

DIBD20/40/60

Curtain Type Dynamic Fire Dampers

1 1/2 UL555 Rated For Use In Dynamic And Static Systems



APPLICATION

DIBD20, 40, 60 fire dampers can be installed vertically in walls or horizontally in floors with fire resistance ratings of less than 3 hours. The DIBD20, 40, 60 carry a 1 1/2 hour UL fire damper label and are classified as a dynamic damper for use in HVAC systems that remain in operation during a fire.

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 (in gauges required by UL listing R-5531).
Frame/Sleeve Length	DIBD20 - 12" (305) long. DIBD40 - 14" (356) long. DIBD60 - 16" (406) long.
Closure Springs	301 stainless steel constant force or spring clip type.
Fusible Link	165°F (74°C) is standard. 212°F (100°C) and 285°F (141°C) are available.

DAMPER SIZES

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

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

OPTIONS

SP200 Switch Package to remotely indicate damper blade position.

FAST Angles for one side angle installation.

G Style for grille applications.

Fire Stop Caulk Installation.



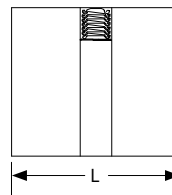
Models DIBD20, 40, 60 and DIBD230, 430, 630 meet the requirements for fire, dampers established by:

- ▶ **National Fire Protection Association**
NFPA Standards 90A and 101
- ▶ **ICC International Building Codes**
- ▶ **CSFM California State Fire Marshal**
Fire Damper Listing (#3225-245:005)

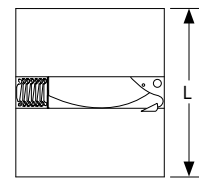


SEE COMPLETE
MARKING ON PRODUCT

UL CLASSIFIED
UL555 Listing R5531
ULC S112



VERTICAL MOUNT



HORIZONTAL MOUNT

L = Frame/Sleeve Length

NOTE:

- Dimensions shown in parentheses () indicate millimeters.
- Damper Sleeves may need to be sealed in the field to pass local duct leakage requirements.

DAMPER STYLES AND 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

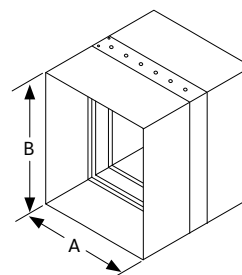
Single Section

Vertical Installation - 33"w x 36"h (838 x 914)
Horizontal Installation - 24"w x 24"h (610 x 610)

Multiple Section Assembly

Vertical Installation - 54"w x 54"h (1372 x 1372)
Horizontal Installation - 36"w x 48"h (1372 x 1372) or 48"w x 36"h (1219 x 914)

NOTE: See page 5 for overall dimensional information.



A Style

B STYLE - BLADES OUT OF AIRSTREAM FOR HIGH FREE AREA APPLICATIONS

Minimum Size

Vertical Installation - 4"w x 4"h (102 x 102)
Horizontal Installation - 6"w x 4"h (152 x 102) for dampers no larger than 24"w or 21"h (610 or 533). Dampers larger than 24"w or 21"h (610 or 533) have a minimum size of 10"w or 8"h (254 or 203)

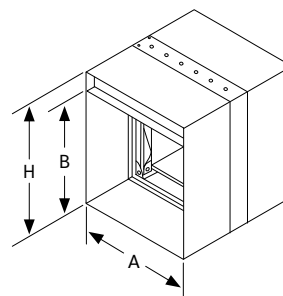
Maximum Size

Single Section

Vertical Installation - 33"w x 32"h (838 x 813)
Horizontal Installation - 24"w x 21"h (610 x 533)

Multiple Section

Vertical Installation - 54"w x 45"h (1372 x 1143), 48"x 51"h (1219 x 1295)
Horizontal Installation - 36"w x 42"h (914 x 1067) or 48"w x 30"h



