

**Triplex Plunger Pump, High-temp Seals****FEATURES**

- Features patented "high tech" packings:
  - dynamic low-pressure seal retainer
  - superior low-pressure seal
  - innovative intermediate ring
  - superior high-pressure seal
- Nickel-plated manifold
- New forged brass manifold, increases working pressure to 4,000 PSI
- New plunger guide bushing (patent pending)
- Solid ceramic plungers with dual guide system
- New dual diameter plunger guide
- New optimized outlet valves
- New dual lip oil seal

**SPECIFICATIONS**

| Pump Model                 | EPHT1810S (L)        | EPHT1812S (L)  | EPHT1813S (L)  |
|----------------------------|----------------------|----------------|----------------|
| Maximum Volume             | 3.3 GPM              | 3.9 GPM        | 3.4 GPM        |
| Maximum Discharge Pressure | 2,465 PSI            |                |                |
| Horsepower                 | 5.6 EBHP             | 6.6 EBHP       | 5.7 EBHP       |
| Maximum Pump Speed         | 1450 RPM             | 1750 RPM       | 1450 RPM       |
| Maximum Inlet Pressure     | 125 PSI              |                |                |
| Max. Inlet Vacuum          | 3 ft. water (2.6 Hg) |                |                |
| Plunger Bore (in / mm)     | .708 in./18 mm       |                |                |
| Plunger Stroke (in / mm)   | .394 in./10 mm       | .472 in./12 mm | .512 in./13 mm |
| Oil Capacity               | 14 oz.               |                |                |
| Maximum Fluid Temperature  | 185° F               |                |                |
| Inlet Port Thread          | 1/2"-14 BSP-F        |                |                |
| Discharge Port Thread      | 3/8"-19 BSP-F        |                |                |
| Shaft Diameter             | .945 in./24 mm       |                |                |
| Weight                     | 18.0 lbs.            |                |                |
| Dimensions - Nominal       | 9.5" x 8.38" x 5.1"  |                |                |

Available in left hand version, add L to part number



General Pump  
is a member of  
the Interpump Group



Ref 301115 Rev. A  
02-22



GENERAL PUMP

# Instructions and Recommendations for the Installation of *EPHT Series Pumps*

Maximum temperature of the water through the pump is 165°F (73°C).

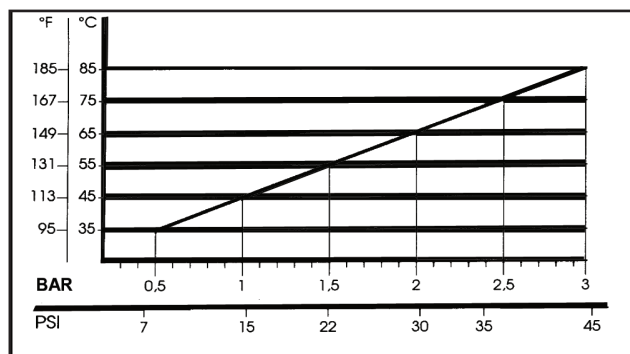
In order to obtain maximum performance in terms of duration of seals and valves, it is necessary to respect a few simple rules, as follows:

1) **In order to avoid damage caused by cavitation, the pump must be pressure fed.**

The higher the inlet pressure, the longer the life of the wet end of the pump.

When working at 165°F (73°C), the minimum feed pressure - measured directly in the inlet port of the pump when it is working - is 45 psi (3 bar).

The minimum feed pressure according to the different temperatures are:



Naturally, if the application allows for feeding the pump with 45 psi (3 bar) even at low temperatures (for example: 115°F/45°C the life of the wet end of the pump will be even longer.

2) **The plumbing which feeds the pump must be of a diameter at least equal to the inlet port.**

Also, follow the suggestions below:

a) Make the plumbing as short and straight as possible, preferably in an upward direction to facilitate the expulsion of eventual air bubbles naturally if compatible with the requirements of the system.

b) It is always useful to put a filter at the inlet with capacity of 4 to 5 times the flow of

the pump, for example for a 4 gpm (15 l/min) pump, put a filter from 16 to 20 gpm (60-75 l/min). The mesh size suitable for this application is 0.016" (.4 mm).

c) It is extremely important to put a pressure switch on the suction port of the pump, and in any case downstream from the filter, so that it can stop the pump should the feed pressure drop by 20% due to the filter clogging or failure of the feed pump, etc.

3) **Change of oil**

We recommend the **first oil change after the first 50 hours**, with the **pump stopped** and the **oil still warm**.

