

IBD2 CURTAIN TYPE STATIC FIRE DAMPERS 1½ HOUR UL555 RATED FOR USE IN STATIC SYSTEMS

APPLICATION

Ruskin Model IBD2 1½ 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 1½ 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

Frame and Blades Material

Galvanized steel (in gauges required by UL listing R-5531).

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 - 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
- **FM Approvals** as Specification Tested Product
- **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

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
- **New York City** MEA 450-06-M

UL CLASSIFIED
UL555 Listing R5531



SEE COMPLETE
MARKING
ON PRODUCT

FM Approvals
Specification Tested Product
(Option)

Notes:

1. Dimensions shown in parentheses () indicate millimeters.
2. 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 AND 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 45½"h (762 x 1156) or

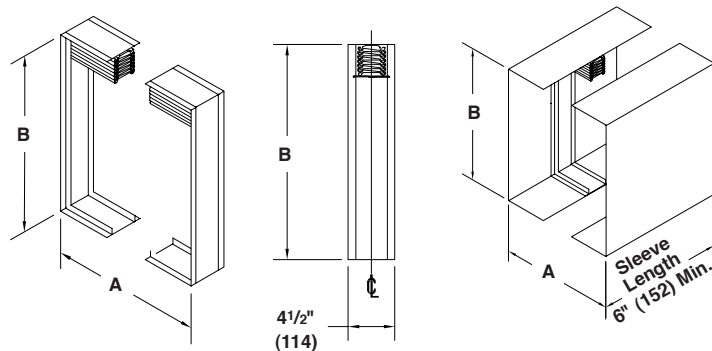
33"w x 38"h (838 x 965)

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)



A Style w/o Sleeve

A Style w/Sleeve

Note: See page 6 for overall dimensional information

B Style

Blades out of air stream

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 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

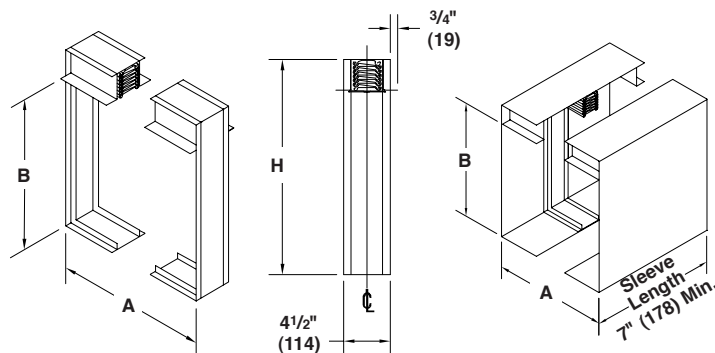
33"w x 34"h (838 x 863)

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)



B Style w/o Sleeve

B Style w/Sleeve

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

Note: See page 7 for overall dimensional information

BC and WB Style

Blades out of air stream

BC style: Fully sealed sleeve

WB style: Fully welded sleeve

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 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

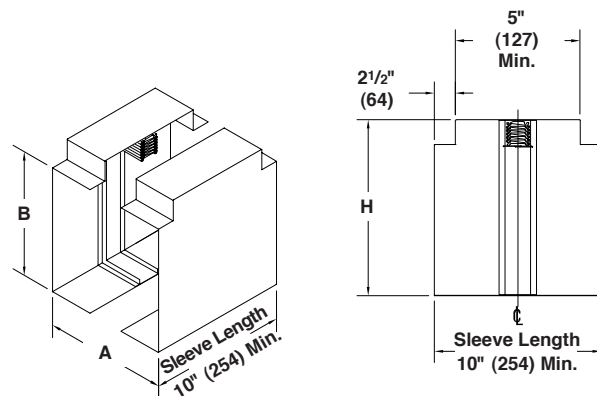
33"w x 34"h (838 x 863)

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)



BC Style w/Sleeve

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

Note: See page 7 for overall dimensional information

DAMPER STYLES AND SIZES

C AND 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)

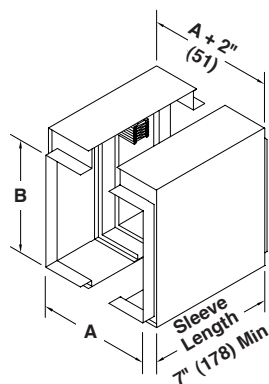
Horizontal Installation – 88"w x 81"h (2235 x 2057) or

112"w x 33"h (2845 x 838)

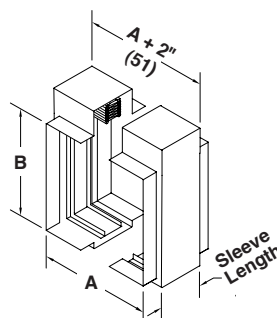
A = Duct Width
B = Duct Height
H = Overall Damper Height

