

Reference:

Client:

Project:

Consultant:

Location:

Contractor:

Date:

Submitted by: BM



**BADR and ASFOUR**  
Engineering & Metal Industries

### Model FDD-SL

Slimline Dynamic Curtain Fire Damper  
1-1/2 or 3 Hour, UL555 Classified

### Application:

The BAS/CVS model FDD-SL fire damper utilizes a Slimline frame as well as curtain style blades to prevent the spread of fire through a penetration in a fire rated barrier made by an HVAC duct or transfer. The FDD-SL can be installed vertically or horizontally and is meant for dynamic (fans remain on in a fire) or static (fans shut off in a fire) HVAC systems.

**MAXIMUM VELOCITY:** 2000 fpm (10.2 m/s) on all sizes.

**MAXIMUM PRESSURE:** 4" wg (1kPa) on all sizes.

### Standard Construction:

	Standard	Optional
<b>Frame Material</b>	22 Gauge Galvanized Roll-formed Steel	-----
<b>Blade Material and Type</b>	22 Gauge Galvanized Roll-formed Steel	-----
<b>Frame Depth</b>	2-3/8" (55)	3-11/16" (94) [see Model FDD]
<b>Dimensions</b>	Actual - 1/4" (6)	Actual
<b>Closure Spring</b>	Stainless Steel	-----
<b>Fusible Link</b>	165° (74°C)	212° (100°C)
<b>Mounting</b>	Vertical	Horizontal
<b>UL Hour Rating</b>	1-1/2 Hour	3 Hour

Option in Stainless steel construction available.

All dimensions shown in inches, parentheses ( ) indicate millimeters.

### Optional Construction:

#### Factory Installed External Sleeve:

**Length:** 12 (305) 16 (406) 24 (610) Other: \_\_\_\_\_

**Gauge:** 20 (1.0) 18 (1.2) 16 (1.5) 14 (2.0) 10 (3.5)

**Location in Sleeve:** Standard Offset: \_\_\_\_\_

#### Flanged Sleeve (requires factory installed external sleeve):

3/4" (19) 1" (25)

#### Framed Retaining Angles - 16 ga. x 1 1/2 x 1 1/2 (1.5x38x38)

Single Side Dual Side

### Other Options:

- Static models (see Model FD-SL)
- Multi-Blade models (FDD-MB)
- Regular Frame Models (FDD)
- Out-of-wall models (see Model FDD-OW)
- True Round models (see Model FDD-RD)



### LISTINGS:

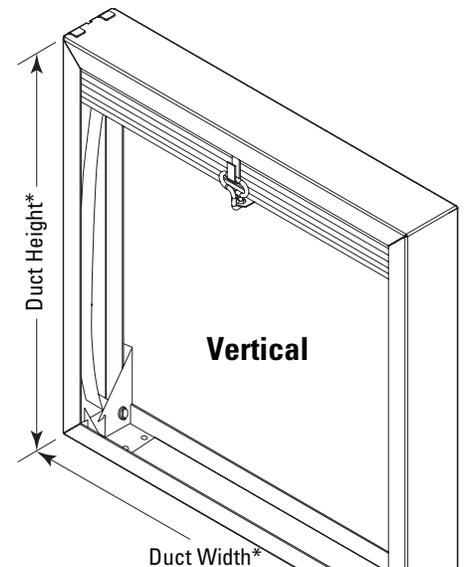
**UL 555 Listing:** R27700(UAE), R41135(KSA), R40068(Qatar), R41122(Egypt)

### STANDARDS MET:

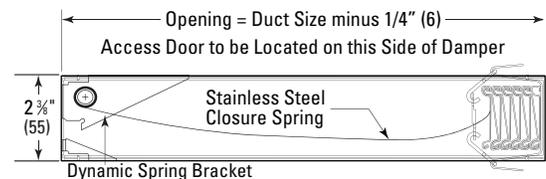
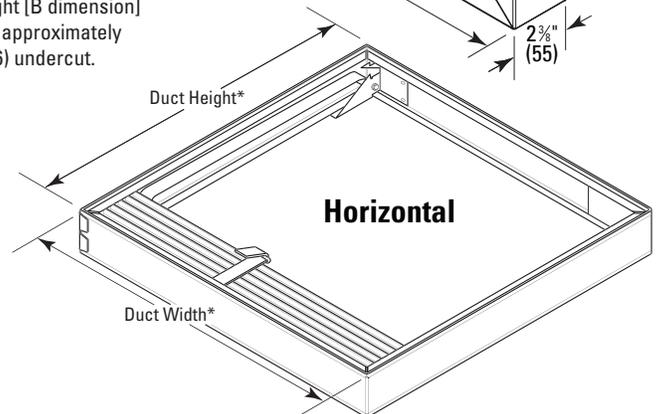
**NFPA Standards:** 80, 90A, 92A, 92B and 101

**Building Code Standard:**

ICC International Building Code



\* Width [A dimension] and Height [B dimension] are approximately 1/4" (6) undercut.



