

Application

The RD-521 ceiling radiation damper employs butterfly style blades for point-of-origin control of radiant heat in HVAC systems. The RD-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.

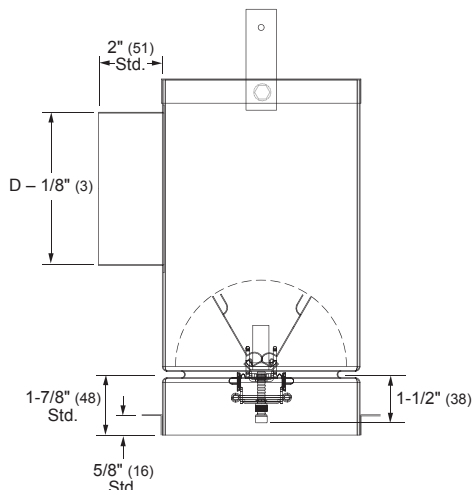
Fire Closure Temperature: 165°F (75°C).

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
 - Side: ☐ H ☐ P ☐ Q
 - Collar depth: ☐ 4" (102)
- ☐ Alternate Plaster Ground:
 - ☐ 1 1/4" (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)
- ☐ Boot rail installation set:
 - 2 pieces 25" (635) long (see installation instructions for mounting restrictions)



RD-521 with optional VC

Ratings

UL 555C Fire Resistance Rating: 1 hour for installation in floor designs L-521, L-528, L-546, L-558, L-562, L-576, L-574, L-581, L-583, L-585, M-509, M-540 and in roof/ceiling designs P-522, P-533, P-538, P-545, P-547, P-579, and P-580.

Listings

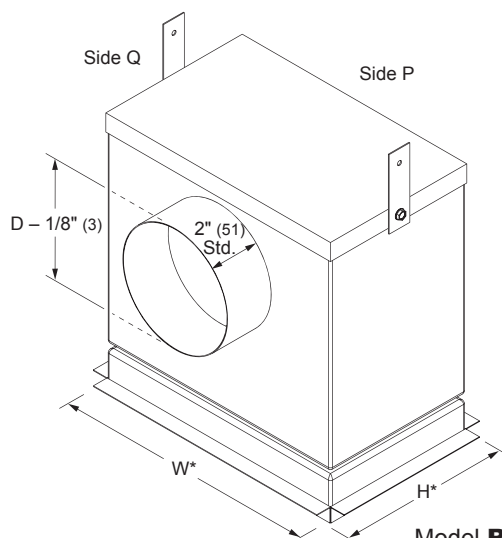
UL 555C listing: R14980

CSFM listing: 3226-1404:100

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

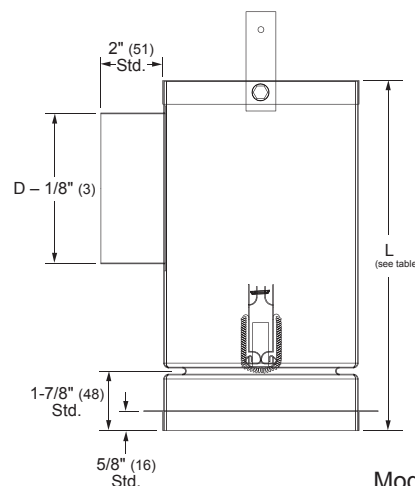
Meets NFPA Standards: 90A and 101

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



Model RD-521
(standard)

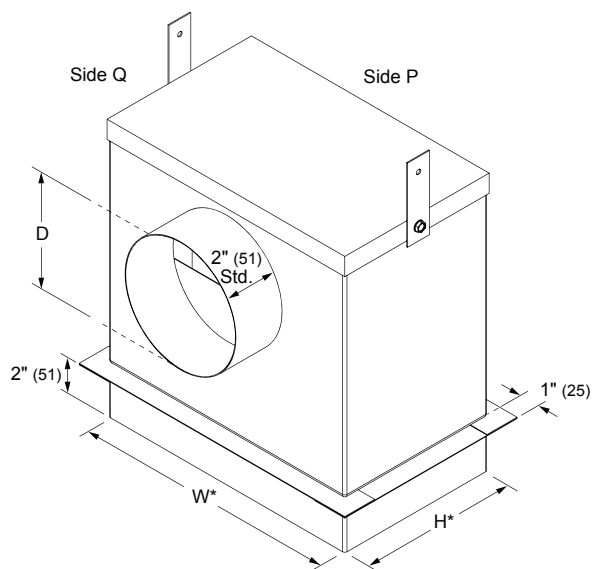
*Damper dimensions furnished approximately net O.D.