NOTE:

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



C Style w/Sleeve



WC Style w/Sleeve

CR AND 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

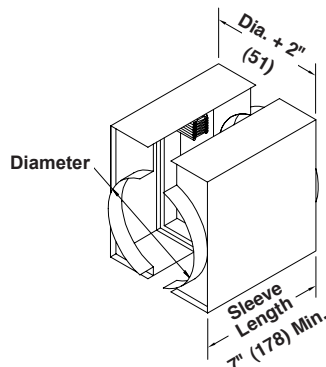
Vertical Installation – 64" diameter (1626)

Horizontal Installation – 81" diameter (2057)

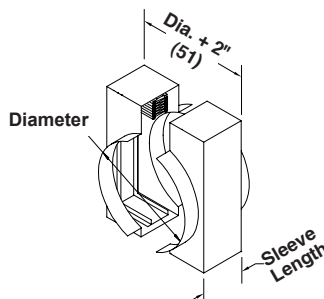
D = Diameter
H = Overall Damper Height
X = Blade Package Height

NOTE:

1. Style CR duct connection extends 1 1/2" (38) beyond the sleeve.
2. Style WC duct connection extends 2 1/2" (64) beyond the sleeve.
3. Transition collars to be sealed (By Others).
4. 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 AND SIZES

CO AND 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)

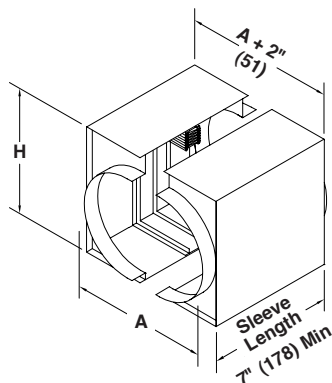
Multiple Section Assembly

Vertical Installation – 118"w x 64"h (2997 x 1626)

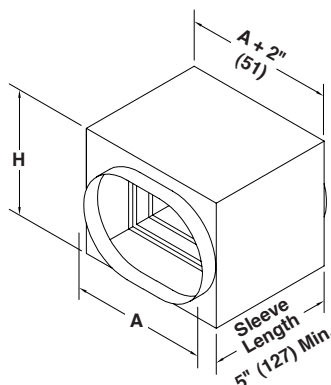
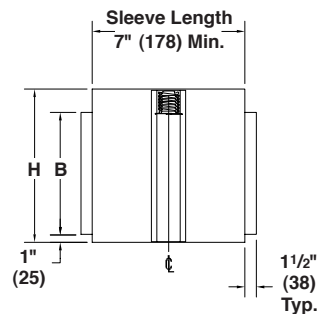
Horizontal Installation – 88"w x 81"h (2235 x 2057)

or 112"w x 33"h (2845 x 838)

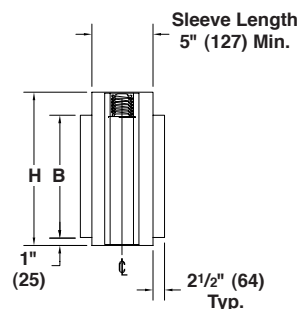
A = Duct Width
B = Duct Height
H = Overall Damper Height



CO Style



WO Style



NOTE:

1. Style CO duct connection extends 1 1/2" (38) beyond the sleeve.
2. Style WO duct connection extends 2 1/2" (64) beyond the sleeve.
3. Transition collars to be sealed (By Others).
4. 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)

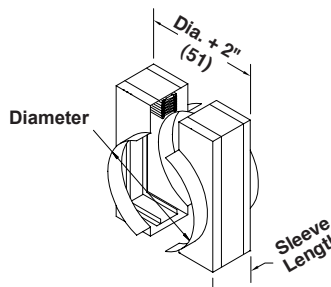
MAXIMUM SIZE

Single Section

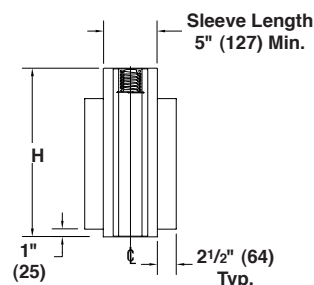
Vertical or Horizontal Installation – 31" diameter (787)

Multiple Section Assembly

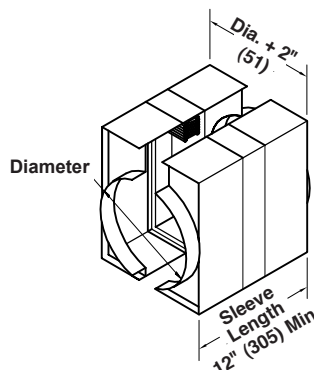
Not available in style LR. See Style CR for larger assemblies



