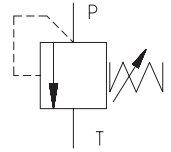


- Screw-in cartridge design
- 7 pressure ranges
- Pressure setting by
  - Hexagon set screw lock
  - Adjustable handknob



## Functional Description

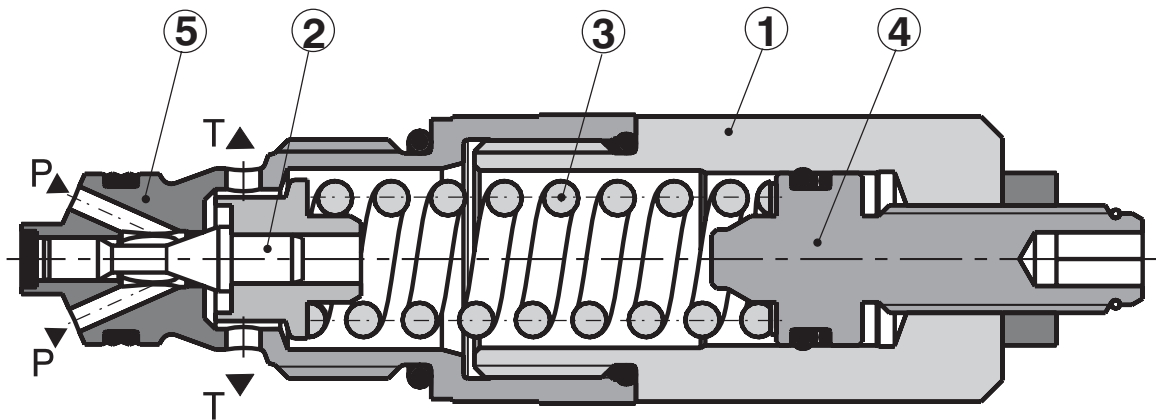
Directly operated pressure relief valves SR1A-B2 were designed for applications requiring a safety valve or a pressure regulating valve working over a wide range of pressures and flow rates.

The valve basically consists of the valve body (1), poppet with damping spool (2), spring (3) and adjusting screw (4). The spring pushes the poppet into the seat (5) and holds the valve in its normally closed position. When the force, caused by the input pressure, exceeds the spring force, the valve opens and the flow passes from port P to port T.

To optimize the valve performance seven pressure ranges the valve are available. Choosing the closest range is recommended.

The design enables the valve to be used as a screw-in cartridge for manifold mounting, or in a subplate and/or in-line mounted housing.

The valve body and the adjustment screw are zinc coated.



# Ordering Code

SR1A-B2 /

Directly Operated Pressure Relief Valve

High performance

H

**Pressure range**

- up to 25 bar (363 PSI)
- up to 63 bar (914 PSI)
- up to 100 bar (1450 PSI)
- up to 160 bar (2321 PSI)
- up to 250 bar (3626 PSI)
- up to 320 bar (4641 PSI)
- up to 420 bar (6092 PSI)

- 2,5
- 6,3
- 10
- 16
- 25
- 35
- 42

without designation

V

**Seals**

- NBR ( Standard)
- FPM (Viton )

**Adjustment option**

- Hexagon set screw locknut 5 mm
- Adjustable handknob

S  
R

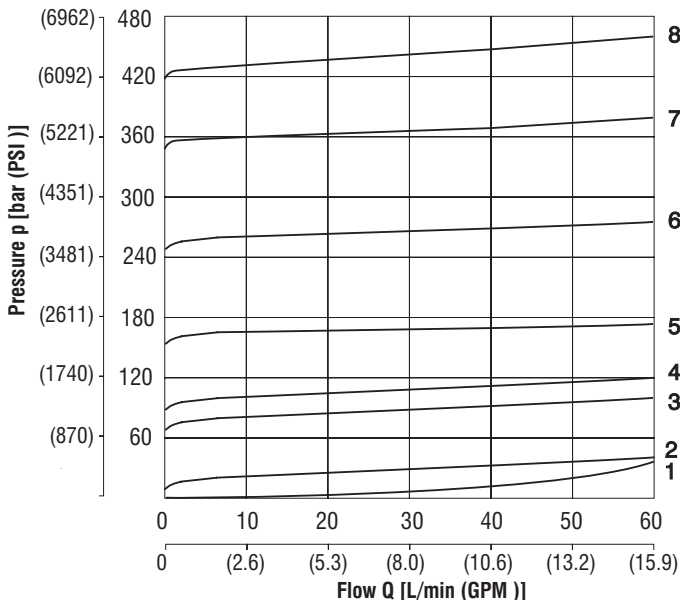
# Technical Data

		High performance
Cartridge thread		7/8-14 UNF-2B
Maximum flow	L/min (GPM)	60 (15.85)
Max. input pressure (port P)	bar (PSI)	420 (6092)
Max. output pressure (port T)	bar (PSI)	250 (3626)
Pressure drop	bar (PSI)	see $\Delta p$ -Q characteristics
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51524
Fluid temperature range for standard sealing (NBR)	°C (°F)	-30 ... +100 (-22 ... 212)
Fluid temperature range for Viton sealing (FPM)	°C (°F)	-20 ... +120 (-4 ... 248)
Viscosity range	mm <sup>2</sup> /s (SUS)	10 ... 500 (49 ... 2450)
Maximum degree of fluid contamination		Class 21/18/15 according to ISO 4406 (2006)
Weight	kg (lbs)	0,25(0.55)
Maximum valve tightening torque	Nm (lbf.ft)	50+5 (36.88+3.68)
Mounting position		optional

