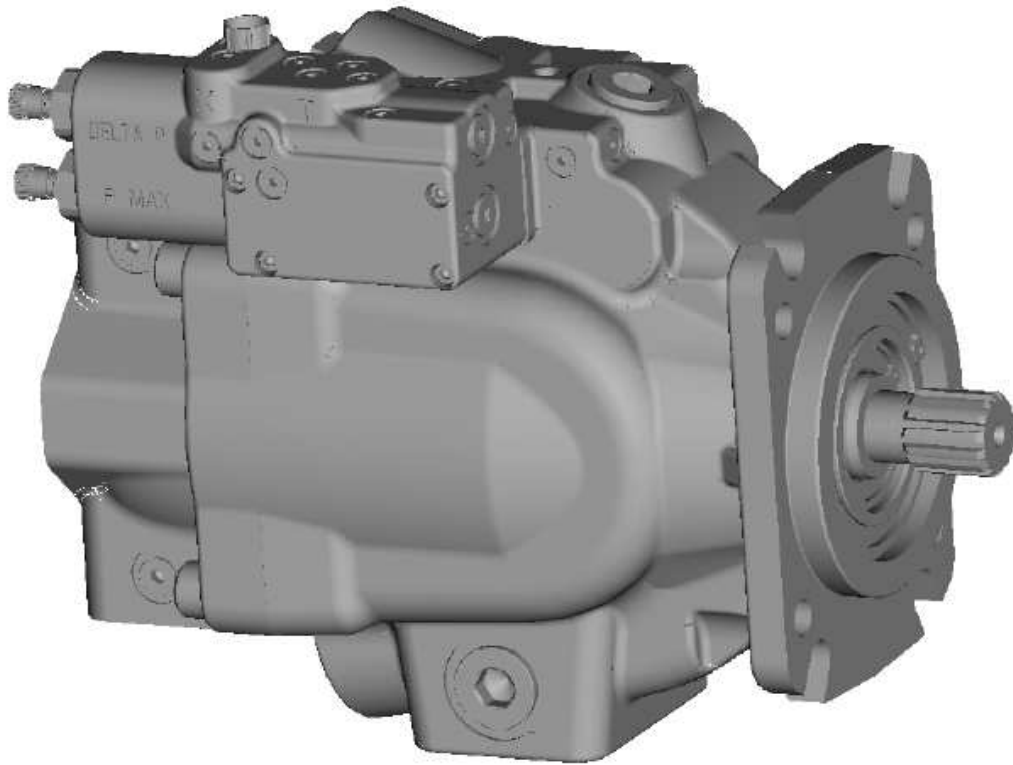




INSTALLATION MANUAL

SERIES P2 and P3

MOBILE PISTON PUMP



PUMP AND MOTOR DIVISION

Neefestraße 96

09116 Chemnitz, Germany

1 Check model code / compare with your paper work



Nameplate of the pump

090804: Umbeh Chemnitz Telefon: +49 (0)371 3321-0 Fax: +49 (0)371 33 21-10 E-Mail: 090804@parker.com www.parker.com/deutschland		Industriepark Dübener Park 42 (Ex-Works) 09126 Chemnitz Telefon: +49 (0)371 33 21-10 Fax: +49 (0)371 33 21-10		
DP1 1028903				
Hydraulic Group - Hersteller: 38 - D-09116 Chemnitz				
Käufer/Hersteller: Oy Yllisteite 16 01510 VANTAA Finnland		Order No.: 575883 SZ 15.10.02 Sales Confirmation: C.KUMERT 02121819-305F-289 Buyer's Order No.: 1199 Group We warrant our products to be free of material defects under normal use. Please refer to the terms of our warranty and repair on the backside.		
14502879				
PD1375285				
Parker Hydraulic Oy Yllisteite 16 01510 VANTAA Finnland		Shipment Condition: Ex works (Pack. incl. / Fr. ag. / m.) Shipment Method: UPS STANDARD		
Part Number Description	Shipped	Unit Decimals: 0	Unit List Price Base Price	Extended Price Descr. Code