LR Style Without Sleeve

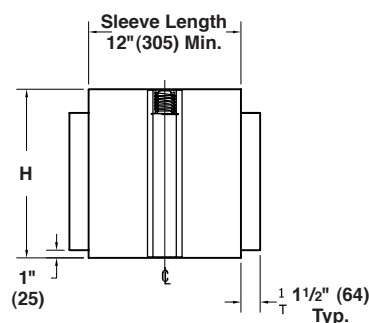


D = Diameter
H = Overall Damper Height
X = Blade Package Height



LR Style w/Sleeve

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



NOTE:

1. Style LR without sleeves the duct connection extends 2 1/2" (64) beyond the damper.
2. Style LR 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 7 for overall dimensional information

DAMPER STYLES AND 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)

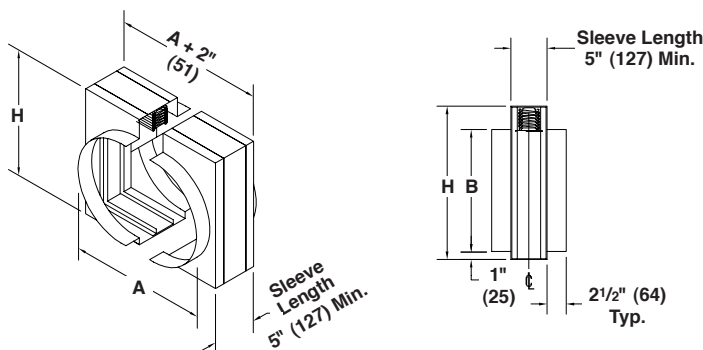
MAXIMUM SIZE

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 Assemblies

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

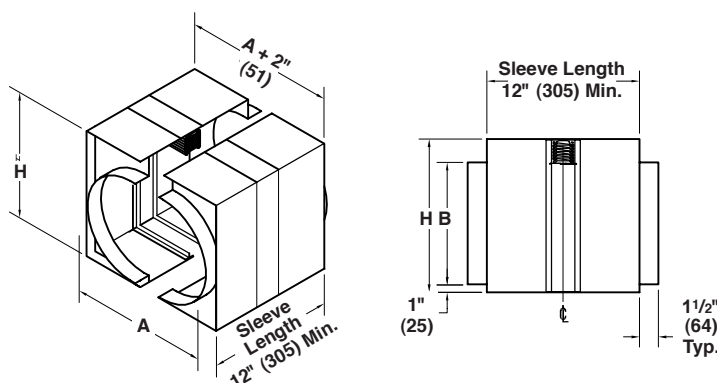


LO Style Without Sleeve

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 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)

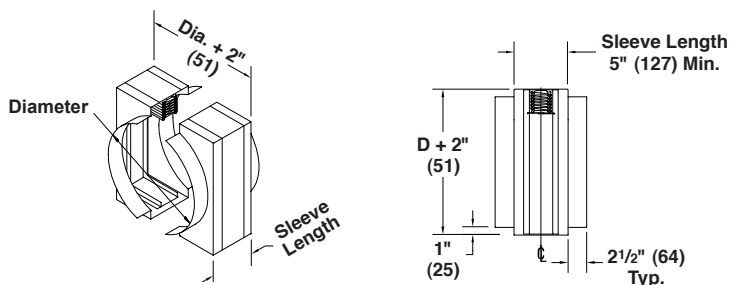
MAXIMUM SIZE

Single Section

Vertical or Horizontal Installation – 31" diameter (787)

