

APPLICATION

Model DFD-350 is approved for use in walls, floors and partitions with fire resistance ratings of 3 hours or more. This model carries a 3 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.

RATINGS

UL555 Fire Resistance Rating

Fire Rating: 3 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	3 11/16 in. (94mm)	-
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

Model DFD-350 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 Code

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)

OPTIONAL FEATURES

- Sealed transitions and sleeves
- Security bars
- One piece retaining angles (POC)
- Transitions (B, B2, C, CO, CR, R)

INSTALLATION

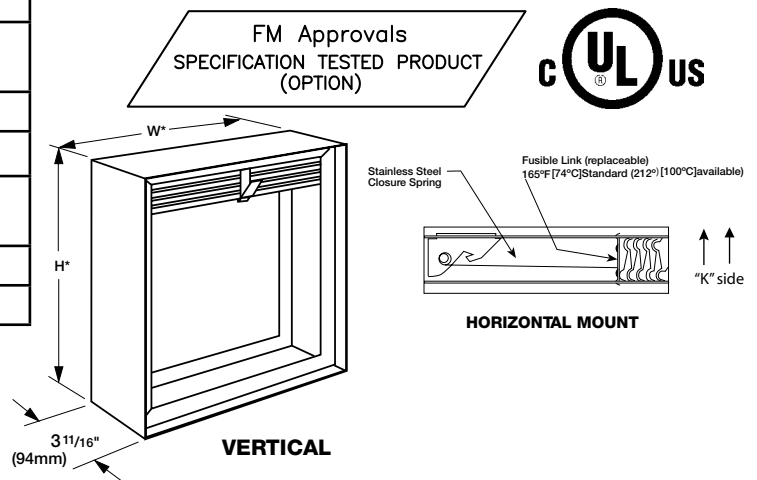
All fire damper installations require the use of sleeves, angles and methods described in Greenheck Fire Damper Installation Instructions #452763, included with every damper shipment. Sleeves can be field fabricated or factory furnished as a complete damper/sleeve assembly. See Factory Sleeve Option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

FACTORY SLEEVE OPTION

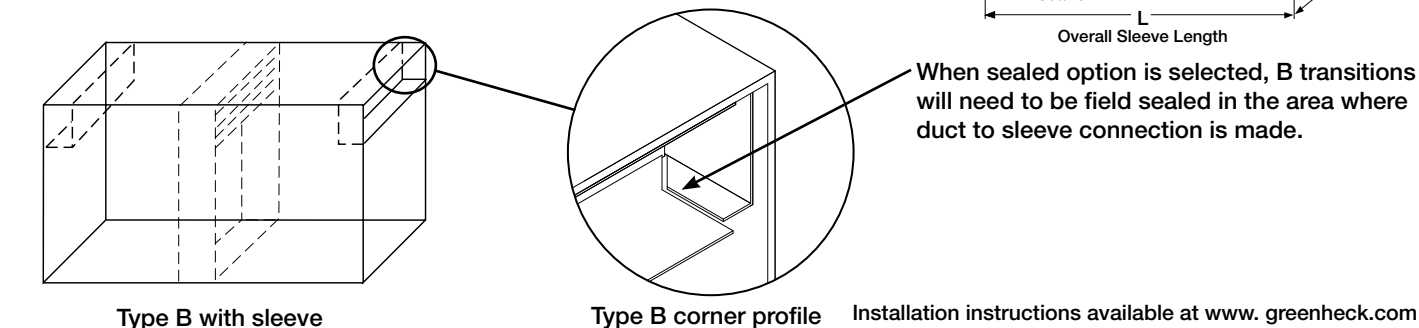
DFD-350 Fire Dampers are available in factory furnished sleeves. Sleeves are galvanized steel and are available in 10 thru 20 ga. (1mm - 3.5mm) thicknesses and lengths up to 36 in. (914mm).

"K" dimension specifies location of damper within the sleeve. Minimum is 4 in. (102mm), maximum is "L" less 4 in. (102mm), 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).

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



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



Type B with sleeve

Type B corner profile

Installation instructions available at www.greenheck.com

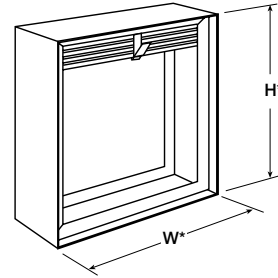
DFD-350 Types A

Dampers larger than maximum single section are supplied in 2 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 section size. Dimensions are in inches (mm).

