

Air Preparation Units Model SH & SC Series

Filters, Regulators and Filter Regulators



Superior performance
throughout the
full operational range

Features:

- High flow
- High stability
- 316L stainless steel
- Full range of accessories
- Arctic service options to -60°C

SC Series Filter Regulator

Reliability and Innovation in directional control valves

Features

- Heavy duty all 316 stainless steel
- High stability
- Thread milled ports
- Elastomer seals
- Modular design
- rugged and corrosion resistant
- precision adjustment
- leak tight joints
- tight shut off
- in line maintenance

Mechanical Construction

- Body - stainless steel AISI 316L
- Bonnet & bowl - stainless steel AISI 316L
- Element - sintered 316 stainless steel
- Springs - 302S26 stainless steel to BS 2056 (or Inconel)
- Regulating spring - 316 stainless steel
- Ports - 1/4" thread milled NPT
- Seals - viton as standard
- Diaphragm - silicone
- Fasteners - 18/10 stainless steel
- Adjustment mechanism - M8 socket set screw

Bowl retention capacity

25cc (manual drain)

Maximum inlet pressure

20bar

Filter unit

5-10, 20-30 & 40-50 Micron

Certification

Ingress protection designed to meet heavy seas and deck rating

Regulated pressures

- 0.20 to 6 bar 2.9 - 87 psi
- 0.40 to 10 bar 5.8 - 145 psi

Working temperatures

- 20°C to +180°C
- 60°C to + 80°C

Operating fluids

air, natural gas, inert gases.
Sweet & sour gases -
consult Bifold Fluidpower

Flow capacity

10 bar inlet pressure, 6 bar secondary pressure with 1 bar pressure drop using X4 (40 - 50 micron element)

- | | | | |
|-------------|---|-----------|-----------|
| 1/4" | - | 25.9 SCFM | C.v. 0.7 |
| 3/8" & 1/2" | - | 27.8 SCFM | C.v. 0.75 |

Relief Port

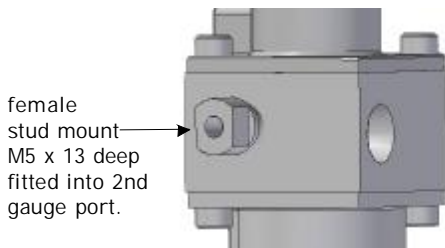
- Threaded 1/8" NPT vent with removable plastic ingress protection
- For gas service, plastic ingress protection can be removed to enable vented gas to be piped away
- Typical bleed flow at 2 bar secondary pressure 1.5cm³/sec
- Relief differential 0.15 bar at 2 bar secondary pressure (relieving type only)

Seal repair kits

- Please add the prefix SRK on the models required leaving off port sizes (only require model number up to element reference)

