

IBD20/40/60

Curtain Type Static Fire Dampers

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



APPLICATION

Ruskin Model IBD20, 40, and 60 are 1 1/2 hour UL classified static (fans off) curtain style fire dampers for use in HVAC systems that shut down during a fire event. These fire dampers are used for the protection of openings in walls, partitions, or masonry floors with fire resistance ratings of less than 3 hours and have a 1 1/2 hour fire protection rating. The IBD20, 40, and 60 can be installed vertically in walls or horizontally in masonry floors and is rated for airflow in either direction.

STANDARD CONSTRUCTION

Frame and Blades Material	Galvanized steel (in gauges required by UL listing R-5531).
Frame/Sleeve Length	IBD20 - 12" (305) long. IBD40 - 14" (356) long. IBD60 - 16" (406) long.
Closure Springs	301 stainless steel constant force type (horizontal mount only).
Fusible Link	165°F (74°C) is standard. 212°F (100°C) is available as an option.

DAMPER SIZES

See pages 2 - 4 for minimum and maximum UL sizes.

See pages 5 - 8 for construction details on multiple section assemblies.

OPTIONS

True Round Fire Damper: See model FDR25.

Stainless Steel Construction: See model 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.

Transitions: Factory mounted and sealed.

MCP: Control panels for monitoring purpose.

Grille Mounting: See IBD20G models.



Models IBD20, 40, and 60 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.
- Dampers may require sealing of seams in the field to meet local code leakage requirements.

DAMPER STYLES & SIZES

A STYLE - FRAME AND BLADES IN AIRSTREAM

Frame and blades in air stream
Non-Sealed Sleeve Standard
Sealed 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

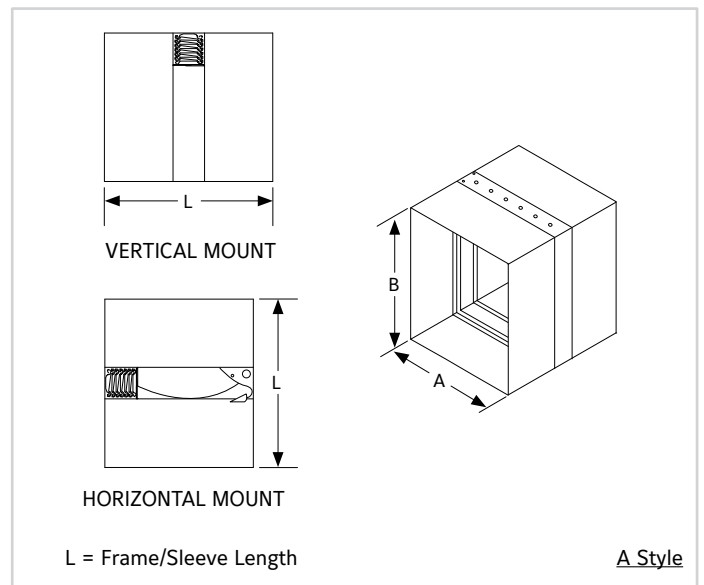
Single Section

Vertical Installation - 33"w x 54"h (838 x 1372) 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 - 54"w x 54"h (1372 x 1372)
Horizontal Installation - 54"w x 54"h (1372 x 1372)

NOTE: See page 5 for overall dimensional information.



B STYLE - BLADES OUT OF THE AIR STREAM

Non-Sealed Sleeve Standard
Sealed Sleeve Optional
80 - 90% free area

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

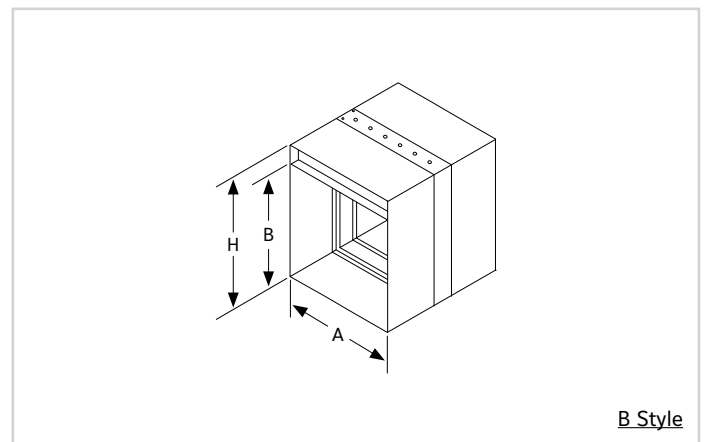
Vertical Installation - 33"w x 48"h (838 x 1219) or 48"w x 26"h (1219 x 660) or 36"w x 32"h (914 x 813)
Horizontal Installation - 30"w x 40"h (762 x 1016) or 33"w x 34"h (838 x 863)

