



# 2500 and 2600 Series

## Fire Damper

### Installation Instructions

#### General Install Instructions

1. Inspect for shipping damage
2. Check both size and model are correct for the installation
3. Confirm the proper orientation, as stated on damper label, prior to finalizing installation
4. Inspect for obstructions which could interfere with free operation and complete closure.
5. After installation manually verify proper operation

#### Installation

The intent of a proper installation is to secure the fire damper in, not to, the opening in such a manner as to prevent distortion or disruption of the damper operation by allowing the fire damper to expand and the connecting duct to separate in the event of the collapse of the hanging system. The fire damper must be positioned within the fire partition

#### Access

Access must be provided for damper inspection and servicing. Where it is not possible to achieve sufficient size access, it will be necessary to install a removable section of duct.

#### Damper Sleeve Attachment

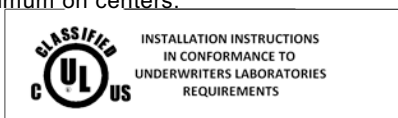
A sleeve shall be used of sufficient length to permit direct attachment of the perimeter mounting angles. If the sleeve is not factory supplied, it must be attached on both sides of the damper by one of the following methods:

- a.  $\frac{1}{4}$ " dia. bolts and nuts
- b.  $\frac{1}{2}$ " long welds
- c. #10 sheet metal screws
- d.  $\frac{3}{16}$ " steel pop rivets

Fasteners shall be 6" maximum on center and 2" maximum from corners. Fasteners cannot be placed where they will interfere with damper operation. Gaps between the damper and its sleeve must be small enough to prohibit the passage of a  $\frac{1}{8}$ " diameter rod through the entire depth of the gap.

#### Mounting Angles

1. Secure angles to the sleeve and not to the fire partition.
2. Mounting angles must fully frame the sleeve on both sides of the fire partition.
3. When reverse mounting angles are used the size of the opening must be increased to maintain the expansion clearance between the fasteners and the opening.
4. Angles shall be a minimum of 1  $\frac{1}{2}$  x 1  $\frac{1}{2}$  x 16 Ga. on dampers 36 x 50 and less and a minimum of 1  $\frac{1}{2}$  x 1  $\frac{1}{2}$  x 14 Ga. over 36x50.
5. Fasten angles to the sleeve using  $\frac{1}{4}$ " dia. bolts and nuts, or by spot or  $\frac{1}{2}$ " tack welds, or with #8 or #10 steel sheet metal screws, or with  $\frac{3}{16}$ " steel rivets. Fasteners or weld beads shall be 8" maximum on centers.



104 Montgomery Avenue  
Cle Elum, WA 98922

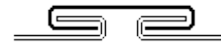
Tel: (866) 940-0696  
Fax: (509) 674-4420  
[sm@shoemakermfg.com](mailto:sm@shoemakermfg.com)

#### Field Assembled Sleeves

Field assembled sleeves shall be the same gauge or heavier than the duct to which it is attached. For C, CR, & CO type dampers sleeves must be a minimum 18 gauge. For all others refer to SMACNA recommended sleeve thicknesses.

#### Duct Connections

1. The installation of the damper and all duct connections to the damper sleeve shall conform to NRPA-90A and SMACNA Fire, Smoke, and Radiation Damper Installation Guide, and UL555.
2. Connecting ducts shall not be continuous but shall terminate at the damper sleeve.
3. Duct connections to the sleeve can be any of the following breakaway types listed below.  
Joints shown below are permitted to have no more than two No. 10 diameter sheet metal screws on both sides and the bottom (6 screws) located in the center of the slip pocket and penetrating both sides of the slip pocket. When the joints shown below are used on the top and bottom of horizontal ducts, flat slips (shown here),



not exceeding 20 inches in length, may be used on the sides. All connections not listed as breakaway shall be considered as rigid.

4. For rigid TDC or TDF type connections follow the manufacturer's instructions for connection. For rigid type duct connections, sleeve shall be a minimum of 16 GA on dampers not exceeding 36" wide or 24" high or 24" diameter and 14 GA on larger units.
5. Duct connections for round or oval duct where the diameter (largest dimension for an oval) is less than 22 inches, three equally spaced #10 sheet metal screws may be used. From 22 to 36 inch diameter connections, five equally spaced #10 sheet metal screws may be used.

