



INSTALLATION INSTRUCTION FIRE / SMOKE DAMPER

SYSTEM BREAKAWAY CONNECTIONS

MOUNTING ANGLES

Secure mounting angles to the sleeve and not to the wall or floor. Mounting angles to frame the four sides of the sleeve on both faces.

When reverse mounting angles are used the size of the opening must be increased to maintain the specified expansion clearance between the angle / fasteners and the opening. Angles shall be a minimum of 1 1/2" x 1 1/2" x 16 gauge on dampers 36" x 50" and smaller. For dampers greater than 36" x 50", angles to be a minimum of 1 1/2" x 1 1/2" x 14 ga. Fasten angles to the sleeve using 1/4" dia. bolts and nuts or by welding with beads 1/2" in length, or with No. 10 steel sheet metal screws, or with 3/16" steel rivets. Fasteners or weld beads shall be 8" maximum on centers.

ACCESS

Suitable 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.

CAULKING

Caulking is allowed between the mounting angles and the damper sleeve, and between the mounting angles and the floor or wall construction. Caulking is not allowed between the damper sleeve and the wall or floor inside the opening. Caulk shall be one of the following: Dow Corning RTV 732, or a UL approved substitute.

DUCT CONNECTION

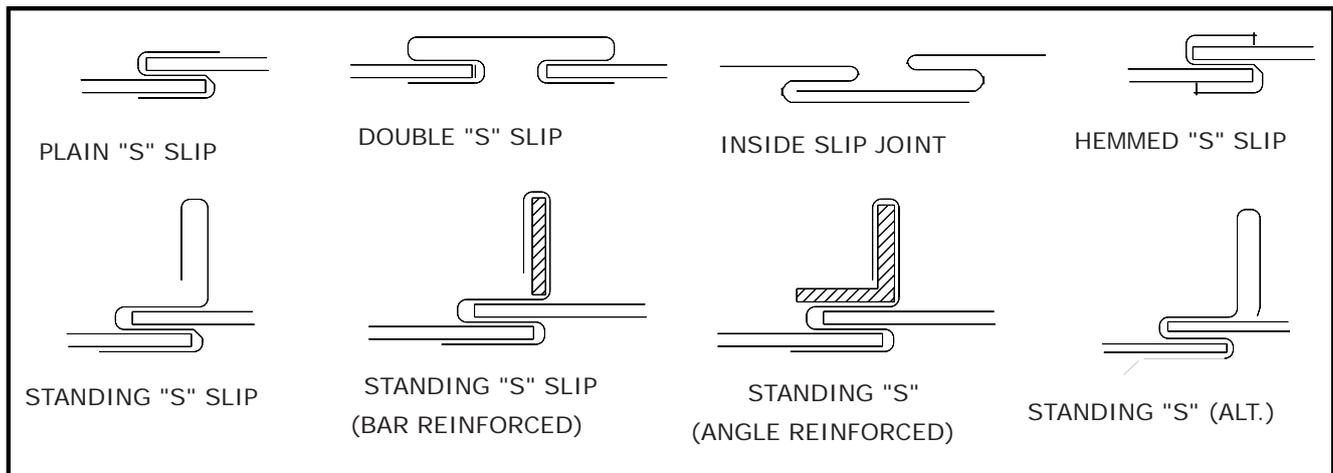
The installation of the damper and all duct connections to the damper sleeve shall conform to NFPA-90A and the SMACNA Fire, Smoke and Radiation Damper Installation Guide. All duct connections shall also conform to UL555. Connecting ducts shall not be continuous but shall terminate at the damper sleeve. Duct connections to the sleeve will be either of the breakaway or rigid types, breakaway types are listed below.

The following determines if the connections are to be rigid or breakaway.

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. Dampers supplied with thinner sleeves will require a breakaway connection of the following type. Plain "S" slip, double "S" slip shown below. All connections not listed as breakaway shall be considered as rigid. Breakaway joints of the types shown below shall have no more than two No.10 (4.8 mm) diameter sheet metal screws on each side and on the top and bottom located in the center of the slip pocket and shall penetrate both sides of the slip pocket. Breakaway joints of the type shown below are permitted on the top and bottom of horizontal ducts (vertical dampers) with flat slips not exceeding 20 inches (508 mm) in length on the sides.

MAINTENANCE

Dampers shall be maintained in intervals as stated in NFPA-90A, Appendix B, unless local codes require more frequent inspections. Check the fuse link, 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.





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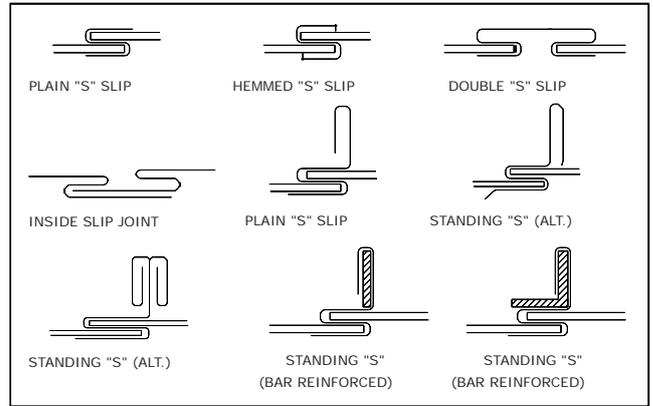
SYSTEM BREAKAWAY CONNECTIONS

Breakaway Style Transverse Joints

-Transverse joints illustrated at right have always been approved as breakaway connections. SMACNA testing has also approved the following variations as breakaway connections.

-Standing "S" joints can be applied with no. 10 sheet metal screws (through joint and duct) subject to the following limitations: Maximum 2 screws in each side and in bottom joint.

Transverse joints illustrated can be applied as top and bottom joints with Drive Slip - side joints in duct heights up to 20 inches.



Round and Oval Duct Breakaway Connections

Round or flat oval ducts connected to type R, CR or CO damper collars may use no. 10 sheet metal screws as follows:

Ducts to 22" wide (or dia.) and smaller may use 3 screws.

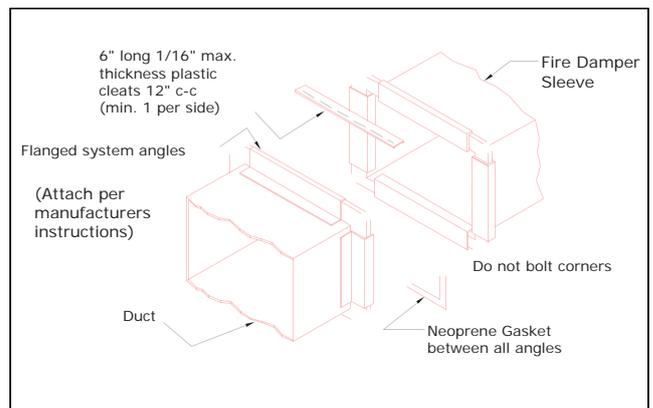
Ducts larger than 22" wide (or dia.) may use 5 screws.

NOTE: All breakaway connections described may have duct sealant applied in accordance with SMACNA recommendations.



Manufactured Flanged System Breakaway

Flanged connection systems manufactured by Ductmate, Ward, and Nexus are approved as breakaway connections when installed as illustrated.



PROPRIETARY FLANGE SYSTEM BREAKAWAY CONNECTIONS (TDC by Lockformer, TDF by Engle)

TDC and TDF systems are approved as breakaway connections when installed as described in the TDC or TDF addendum to the SMACNA Duct construction Standards except the corners may not be bolted. Standard 6" metal clip may be used with spacing as shown in diagram.

