

DIBD20, 40 and 60 CURTAIN TYPE STATIC FIRE DAMPERS 1½ HOUR UL555 RATED FOR USE IN DYNAMIC AND STATIC SYSTEMS

APPLICATION

Ruskin Model DIBD20, 40, & 60 are 1½ hour UL classified dynamic (fans on) or static (fans off) curtain style fire dampers for use in HVAC systems that remain in operation during a fire. 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 shall have a 1½ hour fire protection rating. The DIBD20,40 & 60 can be installed vertically in walls or horizontally in masonry floors and is rated for airflow in either direction.

DYNAMIC CLOSURE RATINGS

4000 fpm (20.3 m/s) vertical mount only, up to 24" x 24" (610 x 610).

3000 fpm (15.2 m/s) vertical and horizontal mount, up to 24" x 24" (610 x 610).

2000 fpm (10.2 m/s) vertical or horizontal mount on all sizes.

4 in. w.g. (1 kPa) maximum pressure on all sizes.

STANDARD CONSTRUCTION

Frame and Blades Material

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

Closure Springs

301 stainless steel constant force or spring clip type.

Note: Vertical units 24" x 24" (610 x 610) and smaller utilize spring clips only and do not have constant force springs.

Fusible Link

165°F (74°C) is standard. 212°F (100°C) and 285°F (141°C) are available option.

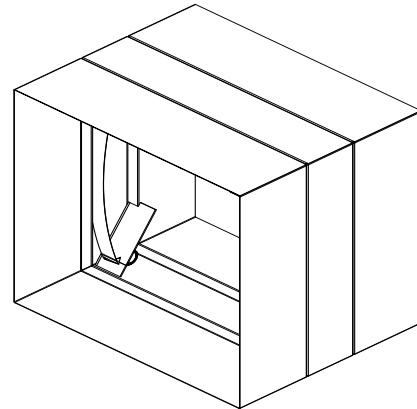
DAMPER SIZES

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)IBD20SS
- **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** sealed sleeves and transitions
- **MCP** Control panels for monitoring purpose
- **Grille Mounting** See (D)IBD20G model



Models DIBD20, 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
- **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. Dampers may require sealing of seams in the field to meet local code leakage requirements.

DAMPER STYLES AND SIZES

A Style

Frame and blades in air stream

Sleeve optional

75 - 85% free area

MINIMUM SIZE 2000 fpm (10.2 m/s)

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

Horizontal Installation – 6"w x 6"h (152 x 152)

MAXIMUM SIZE 2000 fpm (10.2 m/s)

Single Section

Vertical Installation – 33"w x 36"h (838 x 914)

Horizontal Installation – 24"w x 24"h (610 x 610)

Multiple Section Assembly

Vertical Installation – 54"w x 48"h (1372 x 1219) or

48"w x 54"h (1219 x 1372) or 54"w x 24"h (1372 x 610)

Horizontal Installation – 36"w x 48"h (914 x 1219) or

48"w x 36"h (1219 x 914).

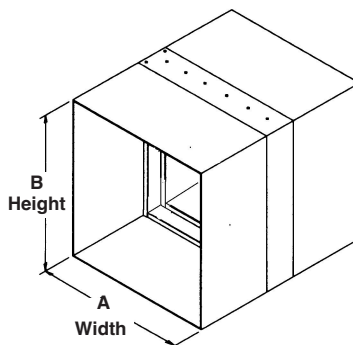
The minimum width or height becomes 9" x 9" (229 x 229) when dampers width or height is over 24" (610).

MINIMUM SIZE UNITS ABOVE 2000 fpm (10.2 m/s)

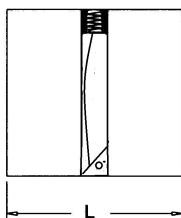
Vertical or Horizontal Installation – 9"w x 9"h (229 x 229)

MAXIMUM SIZE UNITS ABOVE 2000 fpm (10.2 m/s)

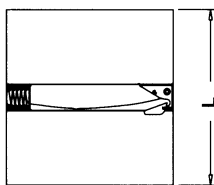
Vertical or Horizontal Installation – 24"w x 24"h (610 x 610)