#### Clearance

The opening in the fire penetration for the damper assembly shall be sized to provide clearance of not less than  $\frac{1}{8}$ " per foot of width on the top and bottom and  $\frac{1}{8}$ " per foot of height on the sides. A minimum gap of  $\frac{1}{8}$ " per side shall be maintained on sizes under 12". See note 3 of Mounting Angles above regarding increased clearance.

**ALL INSTALLATIONS ARE SUBJECT TO LOCAL  
AUTHORITY APPROVAL PRIOR TO ORDERING  
DAMPERS AND DAMPER INSTALLATION**

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[www.shoemakermfg.com](http://www.shoemakermfg.com)





PLAIN "S" SLIP



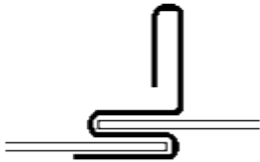
DOUBLE "S" SLIP



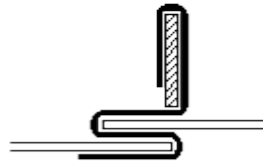
INSIDE SLIP JOINT



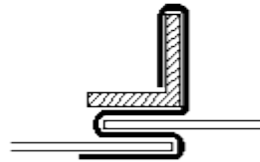
HEMMED "S" SLIP



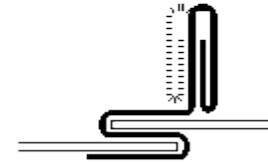
STANDING "S" SLIP



STANDING "S" SLIP  
(BAR REINFORCED)



STANDING "S" SLIP  
(ANGLE REINFORCED)



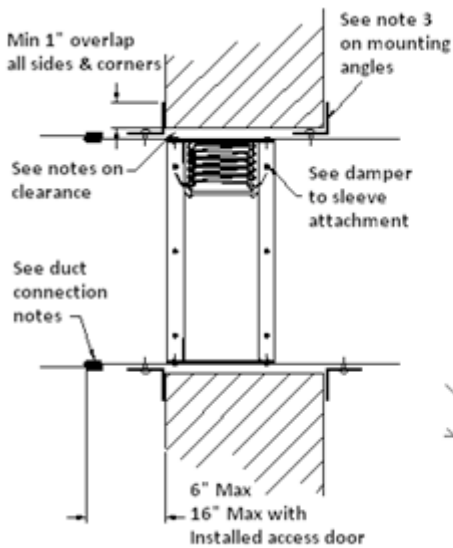
STANDING "S" (ALT.)

### Caulking and Sealing

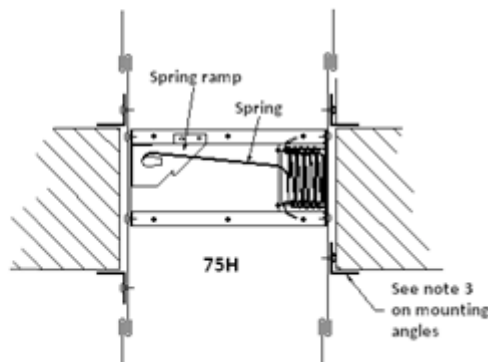
- DO NOT USE INTUMESCENT CAULK ON OR AROUND FIRE DAMPERS.
- No sealing or caulking is required for approved fire damper installation.
- Mounting angles should not be caulked or sealed to the fire penetration. If required by the local authority, contact Shoemaker Manufacturing customer service (509) 674-4414 or [sm@shoemakermfg.com](mailto:sm@shoemakermfg.com).
- No caulking, packing, or insulation is allowed between the damper sleeve and opening.

### Maintenance

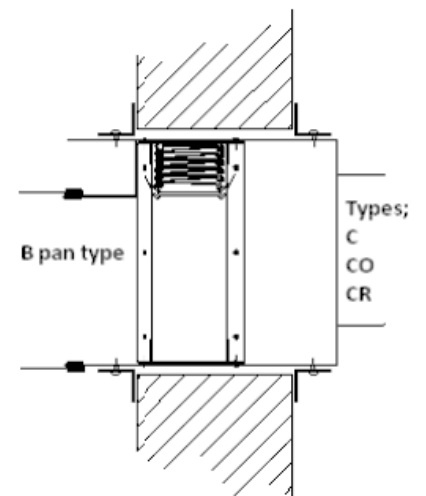
Dampers shall be maintained in intervals as stated in NFPA-90A, Appendix B, unless local codes require more frequent inspections. Check the fuse links, check the stainless steel closure springs where furnished, cycle damper and check for free operation and complete closure, clean with mild detergent or solvent, secure damper open with fusible link.



