

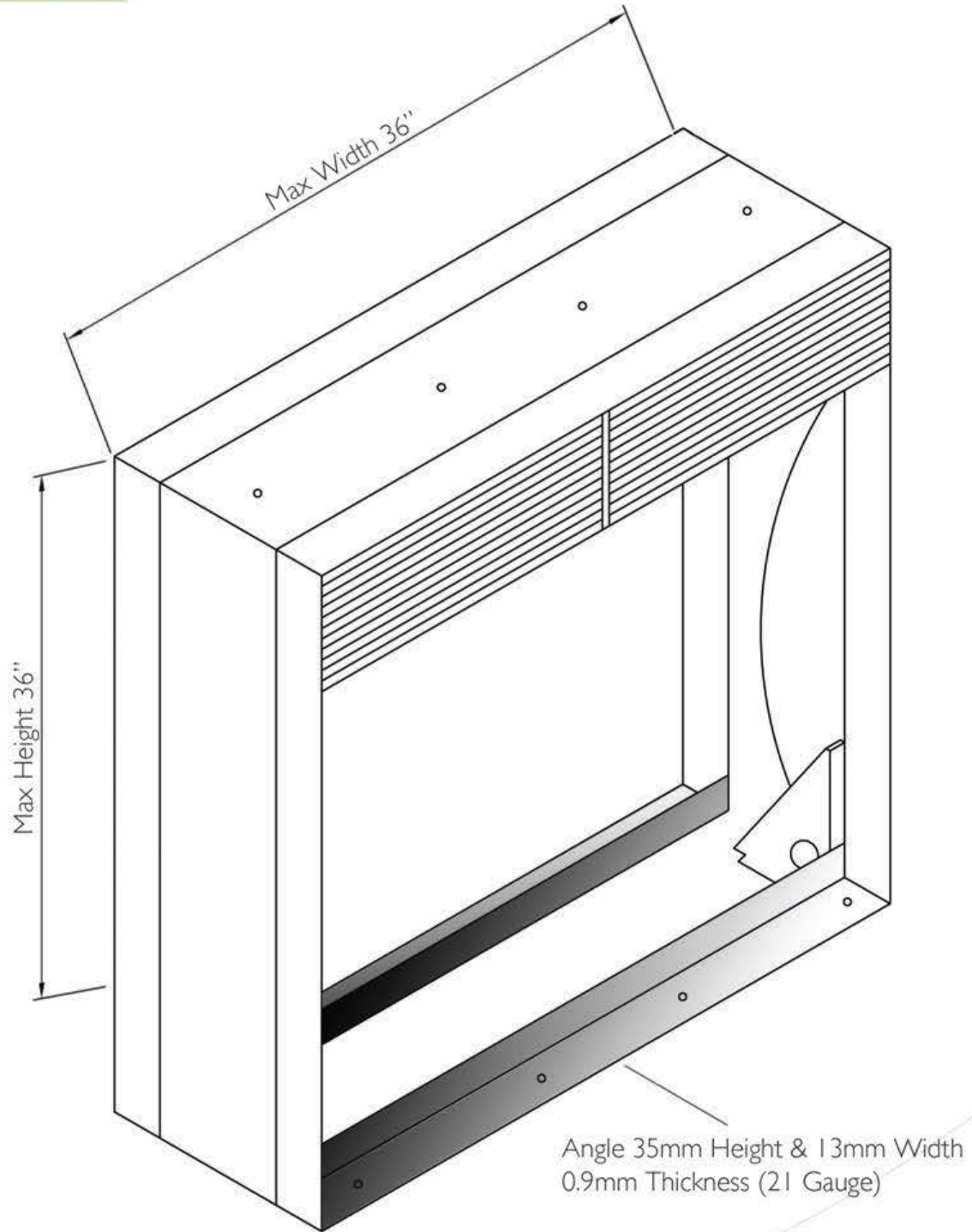
FLOW TECH

AIR DISTRIBUTION SPECIALIST



FIRE DAMPERS

MODEL - FTFD



Blades are inside air stream recommended for usage in low, medium & high velocity ducting system.



FIRE DAMPER INSTALLATION

Fire Damper Installation in Wall Floor Masonry

The basic intent of a proper installation is to secure the fire damper into the opening in such a manner as to prevent distortion and disruption of the damper operation by allowing the fire damper in openings to expand.

