

Ultra Hydraulic Pressure Booster (HPB Ultra™) For Reverse Osmosis Desalination

Operating Parameters

Model *	HPB-180 Ultra	
Liquid	Seawater, Brackish water, Fresh Water	
Pump Operating Ambient Temp	33 - 158 °F	0.6 - 70.0 °C
Maximum Storage Temp	185 °F	85.0 °C
Minimum Pump-Side Flow	352.2 gpm	80 m³/h
Maximum Pump-Side Flow **	915.7 gpm	208 m³/h
Maximum Operating Pressure	1800 psi	124 bar
Nominal Vibration	≤3.8mm/sec RMS	≤0.15"/sec RMS
Nominal Sound	<85 dBA	
Brine Outlet Pressure	Varies upon design	
Filtration Requirement	20 microns	

* Subject to international patent applications

** Range may vary

Performance

Maximum Boost Pressure	Contact FEDCO for specific data
Efficiency (Transfer)	Up to 71.5%
Brine/Feed Mixing	None

Materials

Rotor	Super Duplex SS S32750 ASTM A276/479
Bearings	Non-metallic
Casing (Inlet/Discharge)*	Zeron SS - Powder Coated ASTM A995-13 6A
Fasteners	316 SS S31600 ASTM A193/A320/F593
O-Rings	Buna N®
Diffuser	Super Duplex SS S32750 ASTM A276/479
Eye Bolts	N/A
Baseplate	Carbon Steel - Painted ASTM A36
Crating/Packaging	Export-Wood

* Powder coating (RAL 6018) standard. Raw casting optional.

Miscellaneous

Foundation	Per FEDCO supporting docs
Nozzle Loading	Per FEDCO supporting docs
Pipe Flushing	Per FEDCO supporting docs
Instrumentation Requirements	Per FEDCO supporting docs
Membrane Cleaning	Per FEDCO supporting docs
Check Valve Location	Per FEDCO supporting docs
Aux Valve Actuator	Manual or FEDCO supply

Packaging/ Crating

Protective Covers	Standard	
Export Crating	Standard	
Additional Shipping Options	Available per customer requirements	
Unit Weight (Dry)	157.5 lbs	71.49 kg

Hydraulic Design

Turbine	Impeller and turbine vanes are custom designed and machined for optimal efficiency at design conditions.
Pump	Impeller vanes and diffuser ring are built to customer specifications.
Brine Control	Integral variable area auxiliary nozzle.

Fittings

Pipe Joints	Feed Inlet/ Outlet 3" Cut Groove Brine Inlet/ Outlet 2.5" Cut Groove
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Bearings

Radial	Sleeve, product lubricated
Thrust	Hydrostatic/ hydrodynamic type Rotor-Flo™ design
Cooling	Product fluid
Lubrication	Product fluid

Testing and Inspection

Performance Test	Standard
* Hydraulic Institute (HI) Hydrostatic & Centrifugal Pump Testing Standards	
Hydrostatic Test	Standard
* Hydraulic Institute (HI) Hydrostatic & Centrifugal Pump Testing Standards	
Rotor Balance Certificate	Standard
Visual/ Dimension Check	Optional
Witness Test	Optional
Certified Test Data	Optional
Material Certificates	Optional

* General Code Groups, Associations, Laboratories, and Approval Bodies include the American Society for Testing and Materials (ASTM), the International Organization for Standardization (ISO), and the NSF International.



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NOTE: All numeric values are based on performance norms. Specific performance data is included with each individual unit. FEDCO reserves the right to make specification changes at any time without prior notice. Please contact your FEDCO representative for information. email: sales@fedco-usa.com

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