



These installation instructions show recommended installation procedures. These or other installation methods may be followed subject to the approval of the authority having jurisdiction.

Model CRD-310, 320, 350, 360, 310L, 320L and 700 are specific sizes of Greenheck Model DFD-350 dampers equipped with hardware to facilitate installation with Greenheck Model SP ceiling exhaust fans. The CRD-3XX series and CRD-700 dampers are classified by UL to function as a heat barrier in air handling penetrations through fire resistive membrane ceilings. They are intended to maintain the fire resistive integrity of the ceiling. They can only be installed in conjunction with the SP fan models shown and cannot be installed alone.

**Note: Motors for fan models used in conjunction with CRD shall be equipped with thermal cut-off fuse control.**

**UL CLASSIFIED** (see complete marking on product)  
**UL CLASSIFIED** to Canadian safety standards (see complete marking on product)  
Standard UL555C  
Classifications filed at UL under Listing #R13446



SP Fan Size	CRD Model
SP-B50, SP-B70, SP-B80, SP-B90, SP-B110, SP-B150, SP-B200	CRD-320 CRD-320L
SP-A50, SP-A70, SP-A90, SP-A110, SP-A125, SP-A190	CRD-310 CRD-310L
SP-A250, SP-A290, SP-A390, SP-A200	CRD-320
SP-A410, SP-A510, SP-A710, SP-A780	CRD-350
SP-A900, SP-A1050	CRD-360
SP-A1550, SP-A700	CRD-700

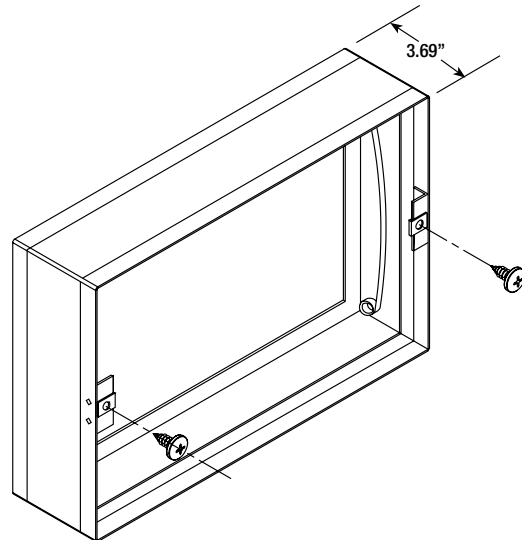


Figure 1: Isometric view of a CRD-3XX series damper.

### Damper Installation to a SP fan model

Fan housing fits inside top flange of damper frame. Observe label on damper indicating top.

Attach damper to fan housing using #10 x 3/4 in. sheet metal screws on 6 in. maximum centers, minimum two fasteners per side. See Figure 3.

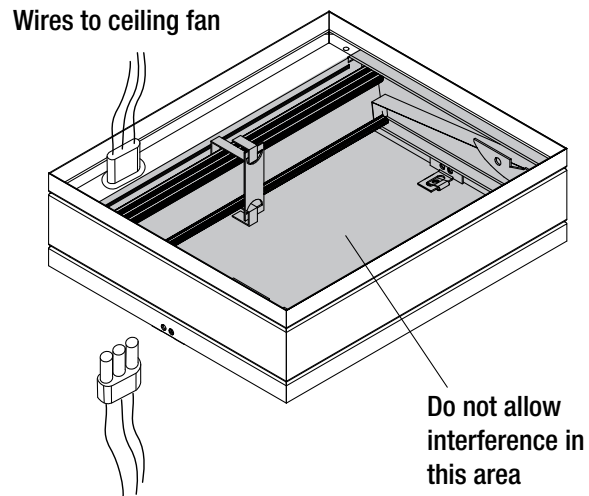


Figure 2: Isometric view for wiring the CRD-3XX series damper to the lighted grille and ceiling fan.

