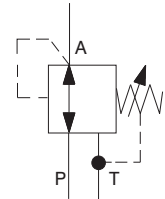


- Screw-in cartridge design
- 3 pressure ranges
- Pressure setting by hexagon socket



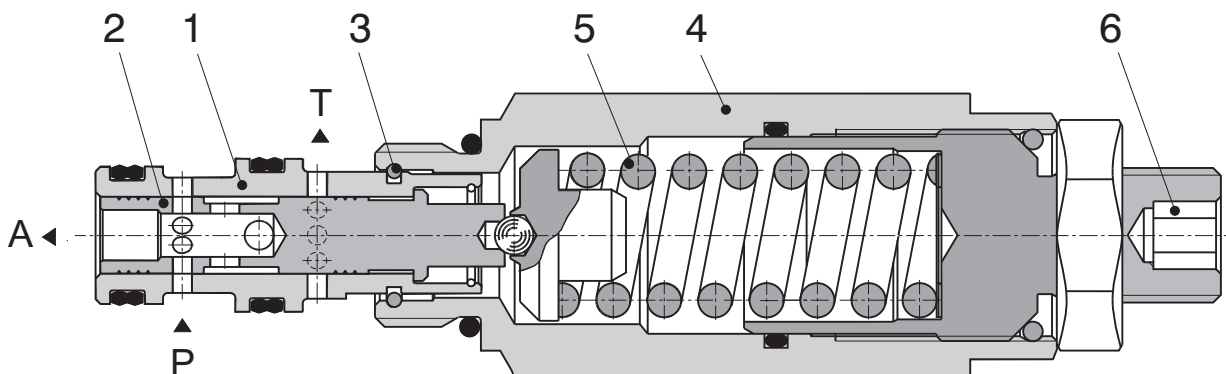
Functional Description

This 3 way direct operated pressure reducing valve is designed to reduce the system pressure. Due to its 3 way design the valve is capable to relief as well the secondary pressure. The pressure can be set by an adjustment screw (6).

In its initial position the valve allows free flow from port P to A. The pressure in port A acts on the front face of the control spool (2) against the spring (5). When the pressure in port A reaches the pressure set at the spring the control spool moves into the regulating position and closes the flow from port P to A until the pressure falls

back to the set pressure. This will maintain a constant pressure in line A. A further pressure increase in port A caused by a potential external force on the actuator will cause the spool to shift against the spring until the spool opens port T and allows the oil flow pass to tank.

The valve bush (1) is fixed to the cartridge (4) by a wire ring (3). Decoupling the bush from the cartridge makes a transmission of tensions caused by high tightening torques impossible. In the basic version the valve corpus and the adjustment screw are zinc plated



Ordering Code

SP2A-A3 / S



Directly Operated Pressure Reducing Valve

Standard

S

without designation
V

Sealing
NBR
FPM (Viton)

06
16
21

Pressure range
up to 63 bar (914 PSI)
up to 160 bar (2321 PSI)
up to 210 bar (3046 PSI)

