

FIRE DAMPERS



ANA Fire Dampers :

Fire Dampers are designed to protect internal HVAC units from excessive heat and to reduce fire spread by blocking the fire from traveling to other duct branches.



Model AF-CFD
meets the require-
ments for fire
dampers established
by
Underwriters
Laboratories
standard 555
(Listing # R38502)

ANA FD Construction

Body :

Constructed from Galvanized Steel **G90** thicknesses depends on the design and model, designed to prevent the fire from passing through to other ducts, wall and floor.

Blades :

Constructed from Galvanized Steel **G90**, thicknesses depends on the design and model. Blocked from operating by a fusible link (breaks at **74° C / 165° F**).

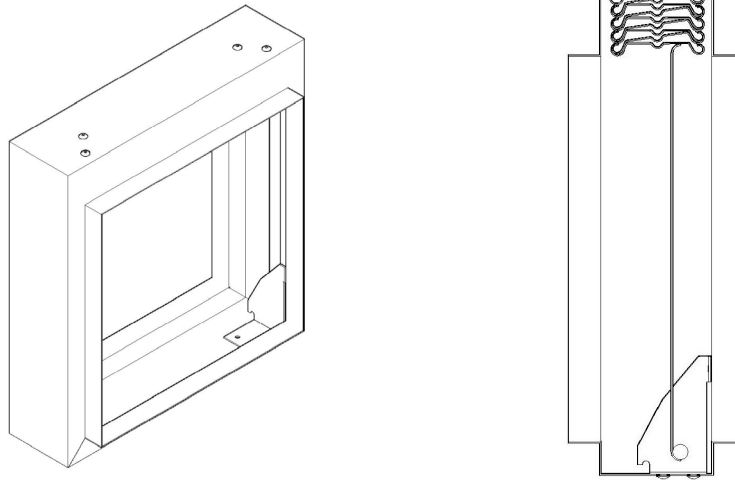
Finish :

Mill galvanized.

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ANA Outside Air Stream Curtain Fire Damper

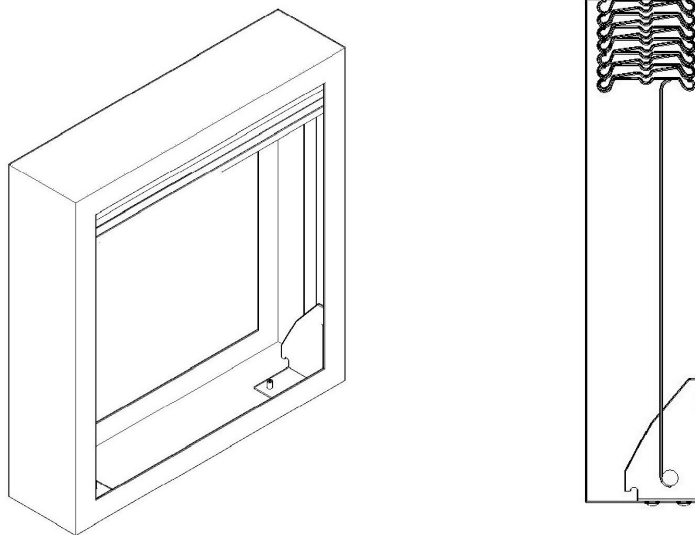
Model : AF-CFD



- This model carries a 1.5 Hour UL Fire damper label.
- Constructed from galvanized steel **G90** with a frame thickness of **(1.2 mm)** and roll formed blades with a thickness of **(0.85 mm)**, with the blades outside the airstream.
- UL Listed Mechanical Fusible Link is attached to both sides of the body to hold and lock the blades at ideal.
- Stainless steel closure spring attached to the blades and a locking ramp on the bottom side for full closure.

