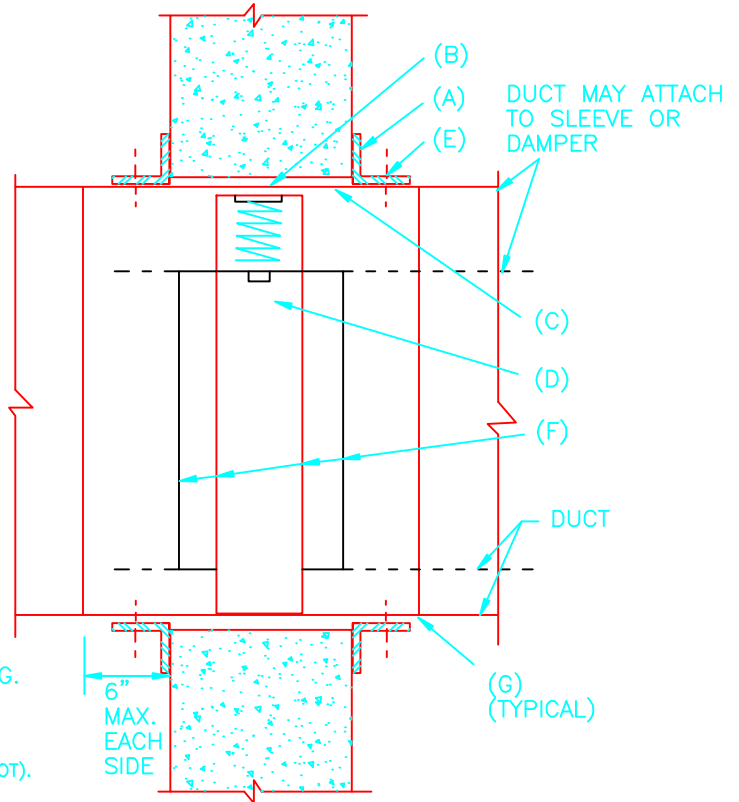


**FIRE AND FIRE/SMOKE DAMPER
TYPICAL INSTALLATION DETAILS**

- (A) RETAINING ANGLES:
MINIMUM 1-1/2" X 1-1/2" X 0.054 (16 GA.)
RETAINING ANGLES MUST LAP STRUCTURAL OPENING
1" MINIMUM AND COVER CORNERS OF OPENINGS.
- (B) CLEARANCE: 1/8" PER LINEAR FOOT
BOTH DIMENSIONS (SEE NOTE 1 BELOW)
- (C) STEEL SLEEVE: GAGE AS REQUIRED BY
MANUFACTURER'S INSTRUCTIONS.
- (D) APPROVED FIRE DAMPER (CURTAIN OR
BLADE TYPE)
- (E) SECURE RETAINING ANGLES TO SLEEVE
ONLY ON 8" CENTERS WITH:
1. 1/2" LONG WELDS, OR
2. 1/4" BOLTS AND NUTS, OR
3. NO. 10 STEEL SCREWS, OR
4. MINIMUM 3/16" STEEL RIVETS
- (F) SECURE DAMPER TO SLEEVE ON 8" CENTERS
WITH:
1. 1/2" LONG WELDS, OR
2. 1/4" BOLTS AND NUTS IN HOLES PROVIDED, OR
3. NO. 10 STEEL SCREWS, OR
4. MINIMUM 3/16" STEEL RIVETS
- (G) CONNECT DUCT TO SLEEVE AS REQUIRED BY
THE MANUFACTURER.
- (H) INSTALL ACCESS DOOR OR PANEL FOR SERVICE
AND INSPECTION. DOOR MUST BE LARGE ENOUGH
TO CHANGE LINK.

NOTE: NO CAULKING IS REQUIRED ON FIRE
DAMPERS OR FIRE DAMPER RETAINING ANGLES



VERTICAL POSITION IS SHOWN; HORIZONTAL INSTALLATION
IS SIMILAR FOLLOW INSTRUCTION FOR
FUSIBLE LINKS

NOTES:

1. FIRE DAMPER SLEEVE CLEARANCE WITHIN WALL OPENING.
CLEARANCE REQUIREMENTS FOR DAMPER SLEEVES WITHIN A WALL OPENING
IS BASED ON 1/8 INCH PER FOOT OR WIDTH (OR HEIGHT) UNLESS
OTHERWISE STATED IN THE LISTING OF THE ASSEMBLY. THE SLEEVE
MAY REST ON THE BOTTOM OF THE OPENING, AND NEED NOT BE CENTERED.
(FRACTIONAL DIMENSIONS SHALL BE TAKEN AS THE NEXT LARGEST WHOLE FOOT).

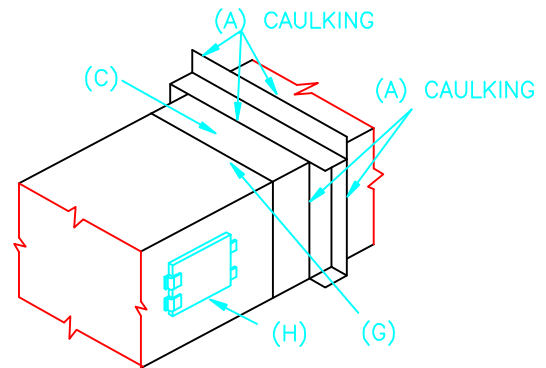
EXAMPLE: A 30 INCH X 24 INCH FIRE DAMPER SLEEVE IS INSTALLED
IN A WALL OPENING. THE OPENING SHALL BE 30-3/8 INCHES WIDE (1/8
INCH X 3 FEET) BY 24-1/2 INCHES HIGH (1/8 INCH X 2 FEET.)

THE SLEEVE IS RETAINED IN THE WALL OPENING BY THE USE OF STEEL
RETAINING ANGLES (A). THESE MUST OVER-LAP THE EDGE OF THE FRAMING
BY A MINIMUM OF ONE (1) INCH OVER AND BEYOND ALL MATERIAL IN THE
OPENING. THIS MEANS THAT THE MINIMUM WIDTH OF THE RETAINING ANGLE
WOULD BE 1-5/8 INCHES (GOOD PRACTICE CALLS FOR AN ADDITIONAL SAFETY
FACTOR BY MAKING THE ANGLE IN THIS CASE 1-1/2 INCHES WIDE.)

THE DIMENSIONS REQUIRED FOR THE OPENING SHALL BE THOSE REMAINING
AFTER THE OPENING HAS BEEN FRAMED AND FIRE RESISTIVE MATERIALS
PROVIDED WHERE REQUIRED. THE FIRE RESISTIVE MATERIALS SHALL BE
EQUAL TO THE REQUIREMENTS FOR FIRE RESISTIVE MATERIALS USED IN
THE CONSTRUCTED WALL SO THAT A CONTINUOUS RATING EXISTS AT THE
WALL PENETRATION.

2. MANUFACTURERS' INSTALLATION DETAILS
THE FIRE DAMPER MANUFACTURERS' INSTALLATION DETAILS AND
INSTRUCTIONS AS TESTED AND APPROVED BY UL MUST BE USED
IN LIEU OF THE ABOVE DETAILS WHERE APPLICABLE.

PROVIDE A COPY OF THE MANUFACTURER'S INSTALLATION
INSTRUCTIONS AT THE HRS INSPECTION.



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