Rotork is the global market leader in valve automation and flow control. Our products and services are helping organisations around the world to improve efficiency, assure safety and protect the environment.

We strive always for technical excellence, innovation and the highest quality standards in everything we do. As a result, our people and products remain at the forefront of flow control technology.

Uncompromising reliability is a feature of our entire product range, from our flagship electric actuator range through to our pneumatic, hydraulic and electro-hydraulic actuators, as well as instruments, gear boxes and valve accessories.

Rotork is committed to providing first class support to each client throughout the whole life of their plant, from initial site surveys to installation, maintenance, audits and repair. From our network of national and international offices, our engineers work around the clock to maintain our position of trust.

Rotork. Redefining flow control.
Introduction

Rotork Midland manufactures a full range of ancillary products in 316L stainless steel to compliment our full range of products. Suitable for use in industrial and severe environments, we have a range of solutions for all your control valve requirements.

Certification Options Available

ATEX
4500 Series Ancillary Products – Air Pressure Switch

A compact fully adjustable pneumatically operated 316L stainless steel pressure switch with operating pressures up to 16 bar (232 psi). For use on fail-safe systems.

Features and Benefits
- Specifically designed for severe environments
- Compact and lightweight
- Up to 5 Pressure Ratings
- Tagging Facility
- Fluoroelastomer seals
- 3/2 and 5/2 Versions
- Ambient temperature range -20 ºC to +80º C
- Low temperature option available
- NACE standard on application
- PED Certified ¼” only

Working Temperature Range
- Valve only version
  -20 to +80 ºC (-4 to +176 °F)
- Low temperature version
  -50 to +90 ºC (-58 to +194 °F optional)

Working Pressure (for main directional valve)
- 12 bar (174 psi) maximum

Maximum Pilot Pressure Inlet
- 16 bar (232 psi)

Pressure setting hysteresis
- 0.25 bar (3.63 psi)

Ports NPT (BSP option available)
- ¼” - ½” NPT line port
- ⅜” NPT pilot port

Operating Media
- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available

Construction Materials
- Body: 316L Stainless Steel
- Spool: 316L Stainless Steel
- Spring: 316 Stainless Steel
- Seals: Fluoroelastomer
- Diaphragm: Fluoroelastomer

Maximum Flow
At 6 bar, 1 bar differential:
- ¼” 3/2 Valves - 1000 L/Min (35.3 SCFM)
- ¼” 5/2 Valves - 1200 L/Min (42.4 SCFM)
- ½” 3/2 Valves - 3500 L/Min (123 SCFM)
- ½” 5/2 Valves - 3500 L/Min (123 SCFM)

Certification Options Available

CE ATEX EAC
Redefining Flow Control

4500 Series Ancillary Products – 1/4" NPT 3/2 Air Pressure switch

Ordering Information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>CV</th>
<th>Weight (kg)</th>
<th>Regulated Pressure (Adjustable) for Main Directional Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>2PS35V022</td>
<td>2PS35L022</td>
<td>1.0</td>
<td>1.60</td>
<td>1.0 to 2.0 bar (14.5 to 29 psi)</td>
</tr>
<tr>
<td>2PS35V042</td>
<td>2PS35L042</td>
<td></td>
<td></td>
<td>1.0 to 4 bar (14.5 to 58 psi)</td>
</tr>
<tr>
<td>2PS35V072</td>
<td>2PS35L072</td>
<td></td>
<td></td>
<td>1.0 to 7 bar (14.5 to 102 psi)</td>
</tr>
<tr>
<td>2PS35V102</td>
<td>2PS35L102</td>
<td></td>
<td></td>
<td>1.0 to 10 bar (14.5 to 145 psi)</td>
</tr>
<tr>
<td>2PS35V162</td>
<td>2PS35L162</td>
<td></td>
<td></td>
<td>1.0 to 16 bar (14.5 to 232 psi)</td>
</tr>
</tbody>
</table>

NOTE: 16 bar regulated pressure must be fed from independent supply to main directional valve.

Function

Application for spring return actuators 3/2

1. Airfail stay put
For this application port 3 is plugged. When pilot air is applied to port 1 or 2 in the Normally Closed mode and pilot air is greater than set pressure, air can flow in either direction. When pilot pressure falls below set pressure the integral spool valve closes and therefore blocks port 1 to 2 and the output from 2 remains blocked, leaving the actuator or downstream signal in the last controlled position.

2. Venting
By not plugging port 3 the valve can be used in the Normally Open, Closed, Diverter or Changeover mode and the actuator will vent to atmosphere.
4500 Series Ancillary Products — ¼” NPT 5/2 Air Pressure switch

Ordering Information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>CV</th>
<th>Weight (kg)</th>
<th>Regulated Pressure (Adjustable) for Main Directional Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>2PSSSV022</td>
<td>2PSSSL022</td>
<td>1.2</td>
<td>2.05</td>
<td>1.0 to 2.0 bar (14.5 to 29 psi)</td>
</tr>
<tr>
<td>2PSSSV042</td>
<td>2PSSSL042</td>
<td></td>
<td></td>
<td>1.0 to 4 bar (14.5 to 58 psi)</td>
</tr>
<tr>
<td>2PSSSV072</td>
<td>2PSSSL072</td>
<td></td>
<td></td>
<td>1.0 to 7 bar (14.5 to 102 psi)</td>
</tr>
<tr>
<td>2PSSSV102</td>
<td>2PSSSL102</td>
<td></td>
<td></td>
<td>1.0 to 10 bar (14.5 to 145 psi)</td>
</tr>
<tr>
<td>2PSSSV162</td>
<td>2PSSSL162</td>
<td></td>
<td></td>
<td>1.0 to 16 bar (14.5 to 232 psi)</td>
</tr>
</tbody>
</table>

NOTE: 16 bar regulated pressure must be fed from independent supply to main directional valve.

