**Ratings**


**Listings**

UL 555C listing: R14603

CSFM listing: 3226-0368:104

Warnock Hersey listing #: WHI-495-PSH-0177, -0178

Meets NFPA Standards: 90A and 101

Meets Building Code Standards: IBC, NBC, NFPA, SBC and UBC

---

**Application**

The CFD-521 ceiling radiation damper employs butterfly style blades for point-of-origin control of radiant heat in HVAC systems. The CFD-521 is installed horizontally in the ceiling membrane of combustible floor-ceiling or roof-ceiling assemblies with fire resistance ratings up to and including 1 hour.

**Standard Construction**

**Frame:** 20 gauge (1) galvanized steel with integral outlet box.

**Blades:** 22 gauge (0.85) galvanized steel – butterfly. Insulated with ceramic refractory material for dampers larger than 114 in.² (735 cm²).

**Transition:** Round, with 2” (51) deep collar, located on W side of outlet box.

**Plaster Ground:** 5/8” (16) deep x 1” (25) wide.

**Closure Device:** Fusible link.

**Fire Closure Temperature:** 165°F (75°C).

**Minimum Size:** 4” x 6” (102 x 152)

**Maximum Size:** Square: 18” x 18” (457 x 457) 
Rectangular: 24” (610) W or 20” (508) H with a maximum area of 324 in.² (2090 cm²).

**Options**

- Alternate Transition: None (field adaptation required).
  - Round
  - Oval
  - Square/Rectangular

- Alternate Plaster Ground:
  - 1 1/8” (32) deep x 1 1/4” (32) wide
  - 2” (51) deep x 1” (25) wide
  - 4” (102) deep x 1” (25) wide

- Alternate 212°F (100°C) fire closure temperature.

- VC — Volume control device factory mounted.

- WHI installation angle set:
  - 2 angles 1” x 1/2” x 28” long (25 x 13 x 711) x 20 ga. (1.0)
  - 2 angles 1” x 1/2” x 3” long (25 x 13 x 76) x 20 ga. (1.0)

---

**Outlet Box Height Table**

<table>
<thead>
<tr>
<th>Duct Diameter</th>
<th>Damper Height</th>
<th>Outlet Box Height 'L'</th>
</tr>
</thead>
<tbody>
<tr>
<td>D ≤ 8” (203)</td>
<td>H ≤ 16” (406)</td>
<td>11” (279)</td>
</tr>
<tr>
<td>8” (203) &lt; D ≤ 11” (279)</td>
<td>16” (406) &lt; H ≤ 20” (508)</td>
<td>14” (356)</td>
</tr>
<tr>
<td>11” (279) &lt; D ≤ 12” (305)</td>
<td>-</td>
<td>15” (381)</td>
</tr>
</tbody>
</table>
**Dimensional Details for Alternate Plaster Ground Options**

Model **CFD-521** with 2" (51) Deep x 1" (25) Wide Plaster Ground

*Damper dimensions furnished approximately net O.D.

Model **CFD-521** with 4" (102) Deep x 1" (25) Wide Plaster Ground

*Damper dimensions furnished approximately net O.D.

**Damper Size Limitations for Round, Oval and Square/Rectangular Duct Transitions**

**Sleeve table for transitions**

<table>
<thead>
<tr>
<th>Duct Diameter</th>
<th>Damper Height</th>
<th>Outlet Box Height 'L'</th>
</tr>
</thead>
<tbody>
<tr>
<td>D or Y ≤ 8&quot; (203)</td>
<td>H ≤ 16&quot; (406)</td>
<td>11&quot; (279)</td>
</tr>
<tr>
<td>8&quot; (203) &lt; D or Y ≤ 11&quot; (279)</td>
<td>16&quot; (406) &lt; H ≤ 20&quot; (508)</td>
<td>-</td>
</tr>
<tr>
<td>11&quot; (279) &lt; D or Y ≤ 12&quot; (305)</td>
<td>-</td>
<td>14&quot; (356)</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>15&quot; (381)</td>
</tr>
</tbody>
</table>

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses ( ) are millimeters.