

Air Preparation Units Models SH & SC

(Up to and including 145 psi / 10 bar operating pressure)

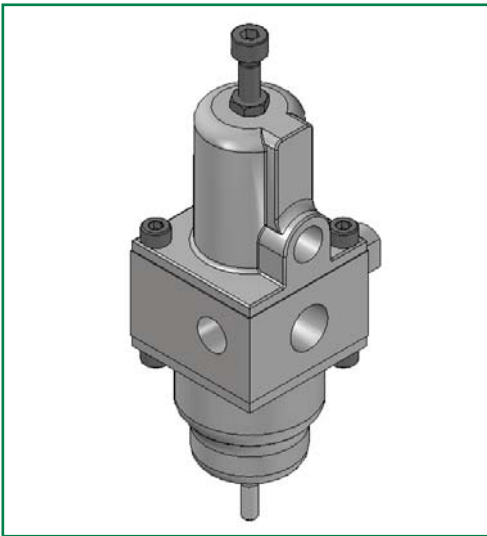


Superior Performance Throughout the Full Operational Range

- Compact Design
- High stability
- Up to 145 psi / 10 bar Working Pressure
- Arctic Service Options to -60°C
- Valve Body 316L Stainless Steel
- NACE MR-01-75 Internal Wetted and Body Materials (Option)
- High Flow - up to 14.2 Cv

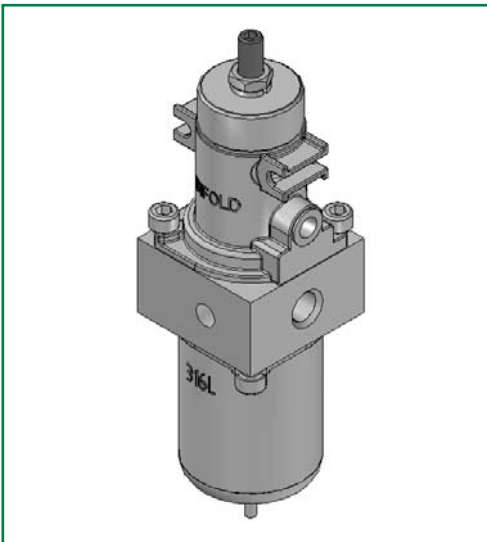


Features & Benefits



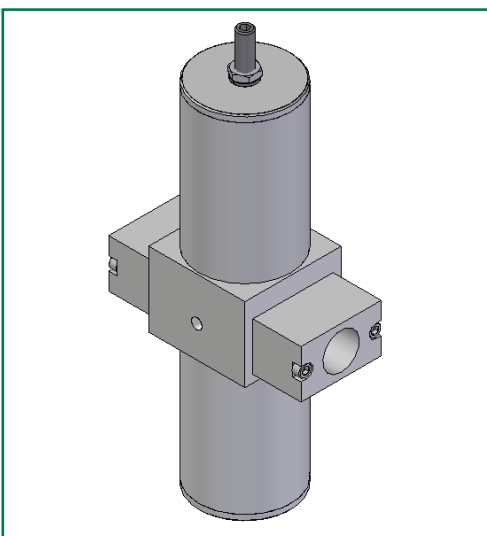
**Standard Valve
Equipment Design & Build**

- Manufactured from 316L grade stainless steel as standard. The valves are suited for offshore and other corrosive atmospheres. Materials can be supplied compliant to NACE MR-01-75 rendering the valves suitable for sour gas media. Low temperature elastomer seals are available for low temperature arctic service applications.
- High stability precision adjustment.
- Modular design for inline maintenance.



Compact Air Preparation Unit

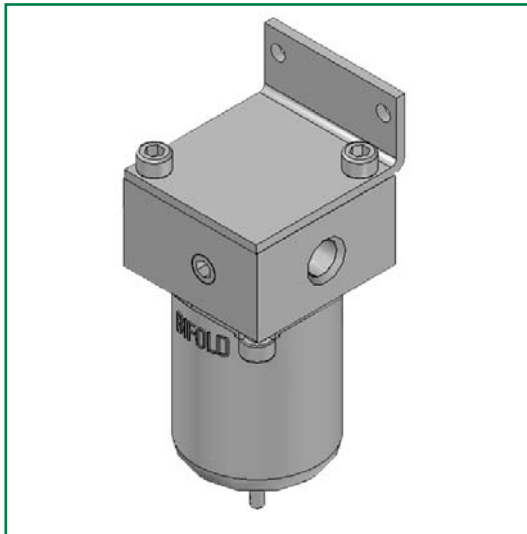
- Our compact SC unit is designed for applications that require high capacity and accurate process control in a small package. A poppet valve which is balanced by utilizing a convoluted diaphragm, insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions adjusting the air supply in accordance with the flow velocity.



