



**SARA INTERNATIONAL FACTORY
FOR AIR CONDITIONING DUCT**



TECHNICAL CATALOGUE

FIRE DAMPER

UL LISTED



EMME.R40285 - Dampers for Fire Barrier and Smoke Applications

Dampers for Fire Barrier and Smoke Applications

[See General Information for Dampers for Fire Barrier and Smoke Applications](#)

SARA INTERNATIONAL FACTORY FOR AIRCONDITIONING DUCT

PO BOX NO 105
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R40285

Fire Dampers for Use in Static Systems

Model	Damper					
	Hr Class	Mounting Position	Single Section Damper Size, in.		Multiple Section Damper Size, in.	
			W	H	W	H
FD Series (FD 100A, FD 100B, FD 100C, FD 100CR, FD 100CO)	1-1/2	V	36	36	—	—

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Fire Dampers

Sara International factory for A/C duct fire dampers are UL certified and labeled to be installed in duct system, designed to be close upon detection of heat. Fire damper when closed interrupt air flow and resist and prevent the passage of flame and maintain the integrity of the fire rated barrier

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Static Curtain Fire Damper

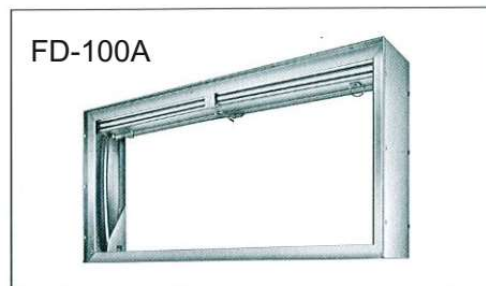
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- 100 CO Page 05



CURTAIN FIRE DAMPER (STATIC)– Model FD 100 A

BLADES INSIDE AIR STREAM

- A. Features** – UL rate d for 1 1/2-hour fire damper, for use in a 2-hour fire partition or wall. Meets NFPA 90A & UL555. Inserted type where blades are inside air stream



B. STANDARD CONSTRUCTION

- **FRAME** 20-gauge Galvanized Steel
- **BLADES** 22-gauge Galvanized steel
- **FUSIBLE LINK** 165 Degree F
- **SPRING** Stainless Steel Closure Spring
- **MINIMUM SIZE** 101X101 mm (4 x 4 Inch)
- **MAXIMUM SIZE** 913 mm x913 mm (36 x 36 Inch)
- **AVAILABLE SIZES** Please check table #
- **MOUNTING DETAILS** Please check figure #

C. OPTION CONSTRUCTION

- **SLEEVES & DUCT CONNECTION** - Factory installed made of galvanized steel 18 gauge (1.2 mm) at 500 mm (20 inch) length.
- **RETAINING ANGLE** – Galvanized angle for wall fixing 40X40X4 mm fixed to sleeves by tap screw

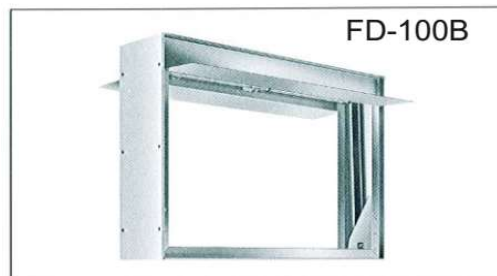


Manufacturer's Recommendations – All moving parts of the damper must be inspected and cycled at intervals not greater than every 6 months and accordance with the latest editions of NFPA 90A & 92 A. In addition, fusible link shall be removed and inspected for corrosion

CURTAIN FIRE DAMPER (STATIC)– Model FD 100 B

BLADES OUTSIDE AIR STREAM

- A. Features** – UL rate d for 1 1/2-hour fire damper, for use in a 2-hour fire partition or wall. Meets NFPA 90A & UL555. Blades are outside air stream for 100 % free area



B. STANDARD CONSTRUCTION

- **FRAME** 20-gauge Galvanized Steel
- **BLADES** 22-gauge Galvanized steel
- **FUSIBLE LINK** 165 Degree F
- **SPRING** Stainless Steel Closure Spring
- **MINIMUM SIZE** 101 mm x 101 mm (4 x 4 Inch)
- **MAXIMUM SIZE** 913 mm x913 mm (36 x 36 Inch)
- **AVAILABLE SIZES** Please check table #
- **MOUNTING DETAILS** Please check figure #

C. OPTION CONSTRUCTION

- **SLEEVES & DUCT CONNECTION** - Factory installed made of galvanized steel 18 gauge (1.2 mm) at 500 mm (20 inch) length.
- **RETAINING ANGLE** – Galvanized angle for wall fixing 40X40X4 mm fixed to sleeves by tap screw.