Multiple Section Assembly

Vertical Installation - 54"w x 48"h (1372 x 1219)
Horizontal Installation - 54"w x 46"h (1372 x 1168)

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

NOTE: See page 6 for overall dimensional information.



C STYLE - SQUARE OR RECTANGLE TRANSITION

Frame and Blades out of air stream
Sealed Sleeve Standard
95 - 100% free area

Minimum Size

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

Maximum Size

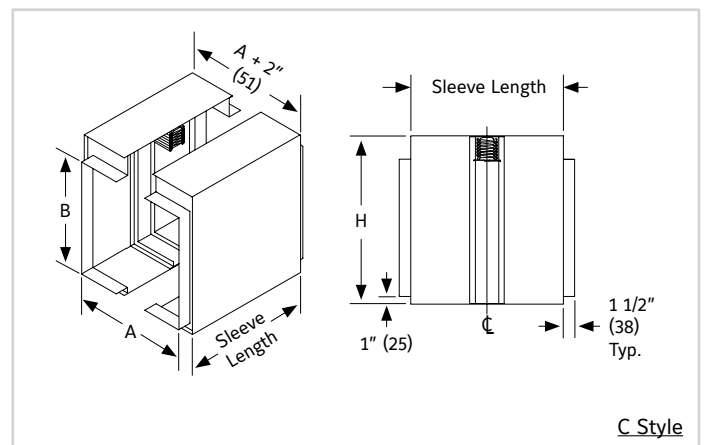
Single Section

Vertical Installation - 31"w x 47"h (787 x 1194) 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)

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

NOTE:

1. Style C duct connection extends 1 1/2" (38) beyond the sleeve.
2. See page 7 for overall dimensional information.



DAMPER STYLES & SIZES

CR STYLE – ROUND TRANSITION

Frame and blades out of air stream
 95 - 100% free area
 Sealed Sleeve Standard

Minimum Size

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

Maximum Size

Single Section

Vertical or Horizontal Installation – 31" diameter (787)

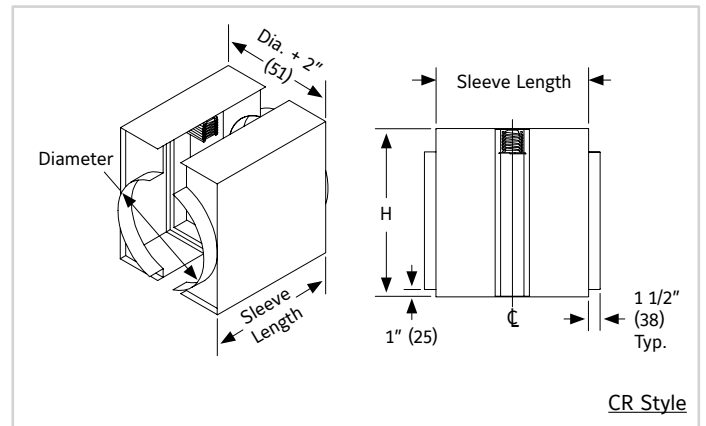
D = Diameter
 H = Overall Damper Height
 X = Blade Package Height

NOTE:

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



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



CR Style

CO STYLE – OVAL TRANSITION

Frame and blades out of air stream
 95 - 100% free area
 Sealed Sleeve Standard

Minimum Size

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

Maximum Size

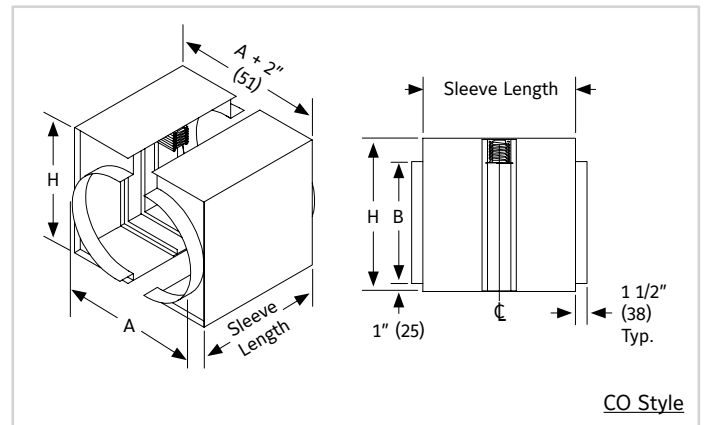
Single Section

Vertical Installation – 31"w x 47"h (787 x 1194) 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)

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

NOTE:

1. Style CO duct connection extends 1 1/2" (38) beyond the sleeve.
2. See page 7 overall dimensional information.



CO Style

DAMPER STYLES & SIZES

LR STYLE – ROUND TRANSITION

Frame and blades out of air stream
Non-sealed Sleeve Standard
Sealed Sleeve Optional
95 - 100% free area

Minimum Size

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

Maximum Size

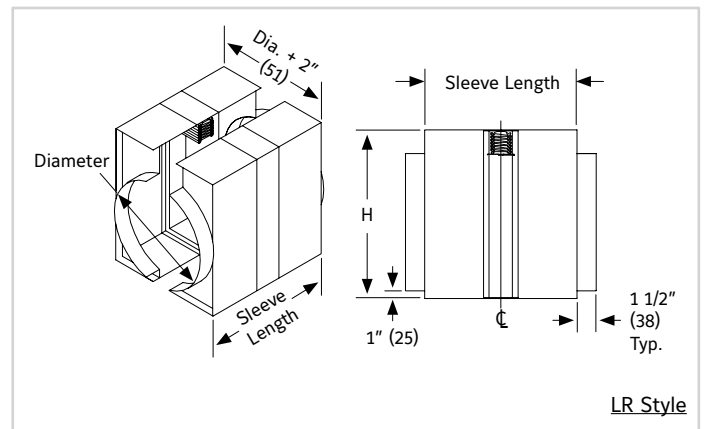
Single Section

Vertical or Horizontal Installation – 31" diameter (787)

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

NOTE:

1. Style LR duct connection extends 1 1/2" (38) beyond the damper.
2. See page 8 for overall dimensional information.



LO STYLE – OVAL TRANSITION

Frame and blades out of air stream
Non-sealed Sleeve Standard
Sealed Sleeve Optional
95 - 100% free area

Minimum Size

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

Maximum Size

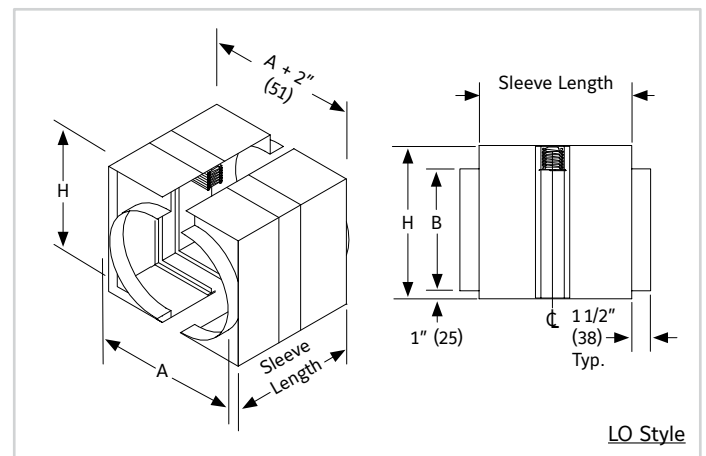
Single Section

Vertical Installation – 31"w x 47"h (787 x 1194) 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)

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

NOTE:

1. Style LO duct connection extends 1 1/2" (38) beyond the damper.
2. See page 7 for overall dimensional information.



R STYLE – ROUND TRANSITION

Round enclosure - Blades partially in the air stream
Non-sealed Sleeve Standard
Sealed Sleeve Optional
85 - 95% free area

