

FD35

Galvanized Steel Multiple Blade "Static" Fire Damper
1 1/2 Hour Rating UL555 Rated | For use in Static Systems



APPLICATION

The FD35 is a 1 1/2 hour UL classified multiple blade static (fans off) fire dampers. 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 1 1/2 hour fire protection rating. The FD35 is constructed with 304 or 316 stainless steel 3-V blades and frame. The FD35 can be installed vertically in walls or horizontally in masonry floors and is rated for airflow in either direction.

STANDARD CONSTRUCTION

Frame	5" x 1" x 16 gauge (127 x 25 x 1.6) galvanized steel hat channel, structurally superior to 13 gauge (2.3) channel frame.
Blades	16 gauge (1.52) galvanized, 304 or 316 stainless steel triple vee groove, approximately 6" (152) on center.
Bearings	Stainless steel sleeve, pressed into frame.
Linkage	Concealed in frame.
Axles	1/2" (13) plated steel hex or 300 series stainless steel.
Fusible Link	165°F (74°C) standard. 212°F (100°C) available.
Damper Weight	Approximately 8 lbs. per sq. ft. without damper sleeve.

DAMPER SIZES

Minimum Size	Vertical or Horizontal Installation – 8"w x 6"h (203 x 152)
Maximum Size	Single Section Vertical or Horizontal Installation – 36"w x 48"h (914 x 1219)
	Multiple Section Vertical or Horizontal Installation – 120"w x 96"h (3048 x 2438)

OPTIONS

SP100 Switch Package to remotely indicate damper blade position.
FAST Angle for one side angle installation.
PFMA Angles for two side angle installations.
Sleeve of various lengths and gauges to ensure field compliance with UL installation requirements.
Jamb Seals stainless steel flexible metal compression type.
Blade Seals silicone blade edge seal.
Crank Lever to assist with testing and fuse link replacement.
GA, Grille Access for one side installation and "out of wall" applications. (See models FD35GA)
OW, Out of Wall of application where the damper can not be installed within the plane of the wall or floor. (See models FD35/OW)



The FD35 dampers meet the requirements for fire dampers established by:

- ▶ **National Fire Protection Association**
NFPA Standards 80, 90A, 92A, 92B, 105 and 101
- ▶ **ICC International Building Codes**
- ▶ **CSFM California State Fire Marshal Listing**
#3225-245:005



SEE COMPLETE MARKING ON PRODUCT

UL555 Classification
R5531

Canadian Standard
CAN/ULC-S112

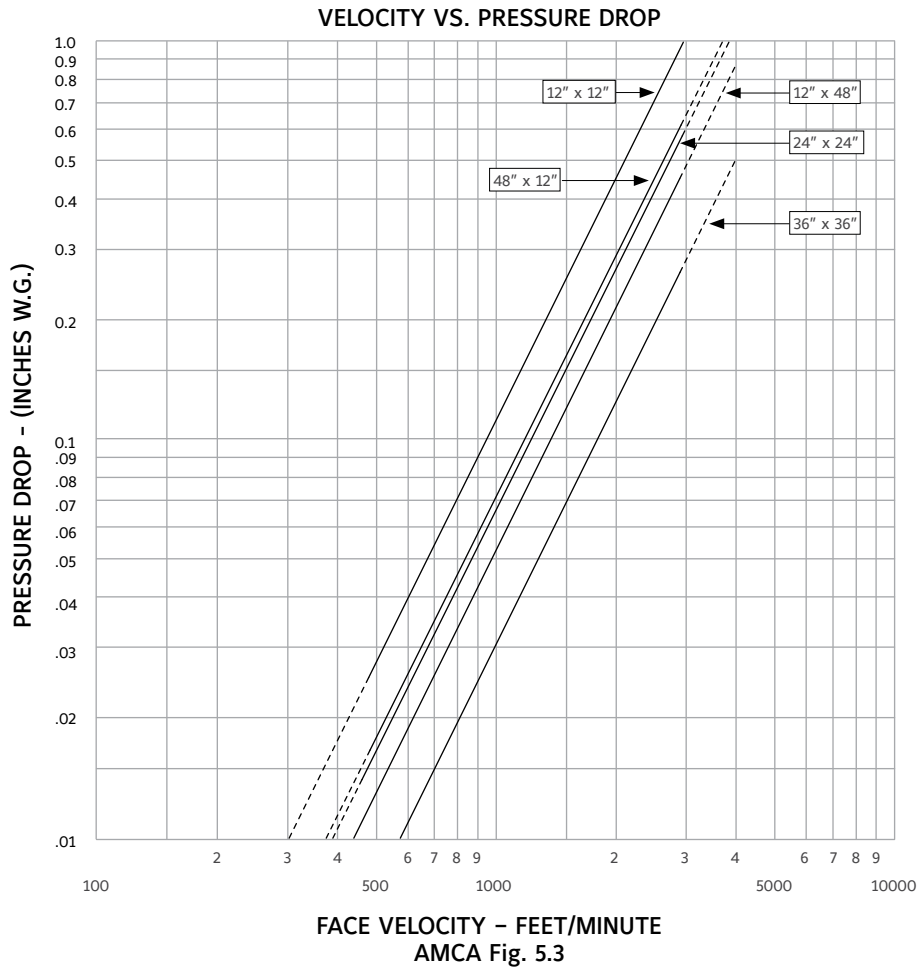
NOTES:

