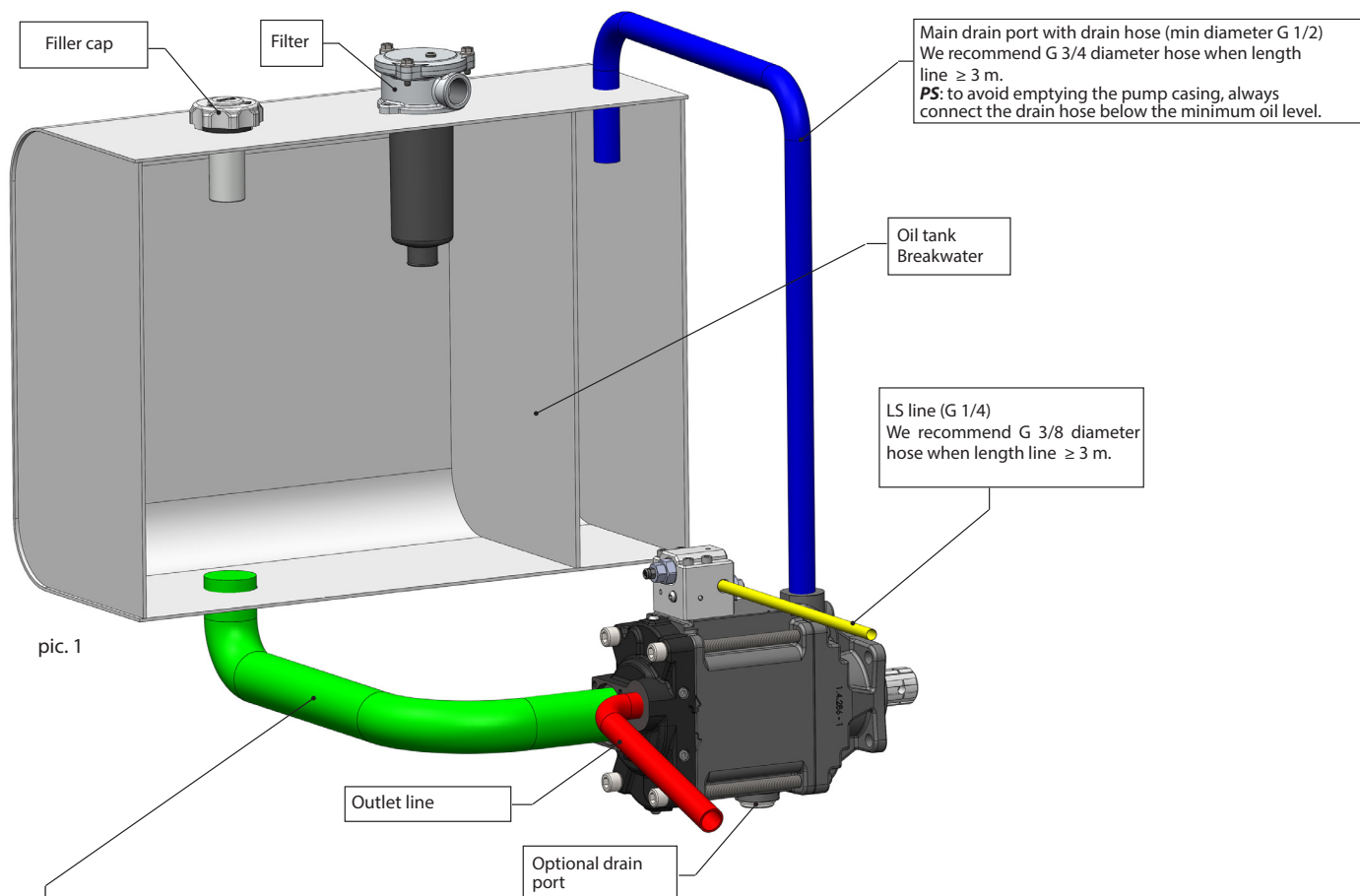


1. Make sure all the components are clean and there are no external contaminations inside.
2. Connect hoses (pic. 1) and fulfill the pump (pic. 2)
3. During first start-up run the pump with delivery pressure between 50 and 100 bar for at least 10 min.
4. Please adjust set-up according settings on page 7 if needed.
5. In case of low temperature the pump has to run without load until the oil reaches a proper viscosyt (fluid page 6).



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)	< -40	-40÷10	10÷35	> 35
	VG (cSt = mm ² /s)	16	22	32	46
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 obtained with filter $\beta_x > 75$ according ISO 16889	10 μ m		