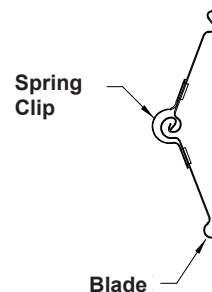
VERTICAL MOUNT



HORIZONTAL MOUNT



L = Frame/Sleeve Length



Spring Detail used on Vertical Mount Units 24" x 24" (610 x 610) and Under

Note: See page 6 for overall dimensional information

B Style - Blades out of the Airstream for Greater Free Area

B Style

Blades out of air stream

Sleeve optional

80 - 90% free area

MINIMUM SIZE 2000 fpm (10.2 m/s)

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

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

MAXIMUM SIZE 2000 fpm (10.2 m/s)

Single Section

Vertical Installation – 33"w x 32"h (838 x 813)

Horizontal Installation – 24"w x 21"h (610 x 533)

Multiple Section Assembly

Vertical Installation – 54"w x 45"h (1372 x 1143) or

48"w x 51"h (1219 x 1295) or 54"w x 21"h (1372 x 533)

Horizontal Installation – 36"w x 42"h (914 x 1067) or

48"w x 30"h (1219 x 813).

The minimum width or height becomes 9"w x 8"h (229 x 203) when damper's width or height is over 21" (533).

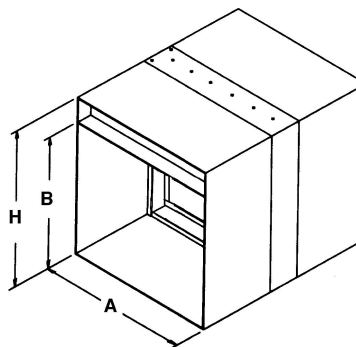
DIBD2 MINIMUM SIZE UNITS ABOVE 2000 fpm (10.2 m/s)

Vertical or Horizontal Installation – 9"w x 7"h (229 x 178)

DIBD2 MAXIMUM SIZE UNITS ABOVE 2000 fpm (10.2 m/s)

Single Section only

Vertical or Horizontal Installation – 24"w x 21"h (610 x 533)



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

Note: See page 7 for overall dimensional information

DAMPER STYLES AND SIZES

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 3"h (102 x 76)

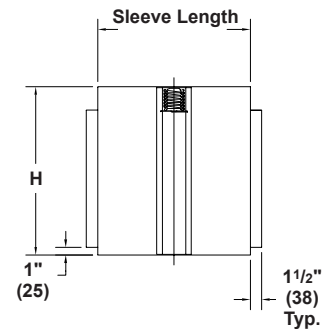
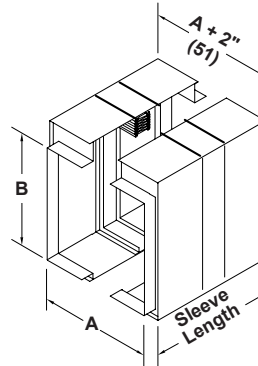
MAXIMUM SIZE

Single Section

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

Horizontal Installation – 22"w x 20"h (559 x 508)

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 8 for overall dimensional information

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)

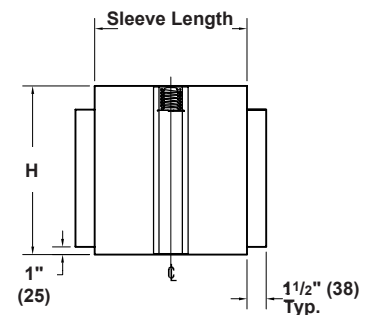
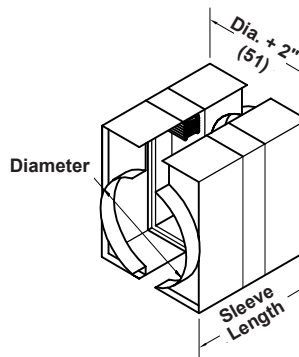
MAXIMUM SIZE

Single Section

Vertical Installation – 31" diameter (787)

Horizontal Installation – 20" diameter (508)

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

For use in Round duct duct sizes 24" (610) FDR25 True Round Fire Damper 1 1/2 hour UL 555 Listed To Replace square to round transitions for Increased Performance

APPLICATION

Ruskin FDR25 is a true round fire damper designed for use in fire rated walls and floors and is the perfect choice when using round duct.

The FDR25 is rated for maximum velocity of 2,000 fpm (10.2 m/s) and 4" w.g. (1 kPa) static pressure. The integral frame and unique "cinch plate" design provides a low cost, high performing damper.