- Dimensions in inches, parentheses () indicate millimeters.
- Damper assembly furnished actual size.

AMCA LICENSED LEAKAGE AND AIR PERFORMANCE DATA

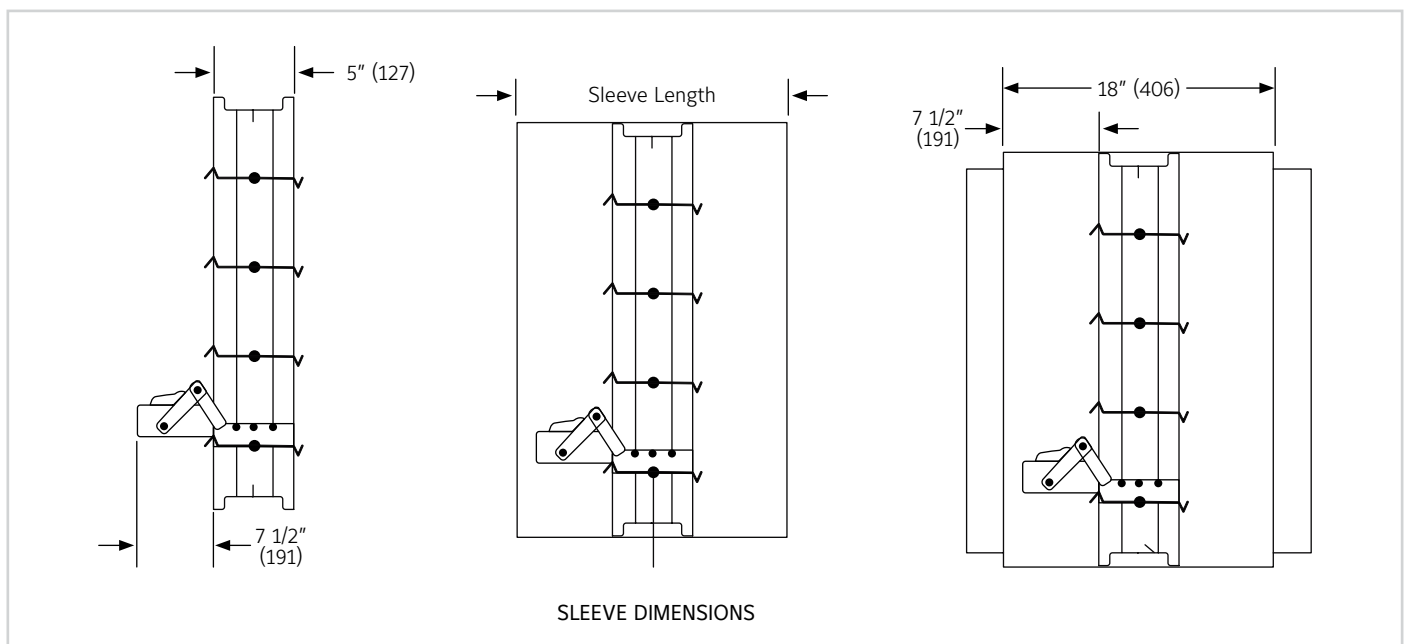
To determine the AMCA Licensed air performance:

Locate the applicable feet per minute face velocity on the bottom of the velocity vs. pressure drop chart below. Move up the chart to the most appropriate size damper line. From the intersection point, move left to determine the pressure drop on the left side of the chart.

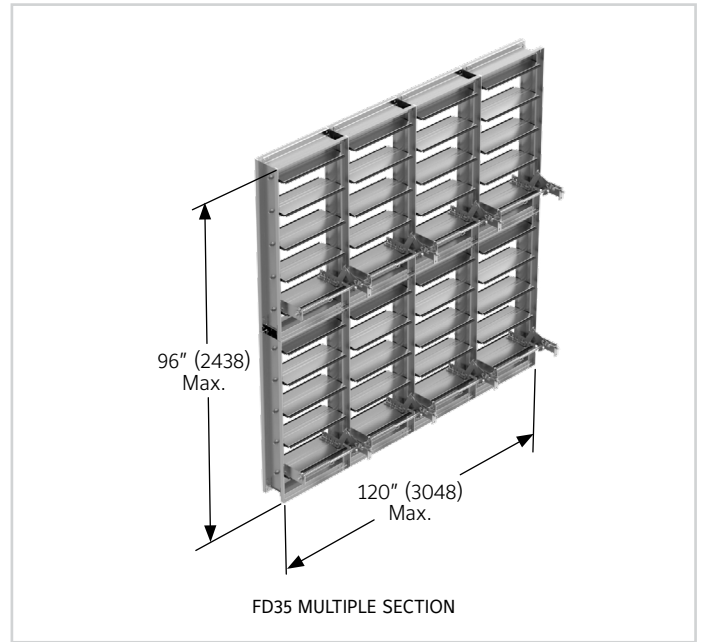
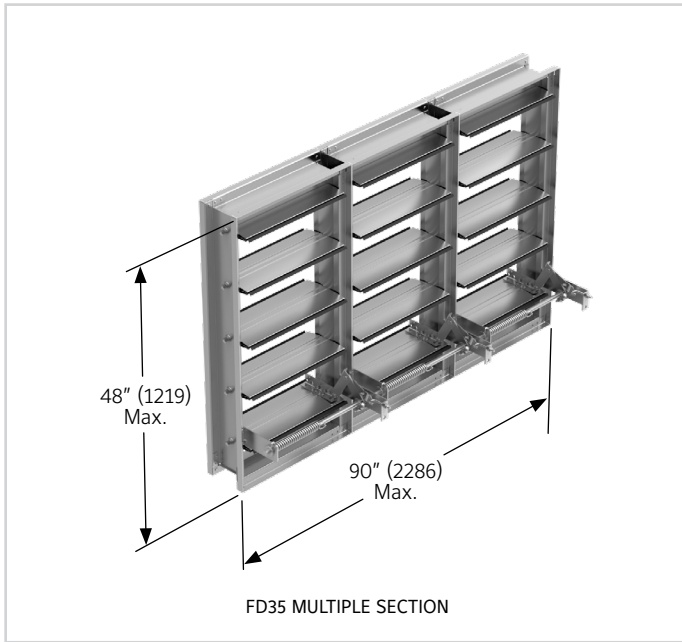


Ruskin Company certifies that the FD35 shown hereon are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance for the FD35.

