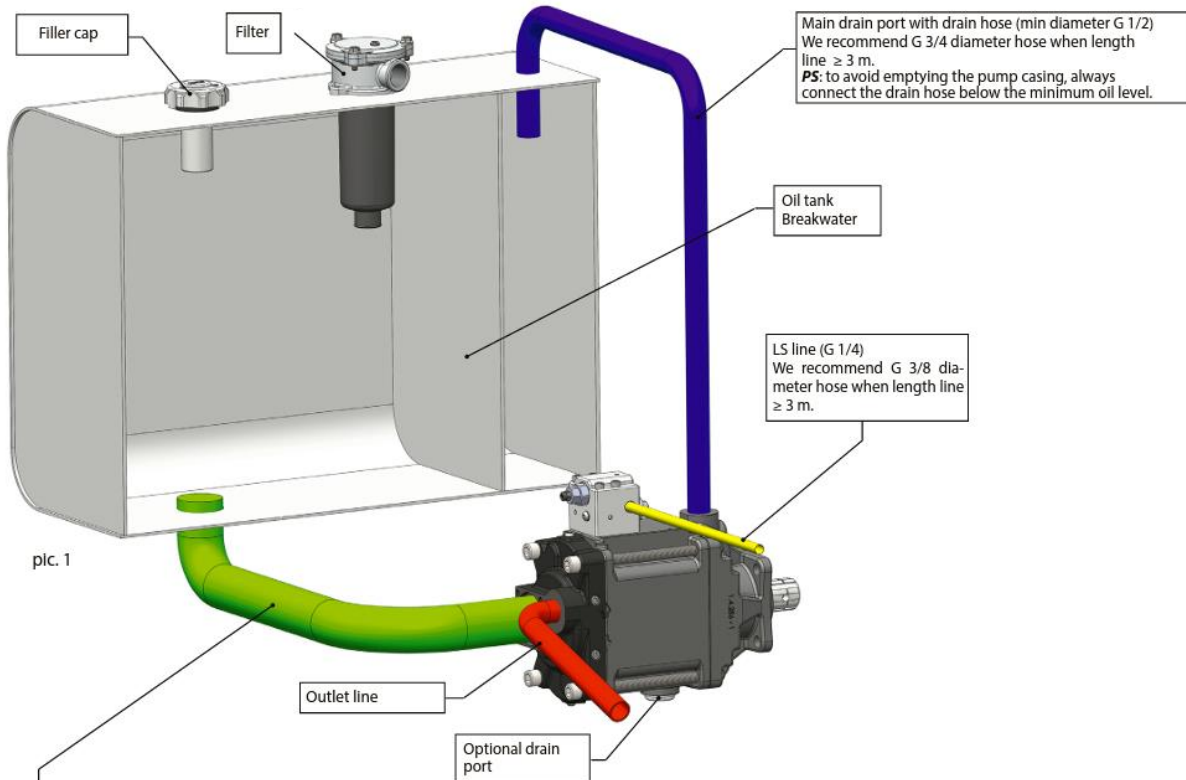


## Start-up and mounting guide for variable displacement pumps PPV

60-90-110-130 series

1. Make sure all the components are clean and there are no external contaminations inside.
2. Connect hoses (pic. 1) and fulfill the pump (pic. 2)
3. During first start-up run the pump with delivery pressure between 50 and 100 bar for at least 10 min.
4. Please adjust set-up if needed.
5. In case of low temperature the pump has to run without load until the oil reaches a proper viscosity.



pic. 1

		Ø SUCTION HOSE [mm]							
Series	Displacement [cc]	Speed							
		800	1000	1200	1400	1600	1800	2000	2200
PPV	60	50							
	90	50		60					
	110	60				63			
	130	63				76			

