

**SPECIFICATION SHEET**  
**Hydraulic Pressure Booster (HPB™)**  
**MODEL HPB-90\***  
**for Reverse Osmosis Desalination**

HYDRAULIC DESIGN	
<b>TURBINE</b>	Impeller vanes and turbine vanes are custom designed and machined for optimal efficiency at design conditions.
<b>PUMP</b>	Impeller vanes and diffuser ring are built to customer specifications.
<b>BRINE CONTROL</b>	Integral variable area auxiliary nozzle.

OPERATING PARAMETERS	
<b>LIQUID</b>	Seawater, brackish water, and fresh water
<b>OPERATING TEMPERATURE</b>	0.6 - 70.0° C
<b>MAXIMUM STORAGE TEMPERATURE</b>	85° C
<b>MINIMUM PUMP-SIDE FLOW</b>	40 m <sup>3</sup> /h
<b>MAXIMUM PUMP-SIDE FLOW*</b>	104 m <sup>3</sup> /h
<b>MAXIMUM OPERATING PRESSURE</b>	83 bar
<b>MINIMUM BRINE OUTLET PRESSURE</b>	Varies upon design
<b>NOMINAL SOUND</b>	75-85 dBA
<b>NOMINAL VIBRATION</b>	0.05"/sec - 0.15"/sec
<b>FILTRATION REQUIREMENT</b>	20 microns

\*Range may vary.

PERFORMANCE	
<b>MAXIMUM BOOST PRESSURE</b>	Contact FEDCO for specific performance data
<b>EFFICIENCY</b>	Up to 69.5%
<b>BRINE/FEED MIXING</b>	None

MATERIALS	
<b>ROTOR</b>	Duplex 2205 one-piece construction machined from bar stock S31803 ASTM A276/479 (Super Duplex SS optional S32750 ASTM A276/479)
<b>BEARINGS</b>	Non-metallic
<b>INLET/DISCHARGE</b>	Duplex 2205 S31803 ASTM A890 (Super Duplex SS optional S32750 ASTM A890)
<b>FASTENERS</b>	316 SS S31600 ASTM A193/A320/F593
<b>O-RINGS</b>	Buna N FITS ISO DIN/ANSI TYPE 2100
<b>DIFFUSER</b>	Ertalyte ASTM D638/D3418
<b>BASEPLATE</b>	Powder coated, carbon steel ASTM A36

FITTINGS	
<b>PIPE JOINTS</b>	Grooved-style couplings Feed inlet/outlet 2.0" Brine inlet/outlet 2.0"
<b>EYE BOLTS</b>	N/A

BEARINGS	
<b>RADIAL</b>	Sleeve, product lubricated
<b>THRUST</b>	Hydrostatic/Hydrodynamic type Rotor-Flo™ design
<b>COOLING</b>	Product provides cooling to all bearings
<b>LUBRICATION</b>	Product lubricated (no user lubrication required)

TESTING AND INSPECTION	
<b>PERFORMANCE TEST</b> **Hydraulic Institute (HI) Hydrostatic and Centrifugal Pump Testing Standards	Standard
<b>HYDROSTATIC TEST</b> **Hydraulic Institute (HI) Hydrostatic and Centrifugal Pump Testing Standards	Standard
<b>ROTOR BALANCE CERTIFICATE</b>	Standard
<b>VISUAL/DIMENSION CHECK</b>	Optional
<b>WITNESS TEST</b>	Optional
<b>CERTIFIED TEST DATA</b>	Optional
<b>MATERIAL CERTIFICATES</b>	Optional

SHIPPING	
<b>PROTECTIVE COVERS</b>	Standard
<b>EXPORT CRATING</b>	Standard
<b>ADDITIONAL SHIPPING OPTIONS</b>	Available per customer requirements
<b>UNIT WEIGHT (DRY)</b>	33.6 kg



**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

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