DAMPER SIZES

MINIMUM SIZE

6" (152) diameter

MAXIMUM SIZE

Vertical/Horizontal – 24" (610) diameter

OPTION

- 304 or 316 Stainless Steel Construction



DAMPER STYLES AND SIZES

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 3"h (102 x 76)

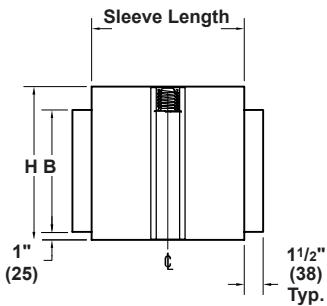
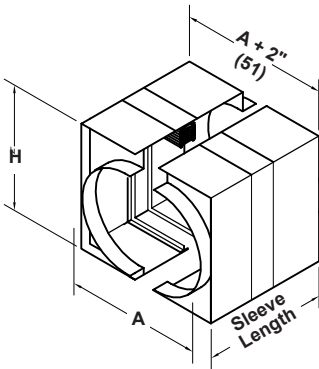
MAXIMUM SIZE

Single Section

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

Horizontal Installation – 22"w x 20"h (559 x 508)

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 8 overall dimensional information

LR Style – Round Transition

Round enclosure - 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)

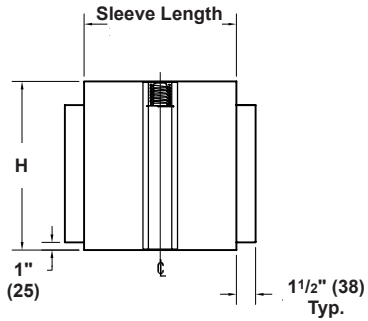
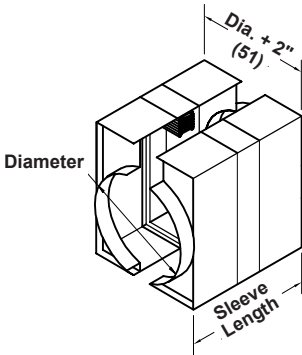
MAXIMUM SIZE

Single Section

Vertical Installation – 31" diameter (787)

Horizontal Installation – 20" diameter (508)

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 7 for overall dimensional information

DAMPER STYLES AND SIZES

LO Style – Oval Transition

Frame and blades out of air stream
Non-sealed sleeve standard
Sealed sleeve optional
95 - 100% free area

MINIMUM SIZE

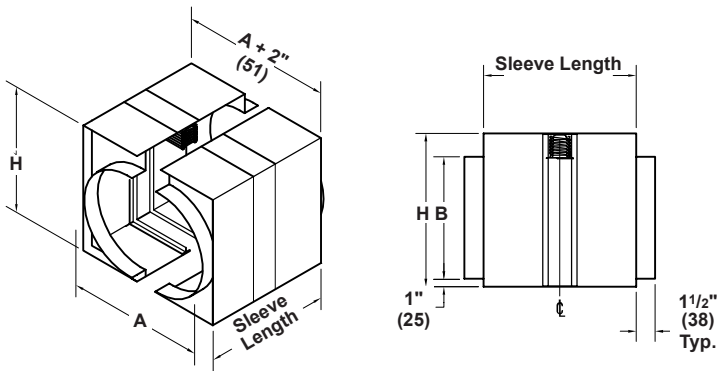
Vertical or Horizontal Installation – 4"w x 3"h (102 x 76)

MAXIMUM SIZE

Single Section

Vertical Installation – 31"w x 31"h (787 x 787)
Horizontal Installation – 22"w x 20"h (533 x 533)

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



NOTE:

1. Style LO the duct connection extends 1 1/2" (38) beyond the damper.
2. See page 8 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

