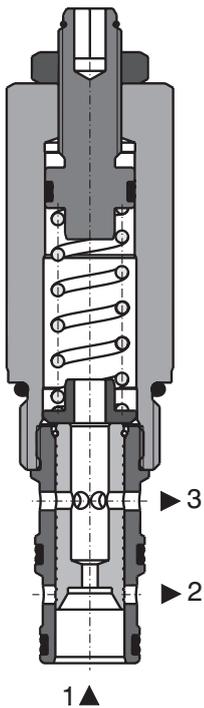


Screw-in Cartridge Flow Control Valve with 3-Way Pressure Compensator

SF32A-B3/H

7/8-14 UNF • Q_{max} 50 l/min (13 GPM) • p_{max} 350 bar (5100 PSI)

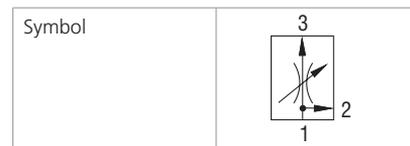


Technical Features

- › Set volumetric flow is independent of load pressure and temperature changes
- › The flow rate depends on the selected flow range and set pressure drop
- › Four flow ranges
- › Fast and smooth response to load changes
- › Precisely manufactured parts and a hardened compensator spool
- › Possible meter-in connection to an applicator
- › Flow adjustable by allen key or rotating plastic handle
- › In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227. Enhanced surface protection for mobile sector available for the steel parts (ISO 9227, 520 h salt spray)

Functional Description

Screw-in cartridge flow control valve with 3-way pressure compensator is designed for speed control of actuator in applications, where the minimum fluctuation of velocity is acceptable during load changes. The spool of 3-way pressure compensator maintains constant pressure drop on the valve by dividing flow and thus a constant flow in the flow direction 1 → 3. The excess fluid is discharged through port 2 back to the tank. The volumetric flow is independent of pressure changes in ports 1 and 3. Flow adjustment, in the range given by nozzle diameter, is performed by changing the pressure drop, by means of spring compression with adjusting screw. The regulated flow increases with clockwise rotation of the adjusting screw. If the port 2 in the block is closed, the pressure compensator will operate as a 2-way. In the opposite flow direction 3 → 1 the valve works as a flow restrictor and the pressure compensator spool is inactive. The valve can also be used as a flow divider with a priority constant flow in the direction 1 → 3.



Technical Data

Valve size / Cartridge cavity	7/8-14 UNF-2A / B3 (C-10-3)			
Max. inlet flow (port 1)	l/min (GPM) 50 (13.2)			
Nominal flow rates	10	14	22	30
Adjustment range	5 - 10 (1.2 - 2.6)	6 - 14 (1.6 - 3.7)	11 - 22 (2.9 - 5.8)	17 - 30 (4.5 - 7.9)
Max. operating pressure	bar (PSI) 350 (5100)			
Fluid temperature range (NBR)	°C (°F) -30... + 100 (-22 ... +212)			
Fluid temperature range (FPM)	°C (°F) -20 ... +120 (-4 ... +248)			
Weight	kg (lbs) 0.24 (0.52)			

General Information		Datasheet	Type
		HA 0060	Products operating conditions
Valve bodies	In-line mounted	HA 0018	SB-B3*
	Sandwich mounted	HA 0028	SB-*B3*
Cavity details / Form tools		HA 0019	SMT-B3*
Spare parts		HA 8010	

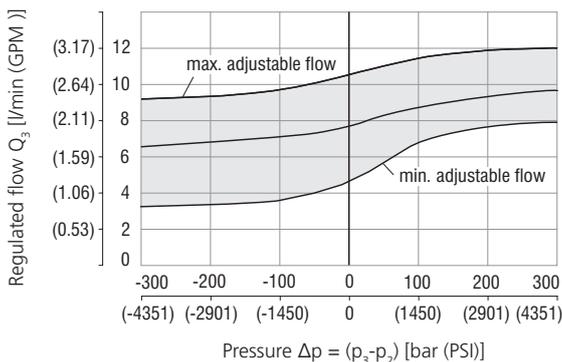
Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

Regulated flow related to input pressure

Measured at constant inlet flow $Q_1 = 50 \text{ l/min}$ (13.21 GPM)

