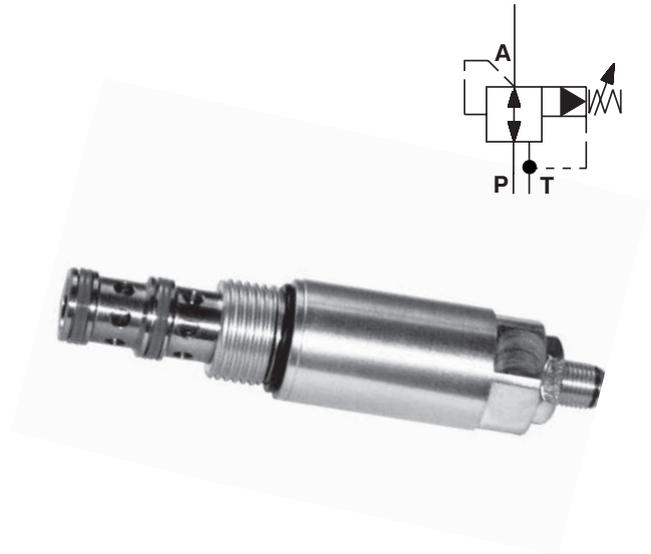


- Screw-in cartridge design
- 5 pressure ranges
- Pressure setting by
 - Hexagon set screw lock
 - Adjustable handknob

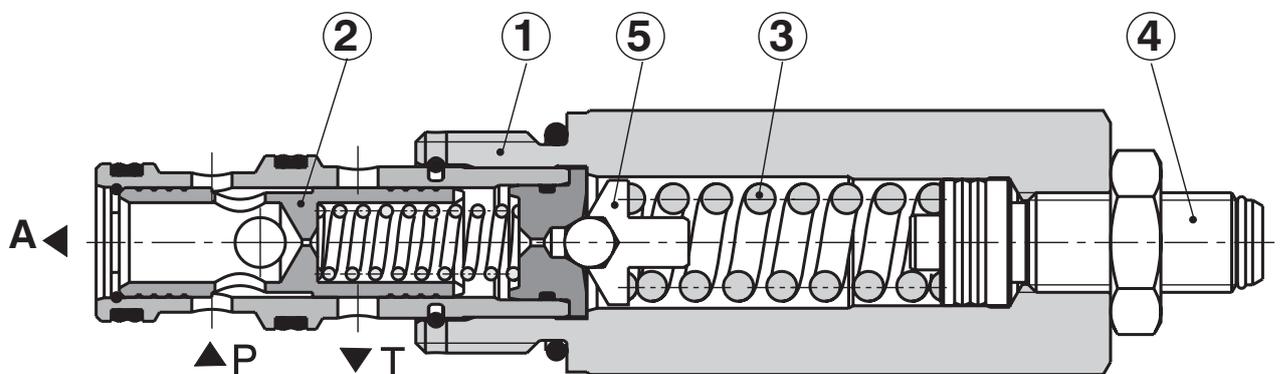


Functional Description

The pressure valves SP4A-B3 are pilot operated screw-in cartridge pressure reducing valves designed as 3 way valves, i.e. with pressure protection of the secondary circuit. The reducing valve consists of a body (1) with thread 7/8-14 UNF, control spool (2), spring (3) and the adjustment element (4). The flow from the primary circuit flows to the first metering edge, where its pressure is reduced. The reduced pressure corresponds with the adjustment of the control spring of the ball pilot valve (5). The reduced pressure is continuously controlled and compared with the pressure preset. If any control error appears, the respective control action takes place and the reduced pressure returns to its preset value. If

pressure behind the valve increases due to the effect of external load acting on the user, the control spool shifts further against the spring, the reducing metering edge closes and the second metering edge opens. The fluid passes through the „third way“ to port T. The control flow of the pilot valve (from the spring room) is also routed to port T.

The valve body and the adjustment screw are zinc coated.