Function

Application for double acting actuators 5/2
4500 Series Ancillary Products — 1/4" NPT 3/2 Air Pressure switch with latch-lock manual reset

Ordering Information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>CV</th>
<th>Weight (kg)</th>
<th>Regulated Pressure (Adjustable) for Main Directional Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>2PS3SV022LL</td>
<td>2PS3SL022LL</td>
<td>1.0</td>
<td>2.30</td>
<td>1.0 to 2.0 bar (14.5 to 29 psi)</td>
</tr>
<tr>
<td>2PS3SV042LL</td>
<td>2PS3SL042LL</td>
<td>1.0</td>
<td>2.30</td>
<td>1.0 to 4 bar (14.5 to 58 psi)</td>
</tr>
<tr>
<td>2PS3SL072LL</td>
<td>2PS3SL072LL</td>
<td>1.0</td>
<td>2.30</td>
<td>1.0 to 7 bar (14.5 to 102 psi)</td>
</tr>
<tr>
<td>2PS3SV102LL</td>
<td>2PS3SL102LL</td>
<td>1.0</td>
<td>2.30</td>
<td>1.0 to 10 bar (14.5 to 145 psi)</td>
</tr>
<tr>
<td>2PS3SV162LL</td>
<td>2PS3SL162LL</td>
<td>1.0</td>
<td>2.30</td>
<td>1.0 to 16 bar (14.5 to 232 psi)</td>
</tr>
</tbody>
</table>

NOTE: 16 bar regulated pressure must be fed from independent supply to main directional valve.
4500 Series Ancillary Products — 1/4" NPT 5/2 Air Pressure switch with latch-lock manual reset

**Ordering Information**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>CV</th>
<th>Weight (kg)</th>
<th>Regulated Pressure (Adjustable) for Main Directional Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>2PS5SV022LL</td>
<td>2PS5SL022LL</td>
<td>1.2</td>
<td>2.75</td>
<td>1.0 to 2.0 bar (14.5 to 29 psi)</td>
</tr>
<tr>
<td>2PS5SV042LL</td>
<td>2PS5SL042LL</td>
<td></td>
<td></td>
<td>1.0 to 4 bar (14.5 to 58 psi)</td>
</tr>
<tr>
<td>2PS5SL072LL</td>
<td>2PS5SL072LL</td>
<td></td>
<td></td>
<td>1.0 to 7 bar (14.5 to 102 psi)</td>
</tr>
<tr>
<td>2PS5SV102LL</td>
<td>2PS5SL102LL</td>
<td></td>
<td></td>
<td>1.0 to 10 bar (14.5 to 145 psi)</td>
</tr>
<tr>
<td>2PS5SV162LL</td>
<td>2PS5SL162LL</td>
<td></td>
<td></td>
<td>1.0 to 16 bar (14.5 to 232 psi)</td>
</tr>
</tbody>
</table>

**NOTE:** 16 bar regulated pressure must be fed from independent supply to main directional valve.
Redefining Flow Control

### 4500 Series Ancillary Products — ½" NPT 3/2 Air Pressure switch

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>CV</th>
<th>Weight (kg)</th>
<th>Regulated Pressure (Adjustable) for Main Directional Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>4PS3SV022</td>
<td>4PS3SL022</td>
<td>3.5</td>
<td>3.0</td>
<td>1.0 to 2.0 bar (14.5 to 29 psi)</td>
</tr>
<tr>
<td>4PS3SV042</td>
<td>4PS3SL042</td>
<td></td>
<td>3.0</td>
<td>1.0 to 4.0 bar (14.5 to 58 psi)</td>
</tr>
<tr>
<td>4PS3SV072</td>
<td>4PS3SL072</td>
<td></td>
<td>3.0</td>
<td>1.0 to 7.0 bar (14.5 to 102 psi)</td>
</tr>
<tr>
<td>4PS3SV102</td>
<td>4PS3SL102</td>
<td></td>
<td>3.0</td>
<td>1.0 to 10 bar (14.5 to 145 psi)</td>
</tr>
</tbody>
</table>
4500 Series Ancillary Products — 1/2" NPT 5/2 Air Pressure switch

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>CV</th>
<th>Weight (kg)</th>
<th>Regulated Pressure (Adjustable) for Main Directional Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>4PS5SV022</td>
<td>4PS5SL022</td>
<td>3.5</td>
<td>3.6</td>
<td>1.0 to 2.0 bar (14.5 to 29 psi)</td>
</tr>
<tr>
<td>4PS5SV042</td>
<td>4PS5SL042</td>
<td></td>
<td></td>
<td>1.0 to 4 bar (14.5 to 58 psi)</td>
</tr>
<tr>
<td>4PS5SV072</td>
<td>4PS5SL072</td>
<td></td>
<td></td>
<td>1.0 to 7 bar (14.5 to 102 psi)</td>
</tr>
<tr>
<td>4PS5SV102</td>
<td>4PS5SL102</td>
<td></td>
<td></td>
<td>1.0 to 10 bar (14.5 to 145 psi)</td>
</tr>
</tbody>
</table>
4500 Series Ancillary Products — Pressure switch optional accessories

