

# IBD2

## Curtain Type Static Fire Dampers

1 1/2 Hour UL555 Rated For Use In Static System



### APPLICATION

Ruskin Model IBD2 1 1/2 hour UL classified static (fans off) curtain style fire damper for use in HVAC systems that shut down during a fire event. Fire dampers used for the protection of openings in walls, partitions, or masonry floors with fire resistance ratings of less than 3 hours and shall have a 1 1/2 hour fire protection rating. The IBD2 can be installed vertically in walls or horizontally in masonry floors and is rated for airflow in either direction.

### STANDARD CONSTRUCTION

<b>Frame and Blades Material</b>	Galvanized steel (in gauges required by UL listing R-5531).
<b>Closure Springs</b>	301 stainless steel constant force type (horizontal mount only).
<b>Fusible Link</b>	165°F (74°C) is standard. 212°F (100°C) is available as an option.

### DAMPER SIZES

See pages 2 - 5 for minimum and maximum UL sizes.

See pages 6 - 9 for construction details on multiple section assemblies.

### OPTIONS

**True Round Fire Damper** See model FDR25.

**Stainless Steel Construction** See model (D)IBD2SS.

**SP200 Switch Package** to allow remote indication of damper blade position.

**FAST Angles** factory supplied one-side installation. Other angles of various sizes and gauges also available for one-side or two-side installation.

**Factory Sleeves** of various lengths and gauges to ensure field compliance with UL installation requirements.

**MCP** Control panels for monitoring purpose.

**Grille Mounting** See (D)IBD2G or (D)IBD20G models.

**'GA' Grille Access** See (D)IBD2GA models.

**'OW' Out of Wall** See (D)IBD2/OW models.



ISO 9001  
CERTIFIED



5  
YEAR LIMITED  
WARRANTY

Models IBD2 series meet the requirements for fire dampers established by:

- ▶ **National Fire Protection Association**  
NFPA Standards 80, 90A, 92A, 92B and 101
- ▶ **ICC International Building Codes**
- ▶ **CSFM California State Fire Marshal**  
IBD2 #3225-0245:0005



SEE COMPLETE  
MARKING ON PRODUCT

**UL CLASSIFIED**

UL555 Listing R5531  
ULC S112

#### NOTE:

- Dimensions shown in parentheses ( ) indicate millimeters.
- Single section dampers ordered with either 12" (305), 14" (356) or 16" (406) long sleeve; the IBD20, 40, 60, 230, 430 and 630 models may be substituted.

## DAMPER STYLES & SIZES

### A STYLE

Frame and blades in air stream  
Sleeve optional  
75 - 85% free area

#### Minimum Size

Vertical Installation - 4"w x 4"h (102 x 102)  
Horizontal Installation - 6"w x 6"h (152 x 152)

#### Maximum Size

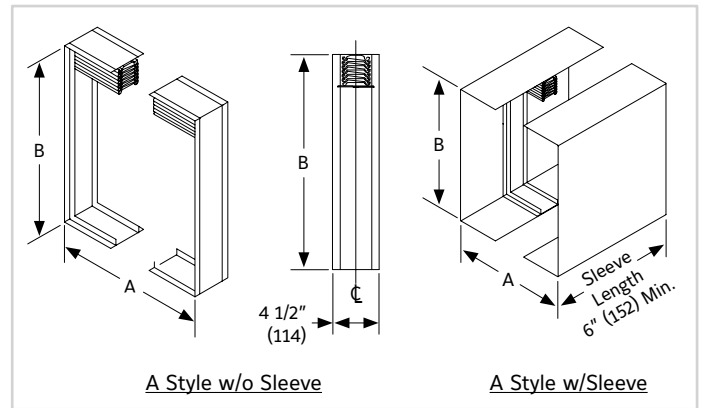
##### Single Section

Vertical Installation - 33"w x 72"h (838 x 1829) or 48"w x 30"h (1219 x 762) or 36"w x 36"h (914 x 914)  
Horizontal Installation - 30"w x 45 1/2"h (762 x 1156) or 33"w x 38"h (838 x 965)

##### Multiple Section Assembly

Vertical Installation - 120"w x 72"h (3048 x 1829)  
Horizontal Installation - 90"w x 91"h (2286 x 2311) or 114"w x 38"h (2896 x 965)

NOTE: See page 6 for overall dimensional information.



### B STYLE

Blades out of air stream  
Sleeve optional  
80 - 90% free area (unit above 12" 'B' dimension)

#### Minimum Size

Vertical Installation - 4"w x 4"h (102 x 102)  
Horizontal Installation - 6"w x 4"h (152 x 102)

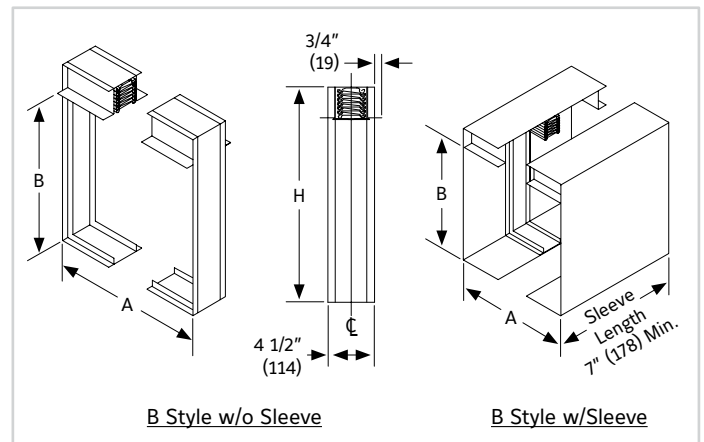
#### Maximum Size

##### Single Section

Vertical Installation - 33"w x 65"h (838 x 1651) or 48"w x 26"h (1219 x 660) or 36"w x 32"h (914 x 813)  
Horizontal Installation - 30"w x 40"h (762 x 1016) or 33"w x 34"h (838 x 863)

##### Multiple Section Assembly

Vertical Installation - 120"w x 65"h (3048 x 1651)  
Horizontal Installation - 90"w x 81"h (2286 x 2057) or 114"w x 34"h (2896 x 863)



A = Duct Width  
B = Duct Height  
H = Overall Damper Height

NOTE: See page 7 for overall dimensional information.