Retaining Angles

Retaining angles are made from galvanized steel minimum 1½ x 1½ x 13ga (35x35x2.38mm)

- Retaining angles must overlap structure opening 1 inch minimum and cover corners of openings. Retaining angle made from galvanized steel sheet with 13 gauge (2.38mm) thickness.

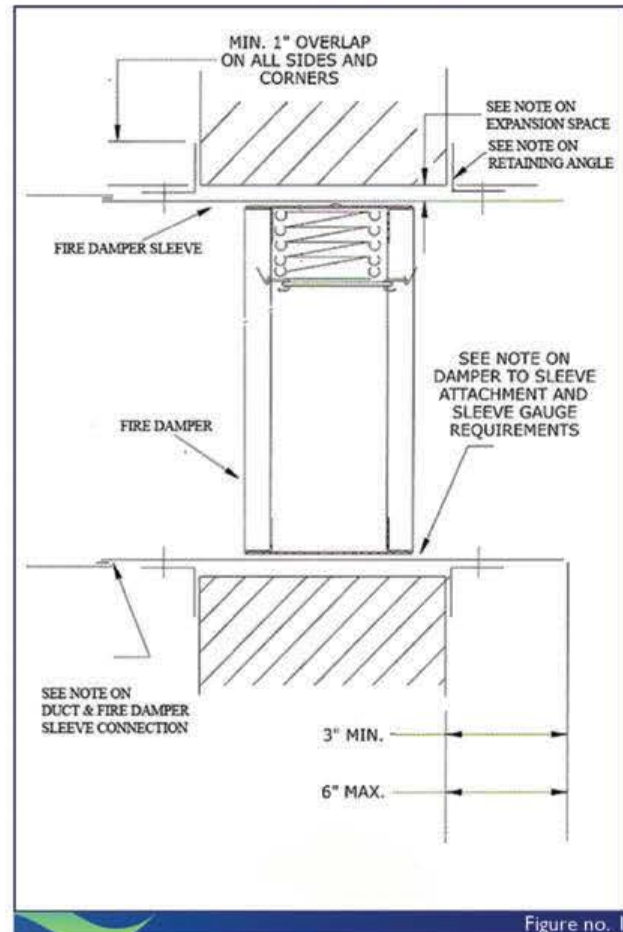


Figure no. 1

Expansion Space

Fire Damper Sleeve Clearance within wall/floor opening

- Clearance requirement for damper sleeves within a wall opening are based on minimum of 1/8 inch per foot (10mm per meter) of width (or height)

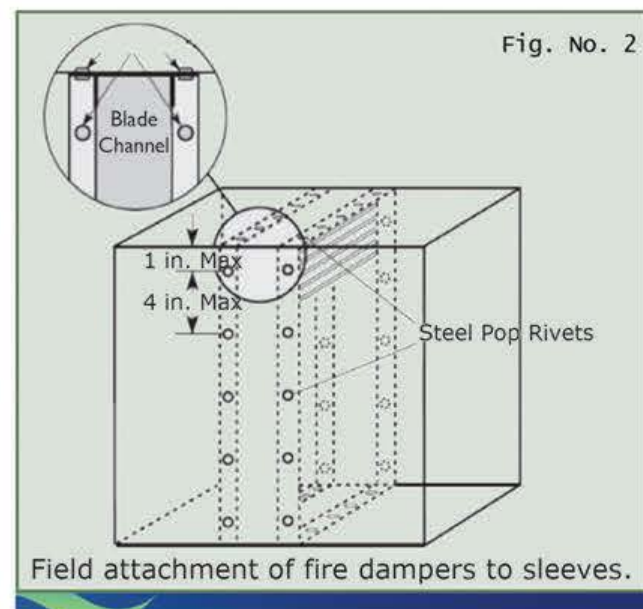
Example: A 36 inch x 24 inch fire damper sleeve is installed in a wall opening. The opening shall be 36 3/8 inches wide (1/8 inch x 3 feet). The sleeve is retained in the wall/floor with the use of steel retaining angles.



SLEEVE

Sleeves are made from galvanized steel equivalent to ASTM A 653 shall be the same gauge or heavier as the duct to which it is attached. Gauges shall conform to SMACNA or ASHRAE duct standards. Sleeve thickness shall be not less than that required by standard for installation of air conditioning and ventilating system NFPA 90A.

