COMMISSIONING OF PUMPS
Model : 1RC / 1RCE and 11RC / 11RCE

Polyhydron pumps, model 1RC / 1RCE and 11RC / 11RCE 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 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)

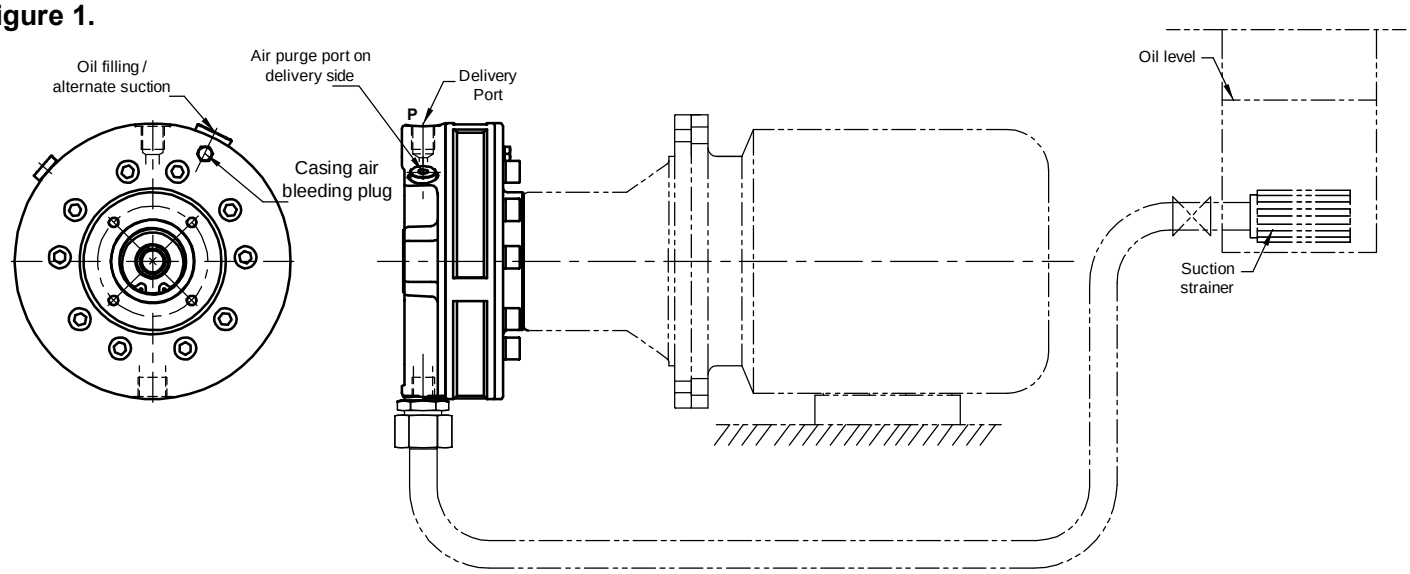
When the pump axis is about ≥100 mm below the oil level (Pump horizontally mounted), or pump mounting face is about ≥100 mm below the oil level (Pump vertically mounted), adopt the following procedure for purging the air from the pump.

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 outlet is directly subjected to pressure, then it is essential that the outlet port is also purged. To do this , run the pump and loosen the Air purge plug provided on delivery side of the pump. The air bleed plug then must be re-tightened once a clear stream of oil (without air bubble) is observed emerging out of the port.

The pump is now ready for operation.

Figure 1.



Case II (Refer figure 2. below)