### BC & WB STYLE

Blades out of air stream  
BC Style: Fully sealed sleeve  
WB Style: Fully welded sleeve  
80 - 90% free area (unit above 12" 'B' dimension)

#### Minimum Size

Vertical Installation - 4"w x 4"h (102 x 102)  
Horizontal Installation - 6"w x 4"h (152 x 102)

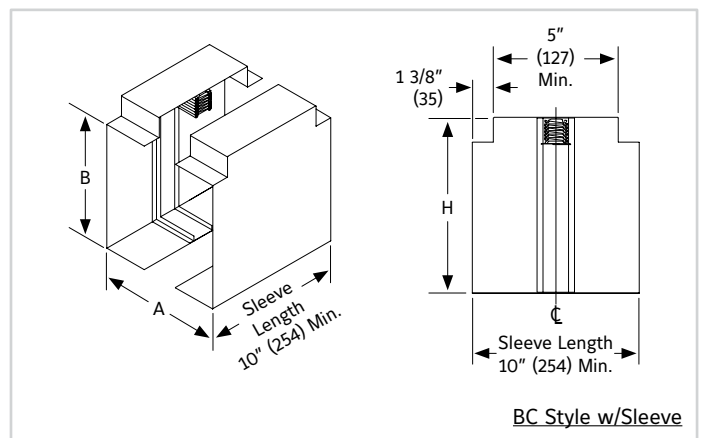
#### Maximum Size

##### Single Section

Vertical Installation - 33"w x 65"h (838 x 1651) or 48"w x 26"h (1219 x 660) or 36"w x 32"h (914 x 813)  
Horizontal Installation - 30"w x 40"h (762 x 1016) or 33"w x 34"h (838 x 863)

##### Multiple Section Assembly

Vertical Installation - 120"w x 65"h (3048 x 1651)  
Horizontal Installation - 90"w x 81"h (2286 x 2057) or 114"w x 34"h (2896 x 863)



A = Duct Width  
B = Duct Height  
H = Overall Damper Height

NOTE: See page 7 for overall dimensional information.

## DAMPER STYLES & SIZES

### C & WC STYLE – SQUARE or RECTANGLE TRANSITION

- Frame and blades out of air stream
- Sleeve required
- 95 - 100% free area
- C Style – sealed assembly
- WC Style – fully welded

#### Minimum Size

Vertical or Horizontal Installation – 4" w x 4" h (102 x 102)

#### Maximum Size

##### Single Section

- Vertical Installation – 31" w x 64" h (787 x 1626) or 46" w x 25" h (1168 x 635) or 34" w x 31" h (864 x 787)
- Horizontal Installation – 28" w x 39" h (711 x 991) or 31" w x 33" h (787 x 838)

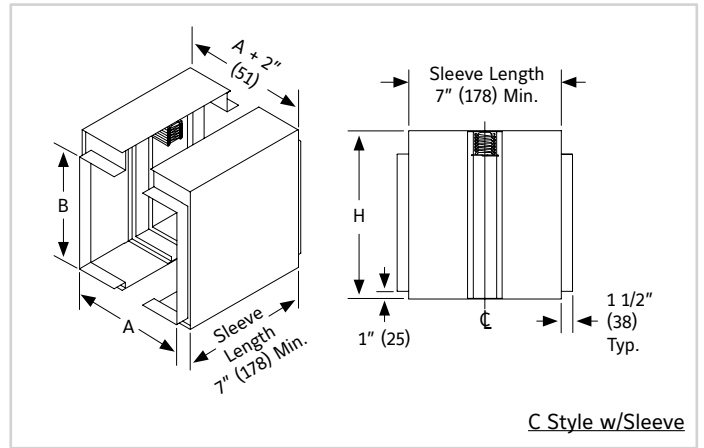
##### Multiple Section Assembly

- Vertical Installation – 118" w x 64" h (2997 x 1626)
- Horizontal Installation – 88" w x 81" h (2235 x 2057) or 112" w x 33" h (2845 x 838)

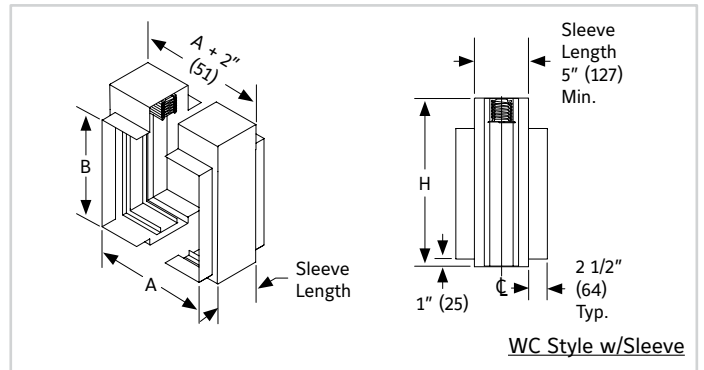
A = Duct Width  
B = Duct Height  
H = Overall Damper Height

#### NOTE:

- Style C duct connection extends 1 1/2" (38) beyond the sleeve.
- Style WC duct connection extends 2 1/2" (64) beyond the sleeve.
- See page 8 for overall dimensional information.



C Style w/Sleeve



WC Style w/Sleeve

### CR & WR STYLE – ROUND TRANSITION

- Frame and blades out of air stream
- Sleeve required
- 95 - 100% free area
- CR Style – sealed assembly
- WR Style – fully welded

#### Minimum Size

- Vertical Installation – 3" diameter (76)
- Horizontal Installation – 4" diameter (102)

#### Maximum Size

##### Single Section

Vertical or Horizontal Installation – 31" diameter (787)

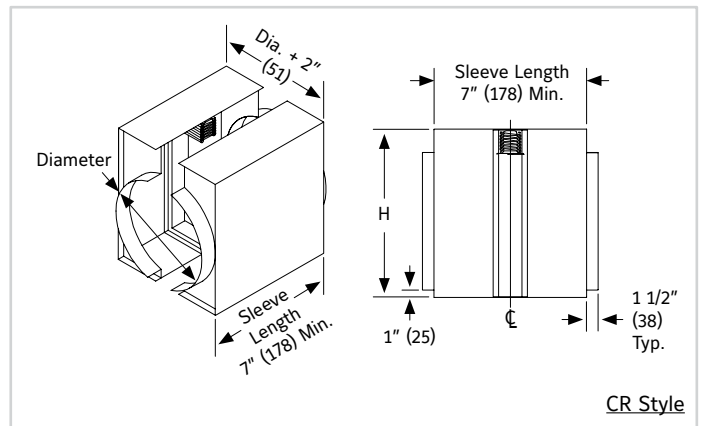
##### Multiple Section Assembly

- Vertical Installation – 64" diameter (1626)
- Horizontal Installation – 81" diameter (2057)

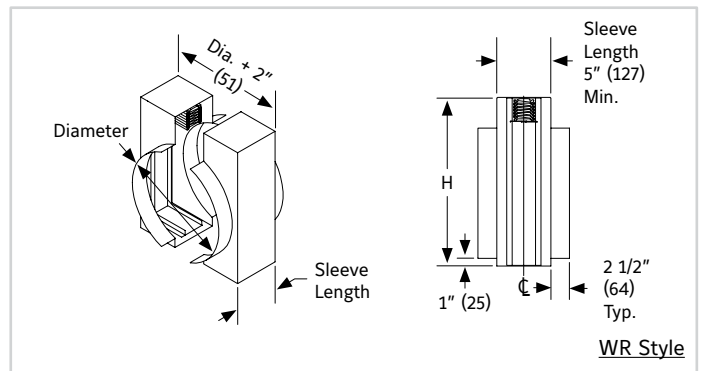
D = Diameter  
H = Overall Damper Height  
X = Blade Package Height