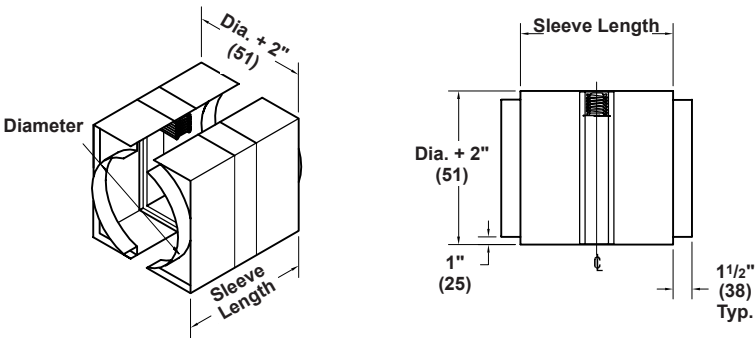
Vertical Installation – 3" diameter (76)
Horizontal Installation – 4" diameter (102)

MAXIMUM SIZE

Single Section

Vertical Installation – 31" diameter (787)
Horizontal Installation – 22" diameter (559)

D = Diameter
H = Overall Damper Height



NOTE:

1. Style R the duct connection extends 1 1/2" (38) beyond the damper.
2. See page 10 for overall dimensional information

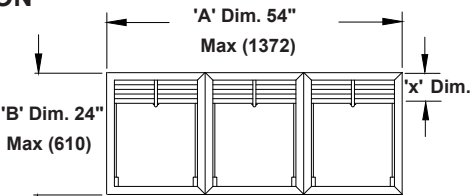
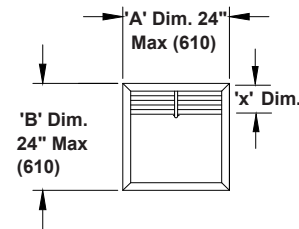
ASSEMBLY AND DIMENSIONAL INFORMATION

Dampers normally fabricated approximately 1/4" (6) less than given duct dimensions. A (width) and B (height) dimensions shown describe maximum UL Classified sizes. 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,

DIBD20, 40, & 60 A STYLE DAMPERS

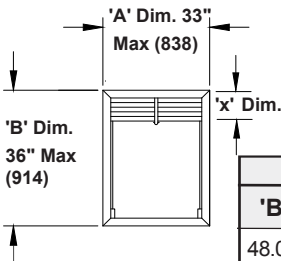
VERTICAL INSTALLATION

Single Section Units 24" (610) wide and 24" (610) high and under	
'B' Damper Height	'x' Dim.
4" (102) thru 7" (178)	1 1/2" (39)
7.01" (179) thru 12" (305)	2" (51)
12.01" (306) thru 17" (432)	2 1/2" (64)
17.01" (433) thru 21" (533)	3" (76)
21.01" (534) thru 24" (610)	3 1/2" (90)



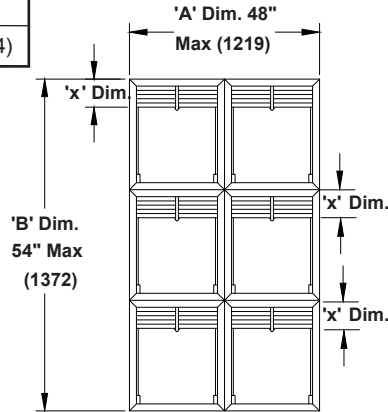
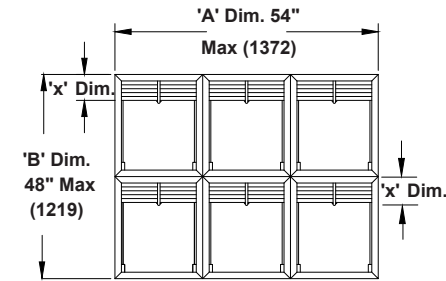
Multiple Section Wide and Single Section 24" (610) high and under	
'B' Damper Height	'x' Dim.
6" (152) thru 10" (254)	1 1/2" (39)
10.01" (254) thru 17" (432)	2" (51)
17.01" (433) thru 21" (533)	2 1/2" (64)
21.01" (534) thru 24" (610)	3" (76)

Single Section Units above 24" (610) wide or high thru 33" (838) wide by 36" (914) high	
'B' Damper Height	'x' Dim.
6" (152) thru 10" (254)	1 1/2" (39)
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" (90)
31.01" (788) thru 36" (914)	4" (102)



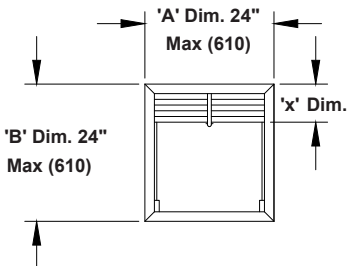
3 Section High Units	
'B' Damper Height	'x' Dim.
48.01" (1220) thru 51" (1295)	2" (51)
51.01" (1296) thru 54" (1372)	2 1/2" (64)