Panel Mounting Ring

![Diagram of Panel Mounting Ring]

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAF238/20</td>
<td>Panel mounting ring</td>
</tr>
</tbody>
</table>

Tamper-proof cap kit

![Diagram of Tamper-proof Cap Kit]

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAF238/22</td>
<td>Kit comprises of 1 Pressure adjusting screw and 1 Tamperproof Cap. All material 316 Stainless Steel</td>
</tr>
</tbody>
</table>
4500 Series Ancillary Products – Pressure switch optional accessories

Mounting Bracket Kit

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAF238/26</td>
<td>Kit comprises of 1 Bracket and 1 Panel Mounting Ring</td>
</tr>
</tbody>
</table>
4500 Series Ancillary Products – ¼” to 1” Flow Regulators

Uni-directional flow regulators:
316L Stainless Steel in-line flow regulators for uni-directional operation (free flow return).

Bi-directional flow regulators:
316 Stainless Steel in-line flow regulators for bi-directional operation (separate flow control in each direction).

Features and Benefits
- Specifically designed for severe environments
- For use on fail-safe systems
- In-line flow
- Ambient Temperature Range -20 ºC to +70 ºC
- Low temperature option available

Working Temperature Range
- -20 to +70 ºC (-4 to +158 ºF)
- Low temperature version -50 to +90 ºC (-58 to +194 ºF optional)

Working Pressure
- 12 bar (174 psi) maximum

Ports NPT (BSP option available)

Operating Media
- Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water.

Construction Materials
- Body: 316L Stainless Steel
- Spring: 316 Stainless Steel
- Seals: Nitrile (EPDM on low temperature option)
- Internals: 316L Stainless Steel

Maximum Flow
At 6 bar, 1 bar differential:

Uni-Directional
- ¼” - 1000 L/Min (35 SCFM)
- ⅜” - 1680 L/Min (59 SCFM)
- ½” - 2520 L/Min (89 SCFM)
- ¾” - 5428 L/Min (192 SCFM)
- 1” - 9820 L/Min (347 SCFM)

Bi-Directional
- ¼” - 620 L/Min (22 SCFM)
- ⅜” - 1290 L/Min (45 SCFM)
- ½” - 2000 L/Min (71 SCFM)

Product Code
Low Temperature Version
Size
CV
Weight (kg)

Uni-directional flow regulators

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
<th>CV</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2REGSN122</td>
<td>2REGSE122</td>
<td>¼”</td>
<td>1.0</td>
<td>0.26</td>
</tr>
<tr>
<td>3REGSN122</td>
<td>3REGSE122</td>
<td>⅜”</td>
<td>1.7</td>
<td>0.75</td>
</tr>
<tr>
<td>4REGSN122</td>
<td>4REGSE122</td>
<td>½”</td>
<td>2.5</td>
<td>0.75</td>
</tr>
<tr>
<td>6REGSN122</td>
<td>6REGSE122</td>
<td>¾”</td>
<td>5.4</td>
<td>1.75</td>
</tr>
<tr>
<td>8REGSN122</td>
<td>8REGSE122</td>
<td>1”</td>
<td>9.8</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Bi-directional flow regulators

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
<th>CV</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2BIDSN122</td>
<td>2BIDSE122</td>
<td>¼”</td>
<td>0.6</td>
<td>0.38</td>
</tr>
<tr>
<td>3BIDSN122</td>
<td>3BIDSE122</td>
<td>⅜”</td>
<td>1.3</td>
<td>1.0</td>
</tr>
<tr>
<td>4BIDSN122</td>
<td>4BIDSE122</td>
<td>½”</td>
<td>2.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>
4500 Series Ancillary Products — ½" to 1½" Uni-Directional Flow Regulators

Ordering Information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
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<tbody>
<tr>
<td>2REGSN122</td>
<td>2REGSE122</td>
<td>⅛&quot;</td>
<td>48</td>
<td>25.4</td>
<td>9</td>
<td>25.4</td>
<td>54</td>
<td>20</td>
<td>40</td>
<td>6.35</td>
<td>5</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>3REGSN122</td>
<td>3REGSE122</td>
<td>⅜&quot;</td>
<td>70</td>
<td>35</td>
<td>15.5</td>
<td>35</td>
<td>76</td>
<td>29</td>
<td>45</td>
<td>6.35</td>
<td>6</td>
<td>23.4</td>
<td>12</td>
</tr>
<tr>
<td>4REGSN122</td>
<td>4REGSE122</td>
<td>⅝&quot;</td>
<td>70</td>
<td>35</td>
<td>13.5</td>
<td>35</td>
<td>76</td>
<td>29</td>
<td>45</td>
<td>6.35</td>
<td>6</td>
<td>23.4</td>
<td>12</td>
</tr>
</tbody>
</table>
4500 Series Ancillary Products — ¾” to 1” Uni-Directional Flow Regulators

