



**FIRE RATED DUCTLESS RETURN AIR
CEILING DAMPER FOR OPTIONAL GRILLE
RAISED TYPE
MODELS: 4127, 4128 & 4129**

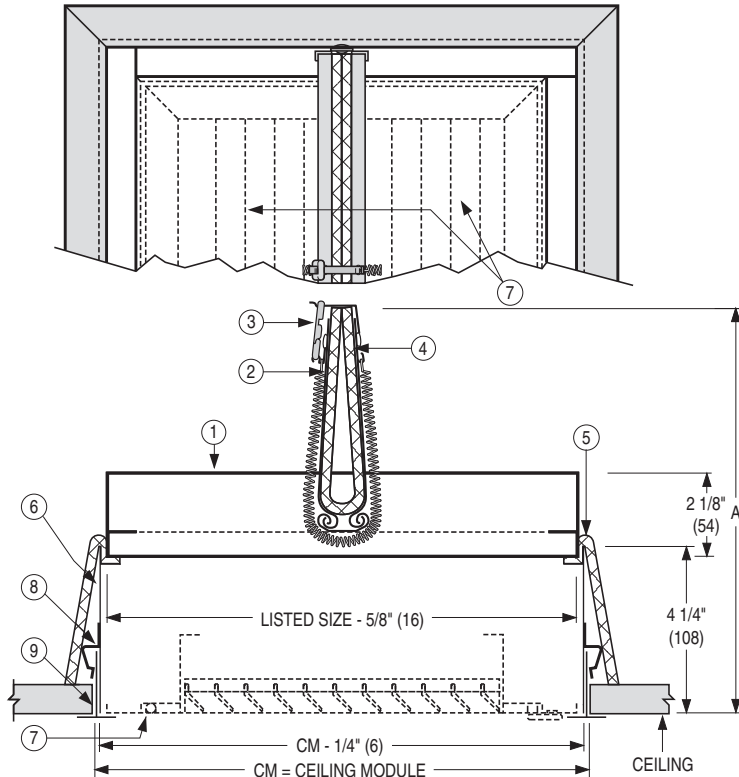
Models:

4127, 4128, 4129

**Some Commonly Selected Nailor
Grille and Register Options:**

- **61EC (-0) Type L**
Steel Return Air Eggcrate Grille (Register).
- **6145H (-0)**
Steel Return Air Grille (Register with Opposed Blade Damper). Fixed 45° Deflection blades on 3/4" (19) centers.
- **5145H (-0)**
Aluminum Return Air Grille (Register with Opposed Blade Damper). Fixed 45° Deflection blades on 3/4" (19) centers.
- **7145H (-0)**
Premium Airfoil Blade Aluminum Return Air Grille (Register).
- **61FPL**
Steel Perforated Face Filter Grille.

Note: Maximum grille depth capacity for this model is 4" (102).



CLASSIFIED
CATEGORY
BZZU



CLASSIFIED
CATEGORY
CABS & CABST

DESCRIPTION:

1. Damper frame: galvanized steel, standard.
2. Damper blades: galvanized steel, standard.
3. U.L. Listed fusible link: 212°F (100°C) standard.
4. Blade insulation: ceramic fiber.
5. Shroud: ceramic fiber.
6. Extension frame: galvanized steel, standard.
7. Steel or aluminum return grille/register as required.
8. Ceiling grid clip: 4 attached. 2 each on opposite sides.
9. Supplementary (or existing) ceiling grid member.

OPTIONS:

1. Non-standard temperature U.L. Listed fusible link.
 165°F (74°C)
2. Return Grille/Register
Specify model _____.
AW Appliance White finish is standard.

The **Nailor Series 4100** are UL/ULC classified fire rated ceiling diffuser assemblies (ceiling dampers).

All diffusers are classified for use in UL/ULC restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate an exposed grid suspended ceiling (lay-in T-bar) with up to a 3 hour rating. For details of fire rated assemblies, see the current UL or ULC Fire Resistance Directory.

As the fire protection and integrity are supplied solely by the damper assembly, any type of return air grille, filter grille or register of steel or aluminum construction may be selected and installed in the fire rated ceiling. For use with exposed grid T-bar ceilings only.

For installation instructions see IOM-FRDRINST.

Available Sizes and Dimensional Data

Model No.	Ceiling Module		Opening Height A
	Imperial (inches)	Metric (mm)	
4127	12 x 12	300 x 300	10 (254)
4128	24 x 12	600 x 300	10 (254)
4129	24 x 24	600 x 600	16 (406)

Dimensions are in inches (mm).