**FDD-SL-A - Horizontal (Similar for Vertical)**

As part of our continuous improvement program, we reserve the right to make further improvements without notice.

Submittal

### Type A Dynamic Curtain Fire Damper

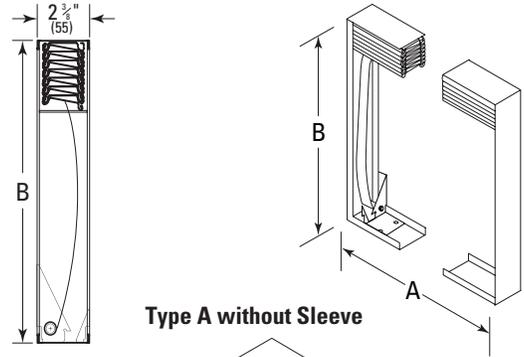
- For use in static HVAC systems (fans off)
- Frame and blade stack in air stream
- Approximately 75-85% Free Area
- Sleeve optional (Factory installed external or Integral)
- 1-1/2 or 3 Hour Fire Rated

#### FDD-SL-A Minimum & Maximum Sizes:

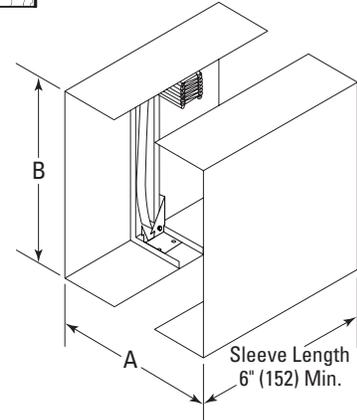
Type A Model	Minimum Size		Max. Single Section		Max. Multi-Section	
	1.5 Hour	3 Hour	1.5 Hour	3 Hour	1.5 Hour	3 Hour
<b>FDD-SL (Vertical)</b>	6x6 (152x152)		24x24 (610x610)	24x24 (610x610)	36x36 (914x914)	36x36 (914x914)
<b>FDD-SL (Horizontal)</b>			24x24 (610x610)	24x24 (610x610)	36x36 (914x914)	36x36 (914x914)

All dimensions shown in inches, parentheses ( ) indicate millimeters.

A Dimension = Duct Width  
B Dimension = Duct Height



Type A without Sleeve



Type A with External Sleeve

### Type B Dynamic Curtain Fire Damper

- For use in static HVAC systems (fans off)
- Black stack out of airstream
- Approximately 80-90% Free Area
- Sleeve optional (Factory installed external or Integral)
- 1-1/2 or 3 Hour Fire Rated

#### FDD-SL-B Minimum & Maximum Sizes:

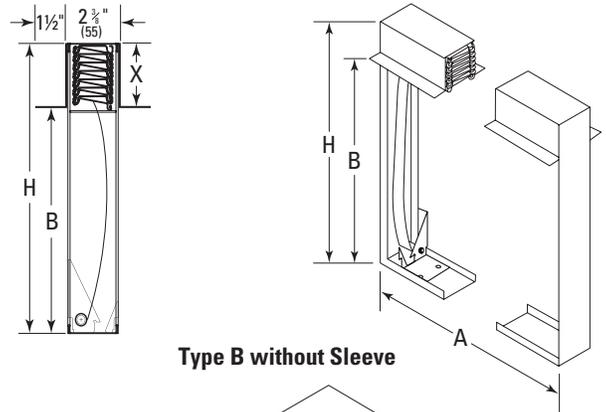
Type B Model	Minimum Size		Max. Single Section		Max. Multi-Section <sup>1</sup>	
	1.5 Hour	3 Hour	1.5 Hour	3 Hour	1.5 Hour	3 Hour
<b>FDD-SL (Vertical)</b>	6x4 (152x102)		24x21 (610x583)	24x21 (610x583)	36x32 (914x813)	36x32 (914x813)
<b>FDD-SL (Horizontal)</b>			24x21 (610x583)	24x21 (610x583)	36x32 (914x813)	36x32 (914x813)

All dimensions shown in inches, parentheses ( ) indicate millimeters.