2 Section High Units	
'B' Damper Height	'x' Dim.
24.01" (611) thru 34" (864)	2" (51)
34.01" (865) thru 42" (1067)	2 1/2" (64)
42.01" (1068) thru 48" (1219)	3" (76)

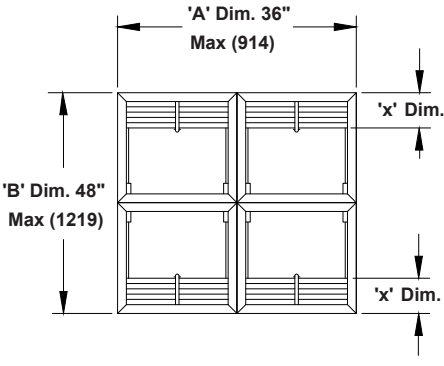
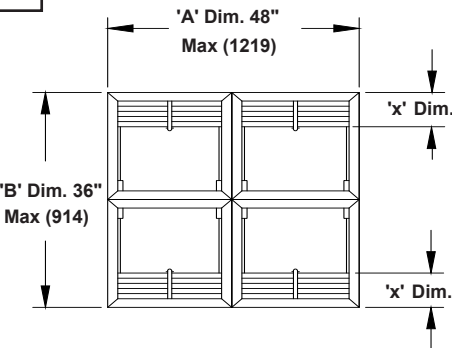


HORIZONTAL INSTALLATION

Single Section Units 24" (610) wide or high and under	
'B' Damper Height	'x' Dim.
6" (152) thru 10" (254)	1 1/2" (39)
10.01" (255) thru 17" (431)	2" (51)
17.01" (432) thru 21" (533)	2 1/2" (64)
21.01" (534) thru 24" (610)	3" (76)



Two Section High Units	
'B' Damper Height	'x' Dim.
18.01" (458) thru 28" (711)	2" (51)
28.01" (712) thru 42" (1067)	2 1/2" (64)
42.01" (1068) thru 48" (1219)	2 3/4" (70)

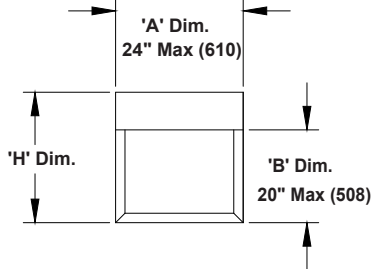


ASSEMBLY AND DIMENSIONAL INFORMATION

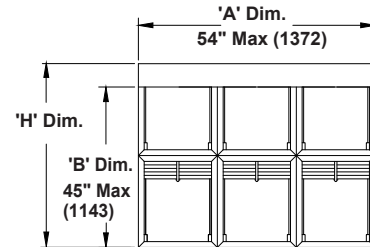
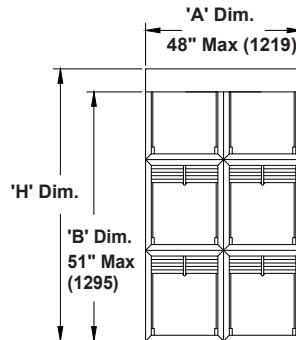
B STYLE DAMPERS VERTICAL INSTALLATION

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

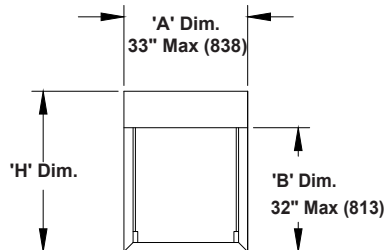
Single Section Units 24" (610) wide and 20" (508) high and under	
'B' Damper Height	'x' Dim.
4" (102) thru 8" (203)	1 ³ / ₄ " (44)
8.01" (204) thru 16" (406)	2 ³ / ₄ " (70)
16.01" (407) thru 20" (508)	3 ³ / ₄ " (95)



