

GENERAL PRODUCT OVERVIEW

Since 1971, Nailor Industries has been committed to the innovation and development of life safety products such as the 0700 Series Ceiling Dampers. This commitment has helped foster industry standards, as well as provide worry free fire protection solutions that benefit today's building designers, owners and occupants. Standard UL 555C tested ceiling dampers are approved for use in lieu of hinged door type dampers in UL floor/ceiling or roof/ceiling assemblies, the Nailor 0700 Series provides a fire and heat barrier that has been tested and qualified to the most exacting standards. For square and rectangular applications, Model 0716 is available with standard blade construction or low profile blades, Model 0716-4. Round duct applications are covered by Model 0722. Nailor Model 0720 features a spring loaded curtain design that maximizes free area while providing a low overall profile. Options such as adjustable volume control are ideal for balancing at the grille/diffuser. Specialty UL 263 tested Models 0755 thru 0763 are specifically for use in wood truss ceiling assemblies and have been developed to meet specific requirements in today's building systems.

MODELS 0716, 0716-4, 0714 & 0722 FOR SQUARE, RECTANGULAR OR ROUND DUCTS

Nailor ceiling dampers, or ceiling radiation dampers as they are commonly called, are designed to function as a fire and heat barrier in air duct openings penetrating fire resistive membrane ceilings. Models 0716, 0716-4 and 0714 are for use in square or rectangular applications and Model 0722 is for use in round applications, in lieu of hinged door type dampers in any UL floor/ceiling or roof/ceiling assembly with up to a 3 hour fire resistance rating where air ducts are allowed.



Models 0716 & 0722

MODELS 0716A, 0716-4A & 0722A ADJUSTABLE VOLUME CONTROL FOR SQUARE, RECTANGULAR OR ROUND DUCTS

Nailor ceiling dampers with adjustable volume control option are designed to function as a fire and heat barrier in air duct openings penetrating fire resistive membrane ceilings. The adjustable volume control mechanism allows the blades to be adjusted for balancing of airflow through the diffuser. Under fire conditions the fusible link will close the damper, regardless of volume setting. Models 0716A and 0716-4A are for use in square or rectangular applications and Model 0722A is for use in round applications, in lieu of hinged door type dampers in any UL floor/ceiling or roof/ceiling assembly with up to a 3 hour fire resistance rating where air ducts are allowed.



Models 0722A & 0716A

MODEL 0720 CURTAIN TYPE FOR SQUARE OR RECTANGULAR DUCTS

Model 0720 ceiling radiation damper, which functions as a fire and heat barrier in air duct openings that penetrate fire resistive membrane ceilings, is for use in lieu of hinged door type dampers in any UL floor/ceiling assembly with up to a 3 hour fire resistance rating where air ducts are permitted. Model 0720 features a specially designed 'pull across' insulated curtain that provides a low overall profile, making it ideal for use in applications where the available duct drop height for installation is limited. The compact curtain design also maximizes free area in the open position.



Model 0720

MODELS 0725 & 0726 THERMAL INSULATING BLANKETS

Models 0725 and 0726 Thermal Blankets are designed to insulate the exposed back pan area of a steel ceiling diffuser that may be used in UL Classified floor/ceiling or roof/ceiling assemblies with up to a 3 hour rating. The insulation protects the floor/roof structure above from the intense heat that radiates through the diffuser pan during fire conditions. A thermal blanket is used in conjunction with a ceiling radiation damper that protects the neck opening of the diffuser, to provide complete protection of the opening in the ceiling membrane. Model 0725 thermal blanket is for use with 0722 ceiling damper models in round neck applications. Model 0726 thermal blanket is for use with 0714, 0716 and 0720 ceiling damper models in square neck applications.



Models 0725 & 0726

CEILING DAMPER BASICS

Definition of a Ceiling Damper (per NFPA Standard 90A):

“A device installed to limit radiant heat transfer through an air outlet or air inlet opening in the ceiling of a floor-or roof-ceiling assembly having not less than a 1 hour fire resistance rating.”

What is the difference between a Ceiling Damper and a standard Fire Damper?

In order to comprehend the difference we must first understand some of the theory behind fire-rated ceilings. A fire-rated ceiling’s primary function is to protect the structure above it from excessive heat and potential subsequent collapse by providing a fire and heat retardant barrier between the fire area and the structural floor above.

