FDR25

Galvanized Steel True Round Fire Damper

1 1/2 Hour UL555 Rating for use in Dynamic & Static Systems

RUSKIN
AUTHORITY IN AIR CONTROL

APPLICATION

Ruskin FDR25 is a true round fire damper designed for use in fire rated walls and floors in either Static or Dynamic systems. The damper is rated for maximum velocity of 2,000 fpm (10.2 m/s) and 4" w.g. (1 kPa). The integral frame and unique "cinch plate" design provides a low cost, high performing damper. The FDR25 has UL approval for plate on one-side of metal stud or concrete walls. The FDR25 is the ideal choice when round duct is used on a project, arriving at the job site with everything required to install the damper.

STANDARD CONSTRUCTION

Frame/Sleeve	20 gauge (.9) galvanized steel, standard 14" (356) integral sleeve Frame/sleeves available up to 36" (914) in length.
Blades	Single skin, 14 gauge (1.9) galvanized steel.
Bearings	Stainless steel sleeve type, pressed into frame.
Axle	1/2" (13) diameter plated steel.
Fuse Link	165°F (74°C) is standard. 212°F (100°C) or 285°F (141°C) available at additional cost.

DAMPER SIZES

Minimum size	Vertical or horizontal installation - 6" (152) diameter.
Maximum size	Vertical or horizontal installation - 24" (610) diameter.

MAXIMUM OPERATIONAL RATINGS

UL555 Hourly Rating	1 1/2 Hours
Maximum Velocity	2000 FPM (10.2 m/s)
Maximum Pressure	4 in. wg (1kPa)

U.S. GREEN BUILDING COUNCIL MEMBER

ISO9001 CERTIFIED

5 YEAR LIMITED WARRANTY

OPTIONS

Stainless Steel Construction (See Model FDR25SS).

Sleeve/Frame of various lengths to insure field compliance with UL installation requirements.

Model FDR25 meets the requirements for fire dampers established by:

- **National Fire Protection Association**
  NFPA Standards 80, 90A, 92A, 92B, 101 and 105
- **ICC International Building Codes**
- **CSFM California State Fire Marshal**
  Fire Damper Listing (#3225-0245:0115)

CLASSIFIED c UL us

SEE COMPLETE MARKING ON PRODUCT

UL CLASSIFIED
UL555 Classification R5531
ULC S112

NOTES:
- Units furnished approximately 1/8" (3) smaller than given size.
- Dimensions shown in parentheses ( ) indicate millimeters.

PERFORMANCE DATA

This pressure drop testing was conducted in accordance with AMCA Standard 500-D using the three configurations shown. All data has been corrected to represent standard air at a density of .075 lb/ft^3(1.201 kg/m^3).

Actual pressure drop found in any HVAC system is a combination of many factors. This pressure drop information along with an analysis of other system influences should be used to estimate actual pressure losses for a damper installed in a given HVAC system.

AMCA TEST FIGURE

Figure 5.3 Illustrates a fully ducted damper. This configuration has the lowest pressure drop of the three test configurations because entrance and exit losses are minimized by straight duct runs upstream and downstream of the damper.