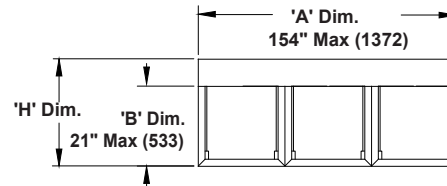
Multiple Section Wide and High Above 21" (533) thru 69" (1153) high	
'B' Damper Height	'x' Dim.
22" (559) thru 26" (660)	1 ³ / ₄ " (44)
26.01" (661) thru 51" (1295)	2 ³ / ₄ " (70)



Single Section Units Above 24" (610) wide or 20" (508) high through 33" (838) wide by 32" (813) 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 32" (813)	3 ³ / ₄ " (95)



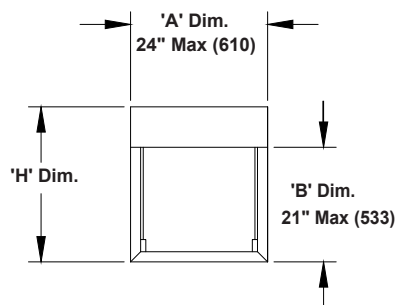
Multiple Section Wide and Single Section High 21" (533) and under	
'B' Damper Height	'x' Dim.
4" (102) thru 12" (305)	1 ³ / ₄ " (44)
12.01" (306) thru 21" (533)	2 ³ / ₄ " (70)



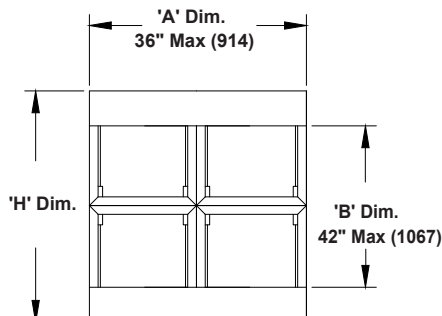
HORIZONTAL INSTALLATION

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

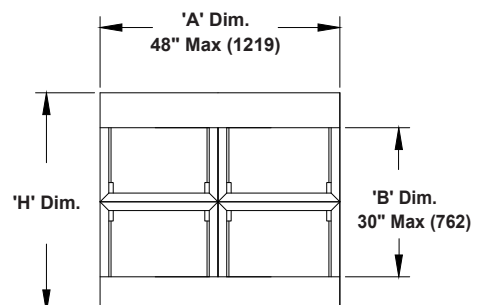
Single Section Units 24" (610) wide and 20" (508) high and under	
'B' Damper Height	'x' Dim.
4" (102) thru 10" (254)	1 ³ / ₄ " (44)
10.01" (255) thru 21" (533)	2 ³ / ₄ " (70)



Multiple Section High and 36" (914) wide and under	
'B' Damper Height	'x' Dim.
8" (203) thru 12" (305)	1 ³ / ₄ " (44)
12.01" (306) thru 21" (533)	2 ³ / ₄ " (70)
21.01" (534) thru 24" (610)	3 ¹ / ₂ " (89)
24.01" (611) thru 42" (1067)	5 ¹ / ₂ " (140)



Multiple Section High and Over 36" (914) wide	
'B' Damper Height	'x' Dim.
8" (203) thru 12" (305)	1 ³ / ₄ " (44)
12.01" (306) thru 15" (381)	2 ³ / ₄ " (70)
15.01" (382) thru 22" (559)	3 ¹ / ₂ " (89)
22.01" (560) thru 30" (762)	5 ¹ / ₂ " (140)

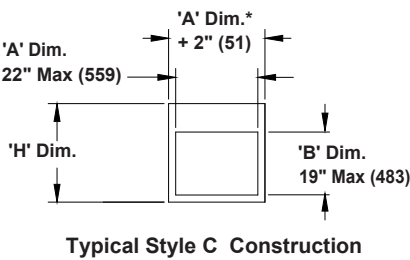
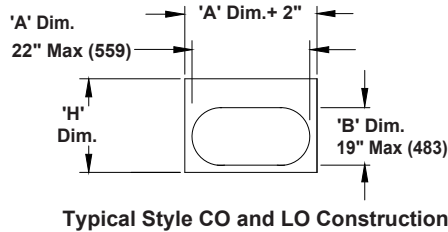


