FIRE RATED CEILING AIR DIFFUSERS Nailor Industries Inc. INSTALLATION INSTRUCTIONS STEEL AIR DUCT

MODEL SERIES: 4000 & 4400



STEP 1: CEILING GRID LAYOUT



FOLD BACK NECK FLAPS OF THERMAL BLANKET, SLIP ON STEEL DUCT DROP AND FASTEN TO DIFFUSER NECK WITH FOUR #8 SHEET METAL SCREWS. SCREWS MUST NOT INTERFERE WITH THE CLOSING OF THE INTEGRAL DAMPER BLADES.



- 1. Series 4000 or 4400 Diffuser
- 2. Ceramic fiber thermal blanket*
- 3. Steel duct drop
- 4. Steel duct
- 5. Main T-Bar runner

*Caution: Replace thermal blanket if it is damaged during shipping or installation.



FASTEN NECK FLAPS OF THERMAL BLANKET USING 18 SWG STEEL WIRE.

STEP 3: THERMAL BLANKET INSTALLATION

- 6. 4'-0" (1200) cross T-Bar
- 7. 2'-0" (600) cross T-Bar
- 8. Hanger wires
- 9. Ceiling panel or tile
- 10. Support channels
- 11. 1'-0 (300) cross T-Bar. See note 9.

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Dimensions are in inches (mm).

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- 1. Follow carefully steps 1, 2 and 3.
- 2. Before installing, open damper blades and install link between spring loaded wire clips. Do not bend or deform clips after assembly. If dampers are provided with link tabs instead of wire clips, install link and bend tabs to secure link in position
- 3. Use 12 swg galvanized steel hanger wires to independently support the T-bar grid members and the support channels to the structural members of the floor or roof above at the four corners of the diffuser. Ensure hanger wires are plumb and straight.
- 4. When installing the Ceiling Air Diffuser in duct drop, use #8 by 1/2" (13) long sheet metal screws 4 per diffuser. The screws shall not interfere with the closing of the Integral Classified Ceiling Damper of the Ceiling Air Diffuser Assembly.
- 5. Support the duct with 2 16 gauge cold rolled steel support channels, 1 1/2" (38) deep with 1/2" (13) flanges. Place the support channels at the bottom of the duct adjacent to both sides of the duct drop.
- 6. Maximum neck size of Series 4000 and 4400 Ceiling Air Diffuser is 14" (356) diameter.
- 7. The clearance between the Ceiling Air Diffuser neck and the duct drop shall be 1/8" (3) maximum.
- 8. No diffusers shall be located in an adjacent 24" x 48" (600 x 1200) ceiling grid module.
- 9. Series 4000 and 4400 Ceiling Air Diffuser Assemblies are for use in lieu of the hinged blade, sheet metal damper in steel ducts with steel diffusers or grilles as specified in the "Design Information Section General" and in the individual floor and roof ceiling design(s) being used, as illustrated and described in the current UL "Fire Resistance Directory" or ULC "List of Equipment and Materials".
- 10. Fire resistive designs must cover UL/ULC Classified Ceiling Grid Members with appropriate cross tee sizes and slots in cross tees.

The following manufacturers currently supply 1'- 0" (300) long cross tees that are UL and/or ULC Classified:

- Armstrong World Industries Inc.
- CGC Interiors, Division of CGC Inc.
- Chicago Metallic Corp.
- USG Interiors Inc.

Cartons of Grid Members shall be of the same type and bear the UL and/or ULC Classification marking.

Dimensions are in inches (mm).



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