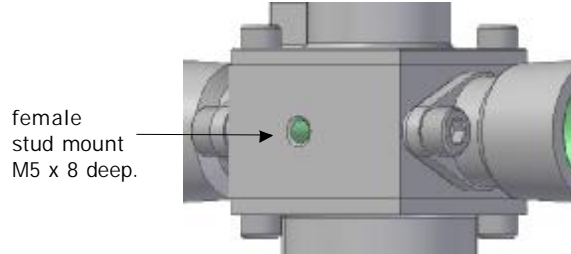
e.g. SRKSC-FR-SR-MD-10-X4-xx

1/4" Unit

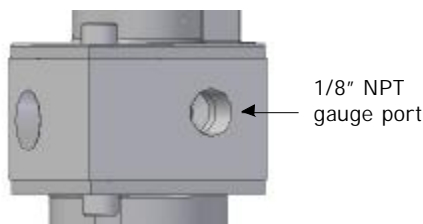


Mounting Details

3/8" & 1/2" Unit

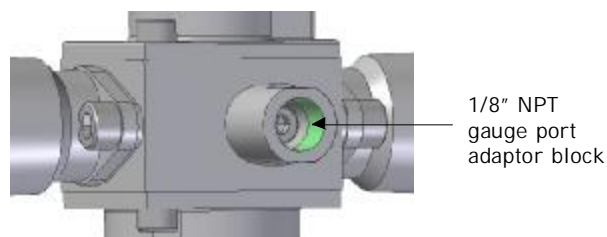


1/4" Unit

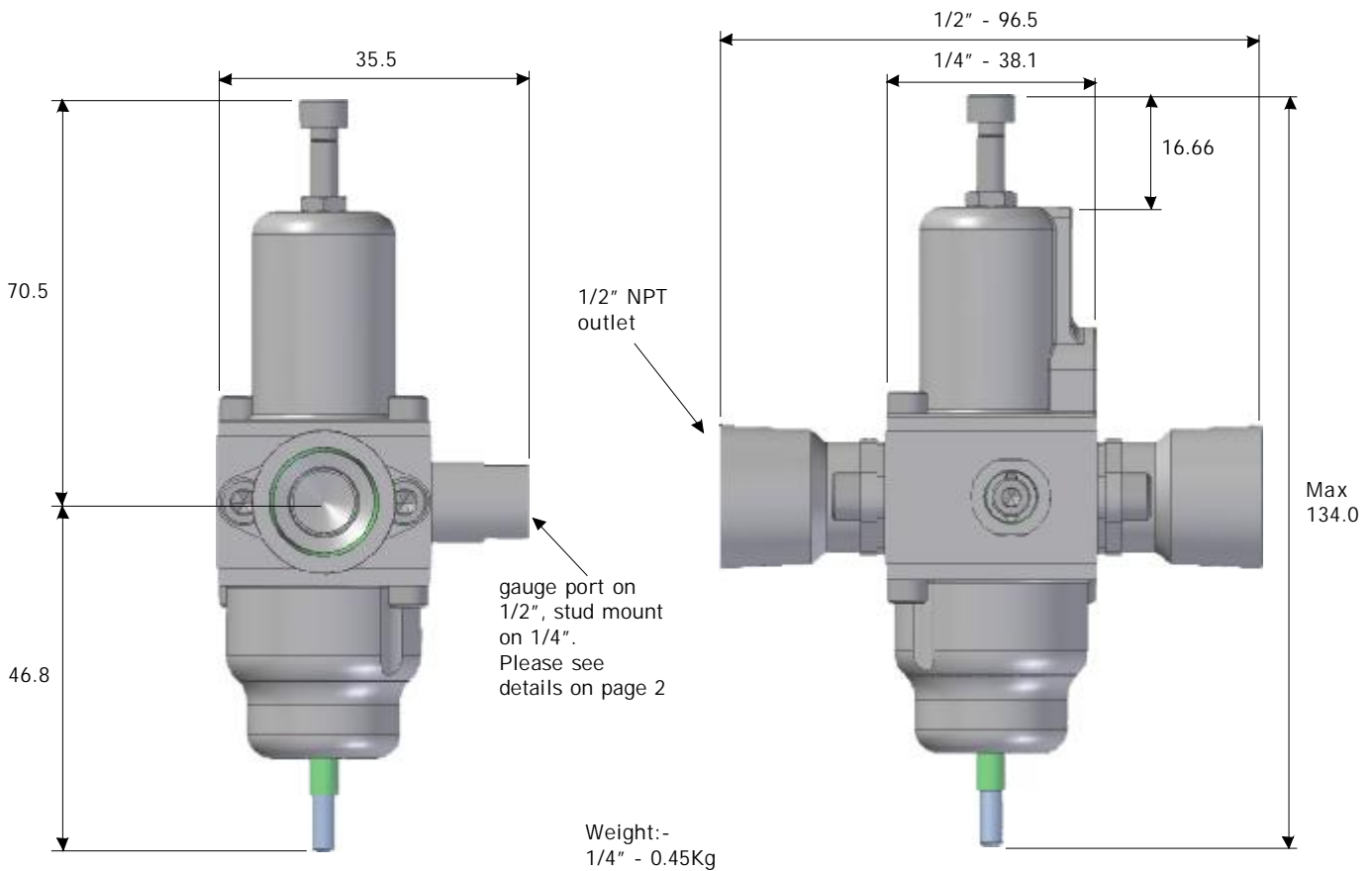


Gauge Details

3/8" & 1/2" Unit



Reliability and Innovation in directional control valves



SC	Compact	Model Code	
06	1/4" NPT	Port Sizes	
09	3/8" NPT		
12	1/2" NPT		
20	20 bar	Inlet Pressure	
FR	Filter Regulator	Model Type	
R1	Regulator		
SR	Self Relieving		
NR	Non Relieving		
MD	Manual Drain <i>(n/a to regulators)</i>		
	Nominal	Actual	Output Pressure Ranges
	06 bar	0.2 - 6 bar	
	10 bar	0.4 - 10 bar	
V	Viton (standard)	O-Ring Material	
AG	Fluorosilicone		
X1	5 - 10 micron element	Filter Element	
X3	20 - 30 micron element		
X4	40 - 50 micron element		
SC 06 - 20 - FR - SR - MD - 10 - V - X4 - xx	(rev no. advised by BF)	Ordering Example	

Gauge Options

- X10 - 10bar 40mm gauge with 316 SS case
- X11 - 10bar 40mm glycerine filled gauge with 316 SS case
- X10 - 10bar / psi 40mm dual gauge with 316 SS case
- X11 - 10bar / psi 40mm dual glycerine filled gauge with 316 SS case

Additional Options

- L15 Viton / stainless steel bug vent
- K10 Plastic hand wheel adjuster

Reliability and Innovation in directional control valves

Features

- Heavy duty all 316 stainless steel - rugged and corrosion resistant
- Large flow paths - high flow from 0.5 bar dp