Length of the sleeve extending beyond the wall or floor opening for breakaway joints between the sleeve and duct shall not exceed 6" (152mm). On each side for fire damper intended for use without an actuator or a factory installed access door in the sleeve. Sleeves connecting duct shall not be continuous and shall be terminated on sleeve or frame.



DAMPER TO SLEEVE ATTACHMENT

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

1. Secure with 4.8 x 10mm steel rivets. Fasteners shall be 4" (100mm) maximum on centers and maximum 1" (25mm) on corners. Fasteners cannot be placed where they will interfere with damper operation as shown in figure 2.
2. M6 steel nuts and bolts fasteners shall be 4" (100mm) maximum on centers and maximum 1" (25mm) on corners. Fasteners cannot be placed where they will interfere with damper operation as shown in figure 2.
3. Weld joint 5mm in length, fastener shall be 4" (100mm) maximum on centers and 1" (25mm) maximum on corners. Fasteners cannot be placed where they will interfere with damper operation as shown in figure 2.

RETAINING ANGLES FASTENED TO SLEEVE

Secure retaining angles must be attached to sleeve maximum 4" (100mm) centers and maximum 1" (25mm) from the corners by following methods:

1. 8mm bolts and nuts with washer as shown in figure 3
2. Weld joint, 5mm in length

Note: Retaining angle shall not be weld to each other at the corner.



SECURING FIRE DAMPER AND SLEEVE TO WALL AND FLOOR OPENINGS:

Fire damper and sleeve assemblies must be installed in wall openings using retaining angles on each side of wall or floor as described below:

- Retaining angles must be a minimum of 13 (2.38mm) gauge steel and have a minimum of 350x350 mm legs.

- Retaining angles must be attached to damper as shown in figure 3. It must be attached to all 4 sides of the sleeve with one row of attachments on each side. Attachments must be spaced a maximum of 100mm on centers and a maximum of 25mm from corners by using 8mm bolts and nuts with washer.

- Retaining angles must completely cover the clearance space between the sleeve and the wall/floor opening, plus overlap the wall/floor a minimum of 1" this coverage includes all corners as shown in figure 3. Retaining angles should not be fastened to the wall / floor material, the angle should only sandwich the wall/floor and allow for dampers / sleeve expansion during periods of intense heat.

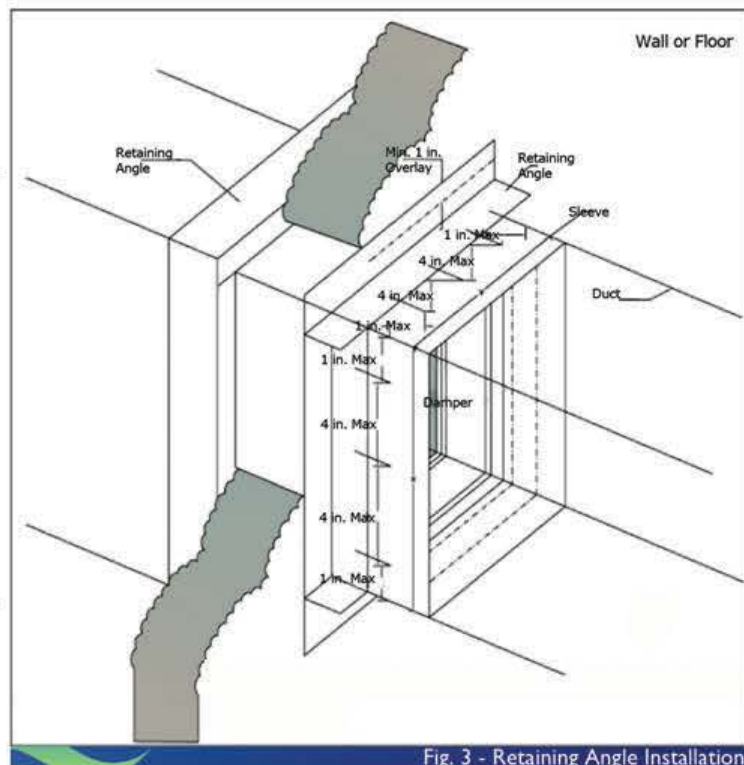


Fig. 3 - Retaining Angle Installation



- The first side of the wall, fixing the retaining angle on the fire damper increase 35mm at each end of the angle on bottom and top. Left and right side of the retaining angle should be the same with the fire damper sleeve size.