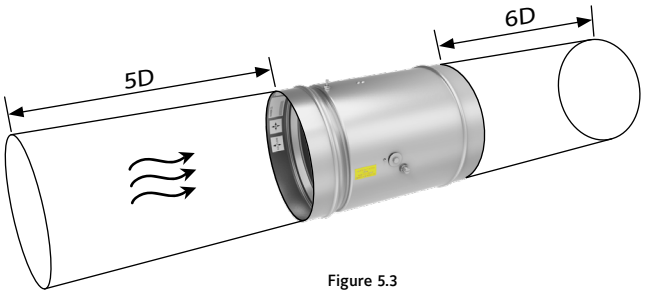


Figure 5.3

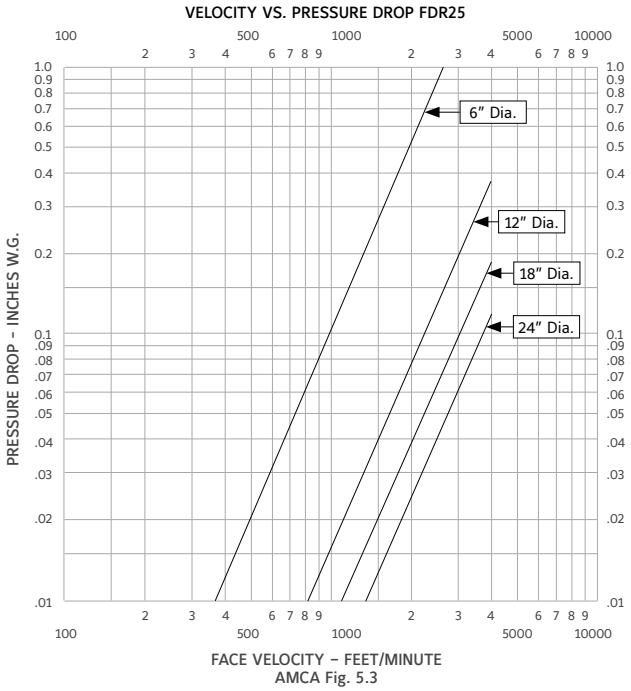


Figure 5.2 Illustrates a ducted damper exhausting air into an open area. This configuration has a lower pressure drop than Figure 5.5 because entrance losses are minimized by a straight duct run upstream of the damper.

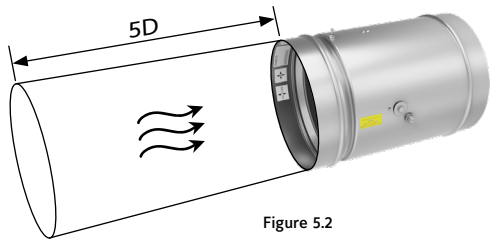
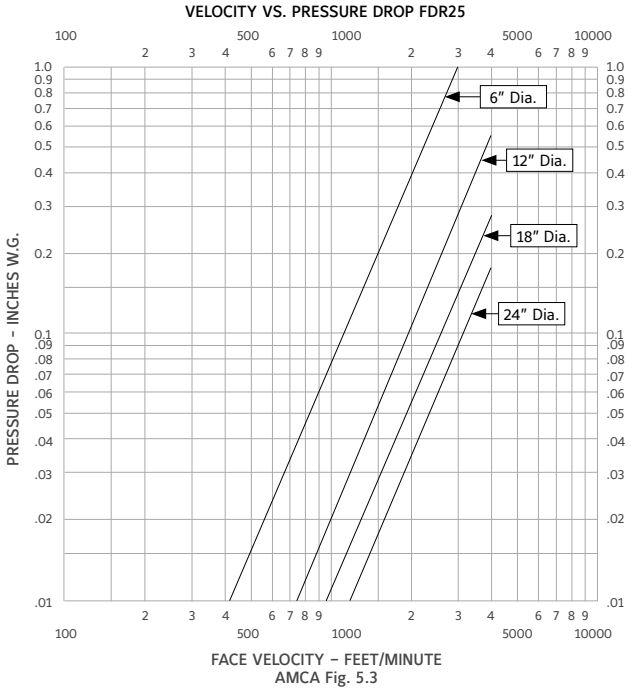


Figure 5.2



PERFORMANCE DATA

Figure 5.5 Illustrates a plenum mounted damper. This configuration has the highest pressure drop because of extremely high entrance and exit losses due to the sudden changes of area in the system.

