

WATERTRAK

Pre-engineered Water Treatment Solutions



Seawater Reverse Osmosis (SWRO)

36,000 PPM TDS SEA WATER
38-228 GPM (8.6-51.8 M3/H)

STANDARD FEATURES

- 8" FRP membrane housing with 1200 psig (80 bar) rating
- Sea water TFC polyamide Low Energy HR membrane or equal
- 7 RO elements per pressure tube with 400 ft² membrane area
- Duplex 2205 stainless steel high pressure piping
- Schedule 80 PVC low pressure piping
- High pressure multistage centrifugal pump in duplex material
- Hydraulic turbo charger energy recovery device
- Variable frequency drive (VFD) for high pressure pump in NEMA 1 enclosure
- 5 micron nominal cartridge filter in GRP/FRP housing
- Victaulic cleaning connections
- Digital Instrumentation
 - *Flow transmitter* – Feed & Permeate
 - *Conductivity* – Permeate
 - *ORP* – Feed
 - *Pressure indicator* – CF inlet/outlet, pump discharge, RO feed, Permeate, Concentrate
 - *Pressure switch* – Pump suction, RO feed, Permeate & Concentrate
- NEMA 4X FRP Local Control Box
- Allen Bradley PLC with Panel view 600 HMI
- Automatic valves for flushing on shutdown

NOTE: VFD will be provided as loose supply

UPGRADE OPTIONS

- Single or dual stage Multi-media filters considering type of feed water intake
- pH analyzer on RO feed
- Cleaning in place (CIP) system
- Chemical dosing units
- Ultrafiltration
- Pressure exchanger instead of turbo charger
- 5 element per pressure vessel design for cases with limited space available
- Containerized option available

DESIGN FEED CONDITIONS

- Recovery – 40%
- Design Temperature - 72°F (22°C)
- Design Feed TDS – 36,000 ppm
- Feed Water SDI < 5
- Feed Water Inlet Pressure – 30 psig (2 bar)



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Aquatech WATERTRAK™ SWRO Models 36,000 PPM TDS

MODEL	AIC-SW-2V-14E	AIC-SW-3V-21E	AIC-SW-5V-35E	AIC-SW-6V-42E	AIC-SW-10V-70E	AIC-SW-12V-84E
Permeate Flow:	206 m ³ /d 8.6 m ³ /h (38 gpm)	309 m ³ /d 12.9 m ³ /h (57 gpm)	518 m ³ /d 21.6 m ³ /h (95 gpm)	621 m ³ /d 26 m ³ /h (114 gpm)	1034 m ³ /d 43 m ³ /h (190 gpm)	1243 m ³ /d 51.8 m ³ /h (228 gpm)
Feed Flow:	21.5 m ³ /h (95 gpm)	32.5 m ³ /h (143 gpm)	54 m ³ /h (238 gpm)	65 m ³ /h (285 gpm)	108 m ³ /h (475 gpm)	129.5 m ³ /h (570 gpm)
Concentrate Flow:	12.9 m ³ /h (57 gpm)	19.6 m ³ /h (86 gpm)	32.4 m ³ /h (143 gpm)	39 m ³ /h (171 gpm)	65 m ³ /h (285 gpm)	77.7 m ³ /h (342 gpm)
Membrane Elements and Vessels						
Vessel quantity:	2	3	5	6	10	12
No. Elements:	14 (7 per vessel)	21 (7 per vessel)	35 (7 per vessel)	42 (7 per vessel)	70 (7 per vessel)	84 (7 per vessel)
High Pressure Feed Pump						
Model:	MSS-20-29	MSS-30-27	MSS-50-28	MSS-70-34	MSS-90-21	MSS-160-11
Manufacturer:	FEDCO® or equal	FEDCO® or equal	FEDCO® or equal	FEDCO® or equal	FEDCO® or equal	FEDCO® or equal
Motor HP / Type:	60 Hp (44.7 kW) TEFC	75 Hp (55.9 kW) TEFC	125 Hp (93.2 kW) TEFC	150 Hp (112 kW) TEFC	200 Hp (149 kW) TEFC	250 Hp (186 kW) TEFC
Design Flow Rate:	21.5 m ³ /h (95 gpm)	32.5 m ³ /h (143 gpm)	54 m ³ /h (238 gpm)	65 m ³ /h (285 gpm)	108 m ³ /h (475 gpm)	129.5 m ³ /h (570 gpm)
Discharge Pressure:	637 psig (43.9 barg)	608 psig (41.9 barg)	603 psig (41.6 barg)	596 psig (41.1 barg)	581 psig (40.1 barg)	581 psig (40.1 barg)
Energy Recovery Device						
Model:	HPBe-30	HPBe-40	HPBe-80	HPBe-80	HPBe-160	HPBe-160
Manufacturer:	FEDCO® or equal	FEDCO® or equal	FEDCO® or equal	FEDCO® or equal	FEDCO® or equal	FEDCO® or equal
Pressure Boost:	313 psig (21.6 barg)	342 psig (23.6 barg)	346 psig (23.9 barg)	354 psig (24.4 barg)	368 psig (25.4 barg)	368 psig (25.4 barg)
Cartridge Filter						
Filter Quantity:	1	1	1	1	2	2
Cartridge Quantity Each:	6	10	20	20	20	20
Installation and Utility Requirements						
Inlet:	2.0" flanged	3.0" flanged	3.0" flanged	4.0" flanged	6.0" flanged	6.0" flanged
Permeate:	1.5" flanged	2.0" flanged	2.0" flanged	3.0" flanged	4.0" flanged	4.0" flanged
Concentrate:	1.5" flanged	2.0" flanged	3.0" flanged	3.0" flanged	4.0" flanged	4.0" flanged
Inlet Water Pressure:	30 psig	30 psig	30 psig	30 psig	30 psig	30 psig
Air Pressure:	80 psig, oil free	80 psig, oil free	80 psig, oil free	80 psig, oil free	80 psig, oil free	80 psig, oil free



ISO 9001

