

Dynamic Rated FIRE DAMPERS

Narrowline Construction

1 1/2 Hour Fire Resistance Rating

APPLICATION

Model DFD-110 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. UL555 classifies dynamic rated fire dampers for use in HVAC systems that are operational in the event of fire.

RATINGS

UL555 Fire Resistance Rating
Fire Rating: 1 1/2 hours

Dynamic Closure Rating

Maximum Velocity: 4000 fpm (20.3 m/s) vertical mount only, up to 24 in. x 24 in. (610mm x 610mm)
2000 fpm (10.2 m/s) vertical or horizontal mount, on all sizes

Maximum Pressure: 4 in. wg (1 kPa)

Construction	Standard	Optional
Frame Material	Galvanized Steel*	-
Frame Depth	2 3/16 in. (56mm)	-
Blade Material	Galvanized steel*	-
Closure Spring	Stainless Steel	-
Fusible Link	165°F (74°C)	212°F or 286°F (100°C) or (141°C)
Mounting	Vertical	Horizontal

* in gauges required by UL listing R-13317

OPTIONAL FEATURES

- Transitions (B or B2)
- Security bars
- One piece retaining angles (POC)
- Grille Tabs
- Sealed transition and sleeve
- Factory mounted accessories
 - Retaining angles
 - Access doors
 - S & drive
 - Quick Connect

FACTORY SLEEVE OPTION

DFD-110 Fire Dampers are available in factory furnished sleeves. Sleeves are galvanized steel and are available in 10 thru 20 ga. (1mm - 3.5mm) thicknesses and lengths up to 36 in. (914mm).

"K" dimension specifies location of damper within the sleeve. Minimum is 4 in. (102mm), maximum is "L" less than 4 in. (102mm), which allows for mounting angle installation and duct connection at each end of the sleeve. If "K" dimension is not specified, it will be provided as one half of "L" dimension (damper centered in sleeve).

Note: If using access doors, the door should be installed on the "K" side of the damper.

Model DFD-110 meets the requirements for fire dampers established by:

National Fire Protection Association
(NFPA Standards 80, 90A & 101)

Underwriters Laboratories Standard 555 (Listing #R-13317)

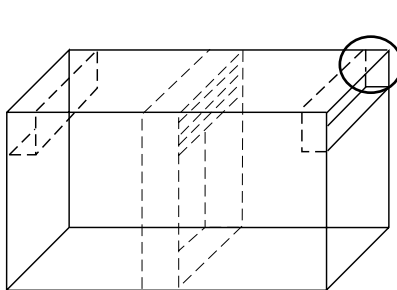
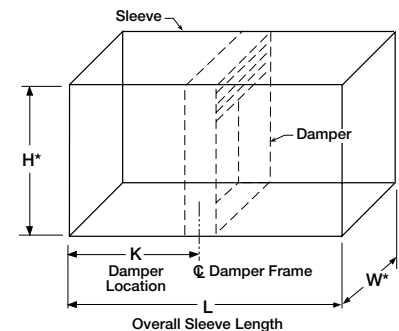
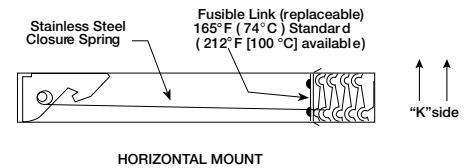
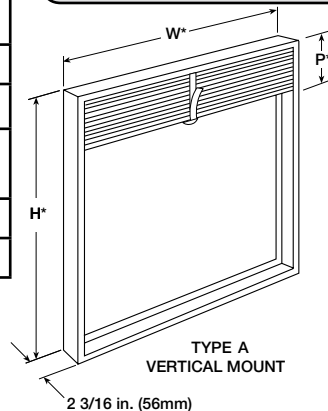
IBC International Building Codes

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

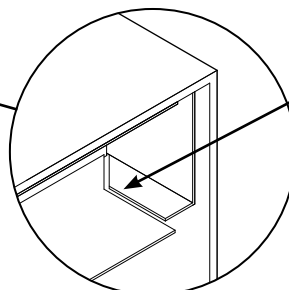
California State Fire Marshall

(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)



Type B with sleeve



Type B corner profile

When sealed option is selected, B transitions will need to be field sealed in the area where duct to sleeve connection is made.