#### NOTE:

- Style CR duct connection extends 1 1/2" (38) beyond the sleeve.
- Style WC duct connection extends 2 1/2" (64) beyond the sleeve.
- Transition collars to be sealed (By Others).
- See page 8 for overall dimensional information



CR Style



WR Style



**Recommended FDR25(SS) For round units 6" (125) dia. through 24" (610) dia. consider using the FDR25 True Round Fire Damper for increased performance**

## DAMPER STYLES & SIZES

### CO & WO STYLE – OVAL TRANSITION

- Frame and blades out of air stream
- Sleeve required
- 95 - 100% free area
- CO Style – sealed assembly
- WO Style – fully welded

#### Minimum Size

Vertical or Horizontal Installation – 4" w x 4" h (102 x 102)

#### Maximum Size

##### Single Section

- Vertical Installation – 31" w x 64" h (787 x 1626) or 46" w x 25" h (1168 x 635) or 34" w x 31" h (864 x 787)
- Horizontal Installation – 28" w x 39" h (711 x 991) or 31" w x 33" h (787 x 838)

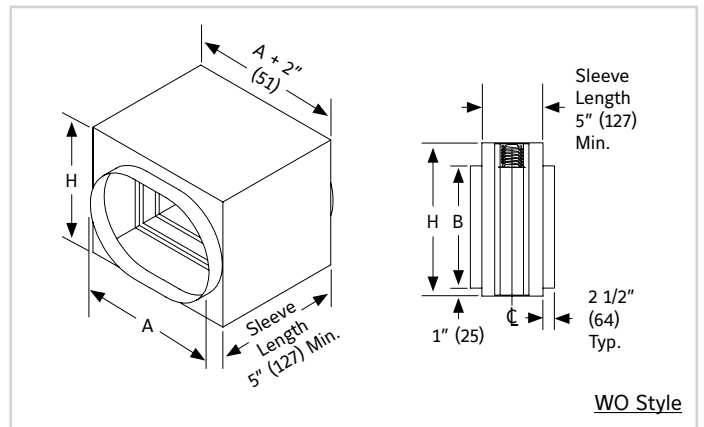
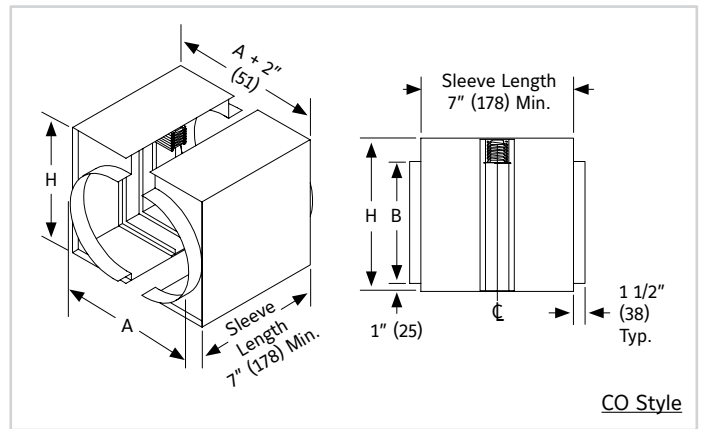
##### Multiple Section Assembly

- Vertical Installation – 118" w x 64" h (2997 x 1626)
- Horizontal Installation – 88" w x 81" h (2235 x 2057) or 112" w x 33" h (2845 x 838)

A = Duct Width  
B = Duct Height  
H = Overall Damper Height

#### NOTE:

- Style CO duct connection extends 1 1/2" (38) beyond the sleeve.
- Style WO duct connection extends 2 1/2" (64) beyond the sleeve.
- Transition collars to be sealed (By Others).
- See page 8 overall dimensional information



### LR STYLE – ROUND TRANSITION

- Round enclosure - frame and blades out of air stream
- Sleeve optional non-sealed assembly
- 95 - 100% free area

#### Minimum Size

- Vertical Installation – 3" diameter (76)
- Horizontal Installation – 4" diameter (102)

#### Maximum Size

##### Single Section

Vertical or Horizontal Installation – 31" diameter (787)

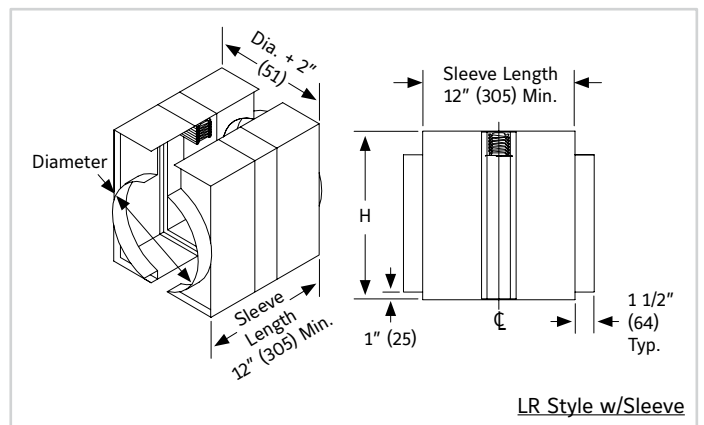
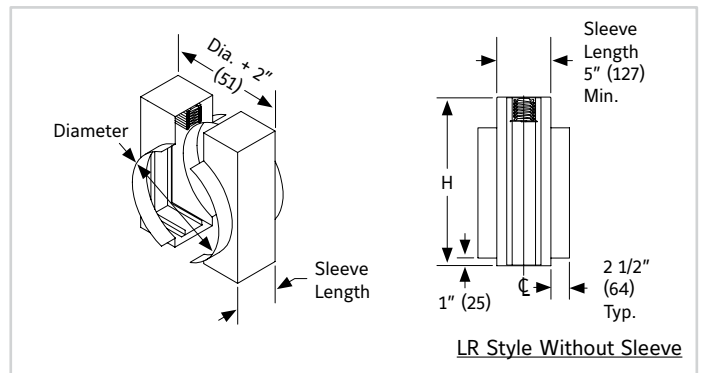
##### Multiple Section Assembly

Not available in style LR. See Style CR for larger assemblies

D = Diameter  
H = Overall Damper Height  
X = Blade Package Height

#### NOTE:

- Style LR without sleeves the duct connection extends 2 1/2" (64) beyond the damper.
- Style LR with sleeves the duct connection extends 1 1/2" (38) beyond the sleeve.
- Transitions and collars to be sealed in the field (By Others).
- See page 7 for overall dimensional information



Available with 12" (305), 14" (356) or 16" (406) long sleeves

## DAMPER STYLES & SIZES

### LO STYLE – OVAL TRANSITION

Frame and blades out of air stream  
Sleeve optional non-sealed assembly  
95 - 100% free area