HYDRAULIC FLUID	
Fluid	Mineral or synthetic compatible with the following seals: HNBR
Allowed temperature range	-25 +80 °C
Kinematic viscosity suggested	Viscosity Index suggested (°C)
	VG (cSt = mm <sup>2</sup> /s)
Optimale kinematic viscosity	VG= 10 cSt ÷ 100 cSt
Max kinematic viscosity suggested at start-up	VG= 750 cSt
Viscosity Index suggested	VI > 100

FILTRATION			
Working pressure (bar)	$\Delta P < 140$	$140 < \Delta P < 210$	$\Delta P > 210$
Contamination class NAS 1638	9	8	7
Contamination class ISO 4406-1999	20/18/15	19/17/14	18/16/13
To be optained with filter $\beta_x > 75$ according ISO 16889	10 $\mu$ m		


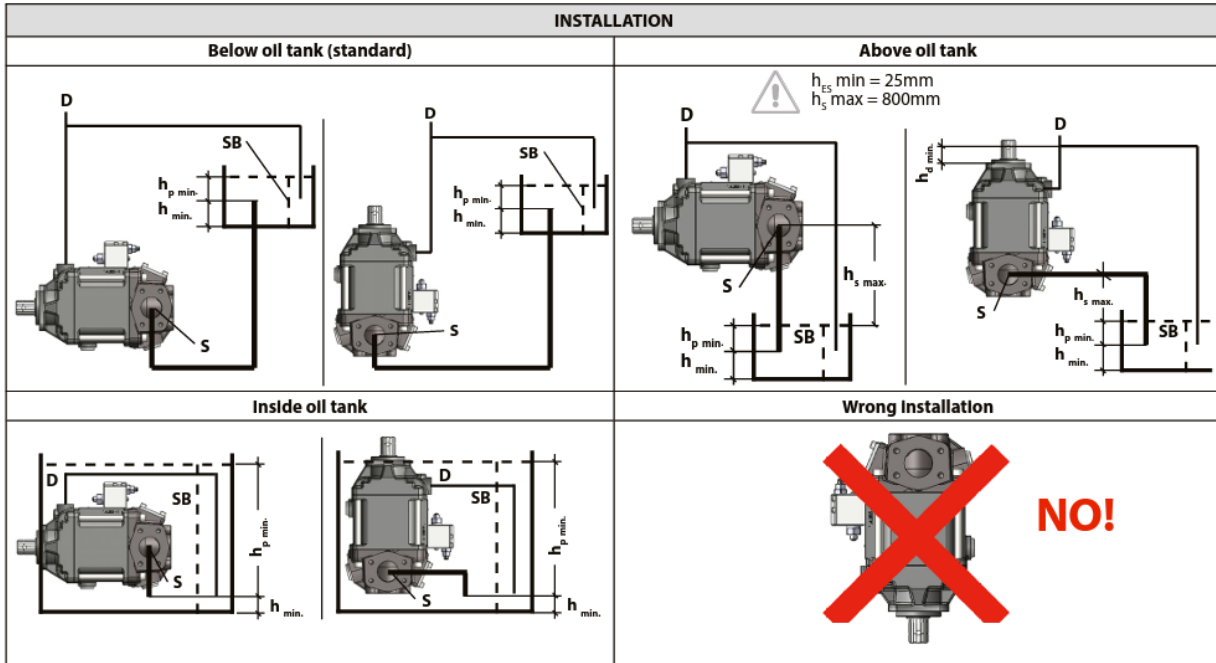
PUMP FILLING		
Please full fill at least 80% capacity volume before pump start-up		
	PPV 60-90-110 total capacity	800ml
	PPV 130 total capacity	900ml

fig. 2

## Mounting positions and settings



LEGENDA	
<b>D</b>	Filling / Drainage
<b>S</b>	Suction
<b>SB</b>	Oil tank breakwater
$h_{p, \min}$	Pump depth inside oil tank (200mm)
$h_{\min}$	Min. distance from oil tank bottom (100mm)
$h_{d, \min}$	Min. height to prevent PPV body emptying (25mm)
$h_{s, \max}$	Max. allowed suction height (800mm)