ANA Inside Air Stream Curtain Fire Damper

Model : AF-CFDI

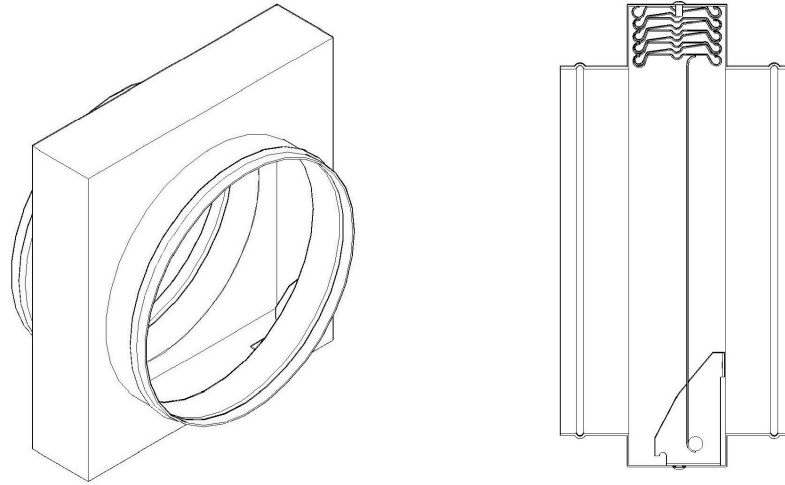


- Constructed from galvanized steel **G90** with a frame thickness of **(1.2 mm)** and roll formed blades with a thickness of **(0.85 mm)**. Blades are fixed inside airstream.
- UL Listed Mechanical Fusible Link is attached to both sides of the body to hold and lock the blades at ideal.
- Stainless steel closure spring attached to the blades and a locking ramp on the bottom side for full closure.

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ANA Curtain Fire Damper With Circular Connection

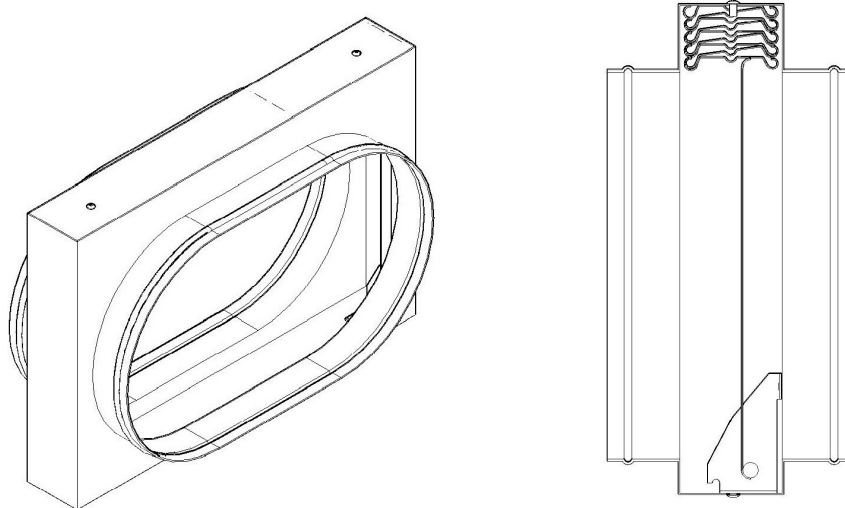
Model : AF-CFDS



- Constructed from galvanized steel **G90** with a frame thickness of **(1.2 mm)** and roll formed blades with a thickness of **(0.8 mm)**, with the blades outside the airstream.
- UL Listed Mechanical Fusible Link is attached to both sides of the body to hold and lock the blades at ideal.
- Round adapter is added to both sides of the fire damper.
- Stainless steel closure spring attached to the blades and a locking ramp on the bottom side for full closure.