- High stability - precision adjustment
- Mounting options - panel, pillar, bracket
- Thread milled ports - leak tight joints
- Elastomer seals - tight shut off
- Modular design - in line maintenance

Working temperatures

ASH : -60°C to +60°C SH : -20°C to +180°C

Operating fluids

air, natural gas, inert gases and sweet & sour gases

Flow capacity

10 bar inlet pressure, 6 bar secondary pressure with 1 bar pressure drop using X4 (40 - 50 micron element)

1/4" - 36 SCFM	C.v. 1.0
1/2" - 94 SCFM	C.v. 2.6
1/2" - 168 SCFM	C.v. 4.2 - high flow version
1" - 429 SCFM	C.v. 11.2

Ports

service ports - 1/4", 3/8", 1/2", 3/4" & 1" NPT (BSPP options)
 gauge ports - 1/8" NPT standard (1/4" NPT and BSPP options)



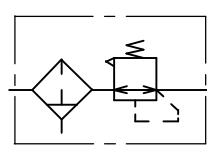


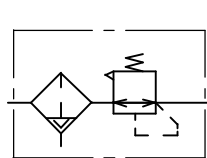


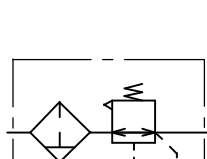


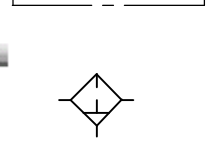


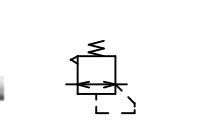


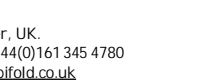



Relief Port

- Threaded 1/8" NPT vent with removable plastic ingress protection
- For gas service, plastic ingress protection can be removed to enable vented gas to be piped away
- Typical bleed flow at 2 bar secondary pressure 1.5cm³/sec
- Relief differential 0.15 bar at 2 bar secondary pressure (relieving type only)

Seal repair kits

- Please add the prefix SRK on the models required leaving off port sizes (only require model number up to element reference) e.g. SRKSH-FR-SR-MD-10-X3

