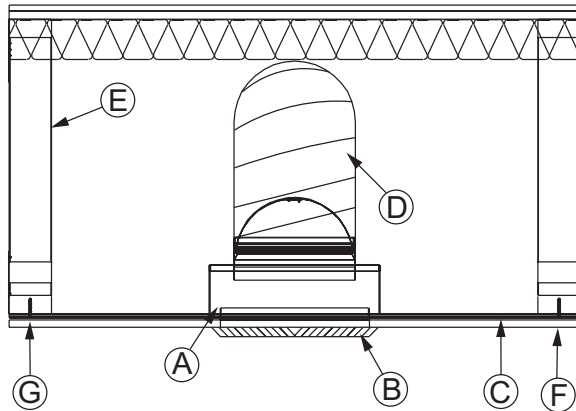
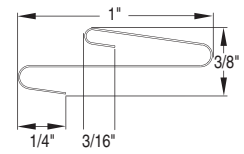


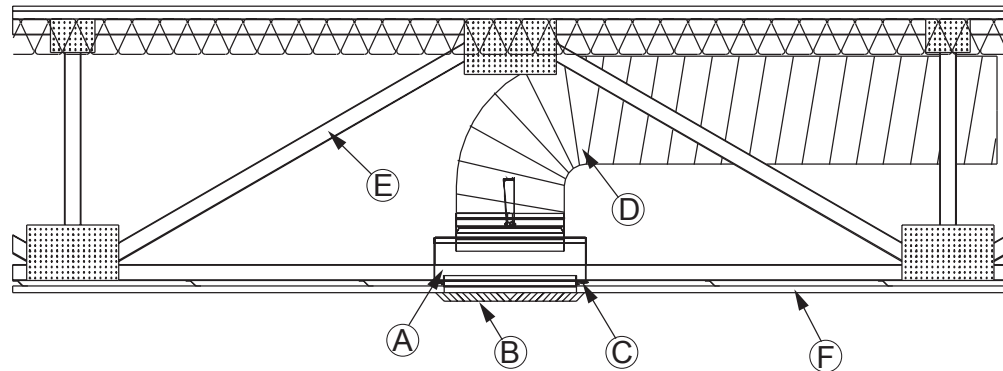
The following installation details apply to model **CFD-521-BT, CFD-521, CFD-521-IP, CFD-521-NP, CFD-521-90 and CFD-521-NP90**



- Ⓐ DAMPER ASSEMBLY
- Ⓑ GRILLE
- Ⓒ BOOT RAIL
- Ⓓ FLEX DUCT, UL CLASSIFIED
- Ⓔ WOOD TRUSS
- Ⓕ 5/8" (16) GYPSUM WALL BOARD (SEE UL DESIGN)
- Ⓖ FASTENERS, (MIN. 16d NAIL, #8 SCREW OR BOLTS)



Standard Boot Rail



**NOTE:** CFD-521 boot rail installation limited to when damper blades close within 1/2" (13) of the top of the gypsum wallboard and a maximum 16" (406) length by 16" (406) width.

**NOTE:** Illustrations show CFD-521-BT; CFD-521-IP, CFD-521-NP, CFD-521-90 and CFD-521-NP90 similar.

**A.** Ceiling penetrations should be located between adjacent trusses and between RC-channels without necessitating cuts in the RC-channel. If required, a maximum of one RC-channel may be cut to enable proper damper location and installation. The maximum clearance between the damper sleeve and the edges of the cutout in the ceiling material shall not exceed 1/8" (3) on any side.

**B.** The grille shall be fastened to the damper assembly using minimum No.8 screws. This is accomplished by securing the face of the grille to the recessed plaster ground flange of the damper, thus the drywall will be between the back of the grille and the underside of the plasterground. A minimum of two fasteners, one each on opposite sides of the damper is required.

**C.** Damper shall be supported with a standard boot rail, in two places minimum, on opposite sides of the damper. The boot rail shall be fastened at each end to the trusses with minimum 16 d nails, No.8 screws or bolts 2" (51) long (min.). Only one connection per end required. For models CFD-521-IP & NP frame/sleeve may extend below ceiling for duct connection. See sheet IICFD-521.

**NOTE:** The addition of the horizontal supports must not interfere nor shall they infringe upon the structural capabilities of the truss system.

**D.** Flex duct shall be UL Classified Air Ducts Class 0 or Class I. In each case, flex duct to the duct connection portion of the damper assembly shall be done in accordance with the Air Distribution Council (ADC) standard practice.

**NOTE:** CFD-521-IP, CFD-521-NP and CFD-521-BT damper blades must close a maximum of 3 1/2" (89) above gypsum wall board. CFD-521-90 and CFD-521-NP90 damper blades must close a maximum of 1 3/8" (35) above gypsum wall board. CFD-521-NP90 requires a field installed plenum. See ceiling radiation damper with 90° boot supplemental installation instructions for additional details. For dampers featuring multiple openings, damper blades must close a maximum of 1/8" (3) above gypsum wall board. Screws, bolts, rivets, etc., used to install the damper or grille **MUST NOT INTERFERE WITH DAMPER BLADE OPERATION.**

**1 Hour Rated.**

CFD-521 for installation in floor-ceiling designs L-521, L-528, L-546, L-558, L-562, L-574, L-576, L-581, L-583, L-585, M-509, M-540 and in roof/ceiling designs P-522, P-533, P-538, P-545, P-547, P-579, and P-580.

CFD-521-IP for installation in floor designs L-521, L-528, L-546, L-558, L-562, L-574, L-576, L-581, L-583, L-585, M-509, M-540 and in roof/ceiling designs P-522, P-533, P-538, P-545, P-547, P-579 and P-580.

