

UNICUS

WATER SOLUTIONS

DemandPure™ Commercial EDI and RO Systems

For Qualified OEMs Only

SnowPure manufactures and sells pre-engineered, pre-assembled Commercial/Industrial EDI and RO systems to Qualified OEMs and Dealers for sale or lease to users.

The SnowPure automatic and self-monitoring **DemandPure™** EDI systems can be easily paired with our matching **DemandPure™** RO systems.

These **DemandPure™** products replace Commercial & Industrial portable exchange DI, and provide a recurring revenue (BOO or BOT) solution to dealers, whenever an exchange tank solution is not economical or welcomed.

Features

- Simple to operate and maintain
- EDI interlocks with RO
- EDI can work with existing RO systems
- Integral quality monitor with alarm
- Compact portable stainless steel skid design
- Sleek, clean laboratory look

Benefits

- No resin to exchange
- Operation cost is almost zero
- Eliminates disruptive visits to Customers' sites
- Ideal for remote locations
- Chemical-free, environmentally friendly



DemandPure™ EDI System (shown: 400E)



DemandPure™ RO System (shown: 400R)

DemandPure™ Commercial EDI Systems

Specifications and Detail

	DemandPure™ 200E	DemandPure™ 300E	DemandPure™ 400E	DemandPure™ 500E
Nominal Capacity	1 GPM (200 LPH)	3 GPM (750 LPH)	5 GPM (1000 LPH)	7.5 GPM (1700 LPH)
Nominal/Max Operating Pressure	30/75 psi (2/5 bar)			
Min/Max Discharge Concentrate+ Electrode	0.10 GPM	0.30 GPM	0.50 GPM	0.75 GPM
Nominal Recovery	90%			
Feed Conductivity ¹	Optimum FCE <9µS/cm Max FCE 33µS/cm			
Total CO ₂ + HCO ₃	< 5 mg/l CO ₂ + HCO ₃ ⁻			
Hardness	< 1.0 ppm @ 90% recovery			
Organics	< 0.5 ppm TOC			
Metals	< 10 ppb			
Feed Temp	Optimum: 15° C—30° C Range: (5° C—35° C)			
Feed pH	Optimum: 7.0—7.5 Range: 5.0—9.5			
Feed Chlorine	ND			
Silica, SiO ₂	< 0.5 ppm			
Power Usage	Nominal: 200W Max: 800 W	Nominal: 375W Max: 1.2 kW	Nominal: 500W Max: 1.8 kW	Nominal: 750W Max: 2.4 kW

DemandPure™ Model	200E	300E	400E	500E
Frame	Welded stainless steel tube			
Dimensions	28-3/8"(721mm)W x 27-1/2"(686mm)D x 41-1/4"(1050mm)H			
Pressure Gauges	Filter inlet/outlet, product, concentrate, electrode inlet: SS case, bronze internals, glycerin-filled			
Valves	Filter inlet/outlet isolation valves, product, concentrate & electrode feed flow control valves			
Switches	Off/on switch, feed low pressure cut-out, concentrate low flow cut-out			
Filters	10 Micron Prefilter, 10"			20"
Electrical Input	176-264 VAC, 50/60 Hz, 1-Phase, FLA 20A			
Feed/Product	3/4" PVC Union—Socket (Solvent) Weld (FNPT option)			
Control System	Product conductivity controller			
Sample Valve	Concentrate sample valve			
Standard Panel Instruments	Product quality meter w/alarm output (relay) Product flowmeter, concentrate flowmeter, electrode flowmeter			
Options	Automatic Product Divert Valve Resistivity Meter Product Booster Pump			

1. $FCE = \text{Conductivity} + 2.79 \cdot (\text{CO}_2) + 1.94 \cdot (\text{SiO}_2)$
 Example: $\text{Conductivity} = 5.0 \mu\text{S/cm}$, $\text{CO}_2 = 3.5 \text{ mg/l}$, $\text{SiO}_2 = 0.5 \text{ mg/l}$
 $FCE = 5.0 + 2.79 \cdot (3.5) + 1.94 \cdot (0.5) = 15.7 \mu\text{S/cm}$