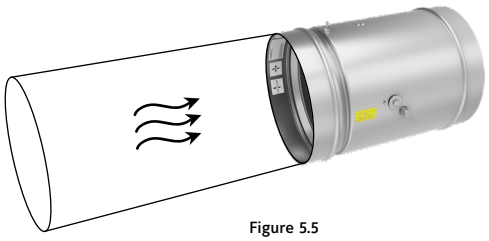
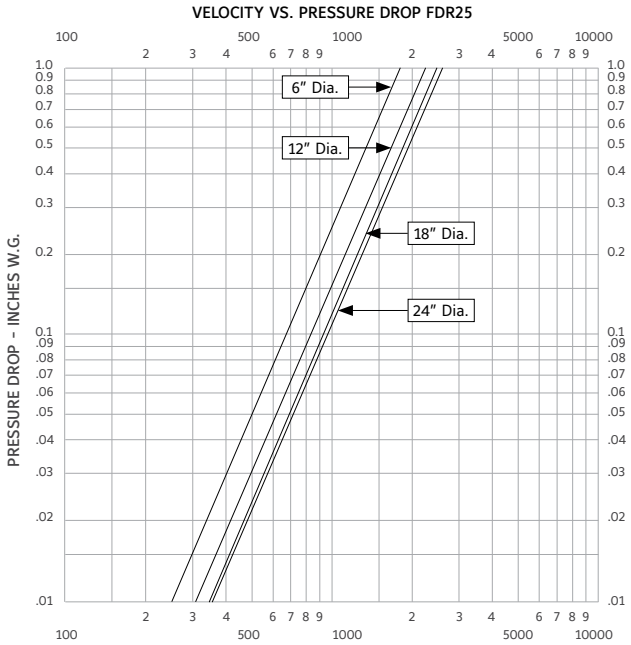
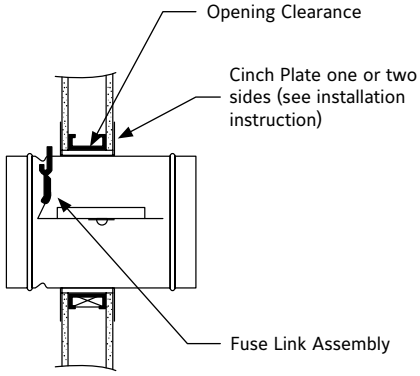


Figure 5.5



AMCA Fig. 5.5

GENERAL INSTALLATION INFORMATION



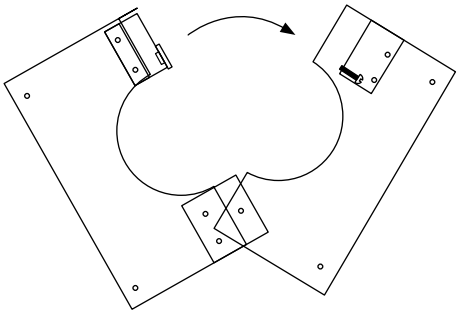
METAL/ WOOD/MASONRY WALL OR CONCRETE FLOOR INSTALLATION

Minimum Sleeve Length	
Wall/Floor Thickness	**Min. Sleeve Length**
4" (102)	14" (356)
5" (127)	14" (356)
6" (152)	14" (356)
7" (178)	17" (432)
8" (203)	17" (432)
9" (229)	17" (432)
10" (254)	20" (508)
12" (305)	20" (508)
Over 12" (305) Thru 24" (609)	Add 1" (25) for every inch of wall/floor depth

NOTE: 36" (914) maximum sleeve length.

A **square** opening in wood or metal stud walls or masonry walls and floors shall be a minimum of 1" (25) and a maximum of 2 1/2" (64) larger than the damper diameter. See wood stud and metal stud framing for fire dampers installation instructions supplement for complete framing details. A **round** opening in masonry walls or floors shall be a minimum of 1" (25) and a maximum of 2 1/2" (64) larger than the damper diameter.

Factory supplied retaining "cinch" plates hold the damper within the wall opening. The plates must overlap the opening a minimum of 1/2" (13). The plate fits snugly around the integral sleeve. The plates are fastened directly to the wall or floor.

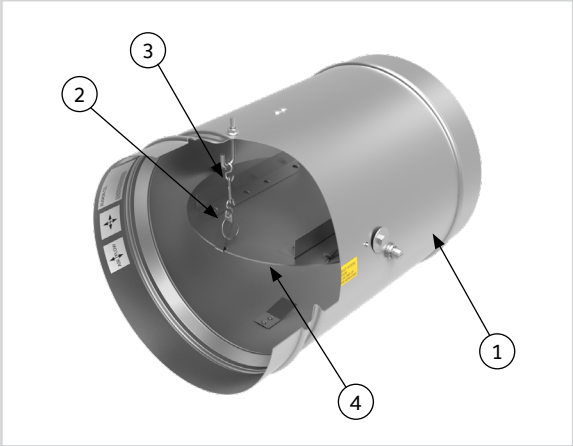


RETAINING "CINCH" PLATES

REFER TO THE FDR25 INSTALLATION INSTRUCTIONS FOR COMPLETE INSTALLATION DETAILS.

