

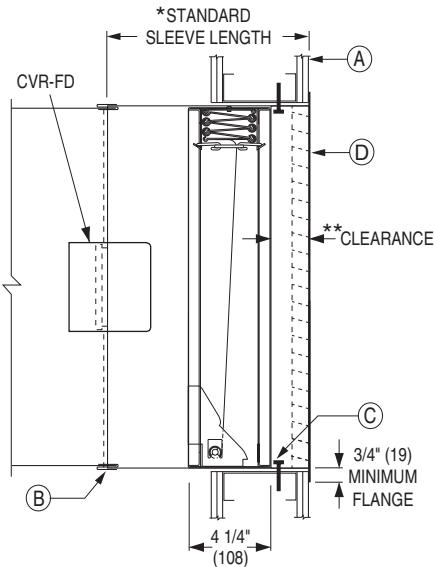
QUALIFICATIONS:

- Meets all the requirements of UL 555 and CAN/ULC-S112.
- Meets the requirements for NFPA 80, 90A and 101 as well as IBC and NBC (Canada) building codes.
- California State Fire Marshal Listing No. 3225-0935:0113.
- City of New York Board of Standards and Appeals Cal. No. 460-88-SA.
- Vertical or Horizontal installation.



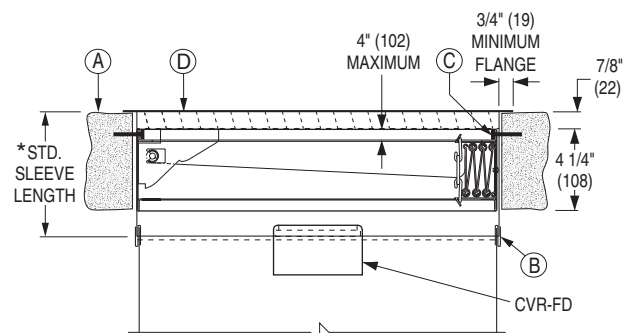
ITEMS:

- A.** Typical 2 hour rated vertical steel stud or masonry construction or horizontal concrete fire partition.
- B.** Duct connection (if applicable) (see Note 2).
- C.** Fasteners (see note 5):
 - a. In metal stud/drywall walls and partitions and cavity shaft wall partitions, use #10 sheet metal screws.
 - b. In masonry wall or floor/ceiling construction, use #10 self-tapping concrete anchors.
 - c. In Wood Stud, use minimum #10 steel screws.
- D.** Grille.
- E.** Typical 2 Hour Rated Vertical Wood Stud Construction

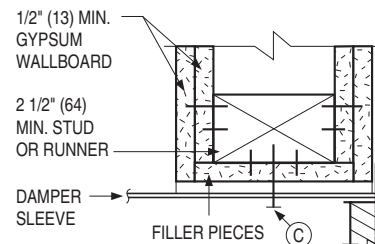


VERTICAL MOUNT

*STANDARD SLEEVE LENGTH: EXHAUST – 6 1/2" (165)
 SUPPLY – 10 1/2" (267)
 (SUPPLY SHOWN ABOVE, EXHAUST SHOWN RIGHT)
 ** CLEARANCE FOR GRILLE:
 SU SUPPLY 2" (51)
 EX EXHAUST/RETURN 7/8" (22)



HORIZONTAL MOUNT



E: Wood Stud Detail

APPLICATION:

CVR-FD is specifically designed for supply or return ducts that terminate at a grille or register.