ANA Curtain Fire Damper With Oval Connection

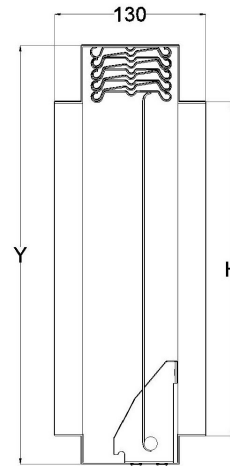
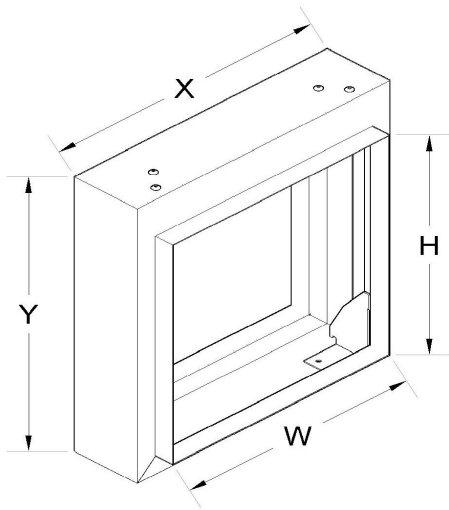
Model : AF-CFDO



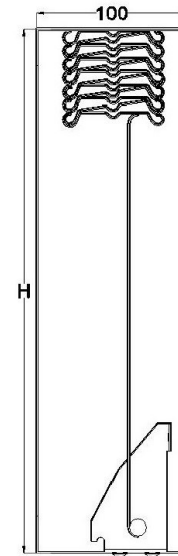
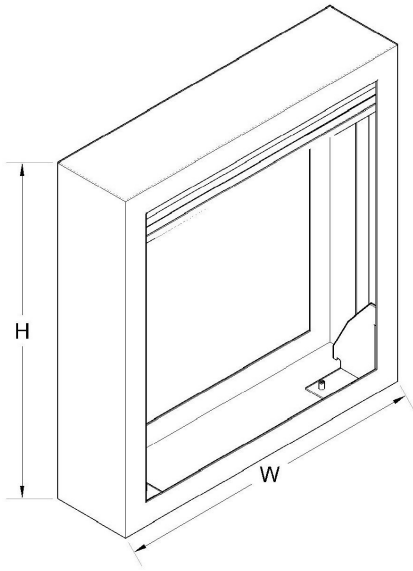
- Constructed from galvanized steel **G90** with a frame thickness of **(1.2 mm)** and roll formed blades with a thickness of **(0.8 mm)**, with the blades outside the airstream.
- UL Listed Mechanical Fusible Link is attached to both sides of the body to hold and lock the blades at ideal.
- Oval adapter is added to both sides of the fire damper.
- Stainless steel closure spring attached to the blades and a locking ramp on the bottom side for full closure.

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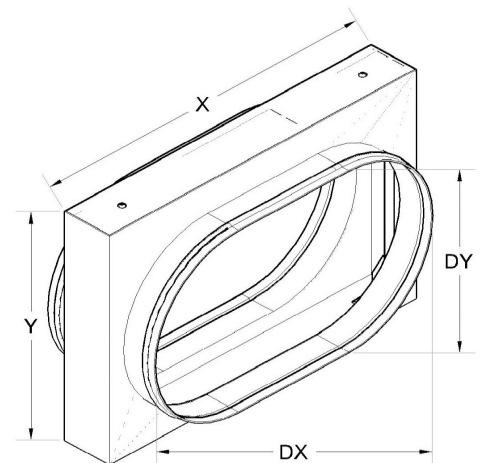
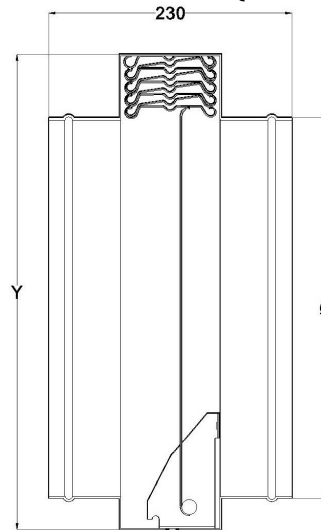
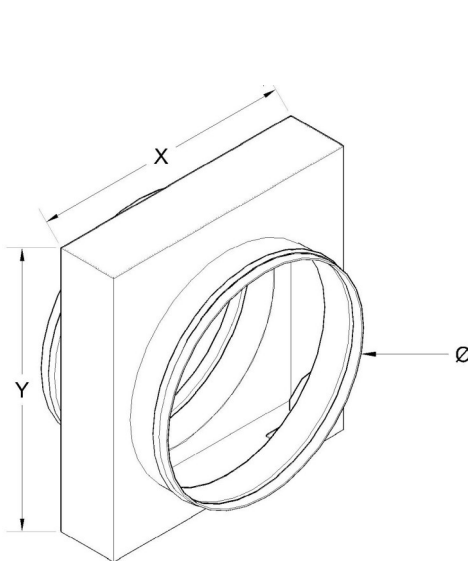
ANA Curtain Fire Damper Dimensions :