Minimum Size

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

Maximum Size

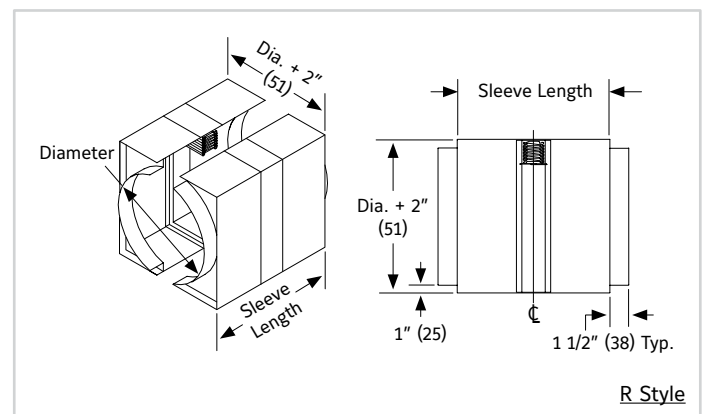
Single Section

Vertical or Horizontal Installation – 31" diameter (787)

D = Diameter
H = Overall Damper Height

NOTE:

1. Style R the duct connection extends 1 1/2" (38) beyond the damper.
2. See page 9 for overall dimensional information.

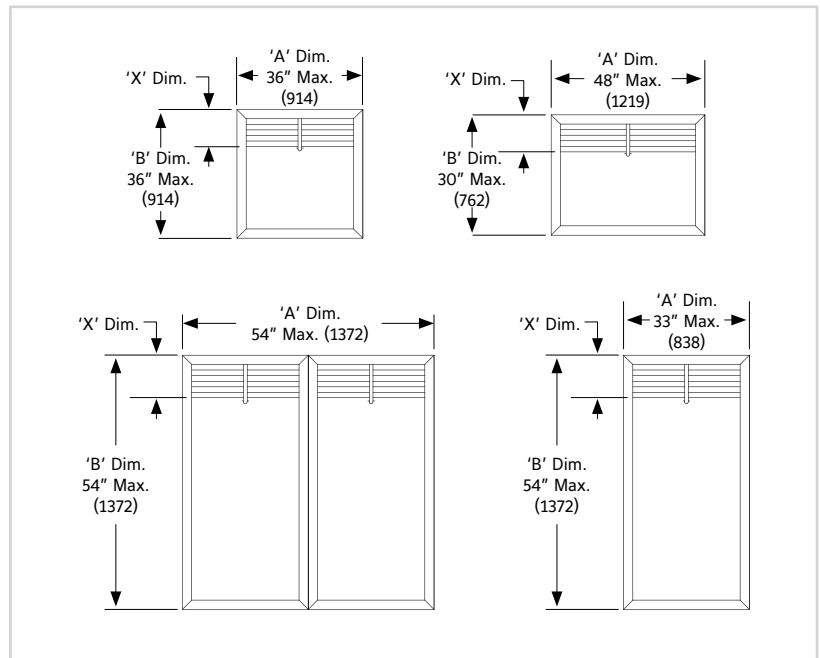


ASSEMBLY AND DIMENSIONAL INFORMATION

Dampers normally fabricated approximately 1/4" (6) less than given duct dimensions. A (width) and B (height) dimensions shown describe maximum UL Classified sizes. IBD20, 40, 60 multiple section dampers are shipped in individual sections for field assembly.

