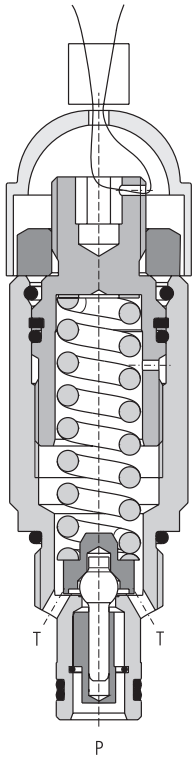
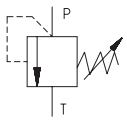
Pressure Relief Valve, PED Certified, Poppet Type, Direct Acting

SR1A-A2/LxxL-CE1017

3/4-16 UNF • Q_{max} 30 l/min (8 GPM) • p_{max} 350 bar (5100 PSI)



Symbol



Technical Features

- Hydraulic safety relief valve suitable for use as a safety device in Category IV Group 2 applications acc.to European Commission (EC) Pressure Equipment Directive (PED) 2014/68/EU
- CE marked valves are supplied with "Declaration of Conformity", "Operating Instructions" and the list of residual risks
  Always follow the operating instructions supplied with the valve!
- Wide pressure range up to 350 bar
- Hardened precision parts
- Sharp-edged steel seats for dirt-tolerant performance
- Leak-free closing and suitable for fast cycling with long life
- Adjustable by allen key or hand screw
- In the standard version, the valve is zinc-coated for 1000 h protection acc. to ISO 9227)

Functional Description

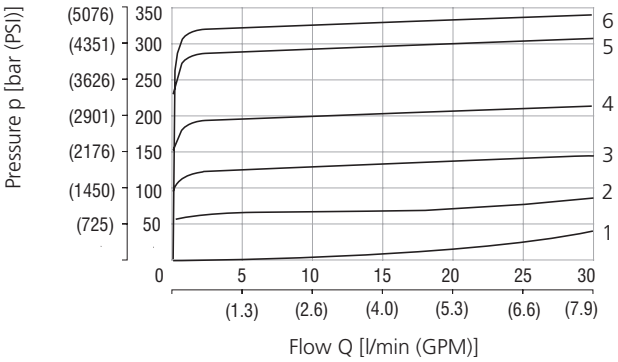
A poppet type, direct acting hydraulic relief valve in the form of a screw-in cartridge intended for use as a pressure limiting device for common hydraulic circuit protection. The spring acts on the poppet and presses it onto the valve seat. If the hydraulic pressure is below the pre-set value, the valve is closed.
If the hydraulic force exceeds the pre-set value the valve opens and flow passes to tank port until the system pressure falls below the spring pre-set value and the valve closes back again.

Technical Data

Valve size / Cartridge cavity			3/4-16 UNF-2A / A2 (C-8-2)
Max. flow		l/min (GPM)	30 (7.9)
Max. operating pressure		bar (PSI)	350 (5080)
Max. pressure (T port)		bar (PSI)	160 (2320)
Fluid temperature range (NBR)		°C (°F)	-30 ... +100 (-22 ... 212)
Fluid temperature range (FPM)		°C (°F)	-20 ... +120 (-4 ... 248)
Max. leakage of closed valve at 80% cracking pressure		cm^3/min	0.1
Viscosity range		mm^2/s (SUS)	10 ... 500 (49 ... 2450)
Weight		kg (lbs)	0.13 (0.29)
		Datasheet	Type
General information		GI_0060	Products operating conditions
Valve bodies	In-line mounted	SB_0018	SB-A2*
	Sandwich mounted	SB-04(06)_0028	SB-*A2*
Cavity details / Form tools		SMT_0019	SMT-A2*
Spare parts		SP_8010	

Characteristics measured at ν = 32 mm^2/s (156 SUS)

Relief pressure related to flow rate



	Pressure range
6	35
5	25
4	16
3	10
2	6
1	Min. pressure setting

Valves Adjusted by the Manufacturer

- The valves are adjusted for the specified pressure at the relevant flow rate and they are fitted with tamper-indicating seals
- The pressure and flow rate values are indicated in the valve description on the product [pressure in bar, flow rate in l/min]
- The seals bear the company logo

