

DIBD2 CURTAIN TYPE DYNAMIC FIRE DAMPERS 1-1/2 HOUR UL555 RATED FOR USE IN DYNAMIC AND STATIC SYSTEMS

Application

Ruskin Model DIBD2 1½ hour UL classified dynamic (fans on) or static (fans off) curtain style fire damper for use in HVAC systems that remain in operation during a fire. 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 DIBD2 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.

Damper Sizes

See pages 2 - 5 for minimum and maximum UL sizes.
See page 6 - 9 for construction details on multiple section assemblies.

Options

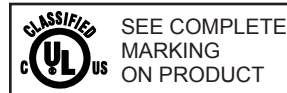
- **True Round Fire Damper** - See model FDR25
- **Stainless Steel Construction** – See model (D)IBD2SS
- **FM Approvals** as Specification Tested Product
- **SP200** Switch Package to allow remote indication of damper blade position
- **FAST Angles** factory supplied one-side installation. Other angles of various sizes and gauges also for one-side or two-side installation
- **Factory Sleeves** of various lengths and gauges to insure field compliance with UL installation requirements
- **MCP** Control panels for monitoring purpose
- **Access Door** factory mounted access door in common sleeve. See model (D)IBD2-D
- **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 DIBD2 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**
DIBD2 #3225-0245:0005
- **New York City MEA 450-06-M**

UL CLASSIFIED
UL555 Listing R5531



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

DIBD2 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)

DIBD2 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 – 72" w x 48" h (1829 x 1219) or 48" w x

72" h (1219 x 1829) or 120" w x 24" h (3048 x 610)

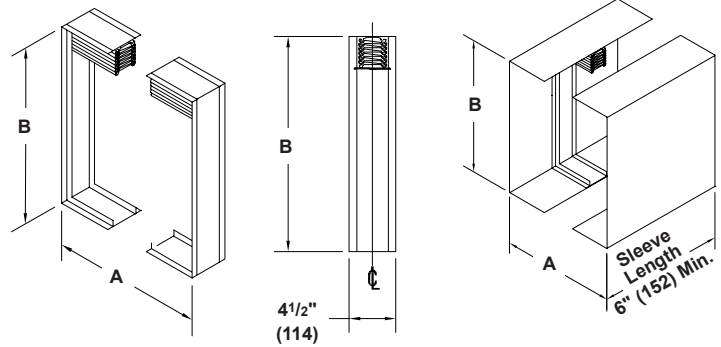
Horizontal Installation – 36" w x 48" h (914 x 1219) or 48" w x 36" h (1219 x 914). The minimum width or height becomes 9" x 9" (229 x 229) when dampers width or height is over 24" (610).

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

Vertical or Horizontal Installation – 9" w x 9" h (229 x 229) **DIBD2**

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

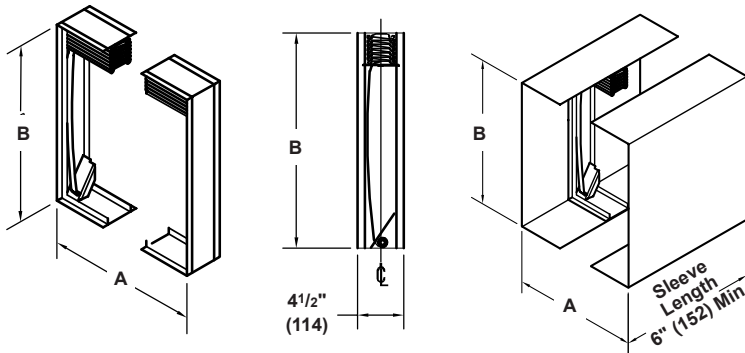
Vertical or Horizontal Installation – 24" w x 24" h (610 x 610)



A Style w/o Sleeve

A Style w/Sleeve

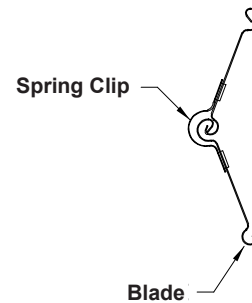
Vertical Mount Single Section Assemblies
Units 24" x 24" (610 x 610)