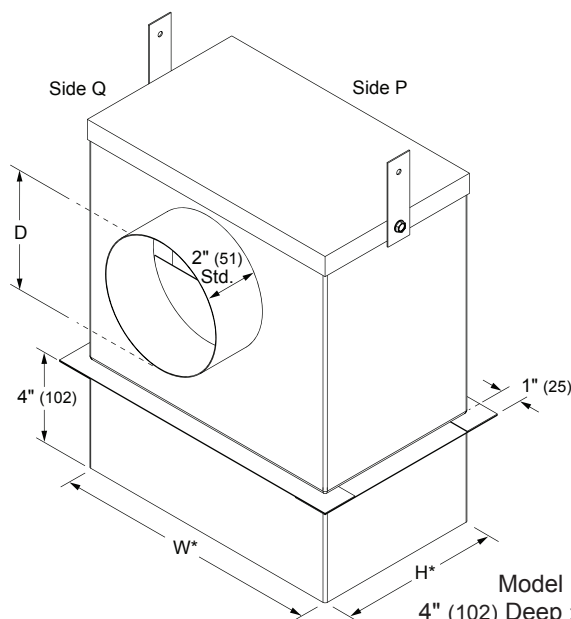
Model RD-521
(standard)

Outlet Box Height Table		
Duct Diameter	Damper Height	Outlet Box Height 'L'
D ≤ 8" (203)	H ≤ 16" (406)	11" (279)
8" (203) < D ≤ 11" (279)	16" (406) < H ≤ 20" (508)	14" (356)
D > 11" (279)	-	D + 4" (102)

Dimensional Details for Alternate Plaster Ground Options

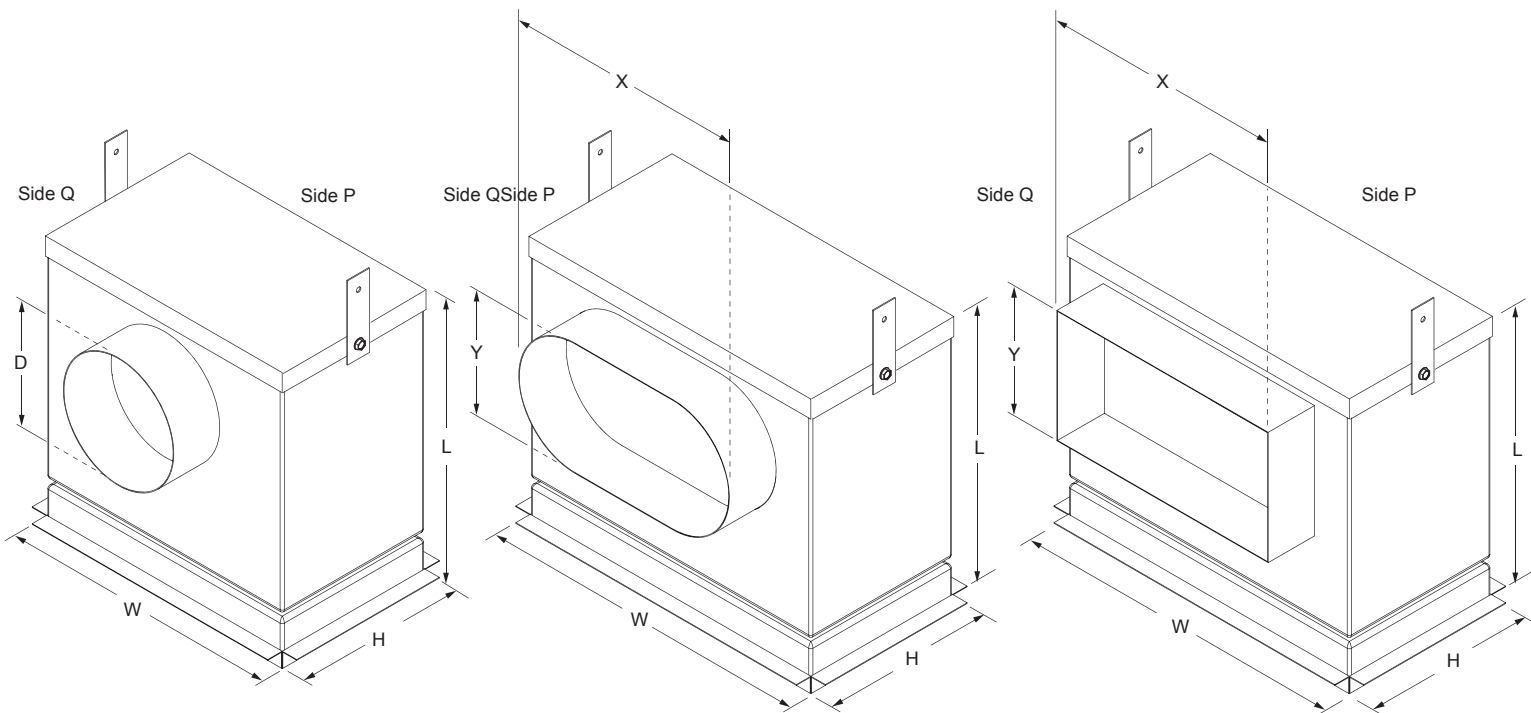


Model **RD-521** with
2" (26) Deep x 1" (25) Wide
Plaster Ground
*Damper dimensions furnished
approximately net O.D.



Model **RD-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



Ceiling Radiation Dampers **RD521** (2/2) September 2019

Sleeve table for transitions

Outlet Box Height Table		
Duct Diameter	Damper Height	Outlet Box Height 'L'
D or Y ≤ 8" (203)	H ≤ 16" (406)	11" (279)
8" (203) < D or Y ≤ 11" (279)	16" (406) < H ≤ 20" (508)	14" (356)
D or Y > 11" (279)	-	D + 4" (102)

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses () are millimeters.