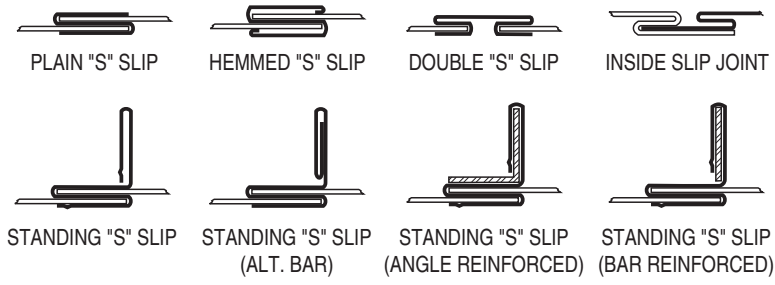
NOTES:

IMPORTANT: DAMPER IS FURNISHED FULL-SIZE (See Note 3)

1. Installation shall be in accordance with the appropriate requirements of the National Fire Protection Association Standard NFPA 90A latest edition.
2. **Damper Sleeve:** These dampers are supplied with a factory furnished sleeve which shall not be less than 16 gauge (1.16) coated steel. Sleeve thickness must be equal to or thicker than the duct connected to it. Sleeve may be attached to the duct with cleats, screws or other types of mechanical fasteners. The maximum sleeve thickness for such rigid joints is 10 gauge (3.51) for coated steel.
3. **Expansion Clearance and Opening Preparation.** To accommodate the damper sleeve thickness, frame and finish the opening so that it is 1/2" (13) larger in width and height than the duct size. Dampers are furnished with an inside sleeve dimension full ordered size to facilitate grille installation.

4. Break-away duct/sleeve connections:

a. Rectangular ducts must use one or more of the following connections if the gauge is less than the requirement in note 2 for rigid connections:



In addition:

- A maximum of two #10 sheet metal screws on each side and on the bottom, located in the center of the slip pocket and penetrating both sides of the slip pocket may be used.



FLAT DRIVE SLIP

- One of the above connections on the top and bottom joints with flat drive slip connections on the side joints may be used for dampers up to 20" (508) in height.
- b. Round or oval duct may be attached to the round or oval collar which is part of the damper/sleeve in the following manner:
- Duct diameters 22" (559) and smaller may use three #10 sheet metal screws equally spaced around the circumference.
- Duct diameters over 22" (559) up to and including 36" (914) may use five #10 sheet metal screws equally spaced around the circumference.
- Duct diameters larger than 36" (914) high or diameter may use eight #10 sheet metal screws equally spaced around the circumference.

c. For the use of approved alternative Ductmate or TDC/TDF break-away connections, refer to the supplements noted on this page.

Note: When optional sealing of these break-away connections is desired, the duct sealant shall be PA2084T Duct Sealant by Precision or water based DP1010 by Design Polymetrics.

5. Fasteners and Retaining Angles. For installation in a masonry wall or floor/ceiling and metal stud drywall partitions, no rear retaining angles are required. Insert damper/sleeve combination into opening so that the 3/4" (19) flange is tight to the drywall or concrete. Secure the damper in the wall opening from inside the sleeve as shown above by use of the following:

- a. In metal stud/drywall walls, partitions and cavity shaft wall partitions, use minimum #10 sheet metal screws.
- b. In masonry walls or floor/ceilings use minimum #10 self-tapping concrete wall anchors. Anchors must penetrate wall or floor a minimum of 1 1/2" (38).
- c. In wood stud, use minimum #10 steel screws, 2 1/2" (64) long with minimum 1 1/2" (38) penetration into framing.

Fasteners shall be spaced a maximum of 6" (152) on center and 2" (51) maximum from corners, a minimum of two per side is required.

IMPORTANT

DO NOT CAST DAMPER IN PLACE.

DO NOT INSTALL DAMPER OUT OF SQUARE OR OUT OF FLAT.

REFER TO THE APPROPRIATE NAILOR INSTALLATION INSTRUCTION SUPPLEMENTS FOR ADDITIONAL INFORMATION OR SPECIAL REQUIREMENTS:

STEEL AND WOOD STUD FRAMING	FDSWSFINST
CAVITY SHAFT WALL PARTITIONS	FDCSWINST
FLANGED TYPE ALTERNATIVE BREAKAWAY CONNECTIONS	FDFAFC

Dimensions are in inches (mm).



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