Preferred Range:-

			SH06-FR-SR-MD-10-X3-01	1/4" NPT, self relieving, manual drain, 10 bar, 20-30 micron filter element, C.v. 1.7
			SH12-FR-SR-MD-10-X3-01	1/2" NPT, self relieving, manual drain, 10 bar, 20-30 micron filter element, C.v. 2.6
			SH06-FR-SR-AD-10-X3-01	1/4" NPT, self relieving, auto drain, 10 bar, 20-30 micron filter element, C.v. 1.7
			SH12-FR-SR-AD-10-X3-01	1/2" NPT, self relieving, auto drain, 10 bar, 20-30 micron filter element, C.v. 2.6
			SH25-FR-SR-MD-10-X4-01	1" NPT, self relieving, manual drain, 10 bar, 40-50 micron filter element, C.v. 14.2
			SH06-F1-MD-X3-01	1/4" NPT, filter, manual drain, 20-30 micron filter element, C.v. 1.7
			SH12-F1-MD-X3-01	1/2" NPT, filter, manual drain, 20-30 micron filter element, C.v. 2.6
			SH06-R1-SR-10-01	1/4" NPT, regulator, self relieving, 10 bar, C.v. 1.7
			SH12-R1-SR-10-01	1/2" NPT, regulator, self relieving, 10 bar, C.v. 2.6

Filter unit

10 micron, 20 - 30 micron (standard)
 40 - 50 micron

Bowl retention capacity

25cc (manual drain), 50cc (auto drain)

Maximum inlet pressure

16 bar - auto drain only
 20, 40 bar - manual drain only

Regulated pressures

- 0.03 to 2 bar 0.4 - 29 psi
- 0.03 to 4 bar 0.4 - 58 psi
- 0.20 to 6 bar 2.9 - 87 psi
- 0.25 to 8 bar 3.6 - 116 psi
- 0.40 to 10 bar 5.8 - 145 psi

Certification

Ingress protection designed to meet heavy seas and deck rating

Gauges

dry - 50mm, 63mm with psi, bar or dual psi/bar dial
 glycerine filled - 50mm, 63mm with psi, bar or dual psi/bar dial polycarbonate window and blow-out device

Mechanical Construction

Reliability and Innovation in directional control valves

- Body - stainless steel AISI 316L
- Bonnet & bowl - stainless steel AISI 316L
- Element - sintered 316 stainless steel
- Springs - 302S26 stainless steel to BS 2056 (or Inconel)
- Regulating spring - inconel X750 AMS5699
- Ports - 1/4", 3/8", 1/2", 3/4" or 1" thread milled NPT (BSPP and other options available)
- Seals - viton as standard
- Fasteners - 18/10 stainless steel
- Adjustment mechanism - M8 socket set screw
- Mounting mechanism - Panel, pillar or bracket
- Diaphragm - Silicon

SH Series Selection Chart

SH	Standard service	Model Code														
S40H	40 bar inlet (only available 1/4")															
ASH	Arctic service															
06	1/4" NPT	Port Sizes														
09	3/8" NPT															
12	1/2" NPT															
19L	3/4" NPT (low flow - see SH 25 selection chart for high flow version)															
19	3/4" NPT (X4 micron element only)															
25	1" NPT (X4 micron element only)															
R1	Regulator	Model Type														
F1	Filter															
FR	Filter Regulator															
SR	Self Relieving	(N/A to Filter Units)														
NR	Non Relieving															
MD	Manual Drain	(N/A to Regulators)														
AD	Auto Drain															
Nominal		Output Pressure Ranges														
Actual																
02 bar	0.03 - 2 bar															
04 bar	0.03 - 4 bar															
06 bar	0.2 - 6 bar															
08 bar	0.25 - 8 bar															
10 bar	0.4 - 10 bar															
X1	5 - 10 micron element	Filter Element														
X3	20 - 30 micron element (standard)															
X4	40 - 50 micron element															
K6	BSPP	Options														
K39	1/4" Gauge Port															
K94	Plug for 1/4" Gauge Port															
K84	Plug for 1/8" Gauge Port															
K10	Black Plastic Button															
xx		Revision														
SH	06	-	FR	-	SR	-	MD	-	10	-	X3	-	K10	-	01	Ordering Example

Additional Line Items

Gauges (316 SS case)