#### Minimum Size

Vertical or Horizontal Installation – 4" w x 4" h (102 x 102)

#### Maximum Size

##### Single Section

Vertical Installation – 31" w x 64" h (787 x 1626) or 46" w x 25" h (1168 x 635) or 34" w x 31" h (864 x 787)  
Horizontal Installation – 28" w x 39" h (711 x 991) or 31" w x 33" h (787 x 838)

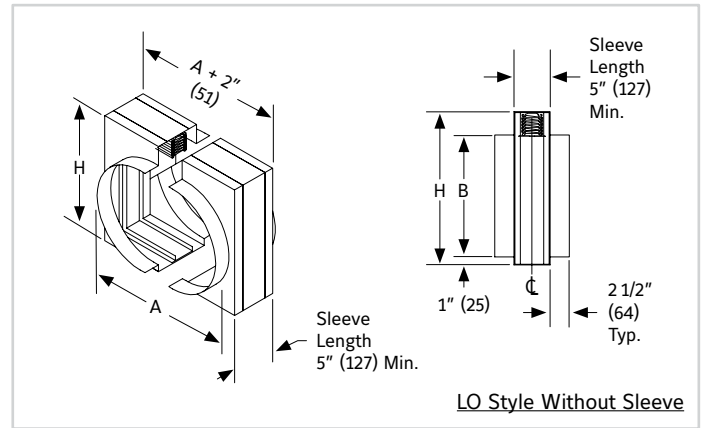
##### Multiple Section Assembly

Not available in Style LO. See Style CO for larger assemblies

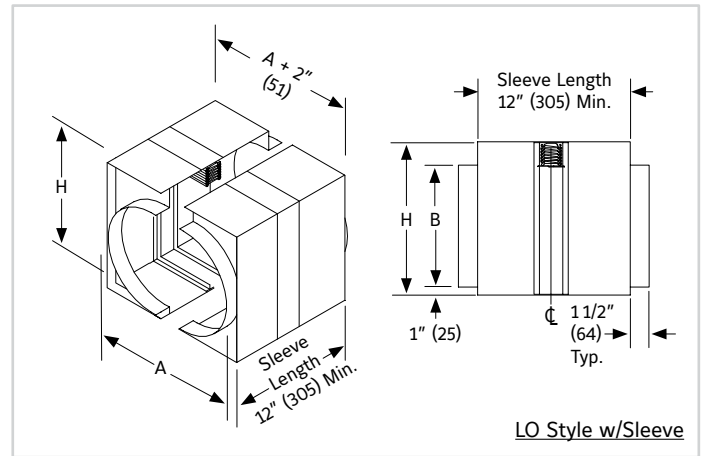
A = Duct Width  
B = Duct Height  
H = Overall Damper Height

#### NOTE:

1. Style LO without sleeves the duct connection extends 2 1/2" (64) beyond the damper.
2. Style LO with sleeves the duct connection extends 1 1/2" (38) beyond the sleeve.
3. Transitions and collars to be sealed in the field (By Others).
4. See page 8 for overall dimensional information.



LO Style Without Sleeve



LO Style w/Sleeve

Available with 12" (305), 14" (356) or 16" (406) long sleeves

### R STYLE – ROUND TRANSITION

Round enclosure – Blades partially in the air stream  
Sleeve optional non-sealed assembly  
85 - 95% free area

#### Minimum Size

Vertical Installation – 3" diameter (76)  
Horizontal Installation – 4" diameter (102)

#### Maximum Size

##### Single Section

Vertical or Horizontal Installation – 31" diameter (787)

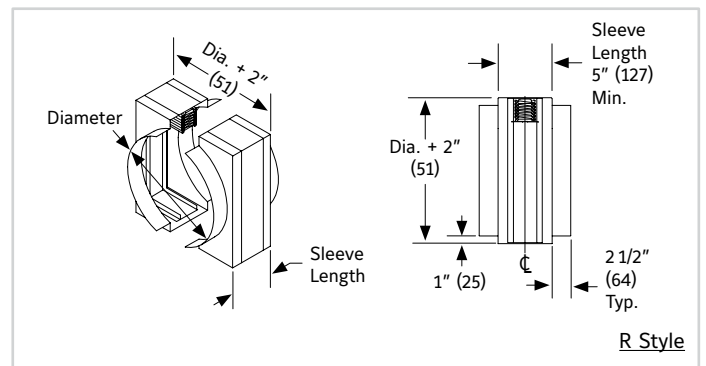
##### Multiple Section Assembly

Not available in Style R. See Style CR for larger assemblies

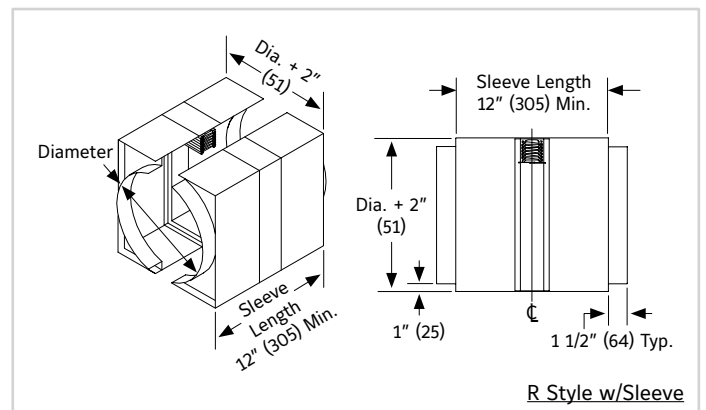
D = Diameter  
H = Overall Damper Height

#### NOTE:

1. Style R without sleeves the duct connection extends 2 1/2" (64) beyond the damper.
2. Style R with sleeves the duct connection extends 1 1/2" (38) beyond the sleeve.
3. Transitions and collars to be sealed in the field (By Others).
4. See page 10 for overall dimensional information.