**Air Preparation Unit
High Flow**

- Our compact SH unit designed for applications that require high flow capacity and accurate process control. A poppet valve which is balanced by utilizing a rolling diaphragm, insures a constant output pressure even during wide supply pressure variations.
- Diaphragm design for good repeatability, response and sensitivity.
- Balanced poppet.
- Accurately maintained output pressure under high flow conditions.
- Precise regulation will sense a decrease in downstream pressure.
- High flow capacity attainable with minimal drop out.

Features & Benefits



**Standard Valve
Equipment Design & Build**

Regulator Precision

- Pressure balanced supply valve prevents supply pressure changes from affecting the set point.
- Separate control chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing.

Filter Regulator Precision

- Non-bleed design to reduce consumption.
- A Gauge Port provides convenient pressure gauge mounting.
- The Filter Dripwell contains a Drain Plug to easily drain trapped liquids.
- Standard Tapped Exhaust.

Safety and Environmental Benefits

- Bifold has state of the art product qualification and production equipment including flow (Cv), environment (-60°C to +180°C), function and leakage testing, and data Logging.
- Tolerant to moist air in control lines.
- Products are manufactured, inspected, assembled and tested in our state of the art production facilities.

State of the Art Testing


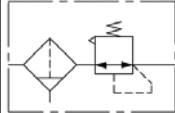
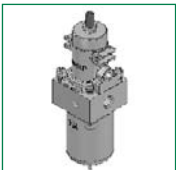
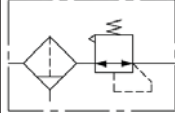
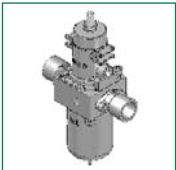
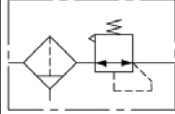

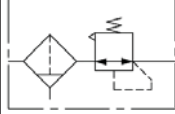

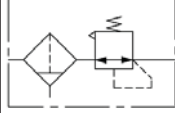

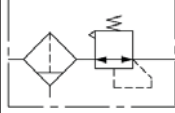


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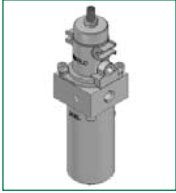
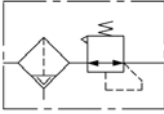
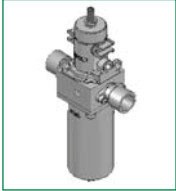
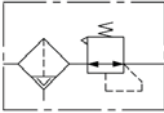
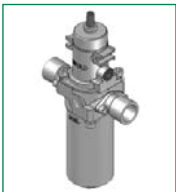
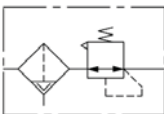
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Preferred Range

SC & SH - COMPACT / AIR PREPARATION UNIT - PREFERRED RANGE				
Product	Schematic Representation	Page Number	Product Code	Product Description
 <p>SC Compact Air Preparation Unit Manual Drain</p>		8	SC06-20-FR-SR-MD-10-V-X3	1/4" NPT Ports, Filter Regulator, Self Relieving, Manual Drain Unit. C.v. 0.7, 145 psi / 10 bar, 20 - 30 Micron Filter Element.
 <p>SH Air Preparation Unit Manual Drain</p>		9	SH06-FR-SR-MD-10-X3-L217	1/4" NPT Ports, Self Relieving, Manual Drain Unit. C.v. 2.6, 145 psi / 10 bar, 20 - 30 Micron Filter Element.
 <p>SH Air Preparation Unit Manual Drain</p>		9	SH12-FR-SR-MD-10-X3-L217	1/2" NPT Ports, Self Relieving, Manual Drain Unit. C.v. 2.6, 145 psi / 10 bar, 20 - 30 Micron Filter Element.
 <p>SH Air Preparation Unit Manual Drain</p>		9	SH12-FR-SR-MD-10-X3-02-L217	1/2" NPT Ports, Self Relieving, Manual Drain, High Flow Unit. C.v. 4.5, 145 psi / 10 bar, 20 - 30 Micron Filter Element.
 <p>SH Air Preparation Unit</p>		9	SH25L-FR-SR-MD-10-X3-02	1" NPT Ports, Self Relieving, Manual Drain. C.v. 4.5, 145 psi / 10 bar, 20 - 30 Micron Filter Element.
 <p>SH Air Preparation Unit Manual Drain</p>		9	SH25-FR-SR-MD-10-X4	1" NPT Ports, Self Relieving, Manual Drain, High Flow Unit. C.v. 14.2, 145 psi / 10 bar, 40 - 50 Micron Filter Element.