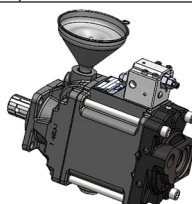
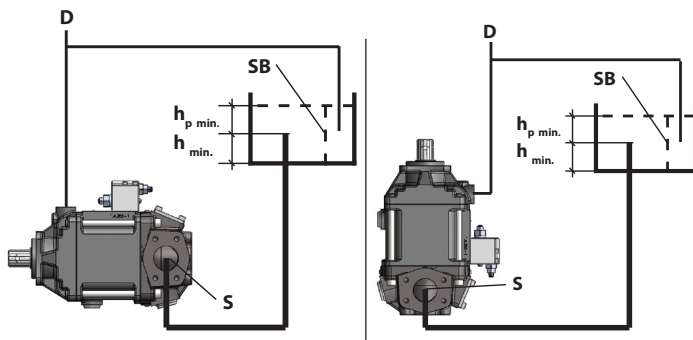
PUMP FILLING		
Please full fill at least 80% capacity volume before pump start-up		
	PPV 60-90-110 total capacity	800ml
	PPV 130 total capacity	900ml

fig. 2

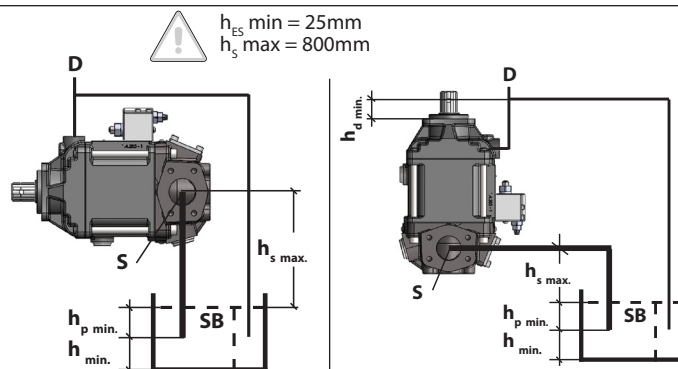
N.B. :: our Technical Service is at your complete disposal for any further information.

INSTALLATION

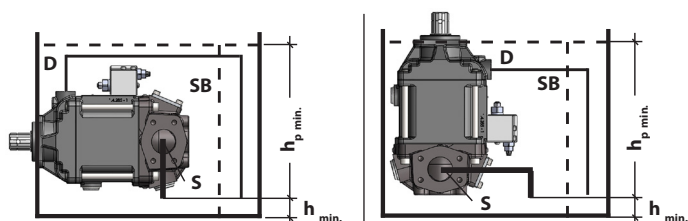
Below oil tank (standard)



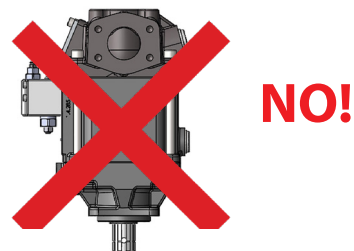
Above oil tank



Inside oil tank



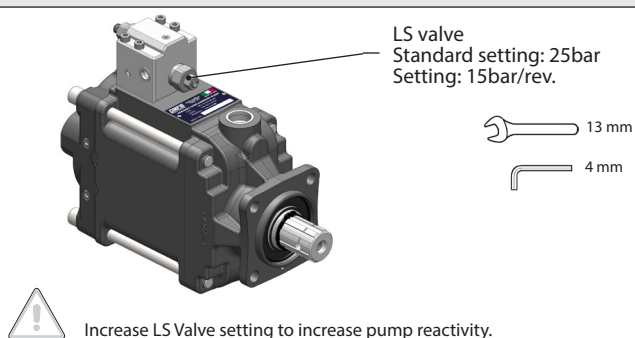
Wrong installation



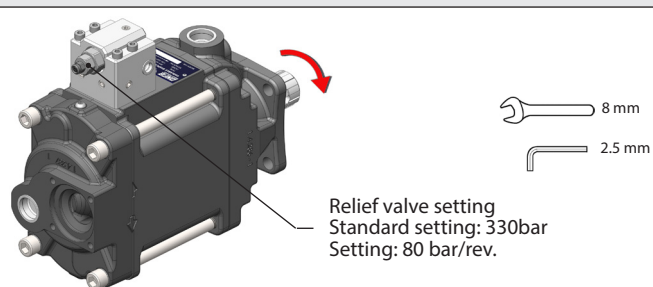
LEGENDA

D	Filling / Drainage
S	Suction
SB	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)

LS VALVE

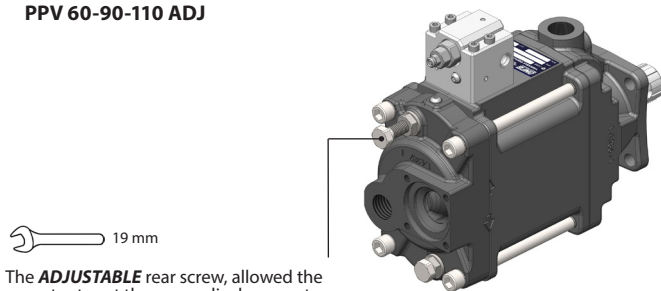


RELIEF VALVE



SETTING "ADJUSTABLE" VERSIONS

PPV 60-90-110 ADJ



DISPLACEMENT	60cc	90cc	110cc
Set-up range	40 - 60 cm ³	55 - 90 cm ³	85 - 110 cm ³
Setting	4,3 cm ³ /rev	5,7 cm ³ /rev	6,6 cm ³ /rev

PPV 130 ADJ

The **ADJUSTABLE** front screw, allowed the operator to set the pump displacement.



DISPLACEMENT	130cc
Set-up range	90 - 130 cm ³
Setting	12 cm ³ /rev