RUSKIN®

AMCA LICENSED
See Page 2

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

FD35 AND FD35SS MULTIPLE BLADE "STATIC" FIRE DAMPER

1½ HOUR RATING UL555 RATED
FOR USE IN STATIC SYSTEMS

APPLICATION

The FD35 and FD35SS are 1½ hour rated multiple blade static (Fan Off) fire dampers. The FD35 is constructed with triple vee groove blades from galvanized steel and FD35SS, 304 or 316 stainless steel and can be installed vertically in walls or horizontally in masonry floors.

STANDARD CONSTRUCTION

FRAME
FD35 – 5" x 1" x 16 gage (127 x 25 x 1.52) galvanized steel hat channel, structurally superior to 13 gage (2.3) channel frame.
FD35SS – 5" x 1" x 16 gage (127 x 25 x 1.52) galvanized steel hat channel.

BLADES
16 gage (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
½" (13) plated steel hex or 300 series stainless steel.

FUSIBLE LINK
165°F (74°C) standard. 212°F (100°C) available.

DAMPER SIZES

FD35

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).

FD35SS

MINIMUM SIZE
Vertical or Horizontal Installation – 8"w x 6"h (203 x 152).

MAXIMUM SIZE
Single Section
Vertical or Horizontal Installation – 30"w x 48"h (762 x 1219).
Multiple Section
Vertical or Horizontal Installation – 90"w x 48"h (2286 x 1219).

NOTES:
1. Dimensions in inches, parentheses ( ) indicate millimeters.
2. Damper assembly furnished actual size.

OPTIONS

- **FM Approvals** as Specification Tested Product.
- **SP100 Switch Package** to remotely indicate damper blade position.
- **FAST Angle** for one side angle installations.
- **PFMA Angles** for two side angle installation
- **Sleeve** of various lengths and gages to insure field compliance with UL installation requirements.
- **Jamb Seals** stainless steel flexible metal compression type.
- **Blade Seals** silicone blade edge seals.
- **GA, Grille Access** for one side installation and "out of wall" applications (see models IBD2GA or DIBD2GA)
- **OW, Out of Wall** of application where the damper can not be installed within the plane of the wall or floor.

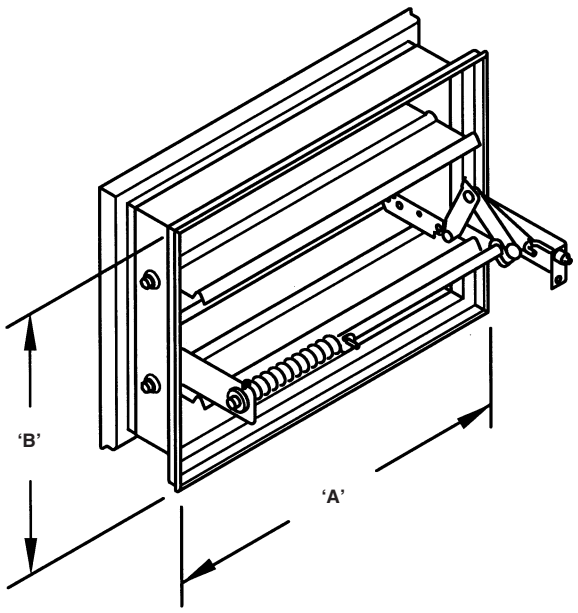
The FD35 and FD35SS dampers meet the requirements for fire dampers established by:

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

UL CLASSIFIED
UL555 Listing R5531

SEE COMPLETE MARKING ON PRODUCT

FM Approvals
Specification Tested Product (Option)



