

# INSTALLATION INSTRUCTIONS

Required NPSH refers to water: Specific weight 1kg/dm<sup>3</sup>, viscosity 1°E at maximum permissible revolutions .

## Ambient Conditions

Ambient temperature:  $5\text{ °C} < T_{\text{Amb.}} < 30\text{ °C}$

## Operation and Maintenance

Check oil level prior to starting and ensure trouble-free water supply .

**!Important!** If there is a **danger of frost**, the water in the pump and in the pump fittings (particularly the unloader valve) must be emptied. The second discharge port can also be used and the pump run 'dry' for 1-2 minutes for this purpose.

**Oil:** Use only 8.1 ounces (0.24 litres) of Giant Oil (p/n 01154) ISO VG 220 GL4 (e.g. Aral Degol BG220) or SAE 90 GL4 gear oil.

Initial change after 50 operating hours and then every 500 operating hours. In either case change the oil once per year.

**Caution!** When operating in damp places or with high temperature fluctuations. Should condensate (frothy oil) occur in the gear box the oil must be changed immediately.

## Keep NPSH under control.

Maximum input pressure 145 PSI (10 bar), maximum suction head -4.35 PSI (-0.3 bar). Make sure that suction pulsation is sufficiently dampened - water column resonance must be avoided.

## Installation/Putting into Operation

To Turn Drive Shaft to the Other Side

Remove the valve casing.

Turn the seal adapters (20) by 180° also so that the leakage holes are underneath.

Remount valve casing rotated 180°.

Interchange plug (5) and oil dipstick (2) with each other.

Turn crankcase cover (3) by 180°.

## Direction of pump rotation

When looking at crankshaft with valve casing mounted on left-hand side, counterclockwise direction of rotation.

When looking at crankshaft with valve casing mounted on right-hand side, clockwise direction of rotation.

## Suction line filter

Recommended mesh size 150 µm.

## Safety Rules

Pump operation without safety valve as well as any excess in temperature or speed limits, automatically voids the warranty . The safety valve must be regulated in accordance with the guidelines for liquid spraying units so that the maximum admissible operating pressure can not be exceeded by more than 10 %.

When the pump is in operation, the drive shaft end and the coupling must be covered up by either a contact-protector or by a coupling bell.

Before any maintenance to the pump takes place the pressure in discharge line and in pump must be at zero. Close suction line. Disconnect fuses to ensure that the driving motor is not accidentally switched on.

Make sure that all parts on the pressure side of the unit are vented before starting the pump. In order to prevent air, or an air-water-mixture being absorbed and to prevent cavitation occurring, the pump-NPSHR suction head and water temperature must be kept under control.

**Cavitation and/or compression of gases lead to uncontrollable pressure-kicks which can ruin pump and unit parts and also be dangerous to the operator or anyone standing nearby.**

Giant Plunger Pumps are suitable for pumping clean water and other non-aggressive or abrasive media with a specific weight similar to water.

**Before pumping other liquids - especially inflammable, explosive and toxic media - the pump manufacturer must under all circumstances be consulted with regard to the resistance of the pump material. It is the responsibility of the equipment manufacture and/or operator to ensure that all pertinent safety regulations are adhered to.**