CEILING RADIATION DAMPER APPLICATION GUIDE MODELS: MRCD, MSCD, DGCD, DGCDSB & MCCD

Use this application guide to help determine what type of ceiling damper best suits the application.

All standard model Metal-Fab ceiling radiation dampers are Underwriters Laboratories listed for 3-4 hours, made of galvanized steel and come standard with a 165° F. fusible link. Some models and sizes use a ceramic fiber (non-asbestos) type of insulation on the damper blades or curtain.

Listed below are the standard Metal-Fab ceiling radiation damper model numbers and a brief description of each one.

Dynamic Ceiling Radiation Dampers

Model DGCD: Metal-Fab Square/Rectangular Dynamic Ceiling Damper, butterfly type, 2-1/2" tall frame and a corrosion resistant spring. When the area of the frame exceeds 80 square inches, ceramic fiber insulation will be mounted on back of the damper blades. Configure To Order (CTO) options with adjustable volume available upon request.

The DGCD can be used for supply side air inside of ductwork or attached to a ceiling register or grill. The corrosion resistant spring insures positive closure when the fusible link opens.

Model DGCDSB: Metal-Fab Square/Rectangular Dynamic Ceiling Damper, single-blade type, 2-1/2" tall frame and a corrosion resistant spring. When the area of the frame exceeds 80 square inches, ceramic fiber insulation will be mounted on back of the damper blade.

The DGCDSB can be used for supply side air inside of ductwork or attached to a ceiling register or grill. The corrosion resistant spring insures positive closure when the fusible link opens.

Static Ceiling Radiation Dampers

Model MRCD: Metal-Fab Round Ceiling Damper, butterfly-type, 3-1/2" or 2-1/2" tall frame and a corrosion resistant spring. When the area of the frame exceeds 80 square inches, ceramic fiber insulation will be mounted on back of the damper blades.

The MRCD can be used for supply side air or return air, inside of ductwork or attached to a ceiling register or grill. The corrosion resistant spring insures positive closure when the fusible link opens. A round to square outlet transition is available.

Model MSCD: Metal-Fab Square/Rectangular Ceiling Damper, butterfly type, 2-1/2" tall frame and a corrosion resistant spring.When the area of the frame exceeds 80 square inches, ceramic fiber insulation will be mounted on back of the damper blades.

The MSCD can be used for supply side air or return air, inside of ductwork or attached to a ceiling register or grill. The corrosion resistant spring insures positive closure when the fusible link opens. A square to round outlet transition is available.

Model MCCD: Metal-Fab Curtain Ceiling Damper, quilted ceramic blanket curtain type, 3-11/16" tall frame and stainless steel springs.

The MCCD can be used for supply side air or return air, inside of ductwork, attached to ductwork with transitions or attached directly to a ceiling register or grill. The MCCD has stainless steel springs to insure positive closure when the fusible link opens. The MCCD is the damper of choice when space above the ceiling is limited.

CEILING DAMPER CONFIGURE TO ORDER (CTO) OPTIONS:

After the model of the ceiling damper that is required has been determined, there will be several configuration options to choose from. A list of options for each model is on the "Specification Sheet" for that model or in the "Ceiling Damper Model Selection Guide."

All the options listed below are not available for each model ceiling damper. Consult the specification sheet for the model in question.

1) Adjustable volume control
2) Fusible link temperature set points of 165°F(Dynamic ONLY) or 212°F.
3) Transition available.
4) TB5000 Thermal Blanket
5) Type-B. (Model MCCD Only)
6) Thermal skirt (Model MCCDS Only)
7) Sleeve

OPTION # 1) ADJUSTABLE VOLUME CONTROL

The adjustable volume control is available on the MRCD, MSCD and DGCD models. The damper has a mechanism that allows the blades of the ceiling damper to be adjusted into or out of the damper frame. The blade adjustment has a direct effect on the airflow volume through the damper and the register or grill.

OPTION # 2) FUSIBLE LINK TEMPERATURE SET POINTS OF 165°F(DYNAMIC ONLY) OR 212°F.

The fusible link is the mechanism that holds the damper blades in the open position. If the fusible link reaches the temperature set point, the fusible link will open. When the fusible link opens, the damper blades close and prevents the spread of fire for a set amount of time. The standard fusible link for Metal-Fab ceiling dampers is 165° F. The other fusible link with a different temperature set point is 212° F available only with Metal-Fab Static Ceiling Radiation Dampers.

OPTION # 3) TRANSITION AVAILABLE

The MCCD can be ordered with an inlet transition (round to square), an outlet transition (square to round) or both transitions. This allows for easy installation in a multitude of different applications. All ceiling dampers are directional, they have an inlet side and an outlet side. When ordering a transition for a MCCD, it is important to specify if you want an inlet or an outlet transition.

See the specification sheets on the following models for restrictions that may apply: MCCD, MCCD1, MCCD2 or MCCDS.

OPTION # 4) TB5000 THERMAL BLANKET

The TB5000 ceramic fiber (non-asbestos) thermal blanket is 24" x 24" x 1/8". Tested up to 2,000°F. at four hours. Allows for ceiling openings larger than the duct size. When ceiling dampers are used in conjunction with lay-in diffusers, the top of the diffuser must be insulated. The lay-in diffusers must be constructed of steel. The TB5000 is UL listed. It is light weight and easy to work with on the job. See the ceiling damper installation instructions for details of TB5000 thermal blanket applications. (Not available for Dynamic Ceiling Radiation Dampers)

OPTION # 5) TYPE-B DAMPER

This option is only available on the MCCD ceiling damper. This option allows for B-Channels to be installed onto the damper frame so the blade stack will not cause as much restriction in the airflow through the duct.

OPTION # 6) THERMAL SKIRT

This option is available on the MCCDS ceiling damper. This option allows the damper frame to have a ceramic fiber skirt mounted around the perimeter for applications where the ceiling assembly needs the added protection to maintain the rating. See the ceiling damper installation instructions for details of thermal skirt applications. The MCCDS model is only available in a 24”W x 24”H frame.

OPTION # 7) SLEEVES

Model MRCD: 6" tall sleeves are available
Model MSCD: 6" and 8" tall sleeves are available
Model MCCD: 6" and 8" tall sleeves are available

Standard damper/sleeve assemblies will have the bottom of the damper frame mounted 1-5/8" above the bottom of the sleeve as shown below.