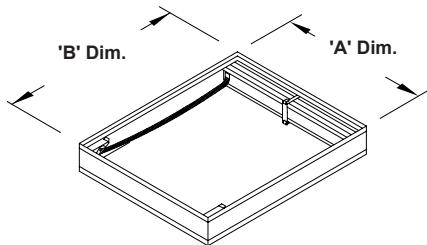
A Style w/o Sleeve

A Style w/Sleeve

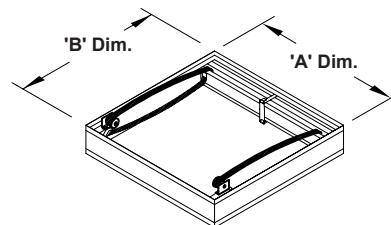
Vertical Mount Units 24" x 24" (610 x 610)
and Multiple Section Assemblies



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



Horizontal Mount Detail used in
Single Section Assemblies



Horizontal Mount Detail used in
Multiple Section Assemblies

DAMPER STYLES AND SIZES

B Style

Blades out of air stream
Sleeve optional
80 - 90% free area

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

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)

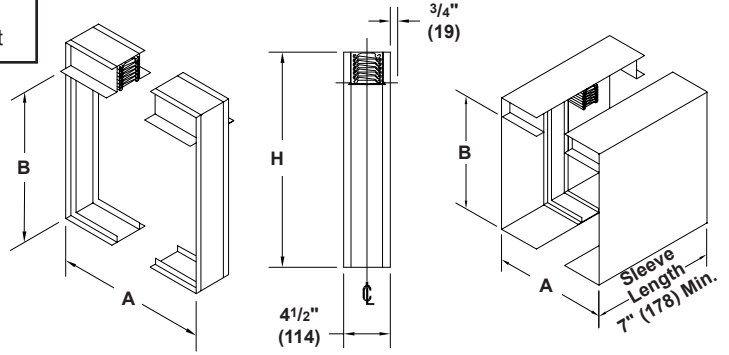
Single Section
Vertical Installation – 33"w x 32"h (838 x 813)
Horizontal Installation – 24"w x 21"h (610 x 533)
Multiple Section Assembly
Vertical Installation – 72"w x 45"h (1829 x 1143) or 48"w x 69"h (1219 x 1753) or 120"w x 21"h (3048 x 533)
Horizontal Installation – 36"w x 42"h (914 x 1067) or 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)



B Style w/o Sleeve

B Style w/Sleeve

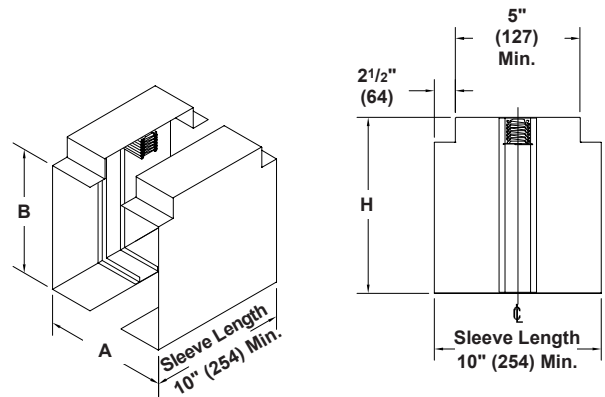
See Style A for Construction Details

BC Style

Blades out of air stream
Fully welded sleeve required
80 - 90% free area

See Style B for Minimum and Maximum Sizes

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



BC Style w/Sleeve

FDR25 True Round Fire Damper 1 1/2 hour UL 555 Listed

Replacing square to round transitions on duct sizes 24" (610) and under to increase 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 and 4" w.g. 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

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 2000 fpm (10.2 m/s)

Vertical Installation – 3" diameter (76)

Horizontal Installation – 4" diameter (102)

MAXIMUM SIZE 2000 fpm (10.2 m/s)