OUTSIDE AIR STREAM (AF-CFD)



INSIDE AIR STREAM (AF-CFDI)



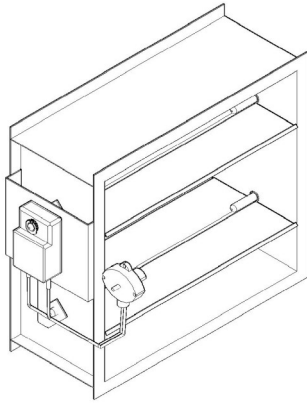
CIRCULAR (AF-CFDS) & OVAL (AF-CFDO)

ANA Motorized Fire Damper

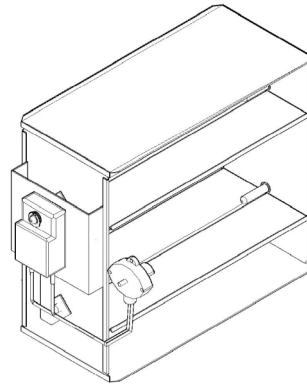


- Constructed from galvanized steel **G90** with a frame and blades thickness of (**gauge 16**), the blades is constructed in a 3-V shaped blades and stoppers to insure full closer.
- The Blades are mounted on self oiling bronze bushings
- UL Listed Electronic Fusible Link is connected to the actuator to close at **74° C/165° F**.
- Siemens or Belimo UL Listed Spring Return actuator model **230or 24V** models.

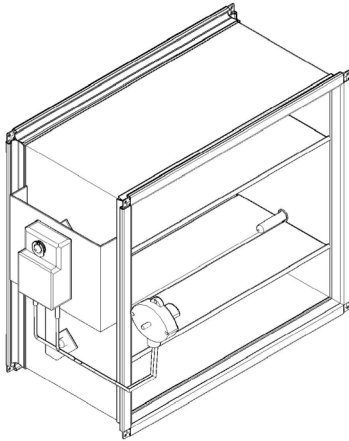
ANA Motorized Fire Damper Models:



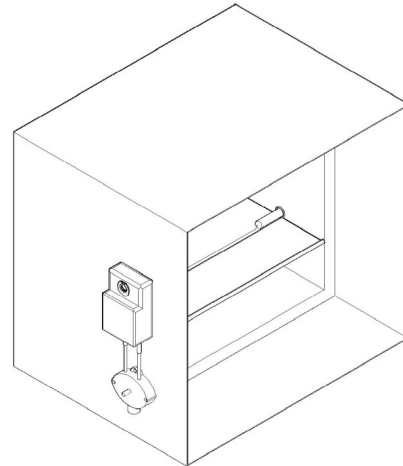
FLANGE CONNECTION (NMFD-F)



C&S CONNECTION (NMFD-C&S)



