



3900 Dr. Greaves Rd. • Kansas City, MO 64030 • (816) 761-7476 • FAX (816) 765-8955

DIBD20, 40, 60 AND DIBD230, 430, 630 CURTAIN TYPE DYNAMIC FIRE DAMPERS 1 1/2 AND 3 HOUR 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.

DIBD230, 430, 630 can be installed vertically in walls or horizontally in floors with fire resistance ratings of 3 hours or more. The DIBD230, 430, 630 carry a 3 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. (1kPa) maximum pressure on all sizes.

STANDARD CONSTRUCTION

FRAME AND BLADES MATERIAL

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

FRAME/SLEEVE LENGTH

DIBD20, DIBD230 - 12" (305) long

DIBD40, DIBD430 - 14" (356) long

DIBD60, DIBD630 - 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

The sizes listed below are for A Style dampers. Refer to pages 2 and 3 for sizes of other style dampers.

MINIMUM SIZE

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

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

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

Vertical Installation - 72"w x 48"h (1829 x 1219), 48"w x 72"h (1219 x 1829) or 84"w x 24"h (2134 x 610)

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

OPTIONS

- **FM Approvals** as Specification Tested Product.
- **Switch Package** to remotely indicate damper blade position.
- **FAST Angle** for one side angle installation
- **DIBD10** for easy all from one side installation.
- **G Style** for grille applications.
- **Access Door** factory mounted in common sleeve to ensure compliance with UL installation requirements.
- **FireStop Caulk Installation.**

NOTE: Dimensions shown in parentheses () indicate millimeters.

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)
- **New York City (BSA Listing #292-71-SA) DIBD2** only.

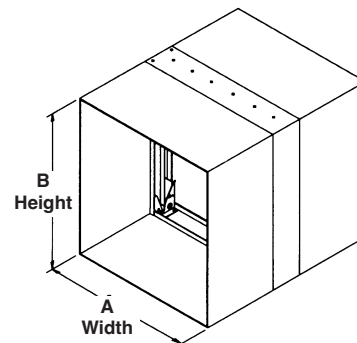
UL CLASSIFIED

UL555 Listing R5531



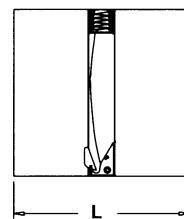
SEE COMPLETE MARKING ON PRODUCT

FM Approvals
Specification Tested Product (Option)

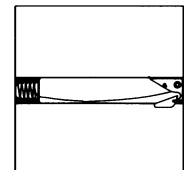


A STYLE
FRAME AND
BLADES IN
AIRSTREAM

VERTICAL MOUNT



HORIZONTAL MOUNT



L = Frame/Sleeve Length

DAMPER STYLES AND SIZES

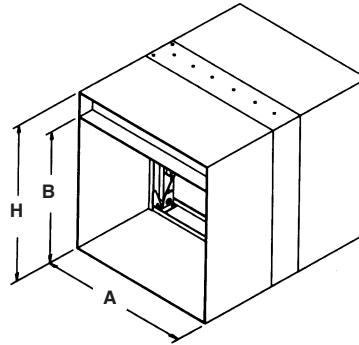
“B” Style – Blades out of airstream for high free area applications

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 – 72" w x 45" h (1829 x 1143), 48" x 69" h (1219 x 1753) or 84" w x 21" h (2134 x 533)
 Horizontal Installation – 36" w x 42" h (914 x 1067)



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

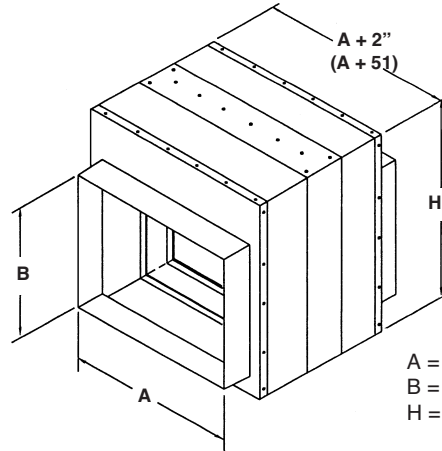
C and LC Style – Sealed (C) or non-sealed (LC) square or rectangular transition for maximum free area applications