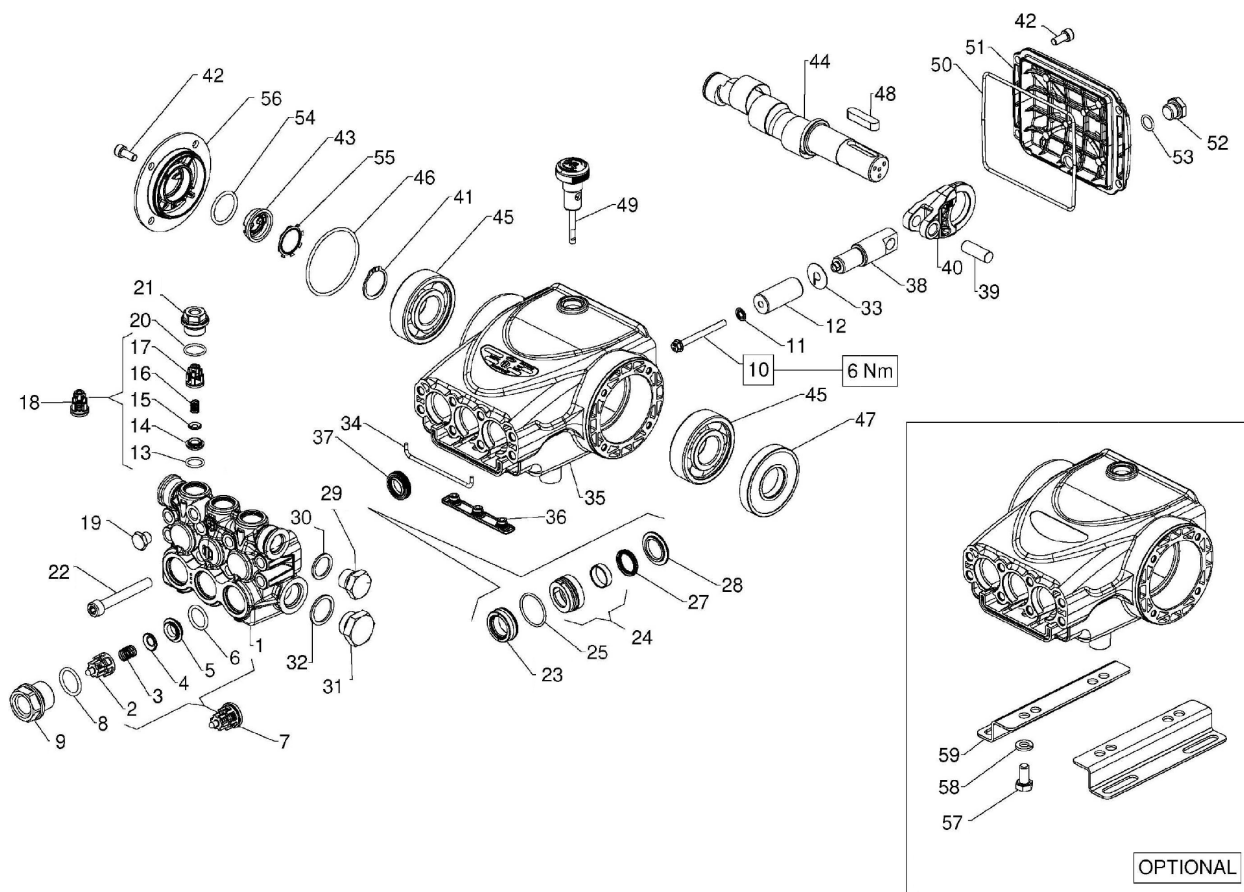
This change is not recommended because the oil has lost its properties, but rather to eliminate the impurities that have gotten into the oil during the running-in phase. If these impurities are not removed, but are allowed to remain in the oil, they *may cause premature wear* to the moving parts and the oil seals. **After this initial change, the oil can then be changed every three months or 300 hours of operation thereafter.**

Please note: If the pump works in conditions with high humidity and with sharp temperature changes, it is possible that condensation will appear inside the crankcase, which mixing with the oil can change its properties. This is easy to see because the oil changes to a white, milky color.

If the pump does not have excessive water leaking from the packings, and the oil becomes milky, the oil has to be changed more frequently. The percentage of water in the oil must not exceed 20%.