Ordering Information

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</tr>
</thead>
<tbody>
<tr>
<td>6REGSN122</td>
<td>6REGSE122</td>
<td>¾”</td>
<td>100</td>
<td>50.8</td>
<td>25.4</td>
<td>50.8</td>
<td>95</td>
<td>16</td>
<td>19</td>
<td>6.35</td>
<td>10</td>
<td>30.5</td>
<td>20</td>
<td>103</td>
<td>80</td>
<td>5.5</td>
<td>3</td>
<td>125</td>
<td>76</td>
<td>100</td>
<td>2</td>
</tr>
<tr>
<td>8REGSN122</td>
<td>8REGSE122</td>
<td>1”</td>
<td>125</td>
<td>63.5</td>
<td>31.75</td>
<td>63.5</td>
<td>107.5</td>
<td>19</td>
<td>24</td>
<td>6.35</td>
<td>12</td>
<td>36</td>
<td>25</td>
<td>115.5</td>
<td>80</td>
<td>5.5</td>
<td>3</td>
<td>137.5</td>
<td>76</td>
<td>100</td>
<td>2</td>
</tr>
</tbody>
</table>

Redefining Flow Control
### Ordering Information

| Product Code | Low Temperature Version | Size | A  | B  | C  | D  | E  | F  | G  | H  | J  | K  | L  | M  |
|--------------|--------------------------|------|----|----|----|----|----|----|----|----|----|----|----|
| 2BIDSN122    | 2BIDSE122                | 1/4" | 85 | 40 | 15.5 | 25.4 | 44.5 | 28 | 32 | 6.35 | 5  | 18 | 6  | 24.5 |
| 3BIDSN122    | 3BIDSE122                | 3/8" | 121 | 51 | 18  | 35  | 63.5 | 35 | 45 | 6.35 | 6  | 23.4 | 12 | 33  |
| 4BIDSN122    | 4BIDSE122                | 1/2" | 121 | 51 | 21  | 35  | 63.5 | 35 | 45 | 6.35 | 6  | 23.4 | 12 | 30  |
4500 Series Ancillary Products — ¼” to ½” Needle Valves

Needle valve: 316L stainless steel needle valve with 3mm, 6mm or 12mm orifice.

Features and Benefits
• Specifically designed for severe environments
• Ambient Temperature Range -20 ºC to +70 ºC
• Low temperature option available
• 316L Stainless Steel

Working Temperature Range
• -20 to +70 ºC (-4 to +158 ºF)
• Low temperature version -50 to +90 ºC (-58 to +194 ºF optional)

Working Pressure
• 12 bar (174 psi)

Ports NPT (BSP option available)

Operating Media
• Gases - filtered lubricated or non-lubricated
• Air, inert gas, sweet (natural) gases
• Sour gas option available
• Liquids - Low pressure hydraulic, mineral oil or water

Construction Materials
• Body: 316L Stainless Steel
• Spring: 316 Stainless Steel
• Seals: Nitrile (EPDM on Low Temperature option)
• Internals: 316L Stainless Steel

Maximum Flow
At 6 bar, 1 bar differential:
Needle Valve (3mm orifice)
• ¼” - 290 L/Min (10.5 SCFM)

Needle Valve (6mm orifice)
• ¼” - 640 L/Min (23 SCFM)

Needle Valve (12mm orifice)
• ½” - 2240 L/Min (79 SCFM)

Certification Options Available

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size (mm)</th>
<th>CV</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2NDVSN12203</td>
<td>2NDVSE12203</td>
<td>3</td>
<td>0.3</td>
<td>0.27</td>
</tr>
<tr>
<td>2NDVSN12206</td>
<td>2NDVSE12206</td>
<td>6</td>
<td>0.7</td>
<td>0.27</td>
</tr>
<tr>
<td>4NDVSN12206</td>
<td>4NDVSE12206</td>
<td>6</td>
<td>1.1</td>
<td>0.71</td>
</tr>
<tr>
<td>4NDVSN12212</td>
<td>4NDVSE12212</td>
<td>12</td>
<td>2.8</td>
<td>0.71</td>
</tr>
</tbody>
</table>
4500 Series Ancillary Products – 1/4” to 1/2” Needle Valves

Ordering Information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>2NDVSN12203</td>
<td>2NDVSE12203</td>
<td>1/4”</td>
<td>54</td>
<td>48</td>
<td>25.4</td>
<td>6.35</td>
<td>40</td>
<td>20</td>
<td>9</td>
<td>6</td>
<td>5</td>
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<tr>
<td>2NDVSN12206</td>
<td>2NDVSE12206</td>
<td>1/4”</td>
<td>54</td>
<td>48</td>
<td>25.4</td>
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<td>4NDVSE12206</td>
<td>1/2”</td>
<td>76</td>
<td>70</td>
<td>35</td>
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<td>76</td>
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<td>45</td>
<td>29</td>
<td>13.5</td>
<td>12</td>
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</tbody>
</table>
4500 Series Ancillary Products — ¼” to ½” Exhaust port flow regulators

Exhaust port flow regulators: 316L stainless steel exhaust flow regulator/breather supplied complete with tamper proof cap.