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

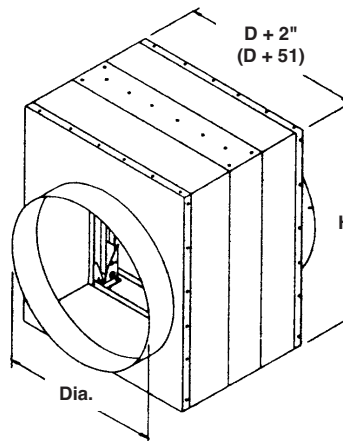
CR Style – Sealed round transition for 100% free area applications

MINIMUM SIZE

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

MAXIMUM SIZE

Vertical Installation
 Single Section – 31" (787) diameter
 Horizontal Installation
 Single Section – 20" (508) diameter



D = Diameter
 H = Overall Damper Height

DAMPER STYLES AND SIZES

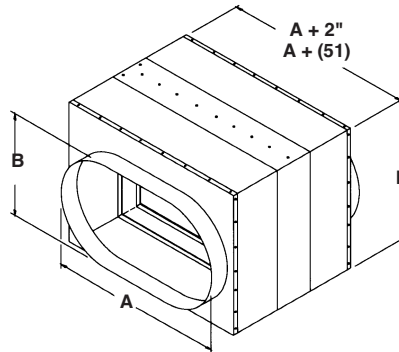
CO Style – Sealed oval transition for 100% free area applications

MINIMUM SIZE

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

MAXIMUM SIZE

Vertical Installation
 Single Section – 31"w x 31"h (787 x 787)
 Horizontal Installation
 Single Section – 22"w x 20"h (559 x 508)
 Multiple Sections – 34"w x 42"h (864 x 1067)



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

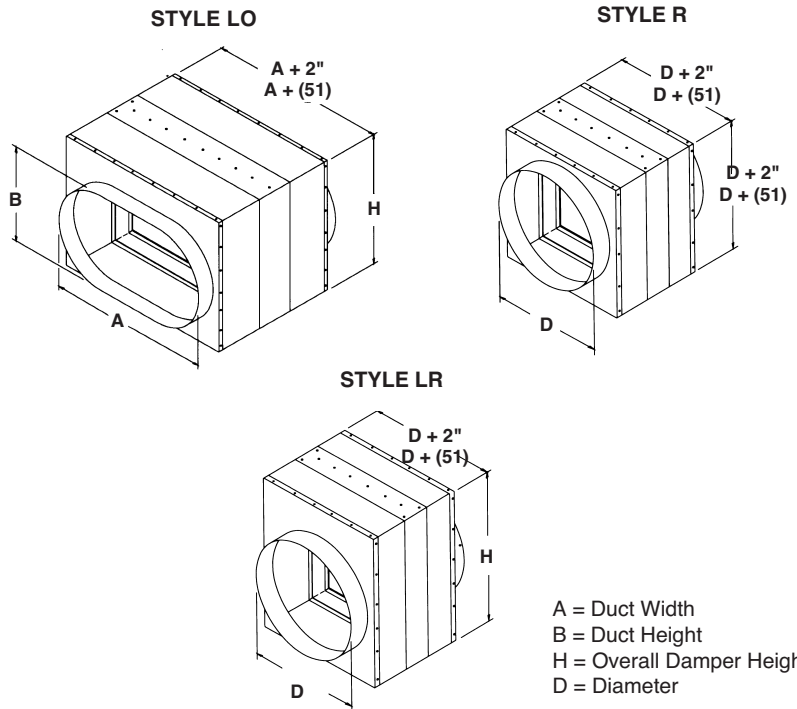
LO, LR and R Style – Non-sealed oval (LO) or round (LR, R) transitions for low pressure applications. LO and LR transitions offset for 100% free area applications. R transition centered for use when 100% free area not required.

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

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. Ruskin recommends the authority having jurisdiction, the engineer and the contractor agree on the installation design prior to installation.

DIBD20, 40, 60, 230, 430, 630 multiple section dampers are shipped in individual sections, for field assembly.