Ordering Code

SP4A-B3 /

Directly Operated Pressure Relief Valve

Standard

S

Pressure range

- up to 63 bar (914 PSI)
- up to 100 bar (1450 PSI)
- up to 160 bar (2320 PSI)
- up to 250 bar (3626 PSI)
- up to 350 bar (5076 PSI)

- 6,3**
- 10**
- 16**
- 25**
- 35**

without designation
V

Seals

- NBR
- FPM (Viton)

Adjustment option

- Hexagon set screw locknut 5 mm
- Adjustable handknob

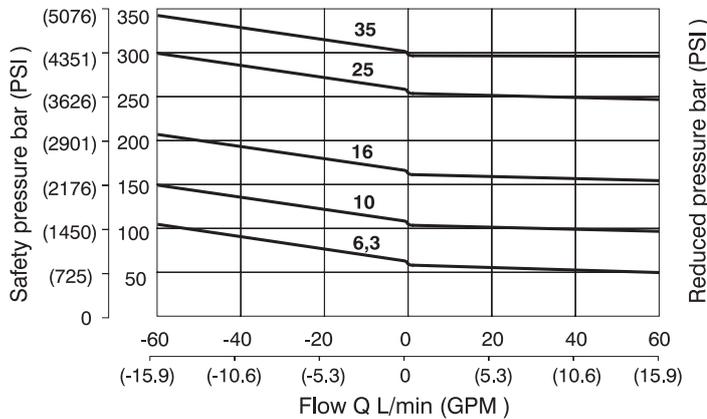
S
R

Technical Data

Cartridge thread		7/8 - 14 UNF - 2B
Max. flow rate	L/min (GPM)	60 (15.85)
Max. input pressure (port P)	bar (PSI)	350 (5076)
Max. output pressure (port T)	bar (PSI)	100 (1450)
Working pressure related to flow	bar (PSI)	see p-Q characteristics
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51524
Fluid temperature range for standard (NBR)	°C (°F)	-30 ... +100 (-22 ... 212)
Fluid temperature range for Viton (FPM)	°C (°F)	-20 ... +120 (-4 ... 248)
Viscosity range	mm ² /s (SUS)	10 ... 500 (49 ... 2450)
Max. degree of fluid contamination		Class 21/18/15 according to ISO 4406 (1999)
Weight	kg (lbs)	0.24 (0.53)
Maximum valve tightening torque	Nm (lbf.ft)	35+5 (25.8+3.7)
Mounting position		optional

