

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

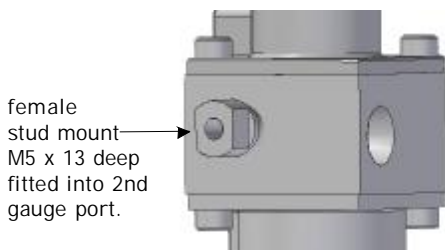
- Threaded 1/8" NPT vent with removable plastic ingress protection
- For gas service, plastic ingress protection can be removed to enable vented gas to be piped away
- Typical bleed flow at 2 bar secondary pressure 1.5cm³/sec
- Relief differential 0.15 bar at 2 bar secondary pressure (relieving type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

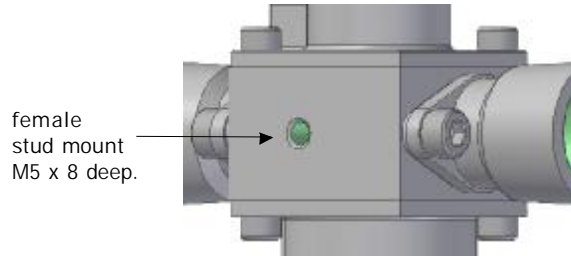
e.g. SRKSC-FR-SR-MD-10-X4-xx

1/4" Unit

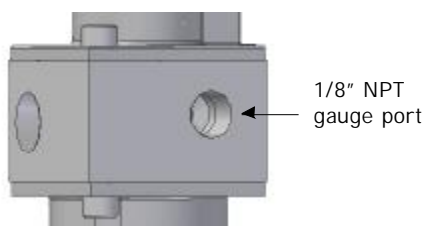


Mounting Details

3/8" & 1/2" Unit

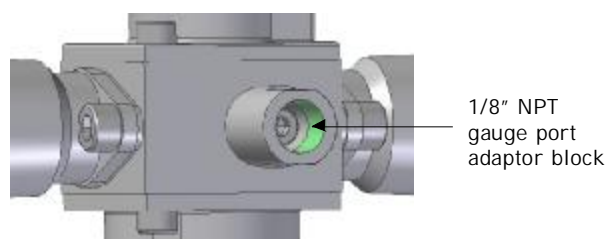


1/4" Unit

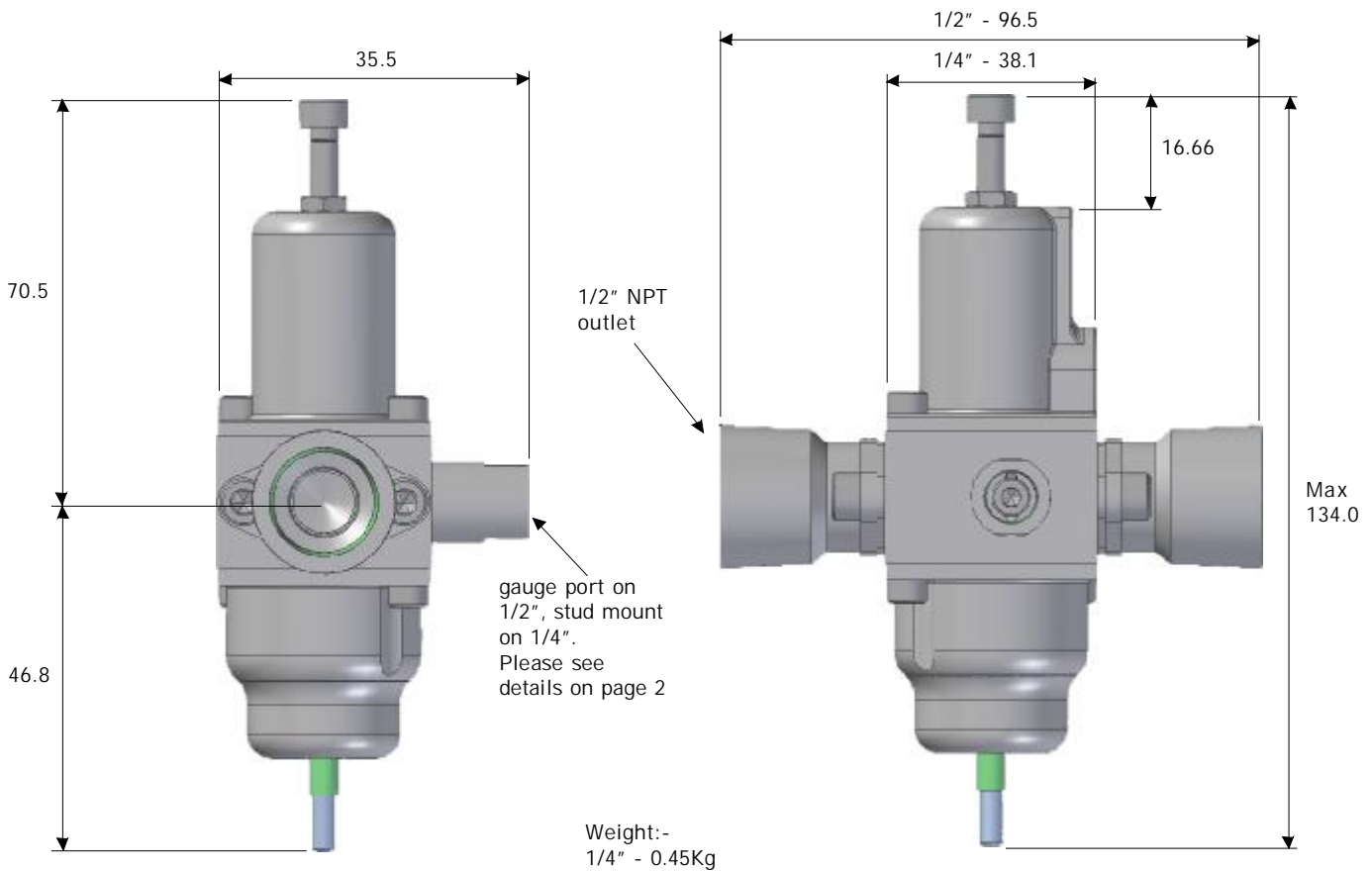


Gauge Details

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)



