Section 2:

AIR BREATHERS
Air Breathers

Quality Air Breathers are Essential

Breathers are integral components of any hydraulic system. A common mistake is treating breathers as a commodity and selecting one based solely on price. Due to particulate contamination found in harsh industrial and mobile environments, this mistake can lead to system inefficiencies and component failures. We offer a portfolio of high quality, cost effective air breathers with various options for a wide range of applications. Choosing the proper breather combats the ingestion of airborne contamination while increasing the efficiency and improving the reliability of your hydraulic system.

The Schroeder Difference

Breather elements are typically constructed with low-grade paper or low-quality sponge material, which tend to tear when exposed to moisture and provide insufficient filtration ratings. Conversely, our breather elements are constructed of phenolic resin impregnated paper or synthetic media. Both types provide high resistance to moisture and adequate micron ratings, ensuring proper filtration while extending the operational service life of the breather.

Recommendations

Increasing demands for fluid cleanliness levels are requiring more frequent use of high-quality media for the filtration of oils. Schroeder recommends selecting a breather with a filtration rating (micron rating) that is equivalent to or finer than your finest system filters.

Since breathers do get clogged over time, Schroeder recommends the following change-out schedules:

Breathers without pressure gauges or visual indicators change your breather every 6 months or with every service interval.

Breathers with pressure gauges change your breather at 3 psi pressure drop (at higher pressure drops, the pump can cavitate).
Air Breathers

Schroeder offers high quality breathers to effectively combat the ingress of airborne contamination and moisture, therefore increasing the efficiency and reliability of the system.

Available breather series are ABF, PAB, SAB, and D-AB. Many are available with filler strainer, dipstick, indicator and check/relief valve options. The ABC air breather check can takes the guesswork out of when to change your breather.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>A</th>
<th>B</th>
<th>Adapter Type</th>
<th>Minimal Micron Retention</th>
<th>Max Flow Rate</th>
<th>Air Flow/psi Drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABF-3/10</td>
<td></td>
<td></td>
<td>.75&quot; NPT Nylon</td>
<td>3</td>
<td>40 SCFM</td>
<td>0.4 psi at 20 SCFM-1.25 psi at 40 SCFM</td>
</tr>
<tr>
<td>ABF-3/10-M-P12</td>
<td></td>
<td></td>
<td>.75&quot; NPT Nylon</td>
<td>3</td>
<td>40 SCFM</td>
<td>0.29 psi at 20 SCFM-1.06 psi at 40 SCFM</td>
</tr>
<tr>
<td>MBF-3-M-P20</td>
<td></td>
<td></td>
<td>1.25&quot; NPT Steel</td>
<td>3</td>
<td>200 SCFM</td>
<td>0.3 psi at 70 SCFM-1.25 psi at 200 SCFM</td>
</tr>
</tbody>
</table>

SCFM = Standard Cubic Feet per Minute

Features and Benefits

- Durable metal housing
- Optional dipstick or filler strainer
- Large pleated surface areas offers high dirt holding and air flow capacity
- NPT or Flange adapter available
- Available with three micron rating

The Air Breather Check (ABC) takes the guesswork out of when to change your air breather because it doesn't care how dirty the air breather looks or how long it's been installed. It only cares how well the breather is working. The air breather check is calibrated in inches of water and will activate, providing a visual indication, when a vacuum equivalent of 15 inches of water (3.75 kPa) is reached. The ABC can be reset simply by depressing the yellow button and used over and over again.