DAMPER DIMENSIONAL DATA



DAMPER DIMENSIONAL DATA



FUSE LINK ADJUSTMENT

To Test or Replace the Fuse Link

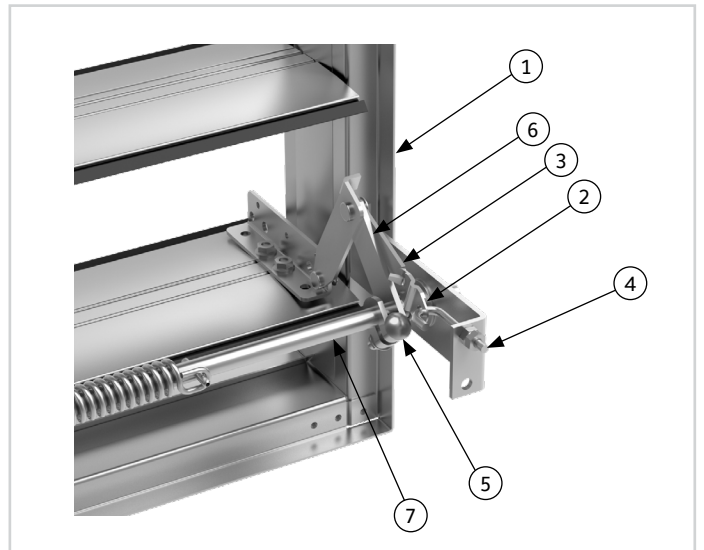
- ▶ Loosen the nuts on the J-bolt (Do not remove the nuts all together).
- ▶ Remove the truarc ring.
- ▶ Turn the jackshaft to open the damper and remove the fuse link.
- ▶ Cycle the damper full open to full close positions, making sure the damper operates freely.

The damper should be able to spring closed in any position.

- ▶ Replace the fuse link and adjust the damper into the original position.

Note: The damper can be adjusted in any position for volume control operation.

Item	Description
1	Multiple Blade Fire Damper
2	Fusible Link Issue 'E'
3	Fuse Link Linkage
4	J-Bolt
5	Truarc Ring 1/4" (6)
6	Over Center Linkage
7	Jackshaft Assembly



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

SLEEVE TRANSITION DIMENSIONAL INFORMATION

DUCT TRANSITION CONNECTIONS

FD35 dampers may be supplied with Round, Oval and Rectangular duct connections.

Style	Description
B	Units Under 6" (152) Tall
R	Round Non-Sealed (Low Pressure)
CR	Round Sealed (Medium Pressure)
WR	Round Welded (High Pressure)
C	Rectangular Sealed (Low and Medium Pressure)
WC	Rectangular Welded (High Pressure)
LO	Oval Non-Sealed (Low Pressure)
CO	Oval Sealed (Medium Pressure)
WO	Oval Welded (High Pressure)

The square damper size will be 2" (51) larger in width and height than the round, oval or rectangular duct size ordered.

