

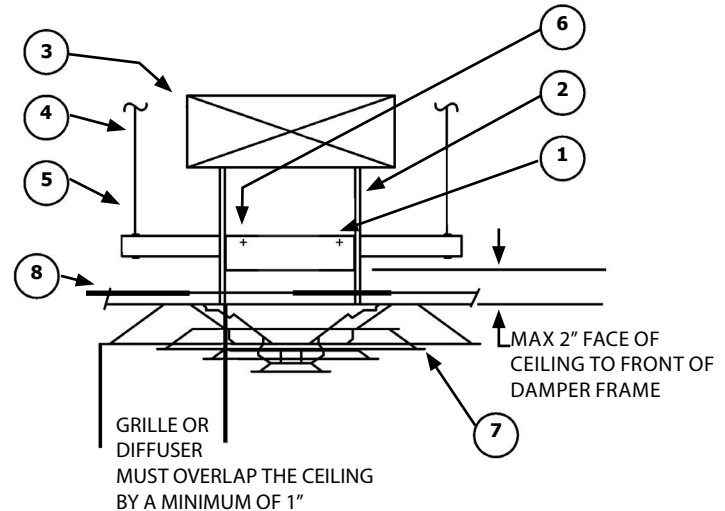
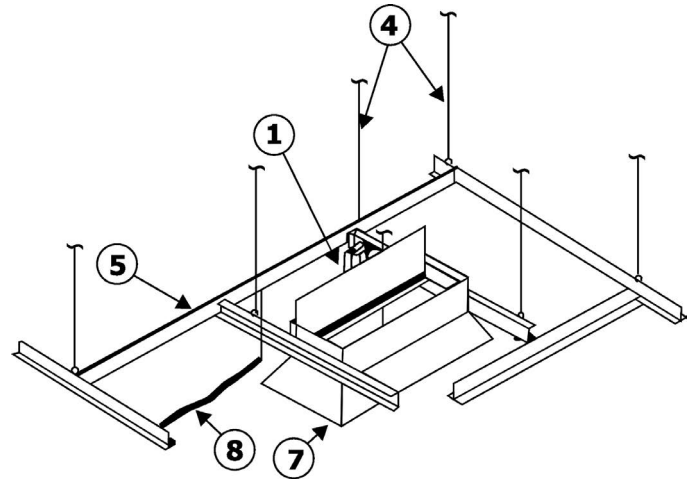
INSTALLATION INSTRUCTIONS

Series 51 Single Blade - CRD

Non-Combustible Partition Ratings Of 3 Hours Or Less Ducted Supply Or Return

INSTALLATION INSTRUCTIONS:

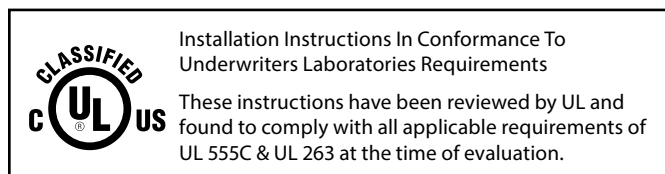
1. Before installing dampers: Series 51, open blade and hook fusible link over the "S" hook bracket and the fusible link blade hook.
2. Support the duct with (2) 16 ga. cold-rolled steel support channels, 1½" or 2" deep with ½" flanges. Place the support channels at the top of the lower end of the duct adjacent to both sides of the duct drop. Use 12 SWG galvanized steel hanger wire to independently support channels on each end, from the structural members of the floor or roof above. Use fasteners specified in line item #3 to secure channel to ducting/register box. Cold-rolled channels shall be used as required to ensure that the grid and damper are supported directly from the structural members by vertical hanger wires (not diagonal).
3. Install the ceiling damper in the duct drop using ¾" diameter by ½" long steel bolts, No. 8 by ½" long steel sheet metal screws at 3" o.c., minimum of 1 per side, ¾" diameter steel rivets, ¼" tack welds, or spot welds at 6" on center and a minimum of two places. Pre-assembly of ceiling radiation dampers to channels is permitted using the listed fastening methods.
4. The clearance between each side of the ceiling damper and the duct drop and lay-in panel shall be ⅛" maximum.
5. Ceiling dampers in lay-in ceilings should be field located in an acoustical ceiling panel or tile. Where it is necessary to cut a main runner or cross tee, each cut end shall be supported by a vertical 12 ga. hanger wire. A ½" clearance shall be maintained between the duct outlet and each cut end of main runner or cross tee. The duct outlet shall be located so that no more than one main runner or cross tee is cut when penetrating the ceiling membrane.
6. Steel grille or diffuser to be attached to the duct drop or ceiling damper using No. 8 by 1½" long sheet metal screws, or ¼" tack welds.
7. Fastener positions must not interfere with damper blade operation.



RECTANGULAR CEILING DAMPER SIZE LIMITATIONS (MAXIMUM 288 SQ. IN.)

