RUSKIN®

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

FD60 MULTIPLE BLADE "STATIC" FIRE DAMPER

1 1/2 HOUR RATING UL555 RATED
FOR USE IN "STATIC" (FANS OFF) SYSTEMS

APPLICATION

Ruskin FD60 is a 1 1/2 hour rated multiple blade Static fire damper. It is constructed with single piece airfoil-shaped blades. The FD60 is also rated for dual direction air flow and can be installed vertically in walls or horizontally in masonry floors.

STANDARD CONSTRUCTION

FRAME
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 dampers.

BLADES
Single piece, airfoil-shaped construction with 14 gage (1.90) equivalent, approximately 6" (152) on center.

BEARINGS
Stainless steel sleeve, pressed into frame.

LINKAGE
Concealed in frame.

AXLES
1/2" (13) plated steel hex.

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)

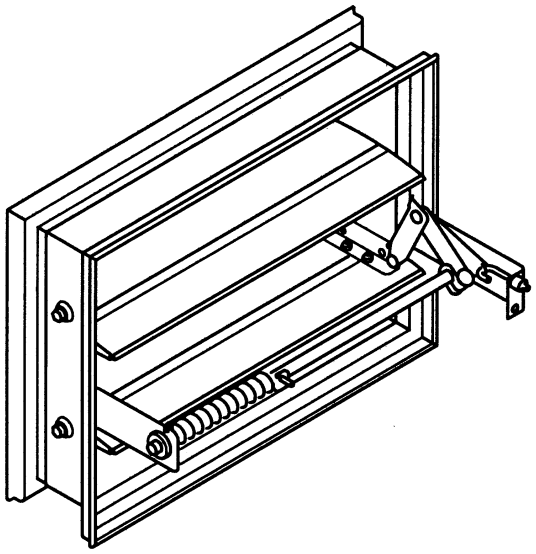
MAXIMUM SIZES
Single Section
Vertical Installation – 32"w x 48"h (813 x 1219)
Horizontal Installation – 30"w x 48"h (762 x 1219)
Multiple Section
Vertical or Horizontal Installation – 120"w x 96"h (3048 x 2438)

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 installations.
- **Sleeve** of various lengths and gages 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 IBD2GA or DIBD2GA)
- **OW, Out of Wall** of application where the damper can not be installed within the plane of the wall or floor.

NOTES

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



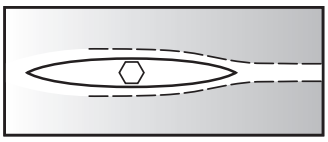
The FD60 damper meets the requirements for fire dampers established by:

- **National Fire Protection Association** NFPA Standards 90A, 92A, 92B and 101
- **ICC International Building Codes**
- **CSFM California State Fire Marshal Listing #3225-245:102**

CLASSIFIED c UL us — SEE COMPLETE MARKING ON PRODUCT

UL555 Classification R5531

FM Approvals
Specification Tested Product
(Option)



Ruskin Airfoil Blade

amca CERTIFIED RATINGS
AIR performance
AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

ALL STATED SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE OR OBLIGATION.