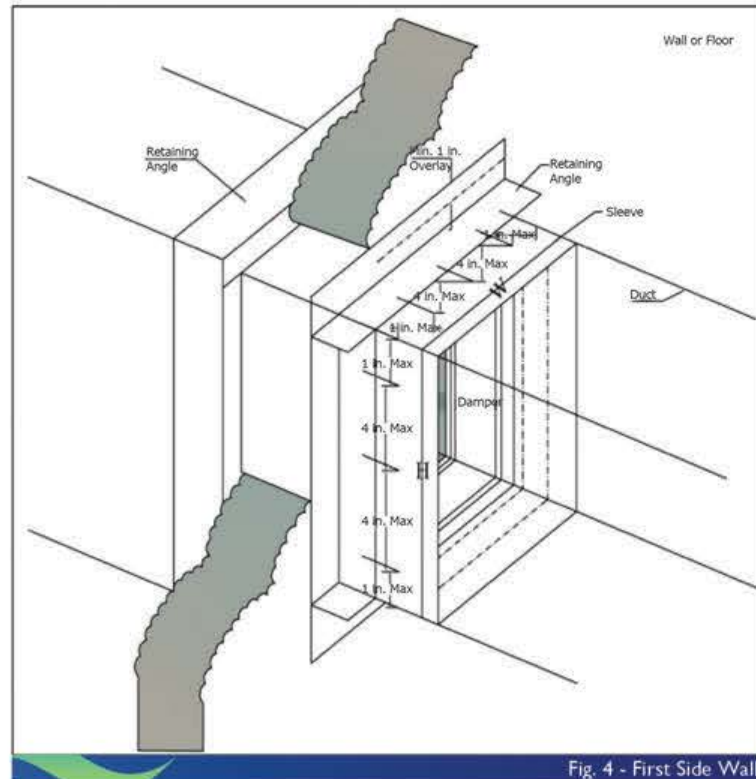


Fig. 4 - First Side Wall

- The second side of the wall, fixing the retaining angle on the fire damper increase 35mm each end of the angle on right and left side of the fire damper. Top and bottom side of the retaining angle should be the same with the fire damper sleeve size.