Multiple Section Assembly

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

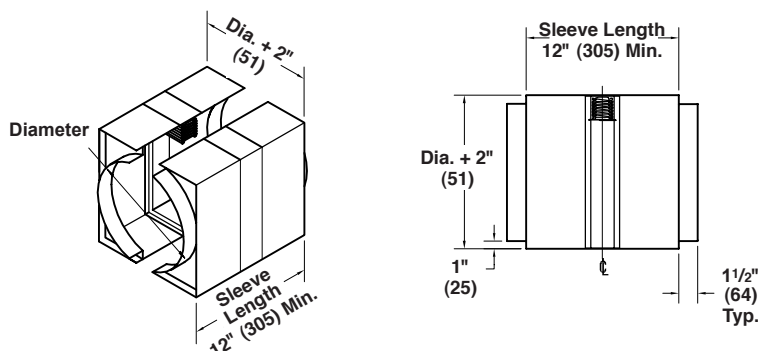


R Style

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 w/Sleeve

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

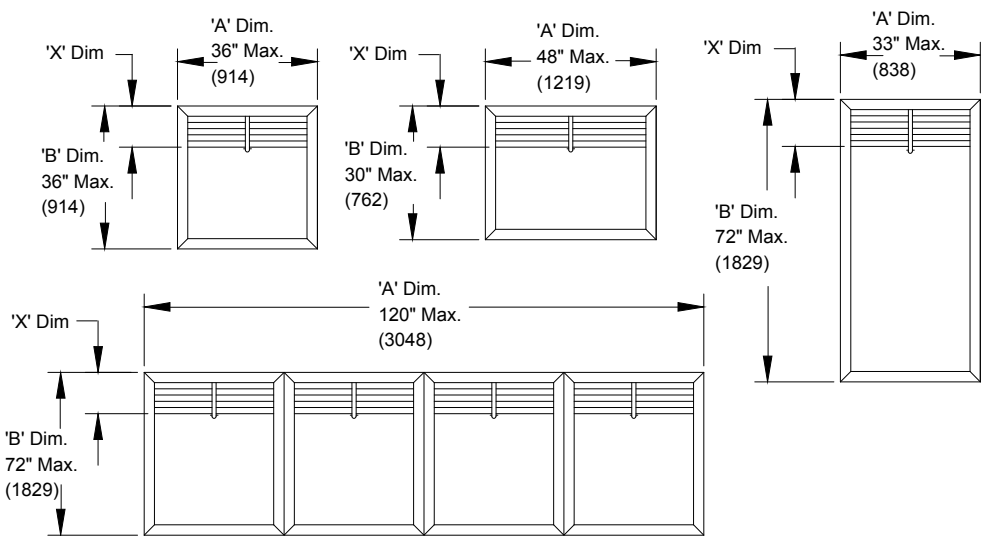
ASSEMBLY AND DIMENSIONAL INFORMATION

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.

IBD2 A STYLE DAMPERS

VERTICAL INSTALLATION

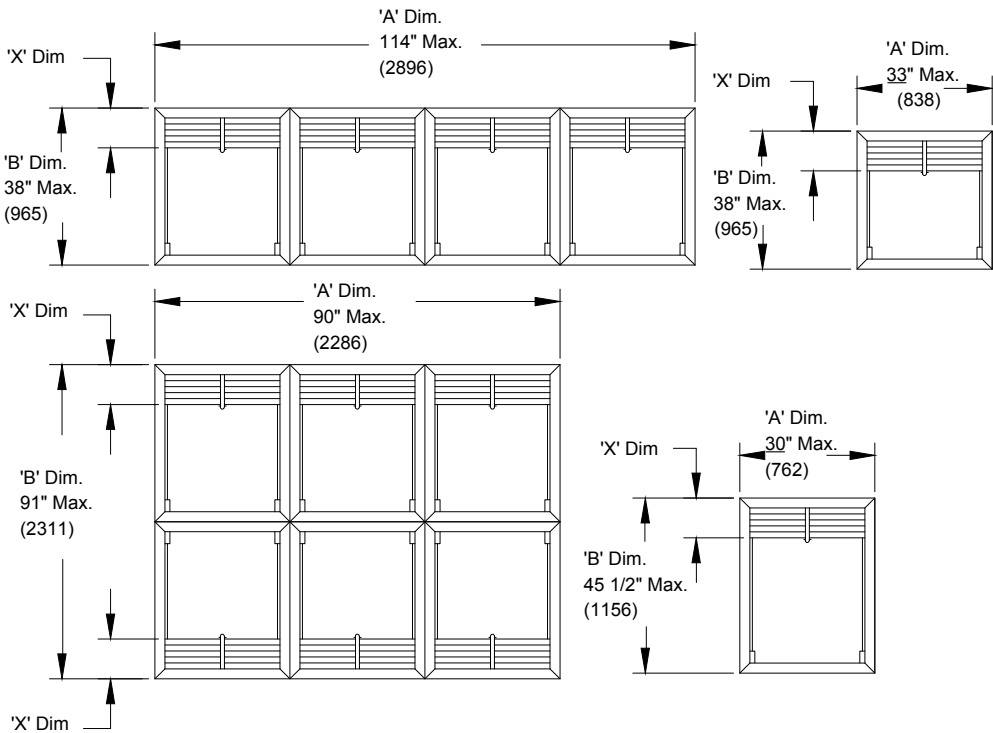
'X' BLADE STACK DIMENSION	
'B' Damper Height	'X' Dim.
4" (102) thru 10" (254)	1 1/2" (39)
10.01" (331) thru 17" (432)	2" (51)
17.01" (433) thru 21" (533)	2 1/2" (64)
21.01" (534) thru 26" (660)	3" (77)
26.01" (661) thru 31" (787)	3 1/2" (89)
31.01" (788) thru 38" (965)	4" (102)
38.01" (966) thru 42"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