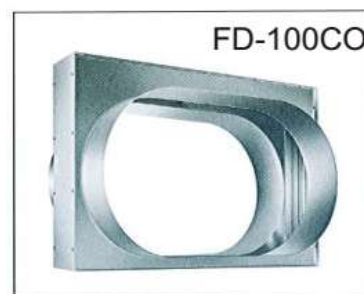
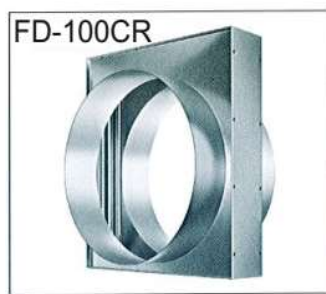
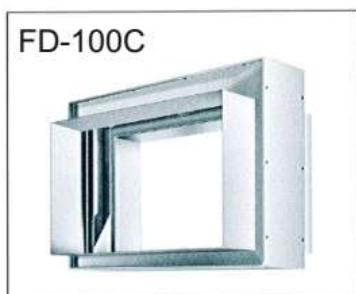


Manufacturer's Recommendations – All moving parts of the damper must be inspected and cycled at intervals not greater than every 6 months and accordance with the latest editions of NFPA 90A & 92 A. In addition, fusible link shall be removed and inspected for corrosion

CURTAIN FIRE DAMPER (STATIC) – Model FD 100 C, CR & CO

BLADES OUTSIDE AIR STREAM

D. Features – UL rate d for 1 1/2-hour fire damper, for use in a 2-hour fire partition or wall. Meets NFPA 90A & UL555. Blades are outside air stream for 100 % free area



E. STANDARD CONSTRUCTION

- **FRAME** 20-gauge Galvanized Steel
- **BLADES** 22-gauge Galvanized steel
- **FUSIBLE LINK** 165 Degree F
- **SPRING** Stainless Steel Closure Spring
- **MINIMUM SIZE** 101 mm x 101 mm (4 x 4 Inch)
- **MAXIMUM SIZE** 913 mm x 913 mm (36 x 36 Inch)
- **AVAILABLE SIZES** Please check table #
- **MOUNTING DETAILS** Please check figure #

F. OPTION CONSTRUCTION

- **SLEEVES & DUCT CONNECTION** - Factory installed made of galvanized steel 18 gauge (1.2 mm) at 500 mm (20 inch) length.
- **RETAINING ANGLE** – Galvanized angle for wall fixing 40X40X4 mm fixed to sleeves by tap screw.
- **AVAILABLE SIZES**– Please check table #



Manufacturer's Recommendations – All moving parts of the damper must be inspected and cycled at intervals not greater than every 6 months and accordance with the latest editions of NFPA 90A & 92 A. In addition, fusible link shall be removed and inspected for corrosion

INSTALLATION INSTRUCTION

Duct Breakaway Connections

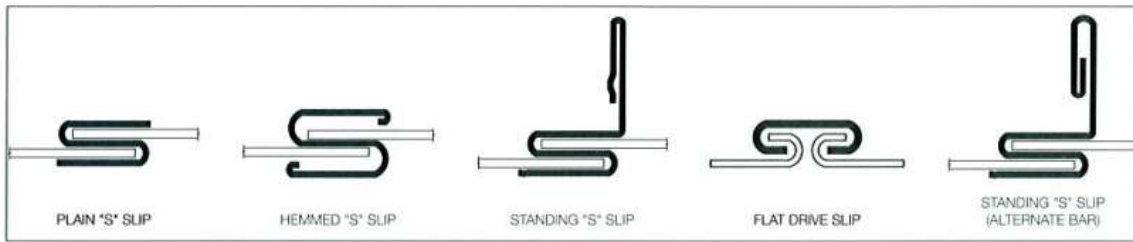
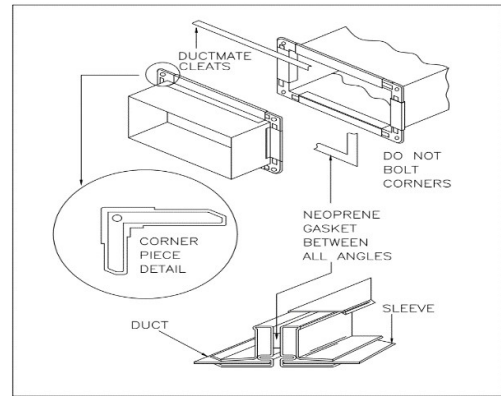