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5 - 11 - 15	4100	10 - 9 - 01	4100-3A



**FIRE RATED DUCTLESS RETURN AIR
CEILING DAMPER FOR OPTIONAL GRILLE
RAISED TYPE W/ADJ. VOLUME CONTROL
MODELS: 4127 AV, 4128 AV AND 4129 AV**

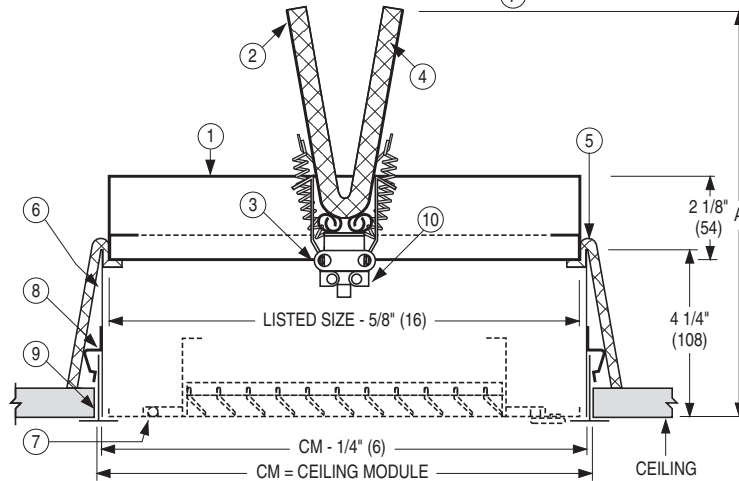
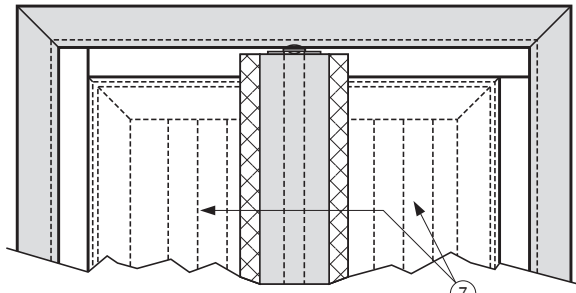
**Models with Adjustable
Volume Control:**

4127 AV, 4128 AV, 4129 AV

**Some Commonly Selected
Nailor Grille Options:**

- **61EC Type L**
Steel Frame Return Air Eggcrate Grille.
- **6145H**
Steel Return Air Grille. Fixed 45° Deflection blades on 3/4" (19) centers.
- **5145H**
Aluminum Return Air Grille. Fixed 45° Deflection blades on 3/4" (19) centers.
- **7145H**
Aluminum Premium Airfoil Blade Return Air Grille.
- **61FPL**
Steel Perforated Face Filter Grille.

Note: Maximum grille depth capacity for this model is 2 1/4" (57) with AV option.



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DESCRIPTION:

1. Damper frame: Galvanized steel, standard.
2. Damper blades: Galvanized steel, standard.
3. U.L. Listed fusible link: 212°F (100°C) standard.
4. Blade insulation: Ceramic fiber.
5. Shroud: Ceramic fiber.
6. Extension frame: Galvanized steel, standard.
7. Steel or aluminum return grille as required.
8. Ceiling grid clip: 4 attached. 2 each on opposite sides.
9. Supplementary (or existing) ceiling grid member.
10. AV Adjustable fusible link assembly permits the damper to be used as a balancing damper for volume control. The blades are adjusted with a 3/16" (5) hex key (by others) and perform like a butterfly damper.

OPTIONS:

1. Non-standard temperature U.L. Listed fusible link.
 - 165°F (74°C)
2. Return Grille
Specify model _____
AW Appliance White finish is standard.

The **Nailor Series 4100** are UL/ULC classified fire rated ceiling diffuser assemblies (ceiling dampers).

All diffusers are classified for use in UL/ULC restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate an exposed grid suspended ceiling (lay-in T-bar) with up to a 3 hour rating. For details of fire rated assemblies, see the current UL or ULC Fire Resistance Directory.

As the fire protection and integrity are supplied solely by the damper assembly, any type of return air grille or filter grille of steel or aluminum construction may be selected and installed in the fire rated ceiling.

For use with exposed grid T-bar ceilings only.
For installation instructions see IOM-FRDRINST.

