PowerBump® regeneration system. It eliminates moving parts thereby simplifying design, improving reliability, and facilitating maintenance.

Sand filters

Neptune Benson offers a full range of NSF-50 certified horizontal and vertical sand filters constructed from fiberglass, lined carbon and stainless steel. Made from superior quality materials to exacting manufacturing standards, our sand filters are renowned throughout the commercial aquatics industry for durability and long-life.

Customizable configurations for flexibility

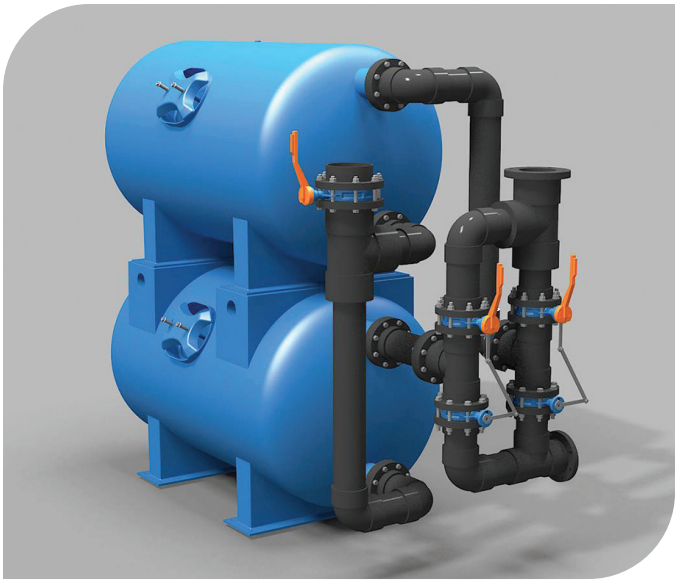
Neptune Benson sand filters are designed with flexibility for projects having limited space or challenging mechanical room layouts. Space savings can be achieved by stacking horizontal models or splitting vertical models into multiple cells. A range of horizontal filters with top tank connections and forward-facing man-ways is also available for projects with space constraints and/or limited footprints. For special applications, we have in-house expertise to custom engineer and fabricate filters to your specific requirements.

Superior materials for strength and durability

Filament wound fiberglass sand filters are constructed of vinyl ester resin for maximum strength and reliability. Our unique seamless design and method of construction eliminates leaks and ensures minimal distortion over repeated cycles of expansion and contraction experienced over the lifetime of the filter. Even inlet and outlet flange connections are woven into the fiberglass filter structure to eliminate the possibility of leaks. Tank bases are designed for seismic zone 4 installation as a standard. Steel filters are available in either high strength carbon or stainless steel. Carbon steel models are internally lined with our proprietary lining to prevent corrosion and leaks.

Easy access & maintenance

Our sand filters incorporate large 14" × 18" man-ways for safe and easy vessel access. Man-ways also incorporate a clear window to allow visibility into the tank, thereby facilitating inspection of the filter internals and sand bed.



Face-piping

Standard and three-way face-piping provides an easy way to incorporate lever, electric, gear and pneumatically operated backwash valves into your filtration system. Unique in the industry, our face piping is precision-built and pre-assembled under factory-controlled conditions. It is then shipped to the job site in sections and quickly reassembled. As opposed to the common practice of building on-site, our method ensures the highest levels of overall job quality, as well as saves significant time/labor.

Controller

A fully automatic programmer is available to automate and simplify the backwash process for up to six (6) tanks.



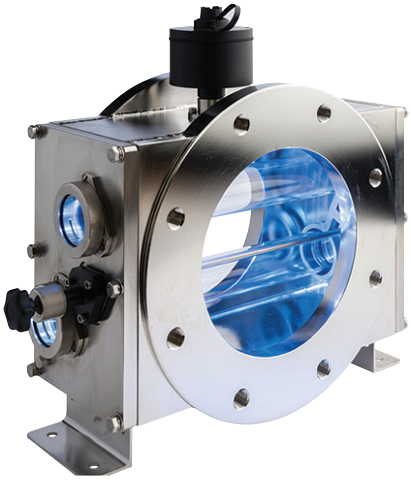
Ultraviolet disinfection

Ultraviolet (UV) light is frequently used in recreational water applications for disinfection and chloramine reduction. UV disinfection plays a key role in improving water and air quality as well as enhancing guest experience. It is one of the most effective methods for deactivating chlorine tolerant pathogens like cryptosporidium.