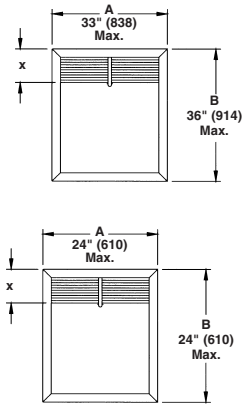
If TDF or other flanged breakaway connections are to be used, order dampers with factory furnished sleeves actual size.

A STYLE DAMPERS

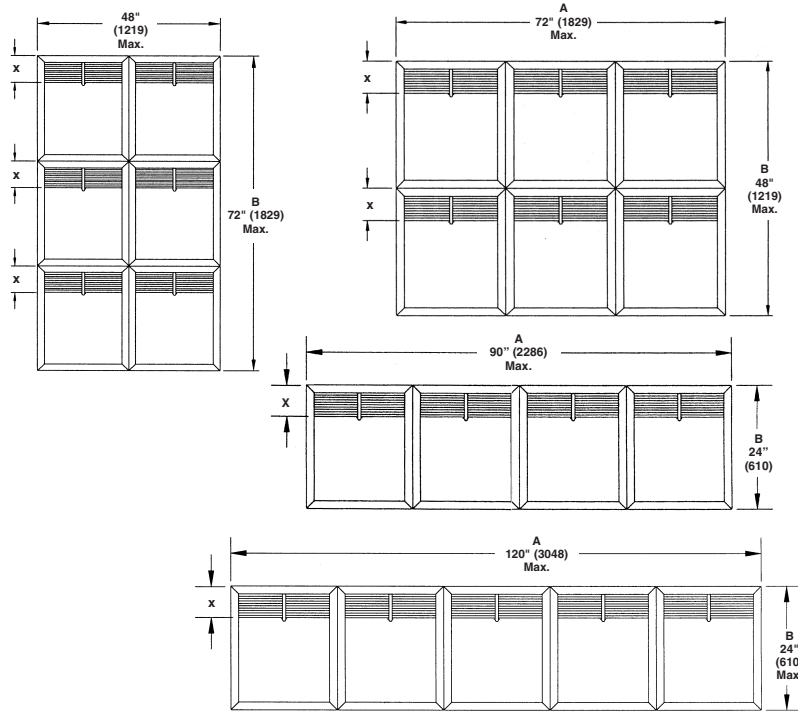
VERTICAL INSTALLATION

Important Note: Dampers larger than 33" x 36" (838 x 914) are multiple section dampers consisting of equal sections no larger than 24" x 24" (610 x 610).

Single Section Dampers



Multiple Section Dampers



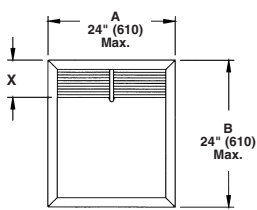
		Blade Dimensions	
B		X	
6	(152)	1 1/2	(38)
7	(178)	1 1/2	(38)
8	(203)	1 3/4	(44)
9	(229)	1 3/4	(44)
10	(254)	1 3/4	(44)
11	(279)	2	(51)
12	(305)	2	(51)
13	(330)	2 3/8	(60)
14	(356)	2 3/8	(60)
15	(381)	2 5/8	(67)
16	(406)	2 5/8	(67)
17	(432)	2 5/8	(67)
18	(457)	2 3/4	(70)
19	(483)	2 3/4	(70)
20	(508)	3 1/4	(83)
21	(533)	3 1/4	(83)
22	(559)	3 1/2	(89)
23	(584)	3 1/2	(89)
24	(610)	3 1/2	(89)
25	(635)	3	(76)
26	(660)	3	(76)
27	(686)	3 1/4	(83)
28	(711)	3 1/4	(83)
29	(737)	3 1/2	(89)
30	(762)	3 1/2	(89)
31	(787)	3 1/2	(89)
32	(813)	3 5/8	(92)
33	(838)	3 5/8	(92)
34	(864)	3 7/8	(98)
35	(889)	3 7/8	(98)
36	(914)	4	(102)

Dimensions shown in parentheses () indicate millimeters.