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	48 x 48 (1219 x 1219)	NA	48 x 45 (1219 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	40 x 36 (1016 x 914)	NA	40 x 33 (1016 x 838)



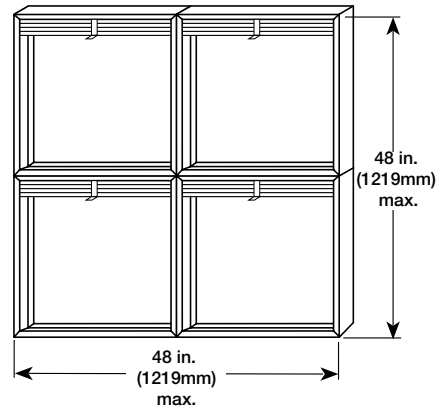
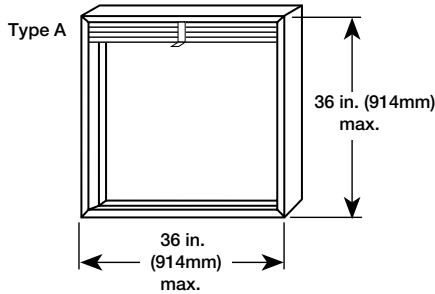
Type A

**Consult factory for number of sections.

② Multi-Section Limitations

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

Maximum Single Section Dimensions

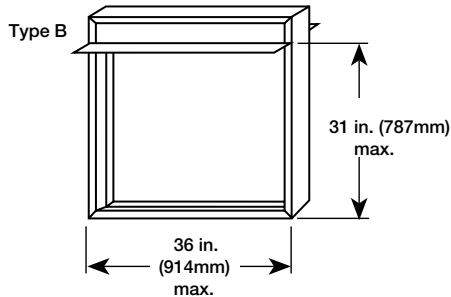


DFD-350 Types B & B2

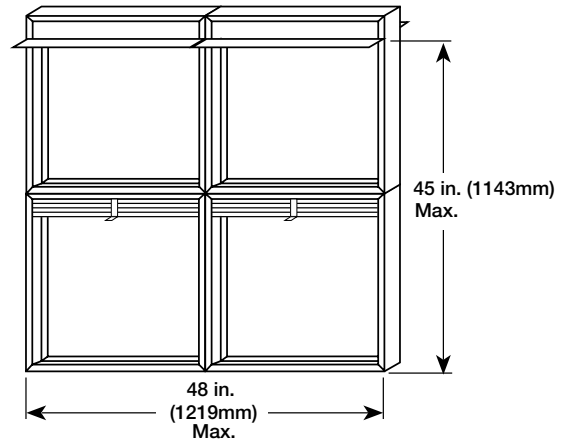
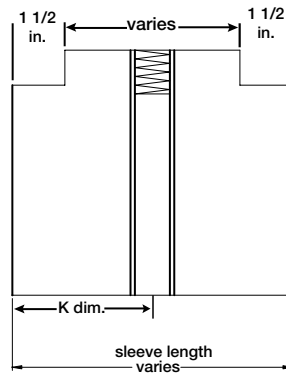
Dampers larger than maximum single section are supplied in 2 sections of equal size. *Note: All multisection dampers with transitions will include a factory installed sleeve.*

Multi Section Limitations

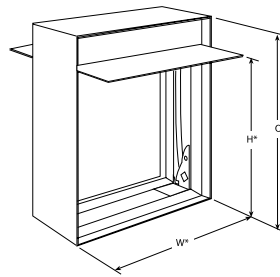
Maximum damper height is 45 in. (1143mm) when combination width is 48 in. (1219mm) or less.



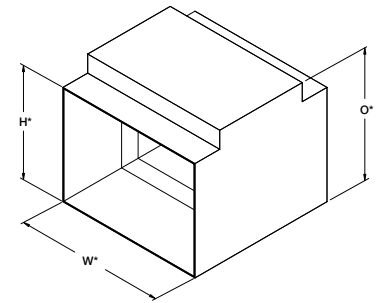
Type B2 side view



DFD-350 Types B & B2 cont....