R Style



R Style w/Sleeve

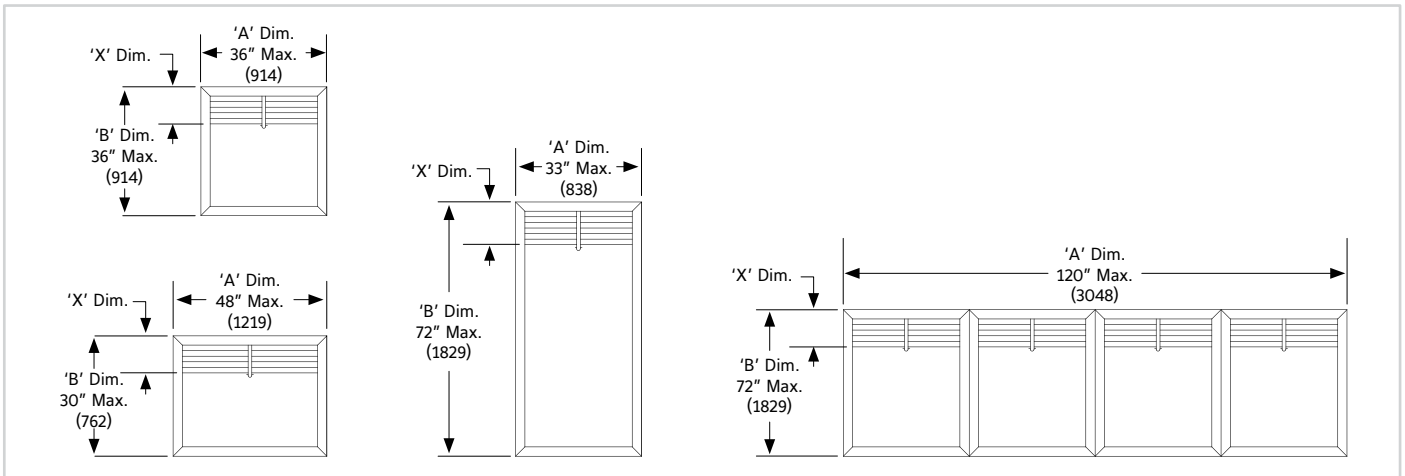
Available with 12" (305), 14" (356) or 16" (406) long sleeves

## ASSEMBLY AND DIMENSIONAL INFORMATION

Dampers normally fabricated approximately 1/4" (6) less than given duct dimensions. A (width) and B (height) dimensions shown describe maximum UL Classified sizes. Multiple section damper assemblies ordered without sleeves are shipped in individual sections, for field assembly. Multiple section dampers ordered with factory furnished sleeves are normally shipped in complete assemblies.

### A STYLE DAMPERS VERTICAL INSTALLATION

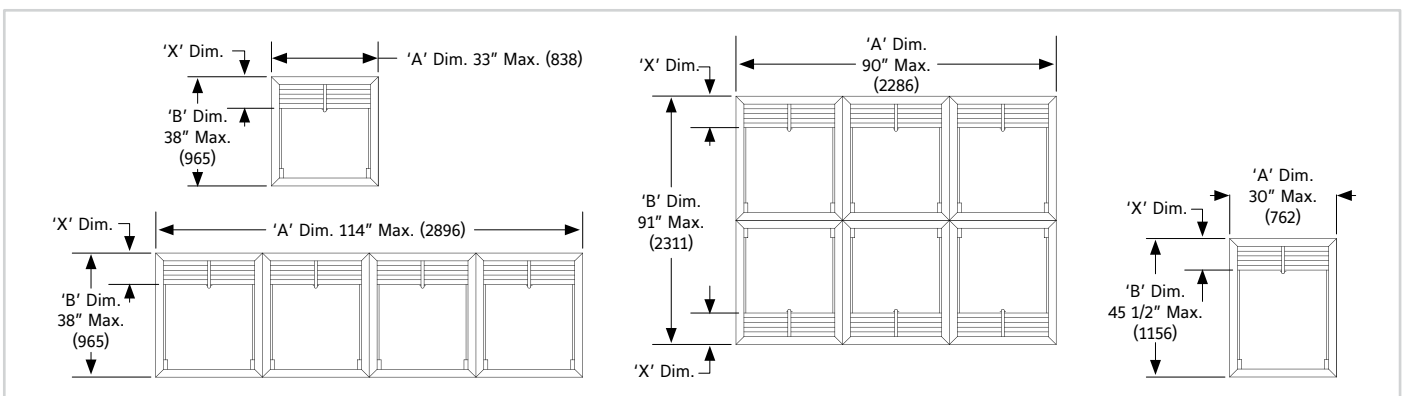
'X' Blade Stack Dimension		'X' Blade Stack Dimension	
'B' Damper Height	'X' Dim.	'B' Damper Height	'X' Dim.
14" (102) thru 10" (254)	1 1/2" (39)	38.01" (966) thru 42" (1067)	4 1/2" (115)
10.01" (331) thru 17" (432)	2" (51)	42.01" (1068) thru 47" (1194)	5" (127)
17.01" (433) thru 21" (533)	2 1/2" (64)	47.01" (1195) thru 54" (1372)	5 1/2" (140)
21.01" (534) thru 26" (660)	3" (77)	54.01" (1373) thru 59" (1499)	6" (153)
26.01" (661) thru 31" (787)	3 1/2" (89)	59.01" (1500) thru 63" (1600)	6 1/2" (166)
31.01" (788) thru 38" (965)	4" (102)	63.01" (1601) thru 72" (1829)	7" (178)



### A STYLE DAMPERS HORIZONTAL INSTALLATION

Single Section High 'X' Blade Stack Dimension		Two Section High 'X' Blade Stack Dimension	
'B' Damper Height	'X' Dim.	'B' Damper Height	'X' Dim.
16" (152) thru 10" (254)	1 1/2" (39)	45.5" (1156) thru 52" (1321)	6" (153)
10.01" (331) thru 17" (432)	2" (51)	52.01" (1322) thru 62" (1575)	7" (178)
17.01" (433) thru 21" (533)	2 1/2" (64)	62.01" (1576) thru 76" (1930)	8" (203)
21.01" (534) thru 26" (660)	3" (77)	76.01" (1931) thru 84" (2133)	9" (228)
26.01" (661) thru 31" (787)	3 1/2" (89)	84.01" (2134) thru 91" (2311)	9 1/2" (241)
31.01" (788) thru 38" (965)	4" (102)		
38.01" (966) thru 42" (1067)	4 1/2" (115)		
42.01" (1068) thru 45" (1143)	5" (127)		

On two section high, 'X' dimension is the total of both sections.



