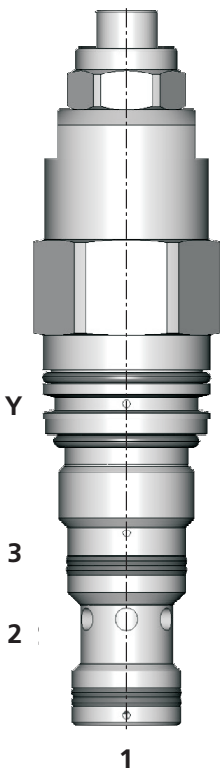


Overcenter Valve Fully Balanced, External Drain

**SOBD5A-BPY3**

7/8-14 UNF •  $Q_{max}$  40 l/min (11 GPM) •  $p_{max}$  420 bar (6100 PSI)

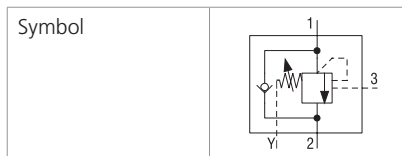


**Technical Features**

- › The valve prevents runaway ahead of the pump in the event of a negative load
- › Load-holding with leak-free closing poppet when the directional control valve is in neutral position
- › Pressure relief function protecting the actuator against overloading and pressure peaks
- › Integrated check valve acting as an anti-cavitation valve
- › When installed close to actuator the valve can be used as a hose burst valve
- › Back pressure has got negligible effect on relief setting nor the required pilot pressure
- › Setting can be performed during machine operation = leak free closing of adjustable element
- › Wide range of relief pressure setting up to 420 bar (6100 PSI)
- › Spring chamber is connected to external drainage port Y
- › In the standard version, the valve is zinc-coated for 520 h protection acc. to ISO 9227

**Functional Description**

Poppet-type, screw-in motion control valve designed to control the runaway of a negative load. The built-in check valve allows reverse flow into the actuator, which is protected by the internal pressure relief function. Back pressure at port 2 has got negligible effect to the pressure relief setting and the required pilot pressure.



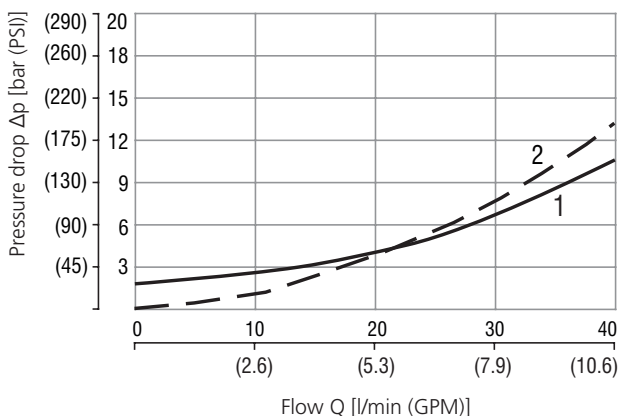
**Technical Data**

Valve size / Cartridge cavity		7/8-14 UNF-2A / BPY3		
Max. flow	l/min (GPM)	40 (10.6)		
Relief pressure range		21	32	42
Max. load induced pressure	bar (PSI)	175 (2540)	265 (3840)	350 (5080)
Max. relief pressure	bar (PSI)	210 (3050)	320 (4640)	420 (6090)
Fluid temperature range (NBR)	°C (°F)	-30... +100 (-22... +212)		
Fluid temperature range (FPM)	°C (°F)	-20... +120 (-4... +248)		
Pilot ratio		2.5:1	5:1	
Leakage	ml/min	0.3 (5 drops per min)		
Weight	kg (lbs)	0.29 (0.64)		
		Datasheet	Type	
General information		GI_0060	Products and operating conditions	
Valve bodies	In-line mounted	SB_0018	SB-BPY3*	
	Sandwich mounted	SB-04(06)_0028	SB-06-BPY3*	
Cavity details		SMT_0019	SMT-BPY3*	
Spare parts		SP_8010		

**Characteristics** measured at  $v = 40 \text{ mm}^2/\text{s}$  (195 SUS)

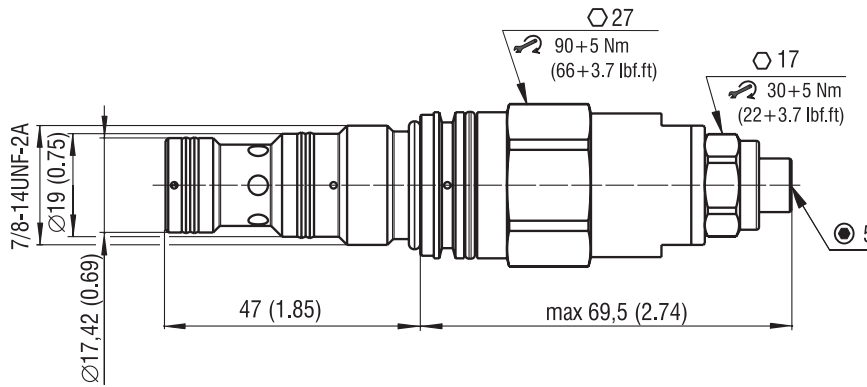
**Pressure drop related to flow rate**

Pilot ratio 2.5:1 and 5:1



Flow	
1	free flow (2→1)
2	pilot open (1→2)

**Dimensions** in millimeters (inches)



**Ordering Code**

**SOBD5A - BPY3 / H**  -  **S**  - **B**

**Overcenter valve fully balanced, external drain to Y port**

**Valve cavity**  
7/8-14 UNF

**Model**  
High performance

**Pilot ratio**

standard	2.5:1	2
	5:1	5

**Relief pressure range**

70 - 210 bar (1020 - 3050 PSI)	21
106 - 320 bar (1540 - 4640 PSI)	32
140 - 420 bar (2030 - 6090 PSI)	42

**Surface treatment**  
zinc-coated (ZnNi), ISO 9227 (520 h)

**No designation**  
V

**Seals**  
NBR  
FPM (Viton)

**Adjustment option**  
allen head (Hex. 5) without protective cap