NOTE: Diameter + 6" (152) = plate size

FUSE LINK ADJUSTMENT



To test or replace fuse link:

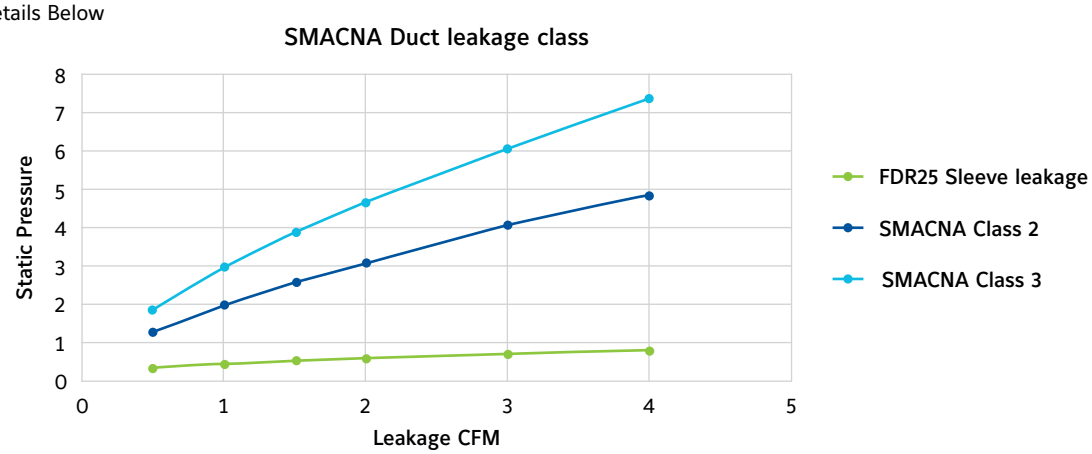
- Loosen the nuts on the J-bolt (do not remove nuts all together).
- Remove fuse link and continue to hold blade.
- Let go of blade and let it cycle shut.
- Reset blade to open position and reattach fuse link.
- Tighten down nuts on the J-Bolt.

ITEM	DESCRIPTION
1.	Round Fire Damper
2.	Fuse Link
3.	J-Bolt
4.	Damper Blade

CAUTION: Damper assembly is under spring tension. Care should be taken to avoid bodily injury or damage to the damper assembly.

DAMPER LEAKAGE TO ATMOSPHERE

When Ruskin's Fire Dampers are supplied with a factory installed damper sleeve, the sealed sleeve meets the lowest duct leakage requirements set fourth by SMACNA. See Details Below



SUGGESTED SPECIFICATION

Fire dampers meeting or exceeding the following specifications shall be furnished and installed at locations shown on plans or as described in schedules. Dampers shall meet the requirements of NFPA80, 90A, 92A, and 92B and shall have a fire rating of 1 1/2 hours in accordance with the latest edition of UL555. Fire Dampers shall be produced in an ISO 9001 certified factory and shall be warranted to be free from defects in material and workmanship for a period of 5 years after date of shipment.

Damper shall be a minimum of 20 (.9) gauge galvanized steel and blade shall be one piece 14 (1.9) gauge minimum galvanized. Bearings shall be stainless steel sleeve type pressed in the frame (Bronze bearings shall not be acceptable). Damper must have an integral sleeve and 20 (.9) gauge retaining cinch plates for damper mounting (Square to round transitions shall not be acceptable).

Each round fire damper shall be 1 1/2 hour fire protection rating and shall be supplied with a 165°F (74°C) or 212°F (100°C) fusible link. Each fire damper shall be labeled for use in dynamic or static systems. The damper shall be rated for dynamic closure at 2000 fpm (10.2 m/s) and 4" w.g. (1 kPa) static pressure and shall be tested and rated to close with airflow in either direction. Fire dampers shall be approved for vertical or horizontal mounting as required by the location shown and shall be installed using cinch plate installation in accordance with the damper manufacturer's installation instructions.

Fire dampers shall be Ruskin model FDR25.

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

LINKS TO IMPORTANT DOCUMENTS

Document Title
FDR25 & FDR25SS Installation Instructions
Operations and Maintenance Instructions
Limited Warranty Document

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AUTHORITY IN AIR CONTROL

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