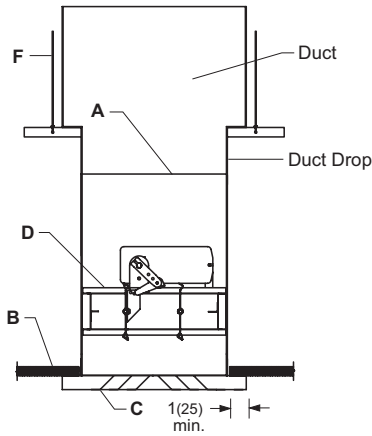
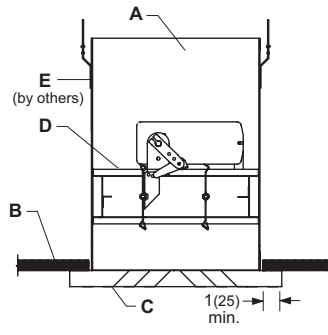


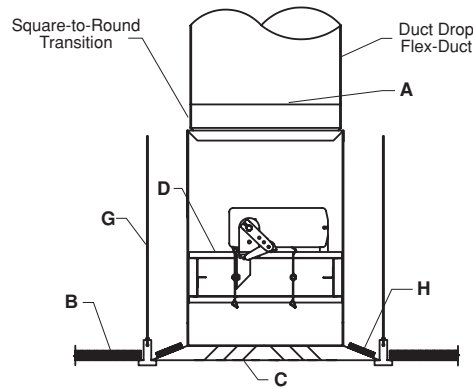
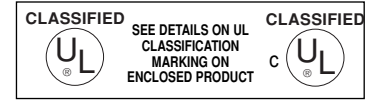
The following installation details apply to models **CFS-131** and **CFS-132**



**Installation 1**



**Installation 2**



**Installation 3**

- A. The ceiling radiation/smoke damper shall be attached to a minimum 22 gauge (0.85) steel sleeve / duct drop by welding, or with rivets, or with #10 (M5) sheet metal screws, or with quick lock, or bolted with 1/4" (6) - 20 bolts at 6" (152) o.c. maximum. A minimum of two connections per side, caution must be taken to ensure that the fasteners do not interfere with the closing of the damper blades. Steel duct drop is not required when flexible duct is utilized in conjunction with a square-to-round transition. Damper requires no additional fire protective material on sleeve when the leading edge of the closed blade line is no more than 6" (152) above rated ceiling.
- B. Ceiling penetration should be located within ceiling tiles or panels without necessitating cuts in the ceiling suspension main runners or cross tees. If required, a maximum of one runner or cross tee may be cut to enable proper damper location and installation. Each cut end shall be supported by a minimum 12 swg (2.7) hanger wire.
- C. Sleeve termination shall be a minimum 3/4" (19) flange, 5/8" (16) plaster ground, or "raw". "Raw" termination requires a steel diffuser with minimum 1" (25) flange to be attached to the damper using #8 (M4) sheet metal screws, 3/16" (5) rivets, welds or bolts at 6" (152) o.c. maximum - minimum of 2 connections per side.
- D. A continuous bead of Dow-Corning 999A, 700, 732, Fiberfax, or GE RTV 108 or SCS 1201 RTV silicone rubber sealant shall be applied between the damper and the sleeve. Sealant is only required on one side of the damper.
- E. Damper hanger tabs, supplied by others, shall be minimum 1" x 2" x 22 gauge (25 x 51 x 0.85) steel, 1 each side minimum, 2 sides minimum. Hanger tabs shall be attached to structural ceiling support with a minimum 12 swg (2.7) wire.
- F. Support duct work with two 1-1/2" x 1/2" x 16 gauge (38 x 13 x 1.6) steel channels. Position the support channels at the bottom of the duct adjacent to both sides of the duct drop and attach to structural ceiling support with a minimum 12 swg (2.7) wire.
- G. T-Bar ceiling grid must be supported on the four corners surrounding the damper by minimum 12 swg (2.7) wire.
- H. Supplemental ceramic refractory thermal blanket 1/10" (2.5) thick x 8 lb density (128 kg/m3) for use where ceiling opening is larger than nominal damper size. The blanket shall be cut so that it protects the back of the diffuser, or outlet box up to the base of the ceiling radiation/smoke damper sleeve.

**Note:**

Ceiling radiation/smoke dampers and qualified operators/actuators are tested together by Underwriters Laboratories and are factory installed to qualify for standard damper/operator warranties. Electric and/or pneumatic actuators shall be connected in accordance with wiring and piping diagrams developed in compliance with applicable codes, ordinances and regulations. Damper actuators shall be tested prior to system start-up to ensure proper operation. Prior to applying power to the actuator, the power requirements must be verified.