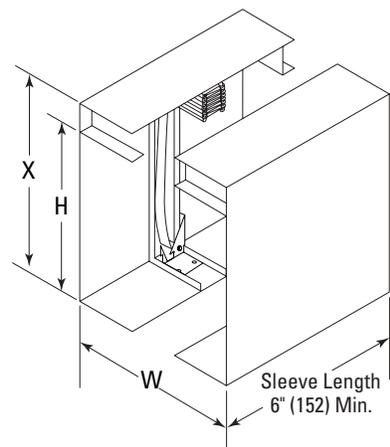
A Dimension = Duct Width  
B Dimension = Duct Height  
X Dimension = Height of Blade Stack  
H Dimension = Overall Damper Height (B+X)

#### Notes:

1. Multi-section damper will have frame in the airstream and blades for vertical models more than one damper in height.



Type B without Sleeve

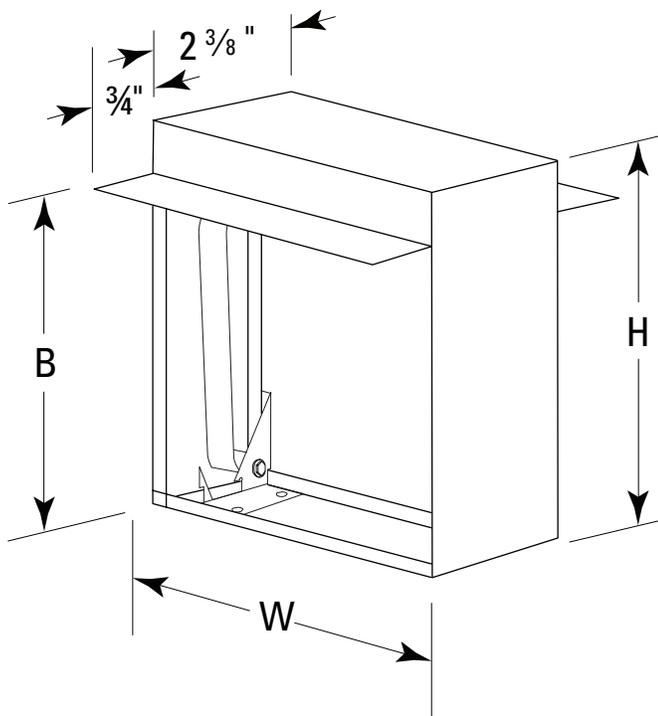


Type B with External Sleeve

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Submittal

## Type B Fire Damper



Duct Height (B)	Type B Damper Height (H)	
	Inches	
Inches	Vertical	Horiz.
3	5	5
4	6	6
5	7	7
6	8	8
7	9	9
8	10	10
9	11	11
10	12	12
11	13	13
12	14	14
13	15	15
14	16	16
15	17	17
16	18	18
17	19	19
18	20	20
19	21	21
20	22	22
21	24	24
22	25	26
23	26	27
24	27	28
25	28	29
26	29	30
27	30	31
28	31	32
29	32	33
30	33	34
31	34	35
32	35	36

Below are diagrams showing the location of the Type A and B fire dampers in a factory installed external sleeve.