HORIZONTAL INSTALLATION

SINGLE SECTION HIGH	
'X' BLADE STACK DIMENSION	
'B' Damper Height	'X' Dim.
6" (152) thru 10" (254)	1 1/2" (39)
10.01" (331) thru 17" (432)	2" (51)
17.01" (433) thru 21" (533)	2 1/2" (64)
21.01" (534) thru 26" (660)	3" (77)
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" (115)
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" (153)
52.01" (1322) thru 62" (1575)	7" (178)
62.01" (1576) thru 76" (1930)	8" (203)
76.01" (1931) thru 84" (2133)	9" (228)
84.01" (2134) thru 91" (2311)	9 1/2" (241)



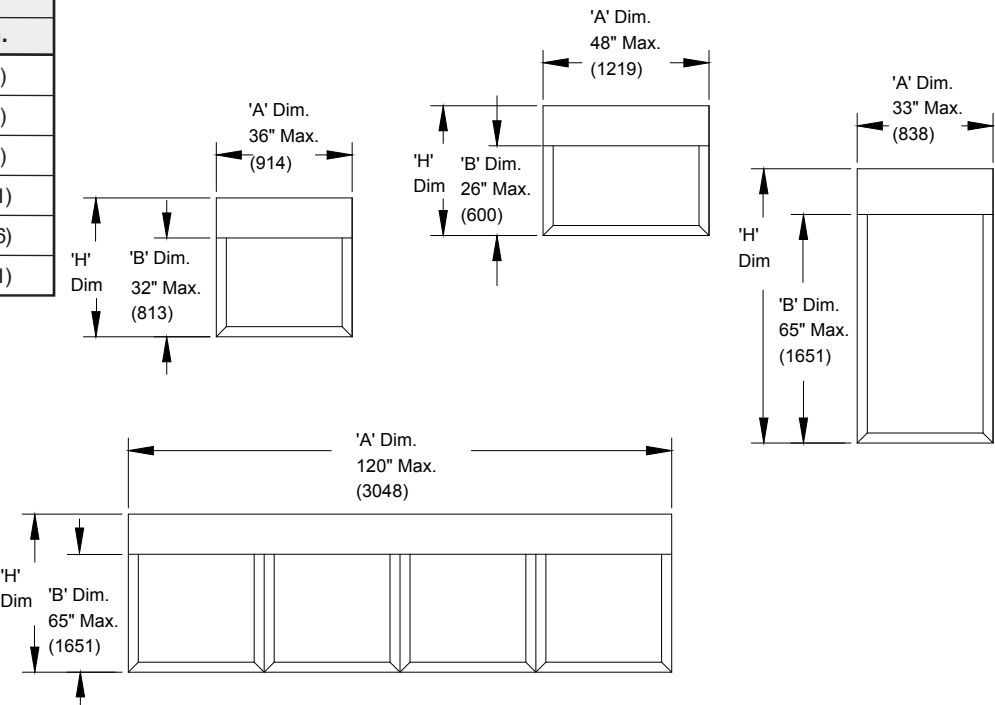
On two section high, 'X' dimension is the total of both sections.

ASSEMBLY AND DIMENSIONAL INFORMATION

B, BC, and WB STYLE DAMPERS
VERTICAL INSTALLATION

SINGLE SECTION HIGH	
'B' Damper Height	'X' Dim.
4" (102) thru 12" (305)	13/4" (44)
12.01" (306) thru 23" (584)	23/4" (70)
23.01" (585) thru 34" (863)	33/4" (95)
34.01" (864) thru 42" (1067)	43/4" (121)
42.01" (1068) thru 53" (1346)	53/4" (146)
53.01" (1347) thru 65" (1651)	63/4" (171)

