ENCLOSURE PROTECTION VENTS
FOR AUTOMOTIVE BATTERY PACKS

4 functions to help support the life and reliability of your batteries

1. **Sealing and Guarding**
   - Against water, dirt, contaminants and harsh automotive fluids.

2. **Continuous Pressure Equalization**
   - To help protect the battery housing against excess over- or underpressure during the life of the battery.

3. **Effective Ventilation**
   - Allows damp air which could accumulate inside the battery housing to be expelled with each warming-up cycle, helping to avoid potential internal condensation issues under certain atmospheric conditions.

4. **Thermal Runaway**
   - Helps ensure proper mitigation in case of a thermal runaway event inside the battery, allowing large amounts of gasses to be expelled in a short timeframe.

**Diagram Description**

- **Battery Vent**
- **Battery Cells**
- **Thermal Runaway**
- **WATER AND DIRT ARE BLOCKED**
- **NORMAL OPERATION**
- **PRESSURE EQUALIZATION**
- **HELPs PREVENT CONDENSATION**
- **DEGASING**
- **HELPS PROTECT BATTERY ENCLOSES**
QUARTER TURN BAYONET ATTACHMENT METHOD ALLOWS FOR MORE ERGONOMIC MANUAL SECURING DIRECTLY ON THE ELECTRO-COATED METAL SHEET HOUSING.

- Integrated O-Ring for optimum sealing reliability and water and air tightness.
- Press-fitted and extensively tested by Donaldson for strength and vibration-proof assembly under normal conditions.
- With water entry pressure up to 2.7 bar and exceptional airflow capabilities, Donaldson’s proprietary Tetratex® ePTFE membrane supports pressure equalization and moisture evacuation from the battery housing. The membrane is chemically inert, water repellent and naturally porous. After receiving a proprietary oleophobic treatment, the membrane resists oils, greases, soaps and harsh automotive fluids.

THE DONALDSON DIFFERENCE

FULL MEMBRANE INTEGRATION FOR COMPONENT PROTECTION

Donaldson’s proprietary Tetratex ePTFE membrane is heat welded into the housing for reliable bonding. This streamlined membrane design is sealed, avoiding the use of a valve, rubber flaps or any other mechanical parts.

Why is integration important? Under certain circumstances, one-way valves might unintentionally and briefly open, just enough to allow dirt or debris to interfere with the valve seat, leaving free passage to water afterwards. Properly designed venting systems help protect against contaminants along with providing pressure equalization, which supports long-lasting enclosures and battery life cycles.

<table>
<thead>
<tr>
<th>SINGLE-STAGE BATTERY VENT</th>
<th>DUAL-STAGE BATTERY VENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P517503</strong></td>
<td><strong>P517721</strong></td>
</tr>
<tr>
<td><strong>AIRFLOW</strong></td>
<td></td>
</tr>
<tr>
<td>25 l/hr @ 70 mbar</td>
<td>&gt;100 l/hr @ 70 mbar</td>
</tr>
<tr>
<td><strong>WEP (OUTSIDE -&gt; IN)</strong></td>
<td></td>
</tr>
<tr>
<td>&gt;500 mbar</td>
<td>2700 mbar</td>
</tr>
<tr>
<td><strong>SAFETY MODE</strong></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Interface</td>
<td></td>
</tr>
<tr>
<td>Adhesive</td>
<td>Bayonet quarter turn</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td></td>
</tr>
<tr>
<td>23.5 mm</td>
<td>47 mm</td>
</tr>
<tr>
<td>5 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td><strong>IP Grade</strong></td>
<td></td>
</tr>
<tr>
<td>IP 67</td>
<td>IP 67</td>
</tr>
<tr>
<td><strong>Number of functions</strong></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Discover our range at [www.donaldsonventing.com](http://www.donaldsonventing.com)
Contact us at [venting.solutions@donaldson.com](mailto:venting.solutions@donaldson.com)

**Important Notice**

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