COMMISSIONING OF PUMPS
Model : 2RC / 2RCE and 12RC / 12RCE

Polyhydron pumps, model 2RC / 2RCE and 12RC / 12RCE are basically meant for mounting horizontally outside an oil tank .

For long life and satisfactory performance of the pump as well as the system , pay full attention to the instructions below while commisioning these pumps :

1. Use mineral hydraulic oil having viscosity range specified in the pump datasheet.

2. Ensure that the oil in the tank is maintained to the cleanliness grade mentioned in the pump datasheet.

3. At no time allow the oil level in the tank to fall 500 mm below the axis of the pump, when the pump is mounted horizontally, or 500 mm below the mounting face of the pump, when the pump is mounted vertically.

4. Ensure that the air is fully purged from the pump casing (and also from the Delivery side of the pump, if the pump is expected to run on pressure while commissioning the pump).

Note: The instructions below are written with an assumption that, the pump is mounted in the system and Suction, Delivery (and Air purge port on the Suction side and Air purge port on delivery side as the case may be) are already piped and oil is filled in the tank to the desired level.

There are different possibilities of installation, which may need different methods of air purging from the pump.

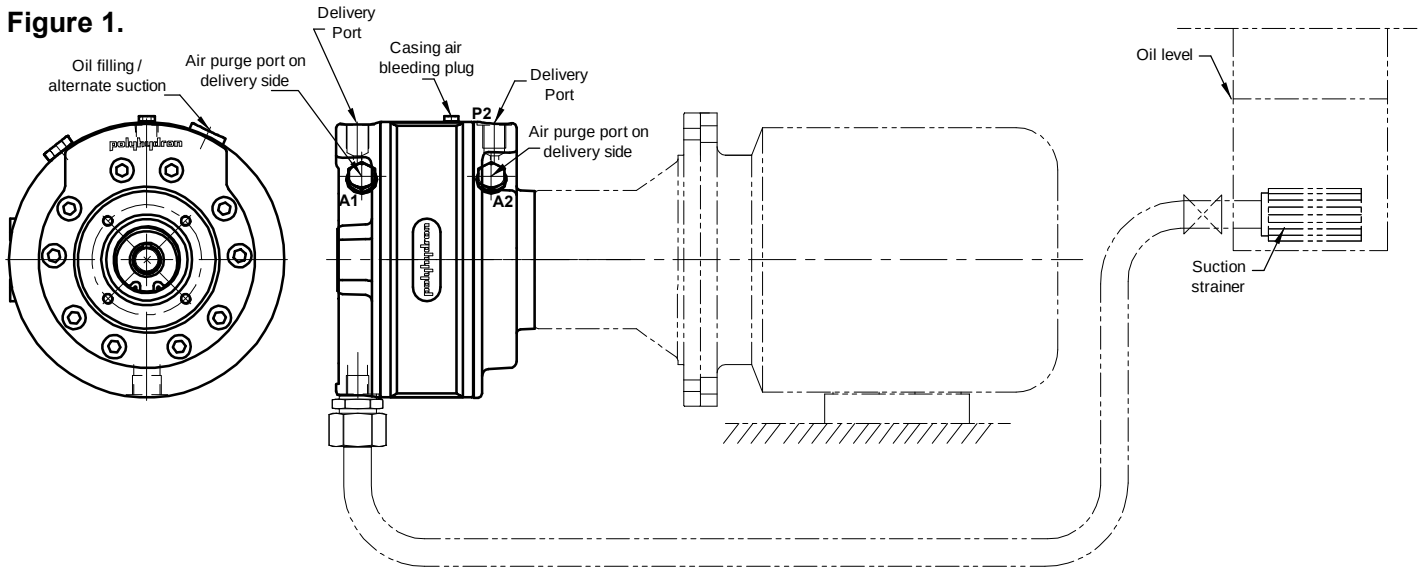
Case I (Refer figure 1. below)
Pump mounted horizontally outside the tank. Oil level always above the pump.

When the pump axis is about ≥100 mm below the oil level (Pump horizontally mounted), or pump mounting face is about ≥100 mm below the oil level (Pump vertically mounted), adopt the following procedure for purging the air from the pump.