Features and Benefits
- Specifically designed for severe environments
- Ambient Temperature Range -20 ºC to +70 ºC
- Low temperature option available
- 316L Stainless Steel

Working Temperature Range
- -20 to +70 ºC (-4 to +158 ºF)
- Low temperature version
  - -50 to +90 ºC (-58 to +194 ºF optional)

Working Pressure
- 12 bar (174 psi)

Operating Media
- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water

Construction Materials
- Body: 316L Stainless Steel
- Spring: 316 Stainless Steel
- Seals: Nitrile (EPDM on Low Temperature option)
- Internals: 316L Stainless Steel

Maximum Flow
At 6 bar, 1 bar differential:
Exhaust Port Flow Regulators
- ¼” - 646 L/Min (23 SCFM)
- ⅜” - 1100 L/Min (39 SCFM)
- ½” - 1800 L/Min (64 SCFM)

Certification Options Available

ATEX

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
<th>CV</th>
<th>Weight (kg)</th>
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</thead>
<tbody>
<tr>
<td>2EFRSN102</td>
<td>2EFRSE122</td>
<td>¼”</td>
<td>0.65</td>
<td>0.06</td>
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<tr>
<td>3EFRSN102</td>
<td>3EFRSE122</td>
<td>⅜”</td>
<td>1.1</td>
<td>0.15</td>
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<tr>
<td>4EFRSN102</td>
<td>4EFRSE122</td>
<td>½”</td>
<td>1.8</td>
<td>0.22</td>
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</table>
4500 Series Ancillary Products — ¹/₄" to ¹/₂" Exhaust port flow regulators

Ordering Information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
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4500 Series Ancillary Products — ¼" to 2" NPT non-return valve

316L Stainless Steel non-return valves for pressures up to 12 bar (174 psi) and 27 bar (391 psi).

Features and Benefits
• Specifically designed for severe environments
• Ambient Temperature Range -20 ºC to +70 ºC
• Low temperature option available
• 316L Stainless Steel

Working Temperature Range
• -20 to +70 ºC (-4 to +158 ºF)
• Low temperature version
  -50 to +90 ºC (-58 to +194 ºF optional)

Working Pressure
• 12 bar (174 psi)
• 27 bar (391 psi)

Ports NPT (BSP option available)

Operating Media
• Gases - filtered lubricated or non-lubricated
• Air, inert gas, sweet (natural) gases
• Sour gas option available
• Liquids - Low pressure hydraulic, mineral oil or water

Construction Materials
• Body: 316L Stainless Steel
• Spring: 316 Stainless Steel
• Seals: Nitrile (EPDM on low temperature option)
• Internals: 316L Stainless Steel

Maximum Flow
At 6 bar, 1 bar differential:
Non Return Valves (12 bar)
• ¼” - 1600 L/Min (57 SCFM)
• ⅜” - 2200 L/Min (80 SCFM)
• ½” - 3800 L/Min (137 SCFM)
• ¾” - 5800 L/Min (205 SCFM)
• 1” - 7700 L/Min (274 SCFM)

Non-Return Valves (27 bar)
• ¼” - 736 L/Min (26 SCFM)
• ⅜” - 1840 L/Min (65 SCFM)
• ½” - 2600 L/Min (91 SCFM)

Non-return valves 12 Bar

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
<th>CV</th>
<th>Weight (kg)</th>
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<tbody>
<tr>
<td>2NRVSN122</td>
<td>2NRVSE122</td>
<td>¼”</td>
<td>1.6</td>
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<td>3NRVSE122</td>
<td>⅜”</td>
<td>2.3</td>
<td>0.26</td>
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<tr>
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<td>4NRVSE122</td>
<td>½”</td>
<td>3.9</td>
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<td>8NRVSE122</td>
<td>1”</td>
<td>15.7</td>
<td>0.66</td>
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<td>7NRVSN122</td>
<td>7NRVSE122</td>
<td>1¼”</td>
<td>49</td>
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<tr>
<td>9NRVSN122</td>
<td>9NRVSE122</td>
<td>2”</td>
<td>51</td>
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Non-return valves 27 Bar

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<th>Weight (kg)</th>
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<tbody>
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<td>2NRVSN272</td>
<td>2NRVSE272</td>
<td>¼”</td>
<td>1.6</td>
<td>0.10</td>
</tr>
<tr>
<td>3NRVSN272</td>
<td>3NRVSE272</td>
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<td>1.9</td>
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<tr>
<td>4NRVSN272</td>
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<td>½”</td>
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Certification Options Available

ATEX

Redefining Flow Control
4500 Series Ancillary Products — 1/4” to 2” NPT non-return valves (12 Bar)

Ordering Information

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<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
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<th>B</th>
<th>C</th>
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</thead>
<tbody>
<tr>
<td>2NRVSN122</td>
<td>2NRVSE122</td>
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<td>50</td>
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<td>3NRVSE122</td>
<td>5/8”</td>
<td>65</td>
<td>30.5</td>
<td>-</td>
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<td>4NRVSN122</td>
<td>4NRVSE122</td>
<td>1/2”</td>
<td>68</td>
<td>30.5</td>
<td>-</td>
</tr>
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<td>6NRVSN122</td>
<td>6NRVSE122</td>
<td>3/4”</td>
<td>84</td>
<td>44.5</td>
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<tr>
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<td>8NRVSE122</td>
<td>1”</td>
<td>84</td>
<td>44.5</td>
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</tr>
<tr>
<td>7NRVSN122</td>
<td>7NRVSE122</td>
<td>1½”</td>
<td>175</td>
<td>70</td>
<td>114</td>
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<tr>
<td>9NRVSN122</td>
<td>9NRVSE122</td>
<td>2”</td>
<td>175</td>
<td>70</td>
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4500 Series Ancillary Products — ¼” to ½” NPT Non-return valves (27 Bar)

Ordering Information

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<tbody>
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<td>2NRSVE272</td>
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<td>½”</td>
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<td>36</td>
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</tbody>
</table>
4500 Series Ancillary Products — 1/4” to 2” NPT Quick exhaust valve

316L Stainless Steel quick exhaust valves.