- X5 - 10bar 50mm diameter
 - X5 - 16bar 50mm diameter
 - X5 - 160psi 50mm diameter
 - X8 - 10 bar 50mm glycerine filled
- Other scale plates available*

Mounting Options

- (not available with -F1)
- L8 Panel Mount Kit
- L9 Pillar Mount Kit
- L46 Panel Mount and bracket

Bug Vent

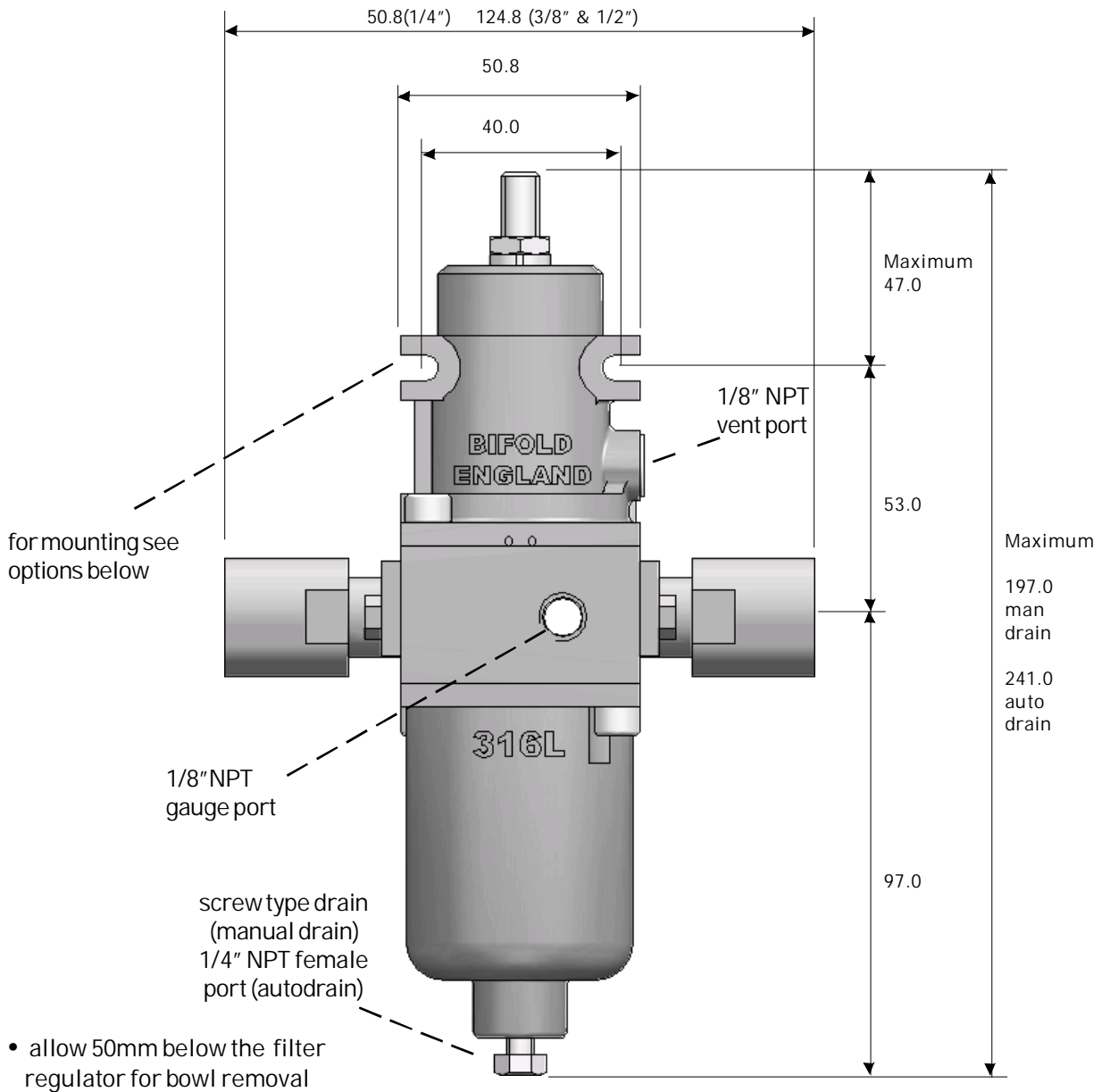
- (not available with -F1)
- L15 13-1 bug vent