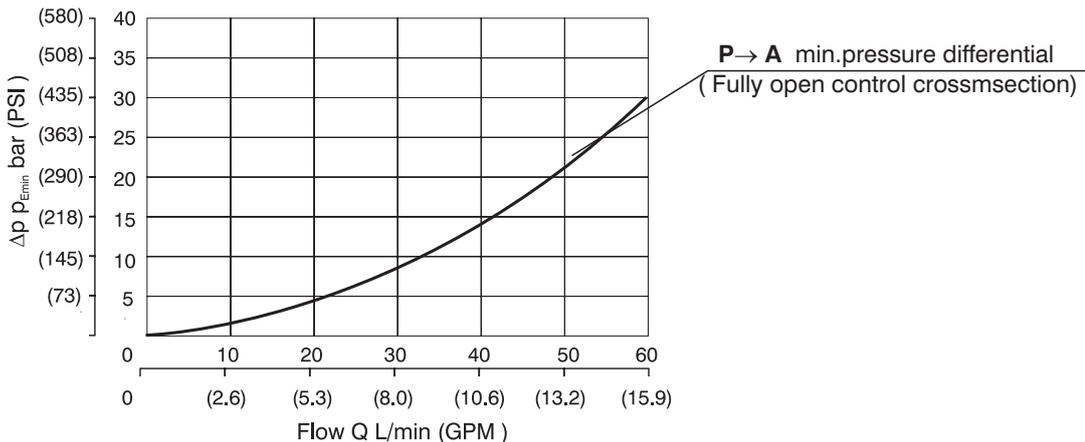
p-Q Characteristics

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



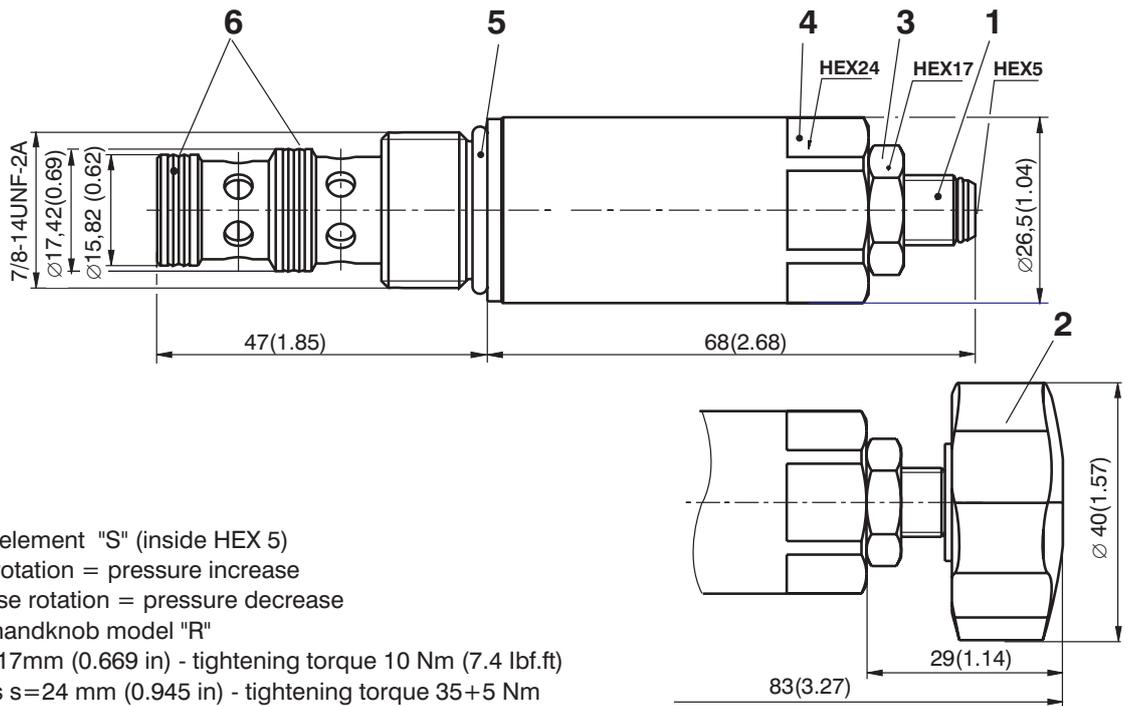
Δp-Q Characteristic

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



Valve Dimensions

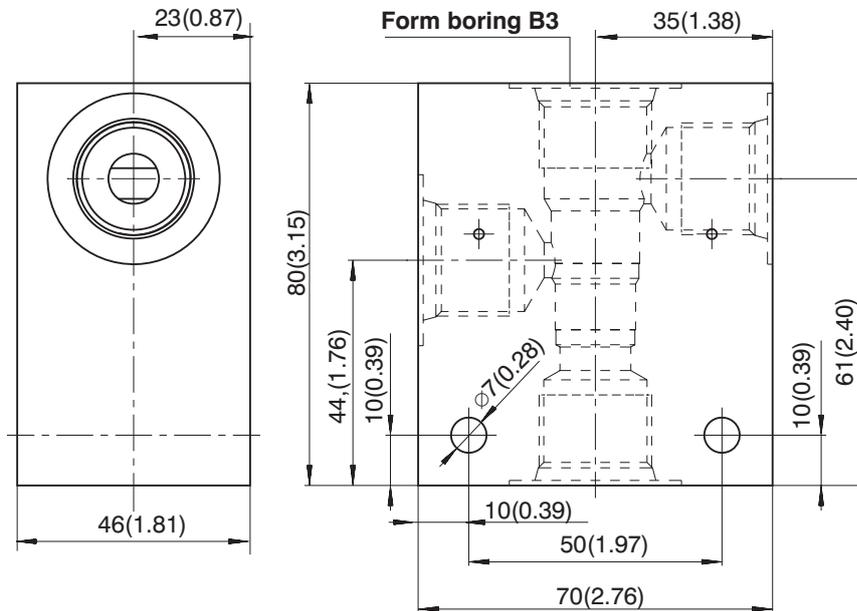
Dimensions in millimetres (inches)



- 1 Adjustment element "S" (inside HEX 5)
Clockwise rotation = pressure increase
Anticlockwise rotation = pressure decrease
- 2 Adjustable handknob model "R"
- 3 Locknut s=17mm (0.669 in) - tightening torque 10 Nm (7.4 lbf.ft)
- 4 Wrench flats s=24 mm (0.945 in) - tightening torque 35+5 Nm (25.8+3.7 lbf.ft)
- 5 O-ring 19,4 x 2,1 (supplied with valve)
- 6 Combined sealing:
DRYZ000002Z20 13,47 x 15,87 x 3,1
DUYZ000001Z20 17,47 x 15,07 x 3,1 (supplied with valve)

Valve Body

Dimensions in millimetres (inches)



