BREATHERS:

Standards

Basic protection from moisture and particulate contamination in lubricant and equipment

APPLICATIONS:

• Totes
• Transformers
• Storage Tanks
• Hydraulics
The Overview

Standard Breathers: Typical Industries

• Power Generation
• Mining
• Aviation
• Storage
• Manufacturing
• Petrochemical

How It Works:
This breather unit replaces the standard dust cap or OEM breather cap on equipment. As air is drawn into equipment through the breather, the layered filter elements remove particulate while the desiccant beads strip harmful moisture.

While in service or during shut-down, the desiccant beads attract moisture from inside the equipment reservoir, actively drying the equipment.

By the Numbers:

1-Integrated Nylon Standpipe
The integrated standpipe provides excellent vibration resistance and dissipates impact throughout the unit, eliminating weak points. It also allows even airflow distribution throughout the unit, eliminating inaccurate readings of desiccant saturation.

2-Resilient Polycarbonate Body
Shock-absorbing, clear casing provides reliable service and easy maintenance.

3-Filter Element
Polyester filter element removes airborne contamination to 3-micron absolute. Unique loops allow particles to release during system exhalation, helping to increase breather life.

4-Foam Pad
Foam filter captures any oil mist and disperses incoming air evenly over filtration and drying areas.

5-Water Vapor Adsorbent
Silica gel absorbs water from incoming air and can hold up to 40% of its weight. Condition is indicated by change of color from blue to light pink.

6-Secondary Filter Element
Second polyester filter element protects against migration of desiccant dust, providing maximum efficiency.

7-Threaded Mounting
Easily replaces standard filler/breather cap with multi-fit connection or one of several adapters.

8-Air Vents
Individual air intakes are opened based on flow requirements of the system. Plugs protect unit during shipping and storage.
**Materials & Components:**
Filter Housing: Polycarbonate, nylon, polypropylene, PVC, Buna-N
Filter Media: Polyurethane, polyester
Hydrophilic Media: Silica gel

**Filter Efficiency:**
(3μ absolute (β₃≥200)

**Recommended Temperature Range:**
-20°F to 200°F
-29°C to 93°C

**Chemical Compatibility:**
Recommended:
All Gear Oil
Most Hydraulic Fluid
Mineral & Synthetic Oil

Not Recommended:
Phosphate Ester
Hydrogen Sulfide
Sulfuric Acid
Highly Alkaline Cleaners

**Humidity Protection:**
A Des-Case standard breather is five times more effective than leading non-desiccant breather.

**Humidity Level Below Ambient Conditions:**
DC-4: protects 30,000+ cycles
Deliquescent: protects 5,000 cycles
(Testing parameters 73°F, 1cfm)*
*See test results on page 4.

**Sizing Recommendations:**

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Airflow at 1psid</th>
<th>Recommended Max. Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gearbox/ Storage Tank</td>
<td>Hydraulic Reservoir</td>
</tr>
<tr>
<td>DC-BB</td>
<td>4.55cfm/129lpm</td>
<td>15gal/57L</td>
</tr>
<tr>
<td>DC-1</td>
<td>4.16cfm/118lpm</td>
<td>35gal/132L</td>
</tr>
<tr>
<td>DC-2</td>
<td>16cfm/453lpm</td>
<td>200gal/757L</td>
</tr>
<tr>
<td>DC-3</td>
<td>16cfm/453lpm</td>
<td>350gal/1325L</td>
</tr>
<tr>
<td>DC-4</td>
<td>16cfm/453lpm</td>
<td>500gal/1893L</td>
</tr>
</tbody>
</table>

**Water Adsorption Capacity:**

<table>
<thead>
<tr>
<th>Size</th>
<th>Maximum Water Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC-BB</td>
<td>23ml / 0.8fl. oz.</td>
</tr>
<tr>
<td>DC-1</td>
<td>50ml / 4fl. oz.</td>
</tr>
<tr>
<td>DC-2</td>
<td>118ml / 4fl. oz</td>
</tr>
<tr>
<td>DC-3</td>
<td>220ml / 7.45fl. oz.</td>
</tr>
<tr>
<td>DC-4</td>
<td>353ml / 11.3 fl. oz</td>
</tr>
</tbody>
</table>

**Dimensions & Connections:**

<table>
<thead>
<tr>
<th>Model</th>
<th>Connection</th>
<th>Unit Height</th>
<th>Unit Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC-BB</td>
<td>Multi-Fit (NPT, BSPP, BSPT)</td>
<td>3.90in</td>
<td>2.5in</td>
</tr>
<tr>
<td>DC-1</td>
<td>Multi-Fit (NPT, BSPP, BSPT)</td>
<td>5.351in</td>
<td>2.5in</td>
</tr>
<tr>
<td>DC-2</td>
<td>1&quot; Multi-Fit (NPT, BSPP, NPSM)</td>
<td>6in</td>
<td>4in</td>
</tr>
<tr>
<td>DC-3</td>
<td>1&quot; Multi-Fit (NPT, BSPP, NPSM)</td>
<td>8in</td>
<td>4in</td>
</tr>
<tr>
<td>DC-4</td>
<td>1&quot; Multi-Fit (NPT, BSPP, NPSM)</td>
<td>10in</td>
<td>4in</td>
</tr>
</tbody>
</table>
**Airflow:**

- DC-BB

**Humidity Protection:**

Desiccant vs. Deliquescent (73°F, 1cfm)

- A Des-Case standard breather is five times more effective than leading non-desiccant breather.

**Humidity Level Below Ambient Conditions:**

- DC-4: protects 30,000+ cycles
- Deliquescent: protects 5,000 cycles

(Testing parameters 73°F, 1cfm)

**Miniatures:**

- DC-2: 4.10
- DC-3: 6.13
- DC-4: 8.13

**Standard Sizes:**

- Breathers A
  - DC-BB: 2.824
  - DC-1: 4.307
  - DC-2: 6.13
  - DC-3: 8.13

**Notes:**

1. Materials:
   - Casing: Polycarbonate and Nylon
   - Cap: Nylon
   - Filtration Element: Polyester, Polyurethane, and Silica Gel

2. Operating Temperatures: -20°F (-29°C) to 200°F (93°C)

3. Inches/millimeters

**ADDITIONAL SPECS.**