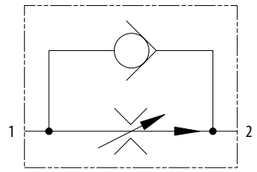
FAR1-12 - Flow regulator

Fully adjustable, pressure compensated with free reverse flow
1.5-94.5 L/min (0.4-25 USgpm) • 310 bar (4500 psi)



Operation

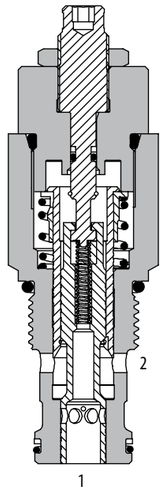
Flow into the inlet of the valve passes through the adjustable orifice and out of the regulated port. The pressure drop across the orifice is sensed on the regulating sleeve and produces a force which, at the required flow rate, overcomes the spring force. The resultant movement of the sleeve regulates the flow by closing the radial valve ports.

The inbuilt check allows free return of flow (2 to 1).

Features

Cartridge construction gives versatility of application. A valve may be fitted into a line body, a custom designed Hydraulic Integrated Circuit or directly into a cylinder or other actuator. Leakproof adjust screw gives easy, accurate adjustment to required flow setting. Hardened and ground working parts give accurate flow control and long working life.

Sectional view



Performance data

Ratings and specifications

Performance data is typical with fluid at 21,8 cSt (105 SUS) and 49°C (120°F)		
Typical application pressure (all ports)		350 bar (5000 psi)
Min. pressure differential across valve		15,9 bar (230 psi)
Max. pressure differential across valve		329 bar (4770 psi)
Cartridge fatigue pressure (infinite life)		310 bar (4500 psi)
Rated flow		1,5–94,5 L/min (.4–25 USgpm)
Temperature range		40° to 120°C (–40° to 248°F)
Flow regulation accuracy	1,5–3,8 L/min (.4–1.0 USgpm) above 3,8–68,1 L/min (above 1–18 USgpm) above 68,1–94,6 L/min (above 18–25 USgpm) 3,8–56,8 L/min (1–15 USgpm) above 56,8–89,1 L/min (above 15–23 USgpm)	±20% @5000 psi ±10% @3000 psi ±15% @3000 psi ±10% @5000 psi ±15% @5000 psi
Factory set maximum flow rate accuracy under standard test conditions and within the above ranges		
Reverse check crack pressure		1.7 bar (25 psi)
Leakage at shutoff position		0,5 L/min (30 in3/min)
Cavity		C–12–2 & C–12–2U
Fluids		All general purpose hydraulic fluids such as: MIL-H-5606, SAE 10, SAE 20 etc.
Filtration		Cleanliness code 18/**16/13**
Standard housing material		Aluminum or Steel
Weight cartridge only		"S" 0,43 kg (0.95 lbs)
Seal kit		02–181304 (Buna-N) 02–181305 (Viton®)

Viton is a registered trademark of E.I. DuPont

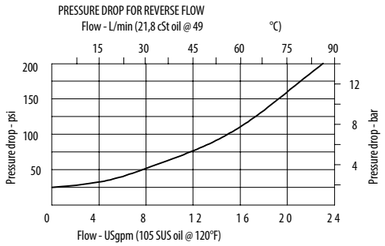
Description

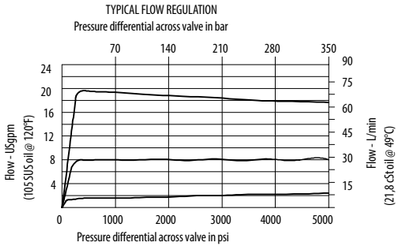
This is a two-port, restrictive flow regulator with a built in free flow check valve. Typical uses include the control of actuator speed by regulating the flow into or out of the actuator (meter-in or meter-out).

The flow (and actuator speed) will be largely independent of the load and the pressure conditions. If used to restrict flow from a fixed supply, for example a standard gear or piston pump, the valve will pass the required flow and any surplus flow will normally pass over the system relief valve.

