

RFL-F-Series

High Precision Flow Controllers

The RFL-F-Series are high precision, high performance flow controllers; well suited for applications subjected to variations and fluctuations in downstream pressures, e.g. oilfield chemical injection.

Features

- Patented, unique control concept
- Flow independent of upstream and downstream pressure variations
- Manually operated or remotely controlled with electrical torque actuator, SXX-A01
- Wide flow range; turn down ratio 30:1
- ATEX certification: II 2 G c IIC T6

Applications

- Oilfield chemical injection systems
- All applications requiring precise flow control despite pressure variation downstream

Description

- The RFL-F-series of high-pressure flow controllers covers a wide range of flow rates and the patented flow control principle ensures a constant flow rate independent of upstream or downstream pressure variations. The RFL-F series have low maintenance and life-cycle cost and are ideal for applications with limited or no downstream pressure control, e.g. for chemical injection.

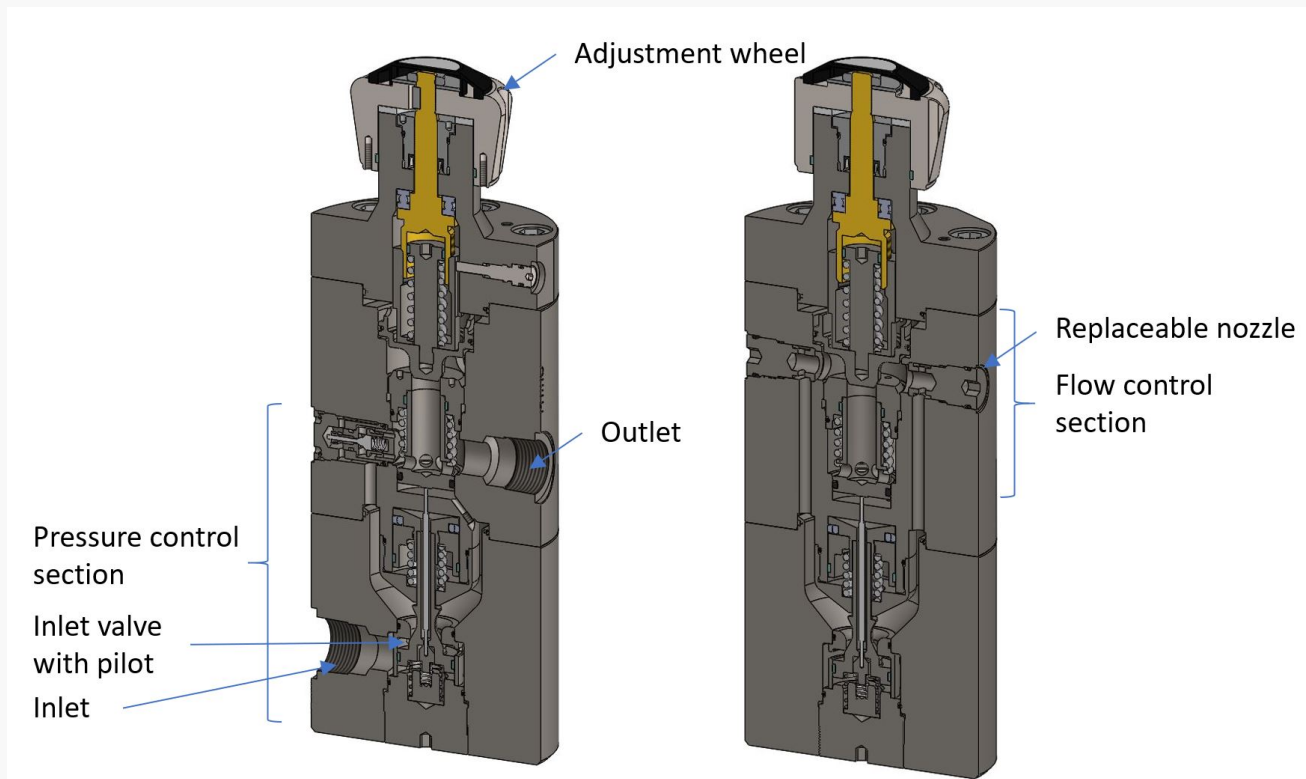
Specifications / Product Range

Model / Part no.	Operation Control	Material housing	Pressure rating [barg] (psi)	Flow range water @ 20° C [l/hour]	Min. differential pressure [bar]	Max Cv
RFL-F13-M-D-J	Manual or Actuator x	Duplex	J= 345 (5k)	0.2 - 60	8	0,02
RFL-F14-M-D-K	M or A	Duplex	K= 690 (10k)	0.2 - 200	8	0,08
RFL-F14-M-D-K	M or A	Duplex	K= 690 (10k)	10 – 400	8	0,15
RFL-F18-M-D-H	M or A	Duplex	H=517 (7.5k)	100-2800	10	0,9

Dimensions and Weights

Model / Part no.	Housing	L mm	D mm	Weight kg	Port type In/out	OBS Draw ref
RFL-F13- M-D-J	2-piece housing	207	80	6,3	3/8" NPT/(F)	00-00150
RFL-F14-M-D-K	2-piece housing	215	100	9,5	1/2" NPT(F) 3/8" Autoclave	00-00144
RFL-F18-M-D-H	3-piece housing	320	120	21	3/4" NPT (F)	00-00178

Typical cross sections and principals



- A pressure control section that provides a near constant differential pressure of 5 bar
- A flow control section that controls the differential pressure across a nozzle and/or the valve, 0-1 bar.

The OBS RFL-F series exhibits some characteristics that reduces or eliminates issues that may be inherent to the design or control principles:

1. Large ratio between sensor/piston area and valve area minimizes the influence of pressure differentials and variations.
2. Outlet pressure is used as reference. In combination with point 1 above, this ensures that differential pressure over the nozzle is nearly constant and has therefore little influence on the desired flow.
3. Low differential pressure over the nozzle allows for larger openings with less risk of plugging for F13 and F14. For F18 differential pressure large nozzles are used in combination with the flow control valve.
4. The OBS RFL-F series will operate reliably with a pressure drop of 8-10 bar and in some applications even as low as 2 bar.