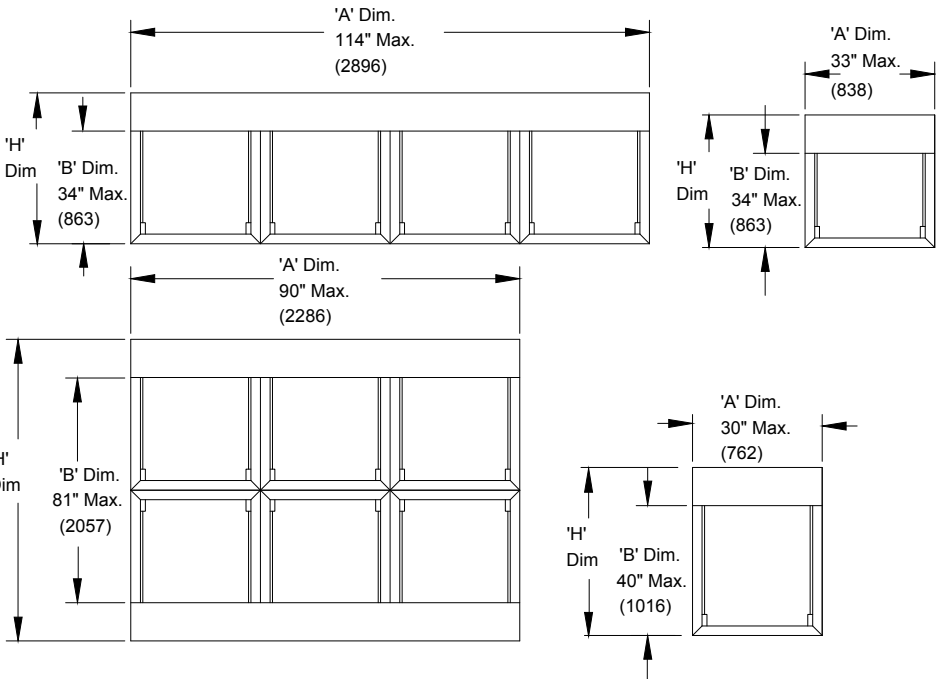
'X' dim. + 'B' dim. = 'H' dim.



HORIZONTAL INSTALLATION

SINGLE SECTION HIGH	
'B' Damper Height	'X' Dim.
4" (102) thru 12" (305)	13/4" (44)
12.01" (306) thru 23" (584)	23/4" (70)
23.01" (585) thru 34" (863)	33/4" (95)
34.01" (864) thru 40" (1016)	43/4" (121)

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



TWO SECTION HIGH	
'B' Damper Height	'X' Dim.
41" (1041) thru 46" (1168)	51/2" (140)
46.01" (1169) thru 68" (1727)	71/2" (191)
68.01" (1728) thru 81" (2057)	91/2" (241)

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

ASSEMBLY AND DIMENSIONAL INFORMATION

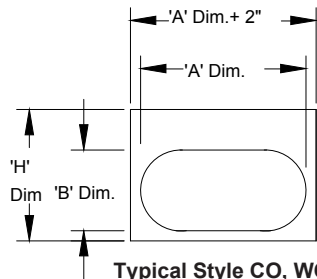
C, WC, CO, WO and LO STYLE DAMPERS
VERTICAL INSTALLATION

SINGLE SECTION HIGH	
'B' Damper Height	'X' Dim.
3" (76) thru 11" (279)	23/4" (70)
11.01" (280) thru 22" (559)	33/4" (95)
22.01" (560) thru 33" (838)	43/4" (121)
33.01" (839) thru 41" (1041)	53/4" (146)
41.01" (1042) thru 52" (1321)	63/4" (171)
52.01" (1322) thru 64" (1626)	73/4" (197)

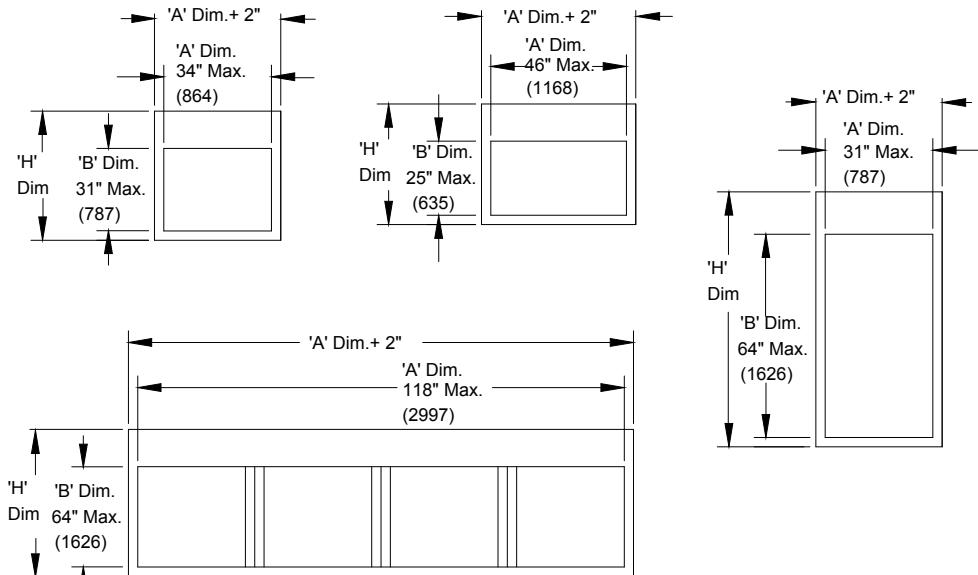
'X' dim. + 'B' dim. = 'H' dim.