Single Section

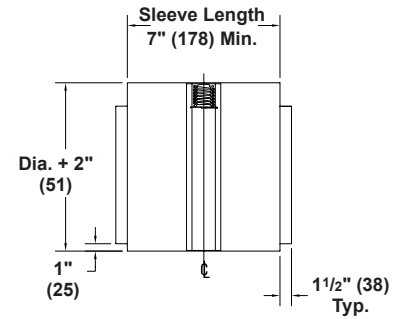
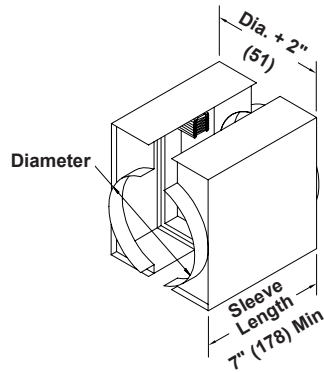
Vertical Installation – 31" diameter (787)

Horizontal Installation – 20" diameter (508)

Multiple Section Assembly

Vertical Installation – 46" diameter (1118)

Horizontal Installation – 34" diameter (864)



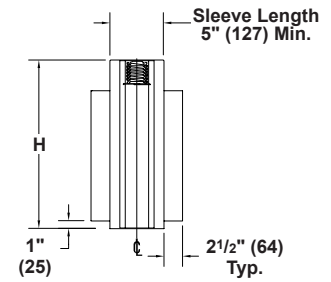
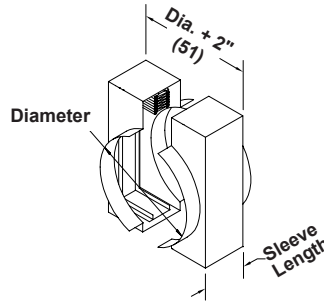
CR Style

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

Vertical or Horizontal Installation – 7" diameter (178)

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

Vertical or Horizontal Installation – 20" diameter (508)



WR Style

D = Diameter
H = Overall Damper Height

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 2000 fpm (10.2 m/s)

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

MAXIMUM SIZE 2000 fpm (10.2 m/s)

Single Section

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

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

Multiple Section Assembly

Vertical Installation – 70"w x 44"h (1778 x 1118) or 46"w x

68"h (1168 x 1727) or 118"w x 20"h (2997 x 508)

Horizontal Installation – 34"w x 42"h (864 x 1067) or 46"w x 32"h (1168 x 813). The minimum width or height becomes 7"w x 7"h (178 x 178) when damper's width or height is over 21" (533)

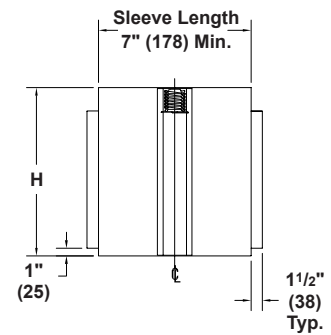
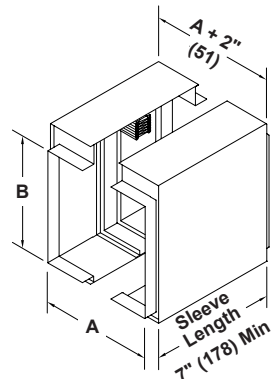
DIBD2 MINIMUM SIZE UNITS ABOVE 2000 fpm (10.2 m/s)

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

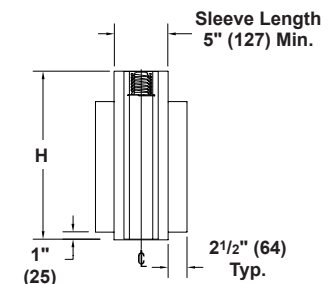
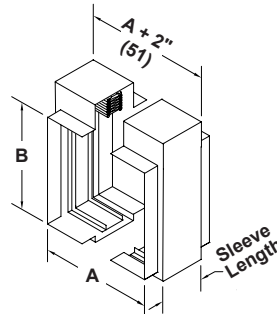
DIBD2 MAXIMUM SIZE UNITS ABOVE 2000 fpm (10.2 m/s)

Single Section only

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



C Style w/Sleeve



WC Style w/Sleeve

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

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 2000 fpm (10.2 m/s)

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

MAXIMUM SIZE 2000 fpm (10.2 m/s)

Single Section

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

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

Multiple Section Assembly

Vertical Installation – 70"w x 44"h (1778 x 1118) or 46"w x 68"h (1168 x 1727) or 118"w x 20"h (2997 x 508)

Horizontal Installation – 34"w x 42"h (864 x 1067) or 46"w x 32"h (1168 x 813). The minimum width or height becomes 7"w x 7"h (178 x 178) when damper's width or height is over 21" (533)