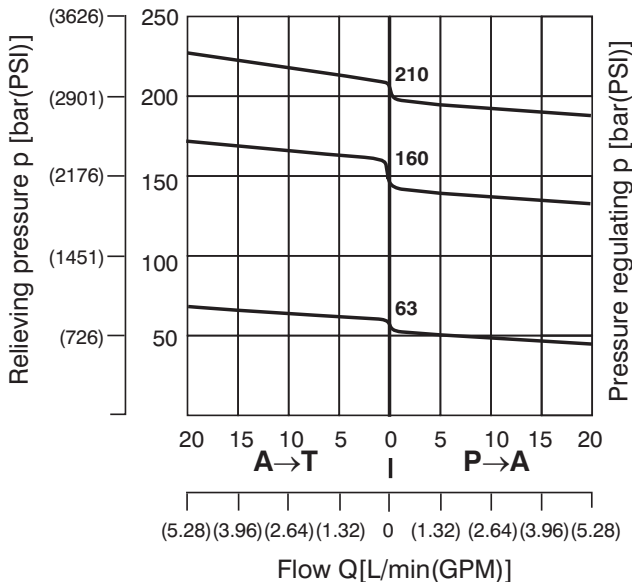
Technical Data

Cartridge thread	3/4 - 16 UNF - 2B		
Max. flow rate	L/min (GPM)	20 (5,28)	
Max. input pressure (port P)	bar (PSI)	150 (2176) (pressure range 06)	250 (3626) (pressure range 16) 350 (5076) (pressure range 21)
Regulated pressure	bar (PSI)	63 (914)	50-160 (725-2321) 100-210 (1450-3046)
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 sealing (NBR)	°C (°F)	-30 ... +100 (-22 ... 212)	
Fluid temperature range for Viton sealing (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)	0,13 (0,286)	
Maximum valve tightening torque	Nm (lbf.ft)	30+2 (22.13+1.48 lbf.ft)	
Mounting position	optional		

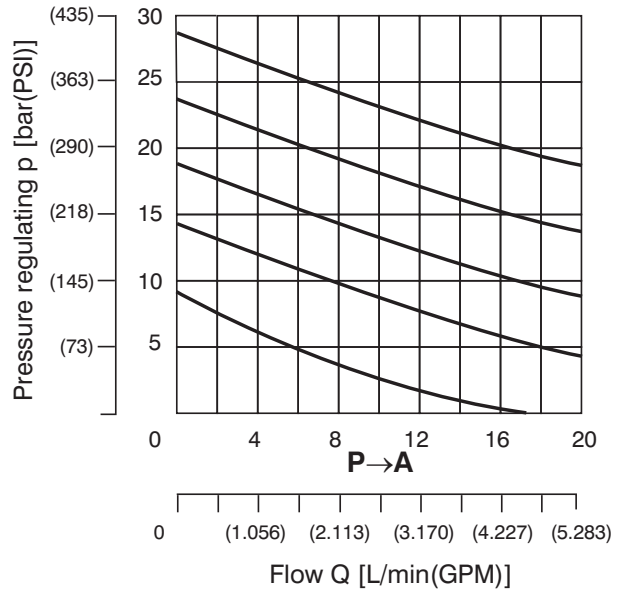
p-Q Characteristics

Measured at $v = 32 \text{ mm}^2/\text{s}$ (156,8 SUS)