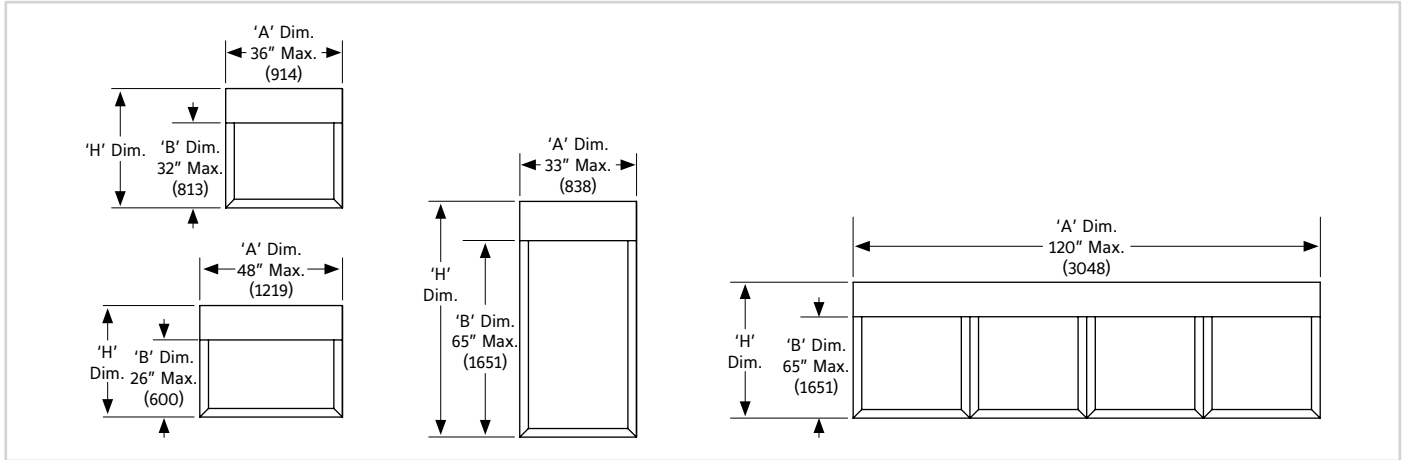
# ASSEMBLY AND DIMENSIONAL INFORMATION

## B, BC & WB STYLE DAMPERS VERTICAL INSTALLATION

Single Section High	
'B' Damper Height	'X' Dim.
4" (102) thru 12" (305)	1 3/4" (44)
12.01" (306) thru 23" (584)	2 3/4" (70)
23.01" (585) thru 34" (863)	3 3/4" (95)

Single Section High	
'B' Damper Height	'X' Dim.
34.01" (864) thru 42" (1067)	4 3/4" (121)
42.01" (1068) thru 53" (1346)	5 3/4" (146)
53.01" (1347) thru 65" (1651)	6 3/4" (171)

'X' dim. + 'B' dim. = 'H' dim.



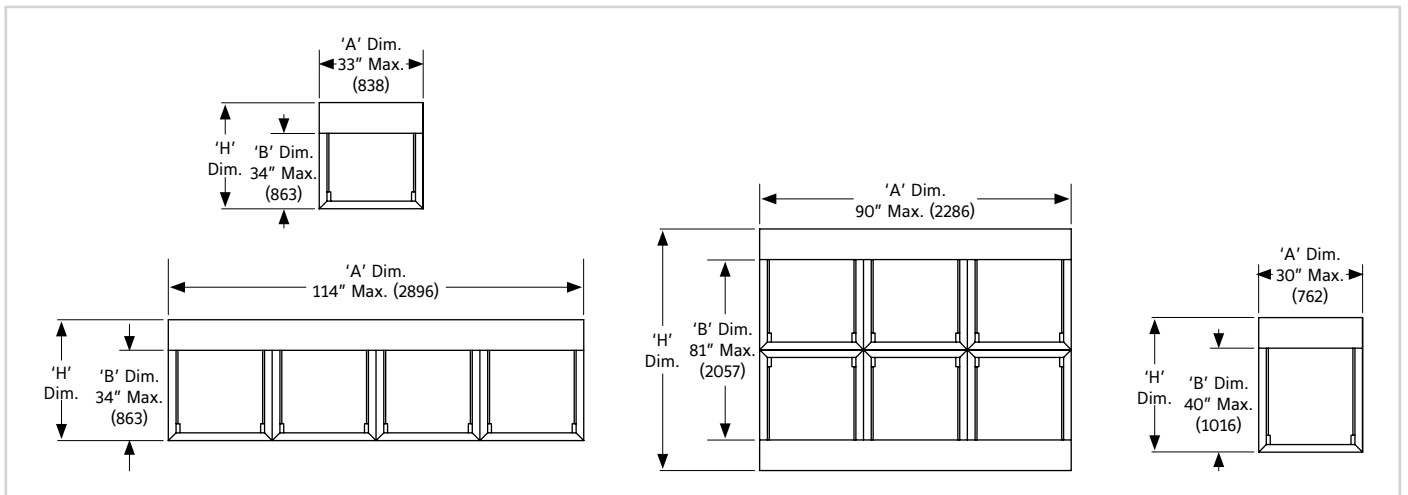
## B, BC & WB STYLE DAMPERS HORIZONTAL INSTALLATION

Single Section High	
'B' Damper Height	'X' Dim.
4" (102) thru 12" (305)	1 3/4" (44)
12.01" (306) thru 23" (584)	2 3/4" (70)
23.01" (585) thru 34" (863)	3 3/4" (95)
34.01" (864) thru 40" (1016)	4 3/4" (121)

Two Section High	
'B' Damper Height	'X' Dim.
41" (1041) thru 46" (1168)	5 1/2" (140)
46.01" (1169) thru 68" (1727)	7 1/2" (191)
68.01" (1728) thru 81" (2057)	9 1/2" (241)

'X' dim. + 'B' dim. = 'H' dim.

'X' dim. + 'B' dim. = 'H' dim.



# ASSEMBLY AND DIMENSIONAL INFORMATION

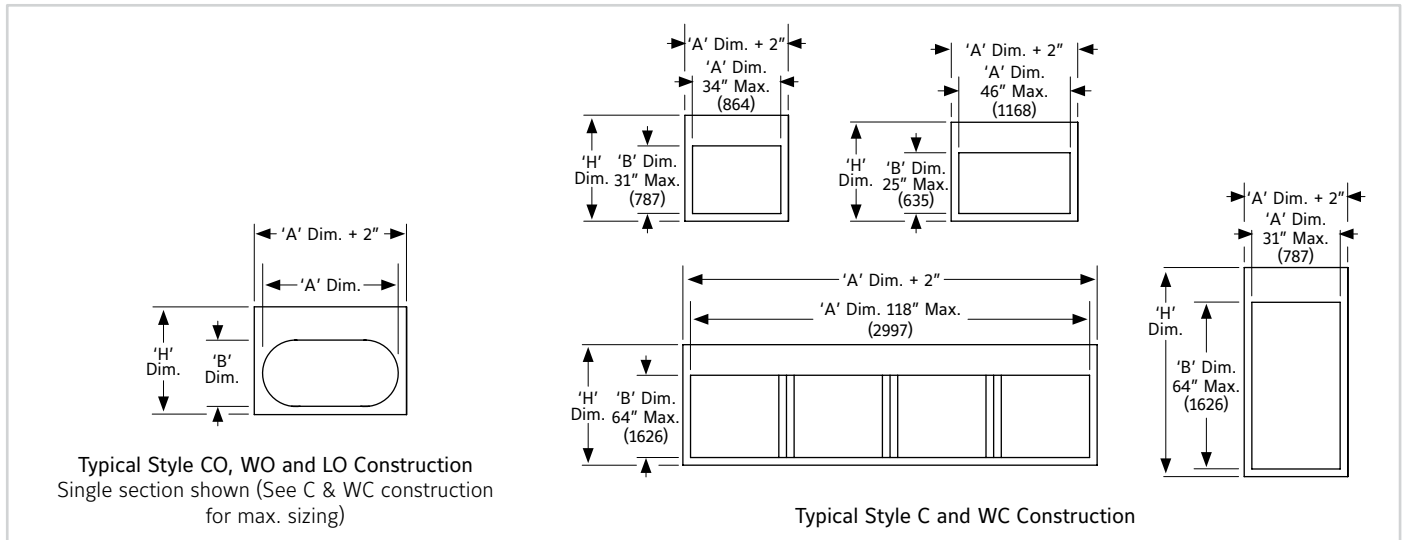
## C, WC, CO, WO & LO STYLE DAMPERS VERTICAL INSTALLATION