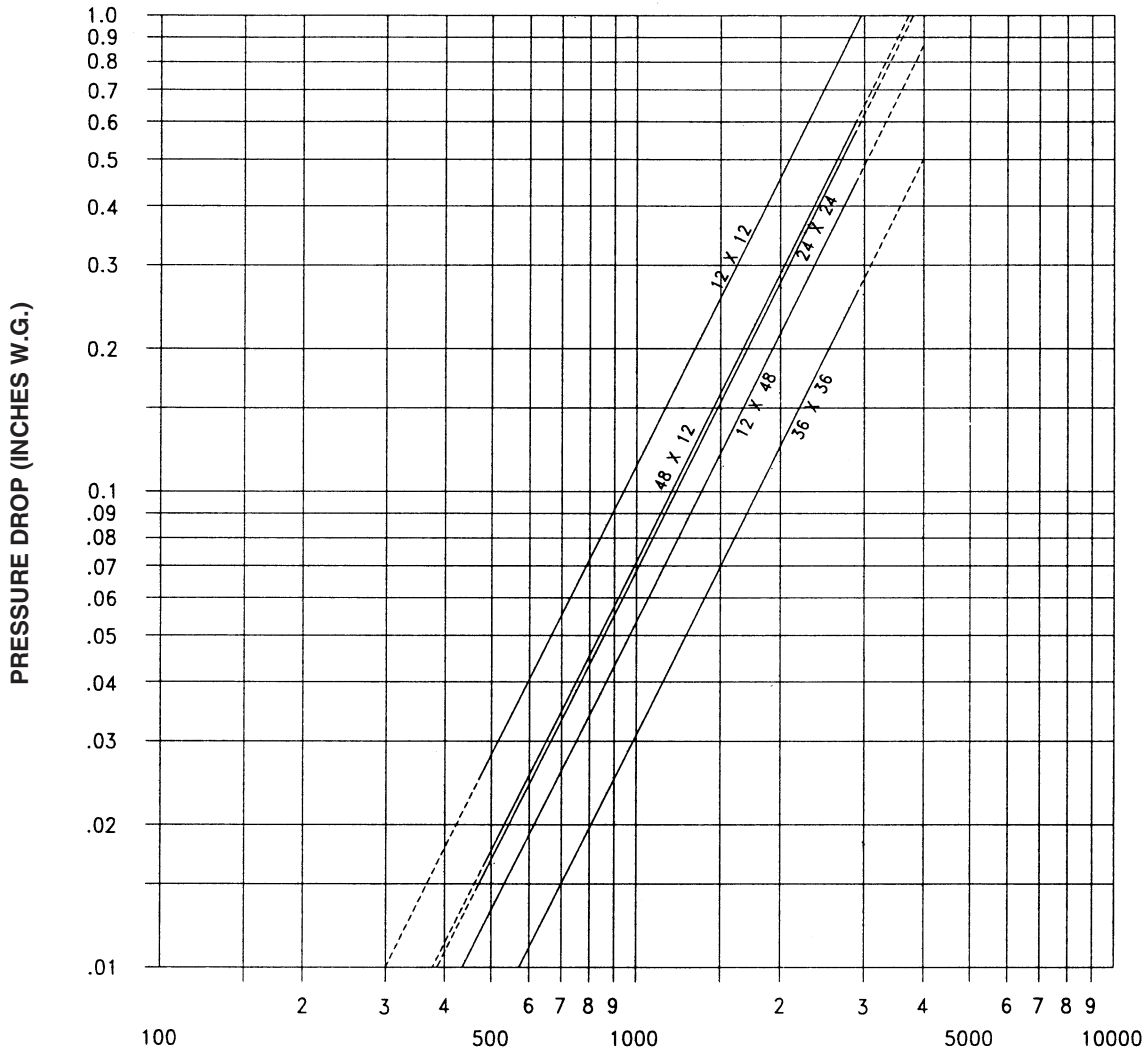
AMCA LICENSED LEAKAGE AND AIR PERFORMANCE DATA

Ruskin Company certifies that the FD35 and FD35SS 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 and FD35SS.

To determine the AMCA Licensed air performance:

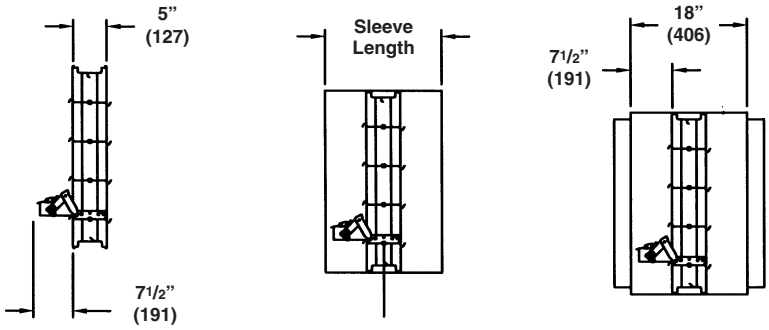
Locate the applicable feet per minute face velocity on the bottom of the velocity vs. pressure drop chart below. Move up the chart to the most appropriate size damper line. From the intersection point, move left to determine the pressure drop on the left side of the chart.

