

CFD4

Ceiling Fire Damper

UL Classified Radiation Dampers



APPLICATION

UL Fire Rated Floor/Ceiling Assemblies and Roof/Ceiling Assemblies require specially tested and classified Ceiling Dampers (also called Ceiling Fire Dampers or Radiation Dampers) to provide fire and heat protection where HVAC components penetrate the ceiling membrane.

Standard 1 1/2 and 3 hr. primary fire dampers DO NOT provide the necessary protection.

Ruskin model CFD4 is UL Classified to provide protection to HVAC penetrations larger than 324 sq. in. and up to 576 sq. in. through UL fire rated assemblies with fire resistance ratings of 3 hours or less. For smaller penetrations, see model CFD(R)2 or CFD(R)3. The quantity and frequency of permissible HVAC ceiling penetrations are described in the UL Fire Resistance Directory.

WOOD TRUSS CEILING APPLICATION

The Ruskin CFD7, CFDR7T and CFD7T series ceiling fire dampers are designed for wood construction floor/ceiling or roof/ceiling assemblies. Standard CFD4 does not have the same fire resistance rating for wood construction and should not be used.

STANDARD CONSTRUCTION

Frame	Galvanized steel (in gauges required by UL listing R8039). See chart below for sizing details:		
	Frame Style	B Dimension	Frame Depth
	Standard	All sizes	3 1/8" (79)
	Extended	14" to 20" (356 to 508)	6 5/16" (160)
		21" to 24" (533 to 610)	8 1/8" (206)
Blade	Galvanized steel (in gauges required by UL listing R8039).		
Fusible Link	165°F (74°C) is standard. 212°F (100°C) is available at no additional cost.		
Minimum Size (Inside Dimension)	14"w x 24"h (356 x 607) or 24"w x 14"h (607 x 356). For smaller sizes, see CFD2 and 3.		
Maximum UL Classified Size (Inside Dimension)	576 sq. in. Maximum A and B dimension 24" (610).		

OPTIONS

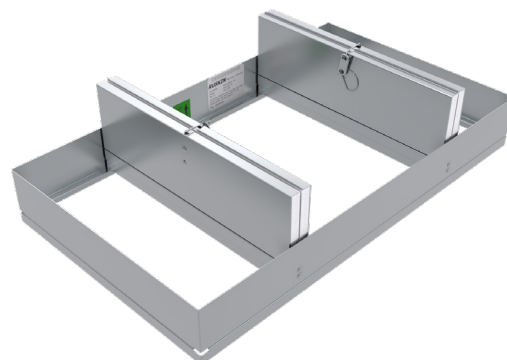
VA Volume Adjust to balance airflow.

Model CFD4 meets the requirements for fire/radiation dampers established by:

- ▶ National Fire Protection Association NFPA Standards 80, 90A, 92A, 92B, and 101.
- ▶ ICC International Building Codes.
- ▶ CSFM California State Fire Marshal Listing (3225-0245:0101)

UL CLASSIFIED & ULC LISTED

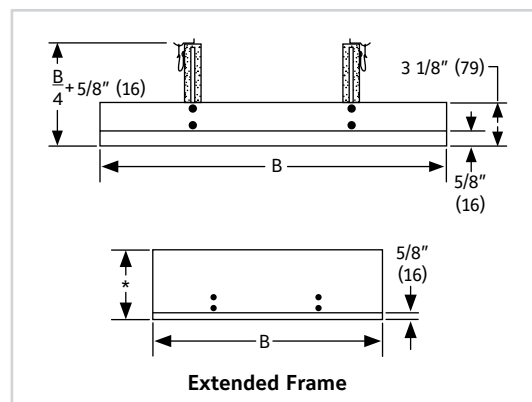
UL555C Classification R5531



CONSTRUCTION DETAILS

UL Classification testing for ceiling fire dampers measures the heat transmitted through, and temperatures above, ceiling penetrations with ceiling dampers. Smaller dampers meet these criteria with out thermal insulation, but larger dampers require insulation to provide acceptable performance.

CFD4 Rectangular dampers with area above 324 square inches (2090) to 576 square inches (3716) are provided with blade insulation.

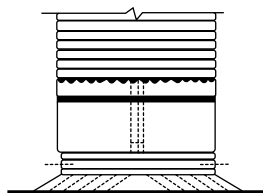


NOTE:

- Dimensions shown in parentheses () indicate millimeters.

CFD4 CEILING FIRE DAMPERS

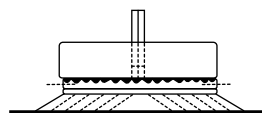
FLEX DUCT INSTALLATIONS



Flex Duct Installation

Order "actual size" with extended frame. Damper installs over diffuser neck; flex duct installs over damper.

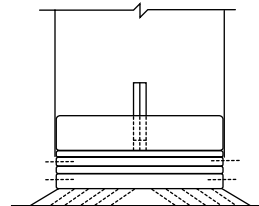
DUCTLESS INSTALLATIONS



Ductless Installation

Order "actual size" with standard frame. Damper installs over diffuser neck.

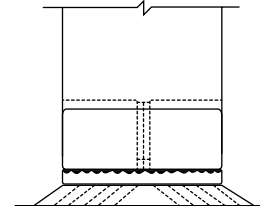
STEEL DUCT DROP INSTALLATIONS



Steel Duct Installation

Order "deduct 1/4" (6)" with standard frame. Damper installs inside duct. Duct connects to diffuser neck.

OR



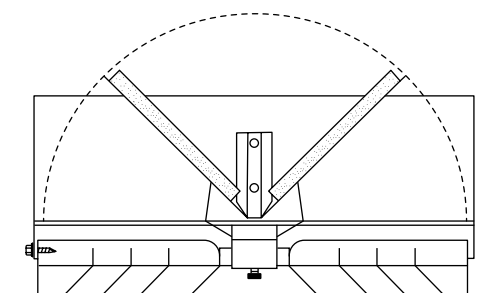
Steel Duct Installation

Order "actual size" with extended frame. Damper installs over diffuser neck. Duct connects to damper.

UL Listed Fusible Volume Adjustment Option

The standard, fusible link can be replaced with a simple mechanism that permits adjustment of damper blades to balance airflow. A standard 3/16" (5) hex (Allen) wrench is used for adjustment. In fire conditions, the damper closes regardless of volume setting. This feature must be added to the damper at fabrication. 165°F or 212°F (74°C or 100°C) (specify temperature) fusible volume adjustment options are available.

Caution: Volume Adjust hangs below a rectangular damper 1 1/8" (29). Volume Adjust hangs below a round damper 3/8" (10).



CFD4 with Fusible Volume Adjustment

LINKS TO IMPORTANT DOCUMENTS

Document Title

Installation instructions



3900 Doctor Greaves Road
Grandview, MO 64030
Website: www.ruskin.com
Phone: (816) 761-7476