Single Section High	
'B' Damper Height	'X' Dim.
3" (76) thru 11" (279)	2 3/4" (70)
11.01" (280) thru 22" (559)	3 3/4" (95)
22.01" (560) thru 33" (838)	4 3/4" (121)
33.01" (839) thru 41" (1041)	5 3/4" (146)

Single Section High	
'B' Damper Height	'X' Dim.
41.01" (1042) thru 52" (1321)	6 3/4" (171)
52.01" (1322) thru 64" (1626)	7 3/4" (197)

'X' dim. + 'B' dim. = 'H' dim.

NOTE: LO Style is limited to single section only.



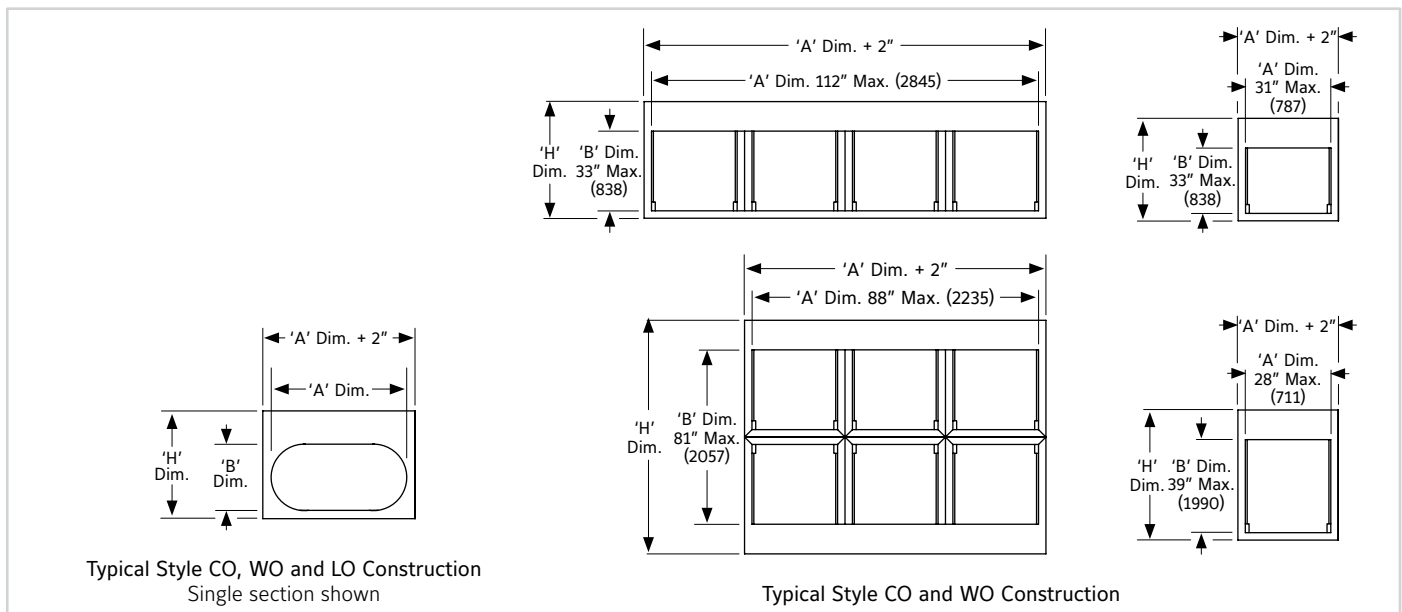
## C, WC, CO, WO & LO STYLE DAMPERS HORIZONTAL INSTALLATION

Single Section High	
'B' Damper Height	'X' Dim.
4" (102) thru 11" (279)	2 3/4" (70)
11.01" (280) thru 22" (559)	3 3/4" (95)
22.01" (560) thru 33" (838)	4 3/4" (121)
33.01" (839) thru 39" (991)	5 3/4" (146)

Two Section High	
'B' Damper Height	'X' Dim.
39.01" (992) thru 46" (1168)	5 1/2" (140)
46.01" (1169) thru 68" (1727)	7 1/2" (191)
68.01" (1728) thru 81" (2057)	9 1/2" (241)

'X' dim. + 'B' dim. = 'H' dim.

'X' dim. + 'B' dim. = 'H' dim.





# FDR25 TRUE ROUND FIRE DAMPER

## APPLICATION

Ruskin FDR25 "true round" fire damper provides point-of-origin fire containment. The FDR series is the ideal choice when round duct is used on a project. FDR25 series dampers may be installed vertically in walls, or horizontally in concrete/masonry floors and is rated for airflow and leakage in either direction. The FSDR25 is rated for velocities up to 2000 fpm (10.2 m/s) and 4 in. w.g. (1 kPa). The FDR25 may be used in Static "Fans Off" or Dynamic "Fans On" systems.

The integral frame and unique "Cinch Plate" design provides a low cost, easy to install, high performing damper.

Visit [RUSKIN.com](http://RUSKIN.com) for more details



Damper	Frame	Blade	Bearings	Hourly Rating	Minimum Size	Maximum Size
FDR25	20 gauge (.9) galvanized steel	Single skin 14 gauge (1.9) galvanized steel	Stainless steel sleeve type, pressed into frame.	1 1/2	6" Dia. (152)	24" Dia. (609)

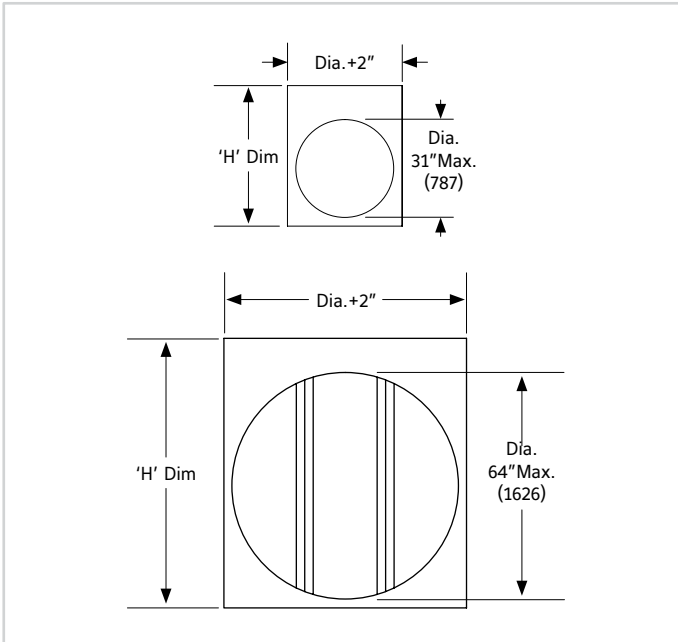
## ASSEMBLY AND DIMENSIONAL INFORMATION

### CR, WR & LR STYLE DAMPERS VERTICAL INSTALLATION

Single Section High 'H' Dimension	
Damper Height	'X' Dim.
3" (76) thru 11" (279)	2 3/4" (70)
11.01" (280) thru 22" (559)	3 3/4" (95)
22.01" (560) thru 32" (812)	4 3/4" (121)
32.01" (813) thru 41" (1041)	5 3/4" (146)
41.01" (1042) thru 52" (1321)	6 3/4" (171)
52.01" (1322) thru 64" (1626)	7 3/4" (197)

'X' dim. + 'B' dim. = 'H' dim.