B Style

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

C AND LC STYLE - SEALED (C) OR NON-SEALED (LC) SQUARE OR RECTANGULAR TRANSITION FOR MAXIMUM FREE AREA APPLICATIONS

Minimum Size

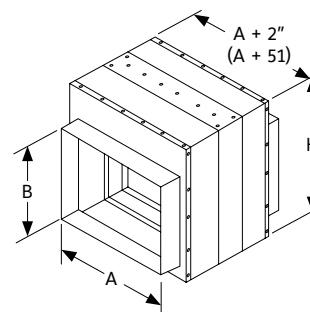
Vertical Installation - 4"w x 3"h (102 x 76)
Horizontal Installation - 4"w x 3"h (102 x 76)

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



C and LC Style

CR STYLE - SEALED ROUND TRANSITION FOR 100% FREE AREA APPLICATIONS

Minimum Size

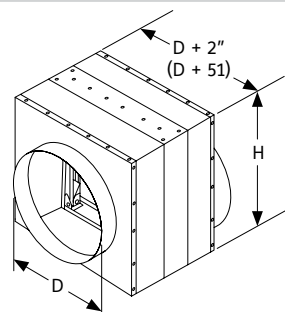
Vertical Installation - 3" (76) diameter
Horizontal Installation - 4" (102) diameter

Maximum Size

Single Section

Vertical Installation - 31" (787) diameter
Horizontal Installation - 20" (508) diameter

D = Diameter
H = Overall Damper Height



CR Style

DAMPER STYLES AND SIZES

CO STYLE – SEALED OVAL TRANSITION FOR 100% FREE AREA APPLICATIONS

Minimum Size

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

Maximum Size

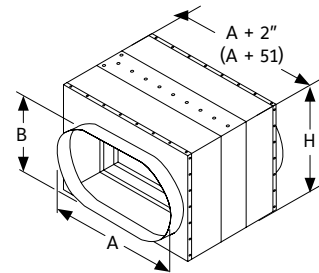
Single Section

Vertical Installation – 31" w x 31" h (787 x 787)
Horizontal Installation – 22" w x 20" h (559 x 508)

Multiple Section

Horizontal Installation – 34" w x 42" h (864 x 1067)

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



CO Style

LO, LR AND R STYLE – NON-SEALED OVAL (LO) OR ROUND (LR, R) TRANSITIONS FOR LOW PRESSURE APPLICATIONS.

LO AND LR TRANSITIONS OFFSET FOR 100% FREE AREA APPLICATIONS. R TRANSITION CENTERED FOR USE WHEN 100% FREE AREA NOT REQUIRED.

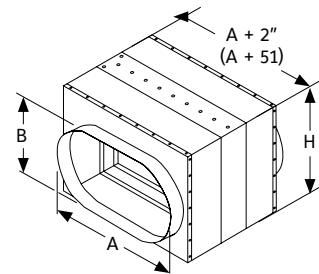
Minimum Size

Vertical Installation –
LR, R Styles – 3" (76) diameter
LO Style – 4" w x 3" h (102 x 76)
Horizontal Installation –
LR, R Styles – 4" (102) diameter
LO Style – 4" w x 3" h (102 x 76)

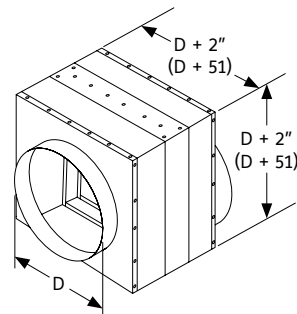
Maximum Size

Vertical Installation –
LR, R Styles – 31" (787) diameter
LO Style – 31" w x 31" h (787 x 787)
Horizontal Installation –
LR, R Styles – 20" (508) diameter
LO Style – 22" w x 20" h (559 x 508)