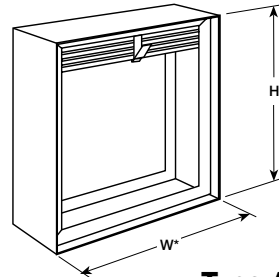
DFD-110 Type A

Dampers larger than maximum single section size are supplied in 2 or more sections of equal size. If ordered with a factory sleeve, multi-section dampers are factory assembled ready for installation. If ordered without a factory sleeve, multi-section dampers require field assembly. (See Greenheck Fire Damper Installation Instructions #452763)

The following chart shows minimum and maximum damper sizes. Dimensions are in inches (mm in parentheses).

Size Limitations

Inches (mm)	Type A		Type B & B2	
	Minimum	Maximum	Minimum	Maximum
Single Section Vertical	4 x 4 (102 x 102)	36 x 36 (914 x 914)	4 x 3 (102 x 76)	36 x 31 (914 x 787)
Multi Section** Vertical	NA	72 x 48 (1829 x 1219)	NA	72 x 45 (1829 x 1143)
Single Section Horizontal	4 x 4 (102 x 102)	30 x 30 (762 x 762)	4 x 3 (102 x 76)	30 x 26 (762 x 762)
Multi Section** Horizontal	NA	48 x 36 (1219 x 914)	NA	48 x 33 (1219 x 838)



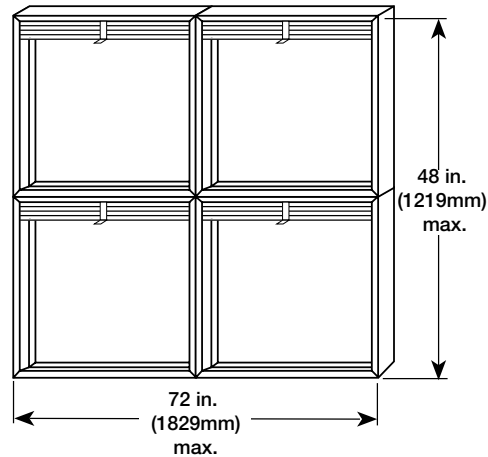
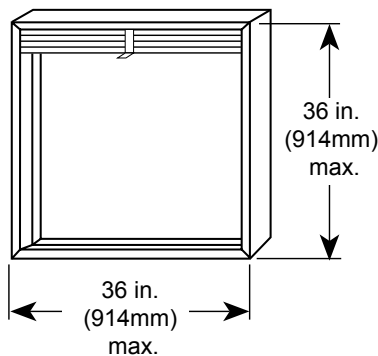
Type A

* These dimensions are furnished approximately 1/4 in. (6mm) undersize. Dimensions are in inches (mm).

Multi-Section Limitations

Maximum damper height is 48 in. (1219mm) when combination width is 72 in. (1829mm) or less.

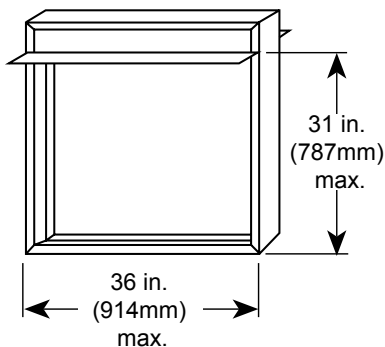
Max. Type A Dimensions



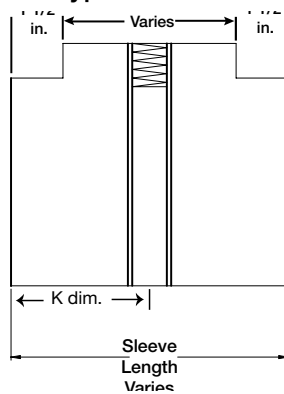
DFD-110 Types B & B2

Dampers larger than maximum single section size are supplied in 2 or more sections of equal size. *Note: All multiple section dampers with transitions, will include a factory installed sleeve.*