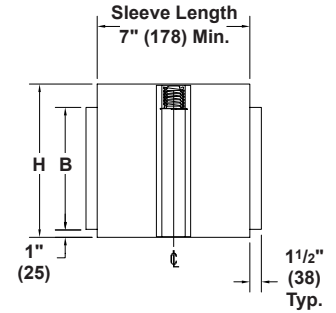
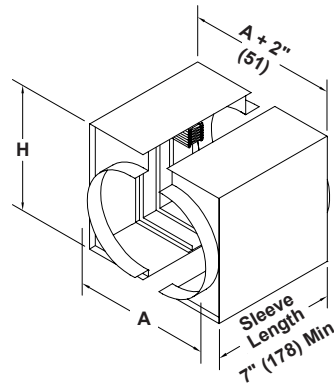
DIBD2 MINIMUM SIZE UNITS ABOVE 2000 fpm (10.2 m/s)

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

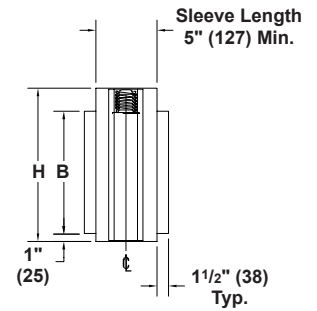
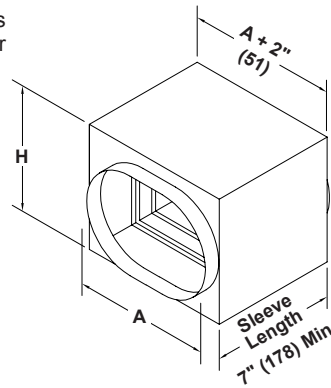
DIBD2 MAXIMUM SIZE UNITS ABOVE 2000 fpm (10.2 m/s)

Single Section only

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



CO Style



WO Style

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

LR Style – Round Transition

Round enclosure - frame and blades out of air stream

Sleeve optional non-sealed assembly

95 - 100% free area

MINIMUM SIZE 2000 fpm (10.2 m/s)

Vertical Installation – 3" diameter (76)

Horizontal Installation – 4" diameter (102)

MAXIMUM SIZE 2000 fpm (10.2 m/s)

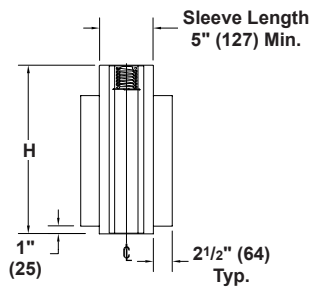
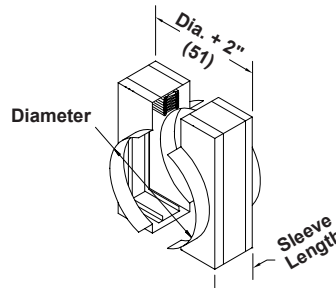
Single Section

Vertical Installation – 31" diameter (787)

Horizontal Installation – 20" diameter (508)

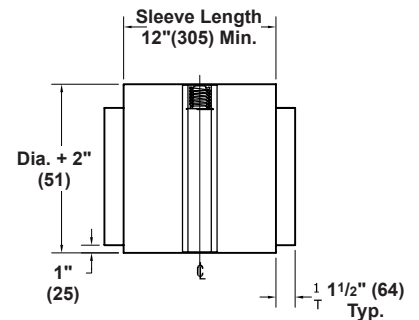
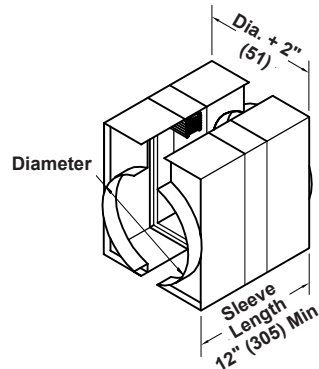
Multiple Section Assemblies

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



LR Style

D = Diameter
H = Overall Damper Height



LR Style w/Sleeve

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 2000 fpm (10.2 m/s)

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

MAXIMUM SIZE 2000 fpm (10.2 m/s)