# p-Q Characteristics

Measured at  $v = 32 \text{ mm}^2/\text{s}$  (156 SUS)

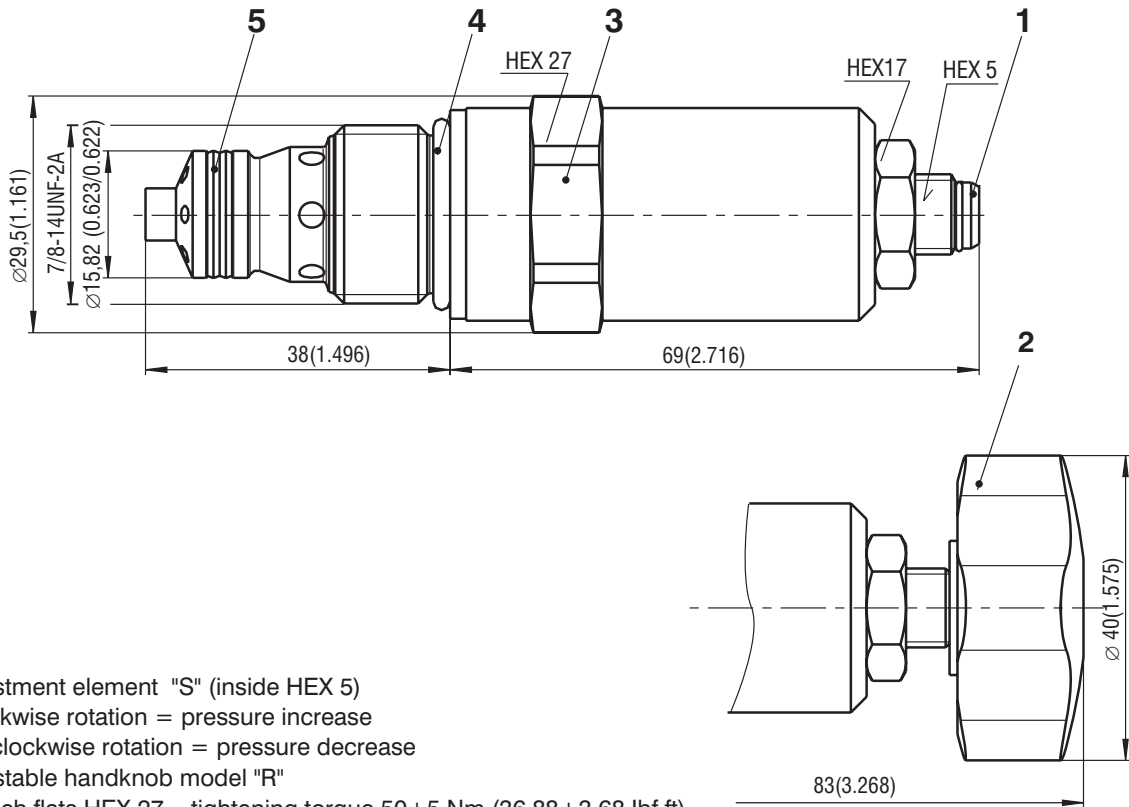
Pressure drops related to flow rate.



8	Pressure range 42
7	Pressure range 32
6	Pressure range 25
5	Pressure range 16
4	Pressure range 10
3	Pressure range 6,3
2	Pressure range 2,5
1	Min. pressure setting

# Valve Dimensions

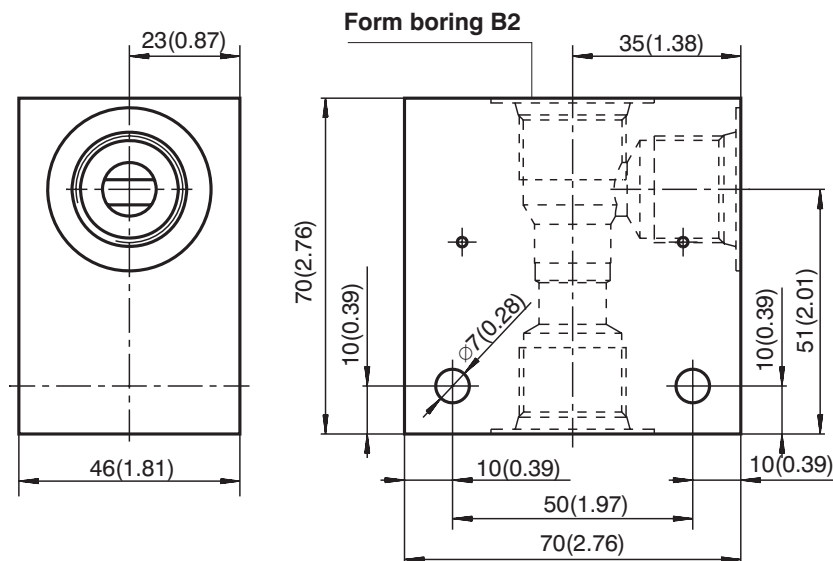
Dimensions in millimetres (inches)



