

GENERAL PUMP AND INSTALLATION INFORMATION

MOUNTING

Locate the Load bank in a suitable position in accordance with the hydraulic, pumping and electrical requirements set out in this manual.

Refer to the "Hydraulic General Arrangement", the "Pump Installation Guide Lines" and the "Electrical Schematic Arrangement"

Bolt down the base of the assembly using the 4 mounting holes provided.

NOTE: If it is necessary to remove the base and/or to mount the system, vessel or pump separately, ensure that complete electrical ground isolation is maintained by retaining the rubber isolators on the mounting feet of the vessel..

When connecting plumbing by use of wrenches, it is critical not to strain or load the connections on the carbon vessel or it's associated fittings and rubber mounting points. Alignment with the connecting inlet and discharge pipe-work with the vessel connections is important, so stress to the composite vessel does not occur.

- Do not remove the rubber mounting feet as they are critical for galvanic and vibration insulation.
- The Hump Hose connections must always be used to connect pipework.
- Take care not to strain the carbon vessel in this process.
- If disconnecting the plumbing, always hold the adaptor fitting on the vessel with a wrench. This will prevent turning in the body and subsequent gasket damage.
- Do not damage or scratch the surface of the carbon vessel. If this occurs, touching-up with resin to repair the surface is recommended.

Recommended pipe sealant: Loctite 577 (See note under "Plumbing")

Touch up any damaged paint work after installation.

PLUMBING

The plumbing arrangement of the unit is extremely important to the system's operation and life expectancy. Pipe size nominated for the discharge must not be reduced and the system must be free of back-pressure. If necessary, step-up the size of the pipework.

INLET: Suction lift is approx. 6.5 Metres (21ft)
Only use the Hump Hose couplings supplied.
Connect a MINIMUM 40mm (1 1/2") supply line from the sea chest. Increase to 2" (50mm) to allow for losses on pipe runs greater than 12 feet.
Note: The coupling allows for the incoming pipe to be rotated to suit.

STRAINER: The inlet pipe line, if not connected to the sea chest, should be fitted with a strainer with an inlet area six times the pipe diameter to prevent solids from entering the system.

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OUTLET: Discharge head is approx 6.5 metres (21ft)
Only use the Hump Hose couplings supplied.
Connect a MINIMUM 40mm (1 1/2") discharge line to overboard. Increase to 2" (50mm) to allow for losses on pipe runs greater than 12feet.

DRAIN: Connect a suitable drain line from the vessel to the bilge tank.
Note: Use only the 1/2" Nylon adapter supplied to make the connection.

Pipe Sealant

Loctite 577 pipe thread sealant is used on the pipework and fittings. The sealant cures to a hard consistency and must be heated to re-plasticise for any fitting is to be removed. Using a hot air blower, apply heat to the area requiring removal, heating to approximately 65°C (150°F).

PUMP

The system is supplied with a self-priming centrifugal pump. Care should be taken to ensure that the discharge port has approximately 300mm (12") of head to ensure the system remains flooded at all times. Do not run dry and ensure correct rotation.

SUCTION PIPING

Above water line installation

The suction line must be airtight. The line should be installed so it rises to the pump or run horizontally. The line should not peak and fall into the pump, creating air pockets.

Below water line installation

The suction line must be airtight. Ensure that the line installed has minimum bends without rise and falls.

DISCHARGE PIPING

The discharge should not have a CHECK VALVE. Check or one way valves prevent the pump from purging air, preventing self-priming. Gate valves in the line must be open at all times during operation.

PUMP

- Prior to commissioning, fill the system with water through the filler cap provided on the pipe work.
- Self-priming pumps must be filled with water at start-up, thereafter they remain primed. Remove the plastic cap at the top of the pump to check if the priming chamber is full. Fill as necessary; replace plug prior to starting.
- **Ensure supply and discharge valves are open prior to start-up.**
- Check that the pump is rotating in the correct direction by switching on for a few seconds. Do not run dry. Refer to arrow on pump motor. Alternate any two phases at the control box terminals to correct.

The length of time to fully prime depends on the vertical suction lift and the length of the pipe from the source. eg. a vertical lift of 4 metres (12 ft) may take up to 3 minutes depending on air in the system.