Features and Benefits
- Specifically designed for severe environments
- Ambient Temperature Range -20 ºC to +70 ºC
- Low temperature option available

Working Temperature Range
- -20 to +70 ºC (-4 to +158 ºF)
- Low temperature version
  -50 to +90 ºC (-58 to +194 ºF optional)

Working Pressure
- 12 bar (174 psi)

Operating Media
- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water

Maximum Flow
At 6 bar, 1 bar differential:
Supply to outlet
- 1/4” - 1290 L/Min (46 SCFM)
- 3/8” - 1810 L/Min (64 SCFM)
- 1/2” - 3810 L/Min (135 SCFM)
- 3/4” - 4520 L/Min (160 SCFM)
- 1” - 7700 L/Min (274 SCFM)
- 1 1/2” - 22000 L/Min (777 SCFM)
- 2” - 32000 L/Min (1130 SCFM)

Outlet to Exhaust
- 1/4” - 2780 L/Min (98 SCFM)
- 3/8” - 3810 L/Min (135 SCFM)
- 1/2” - 5490 L/Min (194 SCFM)
- 3/4” - 6460 L/Min (228 SCFM)
- 1” - 11000 L/Min (388 SCFM)
- 1 1/2” - 32000 L/Min (1130 SCFM)
- 2” - 45000 L/Min (1589 SCFM)

Construction Materials
- Body: 316L Stainless Steel
- Internal Parts: 316L Stainless Steel
- Springs: 316 Stainless Steel
- Seals: Nitrile (EPDM on low temperature option)

Certification Options Available

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
<th>CV Supply to Outlet</th>
<th>CV Outlet to Exhaust</th>
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<tbody>
<tr>
<td>2QEVSN122</td>
<td>2QEVSE122</td>
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<td>3QEVSN122</td>
<td>3QEVSE122</td>
<td>3/8”</td>
<td>1.8</td>
<td>3.8</td>
</tr>
<tr>
<td>4QEVSN122</td>
<td>4QEVSE122</td>
<td>1/2”</td>
<td>3.8</td>
<td>5.5</td>
</tr>
<tr>
<td>6QEVSN122</td>
<td>6QEVSE122</td>
<td>3/4”</td>
<td>4.5</td>
<td>6.5</td>
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<tr>
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<td>8QEVSE122</td>
<td>1”</td>
<td>7.8</td>
<td>11.0</td>
</tr>
<tr>
<td>7QEVSN122</td>
<td>7QEVSE122</td>
<td>1 1/2”</td>
<td>22.0</td>
<td>32.0</td>
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<tr>
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<td>9QEVSE122</td>
<td>2”</td>
<td>32.0</td>
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4500 Series Ancillary Products — ¹/₄” to 1” NPT Quick exhaust valve

Ordering Information

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<th>Low Temperature Version</th>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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<td>2QEVSE122</td>
<td>¹/₄”</td>
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<td>38</td>
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<td>31.75</td>
<td>22</td>
<td>16</td>
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<tr>
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<td>3QEVSE122</td>
<td>¾”</td>
<td>60</td>
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<td>35</td>
<td>23</td>
<td>17.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4QEVSN122</td>
<td>4QEVSE122</td>
<td>1”</td>
<td>70</td>
<td>55</td>
<td>44.5</td>
<td>44.5</td>
<td>30.5</td>
<td>22.5</td>
<td>6.5</td>
<td>10</td>
<td>8.25</td>
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<td>6QEVSN122</td>
<td>6QEVSE122</td>
<td>¾”</td>
<td>80</td>
<td>60</td>
<td>50.8</td>
<td>50.8</td>
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<td>8.5</td>
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Redefining Flow Control
4500 Series Ancillary Products – 1½" to 2" NPT Quick exhaust valve

Ordering Information

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<th>Low Temperature Version</th>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<td>85.5</td>
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<td>76</td>
<td>130</td>
<td>70</td>
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</table>
4500 Series Ancillary Products  –  ¼” to 2” NPT Quick exhaust valve c/w exhaust flow regulator

316L Stainless Steel quick exhaust valves complete with flow regulators to control the speed of exhaust.