SH - AIR PREPARATION UNIT - PREFERRED RANGE

Product	Schematic Representation	Page Number	Product Code	Product Description
 <p>SH Air Preparation Unit Auto Drain</p>		9	SH06-FR-SR-AD-10-X3-L217	<p>¼" NPT Ports, Self Relieving, Auto Drain Unit.</p> <p>C.v. 2.6, 145 psi / 10 bar, 20 - 30 Micron Filter Element.</p>
 <p>SH Air Preparation Unit Auto Drain</p>		9	SH12-FR-SR-AD-10-X3-L217	<p>½" NPT Ports, Self Relieving, Auto Drain Unit.</p> <p>C.v. 2.6, 145 psi / 10 bar, 20 - 30 Micron Filter Element.</p>
 <p>SH Air Preparation Unit Auto Drain</p>		9	SH12-FR-SR-AD-10-X3-02-L217	<p>½" NPT Ports, Self Relieving, Auto Drain, High Flow Unit.</p> <p>C.v. 4.5, 145 psi / 10 bar, 20 - 30 Micron Filter Element.</p>

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SC Overview

Materials of Construction

Body:	316L stainless steel as standard.
Bonnet & Bowl:	316L stainless steel as standard.
Element:	Sintered 316L stainless steel.
Springs:	302S26 stainless steel to BS 2056 (or Inconel).
Regulating spring:	316L stainless steel.
Ports:	1/4" thread milled NPT (BSPP options available).
Seals:	Viton as standard. Alternative elastomers available for extreme conditions.
Diaphragm:	Silicone.
Fasteners:	18/10 stainless steel.
Adjustment Mechanism:	M8 socket set screw.

Flow Performance

145 psi / 10 bar inlet pressure, 87 psi / 6 bar secondary pressure with 14 psi / 1 bar pressure drop using X4 (40 - 50 micron element).

1/4" - C_v 0.7 - 25.9 SCFM.

3/8" - C_v 0.75 - 27.8 SCFM.

1/2" - C_v 0.75 - 27.8 SCFM.

Operating Media

- Air.
- Natural Gas
- Inert Gas.
- Sweet or Sour Gases.

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 29 psi / 2 bar secondary pressure 1.5cm³/sec.
- Relief differential 2 psi / 0.15 bar at 29 psi / 2 bar secondary pressure (relieving type only).

Ports

Service ports: 1/4" NPT (BSPP options available).

Temperature Rating

V	Viton (Standard) (-20°C to +180°C).
AL	Fluorosilicone (-60°C to +100°C).

Bowl Retention Capacity

25cc (Manual Drain).

Maximum Inlet Pressure

290 - 580 psi / 20 - 40 bar (Manual Drain)

Filter Unit

5, 20 - 30 & 40 - 50 Micron.

Regulated Pressures

2.9 - 87 psi / 0.20 to 6 bar.

5.8 - 145 psi / 0.40 to 10 bar.

Water Ingress Rating

Ingress protection - Designed to meet heavy seas / on deck rating.

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.

Bifold SC units must be installed, operated and maintained in accordance with the relevant Bifold installation, operating and maintenance instructions, relevant installation rules, regulations and codes of practice.

For more information, please contact Bifold sales department.

SH Overview

Materials of Construction

Body:	316L stainless steel as standard.
Bonnet & Bowl:	316L stainless steel as standard.
Element:	Sintered 316L 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" & 1" thread milled NPT (BSPP other options available)
Seals:	Nitrile(Low temp.) as standard. Alternative elastomers available for extreme conditions.
Diaphragm:	Silicone.
Fasteners:	18/10 stainless steel.
Adjustment Mechanism:	M8 socket set screw.
Mounting mechanism:	Panel, pillar or bracket.

Flow Performance

145 psi / 10 bar inlet pressure, 87 psi / 6 bar secondary pressure with 14 psi / 1 bar pressure drop using X4 (40 - 50 micron element).

1/4" - Cv 2.6 - 94 SCFM.

1/2" - Cv 2.6 - 94 SCFM.

1/2" - Cv 4.5 - 168 SCFM (High Flow).

1" - Cv 4.5 - 168 SCFM (Low Flow).

1" - Cv 14.2 - 429 SCFM.

Operating Media

- Air.
- Natural Gas
- Inert Gas.
- Sweet or Sour Gases.

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 29 psi / 2 bar secondary pressure 1.5cm³/sec.
- Relief differential 2 psi / 0.15 bar at 29 psi / 2 bar secondary pressure (relieving type only).

Ports

Service ports: 1/4", 3/8", 1/2", 3/4" & 1" NPT (BSPP options available).
Gauge ports: 1/8" NPT standard (1/4" NPT & BSPP options available).

Gauges

Dry: 50mm with psi, bar or dual psi / bar dial.
Glycerine Filled: 50mm with psi, bar or dual psi / bar dial polycarbonate window and blow-out device.

Other options available please see page 13.

Temperature Rating

SH...L217	Nitrile(Low temp.)	(-40°C to +130°C).
SH	Viton	(-20°C to +180°C).
ASH	Fluorosilicone	(-60°C to +100°C).

Bowl Retention Capacity

25cc (Manual Drain) & 50cc (Auto Drain).