Without any openings in the fire-rated ceiling, it would perform as designed by limiting the transfer of heat through the floor above it. Problems arise when we pierce the protective ceiling with big holes to accommodate environmental control devices such as grilles and diffusers. To close these openings should a fire occur, devices called Ceiling Dampers (also commonly called radiation dampers or firestop flaps in Canada) have been developed. If the openings were to remain unobstructed during a fire, generated heat would tend to rapidly flow through in concentration due to a ‘funnel effect’ created at the openings as the hot combustion gases expand and rise. This focuses the intense heat into the structure area directly above the openings, potentially causing severe structural damage (See Figure 1). Ceiling dampers are specifically designed to protect against this phenomenon by firstly, closing the opening to stop any air flow and secondly, by reducing the amount of heat that is conducted and, most importantly, radiated through the device. This is most important, as a regular fire damper although fine for stopping flame and migratory air flow, is virtually transparent to heat and therefore ineffective in this application.

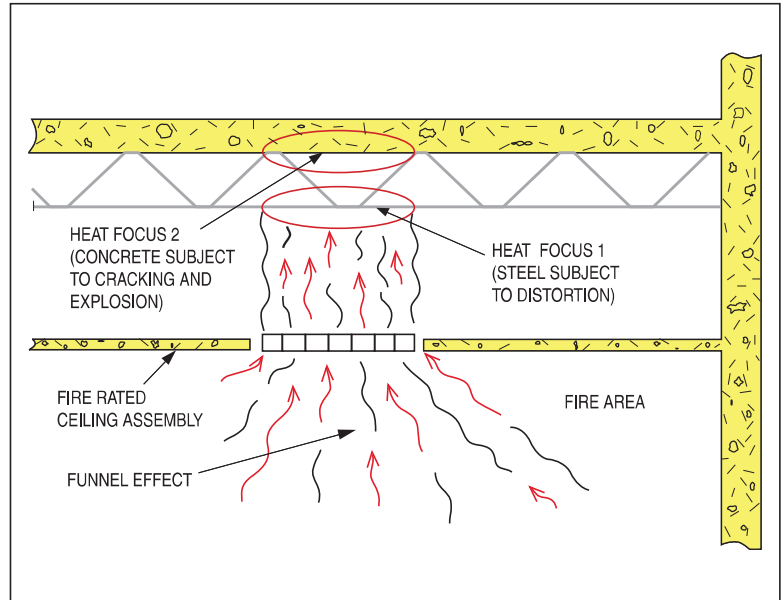


FIGURE 1

- Ceiling Dampers are tested by Underwriter’s Laboratories to the strict criteria of UL 555C, Safety Standard for Ceiling Dampers which includes tests for:
 1. Fire Endurance
 2. Closing Reliability
 3. Salt-Spray Exposure
 4. Spring Closing Force (if applicable)
- Ceiling Dampers are not assigned hourly ratings themselves, but rather are listed for use as a component in an assembly designated for use in fire resistance assemblies having specific hourly ratings.
- All Nailor Ceiling Dampers are classified (Category CABS/CABS7) for use in any UL floor/ceiling or roof/ceiling restrained or unrestrained type assembly with up to a 3 hour fire resistance rating.

For a more in depth look into ceiling dampers, see pages C6 – C9.

LOOKING TO SAVE TIME, MONEY AND HASSLES?

As an alternative to assembling separate components,





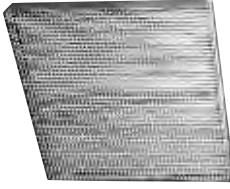

LOOK TO NAILOR FIRE-RATED DIFFUSER AND GRILLE PACKAGES.

As a manufacturer of both **Air Distribution Products** (grilles, diffusers, etc.) and **Air Control Products** (fire dampers, control dampers, louvers, etc.) Nailor can offer **Fire-Rated Packages** as an alternative to assembling separate components from potential separate manufacturers. Nailor is unique in that we can supply **Fire-Rated Packages** at a competitive price, all manufactured at the same facilities for fast lead times and guaranteed Nailor quality . . . no out-sourcing like other major manufacturers.

FEATURES AND BENEFITS:

- Complete package, including ceiling damper, grille, diffuser etc., factory assembled to save on installation time (and money!) and ensures proper assembly.
- Wide variety of quality Nailor diffuser and grille styles to choose from.
- UL and ULC Classified assemblies for use in restrained or unrestrained ceilings incorporating an exposed grid with up to a 3 hour rating.
- Surface Mount package available for hard ceilings.
- Approved for use with Class 0 or 1 Flexible Duct.
- Ductless Return Air grilles can be installed with no connecting ductwork, ideal for use when ceiling space is used for return air.

