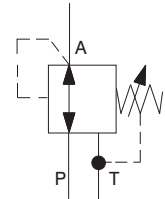


- Screw-in cartridge design
- 3 pressure ranges
- Pressure setting by hexagon socket



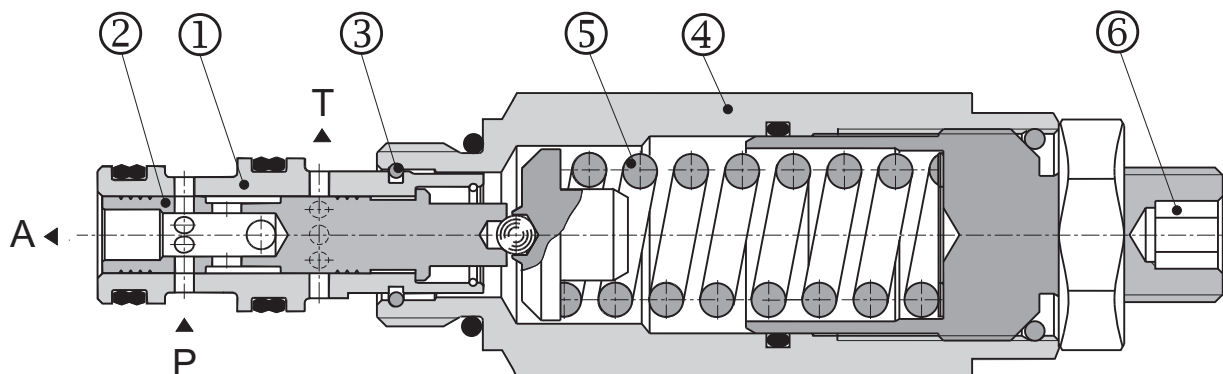
## Functional Description

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 /

**Directly Operated Pressure Reducing Valve  
3/4-16 UNF**

Standard

**S**

without designation  
V

**Sealing**  
NBR  
FPM (Viton)

**06  
16  
21**

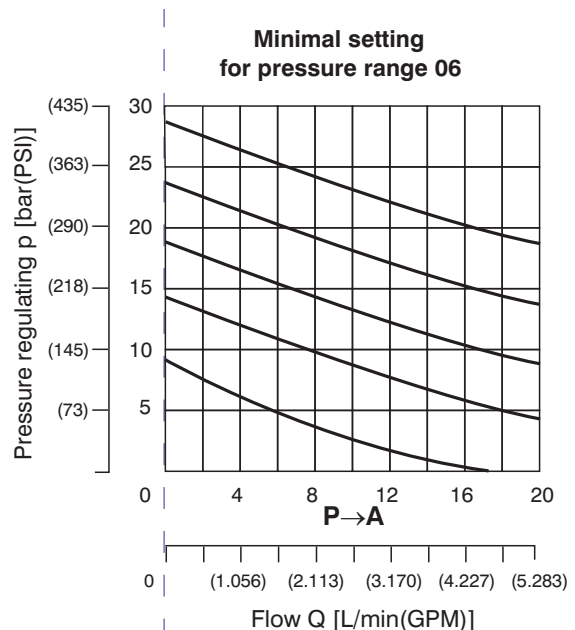
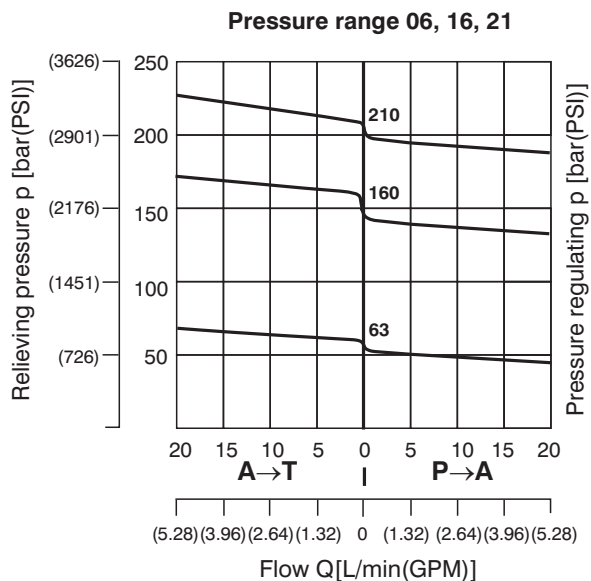
**Pressure range**  
up to 63 bar (914 PSI)  
up to 160 bar (2321 PSI)  
up to 210 bar (3046 PSI)