Maximum Inlet Pressure

232 psi / 16 bar (Auto Drain).
290 - 580 psi / 20 - 40 bar (Manual Drain).

Filter Unit

5, 20 - 30 (Standard) & 40 - 50 Micron.

Regulated Pressures

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

Water Ingress Rating

Ingress protection - Designed to meet heavy seas / on deck rating.

Seal Repair Kits

Please add the prefix SRK on the models required leaving offport sizes (only require model number up to element reference).
e.g. SRKSH-FR-SR-MD-10-X4.

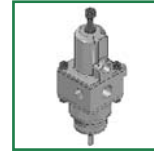
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SC - Compact Air Preparation Unit Range Selection Chart

SC

For a dimensional drawing of the SC unit, please see page 10.



SC Selection Chart - Ordering Example

SC	Standard Service	Model Code	
06	1/4" NPT (Stainless Steel)	Ports	
09	3/8" NPT (Stainless Steel)		
12	1/2" NPT (Stainless Steel)		
20	290 psi / 20 bar	Inlet Pressure	
FR	Filter Regulator	Model Type	
RI	Regulator		
SR	Self Relieving	Self / Non Relieving	
NR	Non Relieving		
MD	Manual Drain (Not Applicable to Regulators)	Drain Option	
	Nominal	Actual	Output Regulated Pressures
06	87 psi / 6 bar	2.9 - 87 psi / 0.20 to 6 bar	
10	145 psi / 10 bar	5.8 - 145 psi / 0.40 to 10 bar	
V	Viton (Standard) (-20°C to +180°C)	O-Ring Material	
AL	Fluorosilicone (-60°C to +100°C)		
X1	5 Micron Element	Filter Element	
X3	20 - 30 Micron Element		
X4	40 - 50 Micron Element		
NO LETTER	NPT Ports	Option	
K6	BSP Ports		
NO LETTER	Allen Key Adjustment	Option	
K10	Black Plastic Button Adjustment		
NO LETTER	Regular Drain Screw	Option	
L116	Knurled Drain Screw		

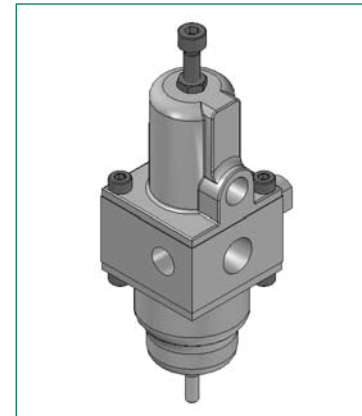
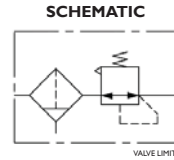
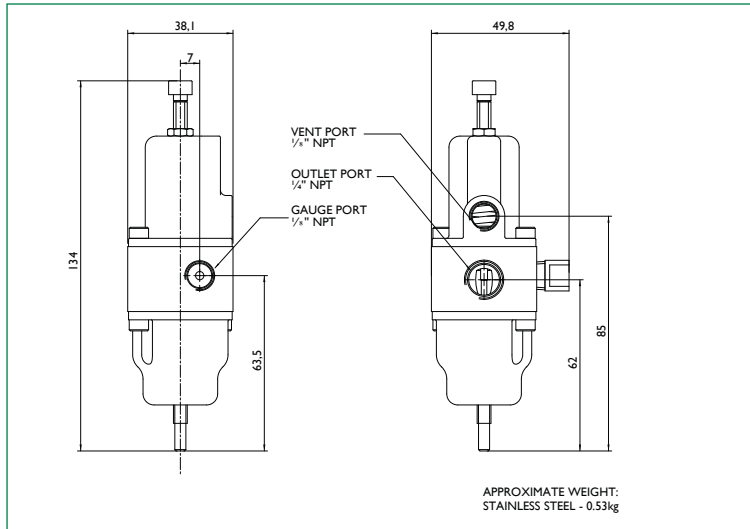
SC 06 - 20 - FR - SR - MD - 10 - V - X4 - K6 - K10 - L116

Ordering Example

Bespoke configured datasheets are available for specific model numbers, please contact Bifold for more information.