SOME OF THE NAILOR FIRE-RATED PACKAGES AVAILABLE:

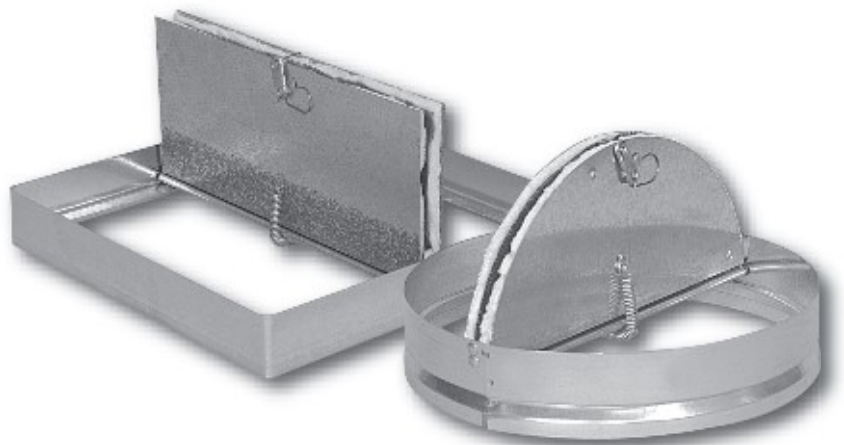
 <p>RNS DIFFUSER SERIES 4000</p>	 <p>PERFORATED FACE SERIES 4000</p>	 <p>MODULAR CORE SERIES 7500 FRD</p>
 <p>PLENUM SLOT SERIES 5500</p>	 <p>EGGCRATE OR PERFORATED DUCTLESS RETURNS SERIES 4100</p>	 <p>LOUVER FACE DUCTLESS RETURNS SERIES 4100</p>

SEE THE NAILOR AIR DISTRIBUTION PRODUCTS CATALOG FOR A COMPLETE SELECTION OF FIRE-RATED PACKAGES.

- FOR SQUARE, RECTANGULAR OR ROUND DUCTS
- UL 555C CLASSIFIED

Models:

- 0716 Two Blades Square & Rectangular
- 0716-4 Low Profile
- 0714 Single Blade
- 0722 Round
- 0722-SE/ Round with Top Extension
- 0722-LE



Models 0716 & 0722

Nailor ceiling dampers, or ceiling radiation dampers as they are commonly called, are designed to function as a fire and heat barrier in air duct openings penetrating fire resistive membrane ceilings. Models 0716, 0716-4 and 0714 are for use in square or rectangular applications and Models 0722, 0722-SE and 0722-LE are for use in round applications, in lieu of hinged door type dampers in any UL floor/ceiling or roof/ceiling assembly with up to a 3 hour fire resistance rating where air ducts are allowed.

Model 0716-4 provides a low profile, dual set of blades design, ideal for installation in tight places that require a fire and heat barrier in air duct openings penetrating fire resistive membrane ceilings. Model 0714's single blade design provides maximum free area and no obstruction to airflow when open. The extension collar on Models 0722-SE and 0722-LE minimizes the risk of interference with blade closure in flexible duct installations and helps ensure even airflow into the diffuser neck for optimum performance.

QUALIFICATIONS:

- UL 555C CLASSIFIED CEILING DAMPER (File # R9660).
- CAN4/ULC-S112.2 Ceiling Firestop Flap Assemblies.
- Meets the requirements for NFPA 90A, IBC, NBC (Canada) and associated local building codes.
- City of New York Board of Standards and Appeals. Cal. No. 460-88-SA.
- California State Fire Marshal: Fire Damper Listing No. 3225-0935:0102.

MODEL: 0716 TWO BLADES (SQUARE OR RECTANGULAR)

STANDARD CONSTRUCTION:

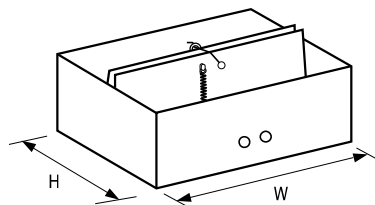
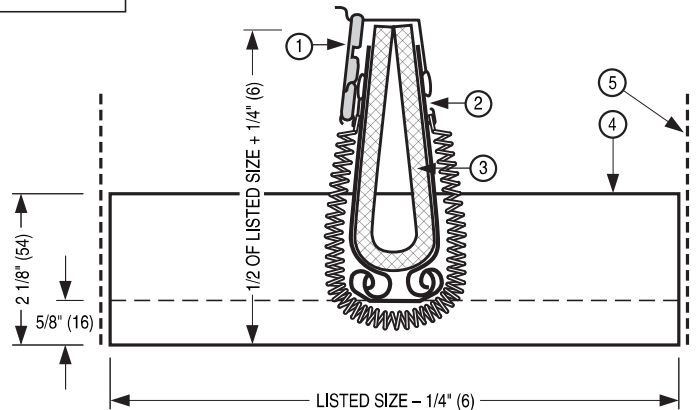
- Fusible Link:** UL Listed, 212°F (100°C), standard.
- Blades:** 22 ga. (0.85) G60 galvanized steel.
- Insulation:** Non-asbestos UL Classified on units over 80 sq. in. (516 sq. cm) finished size, standard. Not required on smaller units.
- Frame:** Roll-formed 22 ga. (0.85) G60 galvanized steel.
- Duct Drop:** By others.