NOTE:

LO Style is limited to single section only.



Typical Style CO, WO and LO Construction
Single section shown
(See C & WC construction for max. sizing)



Typical Style C and WC Construction

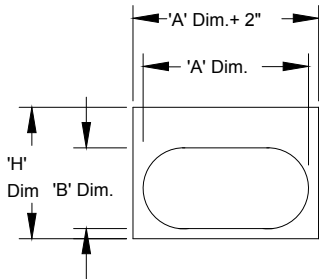
HORIZONTAL INSTALLATION

SINGLE SECTION HIGH	
'B' Damper Height	'X' Dim.
4" (102) thru 11" (279)	23/4" (70)
11.01" (280) thru 22" (559)	33/4" (95)
22.01" (560) thru 33" (838)	43/4" (121)
33.01" (839) thru 39" (991)	53/4" (146)

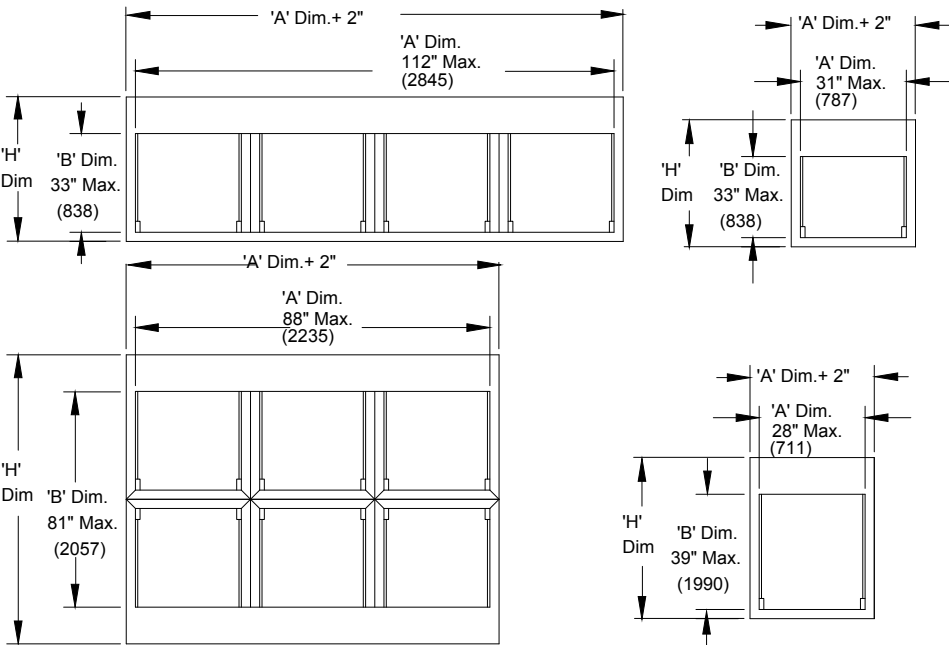
'X' dim. + 'B' dim. = 'H' dim.

TWO SECTION HIGH	
'B' Damper Height	'X' Dim.
39.01" (992) thru 46" (1168)	51/2" (140)
46.01" (1169) thru 68" (1727)	71/2" (191)
68.01" (1728) thru 81" (2057)	91/2" (241)

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



Typical Style CO, WO and LO Construction
Single section shown



Typical Style CO and WO Construction

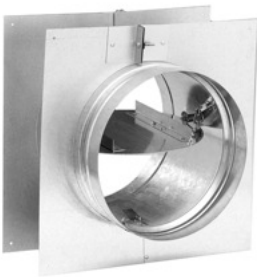
FDR25 TRUE ROUND FIRE DAMPER

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 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