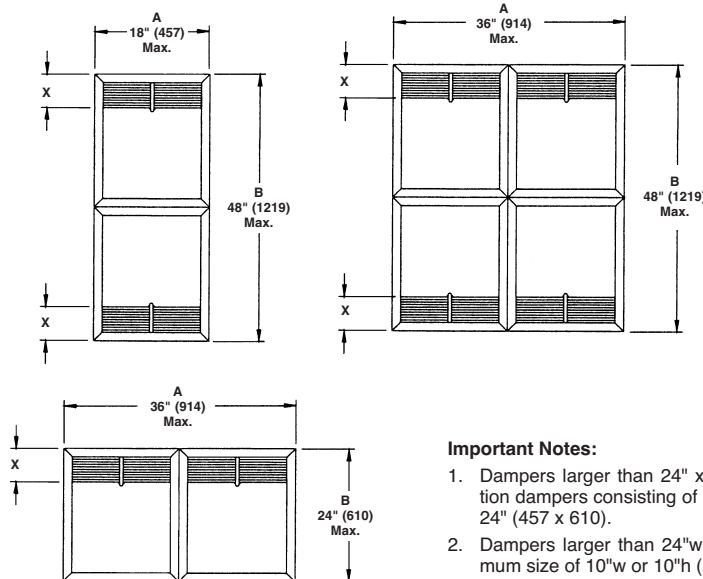
HORIZONTAL INSTALLATION

Important Note: Dampers larger than 33" x 36" (838 x 914) are multiple section dampers consisting of equal sections no larger than 24" x 24" (610 x 610).

Single Section Dampers



Multiple Section Dampers



		Blade Dimensions	
B		X	
6	(152)	1 1/2	(38)
7	(178)	1 1/2	(38)
8	(203)	1 3/4	(44)
9	(229)	1 3/4	(44)
10	(254)	1 3/4	(44)
11	(279)	2	(51)
12	(305)	2	(51)
13	(330)	2	(51)
14	(356)	2	(51)
15	(381)	2 3/8	(60)
16	(406)	2 3/8	(60)
17	(432)	2 3/8	(60)
18	(457)	2 5/8	(67)
19	(483)	2 5/8	(67)
20	(508)	2 3/4	(70)
21	(533)	2 3/4	(70)
22	(559)	3	(76)
23	(584)	3	(76)
24	(610)	3	(76)

Dimensions shown in parentheses () indicate millimeters.

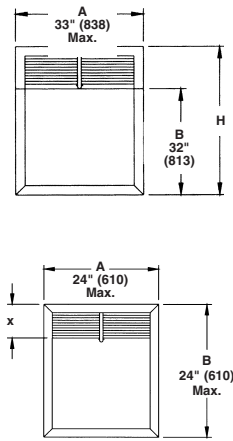
Important Notes:

1. Dampers larger than 24" x 24" (610 x 610) are multiple section dampers consisting of equal sections no larger than 18" x 24" (457 x 610).
2. Dampers larger than 24" w or 24" h (610 x 610) have a minimum size of 10" w or 10" h (254 x 254).