VELOCITY vs. PRESSURE DROP

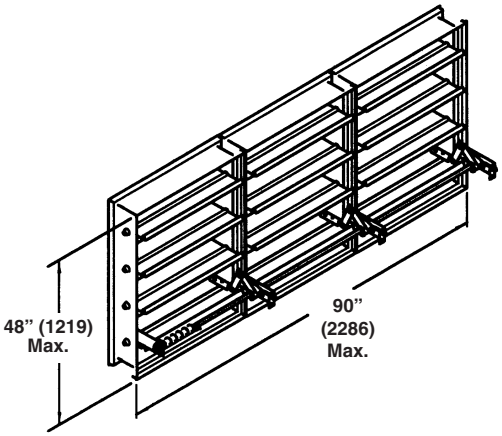


AMCA Fig. 5.3

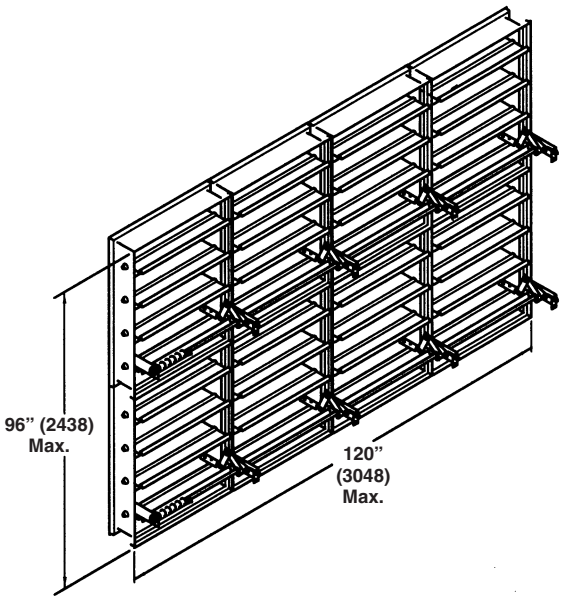
DAMPER DIMENSIONAL DATA



Sleeve Dimensions



FD35SS Multiple Section



FD35 Multiple Section

FUSE LINK ADJUSTMENT

To Test or Replace the Fuse Link

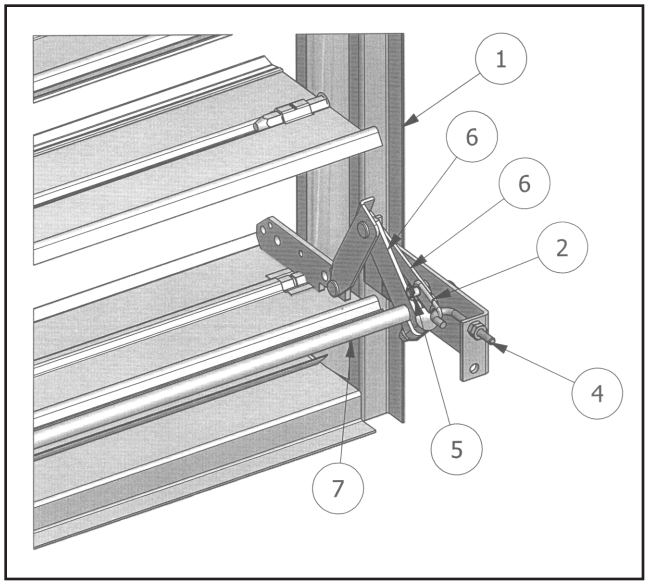
1. Loosen the nuts on the J-bolt (Do not remove the nuts all together).
2. Remove the truarc ring.
3. Turn the jackshaft to open the damper and remove the fuse link.
4. Cycle the damper full open to full close positions, making sure the damper operates freely.
   The damper should be able to spring closed in any position.
5. 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.