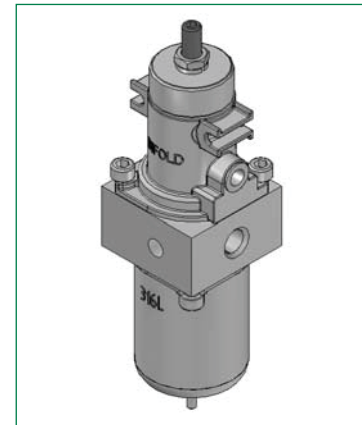
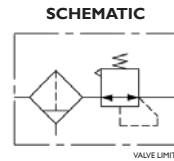
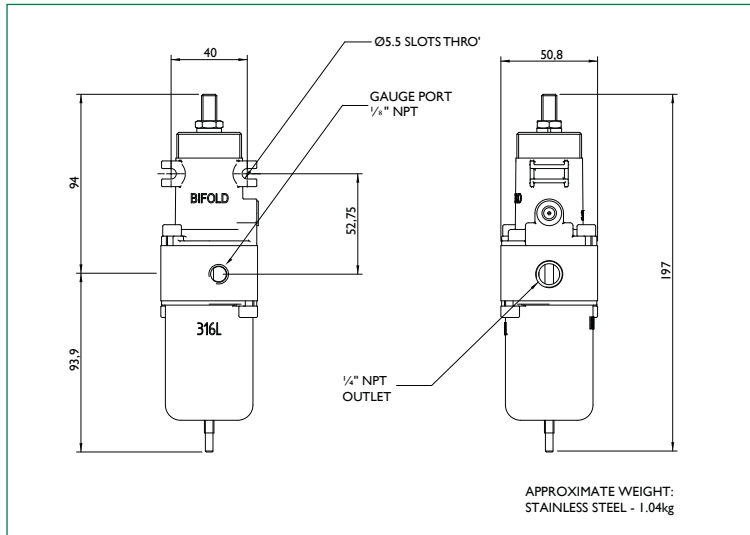
Dimensional Drawings

Example Code - SC06-20-FR-SR-MD-10-X4



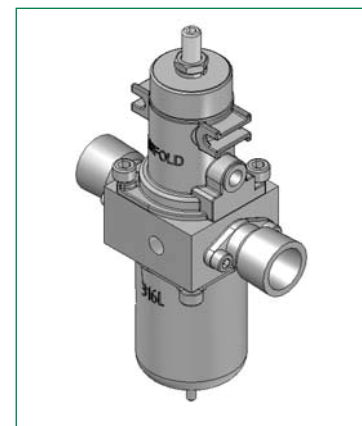
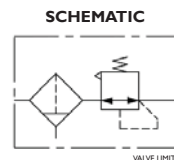
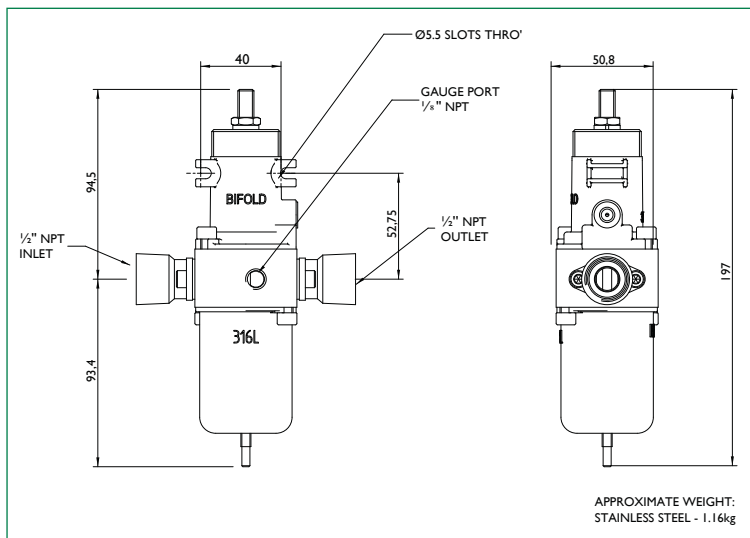
SC
Compact Air Preparation Unit
Manual Drain