Model 0716 Sizes (Duct W x H):

Minimum	Maximum
6" x 3" (152 x 75)	24" x 24" (610 x 610)

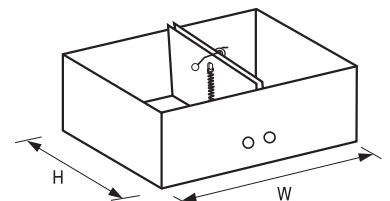
COMMON OPTION:

- 165°F (74°C) UL Listed fusible link.



DETAIL 1
(H = 6" [152] or more)

Units manufactured with blade length on long dimension (W) except where short dimension (H) is less than 6" (152). (See Detail 1 above).



DETAIL 2
(H = less than 6" [152])

If short dimension (H) is less than 6" (152), units are manufactured with blade length on short dimension. (See Detail 2 above).

MODEL: 0722 (ROUND)

STANDARD CONSTRUCTION:

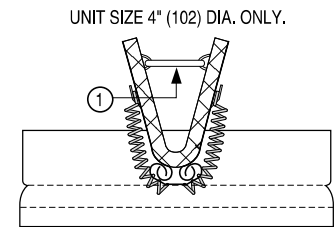
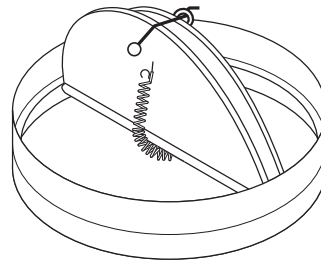
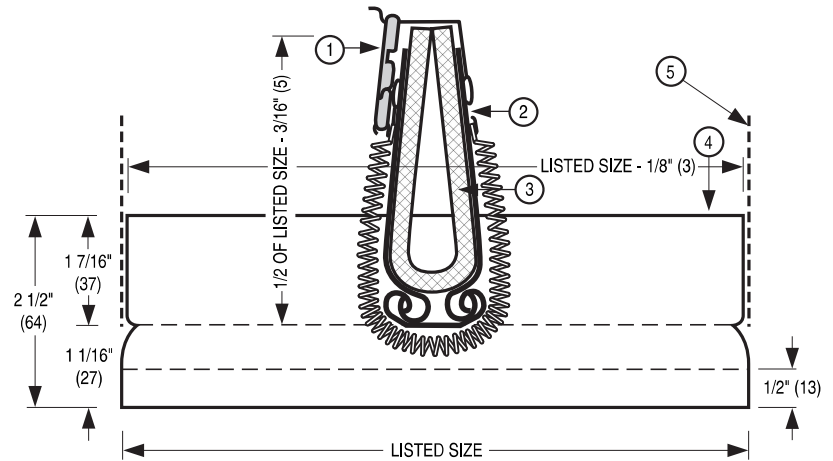
1. **Fusible Link:** UL Listed, 212°F (100°C), standard.
2. **Blades:** 22 ga. (0.85) G60 galvanized steel.
3. **Insulation:** Non-asbestos UL Classified on units 12" (305) dia. and larger. Not required on smaller units.
4. **Frame:** Roll-formed 22 ga. (0.85) G60 galvanized steel.
5. **Duct Drop:** By others.

Model 0722 Sizes (Duct Dia.):

Minimum	Maximum
4" (102) dia.	24" (610) dia.

COMMON OPTION:

- 165°F (74°C) UL Listed fusible link.



MODELS: 0722-SE SHORT TOP EXTENSION (ROUND) 0722-LE LONG TOP EXTENSION (ROUND)

The extension collar on Models 0722-SE and 0722-LE minimizes the risk of interference with blade closure in flexible duct installations and helps ensure even airflow into the diffuser neck for optimum performance.

STANDARD CONSTRUCTION:

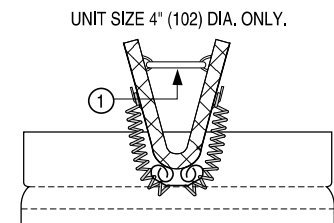
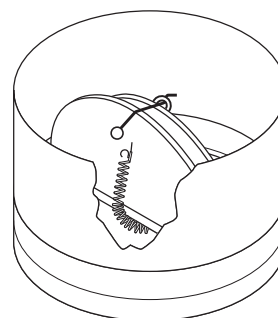
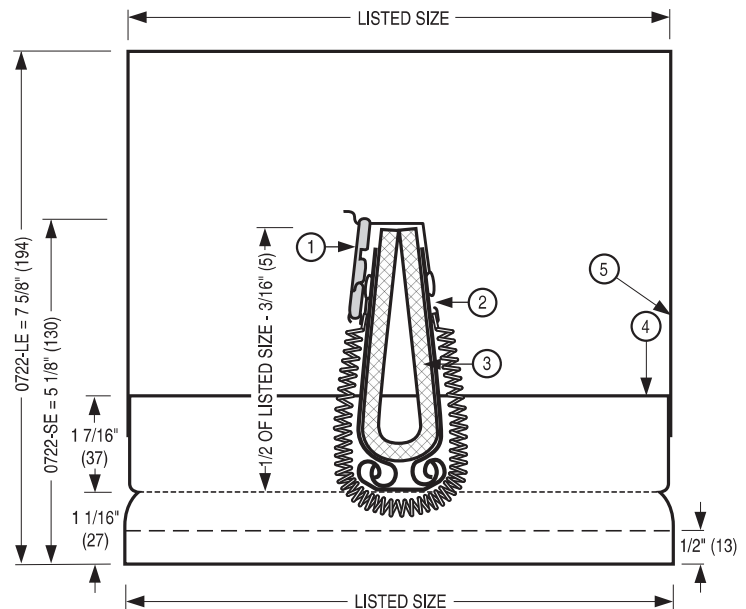
1. **Fusible Link:** UL Listed, 212°F (100°C), standard.
2. **Blades:** 22 ga. (0.85) G60 galvanized steel.
3. **Insulation:** Non-asbestos UL Classified on units 12" (305) dia. and larger. Not required on smaller units.
4. **Frame:** Roll-formed 22 ga. (0.85) G60 galvanized steel.
5. **Top Extension**

Models 0722-SE and 0722-LE Sizes (Duct Dia.):

Minimum	Maximum
4" (102) dia.	24" (610) dia.

COMMON OPTION:

- 165°F (74°C) UL Listed fusible link.



HOW TO SPECIFY

MODELS: 0716, 0716-4, 0722, 0722-SE AND 0722-LE

CEILING DAMPERS

SUGGESTED SPECIFICATION:

Provide and install, as shown on plans and/or schedules, ceiling dampers as manufactured by Nailor Industries, Inc., which meet the following criteria: Ceiling dampers shall be UL Classified for use in all restrained and unrestrained UL Listed ceiling assemblies with fire resistance ratings of 3 hours or less. Dampers shall be tested and manufactured in accordance with UL 555C Standard for Ceiling Dampers and shall bear a UL label identifying the same.

Frame and blade shall be constructed of 22 ga. (0.85) galvanized steel. Blade insulation shall be non-asbestos UL Classified where required, as determined by overall damper size. Each ceiling damper shall be held open with a **(specifier to select)** 212°F (100°C) **or** 165°F (74°C) UL Listed fusible link. Ceiling dampers shall ship with and be installed in accordance with manufacturer's UL approved installation instructions. Information submitted for approval shall include same UL installation instructions.

Standard of acceptance shall be Nailor Industries **(specifier to select)** Model 0716 for square or rectangular applications **or** Model 0716-4 low profile for square or rectangular applications with limited space **or** Model 0722 for round applications.

(Specifier to select, if required) Model 0722-SE short top extension **or** Model 0722-LE long top extension, as deemed suitable by space above ceiling, to ensure flex duct does not interfere with blade closure.

- ADJUSTABLE VOLUME CONTROL
- FOR SQUARE, RECTANGULAR OR ROUND DUCTS
- UL 555C CLASSIFIED

Models:

0716A Square & Rectangular

0716-4A Low Profile

0722A Round

0722A-SE/ Round with Top Extension

0722A-LE



Models 0722A & 0716A

Nailor ceiling dampers, or ceiling radiation dampers as they are commonly called, with **Adjustable Volume Control** option, are designed to function as a fire and heat barrier in air duct openings penetrating fire resistive membrane ceilings. The adjustable volume control mechanism allows the blades to be adjusted for balancing of airflow through the diffuser. Under fire conditions the fusible link will close the damper, regardless of volume setting.

Models 0716A and 0716-4A are for use in square or rectangular applications and Models 0722A is for use in round applications, in lieu of hinged door type dampers in any UL floor/ceiling or roof/ceiling assembly with up to a 3 hour fire resistance rating where air ducts are allowed. Model 0716-4A provides a low profile, dual set of adjustable blades design, ideal for installation in tight places that require a fire and heat barrier in air duct openings penetrating fire resistive membrane ceilings. The extension collar on Models 0722A-SE and 0722A-LE minimizes the risk of interference with blade closure in flexible duct installations and helps ensure even airflow into the diffuser neck for optimum performance. These models incorporate a mechanism to adjust the opening of the blades for balancing airflow through the ceiling diffuser.

QUALIFICATIONS:

- UL 555C CLASSIFIED CEILING DAMPER (File # R9660).
- CAN4/ULC-S112.2 Ceiling Firestop Flap Assemblies.
- Meets the requirements NFPA 90A as well as IBC, NBC (Canada) and associated local building codes.
- City of New York Board of Standards and Appeals. Cal. No. 460-88-SA.
- California State Fire Marshal: Ceiling Damper Listing No. 3226-0935:0102.