Use oil per the following chart:

| CHART OF COMPATIBLE OILS SAE15W40 |                  |
|-----------------------------------|------------------|
| General Pump                      | Series 100       |
| BP                                | VISCO 2000       |
| CASTROL                           | CWX              |
| MOBIL                             | SUPER            |
| SHELL                             | HELIX SUPER      |
| TOTAL                             | QUARTZ 4000-5000 |



### PARTS LIST

| ITEM | PART NO. | DESCRIPTION                  | QTY | ITEM | PART NO. | DESCRIPTION           | QTY | ITEM | PART NO. | DESCRIPTION           | QTY |
|------|----------|------------------------------|-----|------|----------|-----------------------|-----|------|----------|-----------------------|-----|
| 1.   | 58120741 | Manifold, Ø 18               | 1   | 23.  | 90221000 | Head Ring, Ø 18       | 3   | 44.  | 63021235 | Crankshaft, 10mm      | 1   |
| 2.   | 36202551 | Valve Cage                   | 3   | 24.  | 58606401 | Packing, Ø 18, HT     | 3   |      | 63021635 | Crankshaft, 12mm      | 1   |
| 3.   | 94737600 | Spring, Ø 9.4x14.8           | 3   | 25.  | 90360650 | Anti-ext. Ring, Ø 18  | 3   |      | 63021835 | Crankshaft, 13mm      | 1   |
| 4.   | 36200176 | Valve                        | 3   | 27.  | 90220000 | Intermed. Ring, Ø 18  | 3   | 45.  | 91833100 | Bearing, Premium      | 2   |
| 5.   | 36200366 | Valve Seat                   | 3   | 28.  | 58211270 | Support Ring, Ø 18    | 3   | 46.  | 90389800 | O-ring, Ø 56.82x2.62  | 1   |
| 6.   | 701115   | O-ring, Ø17.13x2.62          | 3   | 29.  | 98209900 | Plug, G3/8"x13        | 1   | 47.  | 90164100 | Oil Seal, Ø 25x62x10  | 1   |
| 7.   | 36726201 | Valve Assembly               | 3   | 30.  | 96738000 | Gasket, 17.5x23x1.5   | 1   | 48.  | 91489200 | Oil Dipstick          | 1   |
| 8.   | 90384750 | O-ring, Ø20.24x2.62          | 3   | 31.  | 98217900 | Plug, 1/2" BSPx10     | 1   | 49.  | 98210500 | O-ring, Ø 113.97x2.62 | 1   |
| 9.   | 98222500 | Valve Cap, M24x1.5x16.7      | 3   | 32.  | 96751400 | Gasket, Ø 21.5x27x1.5 | 1   | 50.  | 90392550 | O-ring, Ø 113.97x2.62 | 1   |
| 10.  | 99169000 | Plunger Bolt, M5x55          | 3   | 33.  | 96699000 | Washer, Ø 7.5x15x0.5  | 3   | 51.  | 58160022 | Rear Cover            | 1   |
| 11.  | 96690500 | Washer, Ø 5x11.5x0.4         | 3   | 34.  | 58210582 | Gasket, Ø 3x94        | 1   | 52.  | 98204250 | Plug, 1/4"x9          | 1   |
| 12.  | 58040200 | Plunger, Ø 18x42             | 3   | 35.  | 58010022 | Crankcase             | 1   | 53.  | 701013   | O-ring, Ø 10.82x1.78  | 1   |
| 13.  | 90367450 | O-ring, Ø 12.42x1.78         | 3   | 36.  | 58210451 | Drip Cover            | 1   | 54.  | 90385900 | O-ring, Ø 25.07x2.62  | 1   |
| 14.  | 36211366 | Outlet Valve Seat            | 3   | 37.  | 90156550 | Oil Seal, Ø 15x24x5.7 | 3   | 55.  | 90067100 | Stop Ring             | 1   |
| 15.  | 36211276 | Outlet Valve Poppet          | 3   | 38.  | 58050066 | Piston Guide          | 3   | 56.  | 58150122 | Side Cover            | 1   |
| 16.  | 94733300 | Spring, Ø 6.2x10.4           | 3   | 39.  | 97734000 | Piston Pin, Ø 10x29.5 | 3   | 57.  | 99303700 | Screw, M8x16          | 4   |
| 17.  | 36211151 | Outlet Valve Cage Guide      | 3   | 40.  | 58030022 | Connecting Rod        | 3   | 58.  | 96701600 | Washer, Ø 8.4         | 4   |
| 18.  | 36729801 | Complete Outlet Valve        | 3   | 41.  | 90063500 | Stop Ring Ø 25        | 1   | 59.  | 50200074 | Pump Foot             | 2   |
| 19.  | 98196700 | Plug                         | 3   | 42.  | 99183700 | Screw, M6x14          | 8   |      |          |                       |     |
| 20.  | 701016   | O-ring, Ø 15.6x1.78          | 3   | 43.  | 53210851 | Oil Level Indicator   | 1   |      |          |                       |     |
| 21.  | 98213750 | Outlet Valve Cap, M18x1.5x10 | 3   |      |          |                       |     |      |          |                       |     |
| 22.  | 99317500 | Screw, M8x60                 | 8   |      |          |                       |     |      |          |                       |     |

