

Neptune Pneumatic Caisson Sump Pump™

TECHNICAL SPECS.

- Operational depth: Up to 100 ft.; 30 m.
- Flow range: Up to 11.0 US gpm; 41.6 lpm
- Casing size: 8 in. in.; 20 cm. or greater

HEAVY-DUTY PUMPING IN CORROSIVE SALTWATER

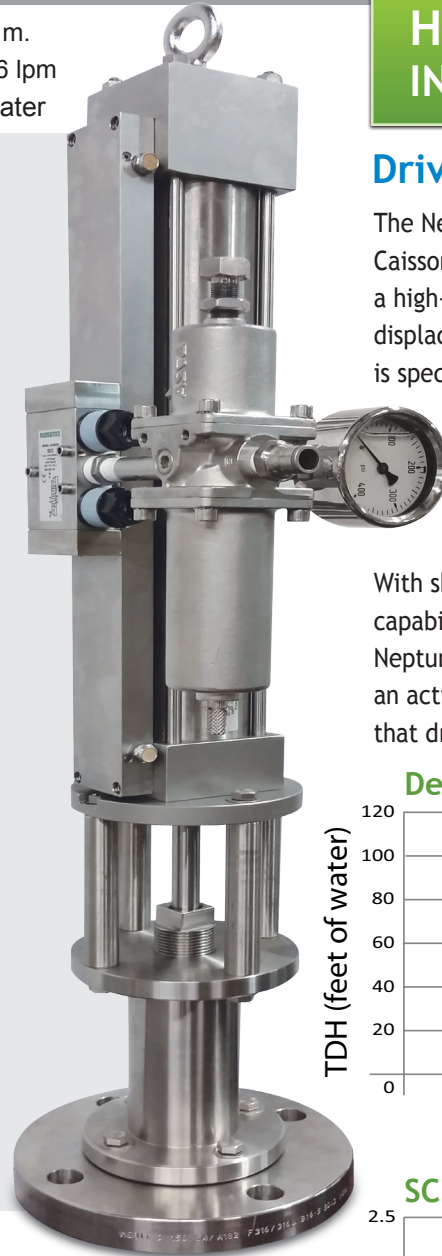
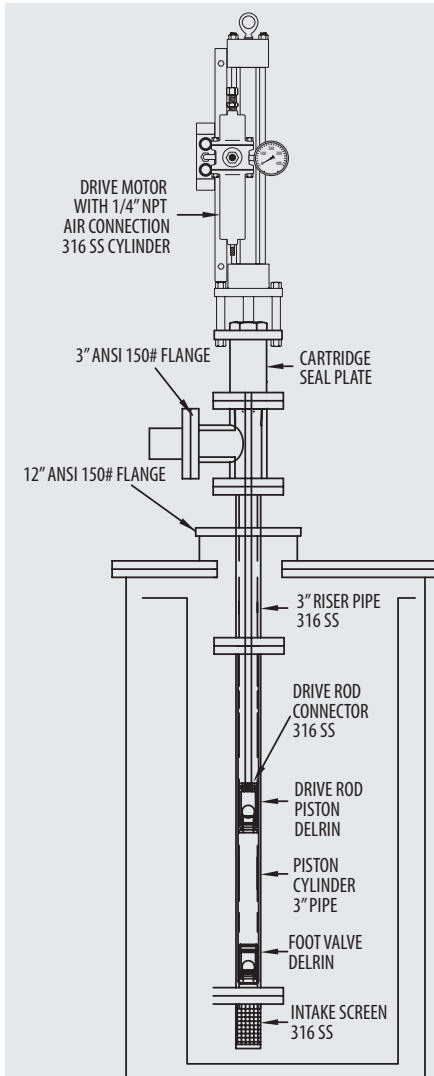
Drive Motor Safely Above Liquid

The Neptune Pneumatic Caisson Sump Piston Pump™ is a high-performance, positive-displacement pump jack that is specially designed to remove hot, viscous, oily liquids from aggressive saltwater industrial environments.