ASSEMBLY AND DIMENSIONAL INFORMATION

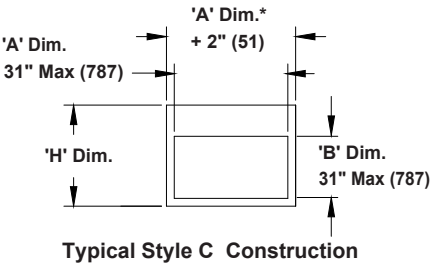
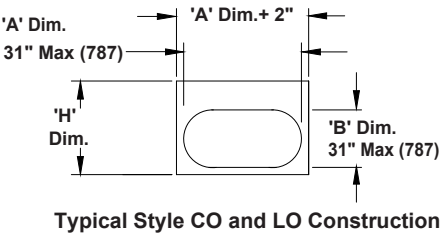
C, CO, and LO STYLE DAMPERS VERTICAL INSTALLATION

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

Single Section Units 22" (559) wide and 19" (483) high and under	
'B' Damper Height	'x' Dim.
3" (76) thru 7" (178)	2 ³ / ₄ " (70)
7.01" (179) thru 15" (381)	3 ³ / ₄ " (95)
15.01" (382) thru 19" (483)	4 ³ / ₄ " (121)



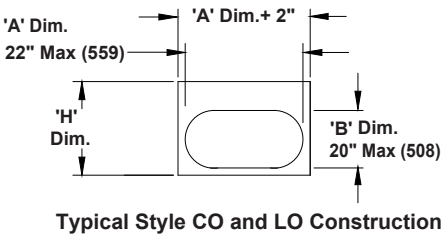
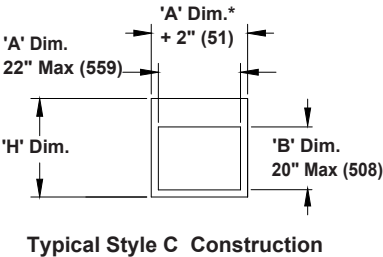
Single Section Units Above 22" (559) wide or 19" (483) high through 31" (787) wide by 31" (787) high	
'B' Damper Height	'x' Dim.
4" (102) thru 11" (280)	2 ³ / ₄ " (70)
11.01" (281) thru 22" (559)	3 ³ / ₄ " (95)
22.01" (560) thru 31" (787)	4 ³ / ₄ " (121)



HORIZONTAL INSTALLATION

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

Single Section Units 24" (610) wide and 20" (508) high and under	
'B' Damper Height	'x' Dim.
4" (102) thru 9" (229)	2 ³ / ₄ " (70)
9.01" (230) thru 20" (508)	3 ³ / ₄ " (95)

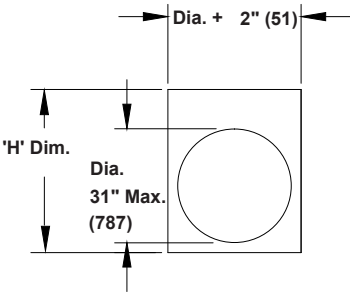


CR and LR STYLE DAMPERS

VERTICAL INSTALLATION

'X' dim. + 'Dia' dim. = 'H' dim.

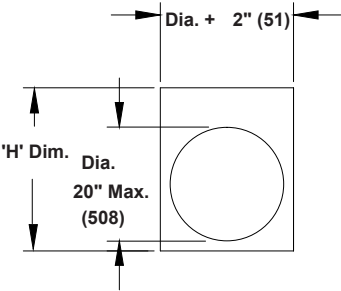
SINGLE SECTION HIGH	
'H' DIMENSION	
'Dia' Damper Height	'x' Dim.
3" (76) thru 7" (178)	2¾" (70)
7.01" (179) thru 15" (533)	3¾" (95)
15.01" (534) thru 19" (483)	4¾" (121)
19.01" (484) thru 22" (559)	3¾" (95)
22.01" (560) thru 31" (787)	4¾" (121)



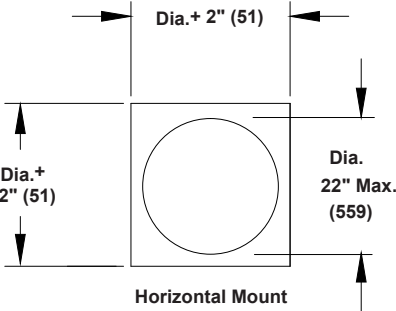
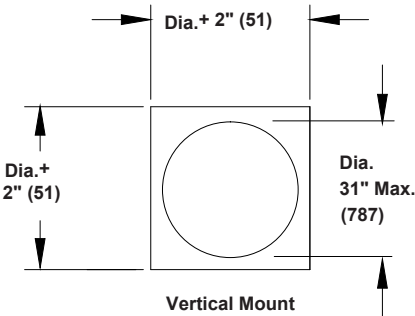
HORIZONTAL INSTALLATION

'X' dim. + 'Dia' dim. = 'H' dim.