**REPAIR KITS**

| KIT NO.                       | K415   | K418         | K271 | K416       | K417               |
|-------------------------------|--|--------------|------|------------|--------------------|
| ITEM NO'S INCLUDED IN KIT     | 2, 3, 4, 5, 6, 13, 14, 15, 16, 17, (7), (18) | 8, 9, 20, 21 | 37   | 23, 25, 27 | 23, 24, 25, 27, 28 |
| NUMBER OF ASSY'S IN KIT       | 6  | 6            | 3    | 3          | 1                  |
| NO. OF CYLINDERS KIT SERVICES | 3  | 3            | 3    | 3          | 1                  |

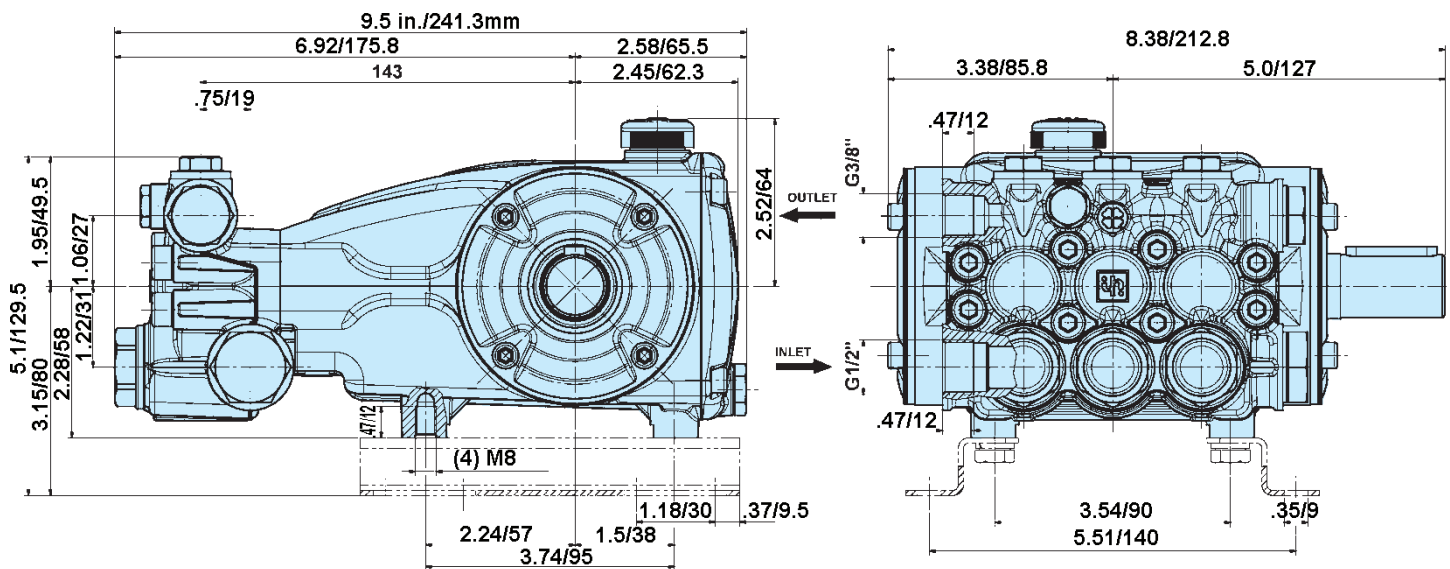
**TORQUE SPECS\***

| Position | Ft.-Lbs. | Nm. |
|----------|----------|-----|
| 9        | 96       | 130 |
| 10       | 4.5      | 6   |
| 19**     | 9.6      | 13  |
| 22       | 14.8     | 20  |
| 29**     | 30       | 40  |
| 31       | 30       | 40  |
| 42       | 7.4      | 10  |
| 52       | 14.8     | 20  |

\*Decrease torque by 20% if threads are lubricated.

<sup>1</sup> Note: Seal tool included

\*\*Use Loctite 542 Red

**DIMENSIONS**


**WARNING: High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices properly could result in personal injury or damage to pump or property. GP does not assume any liability or responsibility for the operation of the user's high pressure system.**



WARNING: This product can expose you to chemicals including lead, which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)