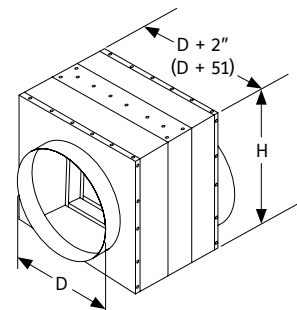
A = Duct Width
B = Duct Height
H = Overall Damper Height
D = Diameter



LO Style



R Style



LR Style

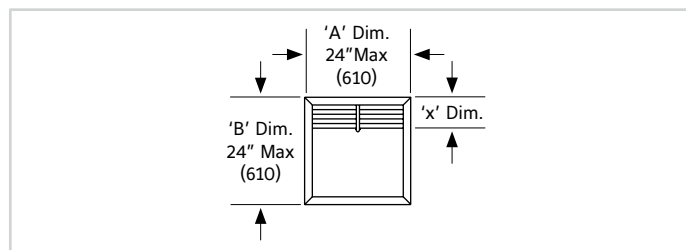
ASSEMBLY AND DIMENSIONAL INFORMATION For 2000 fpm (10.2 m/s) and 4 in. wg. (1 kPa) MAX.

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

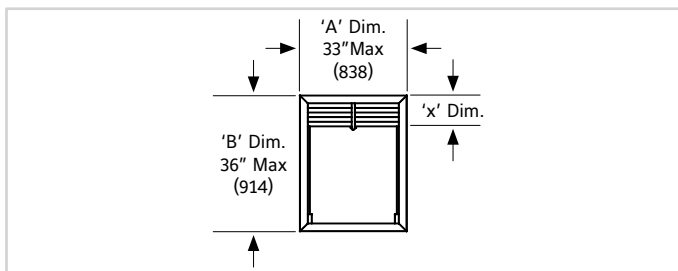
Single Section Units 24" (610) wide and 24" (610) high and under

'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)



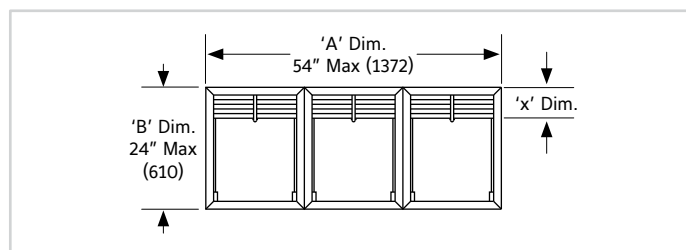
Single Section Units above 24" (610) wide or high thru 33" (838) wide by 36" (914) high

'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)



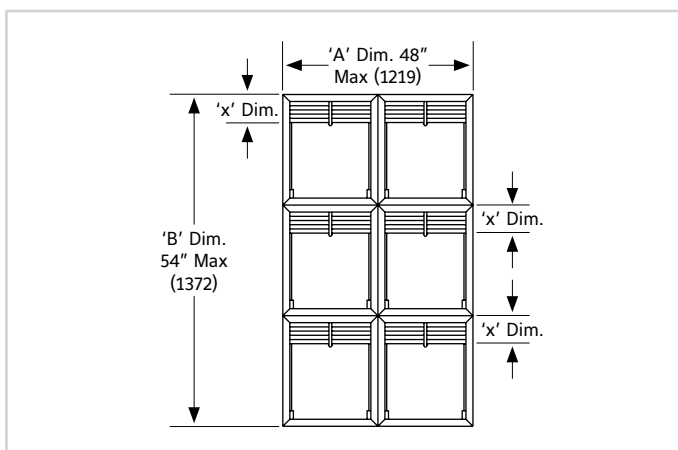
Multiple Section Wide and Single Section 24" (610) high and under

'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)