Ordering / Sales Acknowledgement

2 Check rotation of the pump



Clockwise rotation (right) - side ported P2



Counter clockwise rotation (right) - side ported P2



Clockwise rotation (right) - thru drive P3



Counter clockwise rotation (right) - thru drive P3



3 Suction, pressure and drain line connection

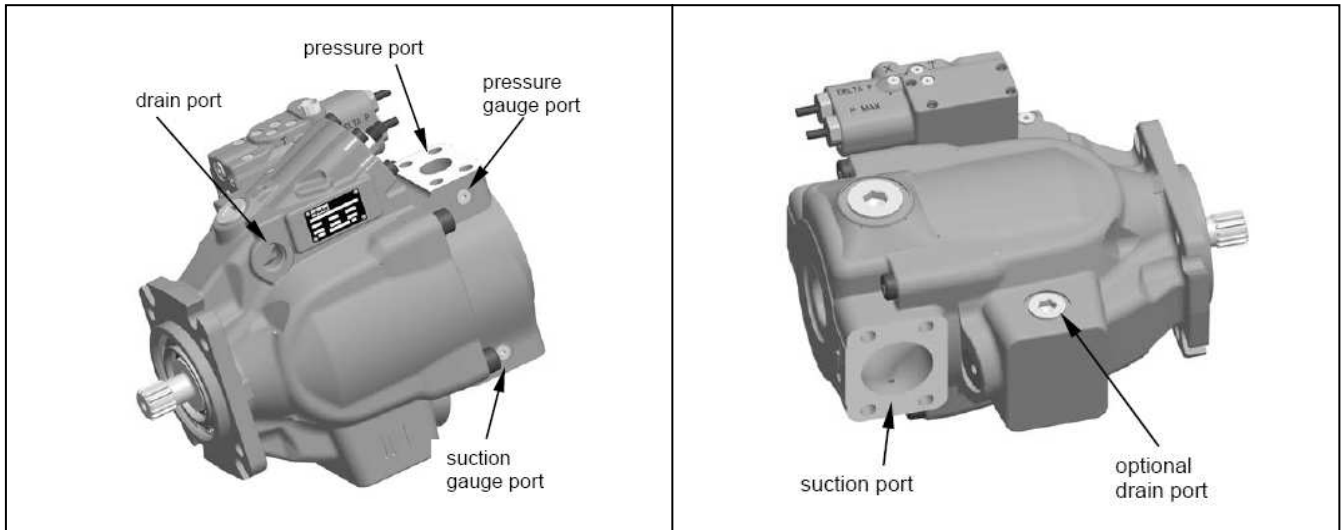
3.1 Connection P2

Minimum pump inlet pressure under static and dynamic load:

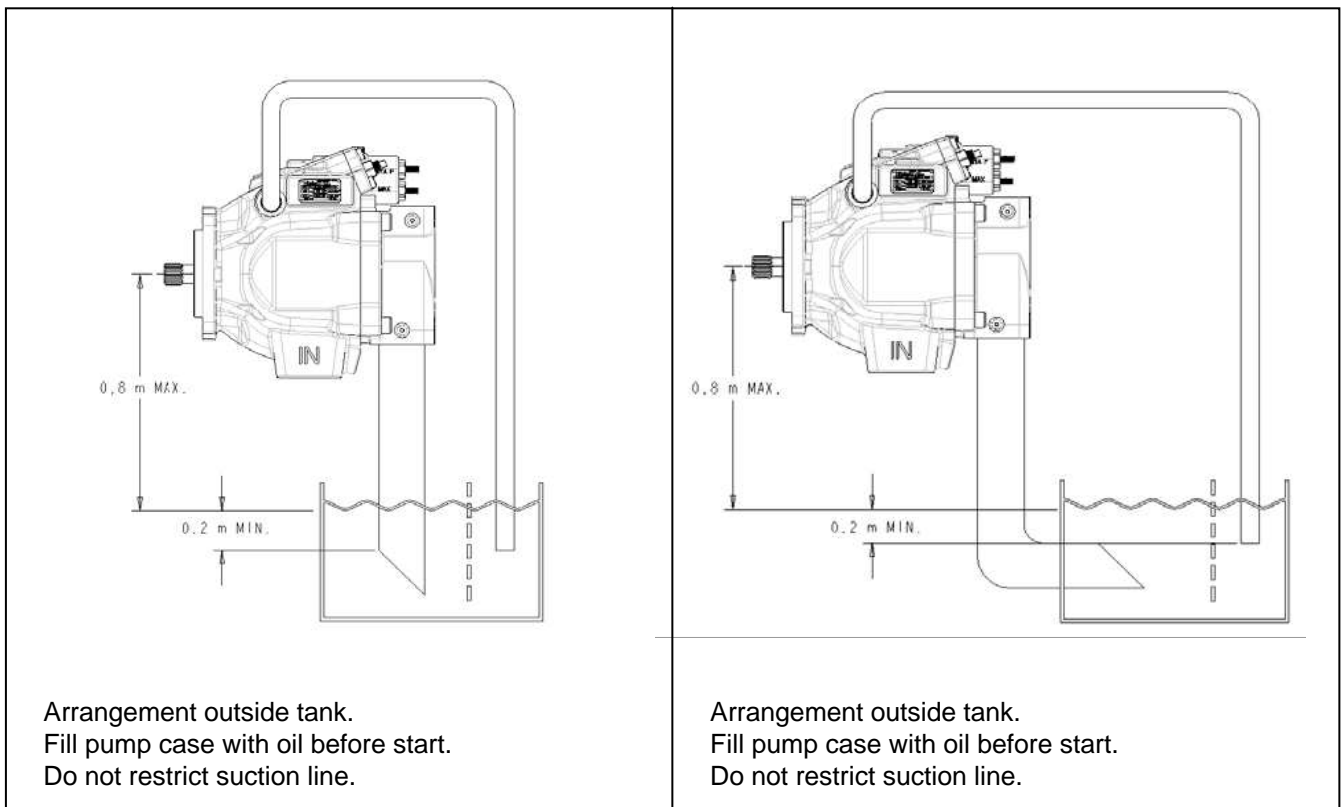
$P_{in\ min} = 0,8\ \text{bar absolute}$

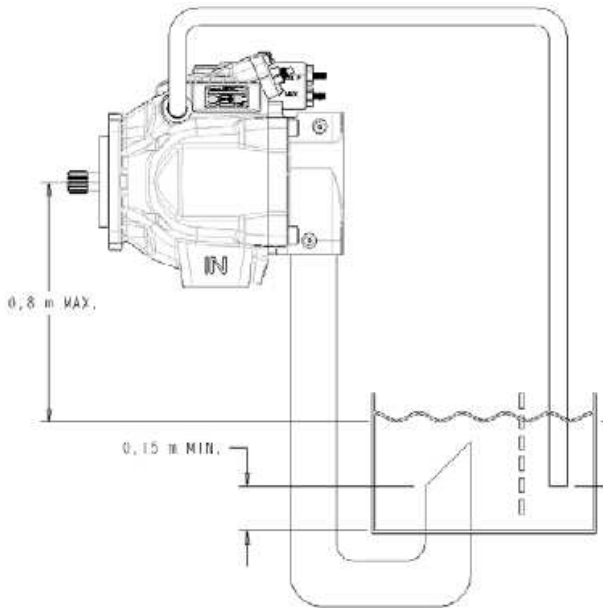
Maximum pump inlet pressure:

