DAMPER PRODUCTS
FIRE DAMPERS • CEILING RADIATION DAMPERS
We make dampers easy for you!

In over 50 years of business, we’ve learned how to make business easy for our customers, and dampers are no exception. We’ve honed it down to a science, to save you time and money!

We provide a complete line of models plus configure-to-order (CTO) options to meet your every damper need. To place an order for Metal-Fab Dampers, here’s all you need to tell us:

**Fire Dampers**
1. Type - A, B or C
2. Fusible Link Temperature Set Point
3. Orientation - Vertical or Horizontal
4. Sleeve Requirement
5. Transition Requirement
6. Pressure Rating
7. Micro-Switch

**Ceiling Radiation Dampers**
1. Spring or Adjustable Volume Control
2. Fusible Link Temperature Set Point
3. Transition Requirement
4. Thermal Blanket
5. Type-B (Model MCCD only)
6. Thermal Skirt

Ask about our UL listed ceiling radiation dampers for boot assemblies!

Make us your damper partner!
You won’t find higher quality product or more responsive customer service. Metal-Fab gives you more:

- **No Inventory Requirement**
  Use Metal-Fab as your damper warehouse.

- **Easy Ordering**
  Order online or with our simple order form.

- **Fast, Dependable Shipping**
  We’ll ship most orders within 24 hours, even large orders. Custom orders take a little longer, but in any case, you won’t be charged extra for fast shipping!

- **Simple Pricing**
  Competitive pricing in a simple price structure that’s easy to understand.

**New Online Customer Service Portal** - Saves time and makes your job easier. Use the simple Damper Calculator, check order status and tracking, find current pricing, order literature and sales support materials. **FAST, SIMPLE, EASY** www.metal-fabinc.com
### Model: MFD

#### 1.5-Hour Rating:
For use in fire barriers rated for 2 hours or less.

#### Standard Construction:
- **Frame:** Roll formed 22 Ga. Galvanized Steel with Safety Edge. Width and height dimensions available in 1/4" increments.
- **Blades:** Roll formed 24 Ga. Galvanized Steel, Curtain Type.
- **Springs:** Stainless Steel.
- **Transition:** 20 Ga. Galvanized Steel.
- **Finish:** Mill Galvanized Standard.

#### Options:
- **Type-A, Type-B or Type-C**
  - Fusible link 165°F, 212°F, 286°F.
  - Vertical or Horizontal applications.
  - Sleeve options are 20 Ga., 18 Ga., or 16 Ga., and 6", 8", 12", 14" or 16" long.
  - Low pressure, medium/high pressure or high pressure.
  - Microswitch.

### Duct Size Limitations:

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<th>MIN.</th>
<th>MAX. Single Section</th>
<th>MAX. Multi Section</th>
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<tr>
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<td>4.25&quot;W x 3.75&quot;H</td>
<td>60.25&quot;W x 60.25&quot;H</td>
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<td>4.25&quot;W x 2.00&quot;H</td>
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<td>5.25&quot; DIA.</td>
<td>39.25&quot;W x 35.25&quot;H</td>
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**Typical Vertical Damper**
- Rolled Safety Edge
- Galv. Steel Interlocking Blades
- Fusible Link (Replaceable)
- Galv. Steel Frame

**Typical Horizontal Damper**
- Stainless Steel Closure Spring
- Access Door Located This Side

**3 11/16" (94mm)**
MODEL: MFDS SLIMFRAME

1.5-HOUR RATING

1.5-HOUR RATING:
For use in fire barriers rated for 2 hours or less.

STANDARD CONSTRUCTION:
Frame: Roll Formed 22 Ga. Galvanized Steel with Safety Edge.
Width and height dimensions available in 1/4" increments.
Blades: Roll Formed 24 Ga. Galvanized Steel, Curtain Type.
Springs: Stainless Steel.

OPTIONS:
Type-A, Type-B or Type-C.
Fuse Link 165°F, 212°F, 286°F.
Vertical or Horizontal application.
Sleeve options are 20 Ga., 18 Ga., or 16 Ga. and 12", 14" or 16" long.
Low pressure, medium/high pressure or high pressure.
Microswitch.

DUCT SIZE LIMITATIONS:

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<tr>
<td>Vertical B</td>
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<td>48.25&quot;W x 43.25&quot;H</td>
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<td>Vertical C</td>
<td>5.25&quot; DIA.</td>
<td>47.25&quot;W x 42.25&quot;H</td>
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<tr>
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<td>48.25&quot;W x 48.25&quot;H</td>
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<tr>
<td>Horizontal B</td>
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<tr>
<td>Horizontal C</td>
<td>5.25&quot; DIA.</td>
<td>47.25&quot;W x 42.25&quot;H</td>
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</table>
MODEL: MFDUS ULTRA SLIMFRAME

1.5-HOUR RATING

For use in fire barriers rated for 2 hours or less.