1. Before running the pump, loosen the Air bleed plug provided on the pump. Oil with air bubble will immerge from the side of the plug. Re-tightened once a clear stream of oil (without air bubble) is observed.

2. In the cases, on starting if the pump outlets are directly subjected to pressure, then it is essential that the outlet ports (P1 and P2) are also purged. To do this, run the pump and loosen the Air purge plugs (A1 and A2) provided on delivery side of the pump. The air purge plugs then must be re-tightened once a clear stream of oil (without air bubble) is observed emerging out of the port.

Figure 1.



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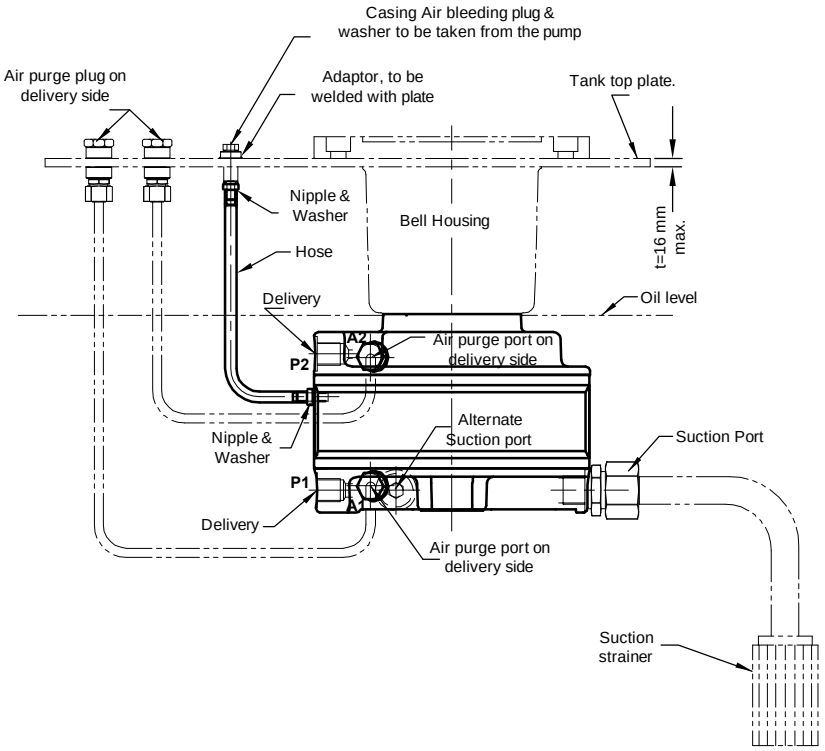
Case II (Refer figure 2. below)
When the pump is mounted vertically inside the tank. Oil level always above the pump.

1. In this case, assemble the Kit of pipe and nipples provided with the pump as shown below. Construct the piping at the delivery side air purge port as shown in figure. Before running the pump, loosen the Casing air bleeding plug, wait for few minutes to fill the oil in the pump casing. Now re-tighten the air bleed plug firmly.

2. In the cases, on starting if the pump outlets are directly subjected to pressure, then it is essential that the outlet ports (P1 and P2) are also purged.To do this, run the pump and loosen the Air purge plugs (A1 and A2) provided on delivery side of the pump. The air purge plugs then must be re-tightened once a clear stream of oil (without air bubble) is observed emerging out of the port.

Figure 2.



Case III (Refer figure 3. below)
Pump mounted horizontally outside the tank. oil level is always below the pump axis.