**Features and Benefits**
- Specifically designed for severe environments
- Ambient Temperature Range -20 ºC to +70 ºC
- Low temperature option available

**Working Temperature Range**
- -20 to +70 ºC (-4 to +158 ºF)
- Low temperature version -50 to +90 ºC (-58 to +194 ºF optional)

**Working Pressure**
- Quick exhaust valve c/w flow regulator
  - 12 bar (174 psi)

**Operating Media**
- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water

**Maximum Flow**
At 6 bar, 1 bar pressure drop:
Quick exhaust valve c/w flow regulator
Supply to outlet
- ¼” - 1290 L/Min (46 SCFM)
- ⅜” - 1810 L/Min (64 SCFM)
- ½” - 3810 L/Min (135 SCFM)
- ¾” - 4520 L/Min (160 SCFM)
- 1” - 7700 L/Min (274 SCFM)
- 1½” - 22000 L/Min (777 SCFM)
- 2” - 32000 L/Min (1130 SCFM)

Quick exhaust valve c/w Flow Regulator
Outlet to exhaust
- ¼” - 2780 L/Min (98 SCFM)
- ⅜” - 3810 L/Min (135 SCFM)
- ½” - 5490 L/Min (194 SCFM)
- ¾” - 6460 L/Min (228 SCFM)
- 1” - 11000 L/Min (388 SCFM)
- 1½” - 32000 L/Min (1130 SCFM)
- 2” - 45000 L/Min (1589 SCFM)

**Construction Materials**
- Body: 316L Stainless Steel
- Internal Parts: 316L Stainless Steel
- Springs: 316 Stainless Steel
- Seals: Nitrile (EPDM on Low temperature option)

### ¼” to 1” Quick Exhaust Valve with Exhaust Flow Regulator

<table>
<thead>
<tr>
<th>Standard Product Code</th>
<th>Standard Product Code with by-pass</th>
<th>Low Temperature Version</th>
<th>Low Temperature Version with by-pass</th>
<th>Size</th>
<th>CV Supply to Outlet (L/Min)</th>
<th>CV Outlet to Exhaust (L/Min)</th>
<th>Weight (kg)</th>
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</thead>
<tbody>
<tr>
<td>2QERSN122</td>
<td>2QEBSN122</td>
<td>2QERSE122</td>
<td>2QEBSE122</td>
<td>¼”</td>
<td>1.3</td>
<td>2.8</td>
<td>0.5</td>
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<tr>
<td>3QERSN122</td>
<td>3QEBSN122</td>
<td>3QERSE122</td>
<td>3QEBSE122</td>
<td>⅜”</td>
<td>1.8</td>
<td>3.8</td>
<td>0.7</td>
</tr>
<tr>
<td>4QERSN122</td>
<td>4QEBSN122</td>
<td>4QERSE122</td>
<td>4QEBSE122</td>
<td>½”</td>
<td>3.8</td>
<td>5.5</td>
<td>1.7</td>
</tr>
<tr>
<td>6QERSN122</td>
<td>6QEBSN122</td>
<td>6QERSE122</td>
<td>6QEBSE122</td>
<td>¾”</td>
<td>4.5</td>
<td>6.5</td>
<td>2.4</td>
</tr>
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<td>8QERSN122</td>
<td>8QEBSN122</td>
<td>8QERSE122</td>
<td>8QEBSE122</td>
<td>1”</td>
<td>7.8</td>
<td>11</td>
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### 1½” to 2” Quick Exhaust Valve with Exhaust Flow Regulator and By-pass

<table>
<thead>
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<th>Low Temperature Version</th>
<th>Size</th>
<th>CV Supply to Outlet (L/Min)</th>
<th>CV Outlet to Exhaust (L/Min)</th>
<th>Weight (kg)</th>
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<tbody>
<tr>
<td>7QEBSN122</td>
<td>7QEBSE122</td>
<td>1½”</td>
<td>22</td>
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<td>9QEBSE122</td>
<td>2”</td>
<td>32</td>
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Certification Options Available

Redefining Flow Control
# 4500 Series Ancillary Products

## 1/4" to 1" NPT Quick exhaust valve c/w exhaust flow regulator

![Diagram of 1/4" to 1" NPT Quick exhaust valve c/w exhaust flow regulator]

### Ordering Information

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<td>16</td>
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<td>26</td>
<td>19.75</td>
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<td>4QEBSE122</td>
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## 1 1/2" to 2" NPT Quick exhaust valve c/w exhaust flow regulator & by-pass

![Diagram of 1 1/2" to 2" NPT Quick exhaust valve c/w exhaust flow regulator & by-pass]

### Ordering Information

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4500 Series Ancillary Products — ¼" to 1" NPT shuttle valve

316L Stainless Steel shuttle valves for three way "OR" function.

Features and Benefits
- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70 °C
- Low temperature option available
- 316L Stainless Steel
- 5 sizes available

Working Temperature Range
- -20 to +70 °C (-4 to +158 °F)
- Low temperature version
  -50 to +90 °C (-58 to +194 °F optional)

Working Pressure
- 12 bar (174 psi)

Operating Media
- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water

Maximum Flow
At 6 bar, 1 bar pressure drop:
Shuttle Valve
- ¼" - 1350 L/Min (45 SCFM)
- ¾" - 1830 L/Min (65 SCFM)
- 1/2" - 3550 L/Min (126 SCFM)
- ¾" - 5500 L/Min (194 SCFM)
- 1" - 9000 L/Min (319 SCFM)

Construction Materials
- Body: 316L Stainless Steel
- Internal Parts: 316L Stainless Steel
- Springs: 316 Stainless Steel
- Seals: Nitrile (EPDM on low temperature option)

Certification Options Available

<table>
<thead>
<tr>
<th>Standard Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
<th>CV</th>
<th>Weight (kg)</th>
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Redefining Flow Control
4500 Series Ancillary Products

**1/4" to 1/2" Shuttle valve**

**3/4" to 1" Shuttle valve**

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<th>Product Code</th>
<th>Low Temperature Version</th>
<th>Size</th>
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<th>B</th>
<th>C</th>
<th>D</th>
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<th>F</th>
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<td>25.4</td>
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4500 Series Ancillary Products – 1/2” NPT Thermal Fuses

316L Stainless Steel thermal fuses for fire release. Available in a range of temperature settings.