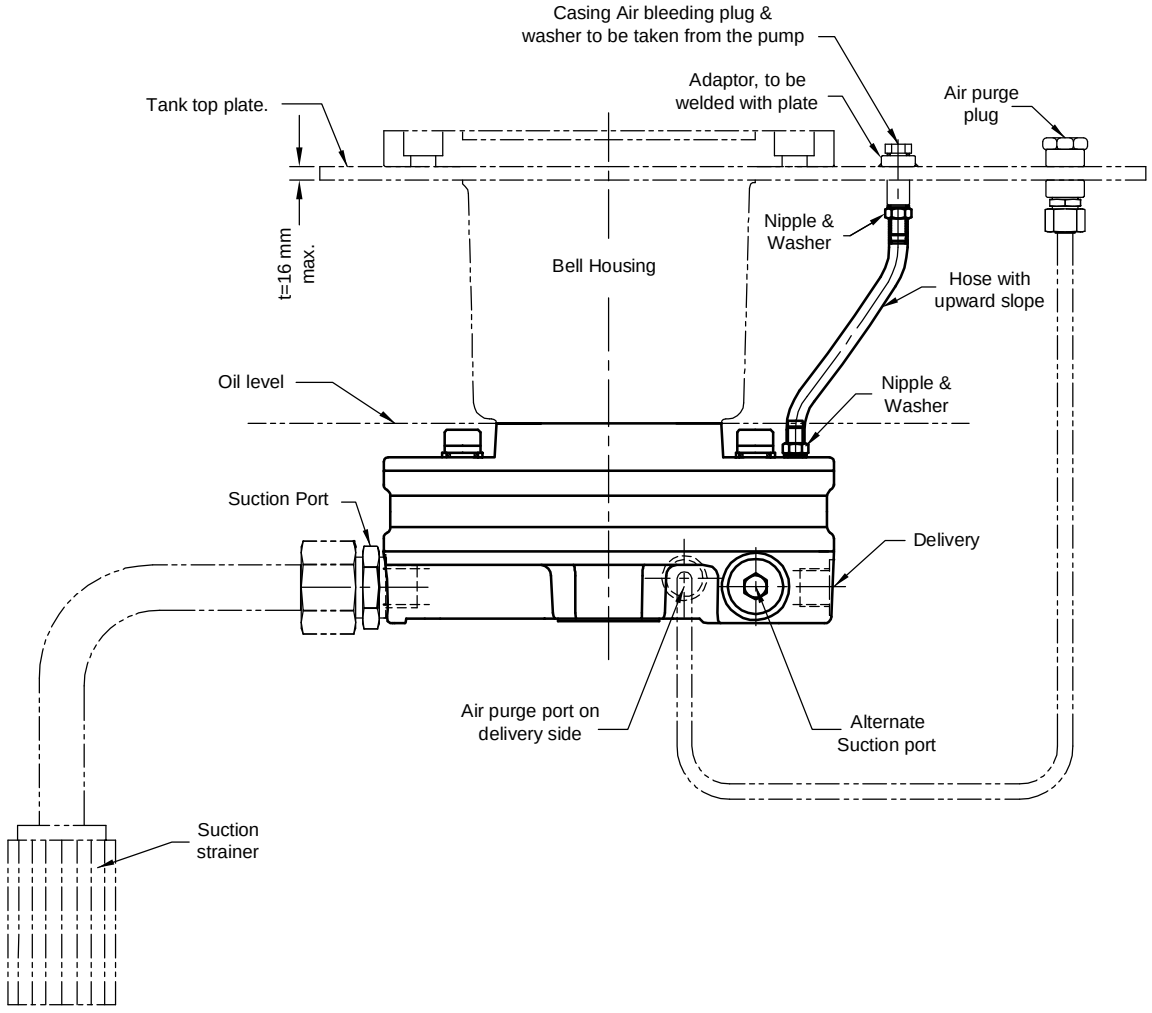
When the pump is submerged in the oil.

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 outlet is directly subjected to pressure, then it is essential that the outlet port is also purged. To do this, run the pump and loosen the Air purge plug provided on delivery side of the pump. The air bleed plug then must be re-tightened once a clear stream of oil (without air bubble) is observed emerging out of the port.

The pump is now ready for operation.

Figure 2.



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Case III (Refer figure 3. below)

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.

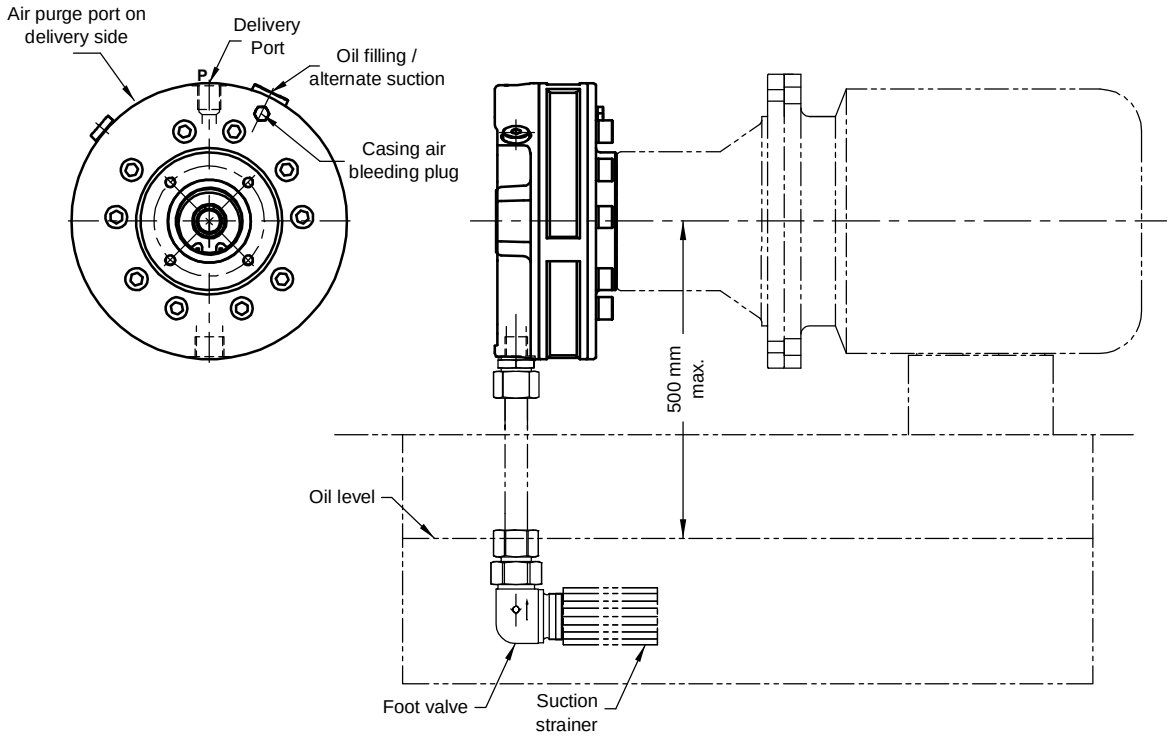
1. Install a Foot valve (ref models given below) at the bottom of the suction line. It is also important to confirm that the Foot valve remains in vertical position, when installed (see figure no. 3 below).