## Technical Data

Valve size	A3		
Cartridge cavity	3/4-16 UNF-2A		
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 <sup>2</sup> /s (SUS)	10 ... 500 (49 ... 2450)	
Max. degree of fluid contamination	Class 21/18/15 according to ISO 4406		
Weight	kg (lbs)	0,13 (0,286)	
Maximum valve tightening torque	Nm ( lbf.ft)	30+2 (22.13+1.48 lbf.ft)	
Mounting position	unrestricted		
Valve body ( data sheet HA 0018)	SB-A3		

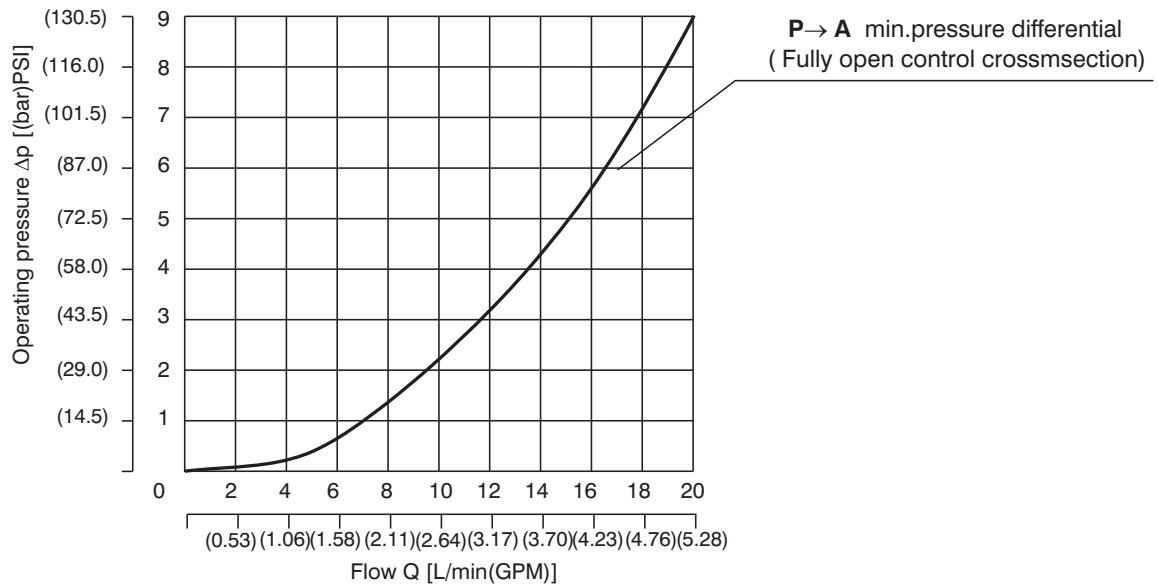
## p-Q Characteristics

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



# Δp-Q Characteristic

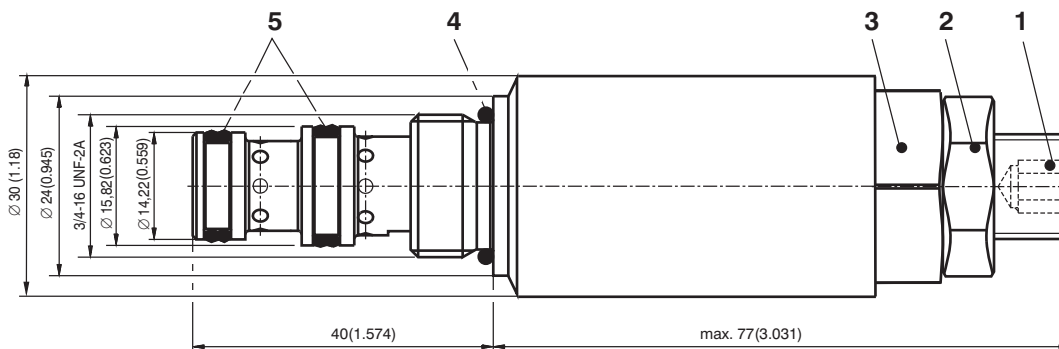
Measured at  $v = 32 \text{ mm}^2/\text{s}$  (156,8 SUS)



