

POC1-10

Pilot operated check valve

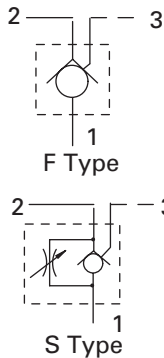
Description

The POC1-10 is a pilot-to-open, screw-in cartridge type check valve.

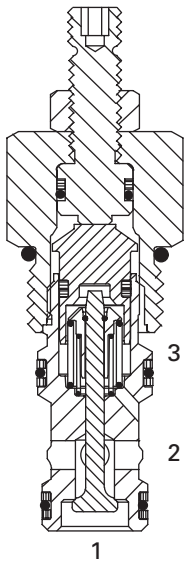
Operation

The POC1-10 will positively lock a load from port 1 to port 2, but will release the load by applying pressure to the pilot port (port 3). The load can also be released by adjusting the optional override.

Functional Symbols



Sectional View



RATINGS AND SPECIFICATIONS

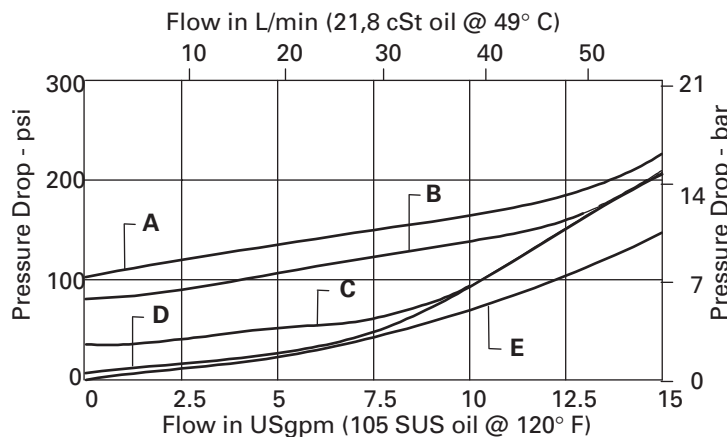
Performance data is typical with fluid at 21,8 cSt (105 SUS) and 49°C (120°F)

Typical application pressure (all ports)	350 bar (5000 psi)
Cartridge fatigue pressure (infinite life)	310 bar (4500 psi)
Rated flow	57 L/min (15 USgpm)
Pilot ratio	3:1
Internal leakage, Port 1 to 2	Less than 5 drops / min. maximum @ 350 bar (5000 psi)
Free flow cracking pressure @ 1.0 L/min (0.25 USgpm)	0,3 bar (5 psi); 2,0 bar (30 psi); 5,1 bar (75 psi); 6,9 bar (100 psi)
Hysteresis	less than 3 bar (45 psi)
Temperature range	-40° to 120°C (-40° to 248°F)
Cavity	C-10-3S
Fluids	All general purpose hydraulic fluids such as: MIL-H-5606, SAE 10, SAE 20, etc.
Filtration	Cleanliness code 18/16/13
Standard housing materials	Aluminum or Steel
Weight cartridge w/out override	0,10 kg (0.23 lb)
cartridge w/override	0,17 kg (0.36 lb)
Seal kit	889650 Buna-N 889652 Viton®

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Pressure Drop Curves

Cartridge only



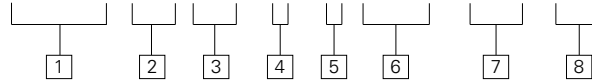
WARNING

Do not use Pilot-to-Open check valves in load holding applications where either overrunning loads are possible; or, load release speed is critical. Failure to observe these guidelines may result in bodily injury or damage to equipment.

3:1 Ratio

$$\text{Pilot pressure, nominal at Port 3} = \frac{(\text{Crack Pressure} + \text{Port 1 Pressure} - \text{Port 2 Pressure})}{3} + \text{Port 2 Pressure}$$

POC1 - 10 (V) - * - * ** - *** - 00**



1 Function

POC1 – Pilot operated check valve

2 Size

10 – 10 Size

3 Seals

Blank – Buna-N
V – Viton®

4 Override option

F – None
S – Adjustable override

5 Valve Body

O - Cartridge only
I - Inline body
N - Close coupled, nipple mounting
G - Gasket mounted, single
D - Dual, line mounted
M - Dual, line mounted with integral shuttle valve
P - Dual, gasket mounted
H - Dual, bolt on manifold for H, S or T series motor
2K -Dual, bolt on manifold for 2000 series motor

6 Housing port sizes

PORT SIZE	VALVE BODY CODES							
	I Aluminum Steel		N/G/P Aluminum Steel		D/M Aluminum Steel		H/2K Aluminum Steel	
SAE 6	A6H*	S6T	A6H	A6T	A6H	S6T	-	-
SAE 8	A8H	S8T	-	-	A8H	S8T	-	-
SAE 10	-	S10T	-	-	A10H	S10T	A10H	-
1/4" BSPP	A2G	-	-	-	A2G	S2G	-	-
3/8" BSPP	A3G*	S3G	A3G	A3G	A3G	S3G	-	-
1/2" BSPP	-	S4G	-	-	A4G	S4G	-	-

* Light Duty Housing is available, to specify, substitute H or G with T or B respectively.

For housing part numbers and dimensions see section J.

Note -P, H, 2K, D and M bodies use two POC1-10 valves.

7 Free flow cracking pressure

005 – 0,3 bar (5 psi)
(anti-cavitation)
030 – 2,0 bar (30 psi)
075 – 5,1 bar (75 psi)
100 – 6,9 bar (100 psi)

8 Special Features

00 – None
(Only required if valve has special features - omitted if "00")

Dimensions

mm (inch)

Torque cartridge in housing

A - 47-54 Nm
(35-40 ft. lbs)

S - 68-75 Nm
(50-55 ft. lbs)



Aluminum housings can be used for pressures up to 210 bar (3000 psi)
Steel housings must be used for operating pressures above 210 bar (3000 psi)

