

Supplement to Installation Instructions: II-FD-1.5 and II-FS

Vertical 1½ Hour Rated, UL Classified Fire Damper Installed in Fire Resistant Shaft Wall Openings of Various Designs

APPLICATIONS

This document outlines supplemental instructions for vertically mounted 1.5 hour dampers installed in non-bearing wall designs rated for less than three hours and that utilize metal studs and are listed in UL's Fire Resistance Directory as U415 Systems A-E, U438, U459, U467, U469, U492, or U497.

INSTALLATION

1. This document is supplemental to installation instructions for each applicable model group indicated below. See referenced II or SI document for complete list of approved models.
 - A. **II-FS**; standard installation for multi-blade airfoil and single thickness blade 1½ hour fire/smoke (F/S) and fire dampers (FD).
 - B. **II-FSOS**; supplemental installation instructions for one-side retaining angle installations.
 - C. **II-FAGM**; out-of-barrier/grille-access installation for multi-blade airfoil and single thickness blade 1½ hour fire/smoke and fire dampers.
 - D. **SI-OOWCFSD**; out-of-barrier C-style installation for multi-blade airfoil and single thickness blade 1½ hour fire/smoke and fire dampers.
 - E. **II-FD-1.5**; standard installation for 1½ hour curtain fire dampers (CFD).
 - F. **SI-GAFD**; in-barrier/grille-access installation for 1½ hour curtain fire dampers.
 - G. **SI-OOWFD**; out-of-barrier/grille-access installation for 1½ hour curtain fire dampers.
 - H. **SI-OOWCFD**; out-of-barrier C-style installation for curtain fire dampers.
2. **Framing**: Gypsum panels must be screwed 12" (305 mm) on centers to all stud and runner flanges surrounding the opening (see **Figure 1** for framing details). Studs shall be spaced 24" (610 mm) max on centers. J-Runners are attached to studs with (minimum) 1½" x 1½" x 2" (38 mm x 38 mm x 51 mm) angles fastened with (minimum) ½" (16 mm) long #12 screws. As an alternative to the clip angle method, J-Track headers can be slotted to fit into the I-Studs and fastened through the J-Track into the I-Stud (shown in **Figure 2**).
3. **Opening Size**:
 - For in-barrier installations, the opening shall be sized to provide expansion clearance between the damper sleeve and the framing members. The minimum expansion clearance shall be the greater of ¼" (6 mm) or ⅜" (3 mm) per linear foot of the overall damper/sleeve width and height. The maximum expansion clearance shall not exceed ⅜" (3 mm) per foot (per 305 mm) of overall damper/sleeve width and height plus 2" (51 mm). Refer to II-FS or II-FD-1.5 for additional details.
 - For out-of-barrier installations, although no expansion clearance is required, the opening shall be sized at least ⅜" larger than the nominal duct size, but no larger than the nominal duct size plus ⅝"; refer to II-FAGM or SI-OOWFD for additional details.
4. **Retaining Angles**:
 - A. Shall be a minimum a minimum of 1½" x ⅞" x 16 ga. (38 mm x 22 mm x 16 ga.) galvanized steel.
 - B. Shall increase in size, proportionately, so there will be a minimum of 1" (25 mm) overlap on the wall, including at the corners.
 - C. Shall be attached to both the damper and the barrier on all four side of the barrier face;
 1. Attached to the damper sleeve with 3/16" (5 mm) diameter nuts and bolts, ½" (13 mm) long welds, #10 sheet metal screws or ⅜" (5 mm) rivets on 6" (152 mm) max centers, 3" (76 mm) from each corner with a minimum of 2 fasteners per side
 2. Attached to barrier with fine thread drywall screws with a minimum of ½" (13 mm) penetration into the framing, on 6" (152 mm) maximum centers and 3" (76 mm) maximum from each corner (a minimum of 2 fasteners per side). Attachment of fasteners shall not restrict the operation of the damper.
 - D. May be reversed so that one leg faces inward into the opening.
 - E. May be positioned between the double layers of gypsum on a 2 hour shaft wall, refer to SI-FUGWB.
 - F. Shall only be required on one side of the partition (see **Page 3** and **Page 4**) if the damper size does not exceed the following sizes listed below. If available, dampers larger than these sizes require retaining angles on both sides of the partition. (Models listed as Air Balance, Arrow United, Cesco, and L&D)
 1. Single Thickness F/S Models FS_V, AS_V, CG_V, MS_V: 108" W x 44" H (2743 mm x 1118 mm) or 44" W x 70" H (1118 mm x 1778 mm)
 2. Out-of-Wall Single Thickness F/S Models FS_G, AS_G, CG_G, MS_G: 36" W x 42" H (914 mm x 1067 mm)
 3. Airfoil F/S Models FA_V, UA_V, CA_V, MA_V: 108" W x 44" H (2743 mm x 1118 mm) or 44"W x 96" H (1112 mm x 2438 mm)
 4. Out-of-Wall Airfoil F/S Models FA_G, UA_G, CA_G, MA_G: 32" W x 42" H (813 mm x 1067 mm)
 5. Single Thickness FD Models MD19V, MD17V, 15MDV, 17MDV: 108" W x 44" H (2743 mm x 1118 mm) or 44" W x 60" H (1112 mm x 1524 mm)
 6. Airfoil FD Models MA19V, MA17V, 15MAV, 17MAV: 64" W x 36" H (1626 mm x 914 mm)
 7. Static CFD Models 119V, 117V, 15SV, 17SV: 108" W x 44" H (2743 mm x 1118 mm) or 44" W x 108" H (1118 mm x 2743 mm)
 8. Out-of-Wall Static CFD Models 119V, 117V, 15SV, 17SV: 36" W x 42" H (914 mm x 1067 mm)
 9. Thinline Static CFD Models 119F, 117F, 15SF, 17SF: 40" W x 40" H (1016 mm x 1016 mm)
 10. Dynamic CFD Models D19V, D17V, 15DV, 17DV: 72" W x 44" H (2743 mm x 1118 mm) or 44"W x 70" H (1118 mm x 1778 mm)
 11. Out-of-Wall Dynamic CFD Models D19V, D17V, 15DV, 17DV: 36" W x 36" H (914 mm x 914 mm)
 12. Dynamic Thinline CFD Model D19FV, D17FV, 15DFV, 17DFV: 24" W x 24" H (610 mm x 610 mm)

