

SINGLE-SIDE RETAINING ANGLES
SUPPLEMENTARY INSTALLATION
INSTRUCTIONS FOR 1½ HOUR FIRE
DAMPERS MODEL SERIES 5100S & 5100D • VERTICAL OR HORIZONTAL



APPLICATION:

Subject to the maximum sizes shown below (and the size limitations of the specific damper model), all Alumavent galvanized steel 1-1/2 hour labeled fire dampers may be installed utilizing single-side retaining angles as an alternative to the customary two-sided angle method. Stainless steel fire dampers must be installed with retaining angles on both sides of the wall/floor. The single-side retaining angle installation method is approved for use in steel stud gypsum walls/partitions, masonry/concrete walls and concrete floors. For vertical walls/partitions the angles may be installed on either side. For floor installations the angles must be installed on the top side. Single-side angles may be factory supplied or fabricated in the field and may or may not be fastened together at the corners.

Maximum sizes:

Vertical mount: Single section: 36" w x 36" h (914 x 914).

Multiple section assembly: 96" w x 48" h (2438 x 1219) or 48" w x 80" h (1219 x 2032).

Horizontal mount: Single section: 36" x 36" (914 x 914).

Multiple section assembly: N/A.

INSTALLATION NOTES:

1. For details not specified herein see standard installation instructions for applicable damper model.
2. **Expansion clearance** between the sleeve and the wall or floor shall be a minimum 1/8" (3.18) per linear foot of width and height of sleeved assembly (including any fastener heads) up to a maximum of 1-1/2" (38) and a minimum of 1/4" (6).
3. **Damper to sleeve attachment:** Attachments must be spaced a maximum of 4" (102) on centers and a maximum of 2" (51) from the corners. A minimum of 4 attachments (2 on each side of the blade track) per side (16 per damper) are required. Fasteners are not to be located within the blade track.
4. **Single-side retaining angles must be attached to both the wall or floor as well as the sleeve.** For metal stud walls, the single-side retaining angles may be attached directly to the metal stud before the gypsum board is installed (See Figure 2).
5. Retaining angles must be a minimum of 1-1/2" x 1-1/2" x 16 ga. (38 x 38 x 1.61) and must overlap the wall/floor a minimum of 1" (25) all around. For applications where the sleeve terminates flush with the wall/floor, the angle may be reversed (sleeve leg turned into opening) provided the opening dimensions are increased to accommodate the thickness of the angles and fasteners regarding expansion clearance (angles must overlap the wall/floor a minimum of 1" (25) all around, including at corners).
6. Fasten the retaining angles to the damper sleeve using #10 sheet metal screws, 1/4" (6) dia. bolts and nuts, 3/16" (5) steel rivets or 1/4" (6) tack welds. Attachments must be spaced a maximum of 4" (102) on centers and a maximum of 1" (25) from corners, with a minimum of two attachments per side/leg. Be sure fasteners do not interfere with damper operation.
7. Fasten the retaining angles to steel stud/gypsum walls using #10 steel screws, 12" (305) maximum on center and 1" (25) maximum from angle ends. Screws must penetrate the metal stud a minimum of 1/2" (13). For concrete/masonry walls or floors, fasten the retaining angles to the wall or floor using 1/4" self-tapping concrete anchors/screws, maximum 12" (305) on center and 1" (25) maximum from angle ends, with a minimum of 2 fasteners per side/leg and minimum 1-1/4" (32) penetration into the wall or floor.