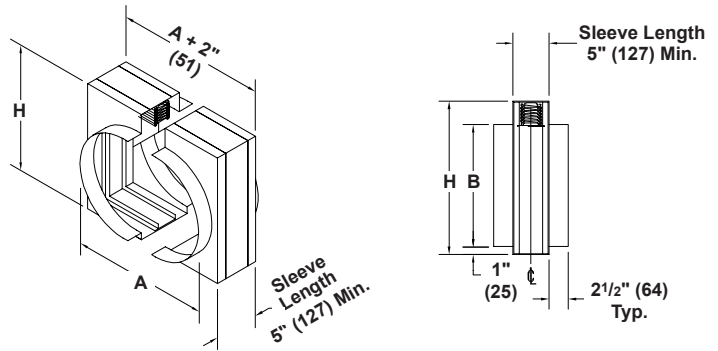
Single Section

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

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

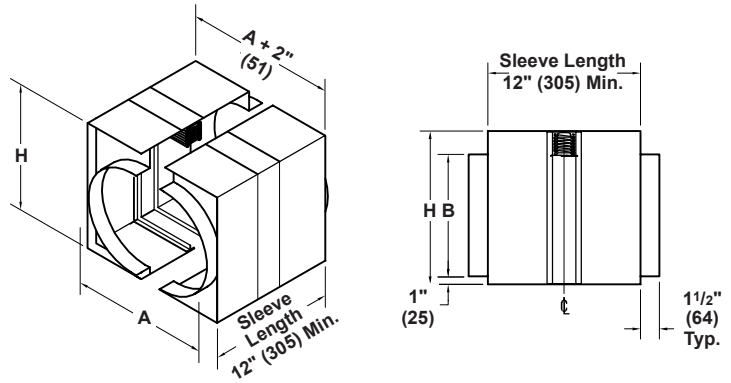
Multiple Section Assemblies

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



LO Style

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



LO Style w/Sleeve

R Style – Round Transition

Round enclosure. Blades partially in the air stream
Sleeve optional non-sealed assembly

85 - 95% free area

MINIMUM SIZE 2000 fpm (10.2 m/s)

Vertical Installation – 3" diameter (76)

Horizontal Installation – 4" diameter (102)

MAXIMUM SIZE 2000 fpm (10.2 m/s)

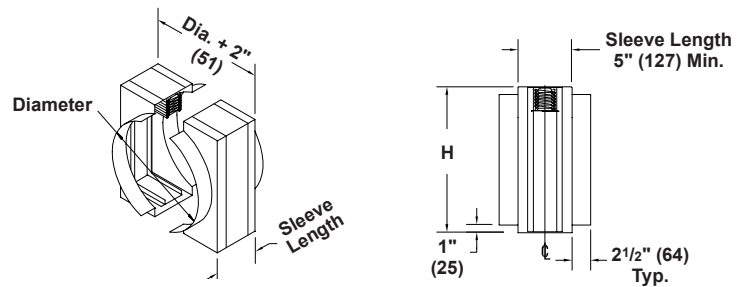
Single Section

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

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

Multiple Section Assemblies

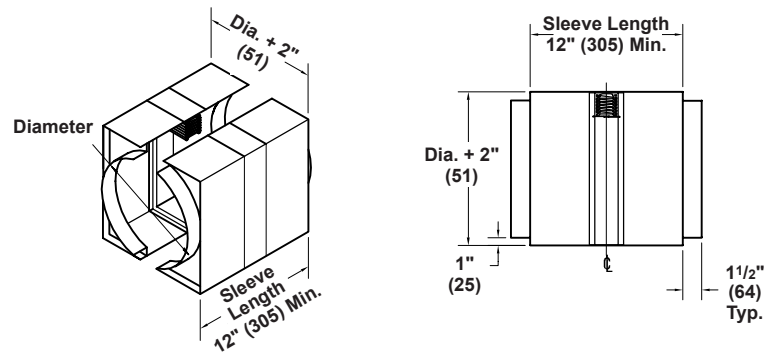
Not available in Style R. See Style CR for larger assemblies



R Style

NOTE: Transition collars to be sealed (by others).

D = Diameter
H = Overall Damper Height



R Style w/Sleeve

DIBD2 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 springs 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 DIBD2.

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 DIBD2

(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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