UV systems reduce chloramines which form when the chlorine in pool water reacts with organic compounds. Volatile in nature, chloramines off-gas and concentrate at the water/air interface, where swimmers breathe, causing burning eyes and respiratory issues that can affect both performance and long-term health. Chloramines further dissipate into the natatorium causing corrosion and that offensive “chlorine smell.”

Neptune Benson offers a variety of high quality UV disinfection solutions from our trusted.





Wafer® UV system

The Wafer system is the premier medium pressure UV solution for commercial aquatic applications with high bather loads and large flow rates up to 3082 gpm. Competition pools, waterparks, splash pads, and large fountains are excellent fits for the Wafer system. At about one third of the size of comparative UV offerings, the Wafer system offers the most compact UV disinfection system available today. With a significantly reduced maintenance envelope, the Wafer system delivers an easy to install and retrofit solution that will fit into the tightest of mechanical rooms.



Barrier™ Ti UV System

The Barrier Ti low pressure UV system is best suited for moderate bather load applications with flow rates up to 506 gpm. Hotels/resorts, swim schools, ponds and water features would be ideal for the Barrier Ti System.

NSF-50 certification

Both the Wafer system and Barrier Ti system are tested to and compliant with the latest and strictest regulatory requirements including NSF-50 3-log Crypto certification for inactivation of 99.9% Cryptosporidium in a single pass.

The ultimate combination

When used together, UV disinfection, chemical disinfection and regenerative media filtration, such as Defender® Regenerative media filters, deliver a multiple barrier approach for exceptional protection from harmful contaminants, providing a superior bather experience.

Chemical controllers

Blu-Sentinel™ analyzers/controllers

The Blu-Sentinel™ line of controllers are designed to meet the demanding requirements of the commercial aquatics industry. A unique collaboration between Neptune Benson and Xylem's Wallace & Tiernan® brand has resulted in a line of best-in-class controllers that offer a proven range of features from basic to advanced control. The Blu-Sentinel SE controller provides free chlorine, ORP and pH measurements in a single LED-lit flow cell. The SE has Ethernet built-in as standard for remote operation from a smart phone or tablet. The basic Blu-Sentinel controller utilizes reliable Strantrol® probes for ORP and pH measurements to as we like to say, "keep the water blue."



Blu-Sentinel SE controller features:

- 4" Touchscreen for ease of navigation
- Remote access from connected smart devices
- Highly visible LED color indication of controller status





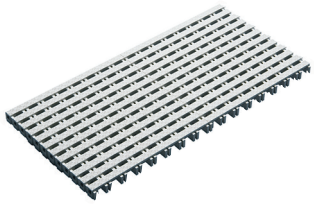
Accessory products

Grating

Neptune Benson offers SuperGrip™ grates; a unique non-slip surface contour that has an advanced finish while providing comfort underfoot.

Available in parallel and perpendicular configurations, this grating system can be easily installed to virtually any freeform design.





Edge treatment

Our edge treatments are non-slip hand hold and finger grip products that provide an improved “curb appeal” eliminating the extensive cost and labor required to install tile or coping. Utilize our edge treatment molded of premium-grade PVC which are UV stabilized for increased protection. Our edge treatment products can conform to almost any radius.





Gutters

Available in both fiberglass and stainless steel, our gutter systems are pre-plumbed according to design requirements.

Custom frame & grates

We can make virtually any size frame & grate
Special features include:

- Replaces ALL existing large area grates
- Permanent marking plate attached with flow rates established using ASME’s formula for “Q”
- Ten-year warranty
- Available in one-inch increments in one direction and no more than 21" unsupported span in the other direction

Reducers

Neptune Benson carries both fiberglass and stainless steel reducers. Our fiberglass reducers utilize heavy duty construction featuring a filament wound, vinyl ester resin body with solid fiberglass flanges which safeguards them from potential corrosives within a harsh mechanical room environment. Our T316 stainless steel reducers are designed and manufactured to precise standards. These reducers’ standard flanged connections match existing installations precisely.

