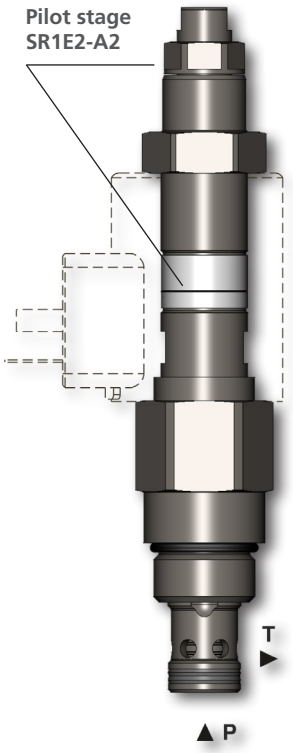
SR4E2-B2

7/8-14 UNF • Q_{max} 80 l/min (21.1 GPM) • p_{max} 350 bar (5100 PSI)



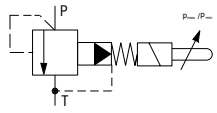
Technical Features

- Screw-in cartridge pilot operated pressure relief valve
- Solenoid operated remote switching between minimum and maximum set pressure
- Possible combined function of pressure relief and unloading valve
- Five pressure ranges with a maximum settable pressure of 350 bar
- Excellent stability throughout the flow range to 80 l/min
- Low hysteresis and accurate pressure control
- Easily interchangeable solenoid coil and easy connector positioning
- In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227. Enhanced surface protection for mobile sector available for the steel parts (ISO 9227, 520 h salt spray)

Functional Description

Screw-in cartridge pressure relief valve, pilot operated, protects the connected circuit against pressure overloading. The input system pressure is permanently compared with mechanically adjusted cracking pressure. The system pressure higher than set cracking pressure opens the valve and unloads the circuit by connection to the tank. Additionally, it is possible to mechanically adjust two values of cracking pressure with the help of adjusting screws built into the end plug of the solenoid actuating system. The two set pressure values can be remotely switched by solenoid. When the solenoid is switched on the valve is set to maximum pressure. The maximum adjustable pressure is defined by pressure range of valve. The minimum circuit pressure can be set from 7 bar to the set maximum pressure. The valve can be used in two ways – as a switcher between two set pressure values or as a combined relief – unloading valve when one pressure value is adjusted on min. system pressure 7 bar.
The complete valve consists of direct acting poppet valve with, main spool valve with connecting thread 7/8-14 UNF and a control solenoid with two adjusting screws.
CAUTION: A pressure change in T channel will cause a change of the set cracking pressure of 1:1.

Symbol

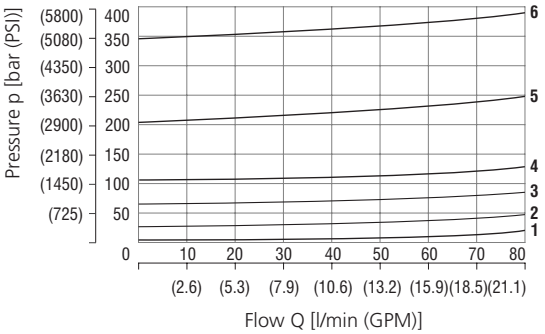


Technical Data

Valve size / Cartridge cavity		7/8-14 UNF-2A / B2 (C-10-2)
Max. flow	l/min (GPM)	80 (21.1)
Max. operating pressure	bar (PSI)	350 (5080)
Max. pressure (port T)	bar (PSI)	100 (1450)
Min. adjustable pressure	bar (PSI)	7 (102)
Fluid temperature range (NBR)	°C (°F)	-30 ... +80 (-22 ... 176)
Fluid temperature range (FPM)	°C (°F)	-20 ... +80 (-4 ... 176)
Ambient temperature range (NBR)	°C (°F)	-30 ... +50 (-22 ... 122)
Ambient temperature range (FPM)	°C (°F)	-20 ... +50 (-4 ... 122)
Supply voltage tolerance	%	AC, DC ± 10
Max. switching frequency	1/h	5 000
Weight	kg (lbs)	0.57 (1.23)
Mounting position: If possible, the valve should be mounted with the coil vertically downward.		
	Datasheet	Type
General information	GI_0060	Products and operating conditions
Coil types	C_8007	C19B*
Valve bodies – In-line mounted	SB_0018	SB-B2*
Valve bodies – Sandwich mounted	SB-06_0028	SB-*B2*
Cavity details / Form tools	SMT_0019	SMT-B2*
Spare parts	SP_8010	

Characteristics measured at ν = 32 mm²/s (156 SUS)

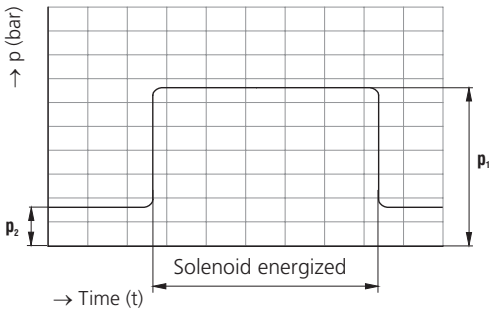
Relief pressure related to flow rate



Pressure range	Min. pressure setting	3	6	12	21	35
	1	2	3	4	5	6
	Solenoid de-energized	Typical performance				