Figure-3

- Breakaway joints of the types shown in **Figure-3** shall have no more than two No. 10 (4.8 mm diameter) sheet metal screws on each side and on the bottom located in the center of the slip pocket and shall penetrate both sides of the slip pocket.
- Vertical Fire Dampers : Breakaway joints of the types shown in **Figure-3** shall either be on the top and on the bottom of horizontal ducts and on the sides, or shall be provided on the top and bottom of the horizontal ducts with flat drive slips on the sides as illustrated in **Figure-3**. Flat drive slips as illustrated in **Figure-3** shall not exceed 20 inch (508 mm) in length.
- Horizontal Fire Dampers : Breakaway joints of the types shown in **Figure-3** shall either be on all sides of vertical ducts, or shall be on one pair of opposite sides of vertical ducts with flat drive slips as illustrated in **Figure-3** on both other opposite sides. Flat drive slips as illustrated in **Figure-3** shall not exceed 20 inch (508 mm) in length.
- Round Or Flat Oval Spiral Ducts attached to round or oval collars which are part of a fire damper sleeve used as breakaway joints shall be attached with No. 10 (4.8 mm diameter) sheet metal screws spaced equally around the circumference of the duct as follows in (a) and (b). For flat oval ducts, the diameter is determined to be the largest (major) dimension of the duct.
 - a. Duct diameters 22 in (559 mm) and smaller shall have three screws.
 - b. Duct diameters greater than 22 in up to and including 36 in (914 mm) shall have five screws.
- **Proprietary Flange System Breakaway Connections (Ductmate)**
Flanged connection systems manufactured by Ductmate, as illustrated in **Figure-4** & Installed as **Figure-5**



ANGLE WEB DETAIL

Figure 4

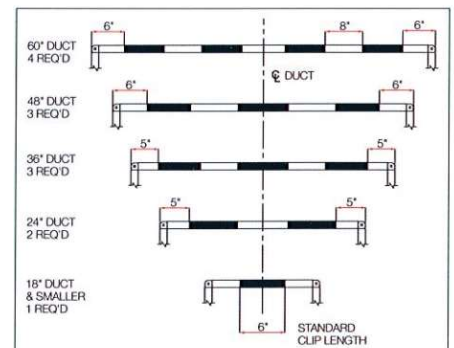
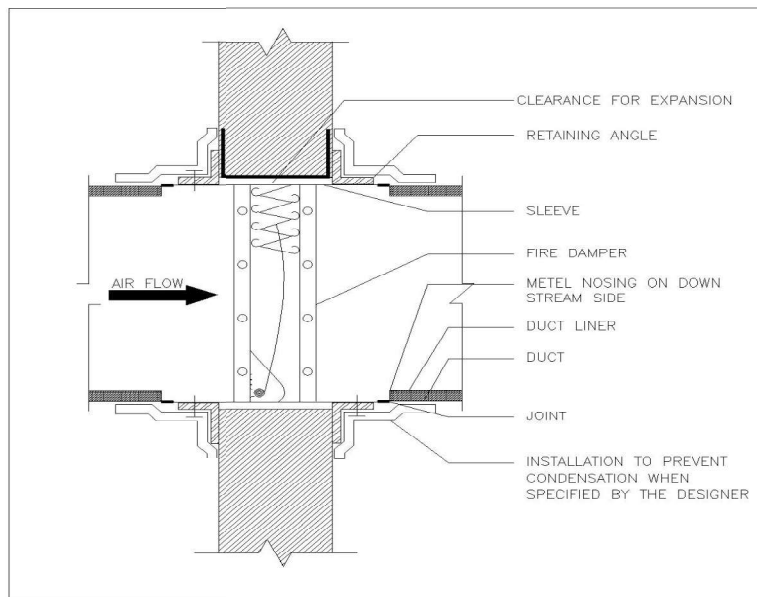


Figure 5

INSTALLATION INSTRUCTION

1- Typical Fire Damper Installation (Vertical)



TYPICAL FIRE DAMPER INSTALLATION

2- Clearance Required Between Fire Damper Sleeve and Wall Opening.

Due to the thermal expansion of fire damper and sleeves during periods of extreme heat, it is required that walls openings to be larger than sleeves sizes as follow:

- For Galvanized Steel 1/8 inch per linear foot or 11 mm per linear meter of damper
- Sleeves can rest on the bottom of the opening and no need to be centered
- Clearance shall not exceed 1 1/2 inch or 38 mm for any damper size

3- Fastening Damper to Sleeves

- Securing damper to sleeve by evenly space
- Secure damper to sleeve on maximum 1.6 Inch at the corners see figure 6
- Secure damper to sleeve on maximum 5-inch center with minimum 5 mm with GI rivets

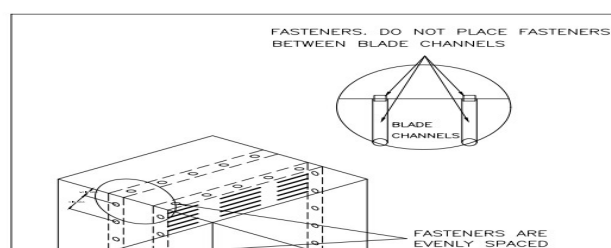




Figure 6

INSTALLATION INSTRUCTION

- 4- **Fastening Retaining Angle to Sleeves.**
- Retaining angle should not be fastened to wall. It should only sandwich the partition or wall and allow the sleeves and damper expansion during intensive heat
 - Securing retaining angle to sleeves to be evenly spaced
 - Secure the retaining angle to the sleeves at 1.18 inch on the corners
 - Secure the retaining angle to sleeves at 3 inch evenly spacing using 6-inch tap screw