Available Sizes and Dimensional Data

Model No.	Ceiling Module		Opening Height A
	Imperial (inches)	Metric (mm)	Standard
4127AV	12 x 12	300 x 300	10 (254)
4128AV	24 x 12	600 x 300	10 (254)
4129AV	24 x 24	600 x 600	16 (406)

SCHEDULE TYPE:	Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5 - 11 - 15	4100	10 - 8 - 01	4100-3B

Nailor offers a selection of standard colors and finishes available on our grilles, registers and diffusers. For painted finishes, our state-of-the-art paint systems provide environmentally friendly finishing solutions with uniform coverage and coating thickness. The result is an exceptionally durable finish that resists scratching, corrosion and general wear. Additional facilities for special requirements, as well as a selection of anodized or brushed finishes, complete our ability to provide unmatched beauty and durability for any application.

NAILOR POWDER COAT PROPERTIES

FILM THICKNESS	2.0 to 3.0 mils
HARDNESS	2 H
IMPACT RESISTANCE	Direct: 160 inch - lbs. Reverse 160 inch - lbs.
SALT SPRAY	1000 hours

ELECTROCOATING PROPERTIES

FILM THICKNESS	.8 to 1.2 mils
HARDNESS	HB TO H
IMPACT RESISTANCE	80 inch - lbs
SALT SPRAY	100 hours


POWDER COAT

Nailor's powder coat is a high-tech thermosetting polyester powder coating with superior physical properties that provide excellent color and gloss retention. The finish offers extreme durability and hardness that resists scratching, chipping and general wear. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse before a final powder coat finish is applied and baked. The environmentally friendly Nailor powder coat system assures uniform coverage and color consistency resulting in a long lasting superior finish. Colors, including simulated anodizing, which is far more economical than color anodizing, can be selected from Nailor's standard color chart or non-standard colors and can be matched from sample chips provided to Nailor.

ELECTROCOATING

E-Coat is an environmentally friendly coating that provides complete coverage and a wide range of performance properties, formulated to meet corrosion, durability and other performance specifications. Electrocoating is a highly automated process in which paint is electrically deposited onto a metal foundation. Film build thickness is uniform and overall application efficiencies are in excess of 90%. Paint is consistent on all part-to-part surfaces, preventing sags, runs or drips. E-Coat offers flexibility, better first yield pass and quicker production times compared to other forms of paint applications. Electrocoating is an excellent solution that offers superior properties and uniform finish.

CLEAR ANODIZING (Aluminum products only)

Clear anodizing is a clear oxide coating that exemplifies an aluminum surface's natural oxide coating producing a hard, scratch resistant surface that is resistant to general wear and mild chemicals. The process provides a natural looking, virtually maintenance free finish that will endure for many years.

COLOR ANODIZING (Aluminum products only)

Color anodizing is an electrolytic process where, after standard anodizing procedures, colored metallic pigments penetrate the oxide surface pores producing a corrosion resistant, colorfast finish. The process results in a natural metallic appearance that requires little maintenance.

BRUSHED AND CLEAR COAT

Available on specific aluminum products (consult applicable product page for availability). Surface is brushed to achieve a scratch finish texture before being degreased and chemically cleaned. A clear lacquer coating is then applied to provide a durable protective finish.

#4 BRUSHED SATIN POLISHED (Stainless Steel products only)

Surface is polished to ASTM A480 #4 standard to achieve a bright durable finish that is resistant to mild chemicals and corrosion. A final coating is not required due to the inherent anti-corrosion properties of the stainless steel.

PRIME COAT

Prime coat provides a stable base for painting in the field. Surface pretreatment includes degreasing and a chemical cleaning before an alkyd prime coat is applied. After a thorough cleaning for dust, etc. that can contaminate the final finish and cause premature flaking or peeling, finish coat should be field applied as soon as possible.

PAINT PREPARED ALUMINUM (Aluminum products only)

Allows for field applied paint. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse. Finish coat should be field applied as soon as possible.

