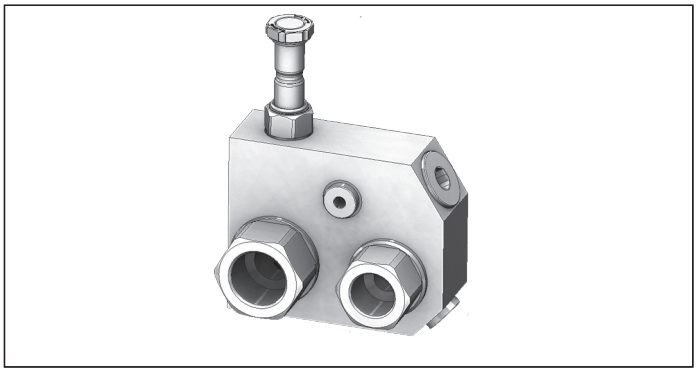
By-pass valve
Flangeable on axial piston pump A17FO series 10

RE 18309-66
Edition: 01.2017

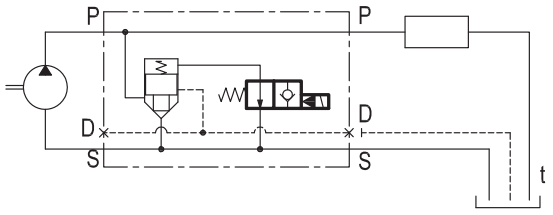
A-VALV-BY-PASS

08.91.11.00 - K



Description

This valve module includes a poppet type logic element piloted by a normally open solenoid valve. With solenoid valve de-energized, flow at port P is by-passed to S through the logic element, with minimized pressure drop. With solenoid valve energized, the logic element is forced to remain closed and flow at port P is available for the directional valve. Port D can be used to discharge a small amount of oil directly to tank for cooling. This by-pass valve is recommended for vehicles where the pump is installed on an engine power takeoff (PTO) that cannot be disengaged (e.g. in truck mounted cranes, tippers, hook loaders where the hydraulic equipment does not have to be operated during transit). During transit the by-pass has to be opened in order to minimize the energy loss. In this condition there is no load on the pump, therefore the pump can run at maximum speed without risk of being damaged. Additionally, the by-pass valve can offer redundancy for safety in combination with switchable PTOs. The valve is designed to be installed directly on the pump with banjo fittings.



Technical data

Hydraulic	
Max. operating pressure port P	350 bar (5000 psi)
Max. peak pressure	400 bar (5800 psi)
Max. operating pressure port S	2 bar (29 psi)
Min. pressure in port P	10 bar (145 psi)
Max. flow	see “Dimensions”
Weight	see “Dimensions”
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Ambient temperature range	-30 to 90 °C (-22 to 194 °F)
Fluid temperature range	-20 to 80 °C (-4 to 176 °F)
Viscosity range	20 to 380 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
FKM seals	
Other technical data	see data sheet 18350-50
Spare parts	
Flange seal kit pump size 63 pump size 80 / 107	E00000000000061 (R930062963) E00000000000062 (R930062964)
Seals kit coil	RG01Z0010000100 (R930058940)
Seals kit solenoid cartridge	RG08A20105201V0 (R930060565)
Solenoid cartridge	OD150618AV00000 (R930060900)
Electrical	
Type of voltage	DC voltage
Coil type	D36 see data sheet 18325-90
Supply voltage	See data sheet 18325-90
Power consumption	20 W
Type of protection	See data sheet 18325-90
Coils must be ordered separately	

Note: for applications outside these parameters, please consult us.