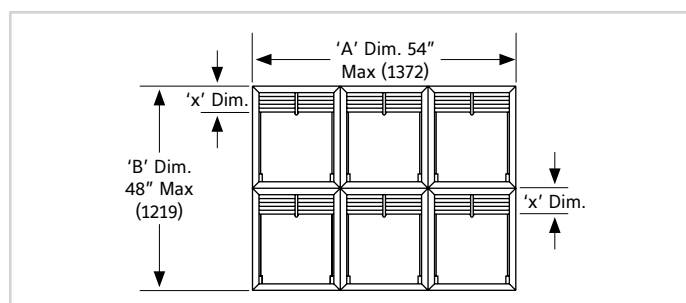
3 Section High Units

'B' Damper Height	'X' Dim.
48.01" (1220) thru 51" (1295)	2" (51)
51.01" (1296) thru 54" (1372)	2 1/2" (64)



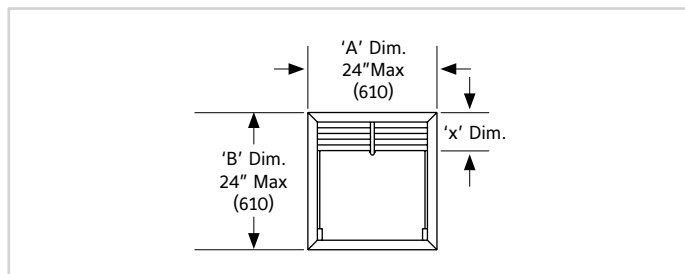
2 Section High Units

'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)

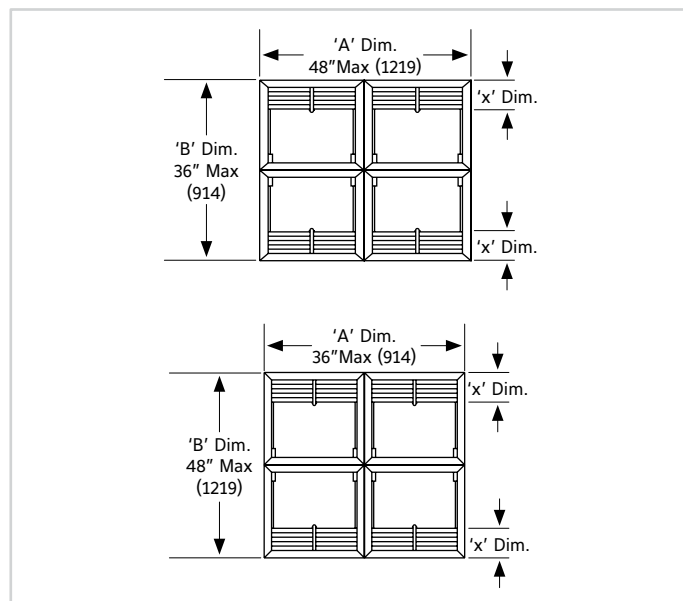


A STYLE DAMPERS HORIZONTAL INSTALLATION

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)



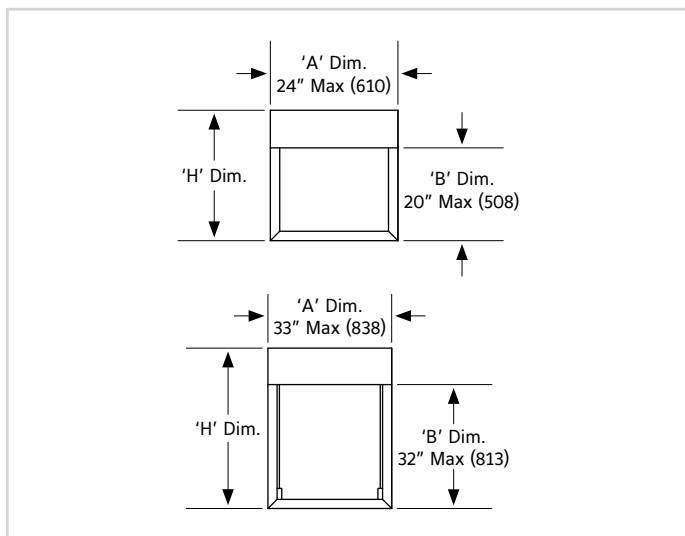
Two Section High Units	
'B' Damper Height	'X' Dim.
18.01" (458) thru 28" (711)	2" (51)
28.01" (712) thru 42" (1067)	2 1/2" (64)
42.01" (1068) thru 48" (1219)	2 3/4" (70)