MILL FINISH

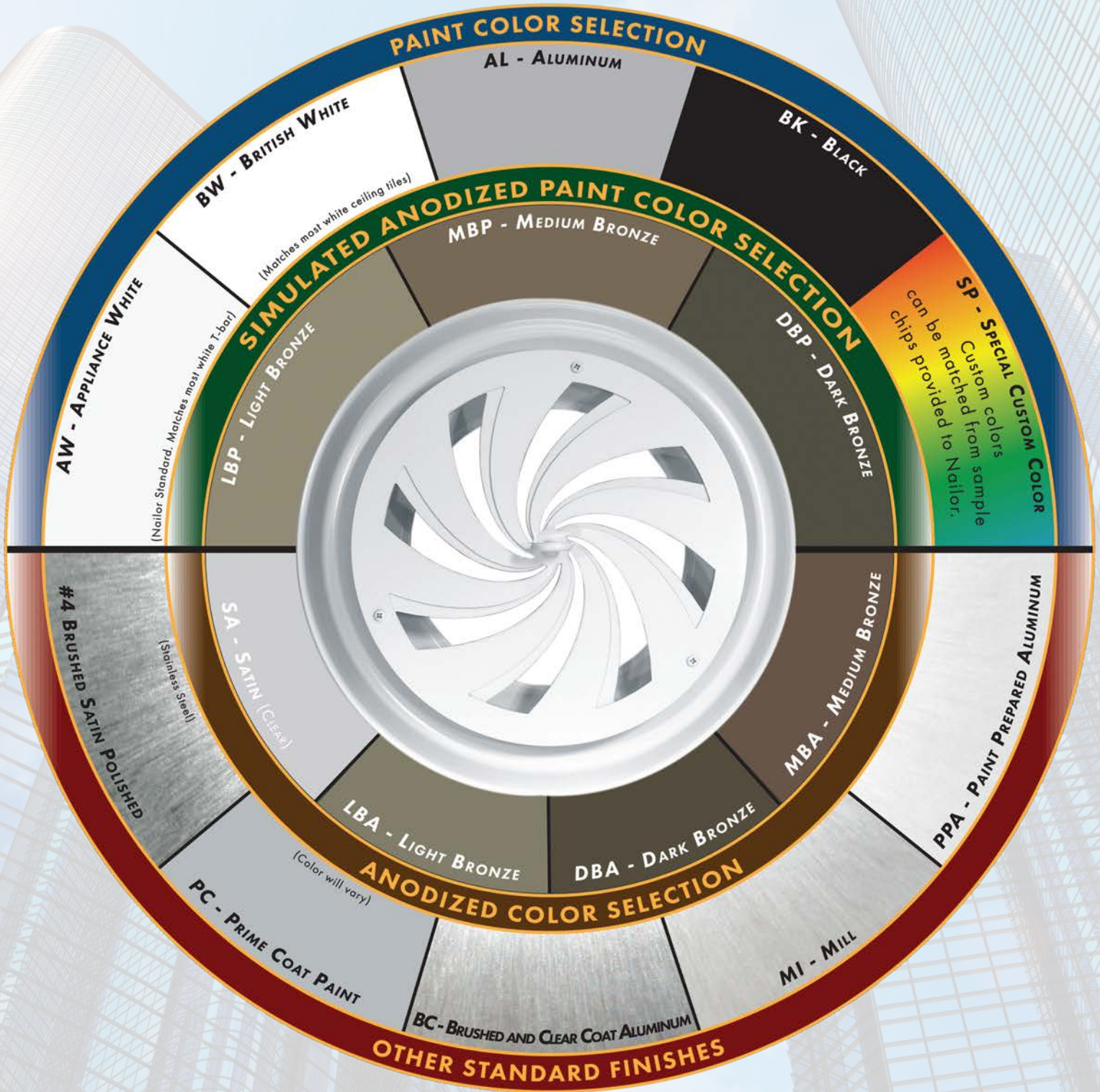
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



Nailor[®]
Industries Inc.

STANDARD AND OPTIONAL FINISHES FOR GRILLES AND DIFFUSERS

The following standard colors and finishes are available on applicable Nailor air distribution products. Consult individual product pages for availability



The pictured finishes have been represented as best as possible within printing limitations. However, actual finish may vary. Contact your Nailor representative for a color chip sample on the material specified for a more accurate representation.

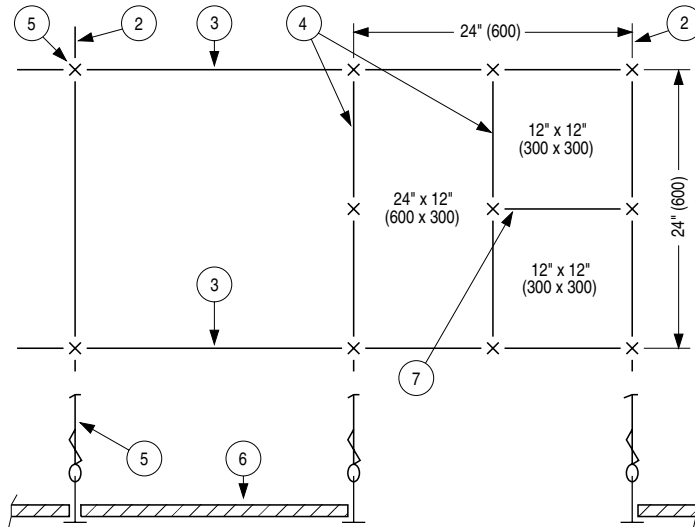
DBK - Black (for registers ordered with factory mounted dampers) - **BA** - Perforated Diffusers (4300 series only) Appliance White (AW) face with black back pan and pattern controllers.