$P_{in\ max} = 10\ \text{bar}$

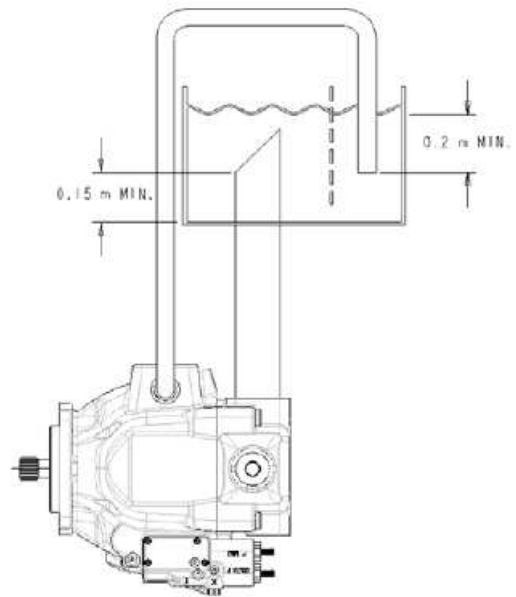


3.1.1 Arrangements P2



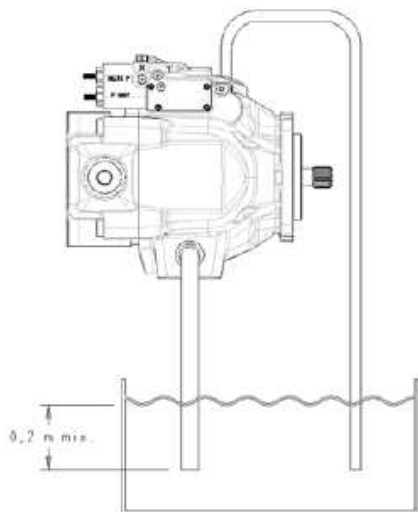


Arrangement outside tank.
 Fill pump case with oil before start.
 Do not restrict suction line.



Arrangement outside tank.
 Fill pump case with oil before start.
 Do not restrict suction line.
Preferred arrangement for best suction characteristics + low noise level operation

3.1.2 Drain line connection P2

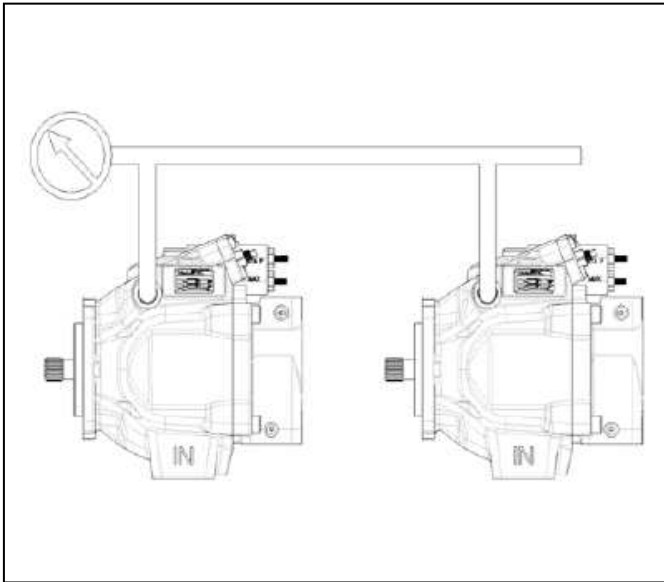


OPTION!

Connect highest drain port with a separate line reduced in size for purging the air out of the case

AND

secondary drain port has to be connected as main drain line.



WARNING!

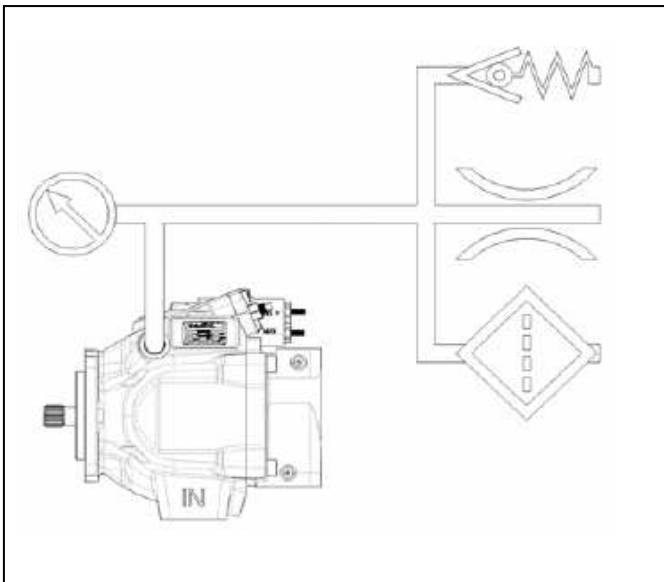
Don not combine drain lines.

Maximum continuous case pressure:

$p_{\text{case}} = 0,5 \text{ bar}$

Maximum intermittent peak case pressure:

$p_{\text{case}} = 2 \text{ bar}$



WARNING!