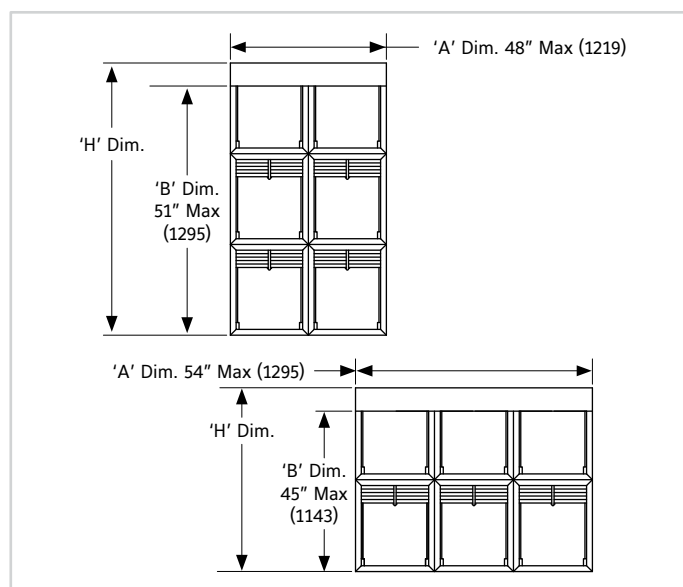
B, BC & WB STYLE DAMPERS VERTICAL INSTALLATION

'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)



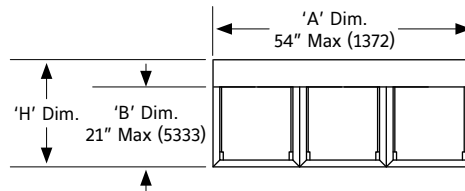
Single Section Units Above 24" (610) wide or 20" (508) high through 33" (838) wide by 32" (813) high	
'B' Damper Height	'X' Dim.
4" (102) thru 12" (305)	1 3/4" (44)
12.01" (306) thru 23" (584)	2 3/4" (70)
23.01" (585) thru 32" (813)	3 3/4" (95)



B, BC & WB STYLE DAMPERS VERTICAL INSTALLATION

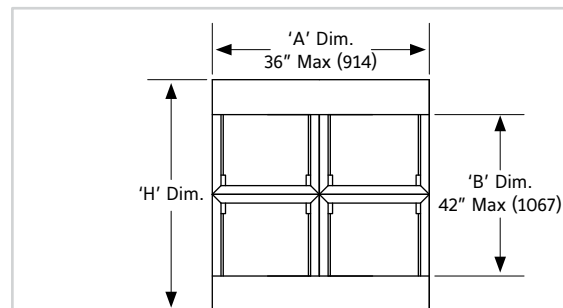
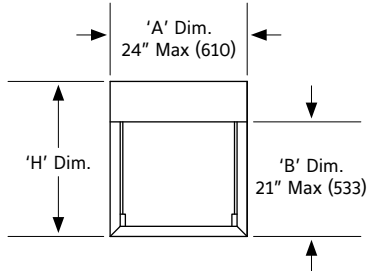
'X' dim. + 'B' dim. = 'H' dim.