Pressure range 06, 16, 21

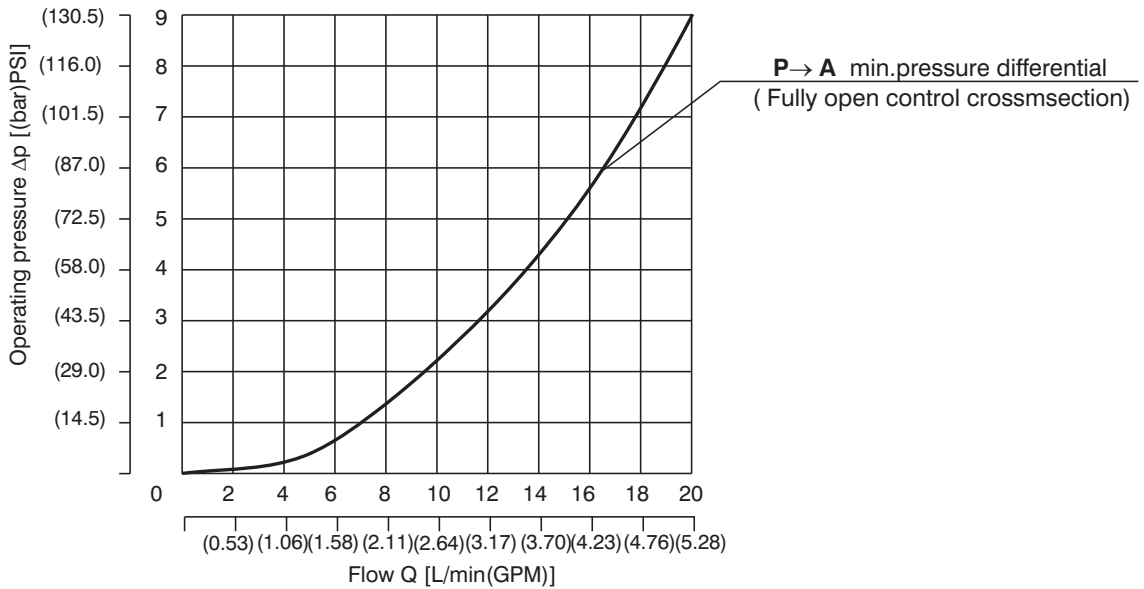


Minimal setting for pressure range 06



Δp-Q Characteristic

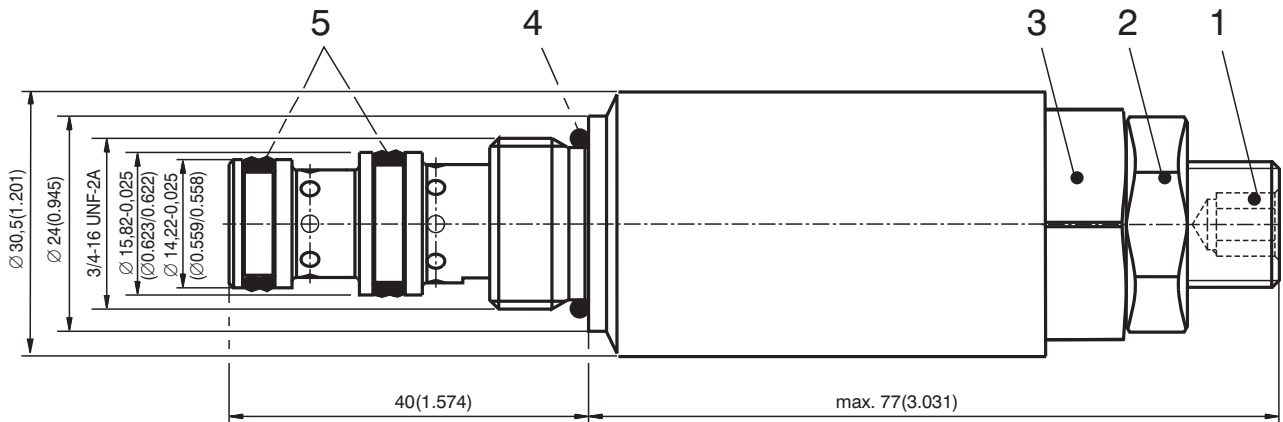
Measured at $v = 32 \text{ mm}^2/\text{s}$ (156,8 SUS)



Valve Dimensions

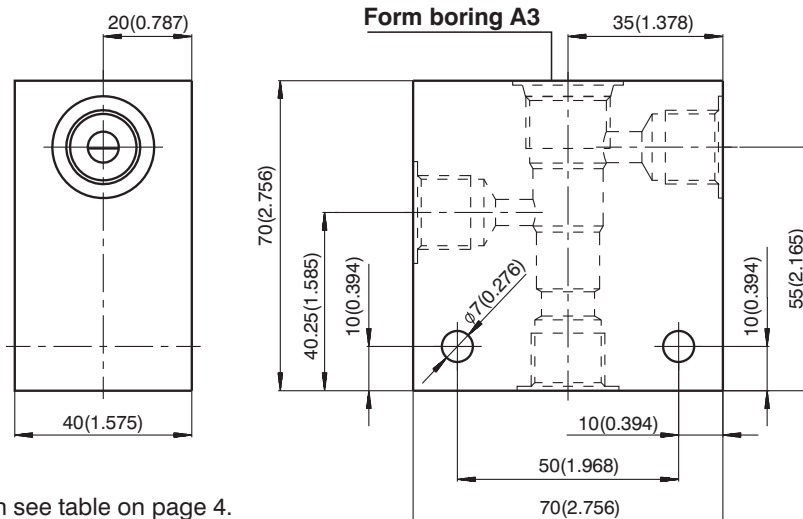
Dimensions in millimetres (inches)