**DUCT MATE FLANGE CONNECTION
(NMFD-D)**

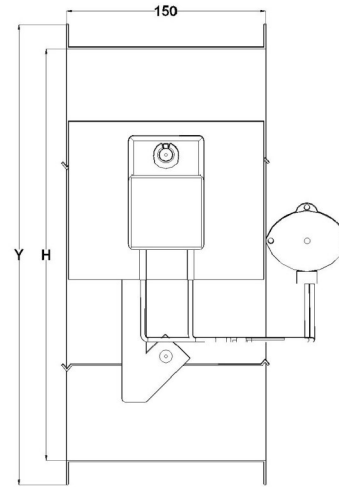
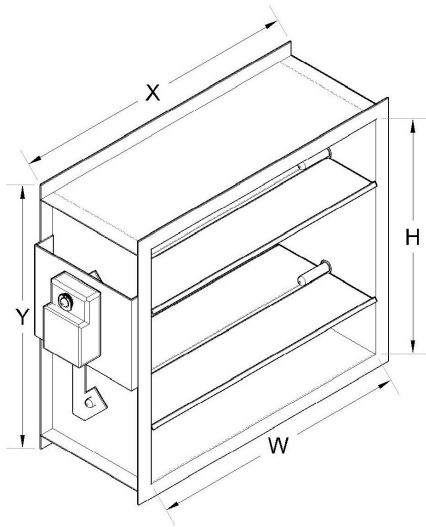


SLEEVE CONNECTION (NMFD-S)

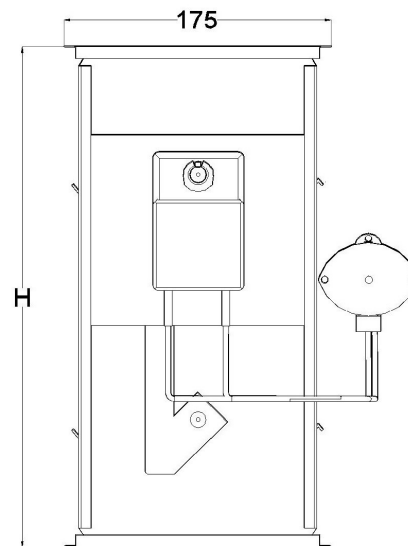
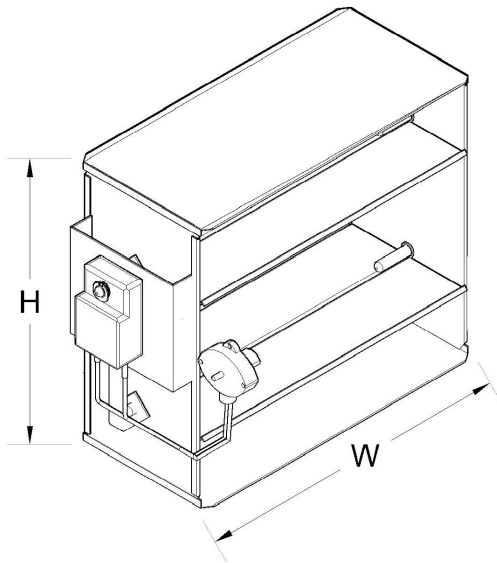
- Constructed from galvanized steel **G90** with a frame and blades thickness of **(1.5 mm)**, the blades are constructed in a 3-V shaped blades and stoppers to insure full closer.
- The Blades are mounted on self oiling bronze bushings
- UL Listed Electronic Fusible Link is connected to the actuator to close at **74° C/165° F**.
- Siemens or Belimo UL Listed Spring Return actuator model **230or 24V** models.

