

# F-Series

## High Flow & High Temperature Bellows Shut-Off Valve



### Features

#### Body Design

Multiport configurations, offering wide range of use.  
Various fitting configuration with standard Moduline dimensions.  
Rigid mechanical connection between stem tip and actuator.  
All tube connections are TIG orbital welded.  
¼" Flat metallic gasket fittings.

#### Materials

Standard Process.....electropolished, Ra < 0.4 µm (16 µin)  
Q+ Process.....electropolished, Ra < 0.15 µm (6 µin)  
  
Body and bellows.....316L VAR Stainless Steel  
Bellows.....Hastelloy® for corrosive gases (option)  
Non rotating stem tip.....Polyimide (VespeI®)  
O-ring (body / actuator)..... Silvered 316L Stainless Steel

#### Actuator Design

Interchangeable actuators : pneumatic NO or NC.  
Permanent color identification for NO or NC.  
Gold & grey anodized actuator in aluminum.  
Actuator O-ring in Viton® up to 180°C (356°F) or Kalrez® up to 240°C (464°F).

#### Verification & Packaging

100% inspection with boroscope.  
Welding photo from boroscope for Q+ process.  
Warranty and leak test certificate for Q+ process.  
Vacuum sealed double packaging with N<sub>2</sub> purge.

#### Options & Accessories

Hastelloy® bellows for corrosive gases.  
Special mounting plates.

### Ratings

#### Specifications

Dead volume..... 2.3 cm<sup>3</sup> with butt weld ends (0.14in<sup>3</sup>)  
Flow coefficient.....Cv = 0.62  
Orifice size.....6.5 mm (0.25in)

#### Temperature

Operating.....-23°C to 240°C (-9.4°F to 464°F)

#### Pressure Ratings

Valve..... Vacuum to 15 bar (200 psi)  
Pneumatic operator.....5-7 bar (72-100 psi)  
Manual actuator (option).....100 bar (1500 psi)

#### Valve Life Expectancy

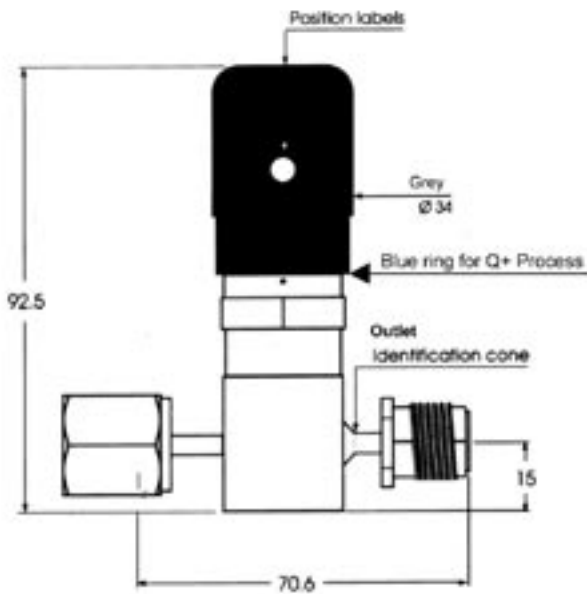
..... > 200,000 cycles

#### Helium Leak Rate

External..... < 5.10<sup>-10</sup> atm cm<sup>3</sup>/s  
Across seat..... < 2.10<sup>-9</sup> atm cm<sup>3</sup>/s

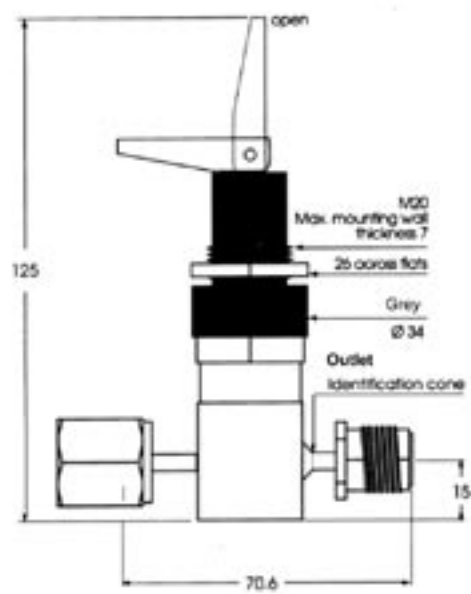
# Dimensions

## MANUAL 1/4

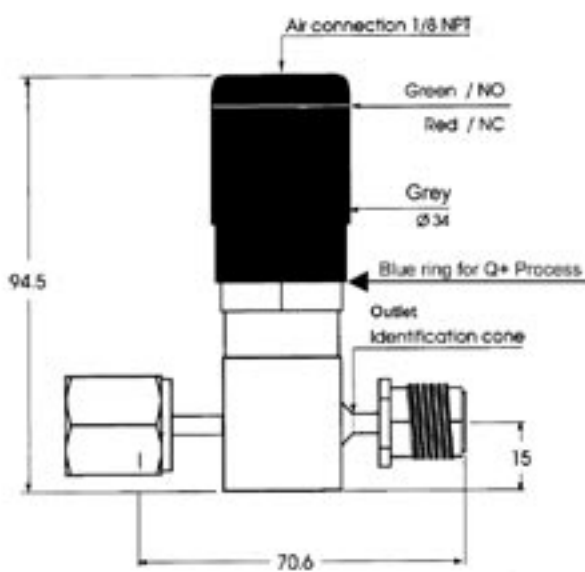


## PNEUMATIC NO or NC 1/4"

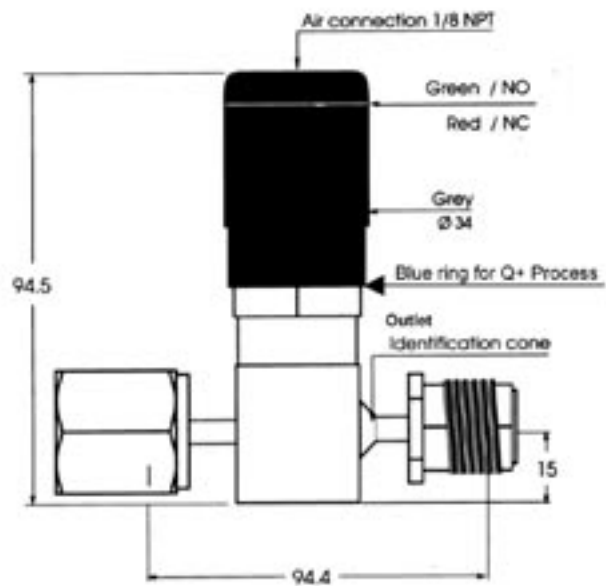
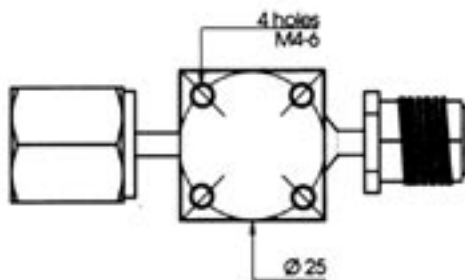
## MANUAL TOGGLE



## PNEUMATIC NO or NC 3/8"



## MOUNTING DIMENSIONS



## FLOW DATA Max flow / ΔP

ΔP ( bars )	N2 l/mn at 21°C
0.1	80
0.5	200
1	300
2	440

	VCR 1/4" HF	VCR 3/8"	Swagelok 3/8"	Weld
pitch (mm)	70.6	94.4	94.4	44.2