- 1 Adjustment element (screw with internal HEX 6)
Clockwise rotation = pressure increase
Anticlockwise rotation = pressure decrease
- 2 Locknut HEX 21 - tightening torque 15 Nm
- 3 Wrench flats HEX 27- tightening torque 30 Nm
- 4 O-ring 17 x 1,8 (supplied with valve)
- 5 Combined sealing:
Dualesel DRYZ000004Z20 11,87 x 14,27 x 3,1
Dualesel DRYZ000002Z20 13,47 x 15,87 x 3,1 (supplied with valve)



Valve Body

Dimensions in millimeters (inches)



Note: For short selection see table on page 4.

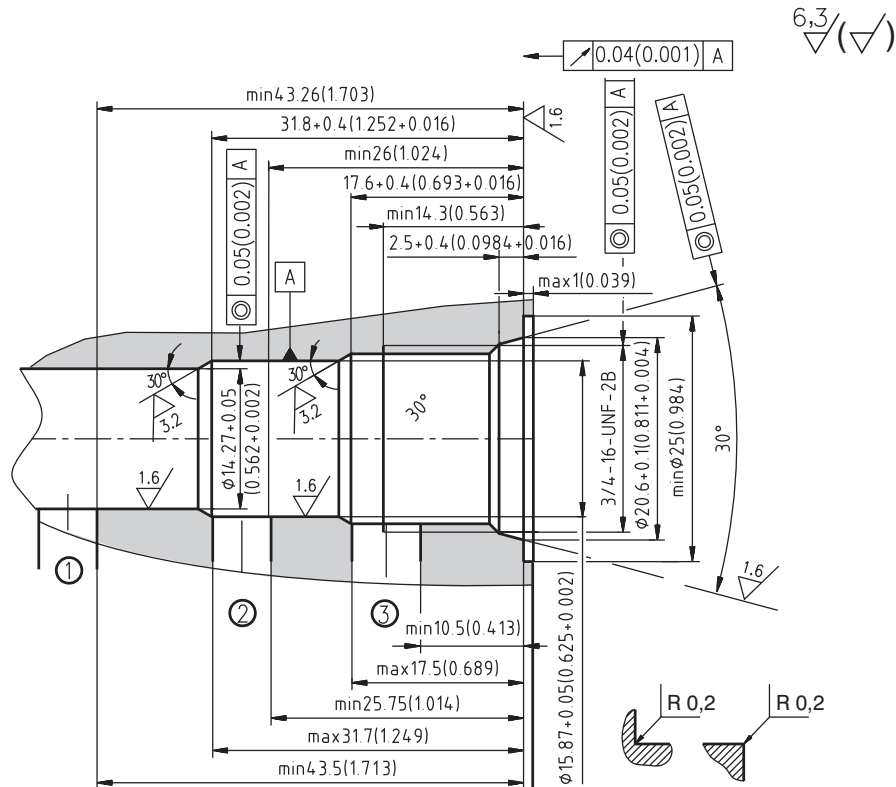
Body material	Connecting size	Type code	Operating pressures
Steel	G3/8	SB-A3-0103ST	420 bar (6091 PSI)
Steel	SAE 6	SB-A3-0102ST	420 bar (6091 PSI)
Aluminium	G3/8	SB-A3-0103AL	250 bar (3626 PSI)
Aluminium	SAE 6	SB-A3-0102AL	250 bar (3626 PSI)

Note:

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

Cavity

Dimensions in millimeters (inches)



Spare Parts

Seal kit

Dualeal - PU	O-ring - NBR	O-ring - Viton	Order number
11,87 x 14,27 x 3,1 (1 pcs.)	17 x 1,8 (1 pcs.)	-	517-0099
13,47 x 15,87 x 3,1 (1 pcs.)	20,35 x 1,78 (1 pcs.)	-	
11,87 x 14,27 x 3,1 (1 pcs.)	-	17 x 1,8 (1 pcs.)	517-0098
13,47 x 15,87 x 3,1 (1 pcs.)	-	20,35 x 1,78 (1 pcs.)	

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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