

BEVPAK series

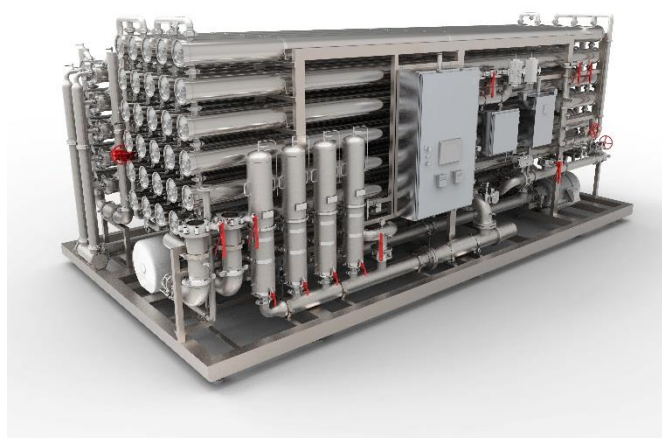
integrated ultrafiltration (UF) & reverse osmosis (RO) membrane systems for ingredient water

features

- SUEZ BEV Pre-engineered UF units are configurable and integrate with pre- and post-treatment options into a full SUEZ Ingredient Water System
- Skid-mounted, compact footprint (30% less) systems reduce onsite installation time and costs
- Integrated UF+RO skid and controls offer a more robust pretreatment from improved operation and run time.
- Stainless Steel construction for durability and suitability in a wet environment
- SUEZ Pressurized ZW700B UF membrane elements with robust SevenBore* hollow fiber technology
- UF pore size of 0.02µm for optimal removal of particulates, bacteria and viruses to maximize runtime on the primary RO
- Turbidity <0.1 NTU
- SDI < 2
- SUEZ BEV Full-fit/Cage Wrap membrane elements for a more sanitary construction and permeate output

configurable options

- RO Bank-by-bank cleaning
- In-line UV sterilizer
- Inlet chlorine monitor
- Interbank pressure transmitters
- Remote monitoring with data trending
- Stainless Steel Air Tubing
- Leveling Feet



documentation included

- Operation and maintenance manual
- Drawings: process flow, piping and instrumentation, electrical and general arrangement

operating parameters

Operating range	40-104 °F (4-40°C)
Minimum inlet pressure	30 PSIG (2 bar)
Average UF membrane flux.....	55 gfd
Average RO membrane flux.....	16 gfd

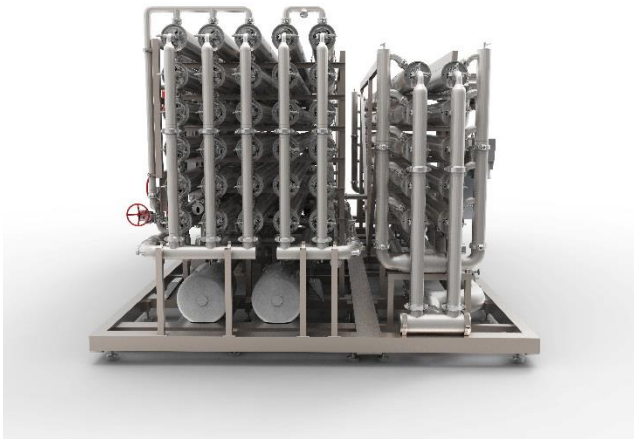
materials of construction

High-pressure piping.....	Stainless Steel, Sch. 10
Low-pressure piping.....	Stainless Steel, Sch. 10
Frame	Stainless steel
Enclosure.....	NEMA 4X Stainless Steel

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ZW700B membrane elements

NSF Certified Hollow fiber PolyEtherSulfone (PES) membrane

Table 1: UF Operating Parameters

Maximum Temperature	104°F (40°C)
Maximum Pressure	109 PSIG (7.5bar)
Typical operating TMP	<14.5PSIG(<1.0bar)
TMP Maximum	36 PSIG(2.5bar)
Backwash flow	150 gfd (250 l/mh)
Cleaning pH Range	1.0-13.0
Hypochlorite Stable	50-200ppm
Hydrogen peroxide	100-200ppm

Table 2: Standard Instrumentation UF

Flow ¹	Feed/Backwash Outlet and Permeate/Backwash Inlet
Temperature	Permeate
pH	Backwash/CIP
Pressure	Feed, Permeate, Backwash/CIP Pump discharge.
Pressure Switch	Feed, Backpulse
Pressure Transmitter	Feed/Backwash Outlet and Permeate/Backwash Inlet
Turbidity	Feed/Backwash Outlet and Permeate/Backwash Inlet

¹Display of calculated permeate flow.

RO membrane elements options

Table 3: NSF Certified RO Membrane Options

BEV RO	Standard Brackish RO
BEV ULE	Ultra-low energy RO
BEV RO CA	Chlorine tolerant RO
BEV NF CA	Chlorine tolerant NF for higher recovery.

Table 4: Standard Instrumentation (RO)

Flow ¹	Feed and concentrate
Conductivity	Feed, permeate
pH	Feed
Pressure	Pre-Filter, Post-Filter, Primary, Final, Permeate, Concentrate, Pump discharge, Inter-bank
Pressure Switch	Permeate, concentrate
Pressure Transmitter	Primary, final

Table 5: Major Component Manufacturers

Major Component	Manufacturer
Cartridge Filter	SUEZ
Membrane Element	SUEZ
High Pressure Pump	SUEZ Tonkaflo*
Cartridge filter housing	SUEZ
Membrane Housing	Wave Cyber
Flow Measurement	Signet
Conductivity, pH	Signet
Turbidity	Hach
HMI Components	Allen Bradley Panel View+1000
PLC Components	Allen Bradley Compact Logix
Valves	Bray

SUEZ BEVPAK models

MODEL	BEVPAK 2460	BEVPAK 48120
Permeate rate [^]	250 gpm	500 gpm
RO Concentrate Rate [^]	63 gpm,	126 gpm
Feed Rate [^]	335 gpm	670 gpm
<u>UF BW Pump⁸</u>		
Manufacturer:	Summit Pump	Summit Pump
Model:	2196 or equivalent	2196 or equivalent
Quantity:	1	1
Motor HP	40HP	40HP
<u>RO HP Pump</u>		
Manufacturer:	Tonkaflo	Tonkaflo
Model:	AS4040(X)	AS6000(X)
Quantity:	1	1
Motor HP	60HP	60 HP
Membranes quantity:	24 (UF)	48 (UF)
Banking Arrangement:	6 parallel (UF) 60 (RO) 5→3→2(RO)	12 parallel(UF) 120(RO) 10→6→4(RO)
Cartridge Filter:	RO.Zs01-40XK	RO.Zs01-40XK
Filter Quantity:	21	42
Inlet:	4.0-inch flange	6.0-inch flange
Permeate:	4.0-inch flange	6.0-inch flange
Backwash Inlet	4.0-inch flange	6.0-inch flange
Backwash Outlet	4.0-inch flange	6.0-inch flange
Rinse Outlet	4.0-inch flange	6.0-inch flange
Drain to be Sized for:	900 gpm	1,800 gpm
Power:	460 VAC, 3-phase, 60Hz	460 VAC, 3-phase, 60Hz
Control Circuit:	120 VAC, 1-phase, 60Hz	120 VAC, 1-phase, 60Hz
Height (inch):	112	112
Width (inch):	89	132
Length (inch):	274	274
Shipping Weight (lbs.):	10,000	18,600

[^]Design Basis considerations:

Design Temperature: 60°F (16°C)

Recovery UF/RO: 94% and 80% Respectively

⁸Shipped Loose