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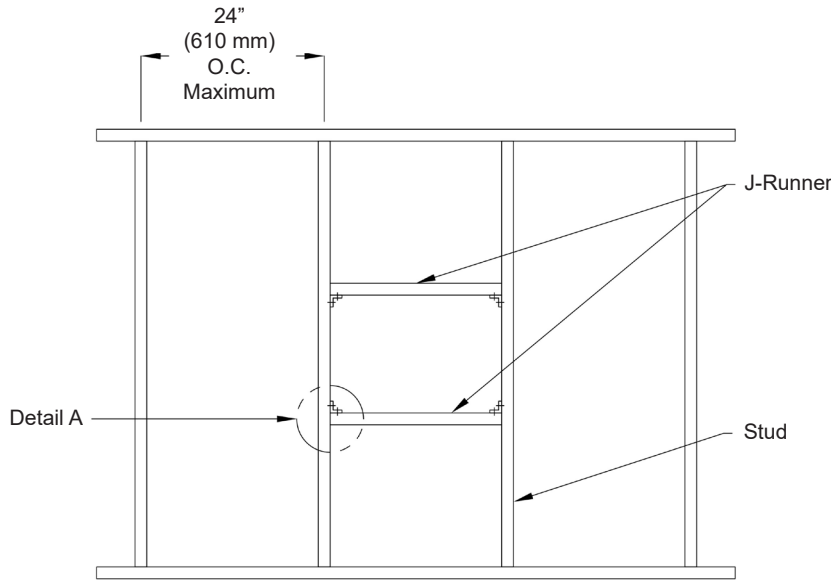


