

Aquasource* XS-700B

Ultrafiltration Membrane System

FACT SHEET

WATER TECHNOLOGIES



Pressurized ultrafiltration system up to 350 m³/day featuring ZeeWeed* 700B membranes

Description and use

As a pioneer of membrane technologies, Veolia leverages decades of research, development, and operational experience in developing one of the most advanced ultrafiltration technologies in the market. Veolia's Aquasource systems are proven to consistently outperform conventional filtration technology while meeting or exceeding regulatory requirements, regardless of source water quality.

Aquasource XS-700B is the turnkey, compact and reliable in/out ultrafiltration solution, offering a clarification and disinfection process in one step.

Aquasource XS-700B produces from 50 to 350 m³/d constant high quality water with ZeeWeed high strength SevenBore* ultrafiltration membranes.

Benefits

- Leverage decades of ultrafiltration membrane system design experience.
- Modular mechanical and automation philosophy provides flexibility in design and integration.
- A compact profile which can fit in tight spaces and containers.
- Operates automatically including pre-filtration, backwashing, integrity testing, clean-in-place (CIP).
- One-skid design philosophy that minimizes ancillary loose-shipped equipment for significantly less interconnecting and installation work onsite.

- The ZeeWeed 700B hollow-fiber membrane has a 0.02 µm nominal pore diameter for optimal removal of particulates, bacteria, viruses; low turbidity and low silt density index (SDI) permeate.
- Ready-to-ship product available for immediate delivery



Typical Applications

The Aquasource XS-700B system is suited for use in numerous municipal and industrial applications including:

- Drinking water for small communities, remote locations, hotels, and hospitals
- Ingredient water in beverage for bottled water, brewery, soft drinks, and food processes
- Utility water for rinsing and cooling in food & beverage, cosmetics, and power
- Pretreatment of ultrapure water production either with IX resin or RO in pharmaceutical & cosmetic, power, and electronics

Base System

- Feed/CIP Pump on Variable Frequency Drive (VFD)
- Disc Filter, 100 microns
- Ultrafiltration modules
- Backwash Pump on VFD
- Backwash tank
- CIP tank
- Schneider programmable logic controller (PLC), 7.5" Human-Machine Interface (HMI)
- Modbus TCP communication via Ethernet for remote control and data exchange

Available Options

- Chemical dosing stations for cleaning (Chlorine, caustic soda, mineral acid)
- Turbidity meter
- pH meter
- Compressor for pneumatic valves & Membrane integrity test (MIT)
- Wooden crate packaging

Instrumentation

Flow Feed, CIP
 Pressure.....Feed, Permeate, MIT
 Level CIP & Backwash Tanks
 Temperature Feed
 pH Permeate - Optional
 Turbidity Feed - Optional

Typical Permeate Quality

Virus..... 4-log removal
 Bacteria, Giardia, Cryptosporidium 6-log removal
 Total Suspended Solids (TSS) ≤ 0.1 mg/L
 Total Organic Carbon (TOC) 50-90% removal^{1,2}

¹ Pretreatment required

² Dependent on water quality

UF Membrane Modules

Membrane ZeeWeed 700B – Inside-Out Filtration
 Chemistry PES
 Membrane Area 60m²
 Pore Size Ultrafiltration, 0.02-micron nominal

Materials of Construction

Skid Frame Stainless steel
 Water Piping and Tanks PVC
 Water Sampling Hose PE
 Compressed Air Piping PE
 Tanks HDPE

Operating Conditions

Parameters	Values
Typical Flux ³	50 – 120 LMH
Production Cycle Duration	30 – 120 mins
Typical Production Recoveries	85 – 95%
Typical TMP	0.1 – 0.9 bar
Max, allowable TMP	2.5 bar
Operating pH	2 – 11
Cleaning pH	1 – 13
Max. Operating Temperature	40° C
Filtration Mode	Dead-end
UF Permeate Pressure	< 1 bar

³ Based on influent water quality and water temperature

Lifecycle Services with Lifetime Support

- Most extensive service capabilities in the industry
- InSight Asset Performance Management remote monitoring available
- Upgrades to help you advance with Veolia's technology.

General System Specifications

Model	XS-7B-1	XS-7B-2	XS-7B-3	XS-7B-4
	Model specifications			
Hydraulic Capacity (m ³ /h)	6	12	16	16
Modules Quantity	1	2	3	4
Modules Type	10060 - 60 m2			
PLC/HMI	Schneider			
Communication Protocol	Modbus TCP, Ethernet			
Power	230VAC, 1P, 50Hz, 5kW			
Feed / CIP pump power	2.2 kW			
Feed / CIP pump material	SS 316L			
BW pump power	2.2 kW			
BW pump material	SS 316L			
Length (+/- 10 mm)	2300 mm			
Width (+/- 10 mm)	1050 mm			
Height (+/- 10 mm)	2200 mm			
Shipping Weight ¹	650 kg			
Operating Weight	1200 kg	1350 kg	1500 kg	1650 kg
	Model Tie-Points			
Feed	DN50 PN10 Flange			
Production	DN50 PN10 Flange			
Waste w/ chemicals	DN50 PN10 Flange			
Waste w/o chemicals	DN50 PN10 Flange			
Chemical injection	1/2" BSP Female Thread			
Compressed Air	Rilsan flexible hose 8/10 mm			

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