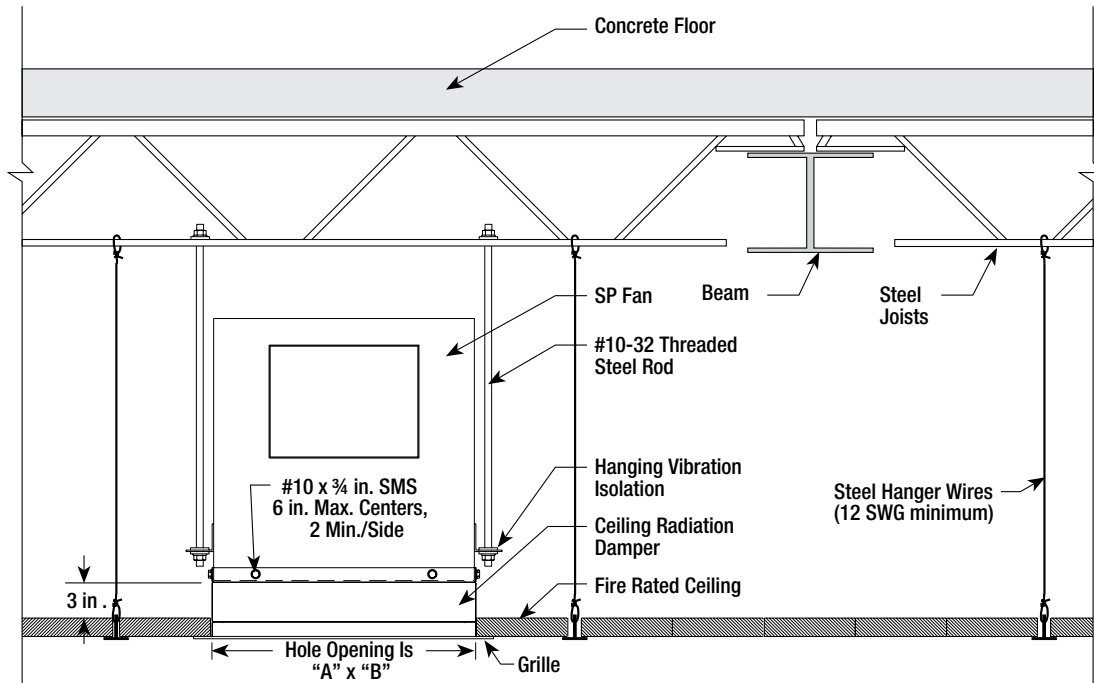


Figure 3

## Ceiling Exhaust Fan Support

The following two mounting methods may be used.

- 1) Suspend fan/damper assembly using #10 -32 threaded steel rod as shown in Figure 4. Suspend from joists or cold rolled channels (do not suspend from beams). If vibration isolators are used, fender washers must have a larger outside diameter than the holes in the fan mounting angle.
- 2) Support fan/damper assembly using (2) minimum 16 ga. x 1 1/2 in. steel channels with 9/16 in. flanges. Suspend from joists or cold rolled channels (do not suspend from beams). Alternatively, bolt channels ends directly to joists or other cold rolled channels using minimum #10 bolts. See Figure 5.

**Do not support fan/damper assembly by ceiling tile or ceiling grid (Tee) members when using with a suspended ceiling!**

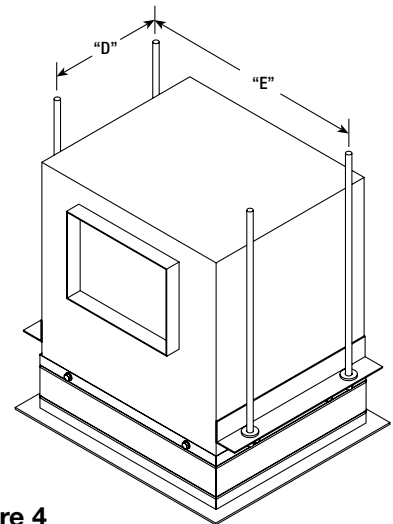


Figure 4

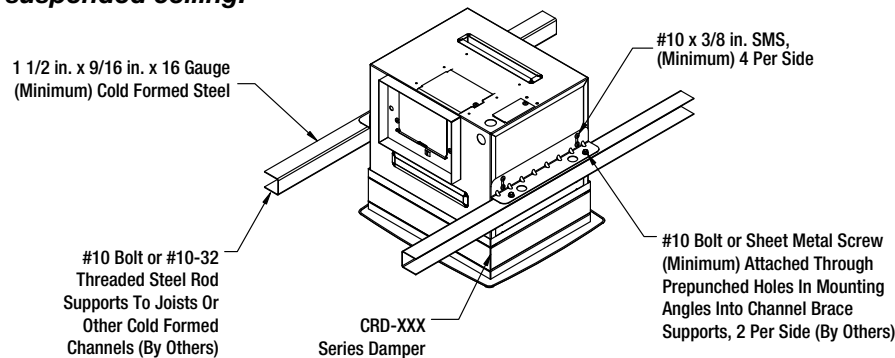


Figure 5

## Grille Installation

Mount grille to underside of ceiling radiation damper using #10 x 1/2 in. Phillips head stainless steel sheet metal screws provided with SP fan.

Unit Size	"D"	"E"
B50, B70, B80, B90, B110, B150, B200	4 1/2	15 5/8
A50, A70, A90, A110, A125, A190	5 1/2	14 5/8
A250, A290, A390, A200	6 3/4	15 1/2
A410, A510, A710, A780	9 1/4	19 5/8
A900, A1050, A1410, A1550	9 1/4	25 3/8
A700	5 1/2	25 1/8