MINIMUM and MAXIMUM SIZES

Round Transitions

Minimum 6" (152) diameter
Maximum FD35 - 94" (2388) diameter

Rectangular and Oval Transitions

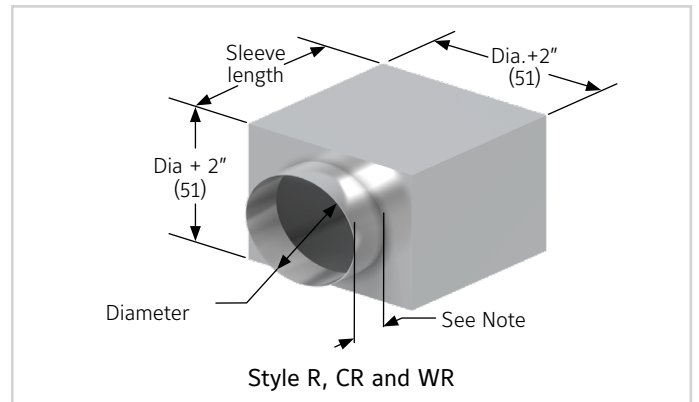
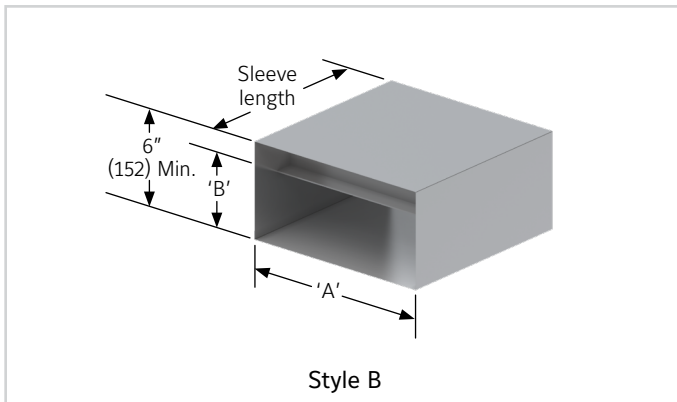
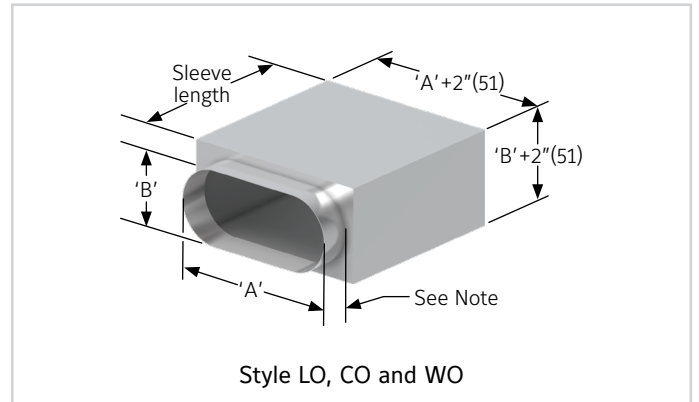
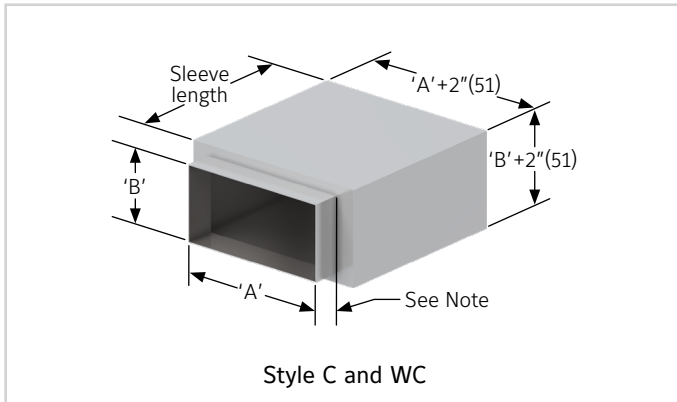
Minimum 6"w x 4"h (152 x 102) diameter
Maximum FD35 - 118"w x 94" (2997 x 2388)

'B' Style Transitions

Minimum height 4" (102) 'B' style transitions are utilized on units where the damper height is less than 6" (152).