Example showing the adjustable pressures p_1 and p_2 ($p_1 \geq p_2$)

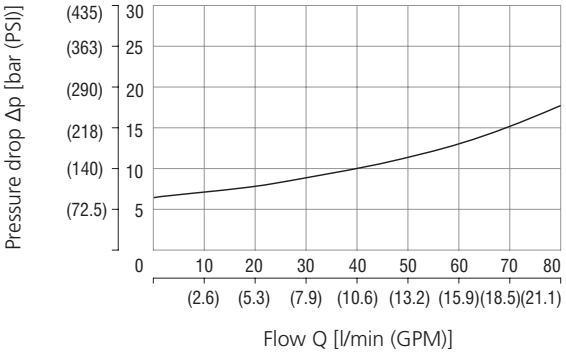
p_1 (p_max, relief pressure) is set as the higher working pressure (solenoid energized)
p_2 (p_min, vented pressure) is set as a lower working pressure (solenoid de–energized)



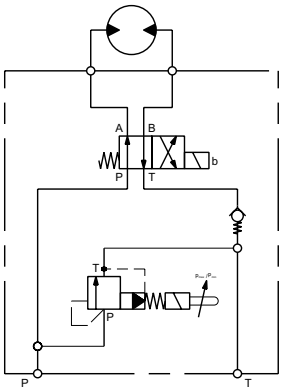
Characteristics measured at ν = 32 mm²/s (156 SUS)

Pressure drop related to flow rate

0 % of control current, P-T direction

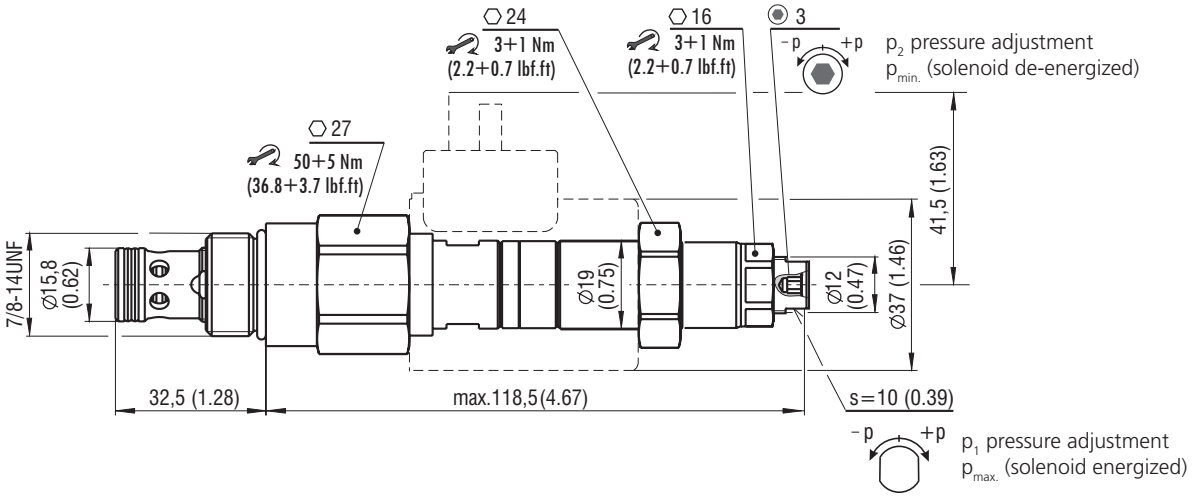


Application example



The valve is used to unload a pump to tank with a very low pressure drop. This results in less heating of the oil and therefore lower energy costs for the user.
p_1 (p_max) must be set before p_2 (p_min). To set p_1, the solenoid is energized and the pressure adjusted with a flat wrench (size 10). The solenoid is then de-energized and the lower pressure adjusted with an allen key (hex. 3).

Dimensions in millimeters (inches)



Ordering Code

SR4E2 - B2 / H ☐ ☐ - ☐

Pressure relief solenoid-operated On/Off valve, piloted

Valve cavity
7/8-14 UNF (C-10-2)

Model
High performance

Max. reduced pressure

up to 30 bar (440 PSI)	**3**
up to 60 bar (870 PSI)	**6**
up to 120 bar (1740 PSI)	**12**
up to 210 bar (3050 PSI)	**21**
up to 350 bar (5080 PSI)	**35**

Seals

No designation	NBR
V	FPM (Viton)

Surface treatment

A	zinc-coated (ZnCr-3), ISO 9227 (240 h)
B	zinc-coated (ZnNi), ISO 9227 (520 h)

Factory setting:
If the valve does not have a specific setting in accordance with the customer's order, standard valves are set to a minimum value of approx 7 bar after function tests.