Figure 1: Opening Preparation Detail

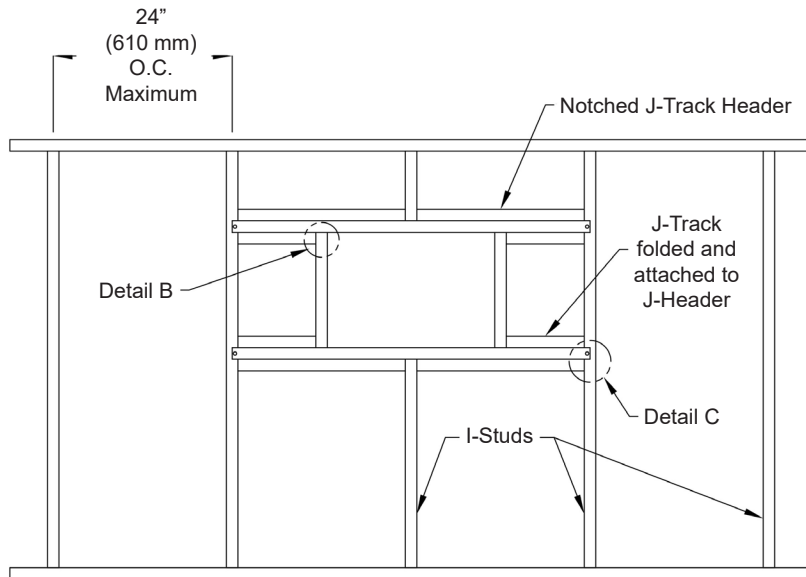
