

Model DFD-150 Type R
High Free Area
1 1/2 Hour Fire Resistance Rating
Application

Model DFD-150 is approved for use in walls, floors and partitions with fire resistance ratings less than 3 hours. This model carries a 1 1/2 hour UL fire damper label. UL 555 classifies dynamic rated fire dampers for use in HVAC systems that are operational in the event of fire.

Construction

Galvanized steel (in gauges required by UL listing R-13317)

Installation

All fire damper installations require the use of sleeves, angles and methods described in Greenheck Fire Damper Installation Instructions #452763, included with every damper shipment. Sleeves can be field fabricated or factory furnished as a complete damper/sleeve assembly. See Factory Sleeve Option below for details.

Model DFD-150 meets the requirements for fire dampers established by:

National Fire Protection Association
(NFPA Standards 90A & 101)

BOCA National Building Codes

ICBO Uniform Building Codes (UBC Standard 43-7)

SBCCI Standard Building Codes

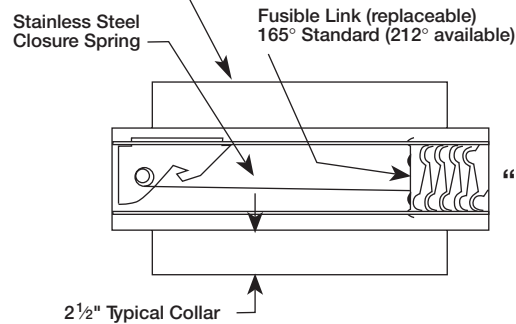
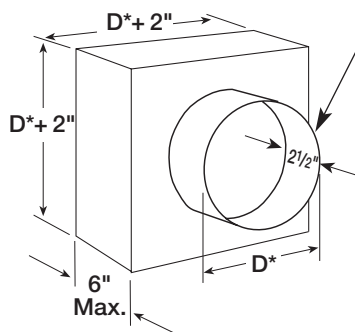
New York City (MEA listing #260-91-M)

California State Fire Marshal (Listing #3225-981:102)

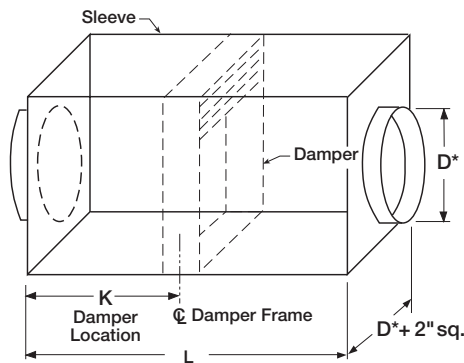
"UL CLASSIFIED (see complete marking on product)"
"UL CLASSIFIED to Canadian safety standards (see complete marking on product)"
 Standard 555 (Listing #R13317)



This model can be ordered with a round transition on this end only. Specify Type R1 when ordering.



*These dimensions are furnished approximately 1/4" undersize. (Add sleeve thickness for overall sleeved damper dimension)
 "D" dimension furnished approximately 1/8" undersize.


Factory Sleeve Option

DFD-150 Fire Dampers are available in factory furnished sleeves. Sleeves are galvanized steel and are available in 10 thru 20 ga. thicknesses and lengths up to 36".

"K" dimension specifies location of damper within the sleeve. Minimum is 4", maximum is "L" less 4", which allows for mounting angle installation and duct connection at each end of sleeve. If "K" dimension is not specified, it will be provided as one half of "L" dimension (damper centered in sleeve).

Horizontally mounted dampers must be installed with the "K" dimension on the bottom side.

Qty.	Model	Mount (V)Vert. (H)Horz.	Damper Size		Fusible Link Temp (165°F std.)	Damper Location	SSC Option
	12" 14" 16"		W* D*	H*		K	

Project	Location
Contractor	Design Specifier

Dynamic Rated Fire Damper Application

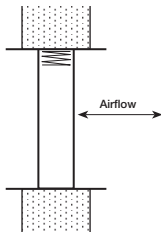
Airflow ratings for dynamic fire dampers vary depending on the type of installation. UL Standard 555 provides for testing and dynamic rating of fire dampers in the six installations illustrated. Use the following steps to verify that a fire damper is properly rated for the application intended:

1. Check the maximum pressure that can occur with damper fully closed. **Model DFD dampers are rated to close against 8 in. w.g.**
2. Select the Installation and Airflow Velocity Table that approximates the installation being considered.
For example: Ducted installation with vertical damper, horizontal airflow would use Table D.
3. Using the WxH damper dimensions (see page 1) determine the maximum velocity rating in fpm from the proper Airflow Velocity Table.
For example: Using Table D for a ducted vertical damper installation with horizontal airflow, maximum airflow velocity through a 24" dia. Type R damper is 6068 fpm. Consult factory for velocity limitations on dampers over 34" in diameter.

Maximum Airflow Velocity Ratings (FPM)

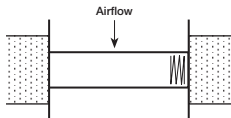
Unducted Installations

Table A
Vertical Damper Installation
Horizontal Airflow



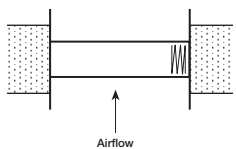
Dia.	FPM
3"-10"	12403
>10-22	9111
>22-34	6852

Table B
Horizontal Damper Installation
Airflow Down



Dia.	FPM
3"-10"	12704
>10-22	5537
>22-34	2131

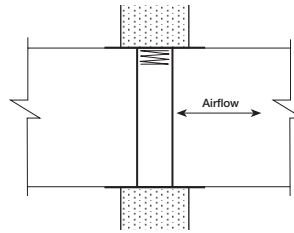
Table C
Horizontal Damper Installation
Airflow Up



Dia.	FPM
3"-10"	13087
>10-22	7652
>22-34	3101

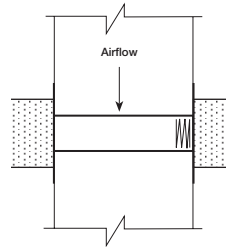
Ducted Installations

Table D
Vertical Damper Installation
Horizontal Airflow



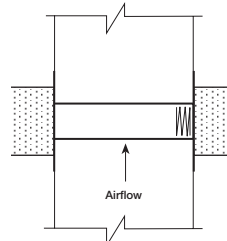
Dia.	FPM
3"-10"	9235
>10-22	6068
>22-34	5029

Table E
Horizontal Damper Installation
Airflow Down



Dia.	FPM
3"-10"	10687
>10-22	3857
>22-34	1433

Table F
Horizontal Damper Installation
Airflow Up



Dia.	FPM
3"-10"	7924
>10-22	4605
>22-34	1788

Sizing and Assembly Data

Dampers larger than maximum single section size are supplied as a factory assembly of two or more sections of equal size.

Transition is centered on damper frame (or frame assembly for multiple section dampers).

SIZE LIMITATIONS

	Vertical or Horizontal	Vertical Only
Minimum	3" dia.	NA
Maximum	46" dia.	72" dia.

Type 'R' dampers over 46" dia. utilize reinforcement rods and a vertical mullion.