MODEL: 0716A ADJUSTABLE (SQ. OR RECT.)

STANDARD CONSTRUCTION:

- 1. Fusible Link:** UL Listed, 212°F (100°C), standard.
- 2. Blades:** 22 ga. (0.85) G60 galvanized steel.
- 3. Insulation:** Non-asbestos UL Classified on units over 80 sq. in. (516 sq. cm) finished size, standard. Not required on smaller units.
- 4. Frame:** Roll-formed 22 ga. (0.85) G60 galvanized steel.
- 5. Vol. Control:** Adjustable fusible link assembly permits volume control.
- 6. Duct Drop:** By others.

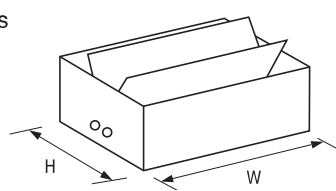
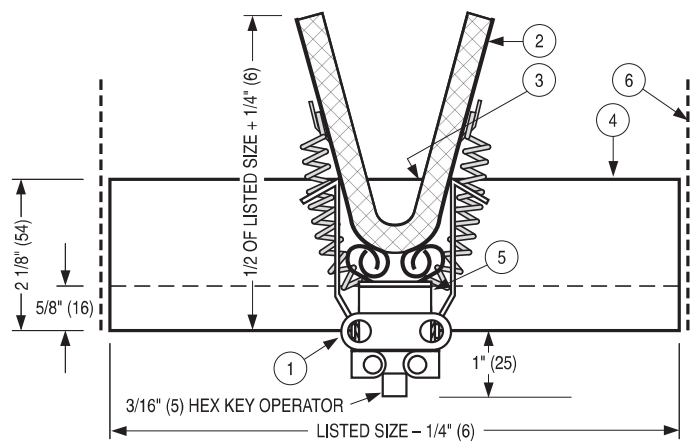
Model 0716A Sizes (Duct W x H):

Minimum	Maximum
6" x 3" (152 x 76)	16" x 16" (406 x 406)

COMMON OPTION:

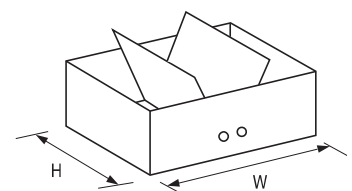
- 165°F (74°C) UL Listed fusible link.

U.S. Patent No. 4,936,287
Canadian Patent No. 2,014,587-1



DETAIL 1
(H = 6" [152] or more)

Units manufactured with blade length on dimension (W) except where short dimension (H) is less than 6" (152). (See Detail 1 above).



DETAIL 2
(H = less than 6" [152])

If short dimension (H) is less than 6" (152), units are manufactured with blade length on short dimension. (See Detail 2 above).



MODEL: 0716-4A LOW PROFILE; ADJUSTABLE (SQUARE OR RECTANGULAR)

MODEL 0716-4A provides a low profile, dual set of adjustable blades design, ideal for installation in tight places.

STANDARD CONSTRUCTION:

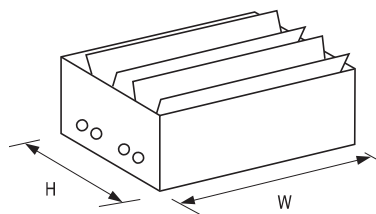
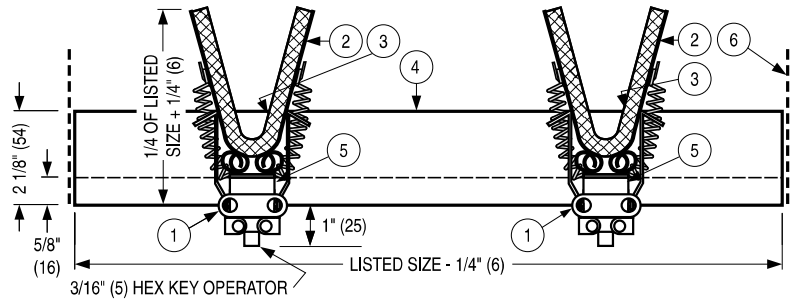
1. **Fusible Link:** UL Listed, 212°F (100°C), standard.
2. **Blades:** 22 ga. (0.85) G60 galvanized steel.
3. **Insulation:** Non-asbestos UL Classified on units over 80 sq. in. (516 sq. cm) finished size, standard. Not required on smaller units.
4. **Frame:** Roll-formed 22 ga. (0.85) G60 galvanized steel.
5. **Vol. Control:** Adjustable fusible link assembly permits volume control.
6. **Duct Drop:** By others.