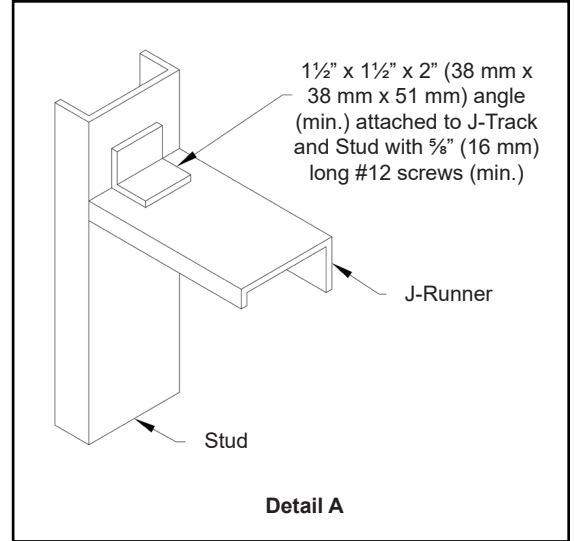
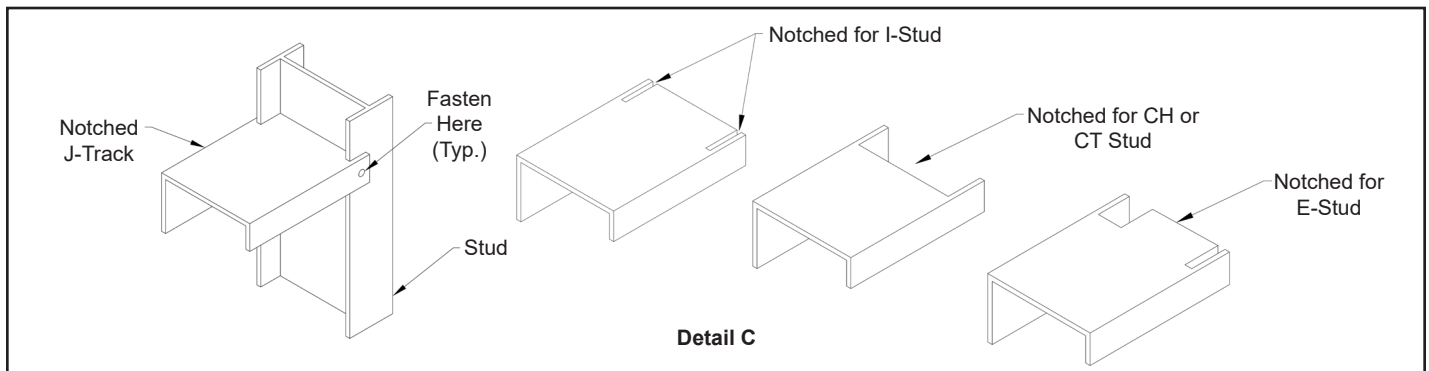
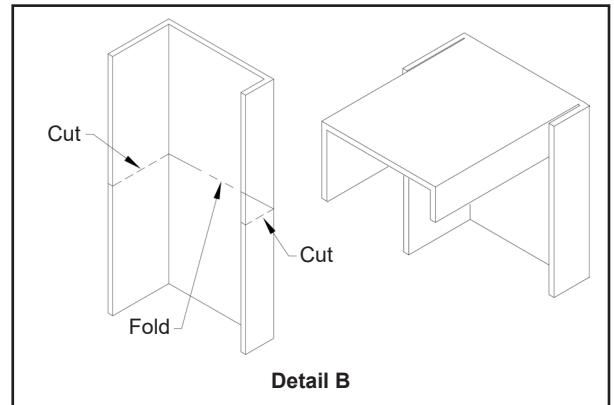