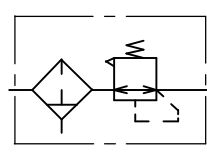


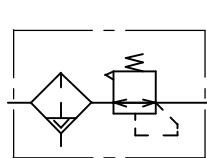


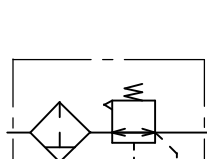


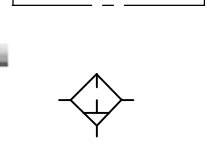


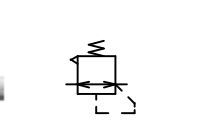


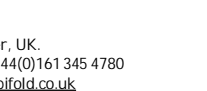



Relief Port

- 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

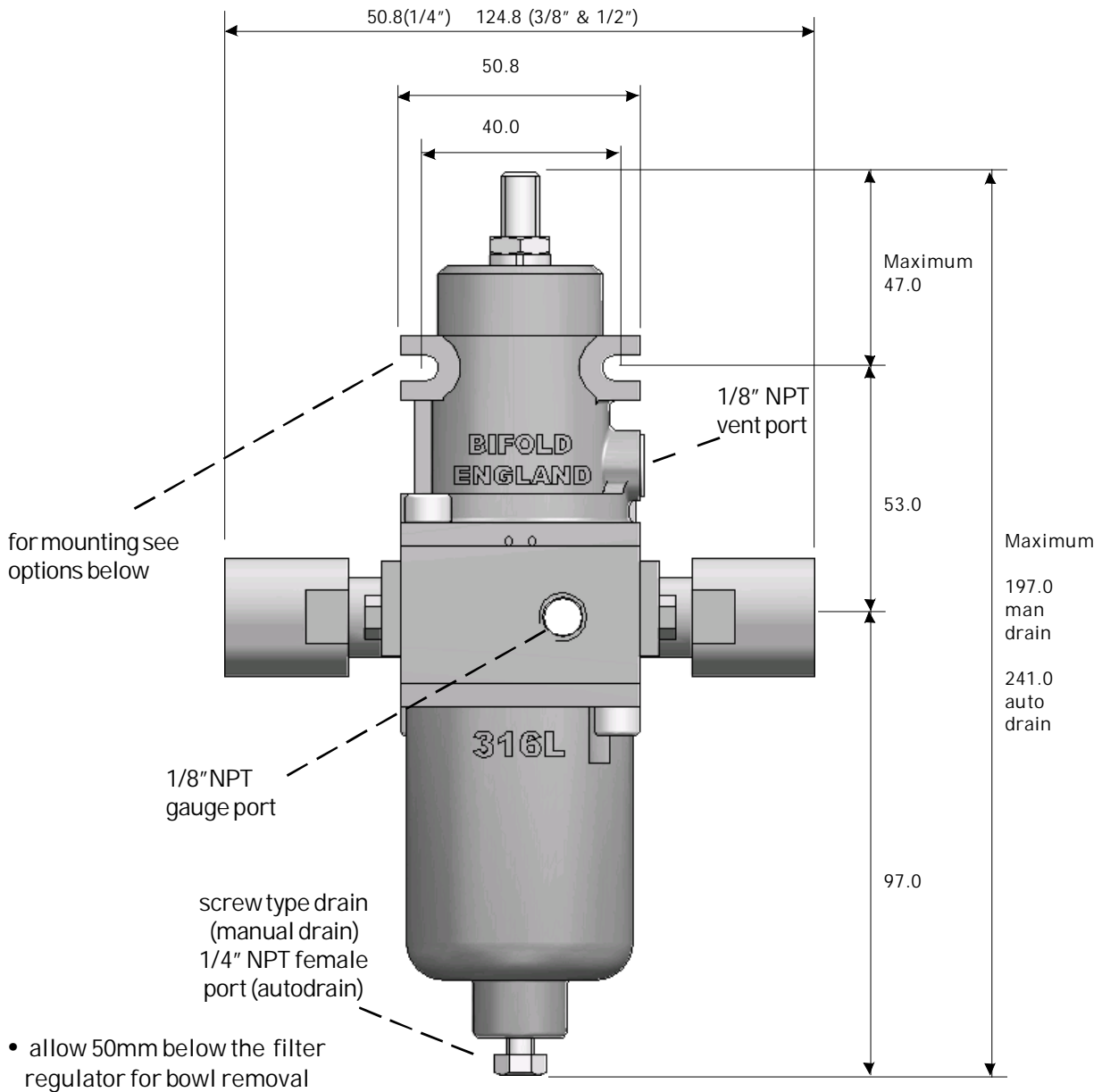
- (not available with -F1)
- L15 13-1 bug vent

Tamperproof

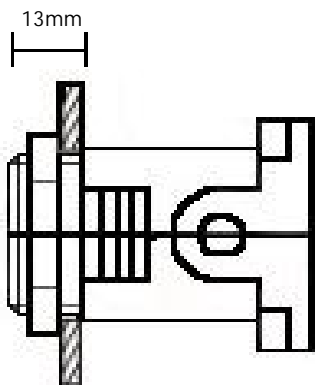
- (not available with -F1 or K10)
- L11 Tamperproof Cap

Filter Regulator

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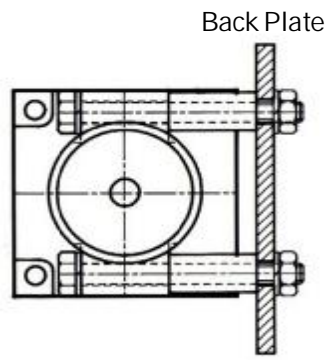


Panel Mount Kit (L8)

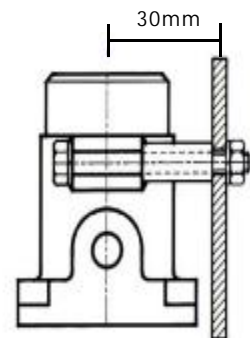


Top cap is threaded and supplied with a panel mount ring

Pillar Kit (L9)