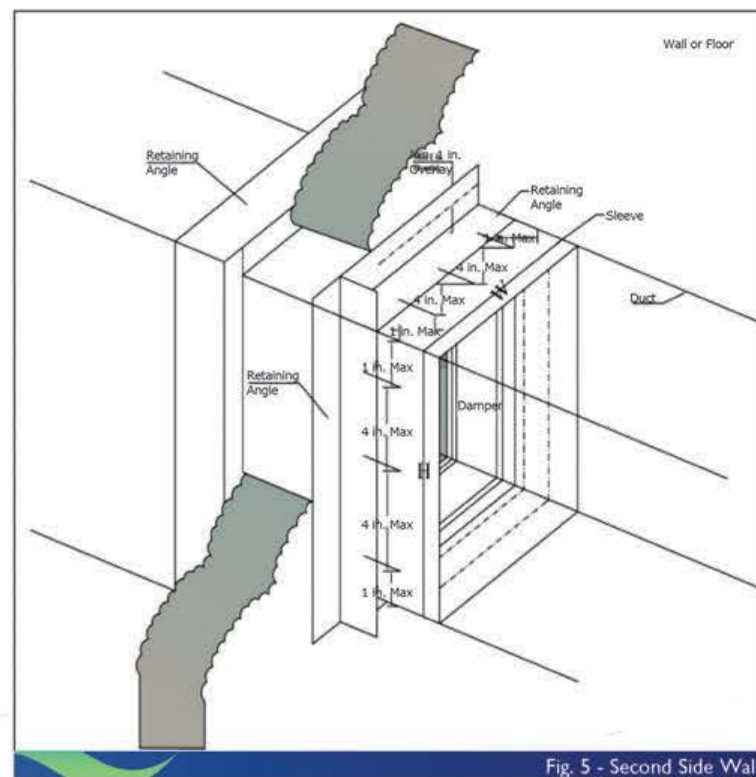


Fig. 5 - Second Side Wall



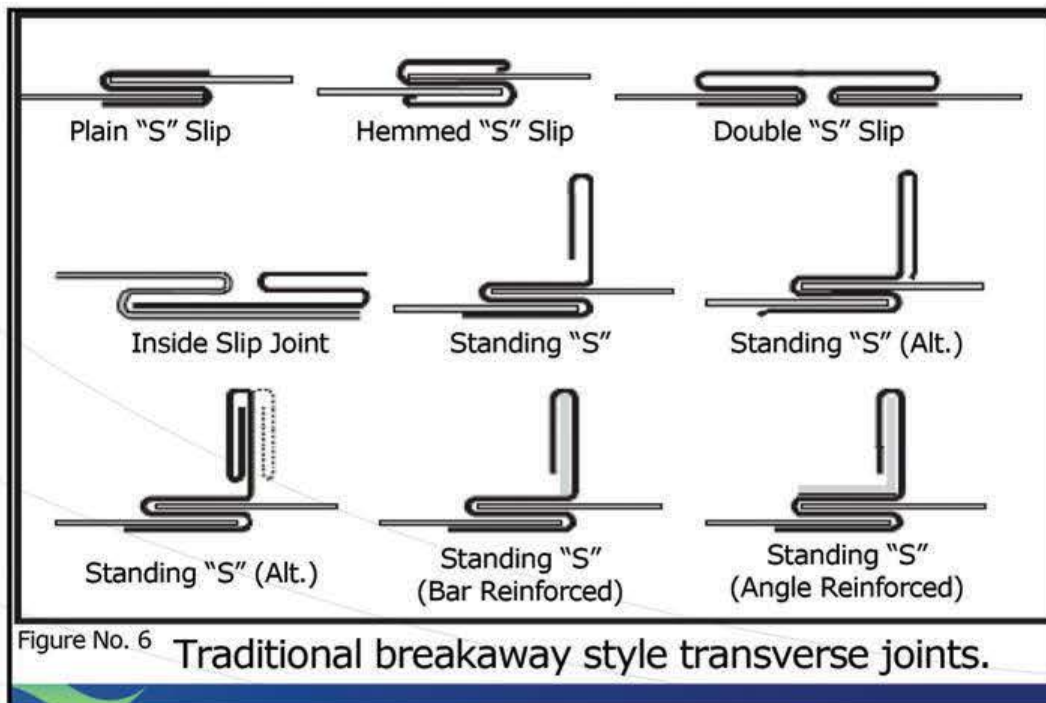
DUCTS TO THE FIRE DAMPER SLEEVE CONNECTION

All duct connections to Fire Damper and sleeve assemblies must be breakaway. The installation of the damper sleeve shall conform to SMACNA Fire, Smoke and Radiation Damper Installation Guide. All Duct connections shall also conform to UL 555. Fire Damper installation for mounting and joining with the duct shall be in accordance with the Standard for the installation of Air-Conditioning and Ventilating Systems, NFPA 90A.