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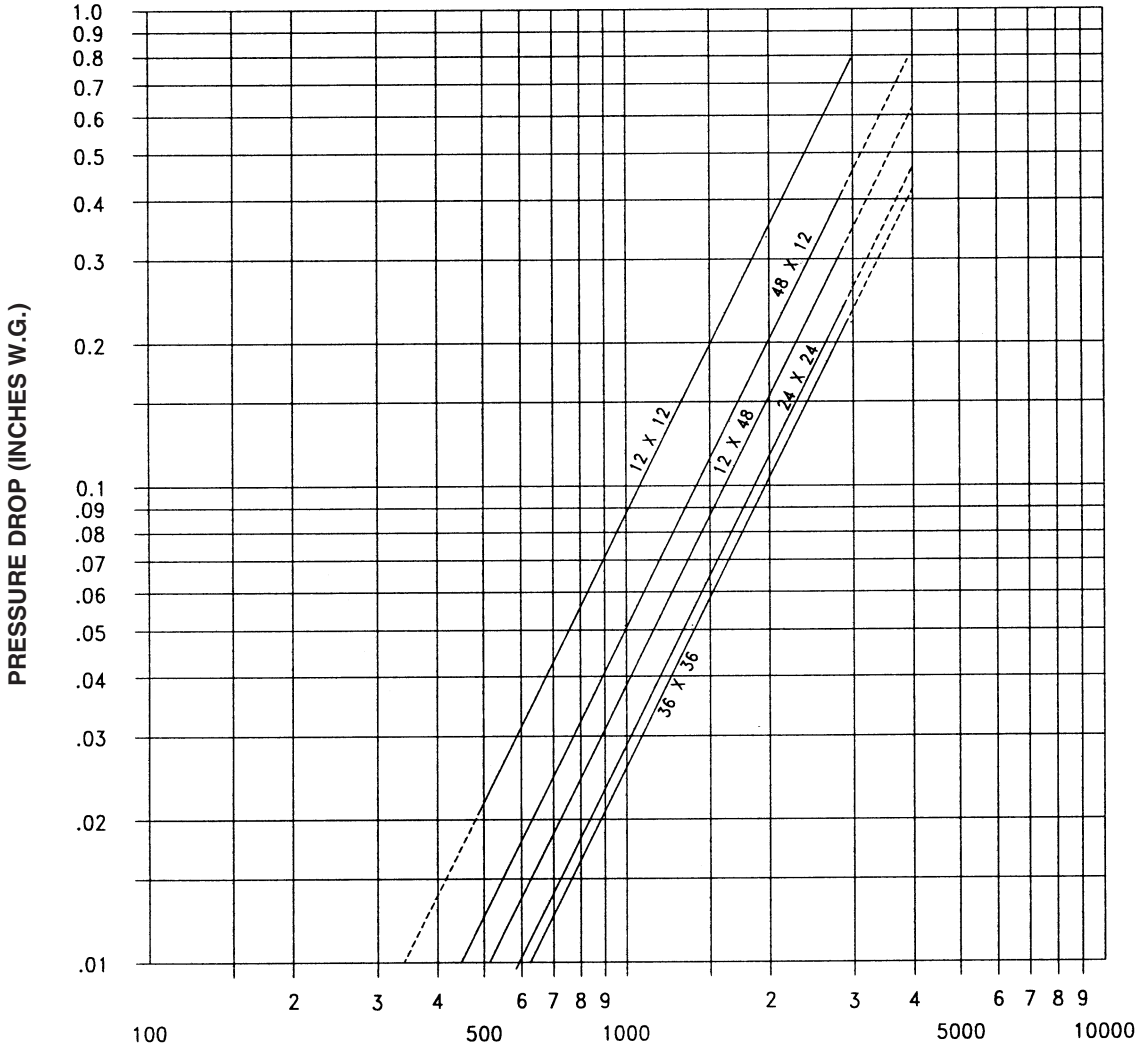
AMCA LICENSED AIR PERFORMANCE DATA

Ruskin Company certifies that the FD60 shown hereon is 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 FD60.

To determine the AMCA Licensed air performance:

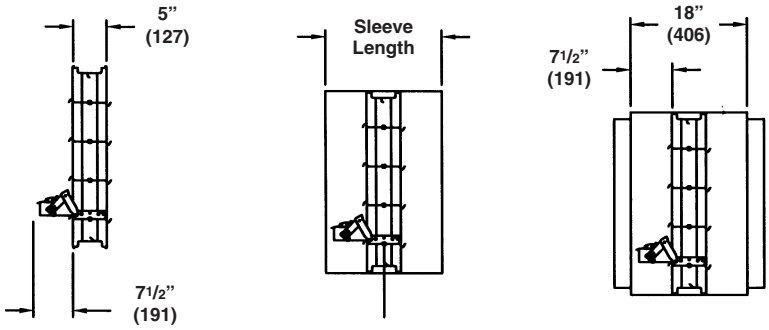
Locate the applicable feet per minute face velocity on the bottom of the velocity vs. pressure drop chart below. Move up the chart to the most appropriate size damper line. From the intersection point, move left to determine the pressure drop on the left side of the chart.

VELOCITY vs. PRESSURE DROP

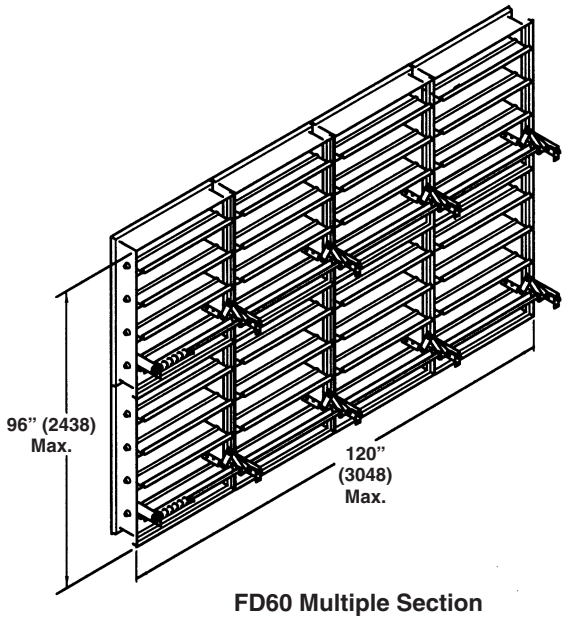


FACE VELOCITY – FEET/MINUTE
AMCA Fig. 5.3

DAMPER DIMENSIONAL DATA



Sleeve Dimensions



FD60 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.