**Sleeve Diagram Key:**

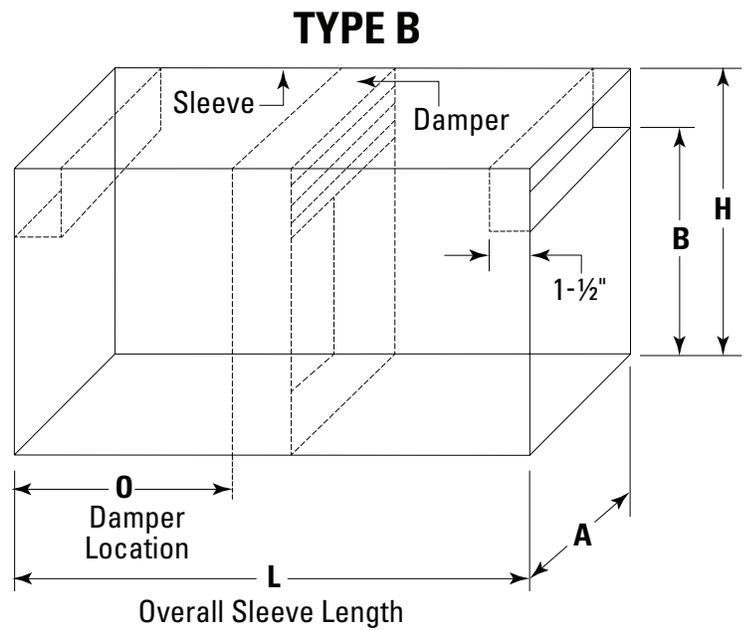
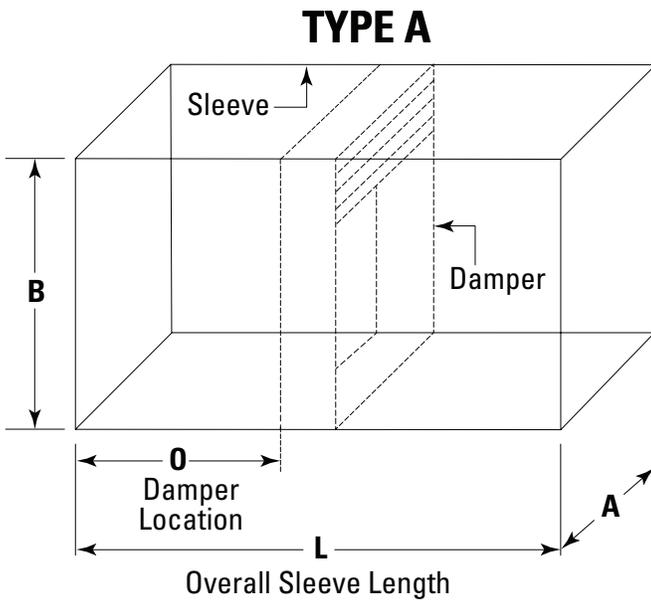
**H** = Overall height

**W** = Overall width (always the length of the blades)

**A** = Duct Width

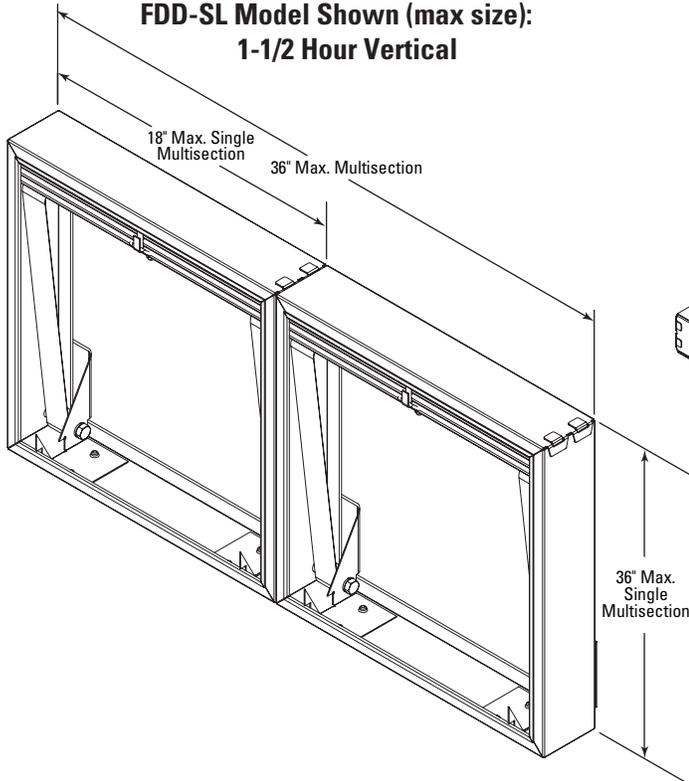
**B** = Duct Height

**O** = The offset from one end of the sleeve to the beginning of the damper frame (can be altered as a construction option)