Multiple Section Wide and High Above 21" (533) thru 69" (1153) high		Multiple Section Wide and Single Section High 21" (533) and under	
'B' Damper Height	'X' Dim.	'B' Damper Height	'X' Dim.
22" (559) thru 26" (660)	1 3/4" (44)	4" (102) thru 12" (305)	1 3/4" (44)
26.01" (661) thru 51" (1295)	2 3/4" (70)	12.01" (306) thru 21" (533)	2 3/4" (70)

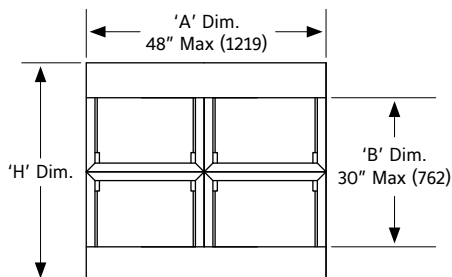

B, BC & WB STYLE DAMPERS HORIZONTAL INSTALLATION

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

Single Section Units 24" (610) wide and 21" (533) high and under		Multiple Section High and 36" (914) wide and under	
'B' Damper Height	'X' Dim.	'B' Damper Height	'X' Dim.
4" (102) thru 10" (254)	1 3/4" (44)	8" (203) thru 12" (305)	1 3/4" (44)
10.01" (255) thru 21" (533)	2 3/4" (70)	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)



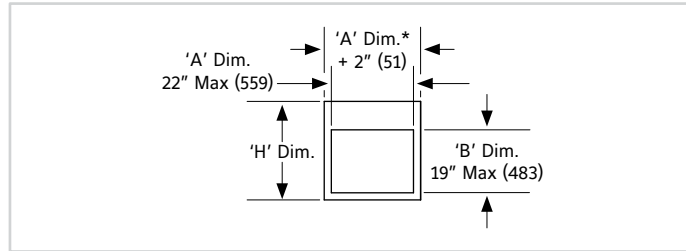
Multiple Section High and Over 36" (914) wide	
'B' Damper Height	'X' Dim.
8" (203) thru 12" (305)	1 3/4" (44)
12.01" (306) thru 15" (381)	2 3/4" (70)
15.01" (382) thru 22" (559)	3 1/2" (89)
22.01" (560) thru 30" (762)	5 1/2" (140)



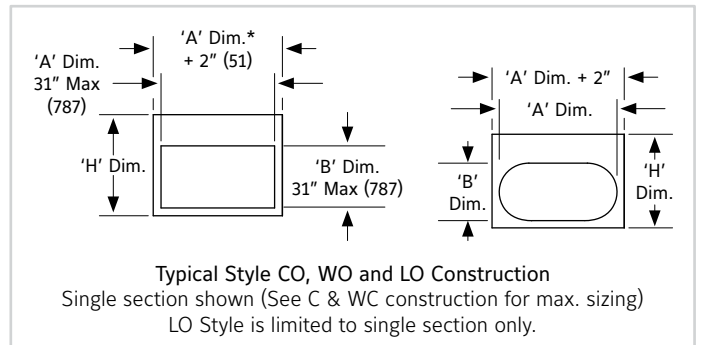
C, CO & LO STYLE DAMPERS VERTICAL INSTALLATION

'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)



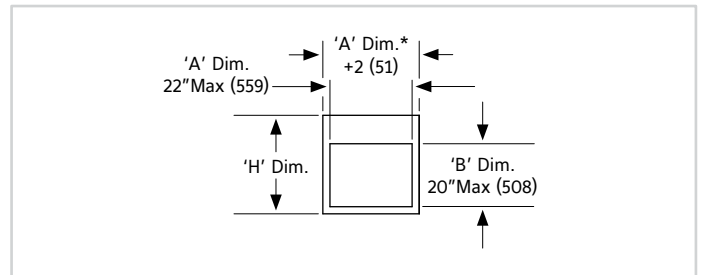
Single Section Units Above 24" (610) wide or 20" (508) high through 33" (838) wide by 32" (813) high	
'B' Damper Height	'X' Dim.
4" (102) thru 11" (280)	2 3/4" (70)
11.01" (281) thru 22" (559)	3 3/4" (95)
22.01" (560) thru 31" (787)	4 3/4" (121)



