

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

APPLICATION

Model DFD-150X 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

Damper is galvanized steel (in gauges required by UL listing R-13317) sleeve is 20 ga. galvanized steel.

INSTALLATION

This model damper requires no additional sleeves but does require the use of angles and installation methods described in Greenheck Fire Damper Installation Instructions #453946, included with every damper shipment. SSC option replaces the angle requirement previously mentioned (installation instructions #455246).

Model FD-150X 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 Marshall** (Listing #3225-981:102 for use in walls)

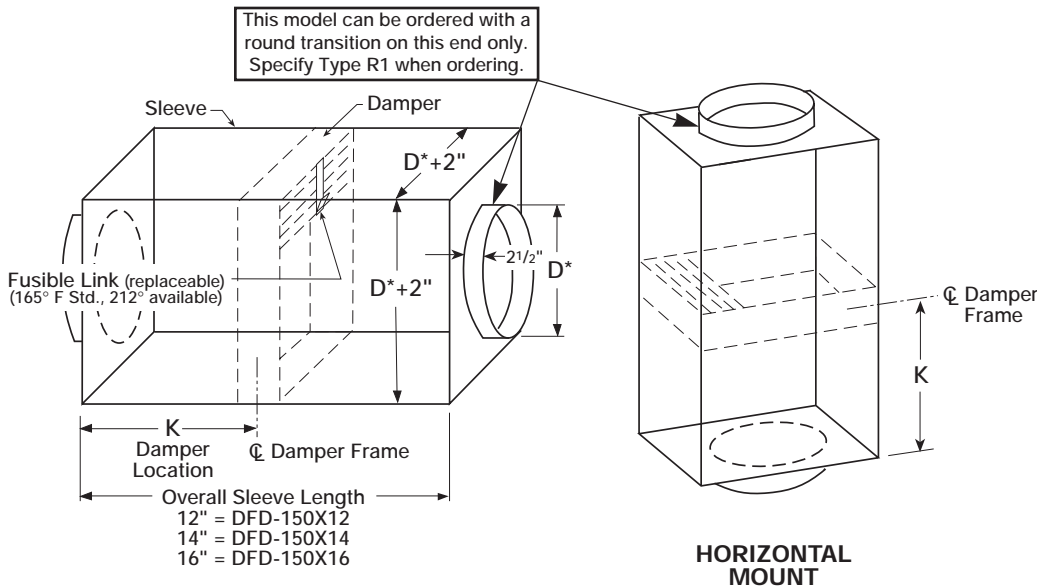
"UL CLASSIFIED (see complete marking on product)"
"UL CLASSIFIED to Canadian safety standards (see complete marking on product)"
 Standard 555 (Listing #R13317)



Features:

- Stainless steel closure springs
- Fusible links (165° standard, 212° available)
- Can be mounted horizontally or vertically.

*These dimensions are furnished approximately 1/4" undersize. "D" dimension furnished approximately 1/8" undersize.



"K" dimension specifies location of damper within the sleeve. Standard "K" dimension is one half of sleeve length (damper centered in sleeve). Optional "K" dimensions for each model are shown below:
 DFD-150X12- "K" can be specified as 4, 5, 6, 7 or 8"
 DFD-150X14- "K" can be specified as 6, 7 or 8"
 DFD-150X16- "K" is always 8"
 All dimensions and gauges are nominal.

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.

Maximum Airflow Velocity Ratings (FPM) Model DFD-150X Type R

Unducted Installations

Ducted Installations

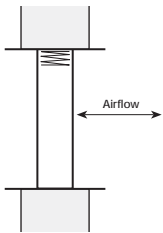


Table A
Vertical Damper Installation
Horizontal Airflow

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

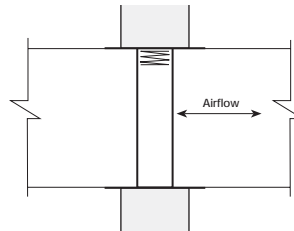


Table D
Vertical Damper Installation
Horizontal Airflow

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

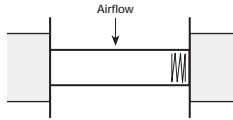


Table B
Horizontal Damper Installation
Airflow Down

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

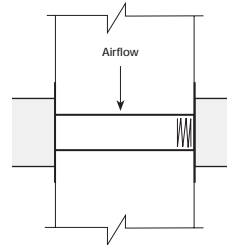


Table E
Horizontal Damper Installation
Airflow Down

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

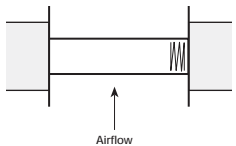


Table C
Horizontal Damper Installation
Airflow Up

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

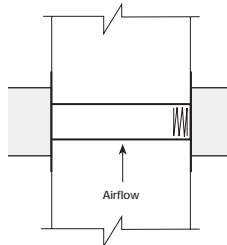


Table F
Horizontal Damper Installation
Airflow Up

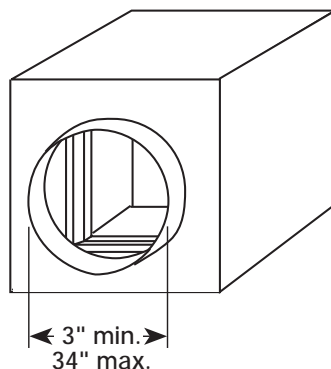
Dia.	FPM
3"-10"	7924
>10-22	4605
>22-34	1788

DFD-150X Type R

Factory sleeved DFD-150X dampers are available only as single section dampers.

SIZE LIMITATIONS

Vertical or Horizontal	
Minimum	3" dia.
Maximum	34" dia.



Steel Stud Connection (SSC) Option

The Steel Stud Connection (SSC) Option allows fastening of the damper sleeve (up to 34" diameter) directly to the wall's steel stud framing. This option replaces the angles that were previously required for wall installations.