B STYLE DAMPERS

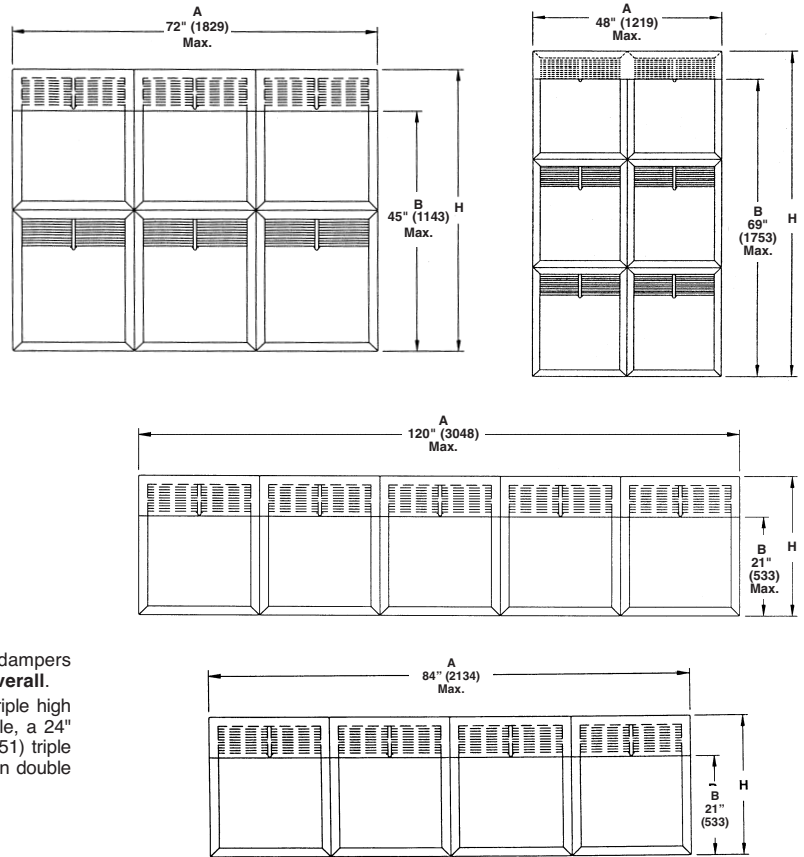
VERTICAL INSTALLATION

Single Section Dampers



B	H	H For dampers larger than 24" (610) W
4 (102)	5 3/4 (146)	
5 (127)	6 3/4 (171)	
6 (152)	7 3/4 (197)	
7 (178)	8 3/4 (222)	
8 (203)	9 3/4 (248)	
9 (229)	11 1/4 (298)	10 3/4 (273)
10 (254)	12 3/4 (324)	11 3/4 (298)
11 (279)	13 3/4 (349)	
12 (305)	14 3/4 (375)	
13 (330)	15 3/4 (400)	
14 (356)	16 3/4 (425)	
15 (381)	17 3/4 (451)	
16 (406)	18 3/4 (476)	
17 (432)	20 3/4 (527)	19 3/4 (502)
18 (457)	21 3/4 (552)	20 3/4 (527)
19 (483)	22 3/4 (578)	21 3/4 (552)
20 (508)	23 3/4 (603)	22 3/4 (578)
21 (533)	23 3/4 (603)	
22 (559)	25 3/4 (654)	
23 (584)	26 3/4 (679)	
24 (610)	27 3/4 (705)	
25 (635)	28 3/4 (730)	
26 (660)	29 3/4 (756)	
27 (686)	30 3/4 (781)	
28 (711)	31 3/4 (806)	
29 (737)	32 3/4 (832)	
30 (762)	33 3/4 (857)	
31 (787)	34 3/4 (883)	
32 (813)	35 3/4 (908)	

Multiple Section Dampers



Important Note:

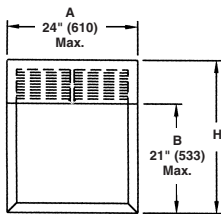
Dampers larger than 33" x 32" (838 x 813) are multiple section dampers consisting of equal sections no larger than 24" x 24" (610 x 610) overall.

To determine the overall height (H dimension) of double high and triple high damper assemblies: Add 2 3/4" (70) to the B dimension. For example, a 24" (610) double high assembly is 26 3/4" (679) overall height. A 65" (1651) triple high assembly is 67 3/4" (1721) overall height. The bottom sections on double and triple high assemblies are Style A dampers.

Dimensions shown in parentheses () indicate millimeters.

