

SPECIFICATION SHEET
Hydraulic Pressure Booster (HPB™)
MODEL HPB-500*
for Reverse Osmosis Desalination

HYDRAULIC DESIGN	
TURBINE	Impeller vanes 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.

OPERATING PARAMETERS	
LIQUID	Seawater, brackish water, and fresh water
OPERATING TEMPERATURE	0.6 - 70.0° C
MAXIMUM STORAGE TEMPERATURE	85° C
MINIMUM PUMP-SIDE FLOW	250 m ³ /h
MAXIMUM PUMP-SIDE FLOW*	650 m ³ /h
MAXIMUM OPERATING PRESSURE	83 bar
MINIMUM BRINE OUTLET PRESSURE	Varies upon design
NOMINAL SOUND	75-85 dBA
NOMINAL VIBRATION	0.05"/sec - 0.15"/sec
FILTRATION REQUIREMENT	20 microns

*Range may vary.

PERFORMANCE	
MAXIMUM BOOST PRESSURE	Contact FEDCO for specific performance data
EFFICIENCY	Up to 76.5%
BRINE/FEED MIXING	None

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

FITTINGS	
PIPE JOINTS	Grooved-style couplings Feed inlet/outlet 6" Brine inlet/outlet 4"
EYE BOLTS	Standard

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

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

SHIPPING	
PROTECTIVE COVERS	Standard
EXPORT CRATING	Standard
ADDITIONAL SHIPPING OPTIONS	Available per customer requirements
UNIT WEIGHT (DRY)	268.5 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.