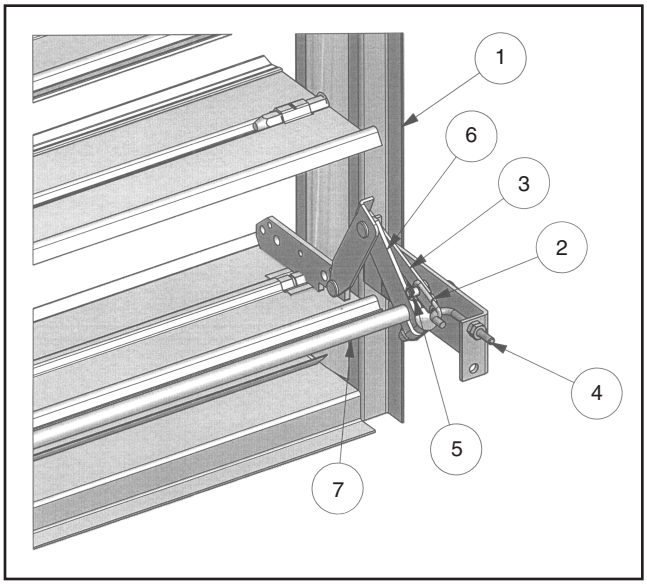
   The damper should be able to spring closed in any position.
5. Replace the fuse link and adjust the damper into the original position.

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 'E'
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

FD60 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

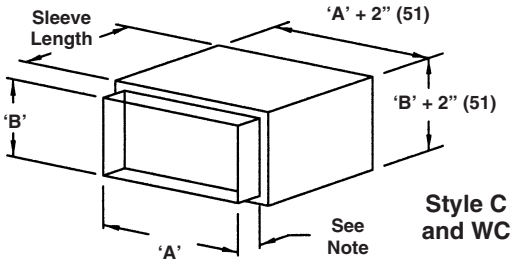
Round Transitions
Minimum 6" (152) diameter
Maximum FD60 – 94" (2388) diameter

Rectangular and Oval Transitions
Minimum 6"w x 4"h (152 x 102) diameter
Maximum FD60 – 118"w x 94" (2997 x 2388)

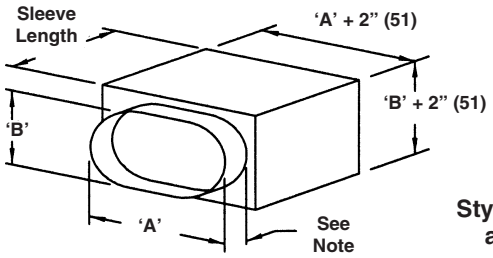
'B' Style Transitions
Minimum height 4" (102) 'B' style transitions are utilized on units where the damper height is less than 6" (152).

Consult Ruskin for other available styles and sizes.

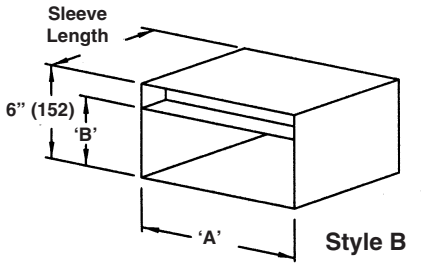
Note: For medium pressure units (Styles CR, C and CO) the collar extends 11/2" (38) beyond the sleeve length and for low pressure and high pressure units (Styles R, WR, WC and LO) the collar extends 21/2" (64) beyond the sleeve length.



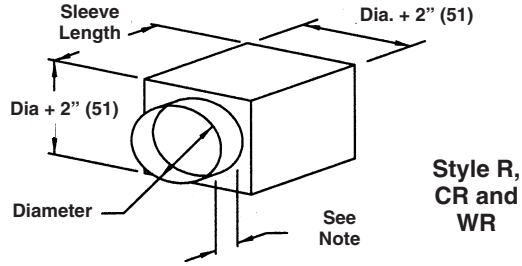
Style C and WC



Style LO, CO and WO



Style B



Style R, CR and WR

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 gage (1.52) galvanized steel (or stainless steel) formed into a structural hat channel superior to 13 gage (2.30) channel frame. Top and bottom frame members on dampers less than 13" (330) high shall be low profile design to maximize the free area of these smaller dampers. Damper blades shall be single piece airfoil shaped with 14 gage (1.90) equivalent thickness. Airfoil type blades generate low pressure drop and low noise levels. Bearings shall be stainless steel, permanently lubricated sleeve type 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 FD60 carries 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.

Optional FM Approvals Specification

Each fire damper shall be listed in Factory Mutual (FM) Approvals Specification Tested Product and labeled accordingly.

Fire dampers shall be Ruskin model FD60.

(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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