These breathers are designed for retrofit on hydraulic reservoirs using the SAE-type flange fill port assembly.
The strainer used here is #24 mesh and is available in the lengths shown.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Adapter Type</th>
<th>Minimal Micron Retention</th>
<th>Max Flow Rate</th>
<th>Air Flow/psi Drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABF-3/10-S</td>
<td>SAE-type flange</td>
<td>10</td>
<td>40 SCFM</td>
<td>0.4 psi at 20 SCFM - 1.25 psi at 40 SCFM</td>
</tr>
<tr>
<td>ABF-3/10-S6</td>
<td></td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABF-S40-S</td>
<td>SAE-type flange</td>
<td>40</td>
<td>40 SCFM</td>
<td>0.29 psi at 20 SCFM - 1.06 psi at 40 SCFM</td>
</tr>
<tr>
<td>ABF-S40-S6</td>
<td></td>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SCFM = Standard Cubic Feet per Minute

To replace breather only, order ABF-3/10-F or ABF-S40-F.
Air Breathers

Features and Benefits
- Durable synthetic Nylon 6 housing
- Phenolic resin impregnated filter element
- Standard Buna N O-Ring
- Available with anti-splash or relief valve
- Optional customer logo (contact factory)
- Optional dipstick (contact factory)

Specifications
Max. Flow Rate:
- 7 SCFM / 51 gpm at .15 psi
- 13 SCFM / 100 gpm at .6 psi

Filtration Rating: 3 µm absolute
Operational Temperature: -22˚ to 212˚F (-30˚ to 100˚C)

How to Build a Valid Model Number for a Schroeder PAB1:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAB1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAB1</td>
<td>P</td>
<td>3</td>
<td>N</td>
<td>.5</td>
<td>R6</td>
<td></td>
</tr>
</tbody>
</table>

= PAB1P3N.5R6

For PABS1 Only

Options
- AS = Anti-Splash
- R6 = 6 psi relief valve
- D = Dipstick

Filter Model Number Selection
- Contact factory for lead time and minimum order quantity for other models.
Air Breathers

### PAB3 Breather

- Durable synthetic Nylon 6 housing
- Phenolic resin impregnated filter element
- Standard Buna N O-Ring
- Available with anti-splash or relief valve
- Optional customer logo (contact factory)
- Optional dipstick (contact factory)

### PABS3 Breather

- Features and Benefits

### Specifications

- **Max. Flow Rate:**
  - 14 SCFM / 105 gpm at .15 psi
  - 30 SCFM / 230 gpm at .6 psi
- **Filtration Rating:** 3 µm absolute
- **Operational Temperature:** -22˚ to 212˚F (-30˚ to 100˚C)

### How to Build a Valid Model Number for a Schroeder PAB3:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAB3</td>
<td>P</td>
<td>3</td>
<td>N</td>
<td>12</td>
<td>R6</td>
<td></td>
</tr>
</tbody>
</table>

Example: One option per box

- **BOX 1:**
  - Model Number
  - PAB3
  - PABS3
- **BOX 2:**
  - Replacement Element
  - Omit
- **BOX 3:**
  - Connection Type
  - P = NPT
  - S = SAE
  - F = Flanged
- **BOX 4:**
  - Filtration Rating
  - 3
- **BOX 5:**
  - Gauge Option
  - N = No Gauge
- **BOX 6:**
  - Connection Size
  - 1 = 1" NPT
  - 12 = 3/4" SAE
- **BOX 7:**
  - Options
  - AS = Anti-Splash
  - R6 = 6 psi relief valve
  - D = Dipstick

Note:

Contact factory for lead time and minimum order quantity for other models.
Air Breathers

Features and Benefits
- Durable synthetic Nylon 6 housing
- Phenolic resin impregnated filter element
- Standard Buna N O-Ring
- Integrated anti-splash insert
- Optional differential gauge
- Optional customer logo (contact factory)

Specifications

Max. Flow Rate: 35 SCFM / 260 gpm at .15 psi
64 SCFM / 475 gpm at .6 psi

Filtration Rating: 3 µm

Operational Temperature: -22˚ to 212˚F (-30˚ to 100˚C)

Range of Indication: 0.5 psi

How to Build a Valid Model Number for a Schroeder PABR7:

Example: NOTE: One option per box

PABR7 – P – 3 – N – .75 – AS

= PABR7P3N.75AS

NOTE: Contact factory for lead time and minimum order quantity for other models.