Ordering code

08.91.11.00	K

By-pass valve
Flangeable on axial piston pump A17FO series 10

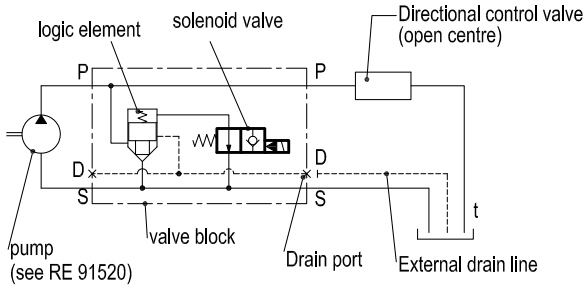
	PUMP SIZE
0402	63
0501	80
0502	107

Preferred types

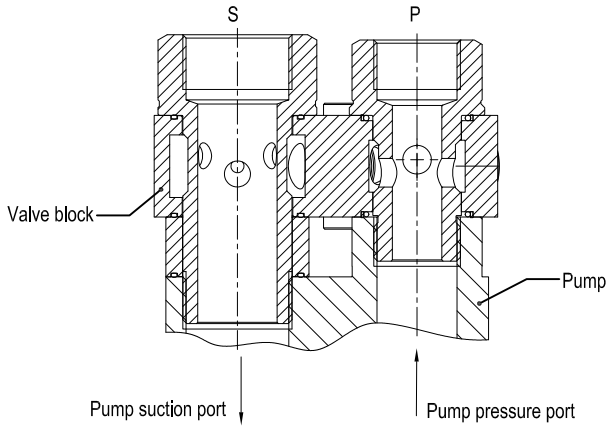
Type	Material number
089111000402000	R930062926
089111000501000	R930062927

Type	Material number
089111000502000	R930062928

Installation information



It is important to ensure a flow of 5 l/min going to the tank (ref. “t” in the scheme) in order to avoid heat increase in the pump during truck movement. This applies to an open center main directional block when the valve is in by-pass mode (non-energized solenoid).
Instead if the flow “t” towards the tank is less than 5 l/min (due to a high pressure drop in the main directional block) or if the main directional block is a “closed center” type, with the valve in by-pass mode, we recommend to install always an external drain line from port “D” directly to tank (see the schematic).



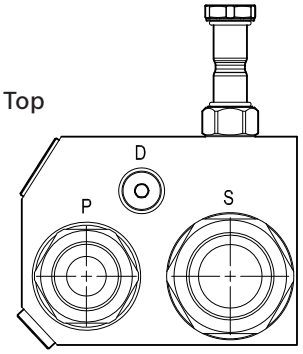
IMPORTANT!

Always tighten the pressure connector P before tightening the pressure connector S.

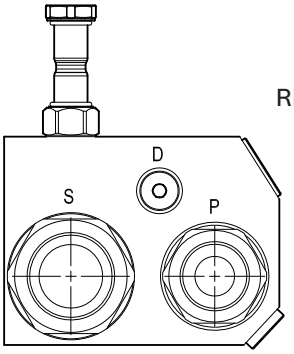
	Installation torque [Nm]	
Pump size	port P	port S
63	110	140
80	220	220
107	220	220

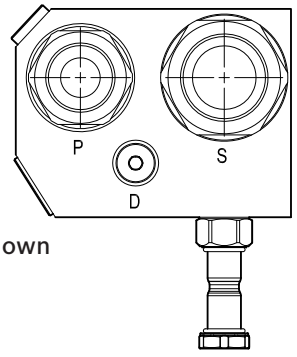
The valve allows 4 positions in mounting positions.
This depends on the direction of pump rotation: two for clockwise and two for counter-clockwise.