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ANA Motorized Fire Damper Dimensions :

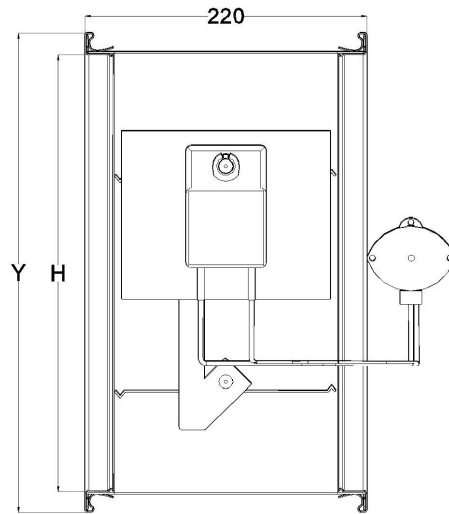
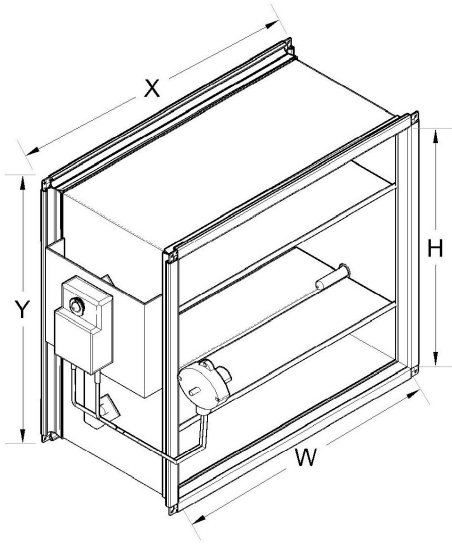


FLANGE CONNECTION (NMFD-F)

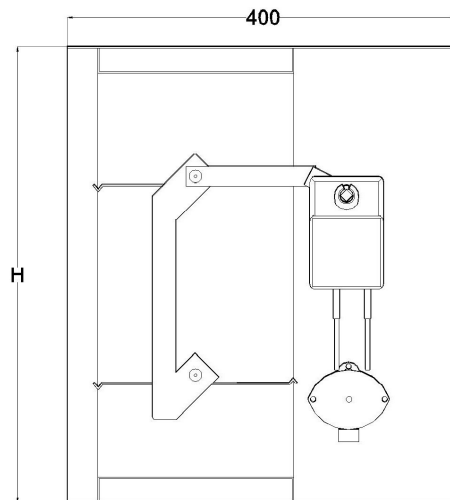
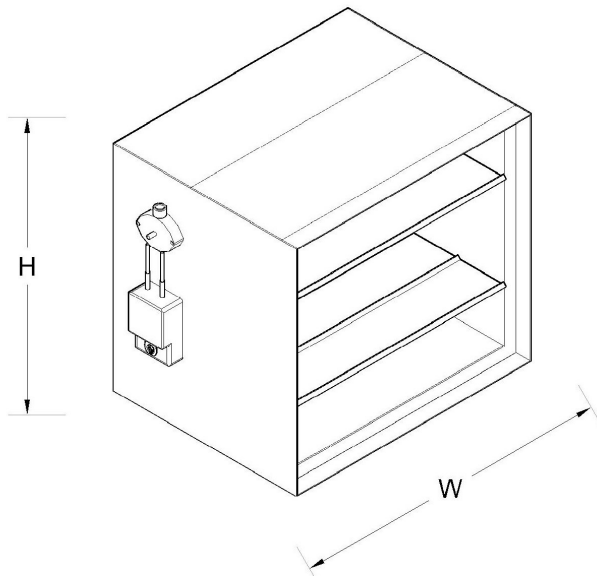


C&S CONNECTION (NMFD-C&S)

ANA Motorized Fire Damper Dimensions :



DUCT MATE FLANGE CONNECTION (NMFD-D)



SLEEVE CONNECTION (NMFD-S)

ANA FD Larger sizes :

- The maximum size of the Curtain fire damper is **(90x90 cm)**, bigger sizes will be divided to pieces with support in between.
- The maximum size of the motorized fire damper is **(120x100 cm)**, bigger sizes will be divided to pieces with support in between.