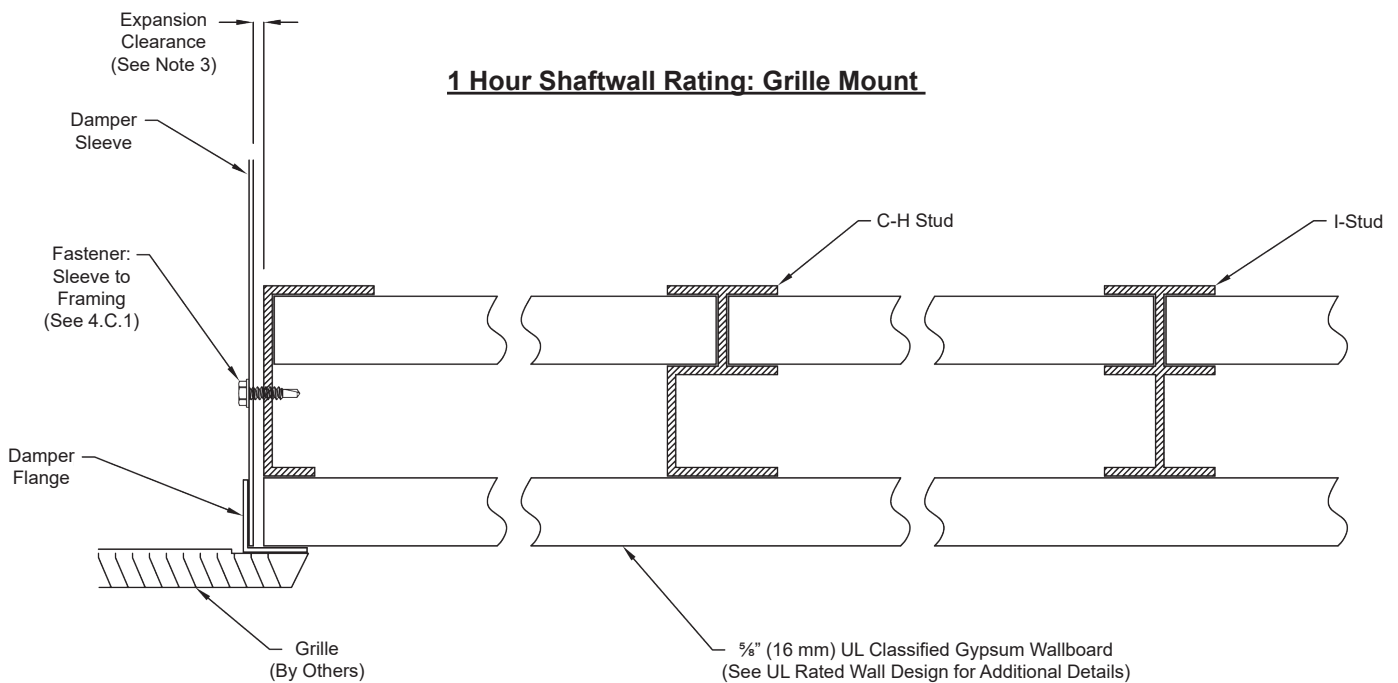
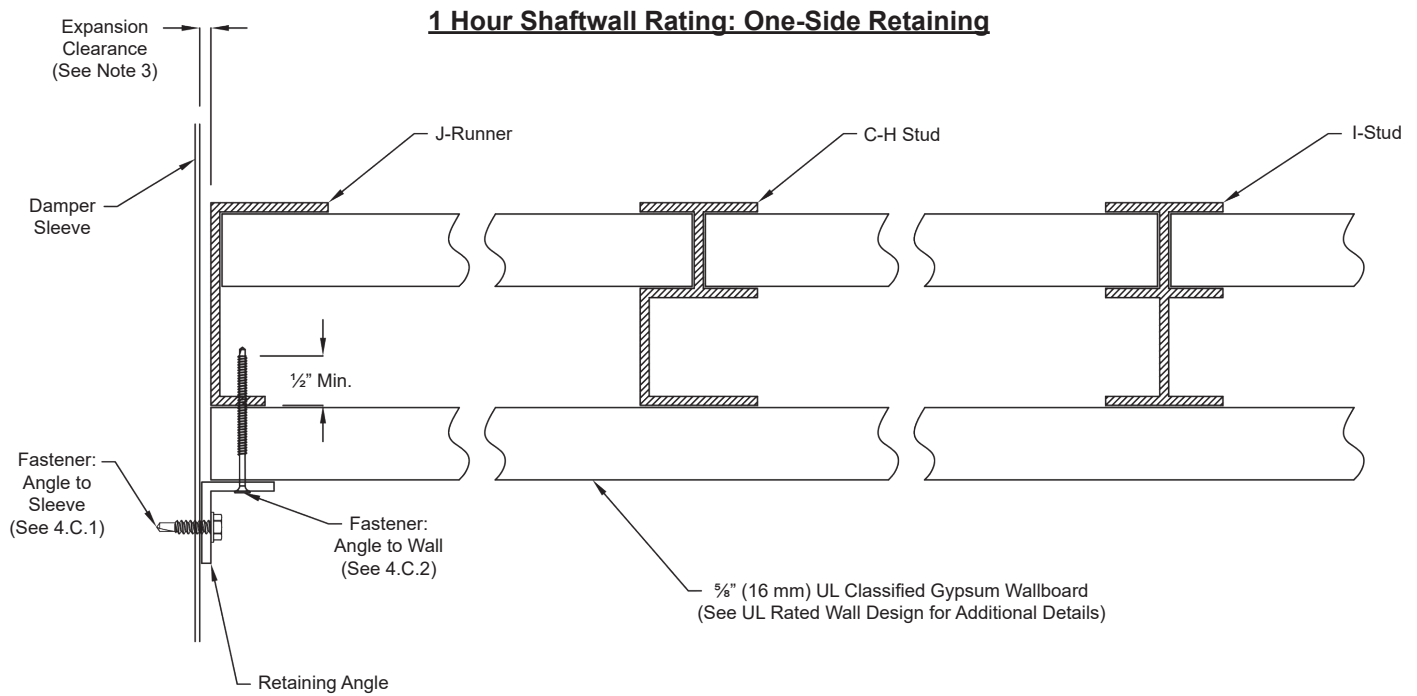