A STYLE DAMPERS VERTICAL INSTALLATION

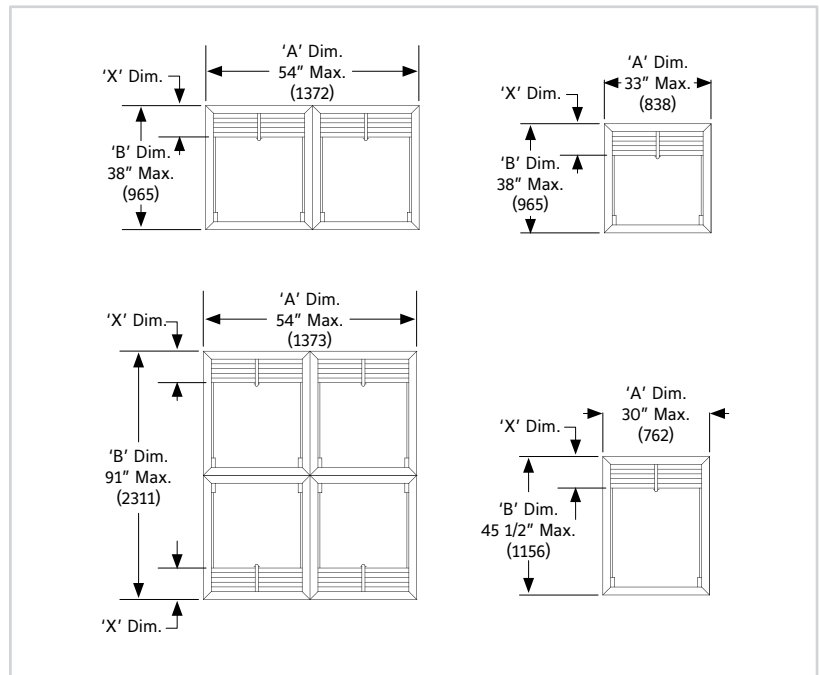
'X' Blade Stack Dimension	
'B' Damper Height	'X' Dim.
4" (102) thru 10" (254)	1 1/2" (38)
10.01" (255) thru 17" (432)	2" (51)
17.01" (433) thru 21" (533)	2 1/2" (64)
21.01" (534) thru 26" (660)	3" (76)
26.01" (661) thru 31" (787)	3 1/2" (89)
31.01" (788) thru 38" (965)	4" (102)
38.01" (966) thru 42" (1067)	4 1/2" (114)
42.01" (1068) thru 47" (1194)	5" (127)
47.01" (1195) thru 54" (1372)	5 1/2" (140)



A STYLE DAMPERS HORIZONTAL INSTALLATION

Single Section High 'X' Blade Stack Dimension	
'B' Damper Height	'X' Dim.
6" (152) thru 10" (254)	1 1/2" (38)
10.01" (255) thru 17" (432)	2" (51)
17.01" (433) thru 21" (533)	2 1/2" (64)
21.01" (534) thru 26" (660)	3" (76)
26.01" (661) thru 31" (787)	3 1/2" (89)
31.01" (788) thru 38" (965)	4" (102)
38.01" (966) thru 42" (1067)	4 1/2" (114)
42.01" (1068) thru 45" (1143)	5" (127)

Two Section High 'X' Blade Stack Dimension	
'B' Damper Height	'X' Dim.
45.5 (1156) thru 52" (1321)	6" (152)
52.01" (1322) thru 54" (1372)	7" (178)



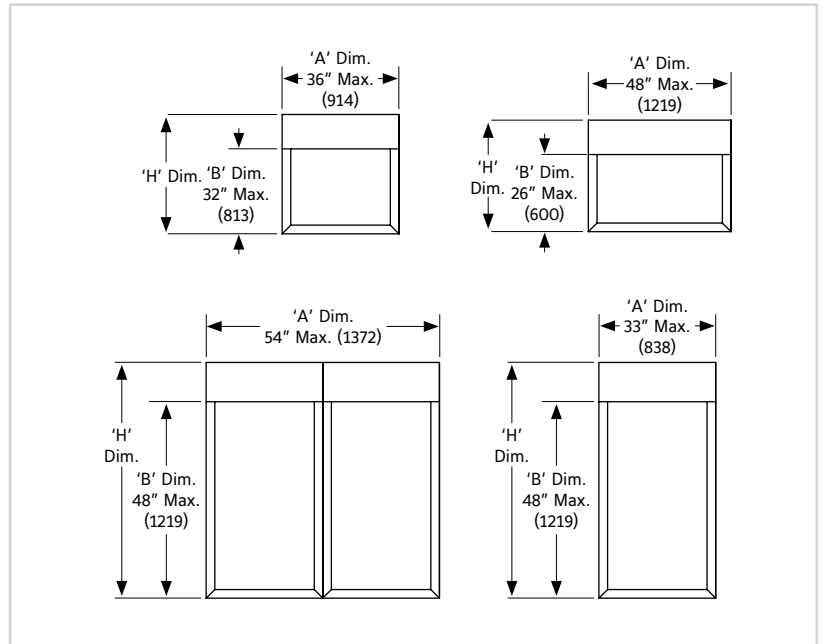
On two section high, 'X' dimension is the total of both sections.