C, CO & LO STYLE DAMPERS HORIZONTAL INSTALLATION

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

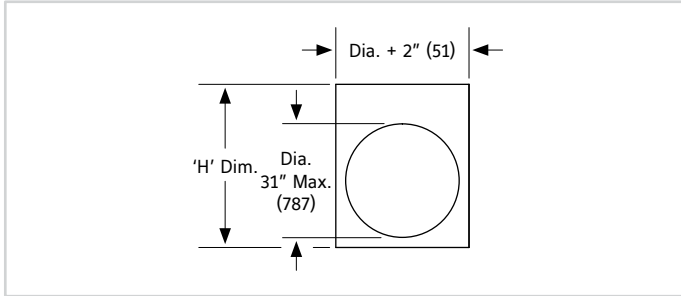
Single Section Units 22" (559) wide and 20" (508) high and under	
'B' Damper Height	'X' Dim.
4" (102) thru 9" (229)	2 3/4" (70)
9.01" (230) thru 20" (508)	3 3/4" (95)



CR & 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)	2 3/4" (70)
7.01" (179) thru 15" (533)	3 3/4" (95)
15.01" (534) thru 19" (483)	4 3/4" (121)
19.01" (484) thru 22" (559)	3 3/4" (95)
22.01" (560) thru 31" (787)	4 3/4" (121)

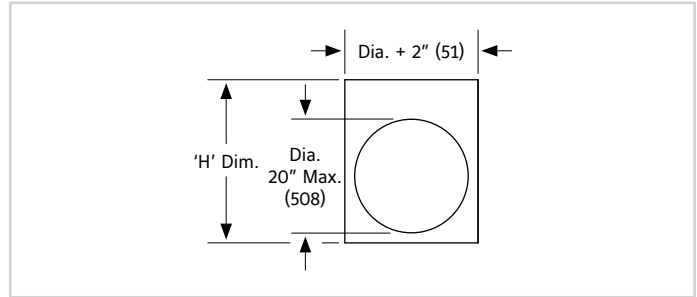


CR & LR STYLE DAMPERS HORIZONTAL INSTALLATION

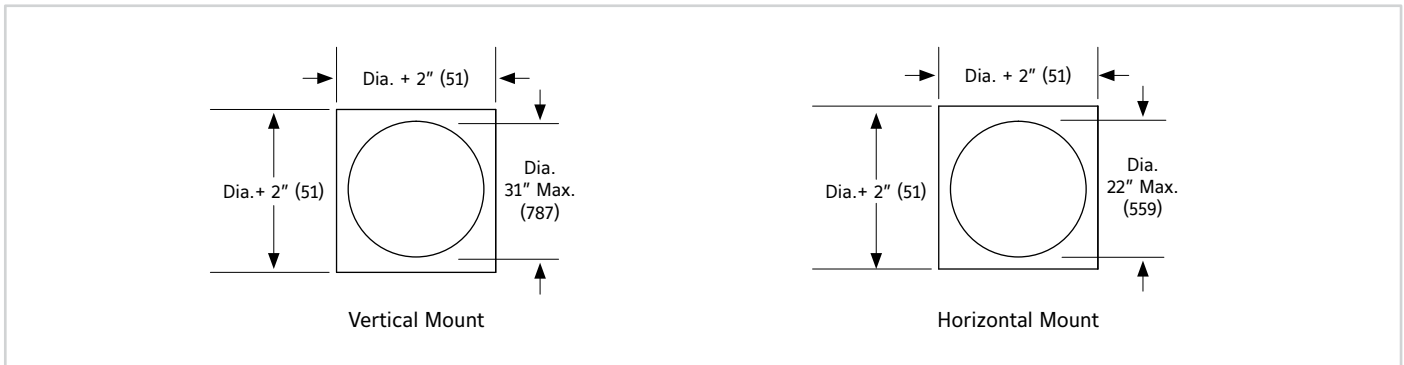
'X' dim. + 'Dia' dim. = 'H' dim.

