

aquasource* Z-XS

Ultrafiltration Membrane Systems



Membrane Technology:

aquasource Z-XS

aquasource Z-XS is a highly compact ultrafiltration unit able to adapt to your raw water source with its comprehensive yet easy-to-use automation. Featuring up to 4 membrane modules ZW700B, the aquasource Z-XS is a packaged unit that can produce up to **350 m³/day of clarified and sanitized water** from surface, ground, city, or seawater.



Applications

Drinking Water Production

- Small cities, isolated areas
- Refurbishment of small plants
- Hotels and resorts
- Emergency situations
- Hospitals...

Process Water Production

- Bottling
- Food & beverage
- Cosmetic & pharmaceutical...

RO Pretreatment

- Power, F&B, any industry...

Seawater Filtration

- O&G, desalination, mining...

Water Reuse From Tertiary Effluent



The **aquasource Z-XS** is a fully-equipped ultrafiltration system. Compact and scalable, it has been designed for the municipal, private and industrial sectors. This new system offers a safe and reliable solution replacing old sand filters with a consistent and improved water quality. Our solution is just as competitive as conventional technologies, but also offers an improved and more secure treatment performance.

Ultrafiltration is a physical treatment process which clarifies and disinfects the water in a single step, while maintaining the water's mineral balance. Featuring the ZeeWeed 700B ultrafiltration modules, the aquasource Z-XS guarantees a consistent water quality regardless of variations in the influent water quality.

How It Works

The automatic operation of **aquasource Z-XS** ensures an optimal security and easy handling of the unit. The raw water is first prefiltered, preventing the introduction of large particles. It is then sent at low pressure to the ultrafiltration membrane modules. The membrane acts as an absolute barrier for particles larger than 0.02 μm .

The unit will automatically alternate filtration cycles, producing

ultrafiltered water, with intermittent flush and backwash which are set based on the inlet water quality.

In case of varying inlet water quality, the optional instrumentation allows the unit to adapt its operation and cleaning cycles accordingly.

The aquasource Z-XS unit leverages the broad Veolia experience in large drinking water production plants with a comprehensive toolkit of flushes, backwashes and cleanings that may involve chemicals (acid, caustic or chlorine). Those different features will be triggered based on the inlet water quality, the unit performance trend and safety parameters set during commissioning.

aquasource Z-XS is designed for quick integration in new or existing buildings

Product Highlights

Quick Installation

- Ready to connect electrically and hydraulically
- Minimized footprint to fit in space constraint environments

Health and Safety

- Physical barrier against micro-organisms & particles
- Constant water quality, despite meteorological events or accidental pollutions
- Reduction of metal particles (iron, aluminum ...)
- Compatible with chlorinated water in continuous

Operation

- Automated unit operation
- Self-regulation process according to flow rate
- Easy management with alerts & remote control
- Secured production by automatic integrity tests
- Connectivity with auxiliary equipment (tanks, dosing pump...) via the unit PLC

Performance

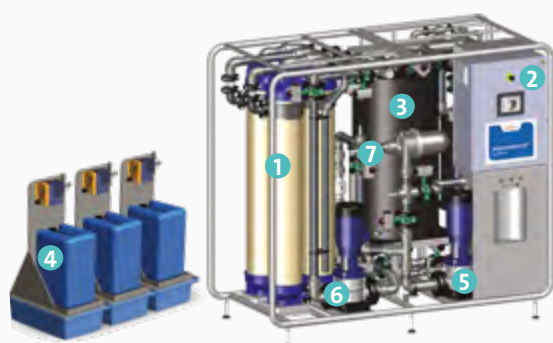
- **Flow rate:** From 1 to 16 $\text{m}^3/\text{hour}/\text{system}$
- **Ultrafiltered water turbidity:** < 0.1 NFU (guaranteed 100%)
- **6 log removal of bacteria and cysts**
- **SDI:** < 3 (guaranteed 100%)



SevenBore* membranes, PolyEtherSulfone -Inside/Out, are ultraresistant and insensitive to bacterial attacks. The fibres are bundled in groups of 7, which renders the membrane more mechanically resistant than individual fibres.

