50%, accumulator sense, pump unload valve - pilot capacity

Capacity:
46 in³/min. (0,75 L/min.)

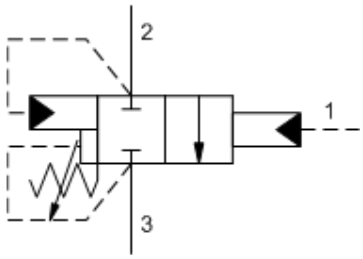
Functional Group:
Products : Cartridges : Circuit Saver : 3-Port : Accumulator Sense, Pump Unload, Pilot Valve, 50%

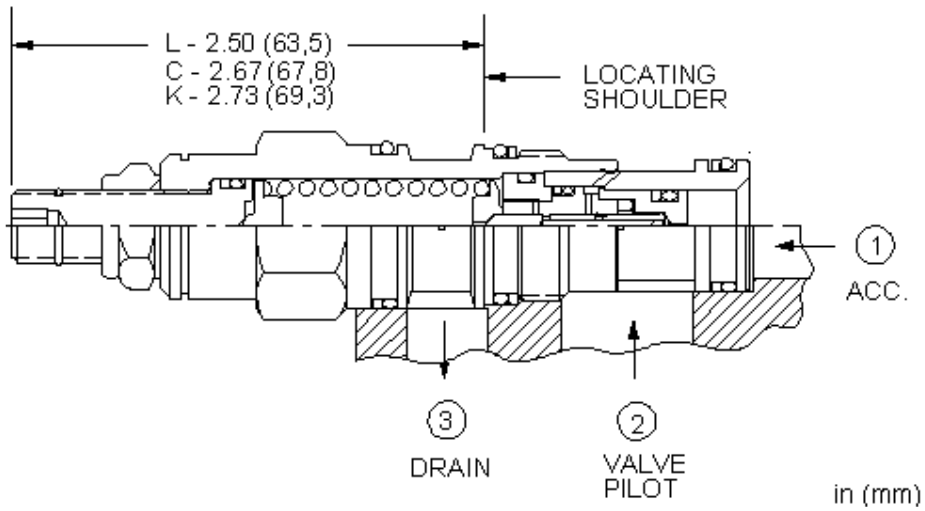
Model:
QPAD

Product Description

The accumulator sense, pump unload pilot valve is used to sense pressure in an accumulator at port 1 of the valve and when the pressure at port 1 reaches the valve setting, port 2 connects to port 3 to vent a relief valve and unload the pump. This valve has a 50% ratio between unload setting and reset; when pressure at port 1 falls below 50% of the valve setting, port 2 is blocked from port 3 and the pump will come back online to recharge the accumulator.

This valve requires a separate check valve between port 1 and the pump. Another version of the accumulator sense, pump unload valve, QCDD, includes a free-flow check valve for pump flows under 12 gpm (50 L/min).





Technical Features

- The pressure differential between unload and reset will be within +/- 1% of the stated ratio of the valve with up to an additional 25 psi (1,7 bar) due to dynamic seal friction.
- The accumulator sensing area is positively sealed.
- Minimum clearances between the spool and sleeve and a seal on the pilot piston diameter significantly reduce the potential for silting.
- When applying this cartridge, a separate drain line is required to prevent erratic operation caused by tank line pressure fluctuations.
- NOTE: Careful consideration should be given when selecting an adjustment range. System pressure drops and flows tend to affect the operation of unloading valves. Low operating pressures combined with low differentials result in a very narrow band between unload and reset, requiring precise system design. High flow rates typically mean high pressure drops, which subtract from the differential the valve has to work with.
- Sun has designed a variety of standard accumulator/pump unload assemblies with a variety of features. These assemblies are not currently viewable on the website but will be in the near future. If you have an immediate need, contact your Sun distributor.
- The spool design of this valve allows it to maintain a fixed differential ratio because the areas are created by diameters on the spool that will not wear or change with use.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

Technical Data

	U.S. Units	Metric Units
Cavity	T-11A	
Capacity	46 in³/min.	0,75 L/min.
Maximum Operating Pressure	5000 psi	350 bar
Pilot Flow Capacity	46 in³/min.	0,75 L/min.
Series (from Cavity)	Series 1	
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	30 - 35 lbf ft	40 - 50 Nm
Adjustment Screw Internal Hex Size	5/32 in.	4 mm
Adjustment Locknut/Cap Hex Size	9/16 in.	15 mm
Adjustment Nut Torque	80 - 90 lbf in.	9 - 10 Nm
Seal Kits - Cartridge	Buna: 990-011-007	
Seal Kits - Cartridge	Viton: 990-011-006	
Model Weight	0.34 lb.	0.15 kg.

QPAD-LAN

Control	Adjustment Range	Seal Material
Standard Options	**Standard Options**	**Standard Options**
C* Tamper Resistant - Factory Set	**A** 1000 - 3000 psi (70 - 210 bar), 1000 psi (70 bar) Standard Setting	**N** Buna-N
L Standard Screw Adjustment	**B** 500 - 1500 psi (35 - 105 bar), 500 psi (35 bar) Standard Setting	**V** Viton
	C 2000 - 5000 psi (140 - 350 bar), 2000 psi (140 bar) Standard Setting	
	D 250 - 800 psi (18 - 55 bar), 250 psi (18 bar) Standard Setting	

Additional Options

Control	Adjustment Range	Seal Material
K Handknob		

* Special Setting required, specify at time of order
Customer specified setting stamped on hex.