CFD-521-BT for installation in floor designs L-521, L-528, L-546, L-574, L-576, L-581, L-583, L-585, M-509, M-540 and in roof/ceiling designs P-522, P-545, P-547, P-579 and P-580.

CFD-521-90 and CFD-521-NP90 for installation in floor designs L-521, L-528, L-546, L-558, L-562, L-574, L-576, L-581, L-583, L-585, M-509, M-540 and in roof/ceiling designs P-522, P-533, P-538, P-545 and P-547.

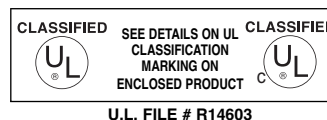
See UL Fire Resistance Directory

Underwriter's Laboratories file #R14603.

The product is also listed by CSFM fire #3226-0368:104

and conforms to NFPA 90A and NFPA 92A.

Warnock Hersey File # WHI-495-PSH-0177,-0178



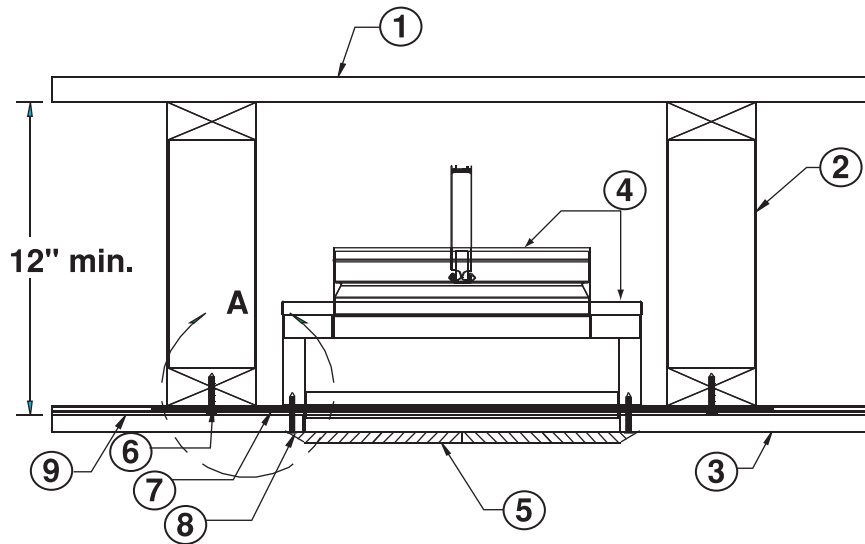
Information is subject to change without notice or obligation.

**NOTE:** Dimensions in parentheses ( ) are millimeters.

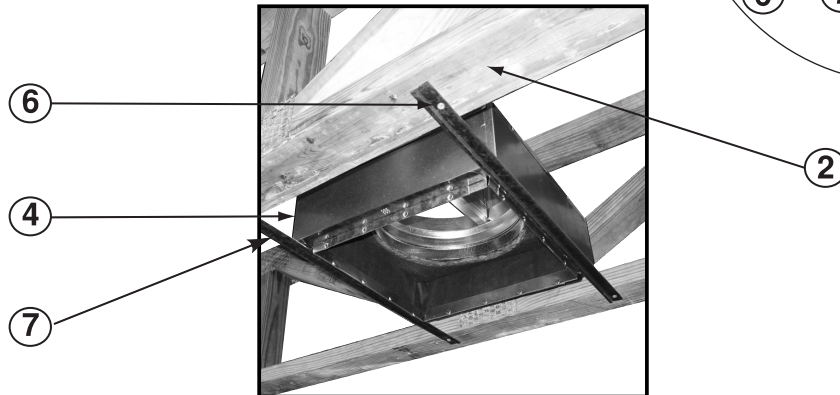
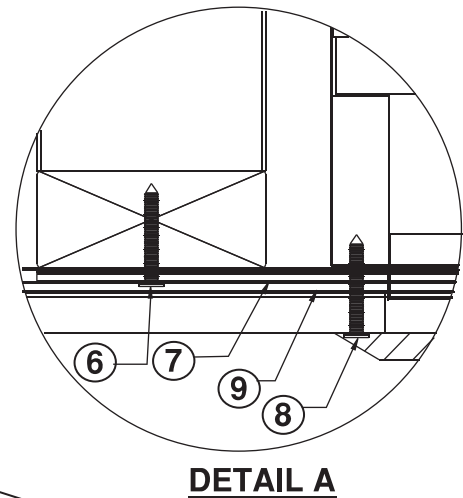
The following installation details apply to model **CFD-521-BT**



Warnock Hersey Listed  
WHI-495-PSH-0177,-0178



- ① Roof/Floor Construction
- ② Wood Framing Member or Joist
- ③ 5/8" Gypsum Wallboard
- ④ Damper/Register Box Assembly
- ⑤ Grille (Steel or Aluminum)
- ⑥ #8 Screw, Bolt or 16d Nail (Min. 2" long)
- ⑦ 30 Gauge (Min.) Steel Mounting Boot Rail
- ⑧ #8 Screw or Equivalent (Min. 1/2" long)
- ⑨ RC Channel (Optional)



**Installed - Bottom View**

- A.** The damper shall be secured to the underside of the wood framing member (or joist) by attaching the mounting boot rail with a 2" (51) long (min.) #8 screw, bolt or 16d nail. A minimum of two fasteners per boot rail, one at each end is required.
- B.** The grille shall be fastened to the damper assembly using minimum #8 screws. This is accomplished by securing the face of the grille to the recessed flange of the damper assembly, thus the drywall will be between the back of the grille and the underside of the plasterground. A minimum of two fasteners, one each on opposite sides of the damper is required.

**NOTE:** Screws, bolts, rivets, etc., used to install the damper or grille **MUST NOT INTERFERE WITH DAMPER BLADE OPERATION.**