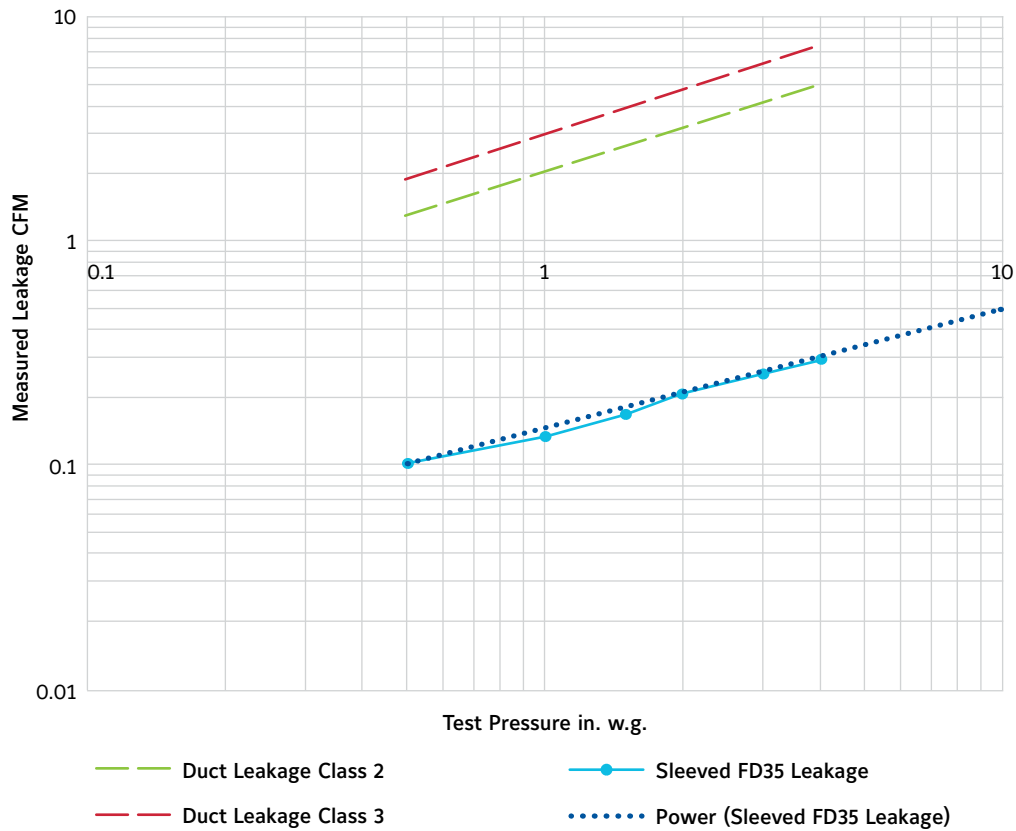
Consult Ruskin for other available styles and sizes.

Note: For medium pressure units (Styles CR, C and CO) the collar extends 1 1/2" (38) beyond the sleeve length and for low pressure and high pressure units (Styles R, WR, WC and LO) the collar extends 2 1/2" (64) beyond the sleeve length.



FD35 LEAKAGE TO ATMOSPHERE / DUCT LEAKAGE TO ATMOSPHERE

When Ruskin's Smoke 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

Furnish and install at locations shown on plans or as described in schedules AMCA Certified fire dampers constructed and tested in accordance with UL Safety Standard 555 that meet or exceed the following specifications. Fire Dampers shall be produced in an ISO 9001 certified factory.

Damper frame, where size permits, shall be constructed using Uniframe Design Concept (UDC) and shall be minimum 16 gauge (1.52) galvanized steel (or stainless steel) formed into a structural hat channel superior to 13 gauge (2.30) channel frame. Top and bottom frame members on dampers less than 12" high shall be low profile design to maximize the free area of these smaller dampers. Damper blades shall be single skin 16 gauge (1.52) galvanized steel (or stainless steel) with three longitudinal grooves for reinforcement. Bearings shall be stainless steel sleeve turning in an extruded hole in the frame for maximum life.

Each fire damper shall have a 1 1/2 hour fire protection rating and shall be supplied with a 165°F (74°C) or 212°F (100°C) fusible link. Fire dampers shall be approved for vertical or horizontal mounting as required by the location and shall be installed using steel sleeves, angles and other materials and practice required to provide an installation in accordance with the damper manufacturer's installation instructions. In addition, the fire dampers shall be AMCA licensed for air performance and shall bear the AMCA Certified Ratings Seal. The FD35 and FD35SS carry a 1 1/2 hour UL fire damper label and is classified as a static damper for use in HVAC systems that shut down during a fire.

Fire dampers shall be Ruskin model FD35.

(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
Limited Warranty Document



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