Features and Benefits
- Specifically designed for severe environments
- 316L Stainless Steel
- For fire release

Working Temperature Range
- -20 °C to +70 °C (-4 °F to +158 °F)
- -20 °C to +96 °C (-4 °F to +205 °F)
- -20 °C to +102 °C (-4 °F to +216 °F)
- -20 °C to +124 °C (-4 °F to +255 °F)
- -20 °C to +137 °C (-4 °F to +279 °F)
- -20 °C to +200 °C (-4 °F to +392 °F)

Working Pressure
- 12 bar (174 psi)

Ports NPT
- 1/2”

Operating Media
- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases

Maximum Flow
At 6 bar, 1 bar differential:
Supply to outlet
- 1/2” - 5800 L/Min (205 SCFM)

Construction Materials
- Body: 316L Stainless Steel
- Thermal plug: Low melting point alloy (bismuth-based)

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Temperature (°C)</th>
<th>Size</th>
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Certification Options Available

EAC

Redefining Flow Control
4500 Series Ancillary Products — Visual Indicator

Compact 316L Stainless Steel panel mounted visual red/green indicator.

**Features and Benefits**
- Specifically designed for severe environments
- 316L Stainless Steel
- Can be panel mounted

**Working Temperature Range**
- -20 ºC to +65 ºC (-4 ºF to +149 ºF)

**Working Pressure**
- 1 to 12 bar (14.5 to 174 psi)

**Ports NPT (BSP option available)**
- ⅛” NPT

**Operating Media**
- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases

**Construction Materials**
- Body: 316L Stainless Steel
- Springs: 316 Stainless Steel
- Seals: Nitrile
- Visual indicator piston: acetal
- Visual indicator assembly: acetal with acrylic lens.

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Ports</th>
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<td>⅛” BSP</td>
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Certification Options Available

[ATEX][EAC]
4500 Series Ancillary Products — 1/4” to 1/2” Non-return valve breather

316L Stainless Steel non-return breather to prevent ingress into exhaust and vent ports.

Features and Benefits
• Specifically designed for severe environments
• Ambient Temperature Range -20 ºC to +70º C
• 316L Stainless Steel

Working Temperature Range
• -20 ºC to +70 ºC (-4 ºF to +158 ºF)

Working Pressure
• 12 bar (174 psi)

Ports NPT (BSP option available)
• 1/4” to 1/2”

Operating Media
• Gases - filtered lubricated or non-lubricated
• Air, inert gas, sweet (natural) gases

Maximum Flow
At 6 bar, 1 bar differential:
• 1/4” - 646 L/Min (23 SCFM)
• 3/8” - 1300 L/Min (45 SCFM)
• 1/2” - 1550 L/Min (54 SCFM)

Construction Materials
• 316L Stainless Steel
• Non-return sleeve: silicon

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<tr>
<th>Product Code</th>
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<th>C</th>
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Certification Options Available

EAC

Redefining Flow Control
4500 Series Ancillary Products – ½" to 1" Breathers (Silencers)

316L Stainless Steel sintered element silencers used to protect ports open to the atmosphere.

Features and Benefits
• Specifically designed for severe environments
• Ambient Temperature Range -20 ºC to +70 ºC
• 316L Stainless Steel

Working Temperature Range
• -20 ºC to +70 ºC (-4 ºF to +158 ºF)

Working Pressure
• 12 bar (174 psi)

Ports NPT (BSP option available)
• ¼" to 1"

Operating Media
• Gases - filtered lubricated or non-lubricated
• Air, inert gas, sweet (natural) gases

Maximum Flow
At 6 bar, 1 bar differential:
• ¼" - 1200 L/Min (42 SCFM)
• ½" - 1550 L/Min (55 SCFM)
• ³⁄₈" - 1940 L/Min (68 SCFM)
• ⁷⁄₈" - 3410 L/Min (123 SCFM)
• ⁵⁄₈" - 5500 L/Min (194 SCFM)
• 1" - 5700 L/Min (201 SCFM)

Certification Options Available

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Size</th>
<th>CV</th>
<th>A</th>
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<th>Weight (kg)</th>
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Construction Materials
• Body: 316L Stainless Steel
• Porous element: 316 Stainless Steel
4500 Series Ancillary Products – 1/8” to 1/4” ‘Bug Screen’ port vents

316L Stainless Steel sintered elements used to protect vent ports open to the atmosphere.

Features and Benefits
- Specifically designed for severe environments
- Ambient Temperature Range -20 ºC to +70º C
- 316L Stainless Steel

Working Temperature Range
- -20 ºC to +70 ºC (-4 ºF to +158 ºF)

Working Pressure
- 12 bar (174 psi)

Ports NPT
- 1/8” to 1/4”

Operating Media
- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases

Construction Materials
- Body: 316L Stainless Steel

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<th>Size</th>
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<th>Weight (kg)</th>
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Certification Options Available
EAC

Redefining Flow Control