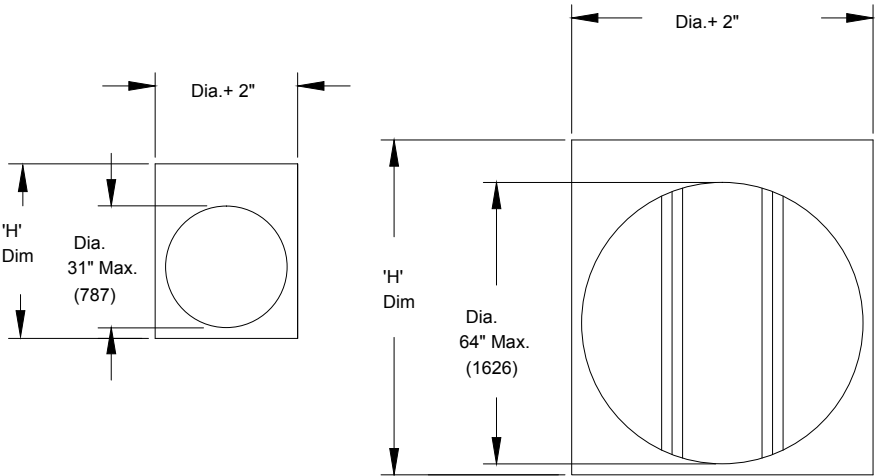
CR, WR and LR STYLE DAMPERS VERTICAL INSTALLATION

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 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.



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 32" (812)	4 3/4" (121)
32.01" (813) thru 39" (991)	5 3/4" (146)

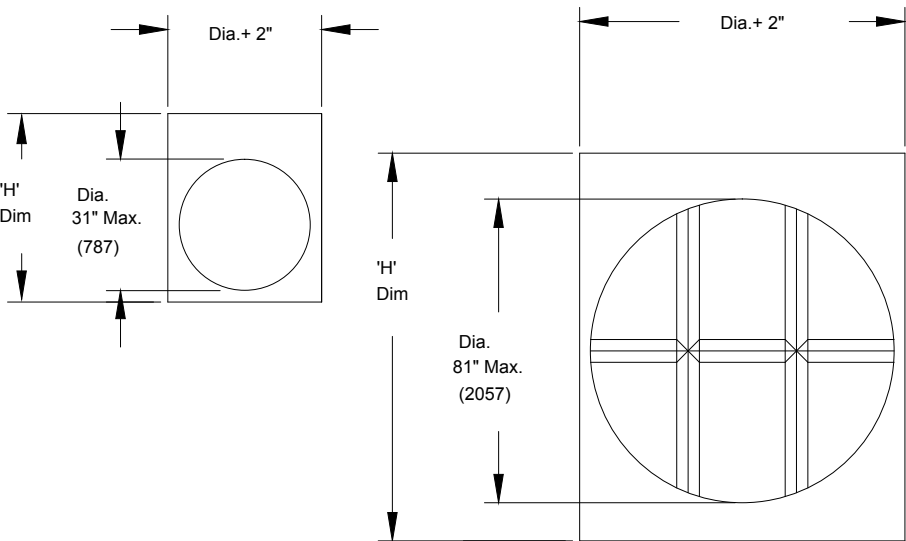
'X' dim. + 'B' dim. = 'H' dim.

TWO SECTION HIGH	
'H' DIMENSION	
Diameter	'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.

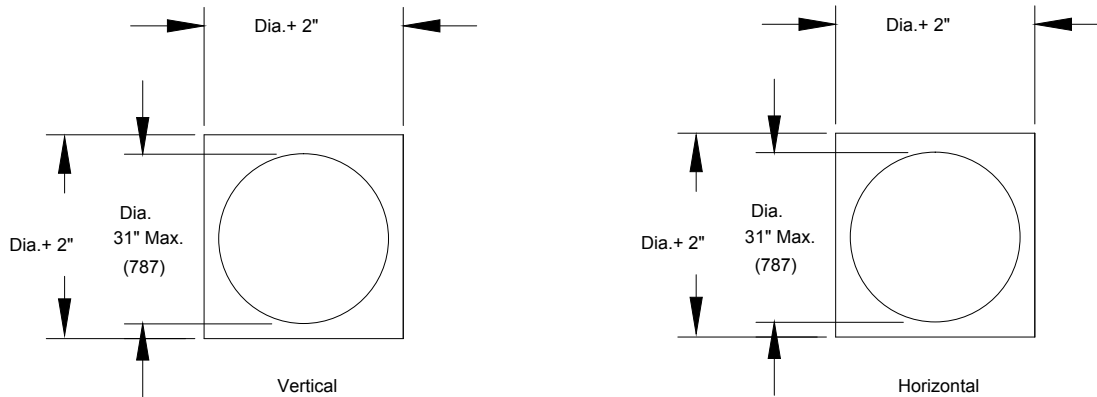
NOTE:

LR Style is limited to single section only.



ASSEMBLY AND DIMENSIONAL INFORMATION

R STYLE DAMPERS VERTICAL OR 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 1½ 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 1½ 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.

Optional FM Approvals Specification

Each fire damper shall be listed in Factory Mutual (FM) Approvals Specification Tested Product and labeled accordingly.

Static fire dampers shall be Ruskin model IBD2.

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

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