Filter Model Number Selection

Same Day Shipment Model
Air Breathers

**Features and Benefits**
- Durable steel housing
- Wide range of flow rates
- Replaceable element

**Specifications**

| Max. Flow Rate: | 90 SCFM / 685 gpm at .15 psi |
| Filtration Rating: | 3 µm absolute, Phenolic resin impregnated filter element |
| Connection: | G2 ½” female thread |
| Lid: | Removable lid to access fill port |

**How to Build a Valid Model Number for a Schroeder SAB22:**

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOX 1</td>
<td>BOX 2</td>
<td>BOX 3</td>
<td>BOX 4</td>
<td>BOX 5</td>
<td>BOX 6</td>
</tr>
<tr>
<td>SAB22</td>
<td>R</td>
<td>G</td>
<td>3</td>
<td>N</td>
<td>2.5</td>
</tr>
<tr>
<td>SAB22</td>
<td>R</td>
<td>G</td>
<td>3</td>
<td>N</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Example:**

NOTE: One option per box

SAB22RG3N2.5

**Filter Model Number Selection**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Replacement Element</th>
<th>Connection Type</th>
<th>Filtration Rating</th>
<th>Gauge Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAB22</td>
<td>R = Replacement Elements</td>
<td>G = BSPP</td>
<td>3</td>
<td>N = No Gauge</td>
</tr>
<tr>
<td>SABS22</td>
<td>R = Replacement Elements</td>
<td>G = BSPP</td>
<td>3</td>
<td>N = No Gauge</td>
</tr>
</tbody>
</table>

**Connection Size**

2.5 = Female BSPP

Replacement Elements: R-SAB22-3
Features and Benefits

- Durable steel housing
- Wide range of flow rates
- Replaceable element

Max. Flow Rate:

- 127 SCFM / 950 gpm at .15 psi
- 176 SCFM / 1320 gpm at .6 psi

Filtration Rating:

- 3 µm absolute, Phenolic resin impregnated filter element

Connection:

- G2 ½" female thread

Lid:

- Removable lid to access fill port

Specifications

- Clearance Required for Element Removal: 9.54 (90)
- Ø 6.97 (177)
- 7.72 (196)
- 9.45 (240)
- Ø 2.68 (68)
- 0.98 (25)
- 3.54 (90)
- 12.17 (346)

How to Build a Valid Model Number for a Schroeder SAB35:

Example:

- SAB35 – R – G – 3 – N – 2.5 = SAB35RG3N2.5

Filter Model Number Selection

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Replacement Element</th>
<th>Connection Type</th>
<th>Filtration Rating</th>
<th>Gauge Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAB35</td>
<td>R = Replacement Elements</td>
<td>G = BSPP</td>
<td>3</td>
<td>N = No Gauge</td>
</tr>
<tr>
<td>SABS35</td>
<td>R = Replacement Elements</td>
<td>G = BSPP</td>
<td>3</td>
<td>N = No Gauge</td>
</tr>
</tbody>
</table>

Connection Size:

- 2.5 = Female BSPP

Replacement Elements: R-SAB22-3 (2 per breather)
Air Breathers

SAB70 Breather

Features and Benefits
- Ideal for large reservoir with high return flow
- Durable steel housing
- Replaceable element
- Unique Oil Mist Trap design
- Optional pressure indicator

Oil Mist Trap
The oil mist in the filter is collected in a "drip tray" and is returned safely to the tank, or it can be drained via an oil drain plug.

Specifications

| Max. Flow Rate: | 340 SCFM / 2560 gpm at .15 psi |
|                | 528 SCFM / 3960 gpm at .6 psi |
| Filtration Rating: | 2 µm Excellement® Z-Media® |
| Connection: | 8 bolt DN 125 flange |

How to Build a Valid Model Number for a Schroeder SAB70:

```
SAB70 - R - F - 2 - N - 1
```

Example: NOTE: One option per box

```
SAB70 - R - F - 2 - N - 1
```

= SAB70RF2N1