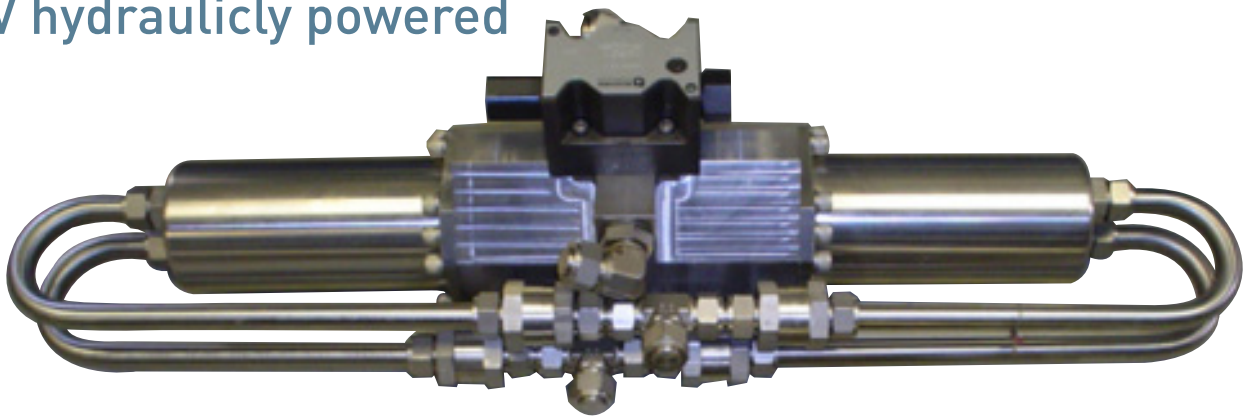


# Duplex Piston Pumps

ROV hydraulically powered



Oceaneering has designed and built a range of Duplex Piston Pumps. These pumps are based upon a reciprocating piston intensifier with fixed displacement. Hydraulically powered by the host Remotely Operated Vehicle (ROV), the pumps are available in two sizes, the 15 hp Series and the 50 hp Series, with a wide range of pressure ratios available in each series.

The pumps are the basis for multiple tooling applications, including subsea hydrotesting, hydrate remediation, and general fluid intervention. The pumps are not compatible with methanol. For methanol-compatible pumping, use the Duplex Plunger Pump.

#### Standard 15 hp Series

|                        |                     |
|------------------------|---------------------|
| <b>Oceaneering p/n</b> | <b>0025594</b>      |
| Hydraulic Supply       | 5,500 psi / 3.5 gpm |
| Weight in Air          | ~40 lb              |
| Weight in Seawater     | ~30 lb              |

|                        |                      |
|------------------------|----------------------|
| <b>Oceaneering p/n</b> | <b>0026646</b>       |
| Hydraulic Supply       | 17,500 psi / 1.1 gpm |
| Weight in Air          | ~40 lb               |
| Weight in Seawater     | ~30 lb               |

|                        |                      |
|------------------------|----------------------|
| <b>Oceaneering p/n</b> | <b>0027012</b>       |
| Hydraulic Supply       | 10,500 psi / 1.8 gpm |
| Weight in Air          | ~40 lb               |
| Weight in Seawater     | ~30 lb               |

#### Standard 50 hp Series

|                        |                    |
|------------------------|--------------------|
| <b>Oceaneering p/n</b> | <b>0031802</b>     |
| Hydraulic Supply       | 5,000 psi / 10 gpm |
| Weight in Air          | ~85 lb             |
| Weight in Seawater     | ~70 lb             |

|                        |                                |
|------------------------|--------------------------------|
| <b>Oceaneering p/n</b> | <b>0277359 (Methanol Pump)</b> |
| Hydraulic Supply       | 12,500 psi / 5 gpm             |
| Weight in Air          | ~85 lb                         |
| Weight in Seawater     | ~70 lb                         |