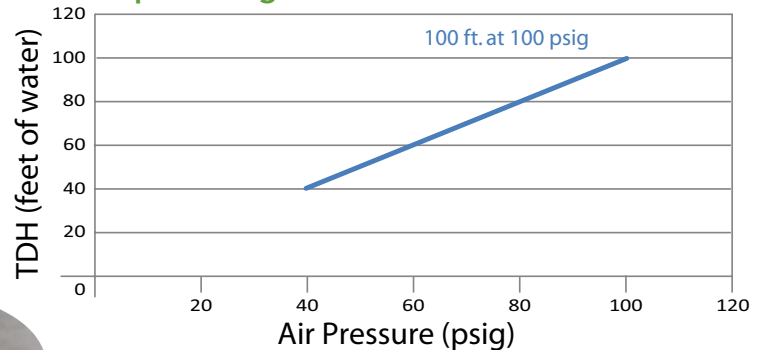
owner-specified depth, at adjustable flow rates up to 11 gpm (41.6 lpm).

The Neptune features a pneumatically powered, above-surface piston drive motor, and is constructed of high-grade stainless steel for greater efficiency and superior wear resistance. The Neptune will pump virtually any liquid and can be customized to meet specific requirements.

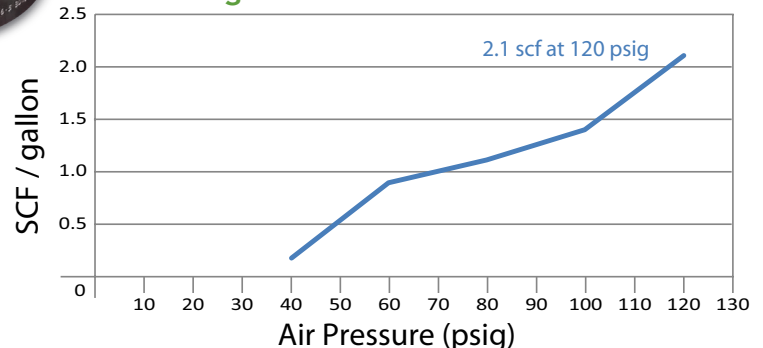
With shallow or deep pumping capabilities, the lightweight Neptune piston pump employs an active recovery process that draws product from an



