

# SPECIFICATION SHEET

## Multi-Stage Duplex (MSD) Pump

### MODEL MSD-400\*

#### for Reverse Osmosis Desalination

HYDRAULIC DESIGN	
PUMP	Horizontal multi-stage centrifugal pump with bolted stage construction.

OPERATING PARAMETERS	
LIQUID	Seawater, brackish water, and fresh water
OPERATING TEMPERATURE	0.6 - 70.0° C
MAXIMUM STORAGE TEMPERATURE	85° C
PUMP OPERATING FLOW RANGE*	200-560 m <sup>3</sup> /h
MAXIMUM PRESSURE	83 bar
FILTRATION REQUIREMENT	20 microns

\*Range may vary.

PERFORMANCE	
PEAK EFFICIENCY	Contact FEDCO for specific performance data

MATERIALS	
SHAFT	Duplex 2205 one-piece construction machined from bar stock S31803 ASTM A276/479 (Super Duplex SS optional S32750 ASTM A276/479)
STAGE BOLTING	316 SS S31600 A193/A320/F593
INLET/DISCHARGE	Duplex 2205 S31803 ASTM A890 (Super Duplex SS optional S32750 ASTM A890)
IMPELLERS/DIFFUSERS	Duplex 2205 S31803 ASTM A890 (Super Duplex SS optional S32750 ASTM A890)
MOTOR ADAPTER	Anodized 713 aluminum casting A07130 ASTM ZC81A
MOTOR COUPLING	Flexible disc coupling - FNC treated Carbon Steel S45C ASTM 1045
COUPLING GUARD	316L S31603 ASTM 276/479
PUMP LEVELING FOOT	Powder coated carbon steel A36 ASTM A570/A
BEARING DRAIN LINE TUBING	Duplex 2205 SA789-11a ASTM A789-10
MECHANICAL SEAL	316 Carbon silicon carbide Buna N FITS ISO DIN/ANSI TYPE 2100
BASEPLATE	Painted carbon steel A36 ( optional) ASTM A570/A

OPTIONS	
Inlet placement available in 90° increments	
High inlet pressure available	

OUTLINE	
OUTLINE	Each MSD model is custom designed to specific customer requirements.
DIMENSIONS	Contact FEDCO for specific outline dimensions

FITTINGS	
PIPE JOINTS	Grooved-style couplings Feed Inlet 8" Feed Outlet 8"

DRIVE	
MOTOR	Available per customer specific requirements NEMA FRAME STANDARD, IEC AVAILABLE

BEARINGS	
THRUST	FEDCO Water Bearing™ Product Lubricated
COOLING	Product provides cooling to all bearings
LUBRICATION	Product lubricated (no user lubrication required)

TESTING AND INSPECTION	
PERFORMANCE TEST **Hydraulic Institute (HI) Hydrostatic and Centrifugal Pump Testing Standards	Standard
HYDROSTATIC TEST **Hydraulic Institute (HI) Hydrostatic and Centrifugal Pump Testing Standards	Standard
VISUAL/DIMENSION CHECK	Optional
SOUND TEST (75-85 dBA Nominal)	Optional
VIBRATION TEST (7mm/sec RMS (0.276"/sec))	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
ESTIMATED UNIT WEIGHT	Contact FEDCO for specific design weight



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. email: sales@fedco-usa.com

\*\*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. Please contact your FEDCO representative for any additional information.