Type B



Type B2

Vertical Mount

H*	O*	H*	O*
3 (76)	5 (127)	25 (635)	29 (737)
4 (102)	6 (152)	26 (660)	30 (762)
5 (127)	7 (178)	27 (686)	31 (787)
6 (152)	8 (203)	28 (711)	32 (813)
7 (178)	9 (229)	29 (737)	33 (838)
8 (203)	10 (254)	30 (762)	34 (864)
9 (229)	11 (279)	31 (787)	36 (914)
10 (254)	12 (305)	32 (813)	37 (940)
11 (279)	13 (330)	33 (838)	37 (940)
12 (305)	14 (356)	34 (864)	37 (940)
13 (330)	15 (381)	35 (889)	38 (965)
14 (356)	16 (406)	36 (914)	39 (991)
15 (381)	18 (457)	37 (940)	40 (1016)
16 (406)	19 (483)	38 (965)	41 (1041)
17 (432)	20 (508)	39 (991)	42 (1067)
18 (457)	21 (533)	40 (1016)	43 (1092)
19 (483)	22 (559)	41 (1041)	44 (1118)
20 (508)	23 (584)	42 (1067)	45 (1143)
21 (533)	24 (610)	43 (1092)	46 (1168)
22 (559)	26 (660)	44 (1118)	47 (1194)
23 (584)	27 (686)	45 (1143)	48 (1219)
24 (610)	28 (711)		

Horizontal Mount

H*	O*	H*	O*
3 (76)	5 (127)	19 (483)	22 (559)
4 (102)	6 (152)	20 (508)	23 (584)
5 (127)	7 (178)	21 (533)	24 (610)
6 (152)	8 (203)	22 (559)	26 (660)
7 (178)	9 (229)	23 (584)	27 (686)
8 (203)	10 (254)	24 (610)	28 (711)
9 (229)	11 (279)	25 (635)	29 (737)
10 (254)	12 (305)	26 (660)	30 (762)
11 (279)	13 (330)	27 (686)	31 (787)
12 (305)	14 (356)	28 (711)	31 (787)
13 (330)	15 (381)	29 (737)	32 (813)
14 (356)	16 (406)	30 (762)	33 (838)
15 (381)	18 (457)	31 (787)	34 (864)
16 (406)	19 (483)	32 (813)	35 (889)
17 (432)	20 (508)	33 (838)	36 (914)
18 (457)	21 (533)		

*Dimensions given 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).

DFD-350 Types C, CO, CR, & R

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

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

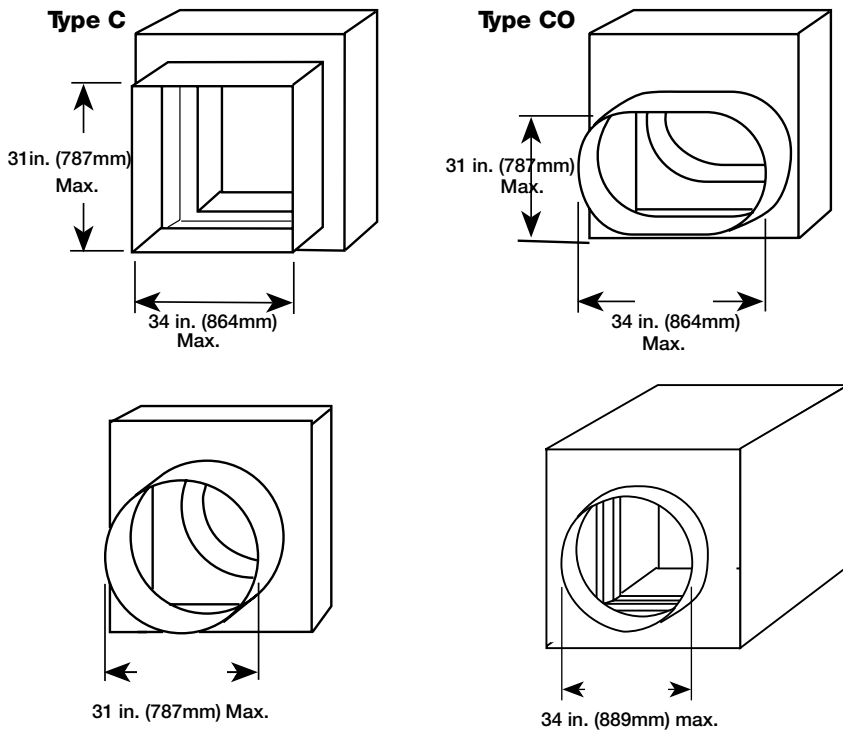
Inches (mm)	Type CR		Type CO & C		Type R* ¹	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Single section Vertical	3 (76)	30 (762)	3 x 3 (76 x 76)	34 x 30 (864 x 762)	3 (76)	34 (864)
Multi Section** Vertical	NA	44 (1118)	NA	46 x 44 (1168 x 1118)	NA	46 (1168)
Single Section Horizontal	3 (76)	25 (635)	3 x 3 (76 x 76)	28 x 25 (711 x 635)	3 (76)	28 (711)
Multi Section** Horizontal	NA	32 (813)	NA	38 x 32 (965 x 813)	NA	34 (864)