"Complete Air Control and Distribution Solutions."

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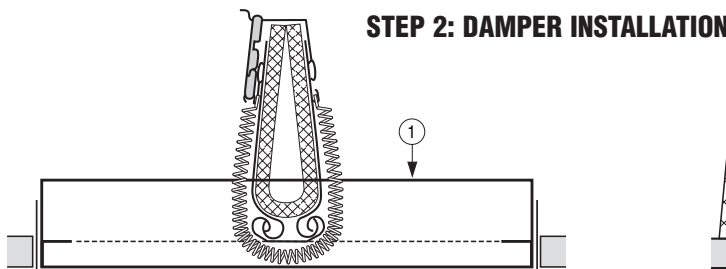
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STEP 1: CEILING GRID LAYOUT (12" x 12": 24" x 12": 24" x 24" (300 x 300: 600 x 300: 600 x 600) SIZES)

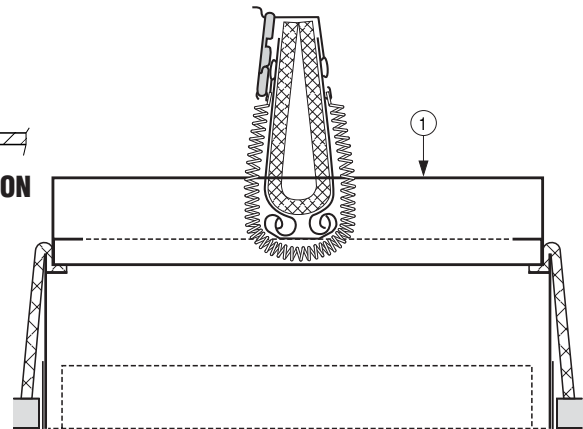


ITEMS:

1. Series 4110 and 4120 Ductless Return Air Damper (and Grille*).
 2. Main Ceiling Grid Member.
 3. 4'-0" (1200) Ceiling Grid Member.
 4. 2'-0" (600) Ceiling Grid Member.
 5. Hanger Wire.
 6. Ceiling Panel or Tile (see note 5).
 7. 1'-0" (300) Ceiling Grid Member.
- Items 2, 3, 4, 6 and 7 are UL/ULC Classified.



STEP 2: DAMPER INSTALLATION



MODELS 4111 THRU 4119 FOR DETAILS SEE DWG. 4100-1A

MODELS 4121 THRU 4129 FOR DETAILS SEE DWGS. 4100-2 & 3

1. Follow carefully steps 1 and 2 as illustrated above.
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. The end tabs of the 2'-0" (600) Ceiling Grid Member shall be bent back against the web of the 4'-0" (1200) Ceiling Grid Member. The 4'-0" (1200) Ceiling Grid Member must have slots in the web for connection of the 2'-0" (600) Ceiling Grid Member.
4. Use 12 ga. (2.5) galvanized steel hanger wires at the corners of the grid modules to support the Ceiling Grid Member to the structural members of the floor or roof above. Wires must hang vertically, not slantwise.
5. Maximum size of the Fire-Rated Ductless Return Air Damper (and Grille*) is 24" x 24" (600 x 600).
6. All UL/ULC Classified Ceiling Assemblies require that Lay-in Ceiling Panels, filling the remainder of the module, less than 24" x 48" (600 x 1200) shall bear on the Ceiling Grid Member by a minimum of 3/8" (10).
7. No Fire-Rated Ductless Return Air Damper (or Grille*) shall be located in an adjacent 24" x 48" (600 x 1200) Ceiling Grid Module.
8. Series 4110 and 4120 Fire-Rated Ductless Return Air Damper (and Grilles*) are for use in place of the Hinged Blade, Sheet Metal Dampers in steel ducts with steel diffusers or grilles as specified in the "Design Information Section - General" and in the individual floor or roof ceiling design(s) being used as illustrated and described in the current U.L. Fire Resistance Directory or ULC List of Equipment and Materials Volume III Fire Resistance Ratings.
9. 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/ULC Classification marking.

*Grilles are optional on Models 4127 thru 4129.

Dimensions are in inches (mm).



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