SERIES	MAXIMUM WIDTH	MAXIMUM HEIGHT	MINIMUM WIDTH	MINIMUM HEIGHT
51	24"	12"	6"	4"

1. Series 51 Ceiling Radiation Damper
2. Steel duct drop (less #3 plenum permitted)
3. Branch duct
4. 12 SWG Hanger wires (4) min. req'd.
5. Steel support channels
6. Mounting fasteners (bolts, screws, rivets)
7. Surface mounted steel grille, diffuser, or drop ducting to plenum
8. Ceiling: acoustical tile/panel (lay-in) or gypsum wallboard



ALL INSTALLATIONS ARE SUBJECT TO LOCAL AUTHORITY APPROVAL PRIOR TO ORDERING DAMPERS AND DAMPER INSTALLATION

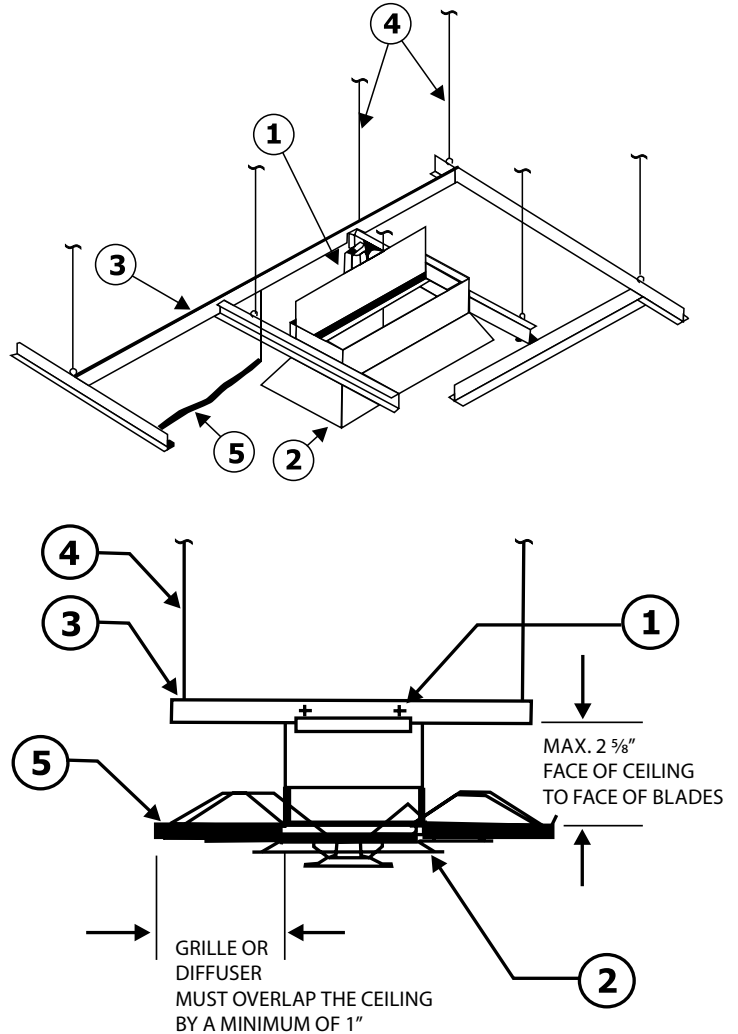
INSTALLATION INSTRUCTIONS

Series 51 Single Blade-CRD

Partition Ratings of 3 Hours or Less Non-Ducted Supply or Return

INSTALLATION INSTRUCTIONS:

1. Before installing dampers: Series 51, open blade and hook fusible link over the "S" hook bracket and the fusible link blade hook.
2. Support the damper with (2) 16 ga. cold-rolled steel support channels, 1½ or 2" deep with ½" flanges. Place the support channels at the lower end of the damper frame, adjacent to opposite sides of the damper. Attach in 2 places each side. Use 12 SWG galvanized steel hanger wire to independently support channels on each end, from the structural members of the floor or roof above. Use fasteners specified in #3 below to secure channel to ducting/register box. Refer to #3 for locations. Use fasteners specified in line item #3 to secure channel to damper. Refer to line item #7 for locations. All hanger wires shall be supported directly from the structural members of the floor or the roof by vertical (not diagonal) hanger wires. Cold-rolled channels shall be used as required to insure that the grid and damper are supported from the structural members by vertical hanger wires (not diagonal).
3. Fasten the ceiling damper to channels using ⅜" diameter x ½" long steel bolts, No. 8 x ½" steel sheet metal screws, ⅜" diameter steel rivets or spot welds at 6" on center maximum and a minimum of 2 places. Pre-assembly of ceiling radiation dampers to channels is permitted using the listed fastening methods.
4. The clearance between each side of the ceiling damper and the lay-in panel shall be ⅛" maximum.
5. Damper outlets in lay-in ceilings should be field located in an acoustical ceiling panel or tile. Where it is necessary to cut a main runner or cross tee, each cut end shall be supported by a vertical 12 ga. hanger wire. A ½" clearance shall be maintained between the duct outlet and each cut end of main runner or cross tee. The duct outlet shall be located so that no more than one main runner or cross tee is cut when penetrating the ceiling membrane.
6. Steel grille or diffuser to be attached to the sleeve or ceiling damper using No. 8 by 1½" long sheet metal screws, or ¼" tack welds.
7. Fastener positions must not interfere with damper blade operation.



ITEM DESCRIPTION

1. Series 51 Ceiling Radiation Damper
2. Mounted steel grille, diffuser, or drop ducting to plenum
3. Steel support channels
4. 12 SWG Hanger wires (4) min. req'd.
5. Ceiling: acoustical tile/panel (lay-in) or gypsum wallboard