**5K / 10 GPM @ 50 HP supplied with:**

2 x 1/2" Hyd hose 3k PSI, 3m long c/w 8 JIC female S/S ends  
 2 x 1/2" Hyd hose 5k PSI, 4m long c/w 8 JIC swivel - 3/4" Tube  
 Adaptor Female S/S ends  
 PUMP SPARES KIT [0266348] Comprising of:  
 6 x Seal Piston 4" OD Glyd Ring T Turcon [0019531]  
 6 x Seal Piston 2.5" OD Glyd Ring T Turcon [0013098]  
 6 x Seal Shaft 2.5" OD x 2.375 ID Variseal with Coil Spring [0031803]  
 6 x Seal back-up Ring F Shaft Seal 2.50 OD Variseal [0031804]  
 1 x Valve Direction Control D05 NG10 Flow Sensing Switch [0025772]  
 6 x O-Ring 2-045 Buna N70 (I) [MB011-N20-45]  
 4 x 0.75 Tube 1 PSI 316SS CH Series [0219030]  
 8 x Screw Cap Socket Head 0.250-20 x 1.375 ASTM F879 316 SS Cold [MF191-S11-16]  
 2 x Kit, Repair Valve Check CH Series 16 1 9SI; Swagelok 302-13K-CH16-1 [0219029]  
 2 x Kit, Repair Valve Check Series 0.75 and 1 Swagelok SS-3KCH16-VI [0219032]

**5.5K / 3.5 GPM @ 15 HP supplied with:**

2 x 1/2" R2T Hyd Hose 3m long c/w 8 JIC F S/S ends  
 1 x 1/2" R2T Hyd Hose 4m long c/w 1/2" OD Straight x 45  
 Standpipe SS ends  
 2 x 3/8" Thermoplastic Hose rated to 5k 6m long c/w 6 JIC F x 1/2"  
 OD Standpipe  
 PUMP SPARES KIT [0266861] Comprising of:-  
 6 x Seal Piston 3.0 OD Glyd Ring T Turcon [0016267]  
 6 x Seal Piston 1.75" OD Glyd Ring T Turcon [0019534]  
 6 x Seal Piston 1.75" OD [0019535]  
 6 x Backup Piston Seal 1.75" OD [0019536]  
 1 x Valve Bucher Dir Control Size 3 [0023552]  
 4 x Screw Socket Head Cap 0.19-24UNC-2A x 1.25 ASTM F837  
 Type 316 Cold Worked [MF191-S09-15]  
 6 x O-Ring 2-041 Buna N70 (I) [MB011-N20-41]  
 2 x Valve Check Spares 0.375 in & 0.5 in [0024393]  
 2 x Valve Check Spares Spring Repair 1 PSI [0219025]  
 2 x Valve Check 0.375 Tube 1 PSI Cracking Pressure 6K PSI WP  
 316 SS [0032540]  
 8 x O-Ring 2-012 Buna N90 [MB011-H20-12]

**10.75K / 1.8 GPM @ 15 HP supplied with:**

2 x Hydraulic Hose - R2AT 1/2", 8 JIC to 8 JIC, 4m length  
 1 x Suction Hose - R2AT 3/8", 6 JIC to 6 JIC, 4m length  
 1 x High Pressure Hose - 1/4" Thermoplastic, 6 JIC to 6 JIC, 4m  
 length  
 1 x 6 - 8 JIC Reducer  
 1 x PUMP SPARES KIT [0266881-2] Comprising of:-  
 6 x Seal Piston 3.0 OD Glyd Ring T Turcon [0016267]  
 6 x Seal Piston 1.375 IN OD [0036019]  
 6 x Seal Shaft 1.375 OD x 1.250 ID [0036020]  
 6 x Seal Back up ring 1.375 IN OD [0036021]  
 6 x O-Ring 2-041 Buna N70 (I) [MB011-N20-41]  
 2 x Poppet O-Ring 20K PSI 0.375 316 SS [0027487]  
 2 x Valve Direction Control Size 3 [0023552]  
 1 x Pelican 1300 9.87 x 7.00 x 6.12 [0026417]  
 2 x Kit rebuild c/w Spring P-1269 Seat Poppet O-Ring for  
 Autoclave CX06600 [0264341]  
 8 x Screw Socket Head Cap 0.19-24UNC-2A x 1.25 ASTM F837  
 Type 316 Cold Worked [MF191-S09-15]  
 2 x Spring Compression 0.300 OD 0.024 wire 0.625 Free Length  
 302SS [0264949]