CAUTION

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

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



SLEEVE TRANSITION DIMENSIONAL INFORMATION

DUCT TRANSITION CONNECTIONS

FD35 and FD35SS 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

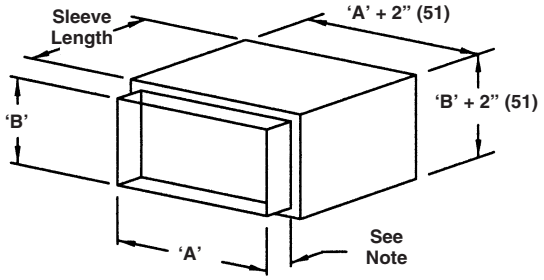
Round Transitions
Minimum 6” (152) diameter
Maximum FD35 – 94” (2388) diameter
Maximum FD35SS – 46” (1168) diameter

Rectangular and Oval Transitions
Minimum 6”w x 4”h (152 x 102) diameter
Maximum FD35 – 118”w x 94” (2997 x 2388)
Maximum FD35SS – 88”w x 46” (2235 x 1168)

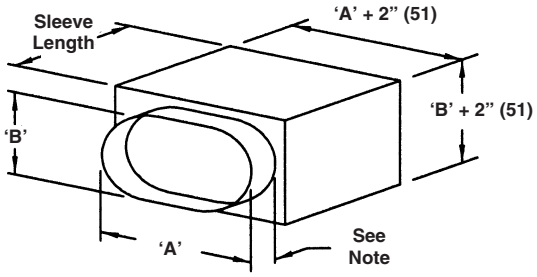
‘B’ Style Transitions
Minimum height 4” (102) ‘B’ style transitions are utilized on units where the damper height is less than 6” (152).

Consult Ruskin for other available styles and sizes.

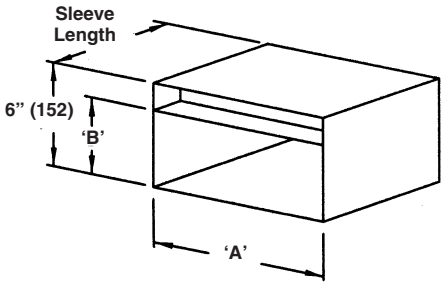
Note: For medium pressure units (Styles CR, C and CO) the collar extends 1½” (38) beyond the sleeve length and for low pressure and high pressure units (Styles R, WR, WC and LO) the collar extends 2½” (64) beyond the sleeve length.



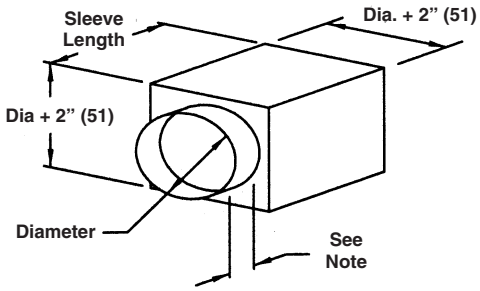
Style C and WC



Style LO, CO and WO



Style B



Style R, CR and WR

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 NFPA90A and shall be classified for use in walls or floors with fire resistance ratings of less than 3 hours in accordance with UL555.

Fire dampers shall be dynamically rated to close under airflow conditions with pressures up to 4" w.g. (lkPa) and velocities up to 2,000 fpm (10.16 m/s). They shall, however, have been tested to close under dynamic airflow conditions with pressures to 8" w.g. (2kPa) and velocities up to 4,000 fpm (20.32 m/s). In addition, the dampers shall be AMCA licensed for Air Performance and shall bear the AMCA Certified Ratings Seal.

Damper frame (when size permits) shall be constructed using the UniFrame Design Concept (UDC) and shall be minimum 16 (1.6) gage galvanized steel structurally superior to 13 (2.3) gage formed into a structural hat channel reinforced at comers. Damper blades shall be single skin galvanized steel 16 (1.6) gage minimum with three longitudinal grooves for reinforcement. Bearings shall be stainless steel sleeve turning in an extruded hole in the frame and each fire damper shall have a 165°F (74°C) or 212°F (100°C) fusible link. Dampers shall be Ruskin model FD35. For stainless steel requirements furnish the FD35SS model.

(Consult Ruskin for detailed CSI MasterFormat Specification).

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