Depth x Regulator Pressure



SCF x Regulator Pressure

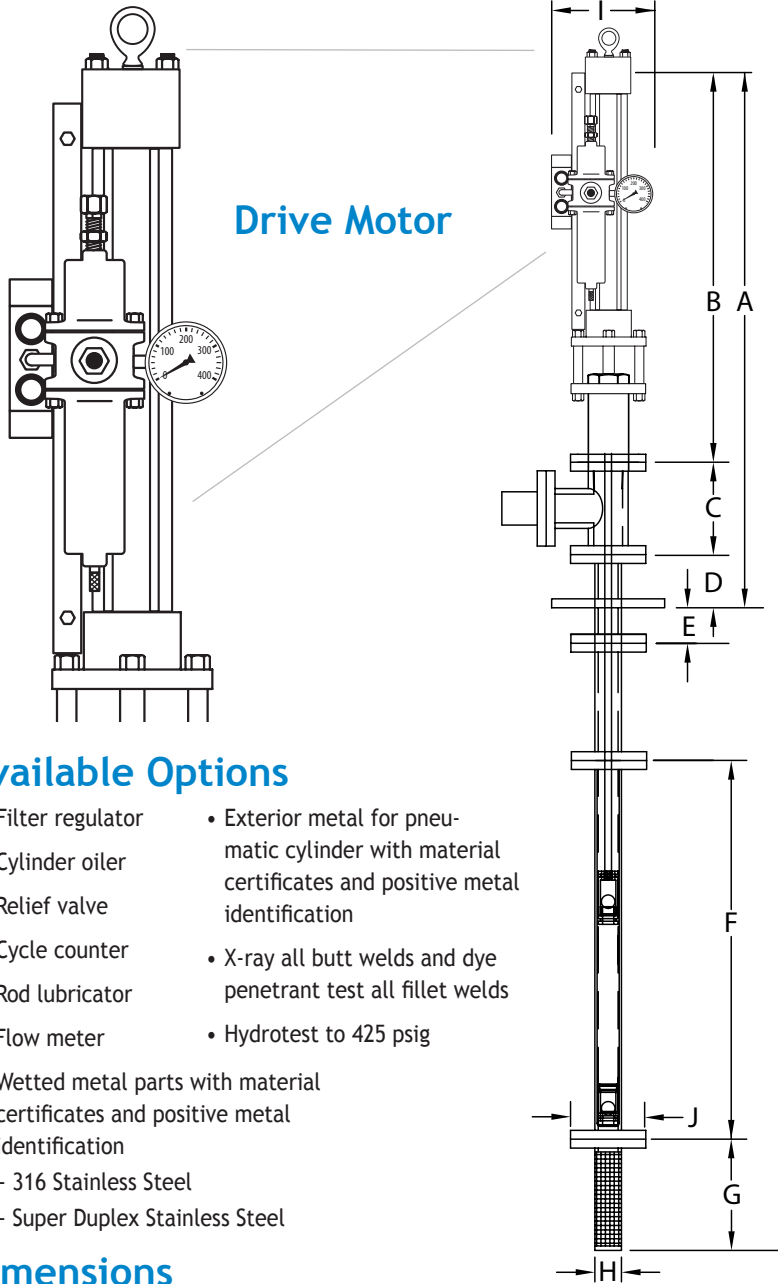


Features and Benefits

- Driver at top of caisson sump – easy, safer access
- Compact, lightweight driver fits in enclosed vault
- Pumps virtually any liquid
- Performance unaffected by vacuum, temperature, pressure
- Discharge air is non-polluting
- Pneumatic shutdown does not damage pump
- Greatly reduced biological buildup, encrustation
- Gently handles product, without emulsification
- Operates at any angle, horizontal to vertical

Neptune Pneumatic Caisson Sump Pump™

**COMPACT & LIGHTWEIGHT
UNAFFECTED BY VACUUM**



Drive Motor

Available Options

- Filter regulator
- Cylinder oiler
- Relief valve
- Cycle counter
- Rod lubricator
- Flow meter
- Wetted metal parts with material certificates and positive metal identification
 - 316 Stainless Steel
 - Super Duplex Stainless Steel
- Exterior metal for pneumatic cylinder with material certificates and positive metal identification
- X-ray all butt welds and dye penetrant test all fillet welds
- Hydrotest to 425 psig

Dimensions

- | | |
|---|---|
| A - Above-well height 46.1 in / 1.17 m | F - Foot valve 35.6 in / 0.90 m |
| B - Pump driver height 27.0 in / 0.68 m | G - Intake screen 22 in / 0.56 m |
| C - Discharge tee height ... 12.4 in / 0.31 m | H - Intake screen OD 6.3 in. / 0.16 m |
| D - Adaptor top 4.17 in / 0.10 m | I - Pump driver OD 8.4 in / 0.21 m |
| E - Adaptor bottom 2.67 in / 0.07 m | J - Flange OD 7.5 in / 0.19 m |

Performance Data

| | |
|----------------------------|--|
| Operating Depth | 100 ft/30 m |
| Flow Range | Up to 11.0 US gpm / 41.6 lpm; 2.5 m3 per hr; 15,800 US gpd/59,900 lpd |
| Discharge Pressure | 50 psig (based on 100 psi air supply) |
| Strokes per Minute | 5-40; Variable speed control |
| Max. Strokes per Minute | 40 |
| Temperature Range | 33° F / 1° C to 140° F / 60° |
| Fluid Viscosity | 0.3 Cp to 100 Cp |
| Total Field Sound Pressure | < 90 dB |
| Suction Pressure | 15 psi/104 kPa |
| Absolute Vapor Pressure | > 2 psi/14 kPa |

Technical Data

| | |
|---------------------------------|-----------------------------------|
| Max. External Diameter | 7.5 in/19 cm |
| Total Cylinder Length | 38 in/96.5 cm |
| Connection to Riser Pipe | 2 in/4.85 cm |
| Connection to Sucker Rod | 7/16 in/1.1 cm to 20 in/50.8 cm |
| Internal Diameter (recommended) | 8 in/20 cm or greater |
| Discharge Size | 3 in/7.6 cm NPT |
| Weight of Cylinder | 12 lb/5.4 kg |
| Installation Angles | Any from vertical to horizontal |
| Driver Weight | 35 lb/15.8 kg |
| Driver Rod Weight | 12 lb per 100 ft/3.7 kg per 100 m |
| Foot Valve Assembly Weight | 60 lb/27 kg |
| Pneumatic Air Connection | 3/8 in NPT; 3/8 in OD tubing |
| Pump Driver Mounting | Flanged |
| Mounting Nozzle | ANSI rated 150 lb. |
| Discharge Nozzle | ANSI rated 150 lb., side |

Materials of Construction

| | |
|---------------------|---------------------|
| Drive Motor Frame | Stainless Steel 316 |
| Drive Rod | Fiberglass |
| Drive Rod Connector | SS 316 |
| Drive Piston | Delrin |
| Piston Seals | Viton U-Cups |
| Foot Valve | Delrin |
| Suction Screen | SS 316 |
| Liquid End | SS 316 |

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