Example Code - SH06-FR-SR-MD-10-X3-L217



SH
Air Preparation Unit
Manual Drain

Example Code - SH12-FR-SR-MD-10-X3-L217



SH
Air Preparation Unit
Manual Drain

All dimensions in mm

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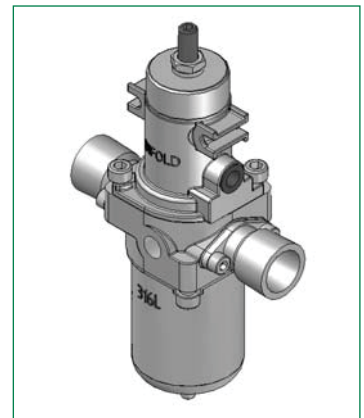
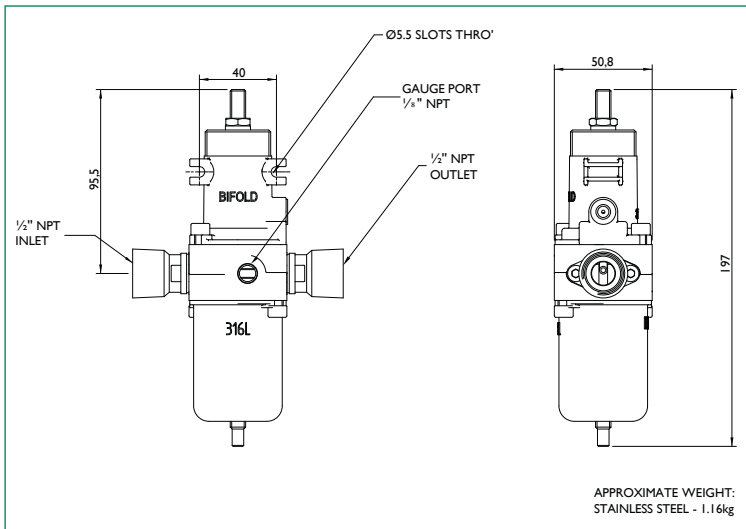
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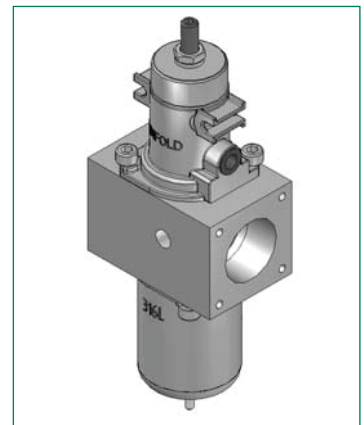
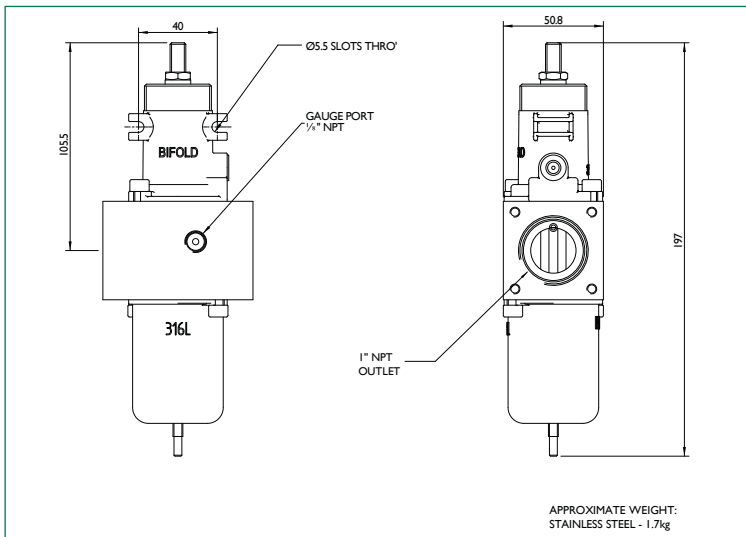
Dimensional Drawings

Example Code - SH12-FR-SR-MD-10-X3-02-L217



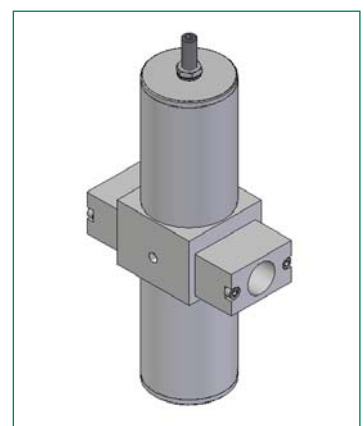
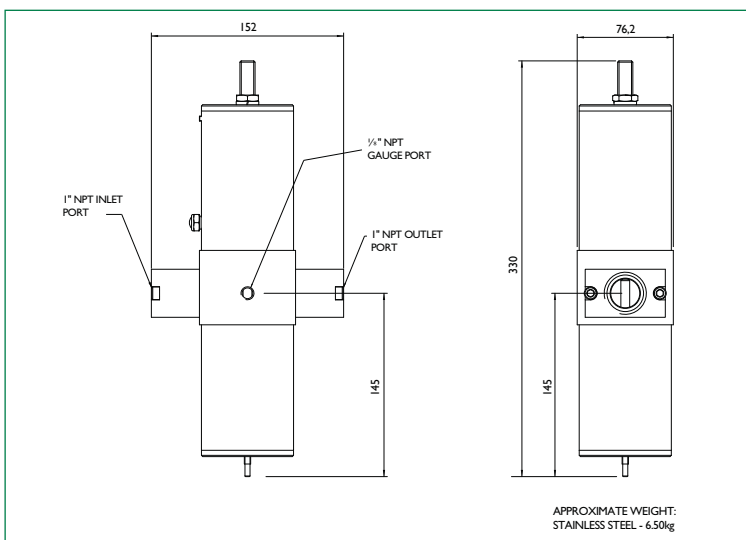
SH
Air Preparation Unit
Manual Drain