DemandPure™ Commercial RO Systems

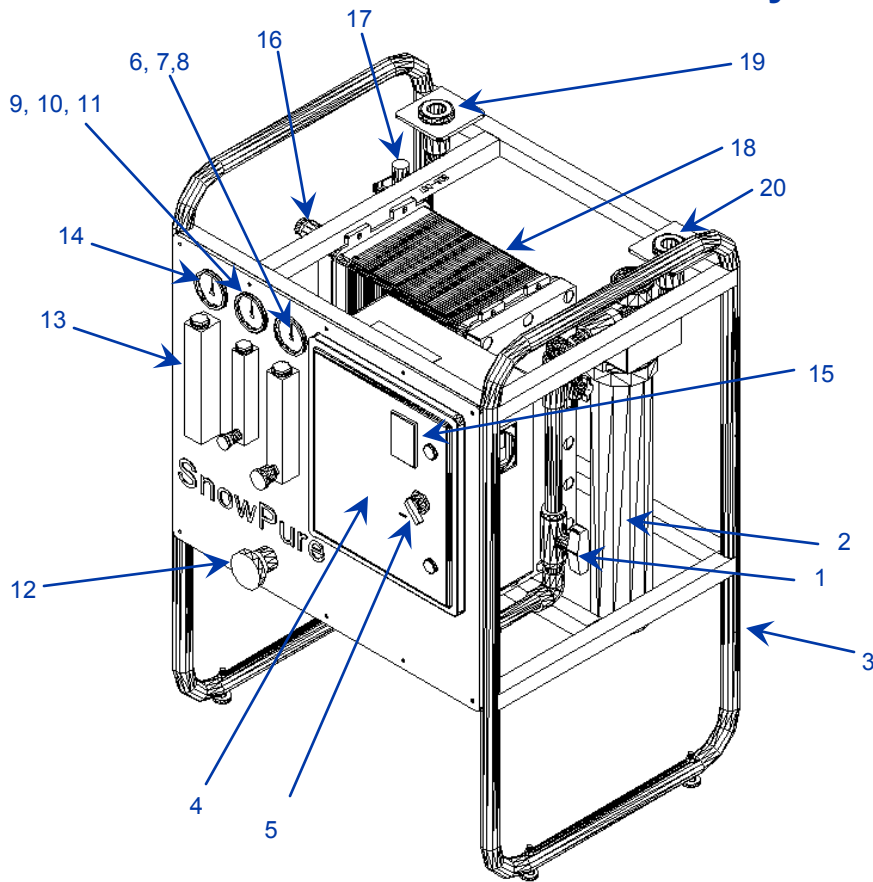
Specifications and Detail

	DemandPure™ 200R	DemandPure™ 300R	DemandPure™ 400R	DemandPure™ 500R
Capacity	1.1 GPM (0.25 m ³ /h)	3.3 GPM (0.75 m ³ /h)	5.5 GPM (1.25 m ³ /h)	8.2 GPM (1.9 m ³ /h)
High Rejection Membranes	1	3	5	8
Nominal/Maximum Operating Pressure	180/200 psi (12.4/13.8 bar)			
Min Conc Flow *Requires Recirc	1.0 gpm* (0.2 m ³ /h)	2.2 gpm* (0.5 m ³ /h)	3.4 gpm* (0.8 m ³ /h)	5.5 gpm (1.2 m ³ /h)
Maximum Recovery (with Recirc Valve)	50-60%	60-65%	60-70%	60-70%
Typical TDS %R	99.0-99.2%			
Max Feed Temp	113°F (45°C)			
Feed pH	3-10			
Feed Chlorine	Dechlorination Required			
Maximum Feed TDS	750 ppm			
Electrical	*110/220V 50/60Hz 1-phase		*220V 50/60Hz 1-phase	
Motor Rating	3/4 HP	1 HP	2 HP	3 HP
Nominal Power Usage 85% at 220 VAC 1 Ph	1.3 kW	1.5 kW	2.2 kW	3.2 kW

RO production rate and rejection are based on membrane performance after 24 hours at 180 psig (12.4 bar) net operating pressure, 77°F (25°C), pH 7.5, max 15% recovery per module on feed water containing 1,000

