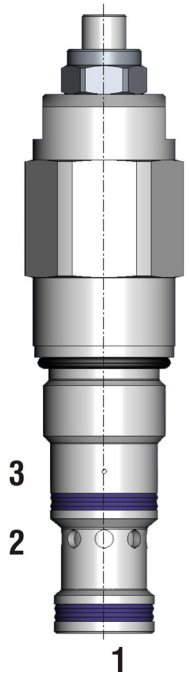
Overcenter Valve

SO5A-CP3

1-1/16-12 UN • Q_{max} 80 l/min (21 GPM) • p_{max} 350 bar (5100 PSI)



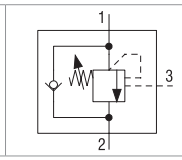
Technical Features

› 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
› Setting can be performed during machine operation = leak free closing of adjustable element
› Wide relief pressure range of setting up to 350 bar (5100 PSI)
› 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.

Symbol



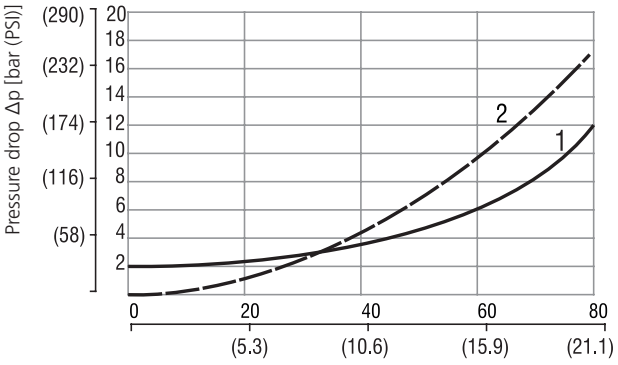
Technical Data

Valve size / Cartridge cavity			1-1/16-12 UN-2A / CP3 (C-12-3S)	
Max. flow		l/min (GPM)	80 (21.1)	
Relief pressure range			22	35
Max. load induced pressure		bar (PSI)	180 (2610)	280 (4060)
Max. relief pressure		bar (PSI)	225 (3260)	350 (5080)
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	8:1
Leakage		ml/min	0.3 (5 drops per min)	
Weight		kg (lbs)	0.40 (0.88)	
		Datasheet	Type	
General information		GI_0060	Products and operating conditions	
Valve bodies	In-line mounted	SB_0018	SB-CP3*	
	Sandwich mounted	SB-04(06)_0028	SB-CP3*	
Cavity details		SMT_0019	SMT-CP3*	
Spare parts		SP_8010		

Characteristics measured at ν = 40 mm²/s (195 SUS)

Pressure drop related to flow rate

Pilot ratio 2.5:1 and 5:1

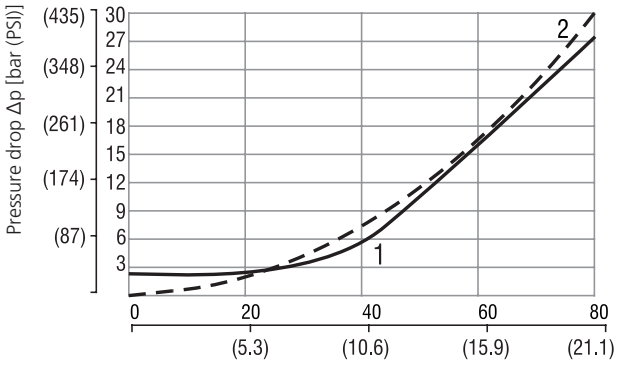


Flow Q [l/min (GPM)]

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

Pressure drop related to flow rate

Pilot ratio 8:1

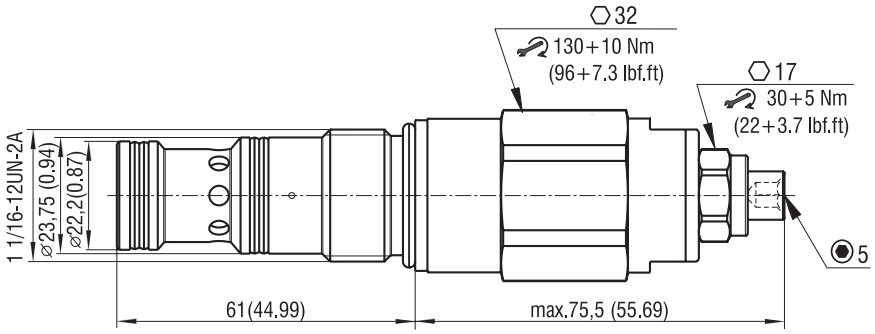


Flow Q [l/min (GPM)]

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

Subject to change · SO5A-CP3_5194_1en_06/2019

Dimensions in millimeters (inches)



Ordering Code

SO5A - CP3 / H ☐ - ☐ **S** ☐ **- B**

Overcenter valve

Valve cavity
1-1/16-12 UN (C-12-3S)

Model
High performance

Pilot ratio

	2.5:1	**2**
standard	5:1	**5**
	8:1	**8**

Relief pressure range

70 - 225 bar (1020 - 3260 PSI)	**22**
190 - 350 bar (2760 - 5080 PSI)	**35**

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

Seals

No designation	NBR
V	FPM (Viton)

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