- 1 Adjustment element "S" (inside HEX 5)  
 Clockwise rotation = pressure increase  
 Anticlockwise rotation = pressure decrease
- 2 Adjustable handknob model "R"
- 3 Wrench flats HEX 27 - tightening torque 50+5 Nm (36.88+3.68 lbf.ft)
- 4 O-ring 19,4 x 2,1 -supplied with valve
- 5 Combined sealing:  
 Dalseal DRYZ000004Z20  
 13,47 x 15,87 x 3,1(PU) - supplied with valve

# Valve Body

Dimensions in millimetres (inches)



**Note:**

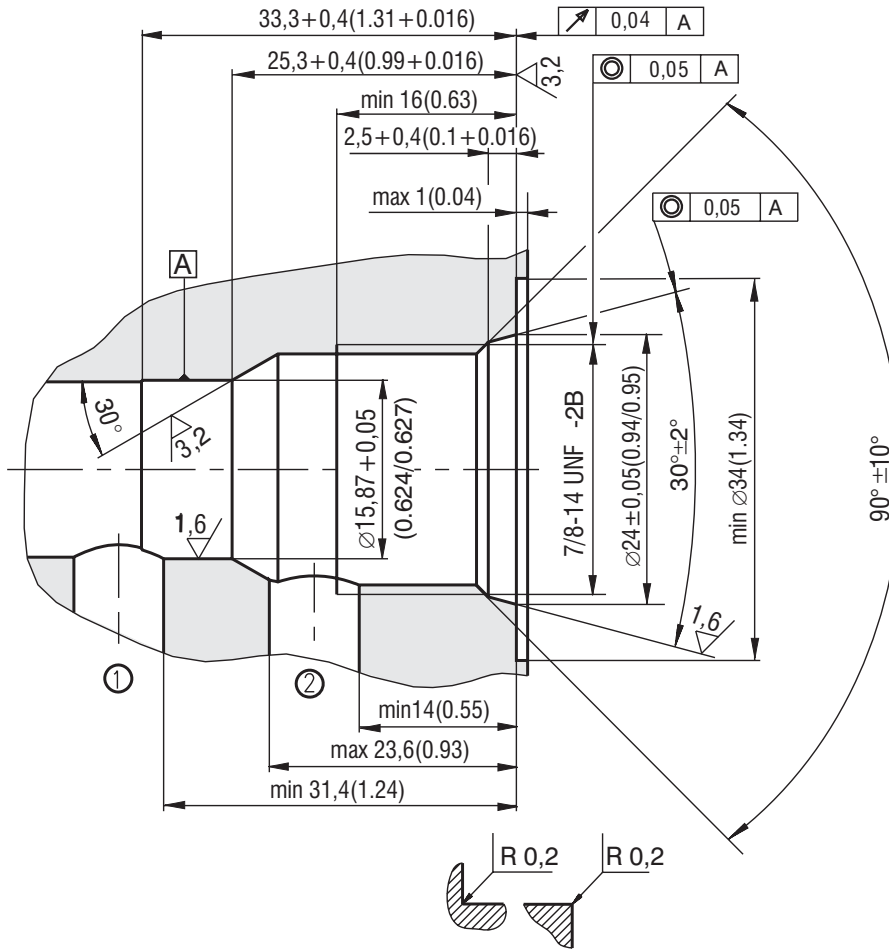
- For detailed valve body ordering code refer to data sheet HA 0018

Body material	Connecting size	Type code	Operating pressures
Steel	G1/2	SB-B2-0105ST	420 bar (6091 PSI)
Steel	SAE8	SB-B2-0104ST	420 bar (6091 PSI)
Aluminium	G1/2	SB-B2-0105AL	250 bar (3626 PSI)
Aluminium	SAE8	SB-B2-0104AL	250 bar (3626 PSI)

**Cavity**

Dimensions in millimetres (inches)

6,3/ (▽/▽)



**Spare Parts**

<b>Seal kit</b>	<b>Order number - 18775600</b>
<b>Dualseal - PU</b>	20159100
DRYZ000002Z20 13,47 x 15,87 x 3,1 (1pc.)	
<b>O-ring - NBR</b>	20143900
19,4 x 2,1 (1pc.)	

**Caution!**

- The packing foil is recyclable.
- The technical information regarding the product presented in this catalogue is for descriptive purposes only. It should not be construed in any case as a guaranteed representation of the product properties in the sense of the law.

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