Left port P - Top

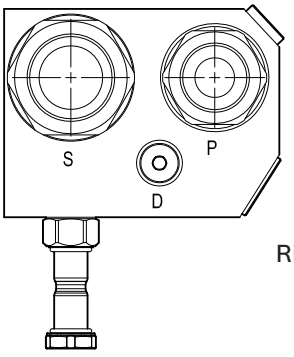


Right port P - Top



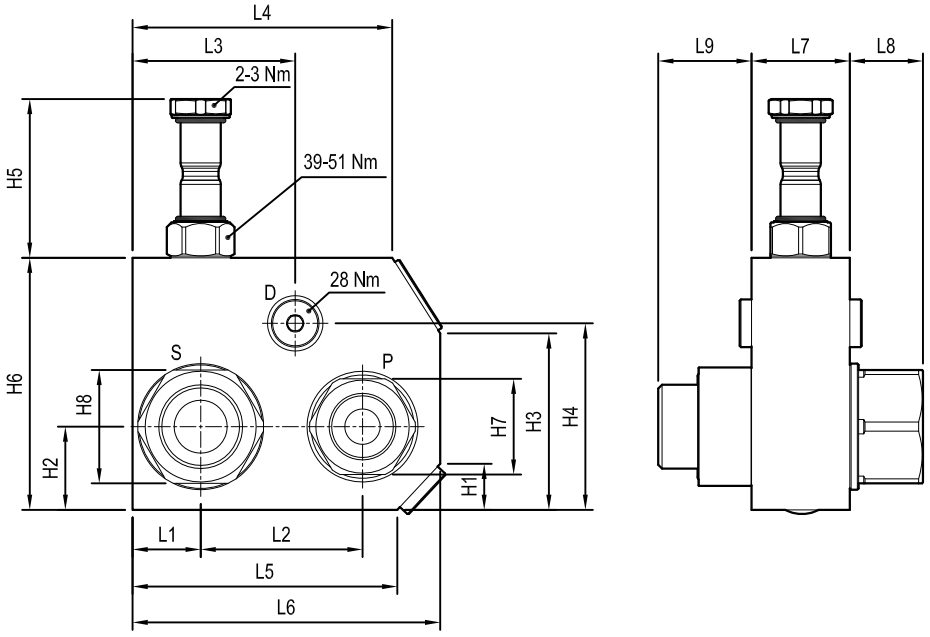


Left port P - Down



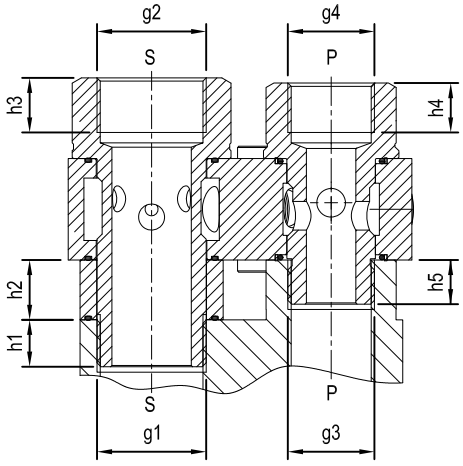
Right port P - Down

Dimensions



Dimensions [mm (inches)]

55 (2.17)	45 (1.77)	100 (3.94)	63 (2.48)	74 (2.91)	70 (2.76)	33 (1.3)	17.7 (0.69)	41 (1.61)	31 (1.22)	39 (1.54)	137 (5.39)	120.5 (4.74)	117.5 (4.63)	79.5 (3.13)	77 (3.03)	32 (1.26)	4.3 (9.5)	**107**
55 (2.17)	45 (1.77)	100 (3.94)	63 (2.48)	74 (2.91)	70 (2.76)	33 (1.3)	18.2 (0.72)	41 (1.61)	31 (1.22)	39 (1.54)	132 (5.2)	115 (4.53)	113 (4.45)	74.5 (2.93)	69 (2.72)	32 (1.26)	4.2 (9.3)	**80**
45 (1.77)	38 (1.5)	100 (3.94)	63 (2.48)	74 (2.91)	70 (2.76)	33 (1.3)	18.2 (0.72)	37 (1.46)	29 (1.14)	39 (1.54)	122 (4.8)	105 (4.13)	103 (4.06)	64.5 (2.54)	64.2 (2.53)	27 (1.06)	4 (8.8)	**63**
H8	H7	H6	H5	H4	H3	H2	H1	L9	L8	L7	L6	L5	L4	L3	L2	L1	Weight kg (lbs)	Pump size



17 (0.67)	19 (0.75)	21 (0.83)	23 (0.91)	18 (0.71)	G 1	G 1	G 1-1/4	G 1-1/4	250 (66)	**107**
17 (0.67)	19 (0.75)	21 (0.83)	23 (0.91)	18 (0.71)	G 1	G 1	G 1-1/4	G 1-1/4	250 (66)	**80**
15 (0.59)	17 (0.67)	19 (0.75)	21 (0.83)	16 (0.63)	G 3/4	G 3/4	G 1	G 1	140 (37)	**63**
h5	h4	h3	h2	h1	g4	g3	g2	g1	Max. Flow l/min. (gpm)	Pump size

Note: for dimension without tolerance consider +/- 0.5 mm

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