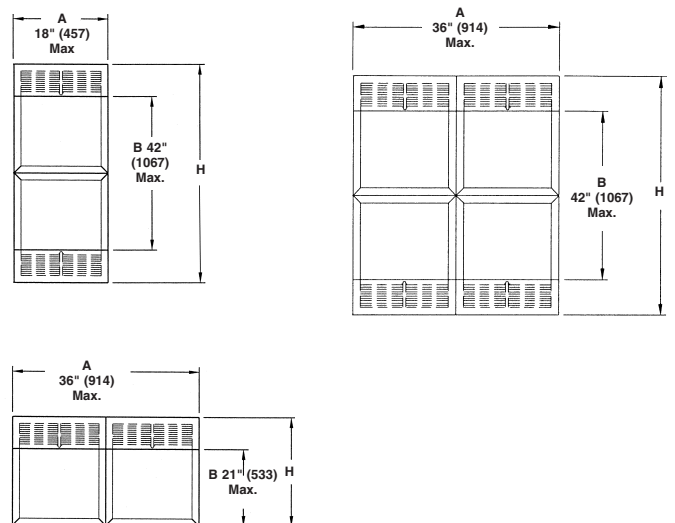
HORIZONTAL INSTALLATION

Single Section Dampers



B	H
4 (102)	5 3/4 (146)
5 (127)	6 3/4 (171)
6 (152)	7 3/4 (197)
7 (178)	8 3/4 (222)
8 (203)	10 3/4 (273)
9 (229)	11 3/4 (298)
10 (254)	12 3/4 (324)
11 (279)	13 3/4 (349)
12 (305)	14 3/4 (375)
13 (330)	15 3/4 (400)
14 (356)	16 3/4 (425)
15 (381)	17 3/4 (451)
16 (406)	18 3/4 (476)
17 (432)	19 3/4 (502)
18 (457)	20 3/4 (527)
19 (483)	21 3/4 (552)
20 (508)	22 3/4 (578)
21 (533)	23 3/4 (603)

Multiple Section Dampers



Important Notes:

- Dampers larger than 24" x 21" (610 x 533) are multiple section dampers consisting of equal sections no larger than 18" x 24" (457 x 610) overall.
- Dampers larger than 24" w or 21" h (610 x 533) have a minimum size of 10" w or 8" h (254 x 203).

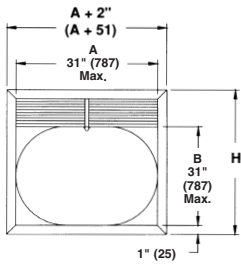
To determine the overall height (H dimension) of double high damper assemblies: Add 3 1/2" (89) to B dimension on dampers over 21" (533) through 24" (610) and 5 1/2" (140) on all other dampers. For example, a damper with a 28" (711) B dimension has an overall H dimension of 33 1/2" (851).

Dimensions shown in parentheses () indicate millimeters.

C, CO, LO AND LC STYLE DAMPERS

VERTICAL INSTALLATION

Single Section Dampers

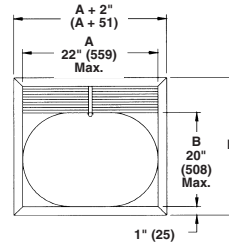


	B	H
3	(76)	5 ³ / ₄ (146)
4	(102)	6 ³ / ₄ (171)
5	(127)	7 ³ / ₄ (197)
6	(152)	8 ³ / ₄ (222)
7	(178)	9 ³ / ₄ (248)
8	(203)	11 ³ / ₄ (298)
9	(229)	12 ³ / ₄ (324)
10	(254)	13 ³ / ₄ (349)
11	(279)	14 ³ / ₄ (375)
12	(305)	15 ³ / ₄ (400)
13	(330)	16 ³ / ₄ (425)
14	(356)	17 ³ / ₄ (451)
15	(381)	18 ³ / ₄ (476)
16	(406)	20 ³ / ₄ (527)
17	(432)	21 ³ / ₄ (552)
18	(457)	22 ³ / ₄ (578)
19	(483)	23 ³ / ₄ (603)
20	(508)	23 ³ / ₄ (603)
21	(533)	25 ³ / ₄ (654)
22	(559)	26 ³ / ₄ (679)
23	(584)	27 ³ / ₄ (705)
24	(610)	28 ³ / ₄ (730)
25	(635)	29 ³ / ₄ (756)
26	(660)	30 ³ / ₄ (781)
27	(686)	31 ³ / ₄ (806)
28	(711)	32 ³ / ₄ (832)
29	(737)	33 ³ / ₄ (857)
30	(762)	34 ³ / ₄ (883)
31	(787)	35 ³ / ₄ (908)

Dimensions shown in parentheses () indicate millimeters.

HORIZONTAL INSTALLATION

Single Section Dampers



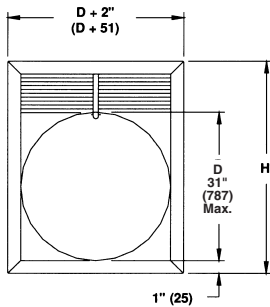
	B	H
3	(76)	5 ³ / ₄ (146)
4	(102)	6 ³ / ₄ (171)
5	(127)	7 ³ / ₄ (197)
6	(152)	8 ³ / ₄ (222)
7	(178)	10 ³ / ₄ (273)
8	(203)	11 ³ / ₄ (298)
9	(229)	12 ³ / ₄ (324)
10	(254)	13 ³ / ₄ (349)
11	(279)	14 ³ / ₄ (375)
12	(305)	15 ³ / ₄ (400)
13	(330)	16 ³ / ₄ (425)
14	(356)	17 ³ / ₄ (451)
15	(381)	18 ³ / ₄ (476)
16	(406)	19 ³ / ₄ (502)
17	(432)	20 ³ / ₄ (527)
18	(457)	21 ³ / ₄ (552)
19	(483)	22 ³ / ₄ (578)
20	(508)	23 ³ / ₄ (603)

Dimensions shown in parentheses () indicate millimeters.