SINGLE SECTION HIGH	
'H' DIMENSION	
'Dia' Damper Height	'x' Dim.
4" (102) thru 9" (228)	2¾" (70)
9.01" (229) thru 20" (508)	3¾" (95)



R STYLE DAMPERS VERTICAL AND HORIZONTAL INSTALLATION



ASSEMBLY AND DIMENSIONAL INFORMATION

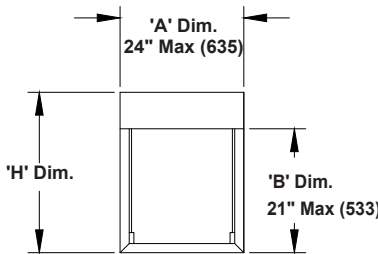
For 4000 fpm (20.3 m/s) and 4 in. wg. (1 kPa) MAX. Vertical Mount Only

For 3000 fpm (15.2 m/s) and 4 in. wg. (1 kPa) MAX. Vertical or Horizontal Mount

B DAMPERS

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

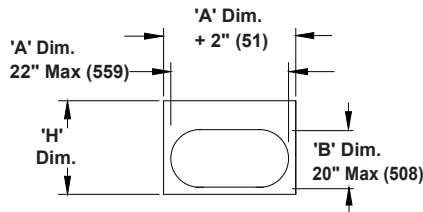
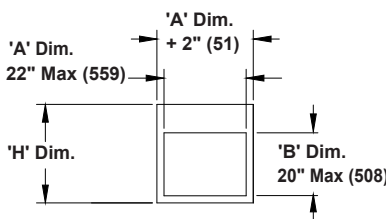
Single Section Units	
'B' Damper Height	'x' Dim.
8" (203) thru 12" (305)	1¾" (44)
12.01" (306) thru 21" (533)	2¾" (70)



C and CO DAMPERS

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

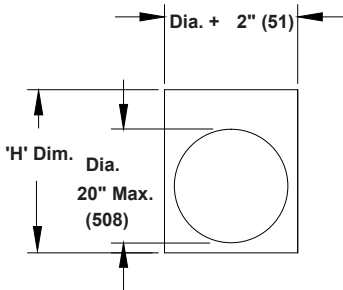
Single Section Units	
'B' Damper Height	'x' Dim.
7" (178) thru 11" (280)	2¾" (44)
11.01" (281) thru 20" (508)	3¾" (95)



CR Dampers

'X' dim. + 'Dia' dim. = 'H'

Single Section Units	
'Dia' Damper Height	'x' Dim.
7" (178) thru 11" (280)	2¾" (44)
11.10" (281) thru 20" (508)	3¾" (95)



DIBD20, 40 & 60 SUGGESTED SPECIFICATION

Furnish and install at locations shown on the plans, or as described in schedules for curtain type fire dampers suitable for vertical wall or horizontal masonry floor or ceiling. Dynamic 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. 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 R-5531 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 R-5531. Closure spring dampers shall be of 301 stainless steel and shall be constant force type.

Each dynamic fire damper shall include a steel sleeve and mounting angles furnished by the damper manufacturer to ensure appropriate installation. Submittal information shall include the fire protection rating, maximum velocity/pressure ratings and the manufac-

turer's UL installation instructions. The dampers shall be installed in accordance with the manufacturer's UL installation instructions. Dynamic fire dampers shall be in all respects equivalent to Ruskin model DIBD20, 40 & 60.

Each damper shall include a 165°F (74°C), 212°F (100°C) or 285°F (141°C) fusible link and shall be labeled for use in dynamic systems. Dampers labeled for use in static systems only are not permitted. The damper shall be rated for dynamic closure at 2000 fpm (10.16 m/s) and 4 inches w.g. (1 kPa) static pressure and shall be rated to close with airflow in either direction.

Optional FM Approvals Specification

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

Dynamic fire dampers shall be Ruskin model DIBD20, 40 & 60.

(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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