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" (864)	3 3/4" (95)
34.01" (864) thru 42" (1067)	4 3/4" (121)
42.01" (1068) thru 48" (1219)	5 3/4" (146)

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



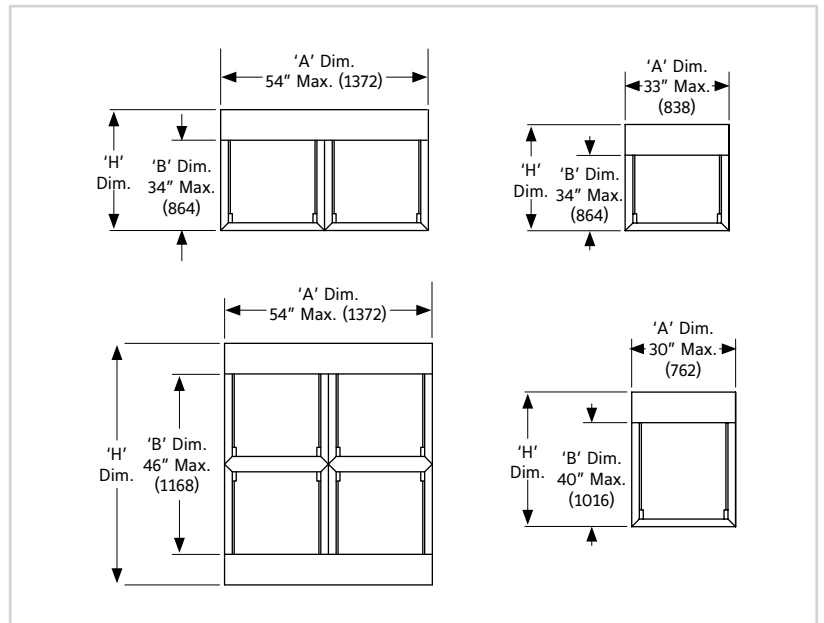
B, BC, & WB STYLE DAMPERS HORIZONTAL INSTALLATION

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" (864)	3 3/4" (95)
34.01" (864) thru 40" (1016)	4 3/4" (121)

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

Two Section High	
'B' Damper Height	'X' Dim.
41" (1041) thru 46" (1168)	5 1/2" (140)

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

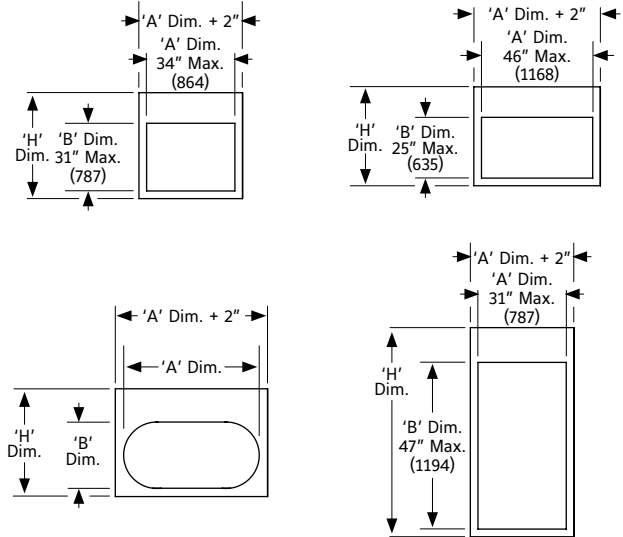


ASSEMBLY AND DIMENSIONAL INFORMATION

C, CO, & 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)
41.01" (1042) thru 47" (1194)	6 3/4" (171)

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

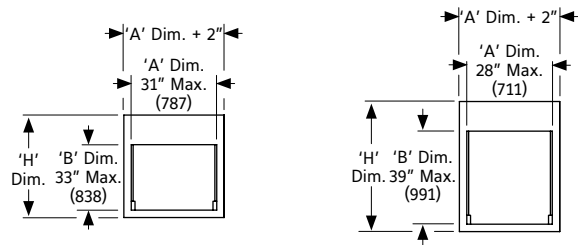


Typical Style CO and LO Construction

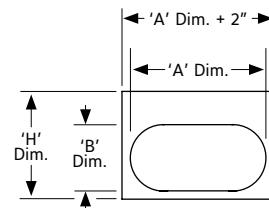
C, CO, & LO STYLE DAMPERS HORIZONTAL INSTALLATION