CR AND LR STYLE DAMPERS

VERTICAL INSTALLATION

Single Section Dampers

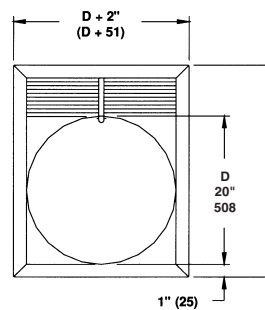


	B	H
3	(76)	5 ³ / ₄ (146)
4	(102)	6 ³ / ₄ (171)
5	(127)	7 ³ / ₄ (197)
6	(152)	8 ³ / ₄ (222)
7	(178)	9 ³ / ₄ (248)
8	(203)	11 ³ / ₄ (298)
9	(229)	12 ³ / ₄ (324)
10	(254)	13 ³ / ₄ (349)
11	(279)	14 ³ / ₄ (375)
12	(305)	15 ³ / ₄ (400)
13	(330)	16 ³ / ₄ (425)
14	(356)	17 ³ / ₄ (451)
15	(381)	18 ³ / ₄ (476)
16	(406)	20 ³ / ₄ (527)
17	(432)	21 ³ / ₄ (552)
18	(457)	22 ³ / ₄ (578)
19	(483)	23 ³ / ₄ (603)
20	(508)	23 ³ / ₄ (603)
21	(533)	25 ³ / ₄ (654)
22	(559)	26 ³ / ₄ (679)
23	(584)	27 ³ / ₄ (705)
24	(610)	28 ³ / ₄ (730)
25	(635)	29 ³ / ₄ (756)
26	(660)	30 ³ / ₄ (781)
27	(686)	31 ³ / ₄ (806)
28	(711)	32 ³ / ₄ (832)
29	(737)	33 ³ / ₄ (857)
30	(762)	34 ³ / ₄ (883)
31	(787)	35 ³ / ₄ (908)

Dimensions shown in parentheses () indicate millimeters.

HORIZONTAL INSTALLATION

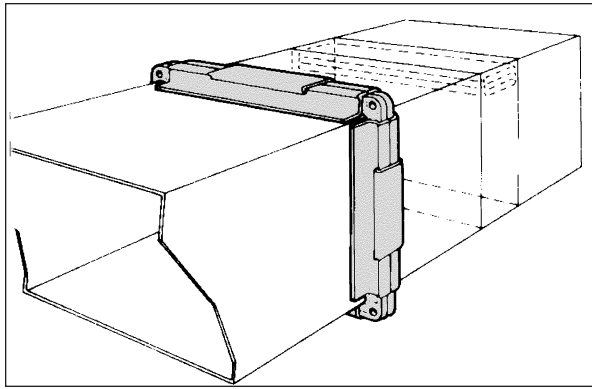
Single Section Dampers



	B	H
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4	(102)	6 ³ / ₄ (171)
5	(127)	7 ³ / ₄ (197)
6	(152)	8 ³ / ₄ (222)
7	(178)	10 ³ / ₄ (273)
8	(203)	11 ³ / ₄ (298)
9	(229)	12 ³ / ₄ (324)
10	(254)	13 ³ / ₄ (349)
11	(279)	14 ³ / ₄ (375)
12	(305)	15 ³ / ₄ (400)
13	(330)	16 ³ / ₄ (425)
14	(356)	17 ³ / ₄ (451)
15	(381)	18 ³ / ₄ (476)
16	(406)	19 ³ / ₄ (502)
17	(432)	20 ³ / ₄ (527)
18	(457)	21 ³ / ₄ (552)
19	(483)	22 ³ / ₄ (578)
20	(508)	23 ³ / ₄ (603)