Typical flow regulation

Cartridge only





Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

FAR1-12 - Flow regulator

Fully adjustable, pressure compensated with free reverse flow
1.5-94.5 L/min (0.4-25 USgpm) • 310 bar (4500 psi)

Model code

FAR1 – **12** **(V)** – * – * – ** – *.* – **00**
1 2 3 4 5 6 7 8

1 Function

FAR1 - Flow adjustable, pressure compensated flow regulator with reverse flow check

2 Size

12 - 12 Size

3 Seal material

Blank - Buna-N
V - Viton®

4 Adjustment

H - Calibrated handknob with locknut
K - Handknob with locknut
S - Screw with locknut

5 Valve housing material

Omit for cartridge only
A - Aluminum **S** - Steel

6 Port size

Code	Port size	Housing number C-12-2U Aluminium light duty	C-12-2 Aluminium fatigue rated	C-12-2U Steel fatigue rated	C-12-2 Steel fatigue rated
		See section J for housing			
0	Cartridge only				
10T(U)	SAE 10	02–160641	02-160640	02-169817	02-169744
12T(U)	SAE 12	02–160645	02-160644	02-169790	02-169782
4G(U)	1/2" BSPP	02–161116	02-161118	02-172512	02-172062
6G(U)	3/4" BSPP	02–161115	02-161117	02-162922	02-169665

See section J for housing details.

7 Factory set flow rate

Blank - Normal factory setting at 10 USgpm User requested setting Within .04–25 US gpm (1,5-–94,6 L/min.) up to 210 bar (3000 psi) Within 0.4-23 USgpm (1,5-87,1 L/min.) up to 350bar (5000 psi)

8 Special features

00 – None
(Only required if valve has special features, omitted if "00")

Dimensions

mm (inch)

Torque cartridge in housing

A - 81-93 Nm (60-70 ft lbs)
S - 102-115 Nm (75-85 ft lbs)

"K" adjustment kit – 565585

Note: To reset scale and knob to an optimum viewing position:

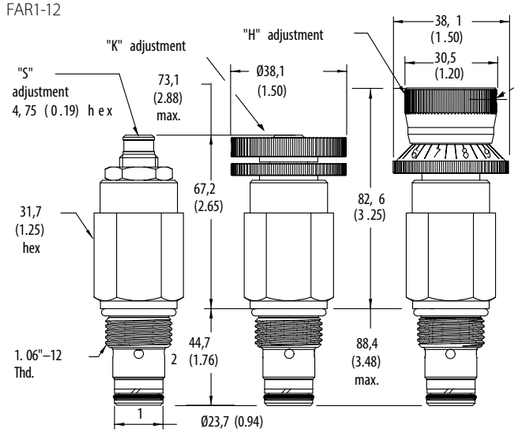
1. Loosen the set screw
2. Rotate zero point on scale to a desired orientation.
3. Align mark on knob with zero on scale.
4 Tighten the set screw firmly.

Note: To change the setting:

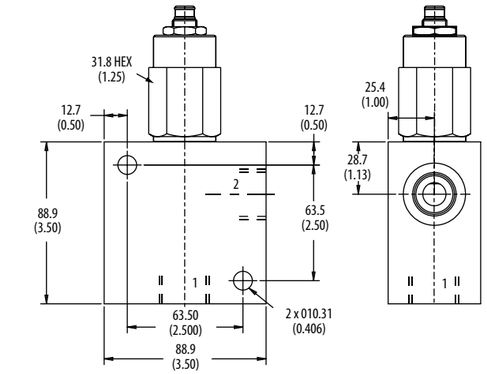
1. Loosen the set screw
2. Loosen jamnut while holding the knob steady, or move the knob along the axis slightly.
3. Turn adjusting screw (jam nut and knob will turn at the same time).
4. At the new adjusting screw position, tighten jamnut firmly while holding the knob steady, or move the knob along the axis slightly.
5. Tighten the set screw firmly.

Cartridge

Basic code
FAR1-12



Installation Drawing (Steel)



⚠ Warning

Aluminum housings can be used for pressures up to 210 bar (3000 psi). Steel housings **must** be used for operating pressures **above** 210 bar (3000 psi).

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.