Model 0716-4A Sizes (Duct W x H):

Minimum	Maximum
12" x 6" (305 x 152)	24" x 24" (610 x 610)

COMMON OPTION:

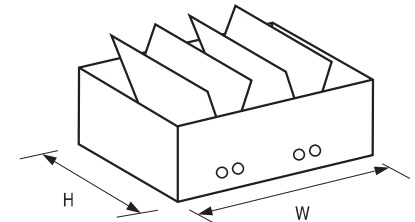
- 165°F (74°C) UL Listed fusible link.



DETAIL 1

(H = 12" [305] or more)

Units manufactured with blade length on dimension (W) except where short dimension (H) is less than 12" (305). (See Detail 1 above).



DETAIL 2

(H = less than 12" [305])

If short dimension (H) is less than 12" (305), units are manufactured with blade length on short dimension. (See Detail 2 above).

MODEL: 0722A ADJUSTABLE (ROUND)

STANDARD CONSTRUCTION:

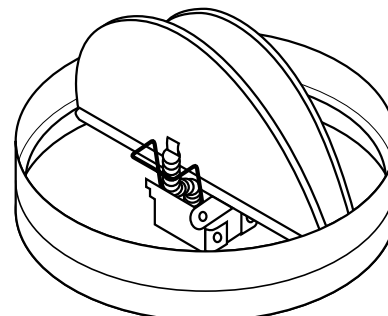
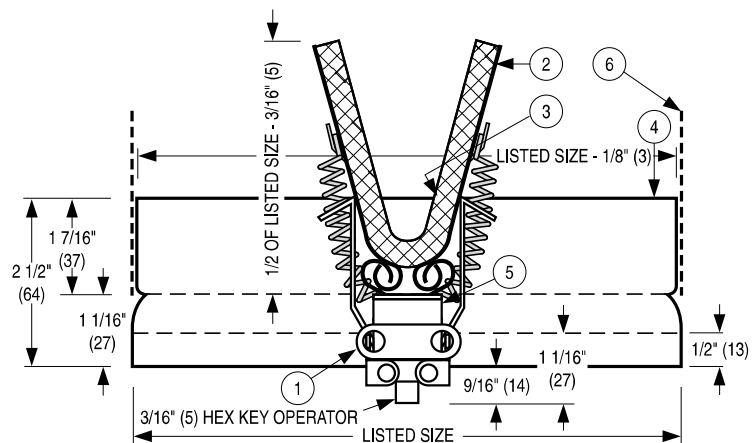
1. **Fusible Link:** UL Listed, 212°F (100°C), standard.
2. **Blades:** 22 ga. (0.85) G60 galvanized steel.
3. **Insulation:** Non-asbestos UL Classified on units 12 in. (305) dia. and larger, standard. Not required on smaller units.
4. **Frame:** Roll-formed 22 ga. (0.85) G60 galvanized steel.
5. **Vol. Control:** Adjustable fusible link assembly permits volume control.
6. **Duct Drop:** By others.

Model 0722A Sizes (Duct Dia.):

Minimum	Maximum
5" (127) dia.	16" (406) dia.

COMMON OPTION:

- 165°F (74°C) UL Listed fusible link.



MODELS: 0722A-SE ADJUSTABLE WITH SHORT EXTENSION (ROUND) 0722A-LE ADJUSTABLE WITH LONG EXTENSION (ROUND)

The extension collar on Models 0722A-SE and 0722A-LE minimizes the risk of interference with blade closure in flexible duct installations and helps ensure even airflow into the diffuser neck for optimum performance. These models incorporate a mechanism to adjust the opening of the blades for balancing airflow through the ceiling diffuser.

STANDARD CONSTRUCTION:

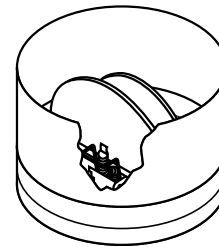
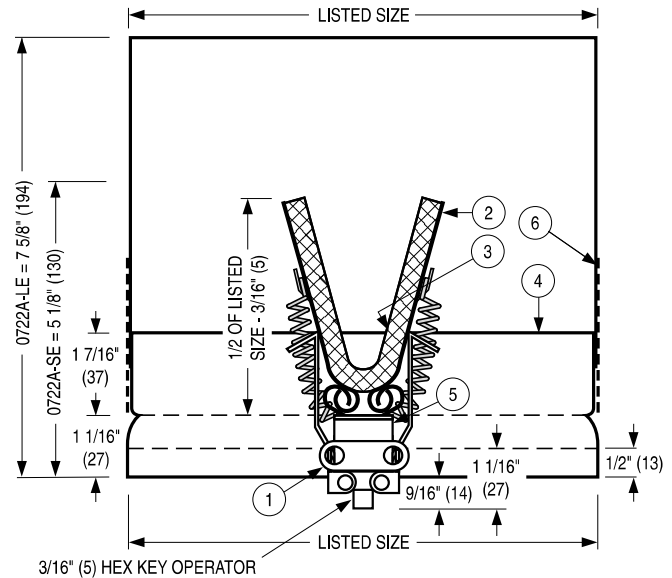
1. **Fusible Link:** UL Listed, 212°F (100°C), standard.
2. **Blades:** 22 ga. (0.85) G60 galvanized steel.
3. **Insulation:** Non-asbestos UL Classified on units 12" (305) dia. and larger, standard. Not required on smaller units.
4. **Frame:** Roll-formed 22 ga. (0.85) G60 galvanized steel.
5. **Vol. Control:** Adjustable fusible link assembly permits volume control.
6. **Duct Drop:** By others.