Range	Number of Modules	Average Production*	Max Flow Rate*	Piping	Installed Power	Dimensions L x L x H	Operating Weight
		m³/Day (gpd)	m³/Hour (gpm)	mm (in)	KVA	mm	kg (lb)
aquasource Z-XS	1	50 - 90 (13,209 - 23,775)	2.5 - 4 (11.0 - 17.6)	DN 50 (2.0)	5	2300 x 1050 x 2050	1,200 (2,645.5)
aquasource Z-XS	2	90 - 180 (23,775 - 47,551)	4 - 8 (17.6 - 35.2)				1,350 (2,976)
aquasource Z-XS	3	180 - 260 (47,551 - 68,685)	8 - 12 (35.2 - 52.8)				1,500 (3,307)
aquasource Z-XS	4	260 - 350 (68,685 - 95,102)	12 - 16 (52.8 - 70.4)				1,650 (3,638)

* Depending on raw water quality



- ① UF module(s)
- ② Drive/control
- ③ Backwash tank
- ④ Cleaning device
- ⑤ Backwash pump
- ⑥ Feeding pump
- ⑦ Prefiltration (100µm)

Technical Data

- **Inlet maximum turbidity:** Up to 100 NFU
- **Low electrical consumption:** Low pressure filtration < 3 bar
- **Outlet maximum pressure:** < 1 bar
- **Certification:** CE (European Community)
- **Ultrafiltration module:** polyethersulfone IN/OUT - 0.02 µm > ZeeWeed 700B membrane
- **Ethernet connection**

Options

- **System environment**
 - Raw water tank & level switch
 - Treated water tank & level switch
 - Gravity flow water supply with modulating valve
 - Waste tank and accessories
 - Divisible system for narrow spaces
 - Engineering for system integration
- **aquasource Z-XS nomad**
 - Integrated in 20" container
- **Equipments**
 - Spare feed pump with check valve, frequency convertor and voltage controller
 - Compressor and accessories
 - Raw water turbidimeter
 - pH sensor
 - Seawater version available
 - Dosing station cabinet
- **Access and remote control**
 - Remote control with MODEM 3G, 4G ou WIFI

Modularity

Quick installation and complete access to parameter settings

- Modular system (expendable capacity by simple module addition (up to 4) without any modifications to the unit)
- Continuous visual monitoring with PLC control panel
- Customized operation (adapting to inlet water changes and fouling profile)

Easy Plug

Simplicity

Automatic production management and secured production

- User-friendly touchscreen for display & access to performance parameters
- Automatic adjustment of production output and to the quality of the resource
- Reliable production (automatic integrity tests)

Easy Drive

Savings

Minimized Operational Costs

- Reduced chemical and power consumption with the automatic adjustment of operating conditions and cleaning toolkit
- Minimal manpower cost

Eco Wash

Peace of Mind

Connected System and Designer Expertise

- Remote dialogue and operation with ancillary equipments
- Remote diagnostic & program update
- Services: Maintenance visit, training...
- Hotline

Aqua Link

Smartphone or Tablet



Follow and pilot the operation of your system from your smartphone or tablet

Assistance



Assistance, remote controlling and operation analysis of your system by aquasource

A pioneer in ultrafiltration (UF), Veolia with the aquasource products, has offered drinking water production for over 30 years, with more than 300 systems in 25 countries.

The aquasource UF products are fast and easy to install and are fully-autonomous. A trusted solution that provides the highest standards in drinking and industrial process water, it is well-suited for a variety of solutions such as emergency situations, isolated areas, small plants, hotels/resorts, hospitals as well as ingredient water for beverage plants, process water for food processes, and pretreatment for high purity water systems for a variety of industries.

Now Veolia is innovating the aquasource product further with its ZeeWeed 700B UF membrane. The ZeeWeed 700B provides inside/out filtration using the SevenBore membrane – a reliable, strong membrane used for drinking water, seawater reverse osmosis pre-treatment and tertiary treatment for water reuse. Veolia has a long history of offering leading edge technology installed in thousands of municipalities, industrial and commercial applications worldwide.

1st

**World DW
Ultrafiltration Plant**

**Over
300**

**plants in operation
in 25 countries**

More than

30

**years
of experience**



 **VEOLIA**
aquasource

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