Tamperproof

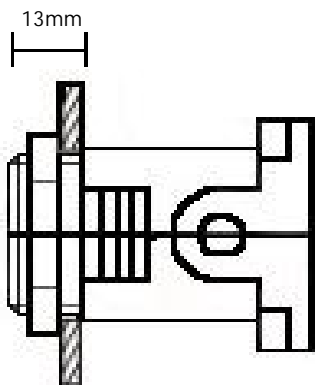
- (not available with -F1 or K10)
- L11 Tamperproof Cap

Filter Regulator

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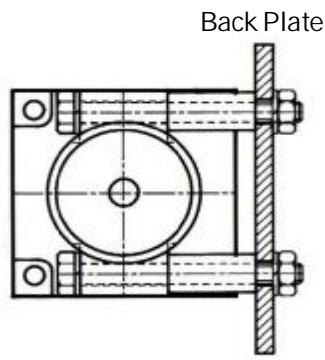


Panel Mount Kit (L8)



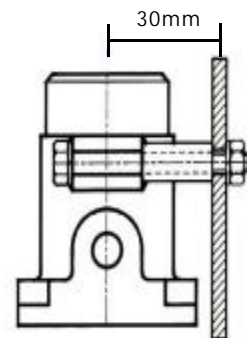
Top cap is threaded and supplied with a panel mount ring

Pillar Kit (L9)