Valves

Neptune Benson carries a variety of butterfly valves in lever, gear operated, pneumatic and electric configurations. Our valves ensure reliable flow control and are available in sizes ranging from 2–12", with custom sizes available by request.

Pumps

Neptune Benson offers a range of pumps to maximize performance of your recirculation system.



Strainers



Guardian strainers

Neptune Benson offers Guardian™ Strainers as part of our high quality aquatic product offerings. Available in fiberglass and stainless steel configurations, our strainers improve water quality and extend equipment life by straining particles and debris from your water.

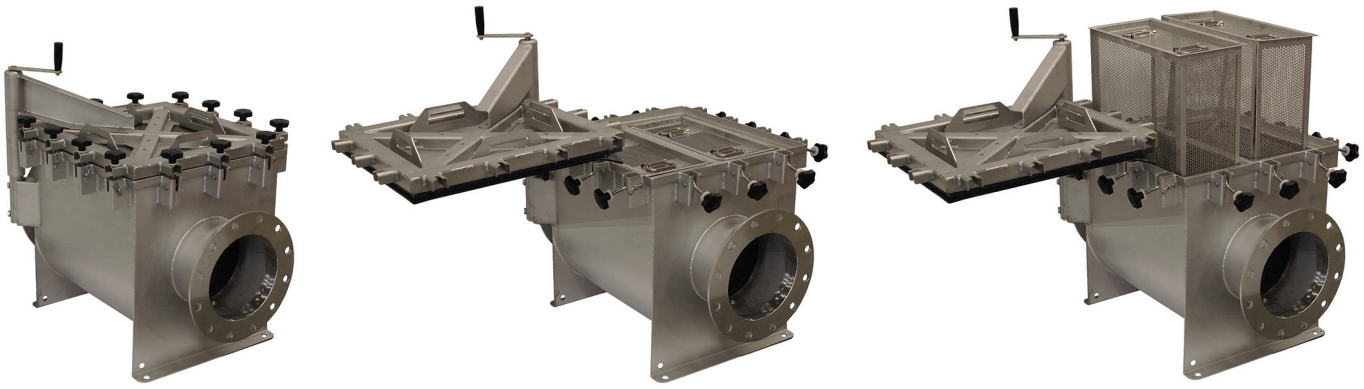
They are the first line of defense, removing hair, lint and other debris from entering your filtration and circulation equipment.

- Clear acrylic lid for easy viewing during operation
- Large easy-grip hand knobs make lid removal a snap
- Full face gasket ensures watertight seal

Prostrainer® strainer

Neptune Benson's ProStrainer® strainer is the first and only dual basket high capacity pump strainer, flow straightener, and air evacuator in one product, with unique Horizontal Laminar Flow (HLF) technology. It is ideal for outdoor pools and fountains with heavy loading of their strainers. Our standard series comes in all flange sizes. Our reducing series allows for a flange size to match the pump. A crank operated davit makes access quick and easy even on larger models.

- 300% improved capacity
- All stainless steel components
- Adjustable draw latch lid clamping system
- Grounding lug hole
- Integrated mounting holes built into feet
- Integrated lid handles for easy and safe service
- Easy access external flush and clean out plug
- HLF creates clog free bypass design
- Low profile improves dynamic head/pump selection




Filtration
Disinfection
Chemical control
Grating
Edge treatment
Gutters
Frame & grates
Reducers
Valves
Pumps
Strainers

Xylem |'zīləm|

1) the tissue in plants that brings water and nutrients upward from the roots.

2) a leading global water solutions company.

Xylem is a leading global water solutions company dedicated to advancing sustainable impact and empowering the people who make water work every day. Xylem connects diverse capabilities and innovative technologies to provide tailored solutions across the entire water cycle. From moving, treating and measuring water to optimizing and maintaining water systems, Xylem collaborates with customers to solve their most critical challenges. Together, through partnerships with utilities, industrial manufacturers, building operators, and communities, we are building a more water-secure world.

For more information on how Xylem can help you, visit xylem.com.

Photos of venues do not necessarily depict facilities that use Neptune Benson products.Disinfection performance will vary based on product, system design, facility operating conditions, water quality, and maintenance protocols. Refer to product, system, installation and validation documentation for details.

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