Don not restrict drain line.

A restricted drain line can damage the pump.

3.2 Connection P3

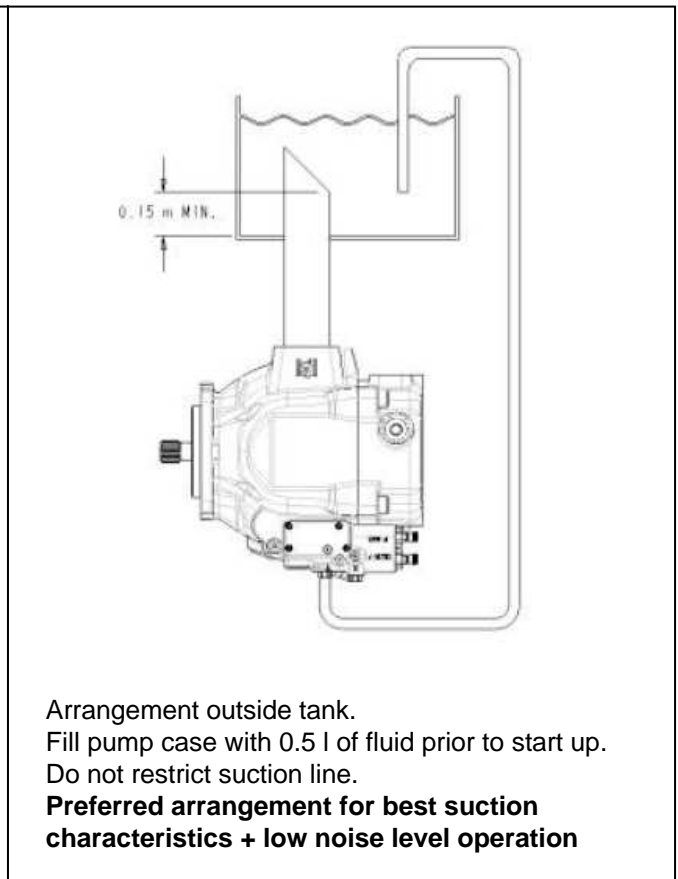
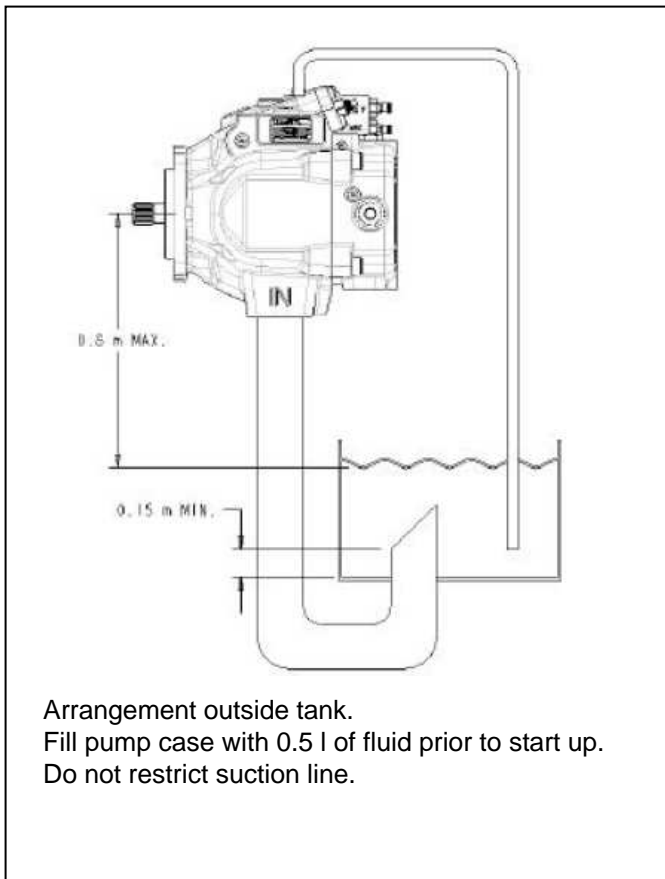
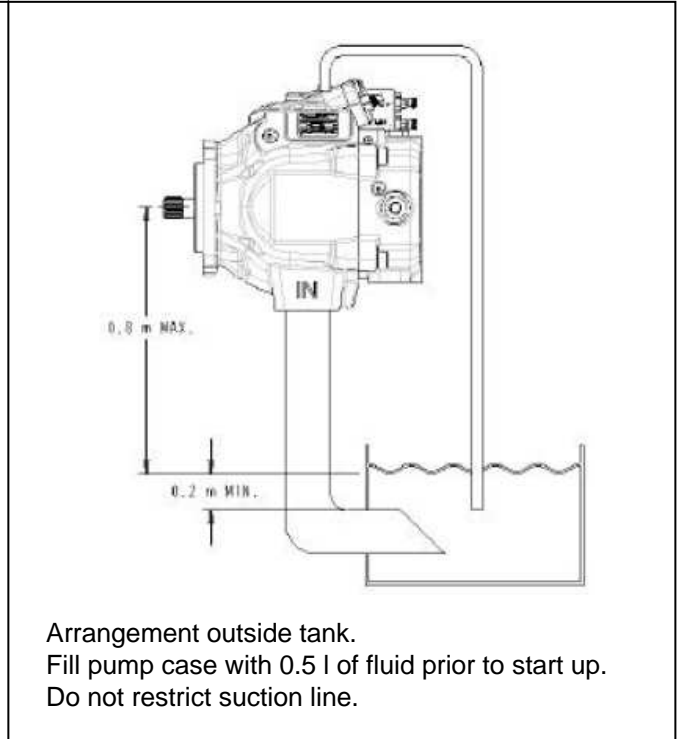
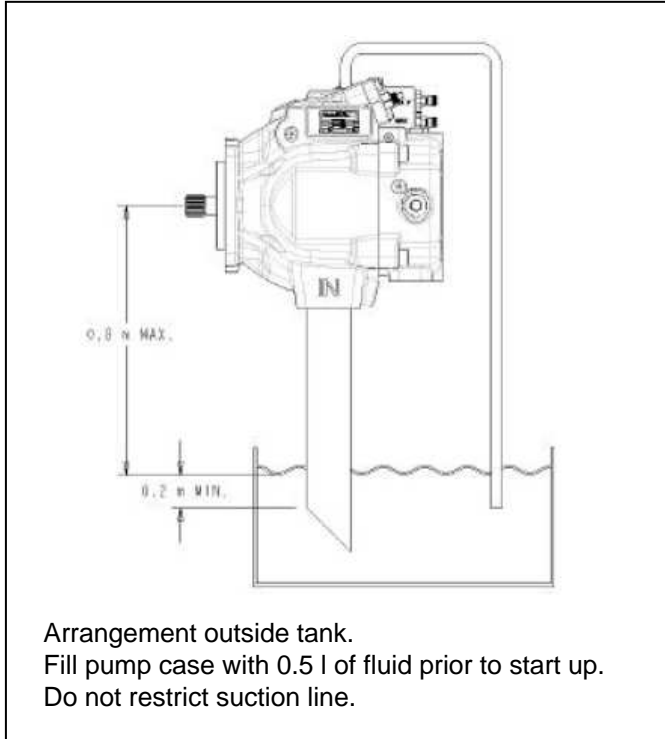
Minimum pump inlet pressure under static and dynamic load:

$p_{in\ min} = 0,8\ \text{bar absolute}$

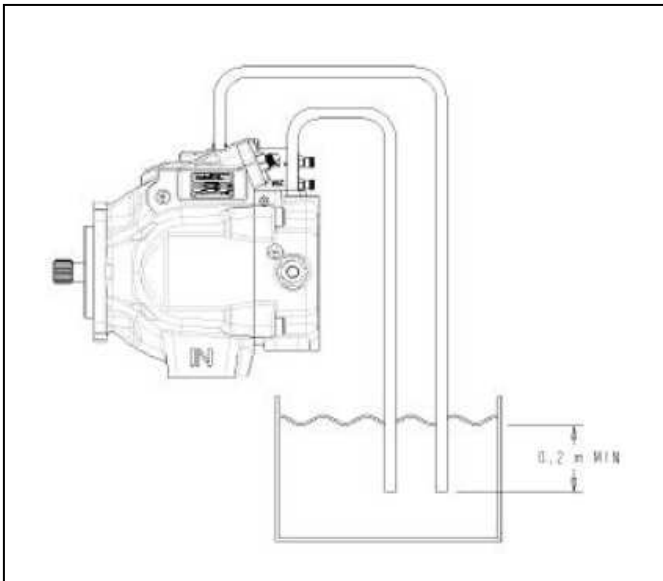
Maximum pump inlet pressure:

$p_{in\ max} = 1\ \text{bar}$

3.2.1 Arrangements P3



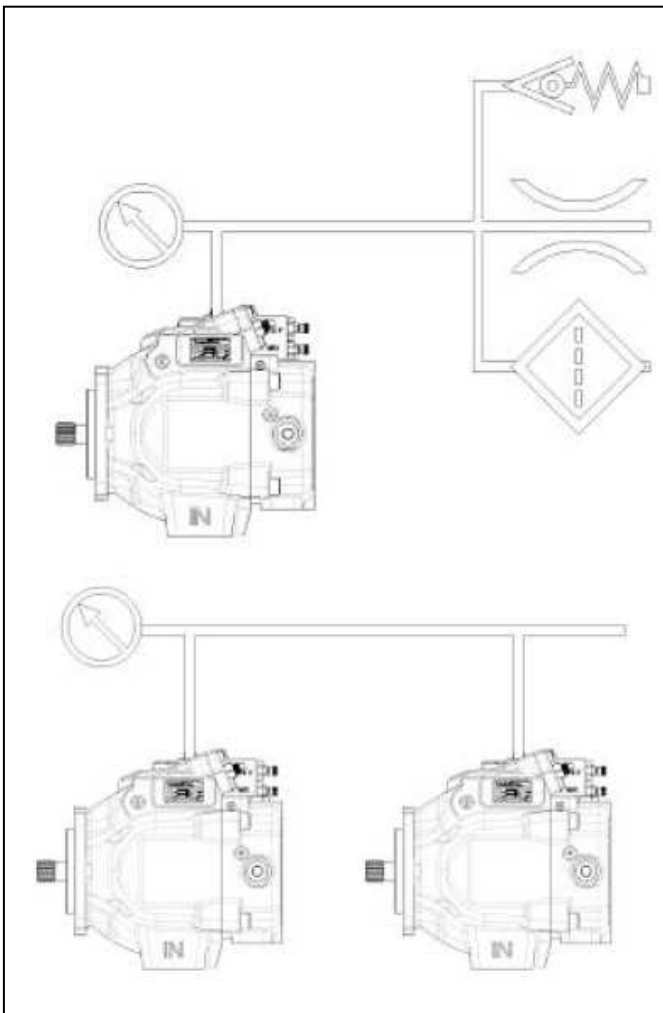
3.2.2 Drain line connection P3



OPTIONAL AIRBLEED CONNECTION

Connect compensator drain line with the reservoir.

Keep inlet and drain line separate (hot loop).



ATTENTION!

Combination and restriction of compensator drain line may result an back pressure.

Maximum continuous drain line pressure:

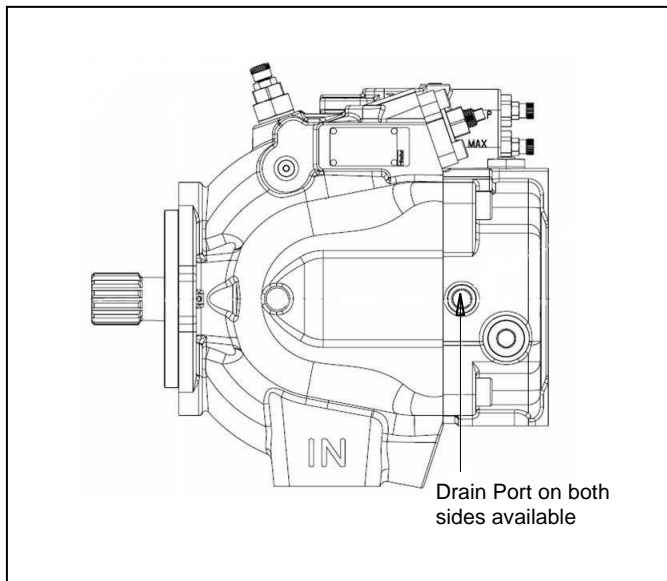
$$p_{\text{drain}} = 2 \text{ bar}$$

Maximum intermittent peak drain line pressure:

$$p_{\text{drain}} = 4 \text{ bar}$$

3.2.3 P3 pumps with drain port in the rear cover

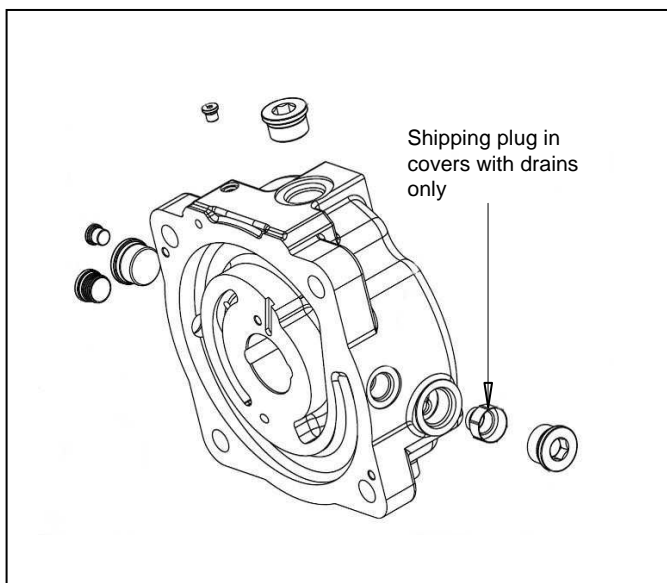
The main benefit of this version is a continuous cooling flow through the case. Thus a better volumetric efficiency is provided. Flow out of the drain port can be up to ~ 50 l/min and is depending on back pressure in the drain line as well as drive speed.



Beneath the design itself pumps with inlet drain port configuration can be identified by the last (25th) digit of the order code.

If this one is **D** or **E** drain line has to be connected to the drain port in rearcover.

In case of **U** or **P** the pump still features a compensator with drain port (see installation manual, pages 3 and 4).



Drain line has to be connected directly to the tank.

Max. drain line pressure:

$p_{\text{drain}} = 0,5 \text{ bar}$

4 Start up

Prior to start up, the pump case must be filled with hydraulic fluid (use case drain port). Initial start up should be at zero pressure with an open circuit to enable the pump to prime. Pressure should only be increased once the pump has been fully primed.

5 Hydraulic fluid

5.1 Recommended Fluids

- Normal mineral oil
- Premium hydraulic fluid / HLP oil
- Biodegradable hydraulic fluid
- Synthetic hydraulic fluid
- Fire resistant fluids



Remark:

Maximum system pressure reduced to 210 bar for water based fluids.
Bearing life time reduced to 25 % by using water based fluids.

5.2 Cleanliness level

Recommendation for maximized component life and reliability:

Class 21 / 18 / 14 according to ISO 4406

5.3 Viscosity range

Minimum viscosity for short periods: 10 mm²/s (cSt)

Normal operating viscosity: 15 – 40 mm²/s (cSt)

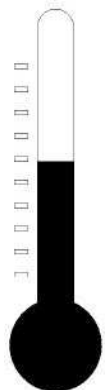
Maximum viscosity for short periods: 1000 mm²/s (cSt)

6 Temperature

6.1 Check hydraulic fluid specification for chemical resistance of seal material!

6.2 Check temperature range of seal material and compare with maximum system and ambient temperature!

N – Nitrile, single shaft seal	- 40°C to + 90°C
D – Nitrile, double shaft seal	- 40°C to + 90°C
V – Fluorocarbon, single shaft seal	- 15°C to + 150°C
T – Fluorocarbon, double shaft seal	- 15°C to + 150°C



Remark:

The highest fluid temperature will be at the drain port of the pump, up to 20°C higher than in the reservoir.