Models 0722A-SE and 0722A-LE Sizes (Duct Dia.):

Minimum	Maximum
5" (127) dia.	16" (406) dia.

COMMON OPTION:

- 165°F (74°C) UL Listed fusible link.



HOW TO SPECIFY

MODELS: 0716A, 0716-4A, 0722A, 0722A-SE AND 0722A-LE CEILING DAMPERS WITH ADJUSTABLE VOLUME CONTROL

SUGGESTED SPECIFICATION:

Provide and install, as shown on plans and/or schedules, ceiling dampers as manufactured by Nailor Industries, Inc., which meet the following criteria: Ceiling dampers shall be UL Classified for use in all restrained and unrestrained UL Listed ceiling assemblies with fire resistance ratings of 3 hours or less. Dampers shall be tested and manufactured in accordance with UL 555C Standard for Ceiling Dampers and shall bear a UL label identifying the same.

Frame and blade shall be constructed of 22 ga. (0.85) galvanized steel. Blade insulation shall be non-asbestos UL Classified where required, as determined by overall damper size. Each ceiling damper shall be held open with a (**specifier to select**) 212°F (100°C) or 165°F (74°C) UL Listed fusible link. Ceiling dampers shall ship with and be installed in accordance with manufacturer's UL approved installation instructions. Information submitted for approval shall include same UL installation instructions.

Standard of acceptance shall be Nailor Industries (**specifier to select**) Model 0716A for square or rectangular applications or Model 0716-4A low profile for square or rectangular applications with limited space or Model 0722A for round applications.

(**Specifier to select, if required**) Model 0722A-SE short top extension or Model 0722A-LE long top extension, as deemed suitable by space above ceiling, to ensure flex duct does not interfere with blade closure.

HOW TO SPECIFY

MODEL: 0720

LOW PROFILE CEILING DAMPERS

SUGGESTED SPECIFICATION:
 Provide and install, as shown on plans and/or schedules, low profile ceiling dampers as manufactured by Nailor Industries, Inc., which meet the following criteria: Low Profile Curtain Type Ceiling Fire Dampers shall be UL Classified for use in all restrained and unrestrained UL Listed ceiling assemblies with fire resistance ratings of 3 hours or less. Dampers shall be tested and manufactured in accordance with UL 555C Standard for Ceiling Dampers and shall bear a UL label identifying the same.
 Frame and blade shall be constructed of 22 ga. (0.85) galvanized steel. Curtain insulation shall be non-asbestos, UL Classified. Each ceiling damper shall be held open with a **(specifier to select)** 212°F (100°C) **or** 165°F (74°C) UL Listed fusible link. Ceiling dampers shall ship with and be installed in accordance with manufacturer's UL approved installation instructions. Information submitted for approval shall include same UL installation instructions.
 Standard of acceptance shall be Nailor Industries Model 0720 Low Profile Curtain Type Ceiling Fire Dampers.

HOW TO ORDER

MODELS: 0714 TO 0722

CEILING RADIATION DAMPERS – UL 555C

EXAMPLE: 0716 - 12" x 6" - 212

- | | |
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| <p>1. Models</p> <ul style="list-style-type: none"> 0714 Square/Rectangular, Single Blade 0716 Square/Rectangular, Two Blades 0716A Square/Rectangular, Two Blades with Adjustable Volume Control 0716-4 Square/Rectangular, Low Profile 0716-4A Square/Rectangular, Low Profile with Adjustable Volume Control 0722 Round 0722A Round, with Adjustable Volume Control 0722-SE Round, Short Extension 0722-LE Round, Long Extension 0722A-SE Round, Short Extension, with Adjustable Volume Control 0722A-LE Round, Long Extension, with Adjustable Volume Control 0720 Low Profile, Curtain Type | <p>2. Duct Size
Width x Height or Diameter (inches [mm's])</p> <p>3. Closure Temperature</p> <ul style="list-style-type: none"> 212 212°F (100°C) (default) 165 165°F (74°C) |
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