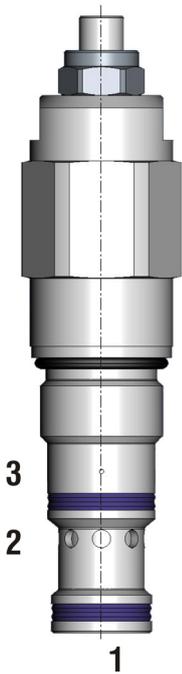


Overcenter Valve

**SO5A-CP3**

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

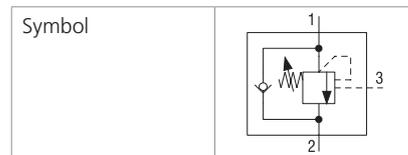


**Technical Features**

- › 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 range of relief pressure 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.



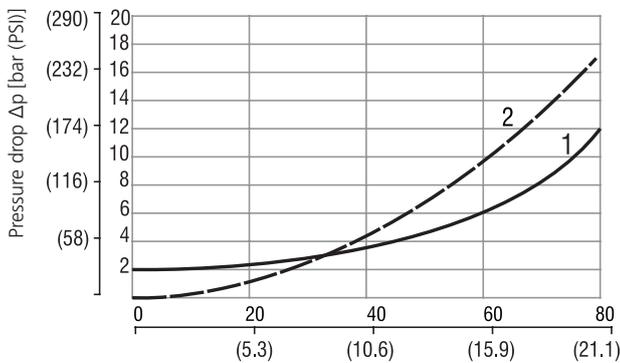
**Technical Data**

Valve size / Cartridge cavity		1-1/16-12 UN-2A / CP3 (VC12-S3)	
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 (5100)
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 minut)	
Weight	kg (lbs)	0.40 (0.88)	
General information		Datasheet	Type
		HA 0060	Products and operating conditions
Valve bodies	In-line mounted	HA 0018	SB-CP3*
	Sandwich mounted	HA 0028	SB-CP3*
Cavity details	HA 0019	SMT-CP3*	
Spare parts	HA 8010		

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

**Pressure drop related to flow rate**

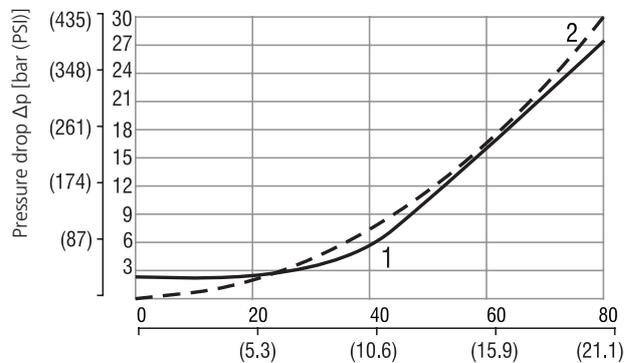
Pilot ratio 2.5:1 and 5:1



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

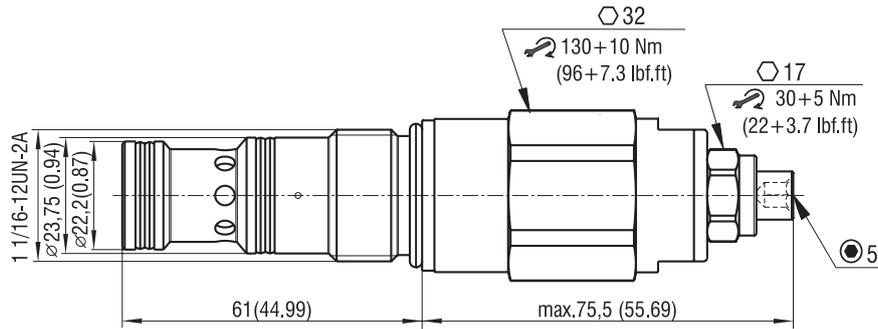
**Pressure drop related to flow rate**

Pilot ratio 8:1



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

**Dimensions** in millimeters (inches)



**Ordering Code**

SO5A - CP3 / H  -  S  - B

**Overcenter valve**

**Valve cavity**  
1-1/16-12 UN (VC12-S3)

**Model**  
High performance

**Pilot ratio**

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

**Relief pressure range**

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

**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