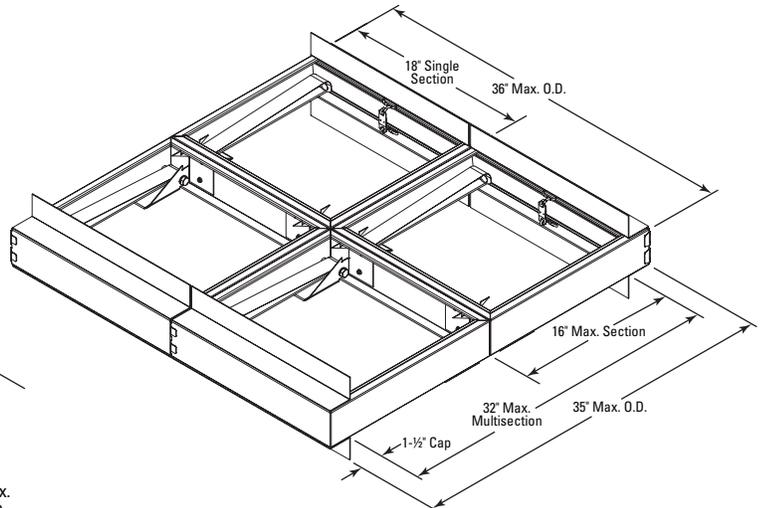


**Multiple section damper assemblies** are shipped in individual sections from the factory unless a factory supplied and installed sleeve is required. When a multiple section damper is ordered with a sleeve, it is usually shipped as a complete assembly. The following drawings are of different maximum size multiple section FDD-SL models and are for reference purposes (not all options are shown).

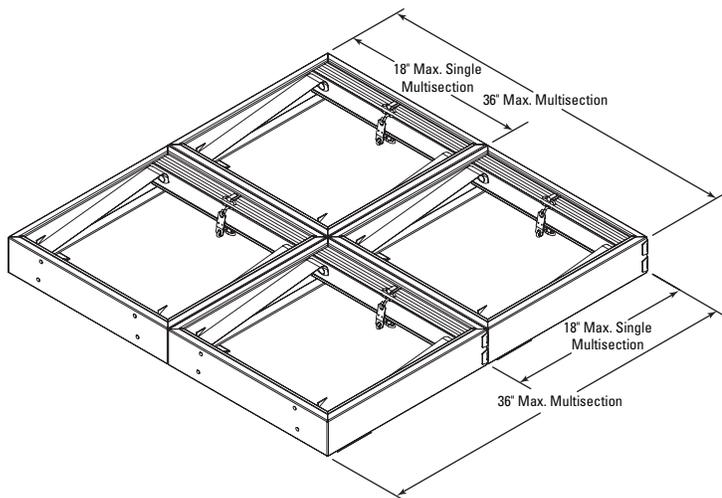
**Type A Multi-Section Assembly**  
FDD-SL Model Shown (max size):  
1-1/2 Hour Vertical



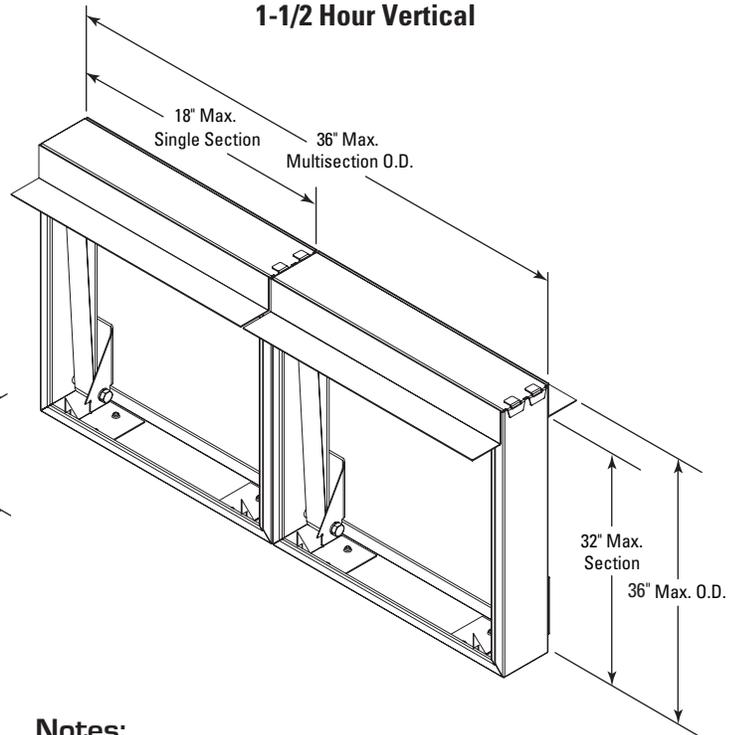
**Type B Multi-Section Assembly**  
FDD-SL Model Shown (max size):  
1-1/2 Hour Horizontal



**Type A Multi-Section Assembly**  
FDD-SL Model Shown (max. size):  
1-1/2 Hour Horizontal



**Type B Multi-Section Assembly**  
FDD-SL Model Shown (max. size):  
1-1/2 Hour Vertical



**Notes:**

1. These diagrams are for reference purposes
2. Not all FDD-SL Model options are shown