**12.5K / 5 GPM @ 50 HP (Methanol) supplied with:**

3x4m Long 1/2" 2RTA hose 3k WP c/w 8 JIC SS female swivel  
 Ends  
 2 x 2m Long 3/4" Thermoplastic Hose 3k WP c/w 12 JIC SS  
 Female Swivel Ends  
 2 x 4m Long 3/8" Thermoplastic Hose 15k WP c/w 3/8" BSP SS  
 Female Swivel Ends  
 1 x 9/16" Autoclave - 12 JIC Male - Male Medium Pressure  
 1 x 9/16" Autoclave - 3/8" BSP Male - Male Medium Pressure  
 PUMP SPARES KIT [0290238] Comprising of:  
 2 x Ring Spiral External 3 OD 2.1818 ID 0.093 THK 2 turn 17-7PH  
 [0277346]  
 2 x Ring Spiral Internal 3.338 OD 0.111 THK 3.125 Housing Dia 2  
 [0277347]  
 6 x O-Ring 2-334 AFLAS 7182D-80 [0277272]  
 6 x O-Ring Concave Backup 2.660 x 3.002 x 0.076 FH XH-ECOPUR  
 Unsplit [0276469]  
 6 x O-Ring Concave Backup 3.635 x 4.000 x 0.076 FH ECOTAL  
 Skive [0276466]  
 12 x O-Ring 2.327 AFLAS 7182D-80 [0277269]  
 24 x O-Ring Concave Backup 1.750 x 2.090 x 0.076 FH ECOTAL  
 Skive [0276468]  
 12 x O-Ring 2-142 AFLAS 7182D-80 (I) [MB011-A21-42]  
 24 x O-Ring Concave Backup 2.375 x 2.537 x 0.053 FH ECOTAL  
 Skive [0276467]  
 16 x Wear Strip 5.5mm wide 2.5mm Thk 1.75 IN ID Scarf Cut  
 [0277401]  
 8 x Wear Strip 5.5mm wide 2.5mm Thk 4.00 IN OD Scarf Cut  
 [0277402]  
 6 x O-Ring 2-045 BUNA N70 [0020522]  
 6 x O-Ring 2.342 AFLAS 7182D-80 [0277271]  
 4 x Spring 0.029 IN wire dia X 1.04 IN LG NOM at rest X 0.525 I  
 [0320112]  
 2 x Valve Direction Control Zero Flow Sensing Switch D05 NG10  
 [0025772]  
 2 x Valve Check Poppet O-Ring 20K PSI 0.5625 316SS [0025776]  
 2 x Kit rebuild with Spring P-1269 Sear Poppet O-Ring for  
 Autoclave [0290267]  
 8 x SCR CAP SCH 0.19-24UNC-2A X 1.25 F837-316 CW [0017780]

**17.5K / 1.1 GPM @ 15 HP supplied with:**

2 x 1/2" R2AT Hyd Hose 3m long c/w 8 JIC F S/S ends  
 1 x 1/2" R2AT Hyd Hose 4m long c/w 1/2" OD Straight x 45  
 Standpipe SS ends  
 2 x 3/8" Thermoplastic Hose rated to 5k 6m long c/w 6 JIC F x 1/2"  
 OD Standpipe  
 1 x PUMP SPARES KIT (I) [0270351] Comprising of:  
 6 x Seal Piston 3.0 OD Glyd Ring T Turcon [0016267]  
 6 x Seal Piston 1.125 " OD Glyd Ring Turcon (I)[0015013]  
 6 x Seal Shaft 1.125 " OD (I)[0015017]  
 6 x Seal Backup Ring 1.125 " OD (I)[0015018]  
 1 x Valve Bucher Dir Control Size 3 [0023552]  
 6 x O-Ring 2-041 Buna N70 (I)[MB011-N20-41]  
 2 x Poppet O-Ring 20k PSI 0.375 316SS [0027487]  
 4 x Kit Rebuild with Spring P-1269 Seat Poppet O-Ring For  
 Autoclave CX06600 [0264341]  
 2 x Spring Compression 0.300 OD 0.024 Wire 0.625 Free Length  
 302SS [0264949]  
 8 x O-Ring 2-012 BUNA N90 [MB011-H20-12]  
 8 x O-Ring 2-008 BUNA N70 [MB011-N20-08]

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