Valves NOT Adjusted by the Manufacturer

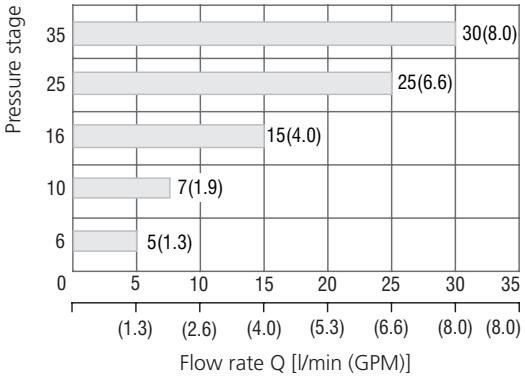
› Valves have no tamper-indicating seals
› No pressure and no flow rate indicated - SR1A-B2/HxxL-CE1017
› After the completion of the functional test, the adjusting screw is completely loosened and the pressure is set to p = 0 bar
› To adjust the required valve pressure proceed as follows:
  - turn the adjusting screw to the right (clockwise) to increase the pressure
  - turn the adjusting screw to the left (counter-clockwise) to decrease the pressure
› The manufacturer accepts no responsibility for the adjustment, securing, and sealing of the valve

Residual Risks

Residual risks are listed and preventive measures against the occurrence of residual risk are described in the document „Operating instructions for pressure relief valve SR1A-A2/LxxL-CE1017“ which is delivered with each valve.

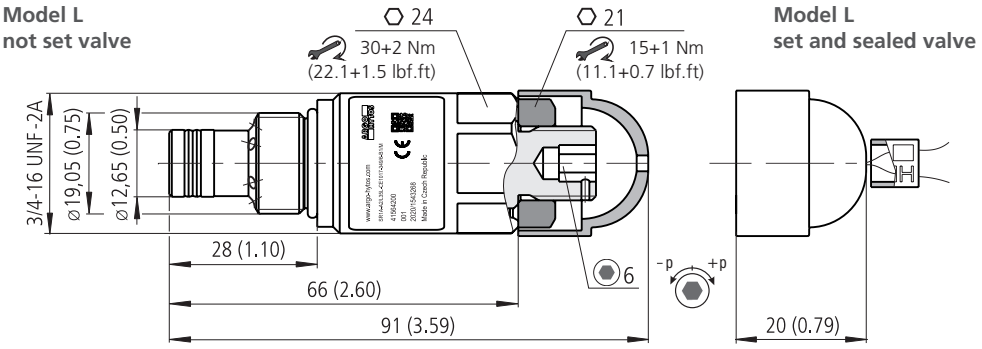
Application area

The diagram shows the operating region where the valve meets the requirements of Directive 2014/68/EU and Standard ISO 4126-1 on maximum short-time overshoot of system pressure by 10 % above the set cracking pressure when the valve opens.
The dynamics of the valve depend on the kinematic viscosity of working fluid.
Measurement conditions: oil Renolin VG 32, T = 40 °C (104 °F) , V = 0.5 l (0.132 gal US)



Aplication area characteristics from certification of SR1A-A2/LxxL-CE1017*

Dimensions in millimeters (in)



Ordering Code

SR1A-A2 / L [ ] **L** [ ] **- CE1017 -** [ ] **/** [ ] **- B1**

Pressure relief valve, PED certified, poppet type, direct acting

Valve cavity
3/4-16 UNF (C-8-2)

Model
Lightline

Pressure range

adjustable pressure 63 bar (910 PSI)	**6**
adjustable pressure 100 bar (1450 PSI)	**10**
adjustable pressure 160 bar (2320 PSI)	**16**
adjustable pressure 250 bar (3630 PSI)	**25**
adjustable pressure 350 bar (5080 PSI)	**35**

No designation
V

Seals
NBR
FPM (Viton)

Adjustment option
allen head (hex. 6), with protective cap, sealable (lockwire holes)

Certification PED
notified body number CE1017

Adjusted pressure [bar]*
(example)
120

Pressure setting at flow rate [l/min]*
Std. pressure setting made at flow 6 litres/min
(example)
6

Surface treatment
zinc-coated (ZnNi), ISO 9227 (1000 h)

*If not preset valves are ordered, pressure and flow rate information is not shown.