Vertical Installation



Horizontal Installation



Alternate Types



INSTALLATION INSTRUCTIONS  
IN CONFORMANCE TO  
UNDERWRITERS LABORATORIES  
REQUIREMENTS

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DAMPERS AND DAMPER INSTALLATION**



# 2500 and 2600 Series

## Fire Damper

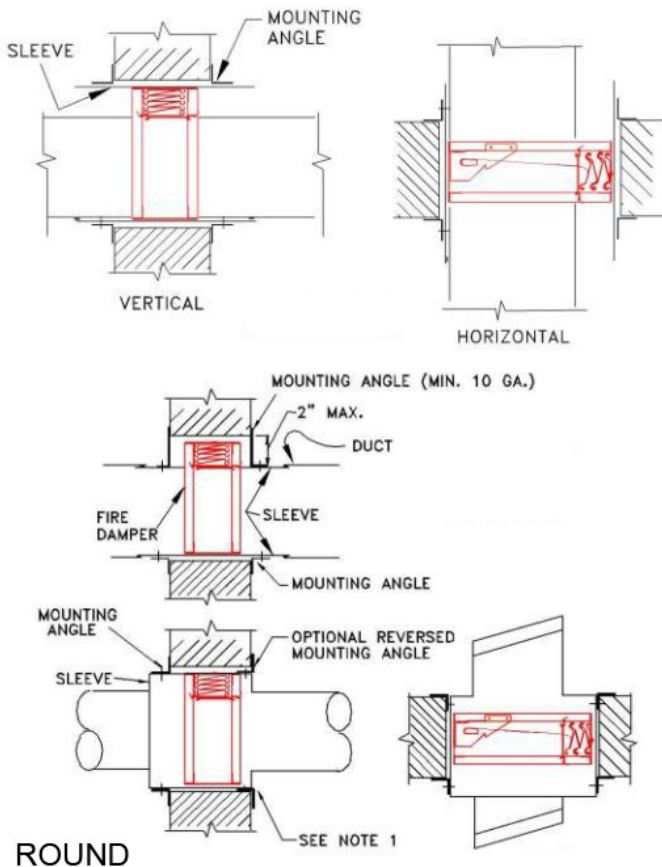
### Installation Instructions

## 2500-2600 ROUND

**1-1/2 Hours Rated, UL Classified ROUND dampers for use in fire barriers with ratings of less than 3 hours**

### DAMPER BEHIND A GRILLE

1. Perimeter mounting angles to be a minimum of 1-1/2 x 1 -1/2 x 16GA on dampers 36 x 50 and smaller. For damp- ers greater than 36 x 50, angles to be a minimum of 1- 1/2 x 1-1/2 x 14GA.
2. Grille to flange fasteners cannot penetrate fire wall ( see note 4).
3. Secure angles to sleeve only, so as to frame the wall opening. Fasten to the sleeve only using the same means as required for fastening the damper to the sleeve.
4. Grille to flange attachment by means of 1/4" dia. Pop rivets, #8 sheet metal screws or #8 bolts and nuts. Fas- teners to be plated steel or stainless steel, minimum two fasteners perside.



### 2500-2600 ROUND

The factory supplied 22 GA. Collar to 18 GA cap connection on type ROUND dampers is a breakaway connection under the following conditions:

1. Round unit duct diameters are no larger that 52"
2. Oval duct sizes are no larger that 58" W x 29"H.
3. Duct gauges shall conform to the SMACNA or ASHRAE duct standard.
4. Duct diameters of 22 inches(559mm) and smaller shall have 3 No. 10 (4.8mm) diameter sheet metal screws evenly spaced around the circumference of the duct.
5. Duct diameters greater than 22 inches and up shall have 5 sheet metal screws evenly spaced around the circumference of the duct.
6. Dampers outside of these restrictions (ie) multiple damper and special size and application dampers must use a 4" wide drawband connection as shown in the SMACNA Fire, Smoke, and Radiation Damper Installation Guide

