Application and Design
The EM-30 series is a vertical mounted backdraft damper that is designed to allow horizontal airflow and prevent reverse airflow. The damper is opened by air pressure differential and closed by gravity.

Ratings (See page 2 for specific limitations)

Pressure: Up to 10.0 in. wg (2.5 kPa) differential pressure. For pressures over 10 in. wg, (2.5 kPa), consult factory.

Velocity: 2,500 to 3,500 fpm (13 m/s - 18 m/s)

Temperature: 180°F (82°C)

<table>
<thead>
<tr>
<th>W x H</th>
<th>Minimum Size With Weights</th>
<th>Minimum Size Without Weights</th>
<th>Maximum Single Section Size</th>
<th>Maximum Multi Section Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inches</td>
<td>8 x 11</td>
<td>8 x 8</td>
<td>48 x 74</td>
<td>148 x 144</td>
</tr>
<tr>
<td>mm</td>
<td>203 x 279</td>
<td>203 x 203</td>
<td>1219 x 1880</td>
<td>3759 x 3657</td>
</tr>
</tbody>
</table>

Sizes larger than maximum shown will be supplied as two or more equal size smaller dampers required to make up the size specified. These larger multiple damper assemblies require field assembly and may require additional reinforcement (not supplied by Greenheck) to support the assembly.

- Counterbalance Weights
- 1½ in. (38mm) flange on discharge: EM-31
- 1½ in. (38mm) flange on intake: EM-32
- Sleeves

APC (Adjustable Pressure Controller)
Allows field setting of relief pressure on all EM dampers. Use one per panel. Maximum recommended pressure set limitations are as follows:

<table>
<thead>
<tr>
<th>Area ft² (m²)</th>
<th>Maximum Set Pressure in. wg (Pa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (.37)</td>
<td>.75 (187)</td>
</tr>
<tr>
<td>6 (.56)</td>
<td>.50 (125)</td>
</tr>
<tr>
<td>8 (100)</td>
<td>.40 (100)</td>
</tr>
<tr>
<td>10 (.93)</td>
<td>.30 (75)</td>
</tr>
<tr>
<td>15 (1.39)</td>
<td>.20 (50)</td>
</tr>
<tr>
<td>20 (1.86)</td>
<td>.15 (37)</td>
</tr>
<tr>
<td>24 (2.23)</td>
<td>.125 (31)</td>
</tr>
</tbody>
</table>

Counterbalance weights may require field adjustment. Instructions are available at www.greenheck.com.
Test Information

- Air leakage is based on operation between 32°F and 120°F (0°C and 48°C)
- Tests for air leakage were conducted in accordance with ANSI/AMCA Standard 500-D Figure 5.5, in the intake direction
- Air performance testing conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.5

Air Leakage

Model EM-30 series dampers with a width and height 24 in. (610mm) or greater leak a maximum of:
- 8.9 cfm/ft² or less at 1.0 inches w.g.

Model EM-30 series dampers with a width or height less than 24 in. (610mm) leak a maximum of:
- 35 cfm/ft² or less at 1.0 inches w.g.

*Note: This model complies with the International Energy Conservation Code (IECC) and ASHRAE 90.1 leakage requirements for non-motorized dampers.

Air Performance

Performance data results from testing a 24 in. x 24 in. damper in accordance with AMCA Standard 500-D using Figure 5.5. All data has been corrected to represent standard air at 0.075 lb/ft³ (1.201 kg/m³).

Pressure Drop

24 in. x 24 in. Damper
(610mm x 610mm)
Specifications

Backdraft dampers meeting the following specifications shall be furnished and installed where shown on plans and/or as described in schedules.

Dampers shall consist of: heavy gauge 6063T5 extruded aluminum channel frame (0.125 in. [3.2mm] thick) with 3 1/8 in. (79mm) depth; blades from 0.070 in. (1.8mm) 6063T5 extruded aluminum; synthetic acetal axle bearings; damper shall be equipped with extruded vinyl blade seals; and internal 1/8 in. (3mm) plated steel blade-to-blade linkage. Damper manufacturer’s printed application and performance data including pressure, velocity and temperature limitations shall be submitted for approval showing damper suitable for pressures to 10 in. wg (2.5 kPa), velocities to 3500 fpm (18 m/s) and temperatures to 180°F (82ºC). Testing and ratings to be in accordance with AMCA Standard 500-D.

Basis of design is Greenheck model EM-30.