Single Section High 'H' Dimension	
'Dia' Damper Height	'X' Dim.
4" (102) thru 9" (228)	2 3/4" (70)
9.01" (229) thru 20" (508)	3 3/4" (95)

LR Style is limited to single section only.



R STYLE DAMPERS VERTICAL AND HORIZONTAL INSTALLATION



ASSEMBLY AND DIMENSIONAL INFORMATION

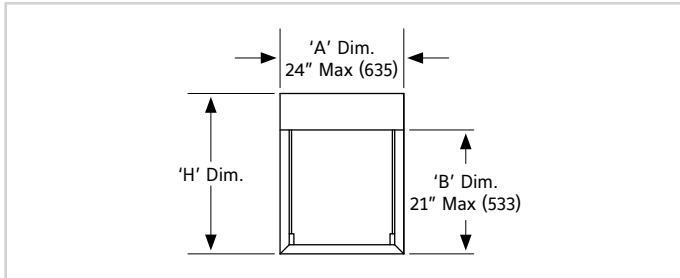
For 4000 fpm (20.3 m/s) and 4 in. wg. (1 kPa) MAX. Vertical Mount Only

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

B, BC & WB DAMPERS

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

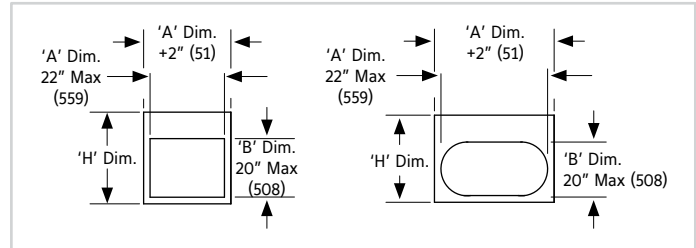
Single Section Units	
'B' Damper Height	'X' Dim.
8" (203) thru 12" (305)	1 3/4" (44)
12.01" (306) thru 21" (533)	2 3/4" (70)



C & CO DAMPERS / WC & WO DAMPERS

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

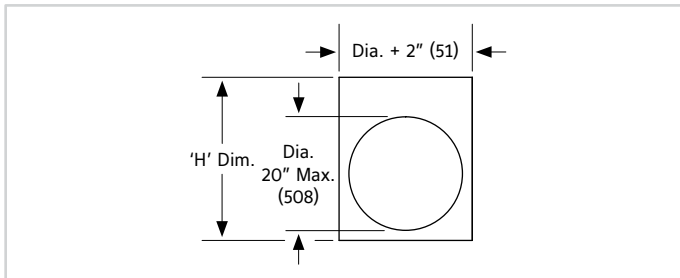
Single Section Units	
'B' Damper Height	'X' Dim.
7" (178) thru 11" (280)	2 3/4" (44)
11.01" (281) thru 20" (508)	3 3/4" (95)



CR & WR DAMPERS

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

Single Section Units	
'Dia' Damper Height	'X' Dim.
7" (178) thru 11" (280)	2 3/4" (44)
11.01" (281) thru 20" (508)	3 3/4" (95)



SUGGESTED SPECIFICATION FOR DIBD20, 40, 60

Furnish and install at locations shown on the plans, Dynamic 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.

Each damper shall include a 165°F (74°C) or 212°F (100°C) fusible link (*specifier select*) 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 to a minimum 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.

Each dynamic fire damper shall include a 12", 14" or 16" (305, 356 or 406) (*specifier select*) long integral roll formed 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 manufacturer's UL installation instructions. The dampers shall be installed in accordance with the manufacturer's UL installation instructions. Dynamic fire dampers shall be curtain type Ruskin model DIBD20 with 12" (305) sleeve, DIBD40 with 14" (356) sleeve or DIBD60 with 16" (406) sleeve (*specifier select*).

LINKS TO IMPORTANT DOCUMENTS

Document Title
Installation Instructions
Limited Warranty Document



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