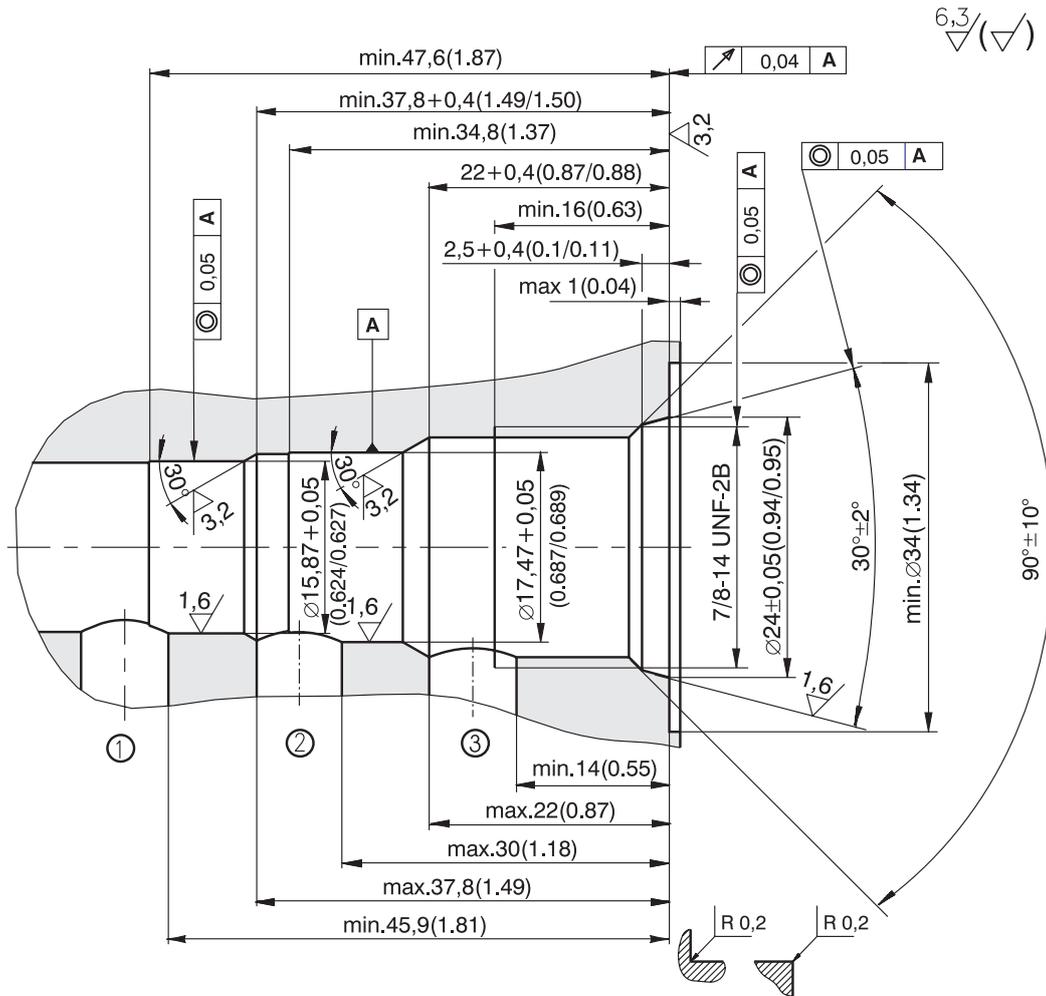
Body material	Connecting size	Type code	Operating pressures
Steel	G3/8	SB-B3-0103ST	420 bar (6091 PSI)
Steel	SAE 8	SB-B3-0104ST	420 bar (6091 PSI)
Aluminium	G3/8	SB-B3-0103AL	250 bar (3626 PSI)
Aluminium	SAE 8	SB-B3-0104AL	250 bar (3626 PSI)

Note:

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

Cavity

Dimensions in millimetres (inches)



Spare Parts

Seal kit	Order number - 18775700
Dualeal - PU	
DRYZ000002Z20 13,47 x 15,87 x 3,1 (pc..)	20159100
DUYZ000001Z20 17,47 x 15,07 x 3,1 (1pc.)	24220800
O-ring - NBR	
19,4 x 2,1 (1pc.)	20143900

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.

ARGO-HYTOS s.r.o. CZ - 543 15 Vrchlábí
 Tel.: +420-499-403111, Fax: +420-499-403421
 E-mail: sales.cz@argo-hytos.com
 www.argo-hytos.com