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 outlet is directly subjected to pressure, then it is essential that the outlet port is also purged. To do this, run the pump and loosen the Air purge plug provided on delivery side of the pump. The air bleed plug then must be re-tightened once a clear stream of oil (without air bubble) is observed emerging out of the port.

The pump is now ready for operation.

Figure 3.



Foot valve model codes. (To be ordered seperately)

1. 1RC pump series :- FT16G08

2. 11RC pump series :- FT20G10

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Case IV (Refer figure 4. below)

When the pump is mounted vertically and inside the tank.

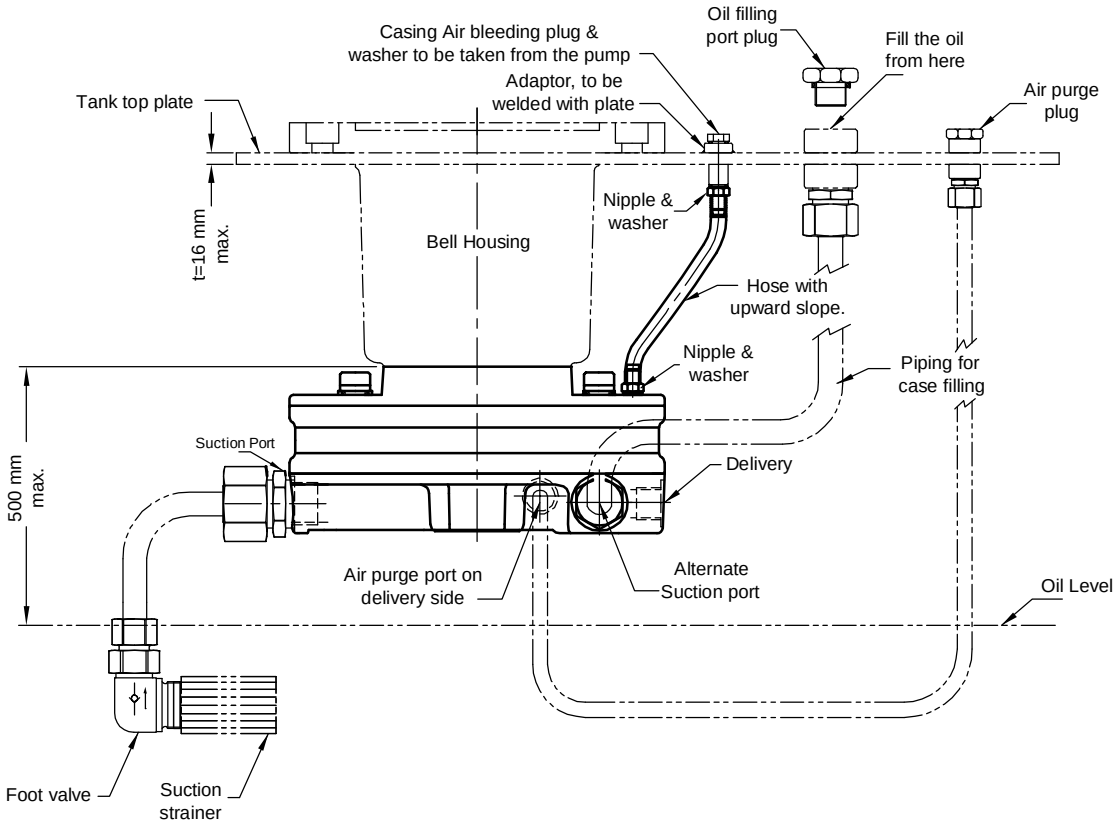
1. In this case, assemble the Kit of pipe and nipples provided with the pump as shown below. Construct the piping at the alternate suction port and delivery side air purge port as shown in figure. Install a Foot valve at the bottom of the suction line. It is also important to confirm that the Foot valve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

2. 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 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 outlet is directly subjected to pressure, then it is essential that the outlet port is also purged. To do this, run the pump and loosen the Air purge plug provided on delivery side of the pump. The air bleed plug then must be re-tightened once a clear stream of oil (without air bubble) is observed emerging out of the port.

The pump is now ready for operation.

Figure 4.



Foot valve model codes. (To be ordered seperately)

1. 1RC pump series :- FT16G08

2. 11RC pump series :- FT20G10

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