Max. Type B Dimensions

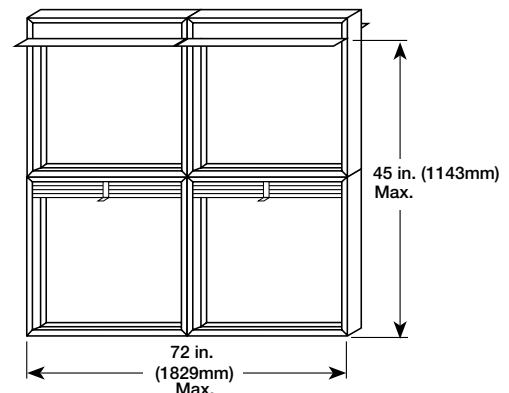


Type B2 side view



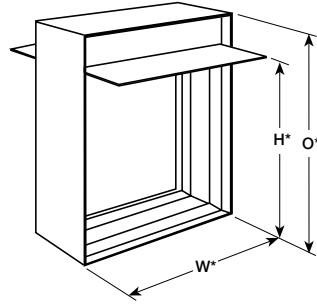
Multi Section Limitations

Maximum damper height is 45 in. (1143mm) when combination width is 72 in. (1829mm) or less.

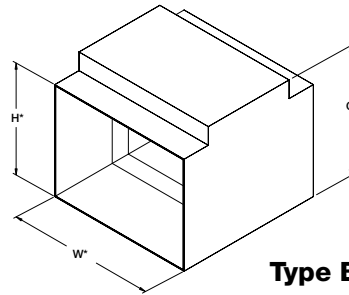


DFD-110 Types B & B2 cont....

Overall Damper and Blade Stack Dimensions



Type B



Type B2

Vertical Mount

H*	O*
3 (76)	5 (127)
4 (101)	6 (152)
5 (127)	7 (178)
6 (152)	8 (203)
7 (178)	9 (229)
8 (203)	10 (254)
9 (229)	11 (279)
10 (254)	12 (305)
11 (279)	13 (330)
12 (305)	14 (356)
13 (330)	15 (381)
14 (356)	16 (406)
15 (381)	18 (457)
16 (406)	19 (483)
17 (432)	20 (508)
18 (457)	21 (533)
19 (483)	22 (559)
20 (508)	23 (584)
21 (533)	24 (610)
22 (559)	26 (660)

H*	O*
23 (584)	27 (686)
24 (610)	28 (711)
25 (635)	29 (737)
26 (660)	30 (762)
27 (686)	31 (787)
28 (711)	32 (813)
29 (737)	33 (838)
30 (762)	34 (864)
31 (787)	36 (914)
32 (813)	37 (940)
33 (838)	37 (940)
34 (864)	37 (940)
35 (889)	38 (965)
36 (914)	39 (991)
37 (940)	40 (1016)
38 (965)	41 (1041)
39 (991)	42 (1067)
40 (1016)	43 (1092)
41 (1041)	44 (1118)
42 (1067)	45 (1143)

Horizontal Mount

H*	O*
3 (76)	5 (127)
4 (101)	6 (152)
5 (127)	7 (178)
6 (152)	8 (203)
7 (178)	9 (229)
8 (203)	10 (254)
9 (229)	11 (279)
10 (254)	12 (305)
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24 (610)	28 (711)
25 (635)	29 (737)
26 (660)	30 (762)
27 (686)	31 (787)
28 (711)	31 (787)
29 (737)	32 (813)
30 (762)	33 (838)

* Dimensions in inches (mm). These dimensions are furnished approximately 1/4 in. (6mm) undersize. (All 'H' dimensions larger than single section height are two sections high. Refer to chart. The top section is a Type B and the bottom sections are Type A).