# Valve Dimensions

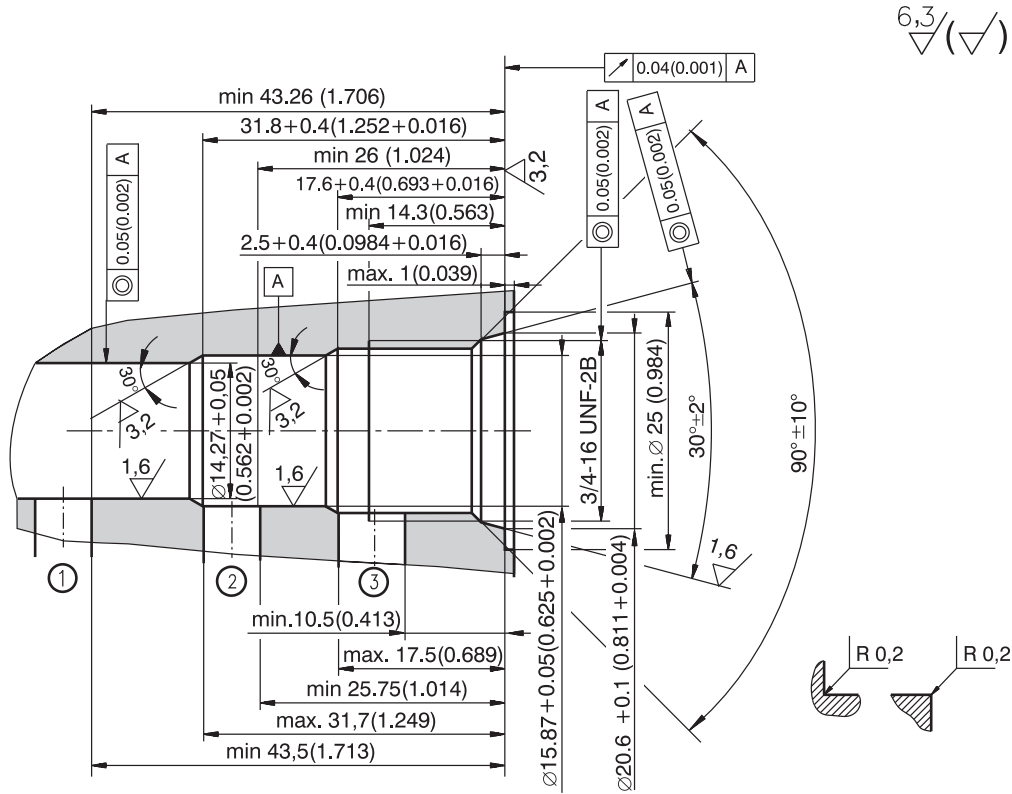
Dimensions in millimeters (inches)

- 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:  
Dualseal DRYZ000004Z20 11,87 x 14,27 x 3,1  
Dualseal DRYZ000002Z20 13,47 x 15,87 x 3,1 (supplied with valve)



**Cavity**

Dimensions in millimeters (inches)



**Spare Parts**

**Seal kit**

Dualseal - PU	O-ring - NBR	O-ring - Viton	Order number
11,87 x 14,27 x 3,1 (1pcs.)	17 x 1,8 (1 pcs.)	-	22565200
13,47 x 15,87 x 3,1 (1pcs.)	20,35 x 1,78 (1 pcs.)	-	
11,87 x 14,27 x 3,1 (1pcs.)	-	17 x 1,8 (1 pcs.)	22565100
13,47 x 15,87 x 3,1 (1pcs.)	-	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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