Example Code - SH25L-FR-SR-MD-10-X3-02



SH
Air Preparation Unit
Manual Drain

Example Code - SH25-FR-SR-MD-10-X4-02



SH
Air Preparation Unit
Manual Drain

All dimensions in mm

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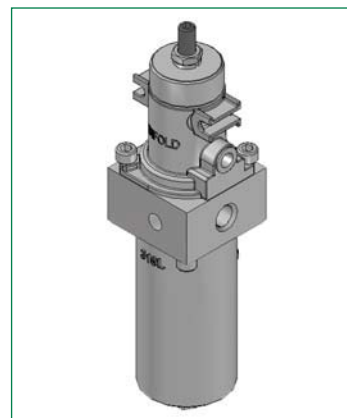
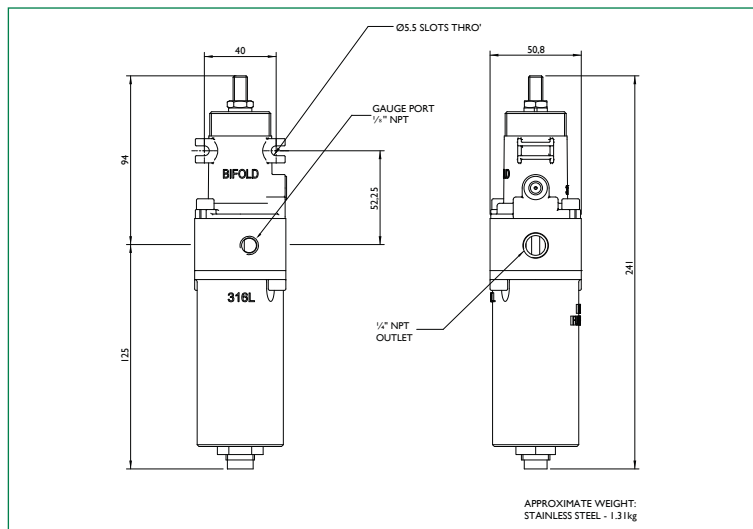
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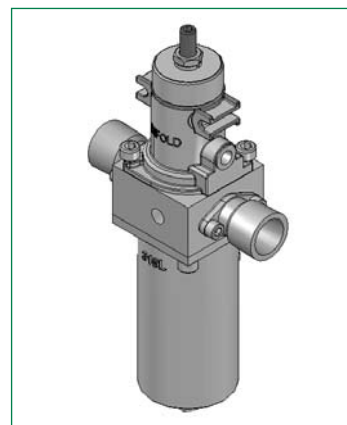
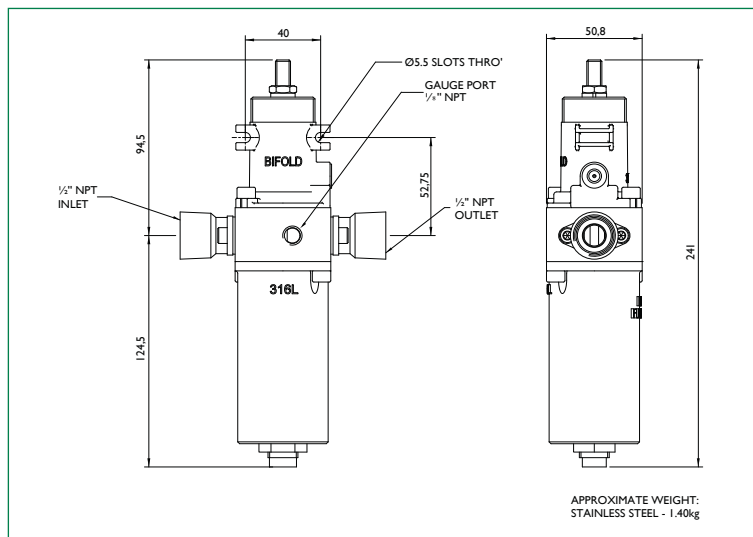


Example Code - SH06-FR-SR-AD-10-X3-L217



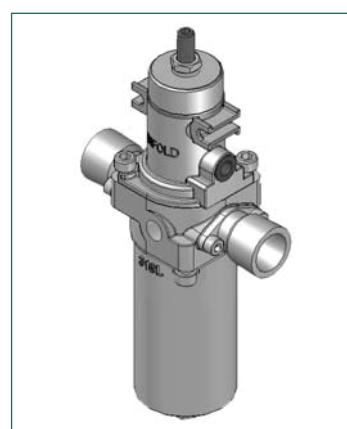
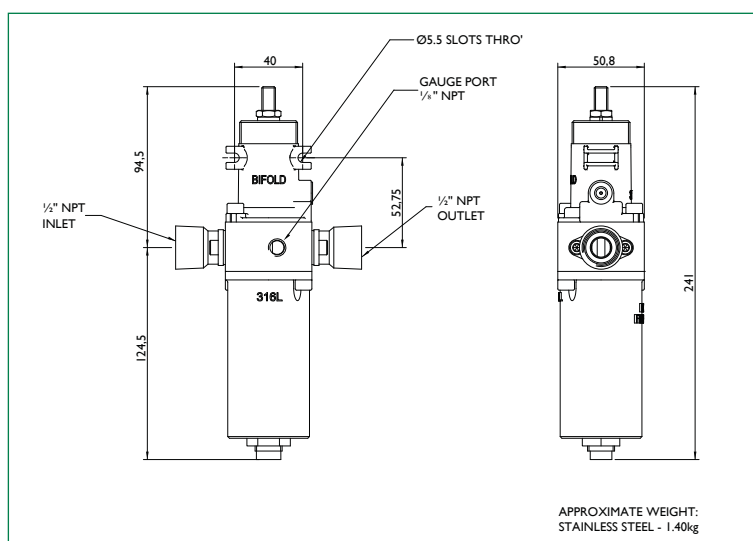
SH
Air Preparation Unit
Auto Drain