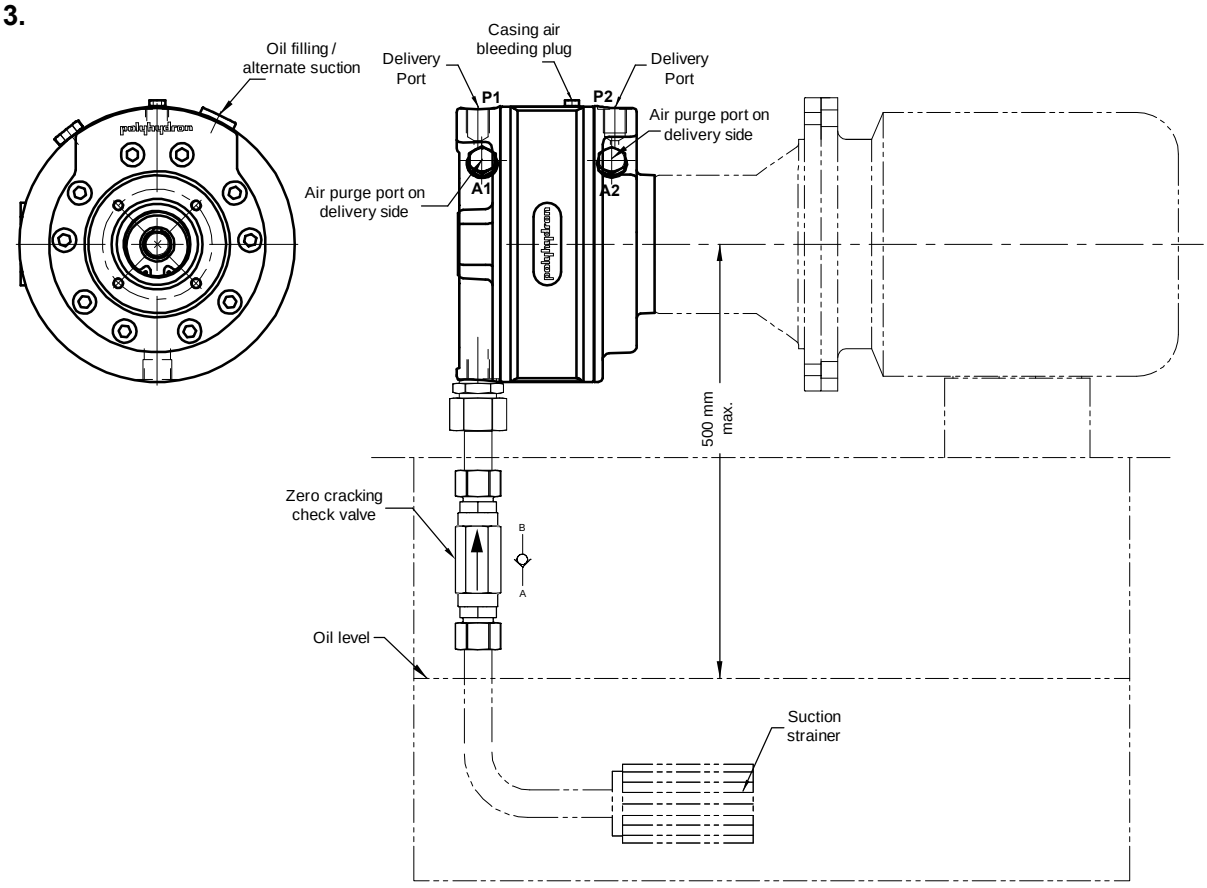
While commissioning the pump, if the pump axis is above the oil level (Pump horizontally mounted) adopt following procedure for purging the air from the pump.

1. Install a zero cracking pressure Check valve (ref models given below) at the bottom of the suction line. It is also important to confirm that the Check valve remains in vertical position, when installed.(see figure no. 3 below).

2. Before running the pump fill the casing completely with oil from 'Oil filling / alternate suction port' provided on pump. Fill the oil though the oil filling port keeping the air bleed port open and till oil emerges out of it, then close and tighten both the ports with plug firmly. Please remember that loose plug or plug without seals may allow air to enter the pump casing, causing malfunctioning of the pump.

3. In the cases, on starting if the pump outlets are directly subjected to pressure, then it is essential that the outlet ports (P1 and P2) are also purged.To do this, run the pump and loosen the Air purge plugs (A1 and A2) provided on delivery side of the pump. The air purge plugs then must be re-tightened once a clear stream of oil (without air bubble) is observed emerging out of the port.

Figure 3.



Check valve model codes. (To be ordered seperately)

1. 1R- Series :- C10T03.

2. 11R- Series :- C20T03.