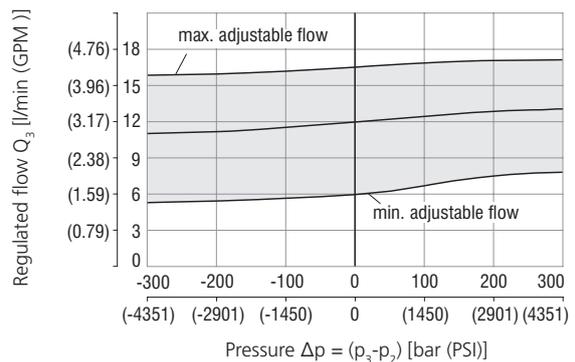
Flow rate 10

By-pass pressure higher than regulated pressure $p_2 > p_3$ | Regulated pressure higher than by-pass pressure $p_3 > p_2$



Flow rate 14

By-pass pressure higher than regulated pressure $p_2 > p_3$ | Regulated pressure higher than by-pass pressure $p_3 > p_2$



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

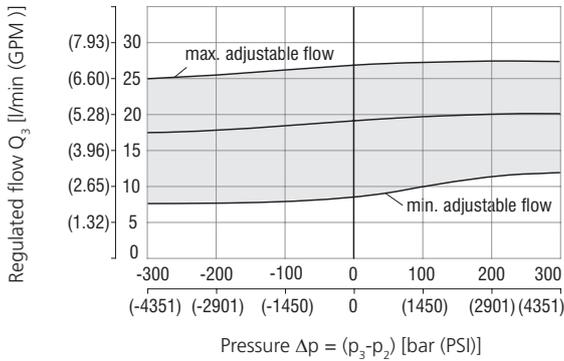
Regulated flow related to input pressure

Measured at constant inlet flow $Q_1 = 50 \text{ l/min}$ (13.21 GPM)

Flow rate 22

By-pass pressure higher than regulated pressure $p_2 > p_3$

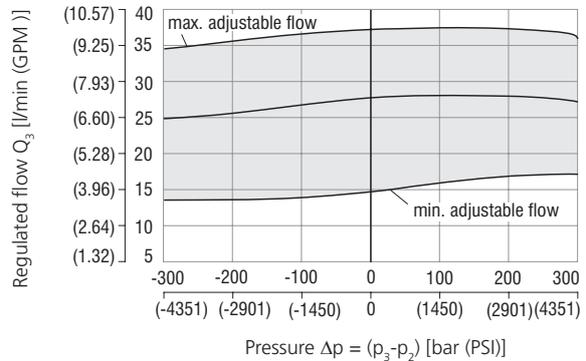
Regulated pressure higher than by-pass pressure $p_3 > p_2$



Flow rate 30

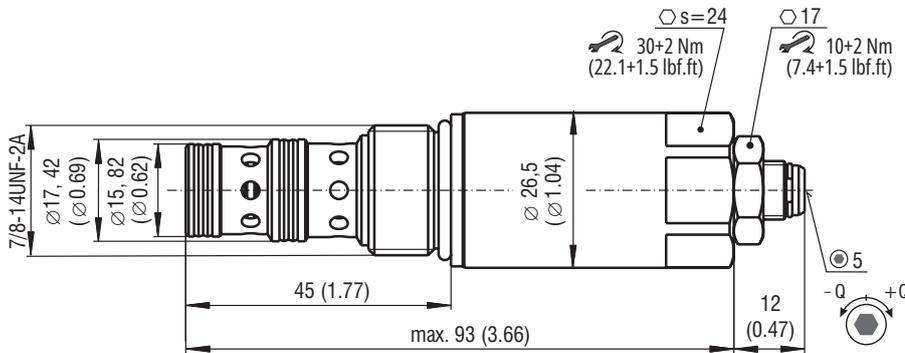
By-pass pressure higher than regulated pressure $p_2 > p_3$

Regulated pressure higher than by-pass pressure $p_3 > p_2$

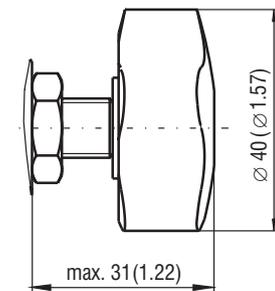


Dimensions in millimeters (inches)

Model S



Model RP



Ordering Code

SF32A-B3 / H

3-Way flow regulator, pressure compensated

Valve cavity
7/8-14 UNF (C-10-3)

Model
High performance

Flow rate
5 - 10 l/min (1.3 - 2.6 GPM) **10**
6 - 14 l/min (1.6 - 3.7 GPM) **14**
11 - 22 l/min (2.9 - 5.8 GPM) **22**
17 - 30 l/min (4.5 - 7.9 GPM) **30**

Surface treatment
A zinc-coated (ZnCr-3), ISO 9227 (240 h)
B zinc-coated (ZnNi), ISO 9227 (520 h)

Seals
No designation
V NBR
FPM (Viton)

Adjustment option
S allen key (hex. 5), without protective cap
RP hand screw, plastic