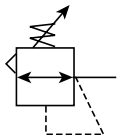
Compressed Air Filters

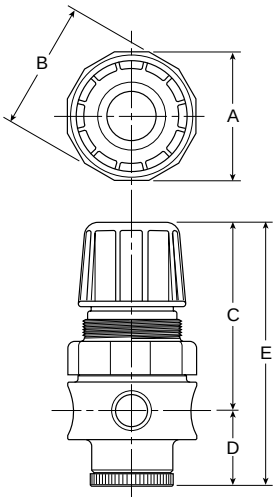
Air Preparation Units - FR10 Regulator - Standard 1/2" Ports



Features

- Stainless steel construction handles most corrosive environments.
- Large diaphragm to valve area ratio for precise regulation and high flow capacity.
- Meets NACE specifications MR-01-75/ISO 15156.
- Low temperature version available.
- High Flow: 1/2" – 80 SCFM§

R10



R10

Port Size	NPT
1/2"	FR10-04CSS

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.

R10, R11 Regulator Dimensions		
A 2.34 (60)	B 2.43 (62)	C 3.59 (91)
D 1.38 (35)	E 4.97 (126)	

inches (mm)
NOTE: 1.75 Dia. (44mm) hole required for panel mounting.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

Ordering Information

FR10	-	04	C	SS

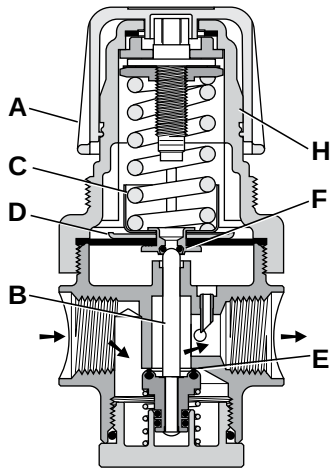
Series	Port Type	Port Size	Pressure Range	Material
R10 Standard Knob	- NPT	04 1/2 Inch	C 0-125 PSIG (0-8.5 bar)	SS Stainless Steel

Compressed Air Filters

Air Preparation Units FR10 Air Line Regulators

Technical Information

Operation



With the adjusting knob **(A)** turned fully counter-clockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly **(B)** is closed. Turning the adjusting knob clockwise applies a load to control spring **(C)**. This load causes the diaphragm **(D)** and the valve poppet assembly **(B)** to move downward allowing flow across the seat area **(E)** created between the poppet assembly and the seat. Pressure in the downstream line is sensed below the diaphragm **(D)** and offsets the load of spring **(C)**. As downstream pressure rises, poppet assembly **(B)** and diaphragm **(D)** move upward until the area **(E)** is closed and the load of the spring **(C)** and pressure under diaphragm **(D)** are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the diaphragm **(D)**. The load of control spring **(C)** now causes the poppet assembly to move downward opening seat area **(E)** allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening **(E)**.

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm **(D)** to move upward against control spring **(C)**, open vent hole **(F)**, and vent the excess pressure to atmosphere through the hole in the bonnet **(H)**. (This occurs in the relieving type regulator only.)

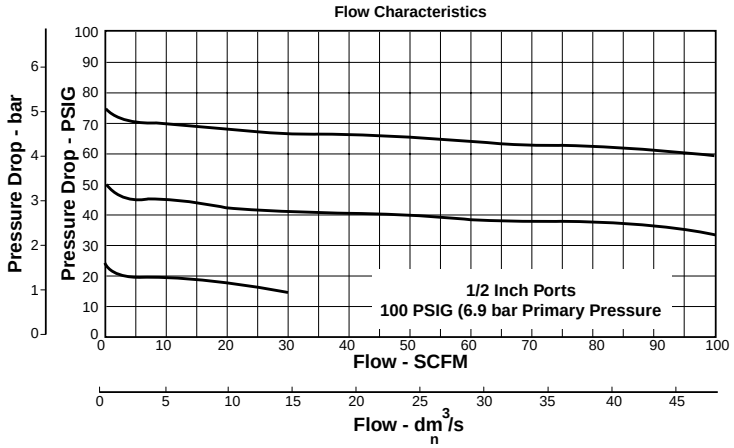
Technical Information

CAUTION:

REGULATOR PRESSURE ADJUSTMENT –

The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



FR10 Regulator Kits & Accessories

R10 Bonnet Kit (Knob Included) CKR10YSS
Gauge –
160 PSIG (0 to 1100 kPa), 2" Face K4520N14160SS
Panel Mount Bracket (Stainless) 161X57-SS
Panel Mount Nut –
Stainless R10X51-SS
Plastic R10X51-P
Service Kit –
Relieving RKR10YSS

Springs –
0-125 PSIG Range SPR-389-1-SS

Specifications

Gauge Port ..... 1/4 Inch
Operation ..... Fluorocarbon Diaphragm
Port Threads ..... 1/2 Inch
Pressure & Temperature Ratings – ..... 300 PSIG Max (20.7 bar)
0°F to 150°F (-18°C to 66°C)
Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (2°C).
Weight ..... 1.79 lb. (0.81 kg)

Materials of Construction

Adjustment Mechanism / Springs ..... 316 Stainless Steel
Body ..... 316 Stainless Steel
Bonnet / Knob (R10) ..... Acetal
Bottom Plug ..... 316 Stainless Steel
Poppet ..... 316 Stainless Steel
Seals ..... Fluorocarbon