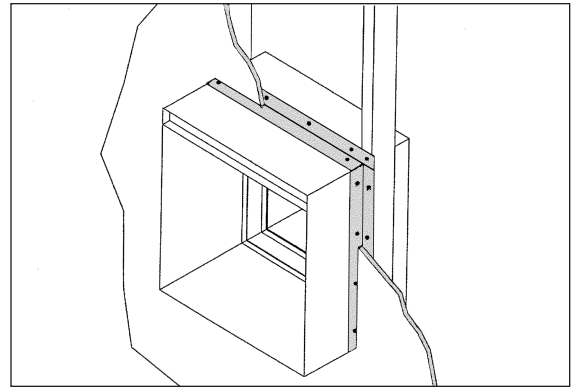
Dimensions shown in parentheses () indicate millimeters.

LABOR SAVER ACCESSORY OPTIONS



TDF OR DUCTMATE BREAKAWAY CONNECTIONS

Meet UL breakaway connection requirements without changing connectors. Ruskin fire dampers can be installed using non-matched flange connections for the breakaway requirement. Any flange connection can mate to a different type or model on Ruskin fire dampers.



FAST MOUNTING ANGLES

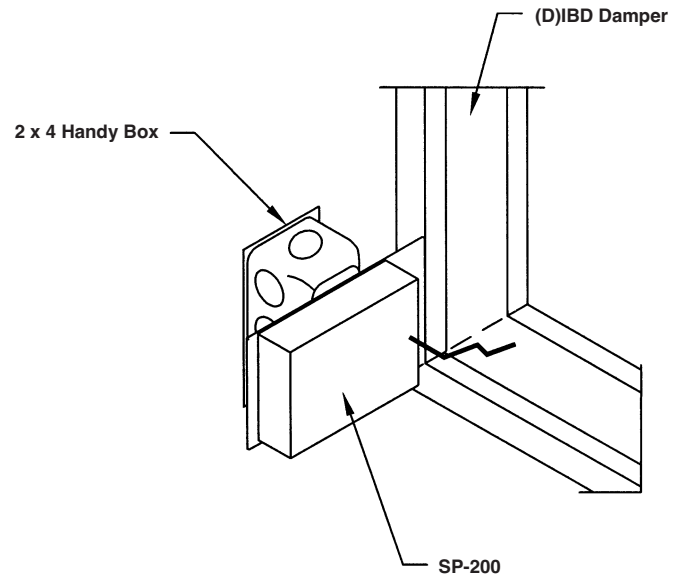
FAST mounting angles are used in lieu of conventional, eight piece mounting angles and are installed on only **one side of the wall** when used with Ruskin DIBD20 fire dampers. The FAST angle can be fastened directly to the metal stud underneath the fire rated gypsum wallboard.

SP200 SWITCH PACKAGE OPTION

APPLICATION

The SP200 switch package on curtain fire dampers (IBD's and DIBD's), used in conjunction with the MCP3 (Single Control Station with Open/Closed Lights) provides the ability to remotely identify

the damper's blade position. Electrical interface with remote control on/off fan stations is also possible with the SP200.



Standard Mounting Detail

LEED 2009 Information

VOC Content (g/l) - 0

Manufacturing Locations (MR Credit 5.1)

Mira Loma, CA 91752
Parsons, KS 67357
Lexington, KY 40509
Fairmont, WV 26554

Recycled Content (MR Credit 4.1 & 4.2)

7.5% Post Consumer
7.5% Pre-Consumer Post Industrial

Approximate Damper Assembly Weight

DIBD20 and 230 – 9 lbs. per sq. ft.
DIBD40 and 430 – 11 lbs. per sq. ft.
DIBD60 and 630 – 13 lbs. per sq. ft.

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 1½ 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, DBD40 with 14" (356) sleeve or DIBD60 with 16" (406) sleeve (**specifier select**).

SUGGESTED SPECIFICATION FOR DIBD230, 430, 630

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 3 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 DIBD230 with 12" (305) sleeve, DBD430 with 14" (356) sleeve or DIBD630 with 16" (406) sleeve.



3900 Dr. Greaves Rd.
Kansas City, MO 64030
(816) 761-7476
FAX (816) 765-8955
www.ruskin.com