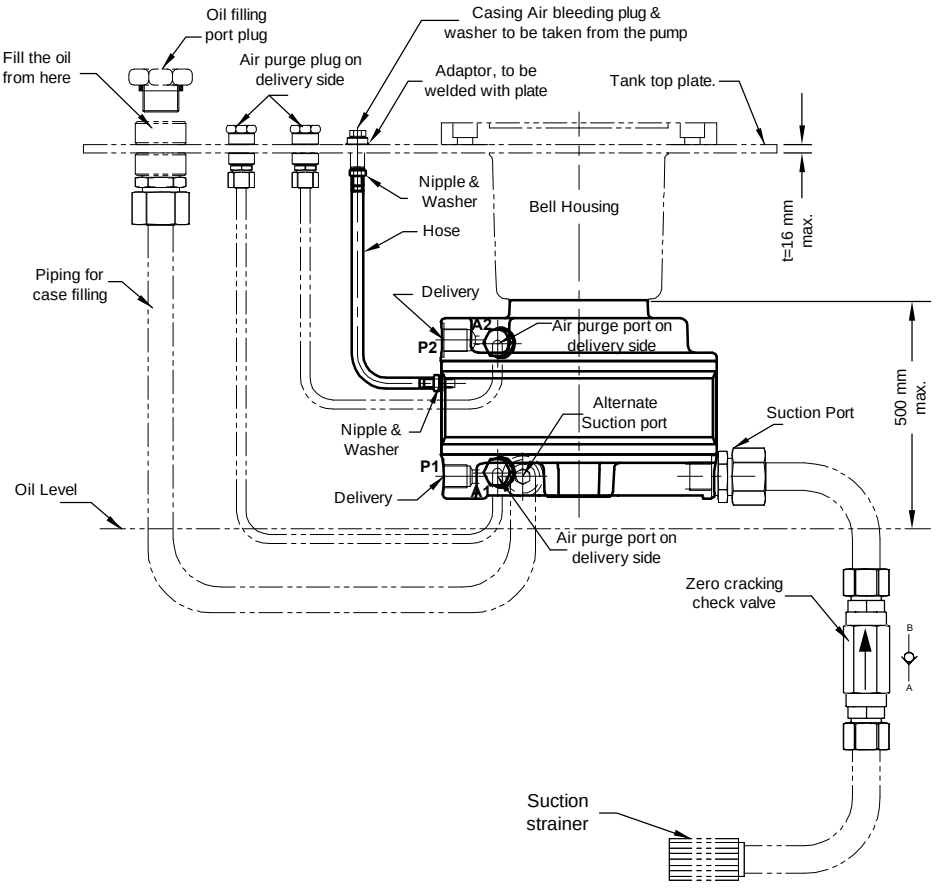
Case IV (Refer figure 4. below)
Pump pounted inside the tank. oil level is below the pump.

1. In this case, assemble the Kit of pipe and nipples provided with the pump as shown below. Construct the piping at the alternate suction port and delivery side air purge port as shown in figure. Install a zero cracking pressure Check valve at the bottom of the suction line. It is also important to confirm that the Check valve (ref models given on previous page) remains in vertical position, when installed.(see figure no. 4 below).

2. Fill the oil though the oil filling port keeping the Casing air bleed port open and till oil emerges out of it , then close and tighten the Casing air bleeding port with plug firmly. Please remember that loose plug or plug used without seals may allow air to enter the pump casing, causing malfunctioning of the pump.

3. In the cases, on starting if the pump outlets are directly subjected to pressure, then it is essential that the outlet ports (P1 and P2) are also purged. To do this, run the pump and loosen the Air purge plugs (A1 and A2) provided on delivery side of the pump. The air purge plugs then must be re-tightened once a clear stream of oil (without air bubble) is observed emerging out of the port.

Figure 4.



The pump is now ready for operation.

Special note :

Polyhydron has developed special Foot valves for these pumps, which :

1. Need small space in the tank, may reduce depth of the tank.
2. Need no additional couplings, can be assemble quickly, less labour cost.
3. Less component cost.

For details, please refer datasheet no. D12400 at www.polyhydron.com