Example Code - SH12-FR-SR-AD-10-X3-L217



SH
Air Preparation Unit
Auto Drain

Example Code - SH12-FR-SR-AD-10-X3-02-L217



SH
Air Preparation Unit
Auto Drain

All dimensions in mm

Accuracy of information
We take care to ensure that product information in this catalogue is reasonably accurate and up-to-date. However, our products are continually developed and updated so to ensure accurate and up-to-date information please refer to the product catalogue issue list on our web-site or contact a member of our sales team.

When selecting a product, the applicable operating system design must be considered to ensure safe use. The products function, material compatibility, adequate ratings, correct installation, operation and maintenance are the responsibilities of the system designer and user.

Quality Assurance
All Bifold products are manufactured to a most stringent QA programme to ensure that every product will give optimum performance and reliability. We are third party certified to BS EN ISO 9001:2008. Functional test certificate, letter of conformity and copies of original mill certificates, providing total traceability are available on request, to BS EN 10204 3.1 where available. We reserve the right to make changes to the specifications and design etc., without prior notice.



Gauge Options

SC - Compact Air Preparation Unit

- X10** 10 bar - 40mm Gauge.
 - X11** 10 bar - 40mm Glycerine Filled Gauge.
 - X10PB** 145 psi / 10 bar - 40mm Dual Gauge.
 - X11PB** 145 psi / 10 bar - 40mm Dual Glycerine Filled Gauge.
- 316SS stainless steel case.

SH - Air Preparation Unit

- X5** 10 bar - 50mm Gauge.
 - X8** 10 bar - 50mm Glycerine Filled Gauge.
 - X5PB** 145 psi / 10 bar - 50mm Gauge.
 - X8PB** 145 psi / 10 bar - 50mm Glycerine Filled Gauge.
- 316SS stainless steel case.
- Other scale plates available.

Additional Options

SC - Compact Air Preparation Unit

- Bug Vent**
- L15** Viton / 316L Stainless Steel Bug Vent.

SH - Air Preparation Unit

Mounting Options

(Not Applicable to Filters)

- L8** Panel Mount Kit
 - L9** Pillar Mount Kit
 - L46** Panel Mount and Bracket
 - L160** Bracket
- } (Not Applicable to SH19 and SH25)
- } (Only Applicable to SH19 and SH25)

Bug Vent

(Not Applicable to Filters)

- L15** Viton / 316L Stainless Steel Bug Vent.

**Pneumatic and
Instrumentation Valves
Hydraulic Valves
Subsea Valves
Hydraulic Pumps,
Intensifiers and Valves
Actuator Electronic
Control and Positioning**



Accuracy of Information

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Registered No. 1787729 in England.
Registered Office:
Broadgate, Oldham Broadway
Business Park, Chadderton,
Oldham, Greater Manchester, OL9 9XA.

Bifold Fluidpower Ltd
Bifold Group
Broadgate, Oldham Broadway
Business Park, Chadderton,
Greater Manchester, OL9 9XA. UK.
Tel: +44 (0) 161 345 4777
Fax: +44 (0) 161 345 4780
Email: marketing@bifold.co.uk
Web: bifold.co.uk

Bifold Orange
Unit 7, Cosford Business Park
Central Park, Lutterworth
Leicestershire
LE17 4QU, UK.
Tel: +44 (0) 161 345 4777
Fax: +44 (0) 161 345 4780
Email: marketing@bifold.co.uk
Web: bifold.co.uk

Marshalsea Hydraulics Limited
Marshalsea House, Venture Way
Priorswood Industrial Estate
Taunton, Somerset,
TA2 8DE, UK.
Tel: +44 (0) 1823 331081
Fax: +44 (0) 1823 323382
Email: info@marshalsea.co.uk
Web: bifold.co.uk

USA Office
Bifold Fluidpower Ltd
11490 Westheimer,
Suite 850,
Houston, TX, 77077.
Tel: +1 (713) 783 4253
Fax: +1 (713) 783 0067
Email: marketing@bifold.co.uk
Web: bifold.co.uk

Singapore Office
Bifold Fluidpower Ltd
511 Guillemard Road #02-03,
Grandlink Square,
Singapore 399849.
Mobile: +65 98245580
Email: marketing@bifold.co.uk
Web: bifold.co.uk

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Valve Solutions**



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