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)

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



Typical Style CO and WO Construction



Typical Style CO, WO and LO Construction
Single section shown

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 FDR25 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 for more details



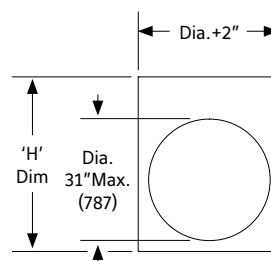
Damper	Frame	Blade	Bearings	Hourly Rating	Minimum Size	Maximum Size
FDR25	20 gauge (.9) galvanized steel	Single skin 14 gauge (1.9) galvanized steel	Stainless steel sleeve type, pressed into frame.	1 1/2	6" Dia. (152)	24" Dia. (610)

ASSEMBLY AND DIMENSIONAL INFORMATION

CR & LR STYLE DAMPERS VERTICAL INSTALLATION

Single Section High 'H' Dimension	
Diameter	'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 31" (787)	4 3/4" (121)

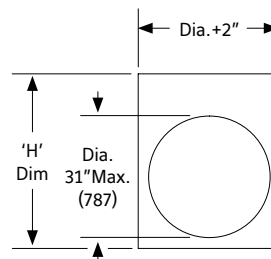
'X' dim. + 'B' dim. = 'H' dim.



CR & LR STYLE DAMPERS HORIZONTAL INSTALLATION

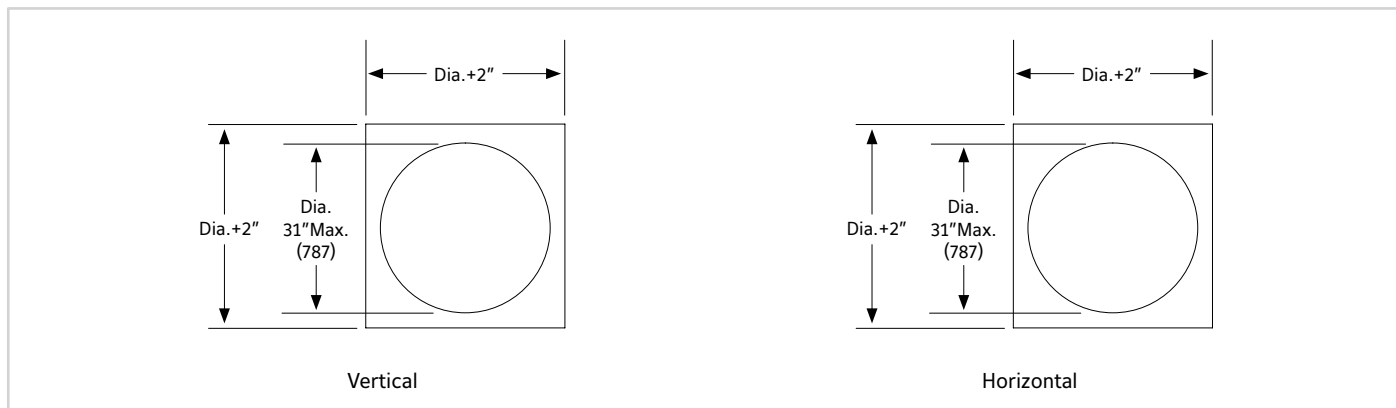
Single Section High 'H' Dimension	
Diameter	'X' Dim.
4" (102) thru 11" (279)	2 3/4" (70)
11.01" (280) thru 22" (559)	3 3/4" (95)
22.01" (560) thru 31" (787)	4 3/4" (121)

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



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 UL555 standard. 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 are 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 with a 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 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 (fans off) systems only. Submittal information shall include the fire protection rating and manufacturer's UL installation instruction..

Static fire dampers shall be Ruskin model IBD20, 40, and 60.

(Consult 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



3900 Doctor Greaves Road
Grandview, MO 64030
Website: www.ruskin.com
Phone: (816) 761-7476