*¹ With 2 in. (50mm) offset. Sizes adjust with 0 offset & 1 in. (25mm) offset.

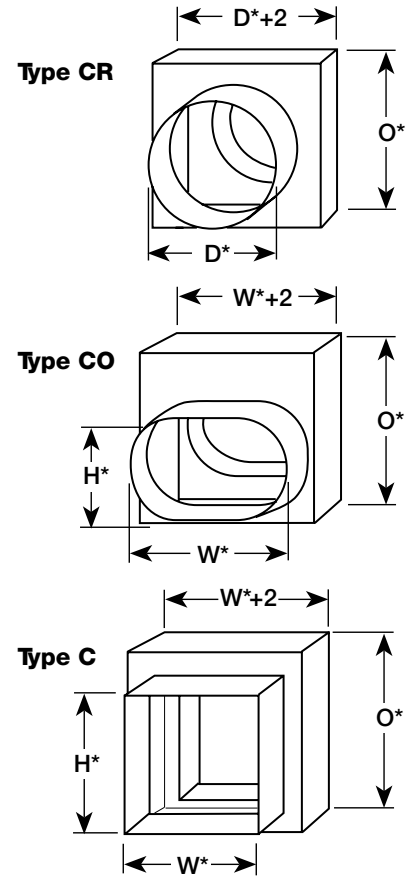
** Consult factory for number of sections.

DFD-350 Types C, CO, CR, & R cont....

Maximum Single Section Dimensions



Overall Damper Dimensions



C, CO, CR transitions are positioned 1 in.(25mm) from bottom of sleeve.

Vertical Mount

H* or D*	O*	H* or D*	O*	H* or D*	O*
3 (76)	6 (152)	17 (432)	21 (533)	31 (787)	37 (940)
4 (102)	7 (178)	18 (457)	22 (559)	32 (813)	37 (940)
5 (127)	8 (203)	19 (483)	23 (584)	33 (838)	37 (940)
6 (152)	9 (229)	20 (508)	24 (610)	34 (864)	38 (965)
7 (178)	10 (254)	21 (533)	26 (660)	35 (889)	39 (991)
8 (203)	11 (279)	22 (559)	27 (686)	36 (914)	40 (1016)
9 (229)	12 (305)	23 (584)	28 (711)	37 (940)	41 (1041)
10 (254)	13 (330)	24 (610)	29 (737)	38 (965)	42 (1067)
11 (279)	14 (356)	25 (635)	30 (762)	39 (991)	43 (1092)
12 (305)	15 (381)	26 (660)	31 (787)	40 (1016)	44 (1118)
13 (330)	16 (406)	27 (686)	32 (813)	41 (1041)	45 (1143)
14 (356)	18 (457)	28 (711)	33 (838)	42 (1067)	46 (1168)
15 (381)	19 (483)	29 (737)	34 (864)	43 (1092)	47 (1194)
16 (406)	20 (508)	30 (762)	36 (914)	44 (1118)	48 (1219)

Horizontal Mount

H* or D*	O*	H* or D*	O*
3 (76)	6 (152)	18 (457)	22 (559)
4 (102)	7 (178)	19 (483)	23 (584)
5 (127)	8 (203)	20 (508)	24 (610)
6 (152)	9 (229)	21 (533)	26 (660)
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*Dimensions given 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).



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DFD-350 rev. 9 Oct 2011