DemandPure™ Model	200R	300R	400R	500R
Frame	Welded stainless steel tube			
Membranes	Thin-film, high-rejection (to protect the DemandPure™ EDI)			
Vessels	Stainless Steel			
Pump	Brass Positive Displacement (SS option)	SS Multi-stage Centrifugal		
Pressure Gauges	Filter inlet/outlet, Feed, Permeate SS case, bronze internals, glycerin filled			
Valves	Brine and recirculation control valves			
Standard	Automatic permeate flush/divert to drain (to protect the DemandPure™ EDI)			
Switches	Low pressure cut-out			
Prefilter	5 micron, 20" filter and housing			
Connection-Feed	3/4" FPT			
Connection-Drain	1/2" quick connect	1/2" hose		
Control System	Microprocessor based			
Standard Panel Instruments	TDS monitor, Recirculation flowmeter, Brine flowmeter, Product flowmeter			
Options for RO	Cleaning Skid Product Storage Tank/Level Control/Repressurization System Call for 220/380/480VAC and 1ph/3ph options			

DemandPure™ Commercial EDI System Diagram

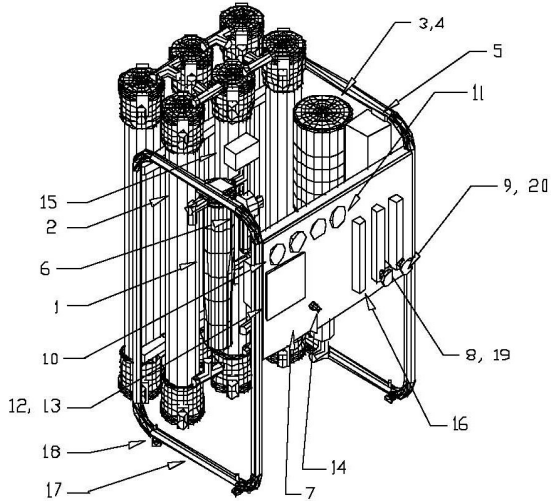


1. FEED ISOLATION VALVE	11. ELECTRODE INLET PRESSURE GAUGE
2. 5 MICRON PRE-FILTER	12. FEED FLOW CONTROL VALVE
3. STAINLESS STEEL FRAME	13. FEED FLOW METER
4. NEMA 4X PANEL W/POWER SUPPLY	14. FEED INLET PRESSURE GAUGE
5. MAIN OFF/ON SWITCH	15. RESISTIVITY METER/CONTROLLER
6. CONCENTRATE FLOW CONTROL VALVE	16. RESISTIVITY SENSOR
7. CONCENTRATE FLOW METER	17. PRODUCT DIVERT VALVES (OPTIONAL)
8. CONCENTRATE INLET PRESSURE GAUGE	18. ELECTROPURE™ EDI MODULE
9. ELECTRODE FLOW CONTROL VALVE	19. PRODUCT OUTLET
10. ELECTRODE FLOW METER	20. FEED INLET

DemandPure™	200E	300E	400E	500E
Dimensions in	29x27x41	Same	Same	Same
WxDxH mm	721x686x1050			
Weight lbs	125	137	145	161
kg	56	62	66	73

DemandPure™ Commercial RO System Diagram

DemandPure™ 200R to 500R



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|--------------------------------|-----------------------------|
| 1. Prefilter | 11. Vessel In/Out Gauges |
| 2. Pressure Vessel Assembly | 12. Conductivity Monitor |
| 3. Pump | 13. Tank & PTL Switch Leads |
| 4. Motor | 14. Main Power Switch |
| 5. Motor Contactor & Ovl. Rly. | 15. Low Pressure Switch |
| 6. Solenoid Valve | 16. Product Flowmeter |
| 7. Monitoring Panel | 17. Frame |
| 8. Brine Control Valve | 18. Levelling Feet |
| 9. Conc. Recirc. Valve | 19. Brine Flowmeter |
| 10. Prefilter In/Out Gauges | 20. Recirc. Flowmeter |

DemandPure™		200R	300R	400R	500R
Dimensions in WxDxH mm		29x26x49 710x660x1250	Same	Same	Same
Weight lbs kg		150 68	190 86	250 114	300 137