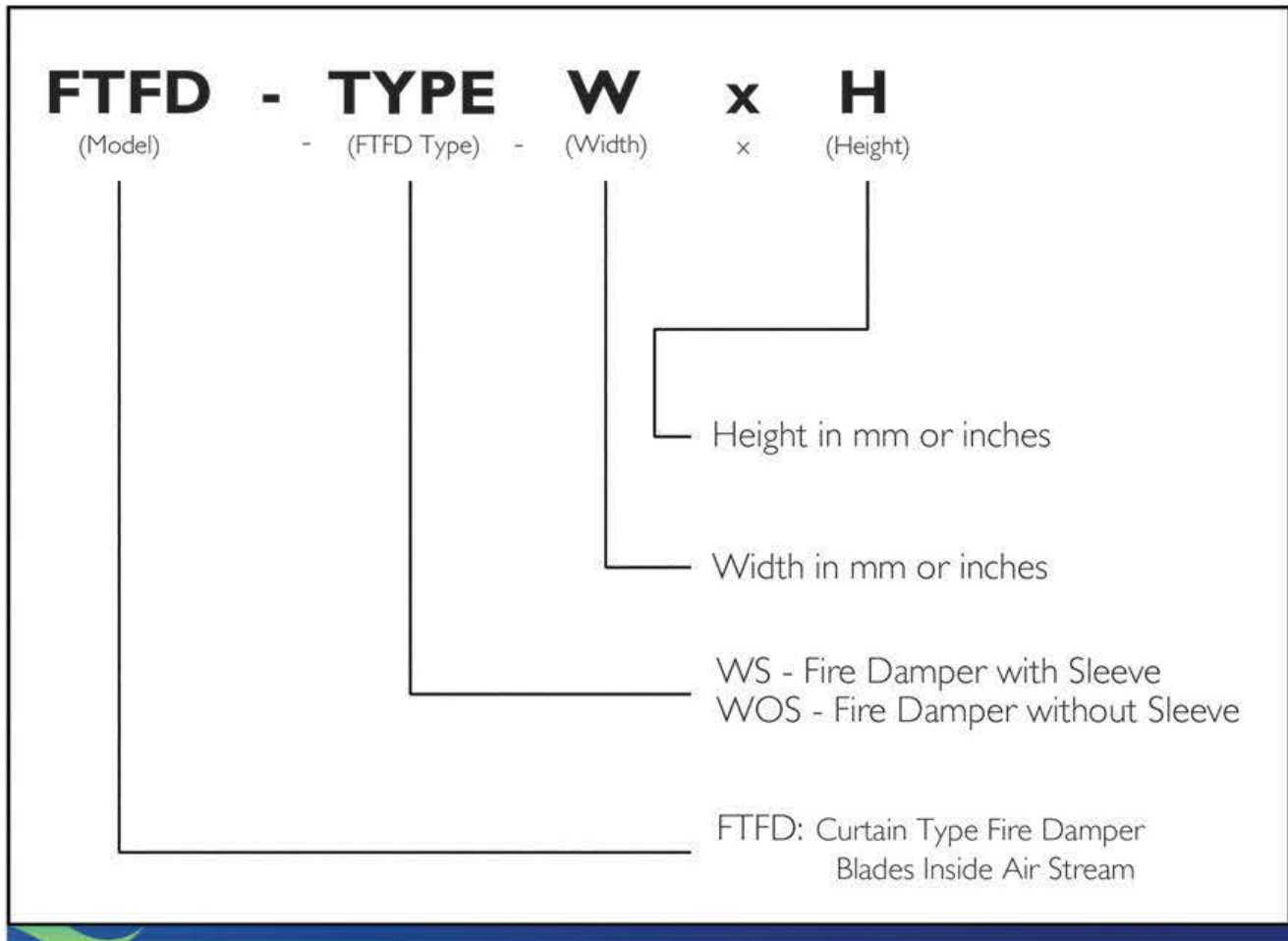
When the sleeves are field supplied, fire damper require the use of wall sleeves (vertically mounted fire dampers) or floor sleeves (horizontally mounted fire dampers) with perimeter mounting angles attached to the sleeve on both sides of the wall or floor openings.

BREAKAWAY STYLE TRANSVERSE JOINTS

- Transverse joints illustrated at Fig.6 have always been approved as breakaway connections. SMACNA testing has also approved the following variations as breakaway connections.
- Standing "S" joint 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.
- Traverse joints illustrated can be applied as top and bottom joints with Drive Slip - side joints in duct heights up to 20 inches.



ORDERING SYSTEM



ORDERING EXAMPLE

FTFD - WOS - 36" x 20"

Refers to curtain type fire damper with blades inside air stream, vertical mounting, without sleeve, of size 36" width x 20" height.



Certificate of Compliance

Certificate Number 20110412R26605
 Report Reference R26605, 2011 APRIL 03
 Issue Date 2011 APRIL 12



Issued to: **FAISAL JASSIM INDUSTRIES**
 DUBAI INVESTMENT PARK
 PO BOX 1871, JEBEL ALI
 DUBAI, 1871 UNITED ARAB EMIRATES

This is to certify that representative samples of

Dampers for Fire Barrier and Smoke Applications

For model information please refer to the addendum

Have been investigated by Underwriters Laboratories Inc.® in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: Tests were conducted in accordance with the Seventh Edition of the Standard for Fire Dampers, UL 555,

Additional Information: See UL On-Line Certification Directory at www.UL.com for additional Information.

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