Figure 2: Optional Opening Preparation Detail for I-Stub Assembly



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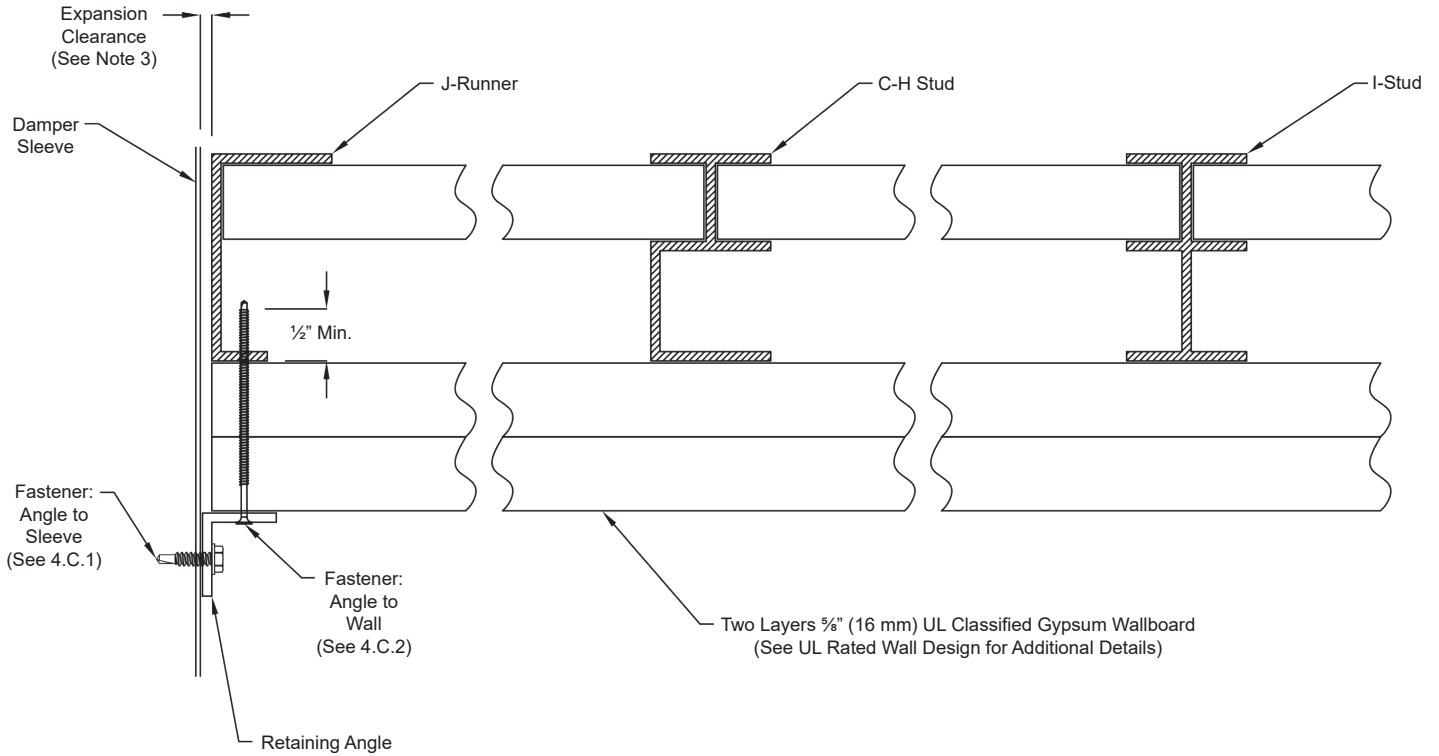
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2 Hour Shaftwall Rating: One-Side Retaining



2 Hour Shaftwall Rating: Grille Mount