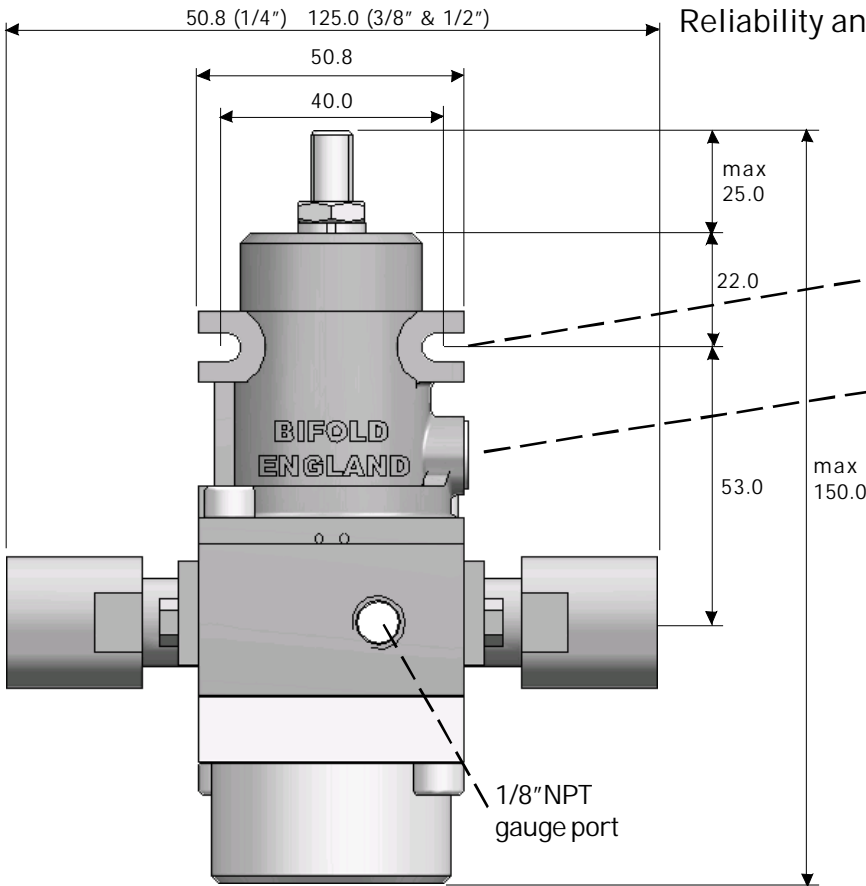
PLAN VIEW



SIDE VIEW

minimum spacer size 20mm

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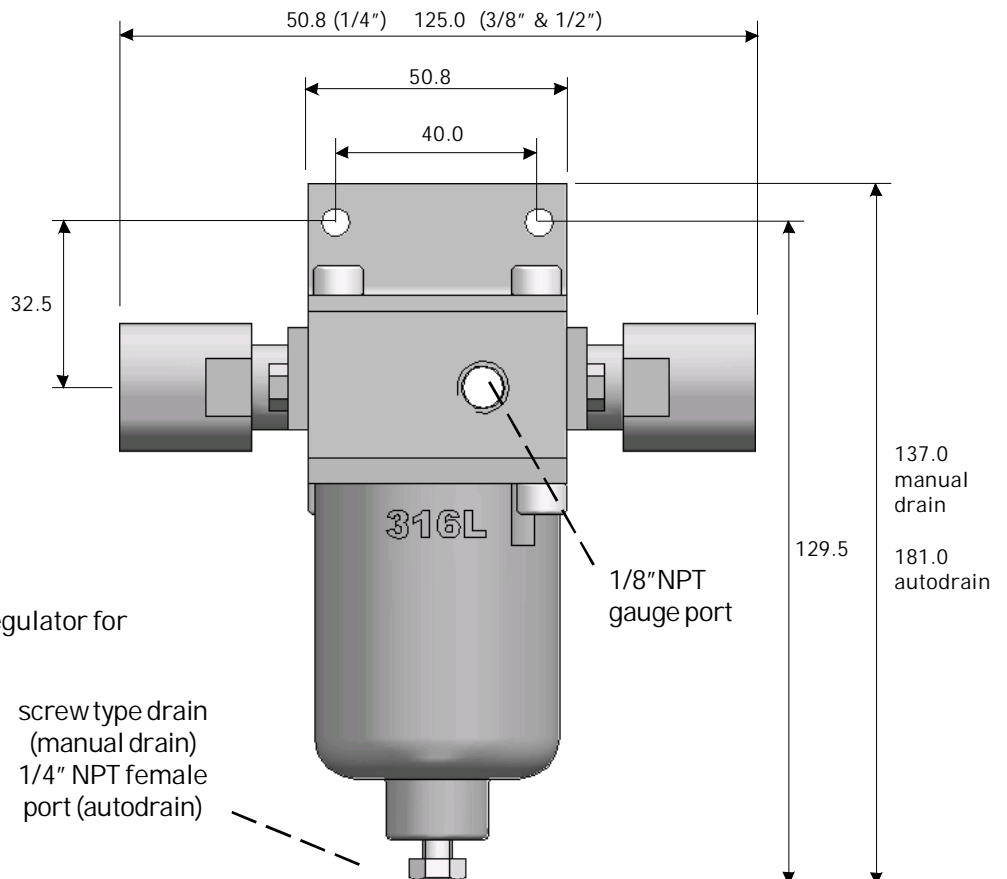


for mounting see options on previous page

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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