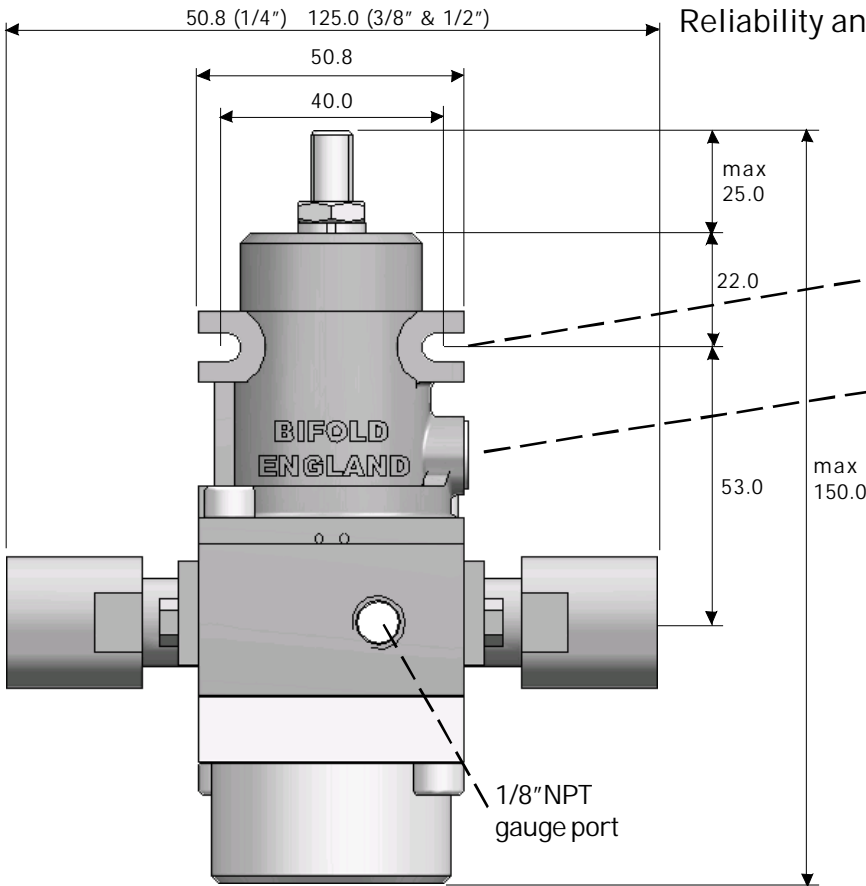
PLAN VIEW

minimum spacer size 20mm



SIDE VIEW

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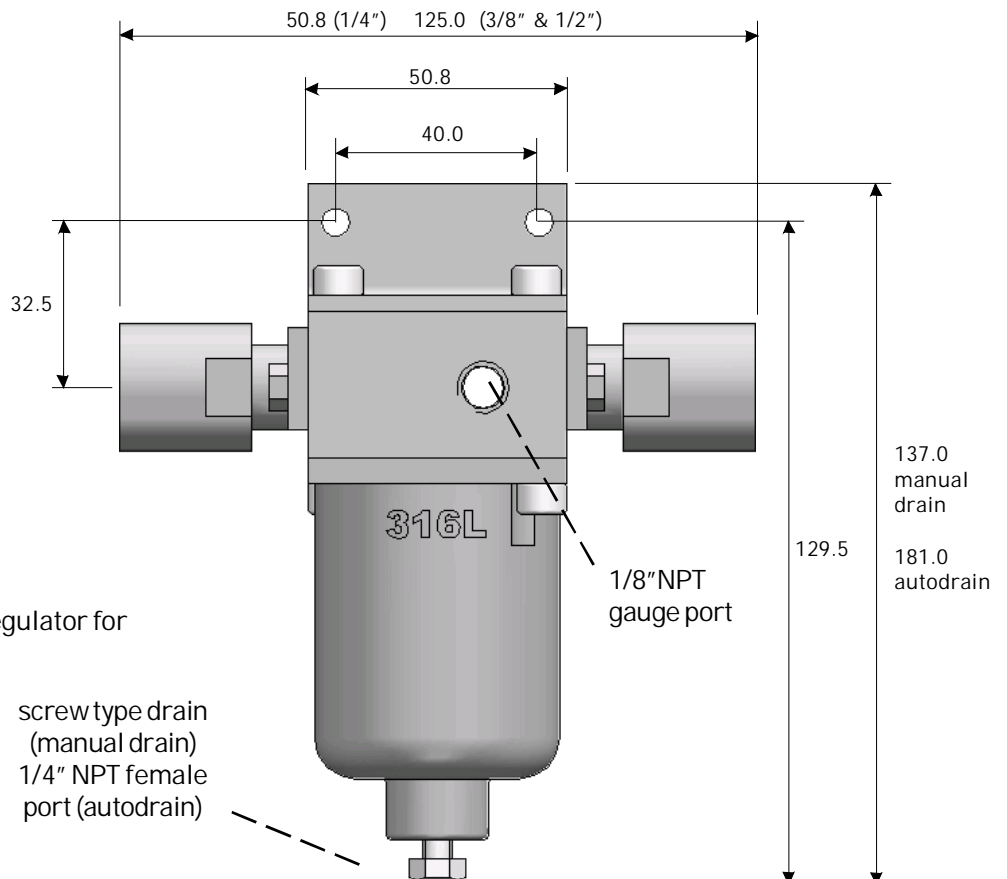


for mounting see options on previous page

1/8" NPT vent port

Regulators

- designed specifically for use in severe and corrosive environments
- various mounting options
- 'lug' mounting as standard
- suitable for mounting in any position



Filters

- reduced size and weight
- cost effective
- manual drain or auto drain
- high flow rates
- range of filter elements
- bracket mounting as standard
- allow 50mm below the filter regulator for bowl removal

screw type drain (manual drain)
1/4" NPT female port (autodrain)

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All Bifold Fluidpower products are manufactured to a most stringent QA programme. Every care is taken at all stages of manufacture to ensure that every product will give optimum performance and reliability. We are recognised to EN ISO 9001:2000. Functional test certificate, letter of conformity and copies of original mill certificates, providing total traceability are available on request, to BSEN 10204 3.1.B where available. The manufacturer reserves the right to make changes to the specifications and design etc., without prior notice

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