



**INSTALLATION AND OPERATING  
INSTRUCTIONS FOR  
HPR PUMPS**

**Bulletin No.  
HPR 000  
10.89/003/04**

Page 1

**Installation:** The installation of the Linde HPR pumps must be carried out in accordance with the circuit and/or piping diagram

**Filtration:** A filter of 10-25 micron must be fitted in the circuit either as a by-pass filter, or as a return line filter in the oil line leading from the consumer to the tank.

**Venting:** Positive venting is vital for the correct operation of the hydraulic pump. Venting must be done from the highest vent port, depending on the mounting position, so that the pump housing is completely filled with oil, and must be connected to the reservoir –below the oil level-. The vent line has to be sized and the tank has to be installed in such a way that the maximum case pressure does not exceed 30 psi.

**Suction:** The suction line must be mounted continuously rising towards the reservoir, and must be of adequate supply as to guard against cavitation. A pressurized inlet should be kept to a maximum of 20 psi.

**Piping:** Pipe work should be seamless drawn precision steel tube to DIN 2391/C, or hose of suitable pressure rating. During installation, close attention should be paid to cleanliness. Cleanliness of the circuit before commissioning is crucial to the operation of the hydraulic system, and will influence the life expectancy.

**Filling:** The initial filling of the system must be carried out in such a way that all the air can escape from the highest pressure circuit, and from the housing before the system is operated. Oil should be introduced into the reservoir and the hydraulic system through a filtering device to ensure cleanliness.

**Initial Start-up:** Start the prime mover three to five times at one minute intervals and allow the pump to rotate for 10 seconds each time. Warm the system up with steadily increasing speed and pressure so that any air may be purged from the fluid.



INSTALLATION AND OPERATING  
INSTRUCTIONS FOR  
HPR PUMPS

Bulletin No.  
HPR 000  
10.89/003/04

Page 2

**Maintenance:** Routine maintenance should be limited to changing the system filter element and the hydraulic pressure fluid. The high pressure lines should not be opened! After the initial start-up, the filter should be changed at 100 hours, and then every 500 operating hours afterwards. The high pressure fluid must be changed after 1000-2000 operating hours, depending on the application. The instructions regarding the initial filling recommends using only premium grade hydraulic oil with a viscosity of approximately 300 SUS at 100 degrees F. The minimum allowable viscosity is 50 SUS at any time. The maximum allowable operating temperature is 210 degrees Fahrenheit and the maximum viscosity for cold start is 3000 SUS.

**Service:** Repair should only be undertaken by skilled personnel who are familiar with the equipment. Only spare parts shown in the Linde spare parts catalog should be used.