NOTE: LR Style is limited to single section only.



### CR, WR & LR STYLE DAMPERS HORIZONTAL INSTALLATION

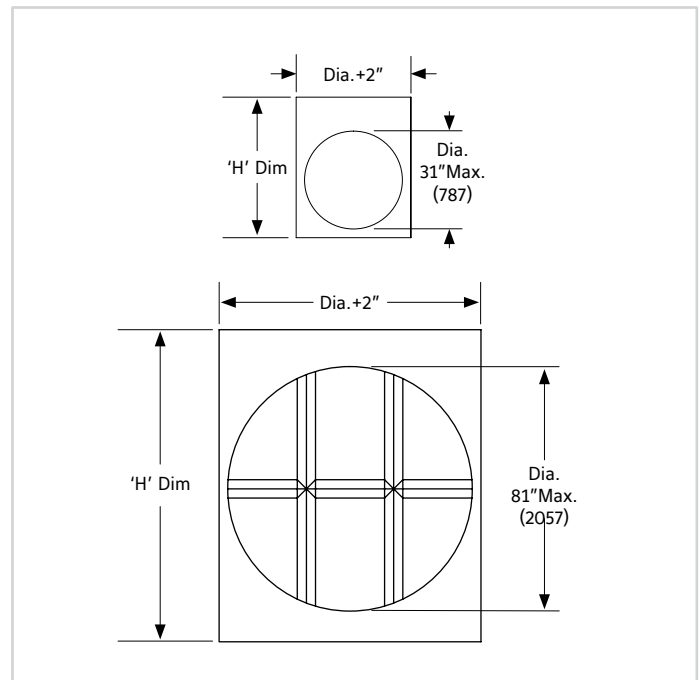
Single Section High 'H' Dimension	
'B' Damper Height	'X' Dim.
4" (102) thru 11" (279)	2 3/4" (70)
11.01" (280) thru 22" (559)	3 3/4" (95)
22.01" (560) thru 32" (812)	4 3/4" (121)
32.01" (813) thru 39" (991)	5 3/4" (146)

'X' dim. + 'B' dim. = 'H' dim.

Two Section High 'H' Dimension	
'B' Damper Height	'X' Dim.
39.01" (992) thru 46" (1168)	5 1/2" (140)
46.01" (1169) thru 68" (1727)	7 1/2" (191)
68.01" (1728) thru 81" (2057)	9 1/2" (241)

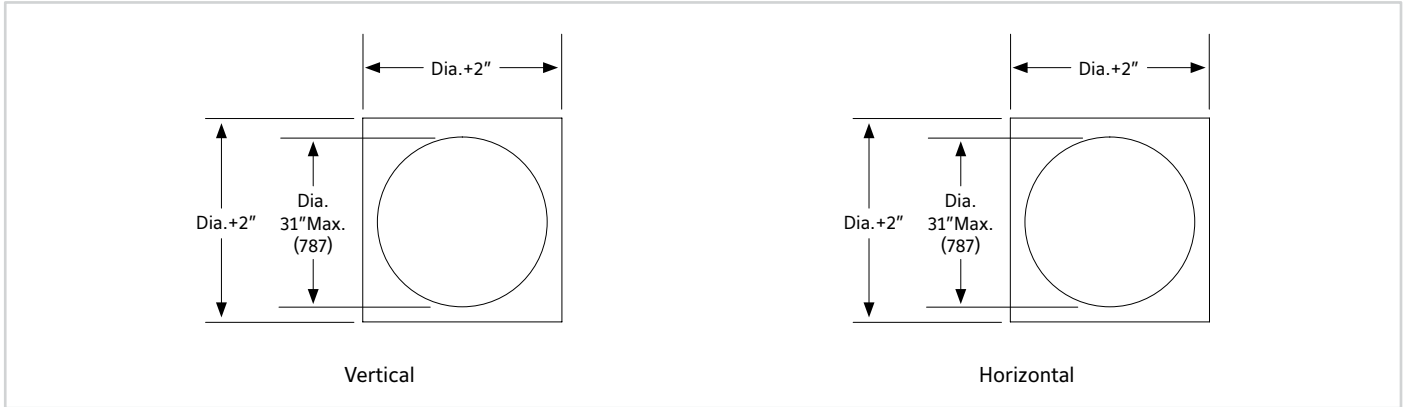
'X' dim. + 'B' dim. = 'H' dim.

NOTE: LR Style is limited to single section only.



## ASSEMBLY AND DIMENSIONAL INFORMATION

### R STYLE DAMPERS VERTICAL & HORIZONTAL INSTALLATION



### SUGGESTED SPECIFICATION

Furnish and install at locations shown on plans, static fire dampers tested, constructed and labeled in accordance with the latest edition of UL standard 555. Dampers shall have a fire rating of 1 1/2 hours and shall meet the requirements of the latest edition of NFPA90A. Curtain type fire dampers suitable for vertical wall or partitions and horizontal masonry floor or ceiling with a fire resistance rating of less than 3 hours. Fire Dampers shall be produced in an ISO 9001 certified factory.

Damper frame and blades shall be galvanized steel in gauges required by UL listing R5531 installed in a factory mounted sleeve and shipped loose mounting angle. Damper blades shall be steel interlock to provide fire shield in gauges required by UL listing R5531. Closure springs on horizontal mounted dampers shall be of 301 stainless steel and shall be constant force type.

Each fire damper shall have a 1/2 hour fire protection rating and shall be supplied with a 165°F (74°C) or 212°F (100°C) fusible link. Damper shall be installed in static (fan off) systems only. Submittal information shall include the fire protection rating and manufacturer's UL installation instruction.

Static fire dampers shall be Ruskin model IBD2.

(Consult [www.ruskin.com](http://www.ruskin.com) for electronic version of this "Quick" spec as well as for complete 3-part CSI MasterFormat Specifications).

#### LINKS TO IMPORTANT DOCUMENTS

Document Title
Limited Warranty Document



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