ANA Curtain & Motorized Fire Damper Installation:

- These instructions apply to 1.5 hour rated fire dampers (blades must be horizontal) models AF-CFD, mounted in concrete masonry, walls (Vertical) and concrete floors (Horizontal).
- Fire dampers are manufactured and labeled for either vertical or horizontal installation. The dampers must be installed in accordance with the labeling. For horizontal installation the locking ramp shall be always on top and lead blade pointing down.

FIRE DAMPER SLEEVE:

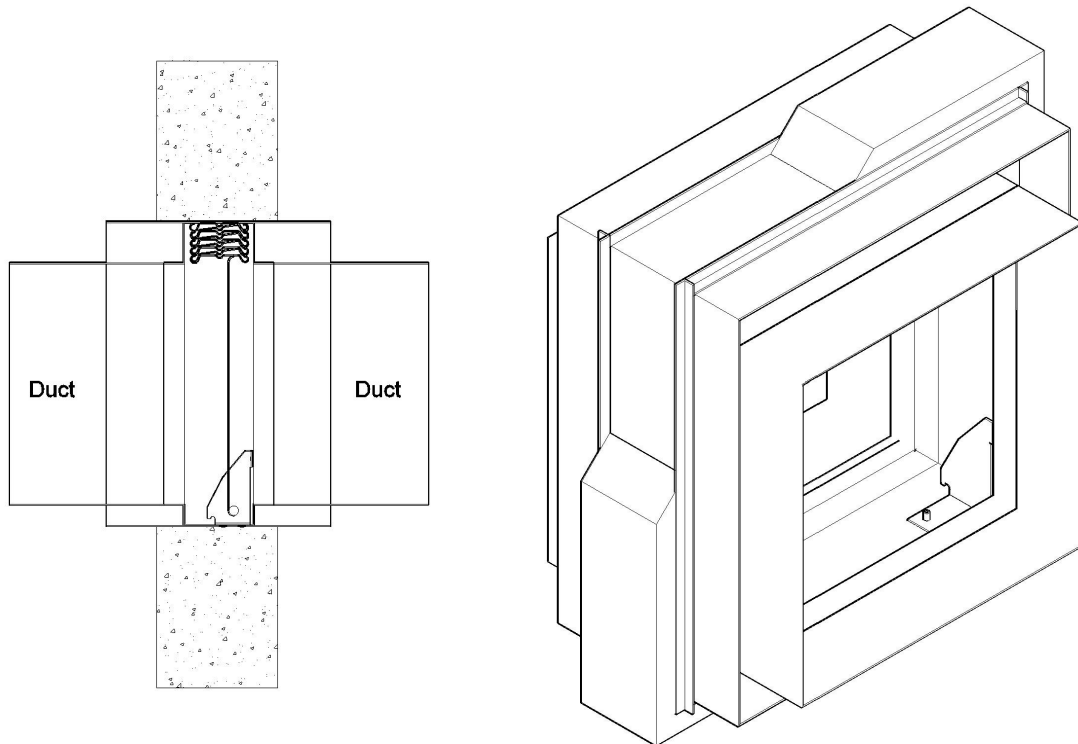
- All Fire Dampers must be installed in a Steel Sleeve with inside dimensions similar to Fire Damper outside Dimensions. The recommended minimum Sleeve thickness shall not be less than the duct thickness and shall as per Table A below.
- Fire Damper sleeve shall be fixed to the fire damper by a row of spot welds, rivets or #10 sheet metal self drilling screws at maximum distance of 50mm (2 inch) from the edges and at spaced middle distances of maximum 150mm (6 inch) center to center, as per Figure 1 below.
- The fire damper sleeve shall extend by maximum 150mm (6 inch) from the wall of floor opening in both sides. In case there is an access door incorporated with the sleeve, it is allowed to extend by maximum 400mm (16 inch) from the access door side. See Figures 2 and 3.

Sleeve Thickness			Duct Dimension		Type of Duct to Sleeve Connection Permitted
mm	inch	Gauge	mm	inch	
2.00 - 3.50	0.075 – 0.138	14 - 10	All Dimensions		Rigid or Breakaway
1.50	0.060	16	91 max. height 610 max. width 610 max. diameter	36 max. height 24 max. width 24 max. diameter	Rigid or Breakaway
1.50	0.060	16	All duct sizes		Breakaway only
1.20	0.048	18	2159 and over	85 and over	
0.90	0.036	20	1397 - 2134	55 – 84	
0.76	0.030	22	787 - 1372	31 – 54	
0.60	0.024	24	330 - 762	13 – 30	
0.46	0.018	26	305 and under	12 and under	

Table A (Minimum Sleeve Thickness)

CLEARANCES REQUIRED BETWEEN FIRE DAMPER SLEEVES AND WALL/FLOOR OPENINGS:

- ◆ Clearance between Fire Damper Sleeve and wall shall be minimum 10mm per 1 meter (1/8 inch per 1 foot) damper height and 10mm per 1 meter (1/8 inch per 1 foot) damper width but not less than 6mm (1/4 inch) and not more than 50mm (2 inch) in either directions. See Figures 2 and 3.
- ◆ These clearances are required to allow the expansion of fire damper and sleeve to fire elevated high temperature.

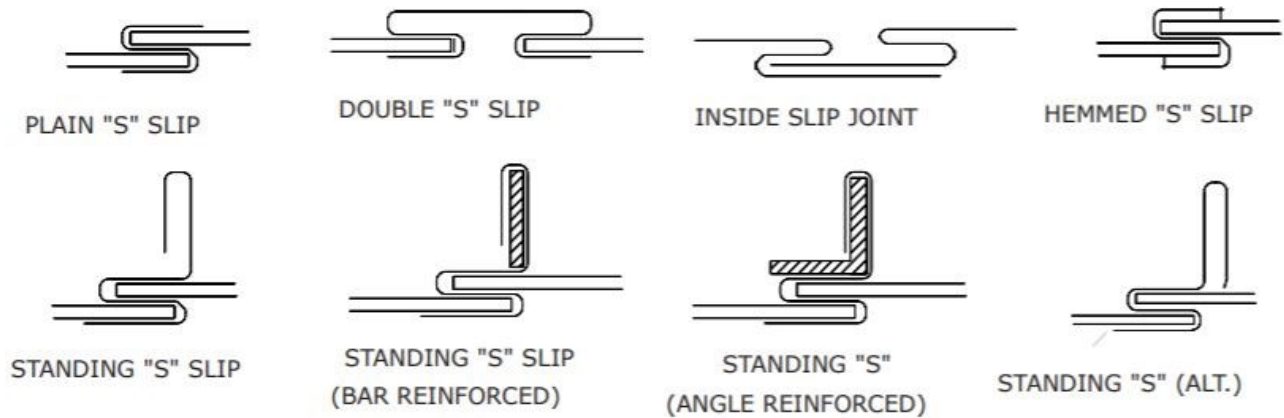


ATTACHING FIRE DAMPER SLEEVE TO WALL/FLOOR OPENINGS:

- ◆ Securing fire damper and sleeve to wall or floor opening shall be via retaining angles on each side of the wall and floor. Retaining angles shall be minimum 32mm × 32mm (1.25 inch × 1.25 inch) with minimum overlap with the wall or floor of 25mm (1 inch). The thickness of retaining angles shall be of minimum 1.5mm (0.060 inch or Gauge 16).
- ◆ The retaining angle should be fixed to the fire damper sleeve by a row of spot welds, rivets or #10 sheet metal self drilling screws at maximum distance of 50mm (2 inch) from the edges and at spaced middle distances of maximum 150mm (6 inch) center to center. The retaining angle should not be fastened to the wall or floor to allow for damper expansion.

Breakaway Connections :

Breakaway connections shall be fixed to the sleeve by 2 pieces of #10 sheet metal self drilling screw on each side and on the bottom located in the center of the slip pocket and penetrating both sides of the slip pocket.



NOTES :

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.