STANDARD CONSTRUCTION:
Blades: Roll Formed 24 Ga. Galvanized Steel, Curtain Type.

OPTIONS:
Type-A, Type-B and Type-C
Fusible link 165°F, 212°F, 286°F.
Vertical application only, not approved for horizontal application.
Sleeve options are 20 Ga., 18 Ga., or 16 Ga. and 12", 14" or 16" long.
Low pressure, medium/high pressure or high pressure.
Microswitch.

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<td>Vertical B</td>
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<td>47.25&quot;W x 42.25&quot;H</td>
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TYPICAL VERTICAL DAMPER
MODEL: MFD3

3-HOUR RATING:
For use in fire barriers rated for 4 hours or less.

Standard Construction:
Frame: Roll Formed 22 Ga. Galvanized Steel with Safety Edge. Width and height dimensions available in 1/4” increments.
Blades: Roll Formed 24 Ga. Galvanized Steel, Curtain Type.
Springs: Stainless Steel.

Options:
Type-A, Type-B or Type-C
Fusible link 165°F, 212°F, 286°F.
Vertical or Horizontal applications.
Sleeve options are 20 Ga., 18 Ga., or 16 Ga., and 12”, 14” or 16” long.
Low pressure, medium/high pressure or high pressure.
Microswitch.

TYPICAL VERTICAL DAMPER

TYPICAL HORIZONTAL DAMPER

DUCT SIZE LIMITATIONS:

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<td>Vertical B</td>
<td>4.25”W x 2.00”H</td>
<td>60.25”W x 55.25”H</td>
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<td>5.25” DIA.</td>
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<tr>
<td>Horizontal A</td>
<td>4.25”W x 4.00”H</td>
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<td>4.25”W x 2.25”H</td>
<td>40.25”W x 36.25”H</td>
<td>80.00”W x 36.00”H</td>
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<td>Horizontal C</td>
<td>5.25” DIA.</td>
<td>39.25”W x 35.25”H</td>
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**MODEL: MFDS3 SLIMFRAME**

**3-HOUR RATING:**
For use in fire barriers rated for 4 hours or less.

**STANDARD CONSTRUCTION:**
- **Frame:** Roll Formed 22 Ga. Galvanized Steel with Safety Edge. Width and height dimensions available in 1/4" increments.
- **Blades:** Roll Formed 24 Ga. Galvanized Steel, Curtain Type.
- **Springs:** Stainless Steel.
- **Transition:** 20 Ga. Galvanized Steel.
- **Finish:** Mill Galvanized Standard.

**OPTIONS:**
- **Type-A, Type-B or Type-C.**
  - Fuse Link 165°F, 212°F, 286°F.
  - Vertical or Horizontal application.
  - Sleeve options are 20 Ga., 18 Ga., or 16 Ga. and 12", 14" or 16" long.
  - Low pressure, medium/high pressure or high pressure.
  - Microswitch.

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MODEL: MFDUS3 ULTRA SLIMFRAME

3-HOUR RATING

3-HOUR RATING:
For use in fire barriers rated for 4 hours or less.

STANDARD CONSTRUCTION:
Blades: Roll Formed 24 Ga. Galvanized Steel, Curtain Type.

OPTIONS:
Type-A, Type-B and Type-C
Fusible link 165°F, 212°F, 286°F. Vertical application only, not approved for horizontal application. Sleeve options are 20 Ga., 18 Ga., or 16 Ga. and 12", 14" or 16" long. Low pressure, medium/high pressure or high pressure. Microswitch.

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<tr>
<td>Vertical B</td>
<td>4.25&quot; W x 2.00&quot; H</td>
</tr>
<tr>
<td>Vertical C</td>
<td>5.25&quot; DIA.</td>
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MODEL: MDFD

1.5-HOUR RATING

For use in fire barriers rated for 2 hours or less.

Standard Construction:
Blades: Roll Formed 24 Ga. Galvanized Steel, Curtain Type.
Springs: Stainless Steel.
Fusible link: 165°F.

Options:
Type-A, Type-B and Type-C
Vertical or Horizontal application.
Sleeve options are 20 Ga., 18 Ga., or 16 Ga. and 12", 14" or 16" long. Low pressure, medium/high pressure or high pressure. Microswitch.

DUCT SIZE LIMITATIONS:

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<td>36.25&quot;W x 36.25&quot;H</td>
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<td>36.25&quot;W x 33.25&quot;H</td>
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<tr>
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<td>18.25&quot;W x 18.25&quot;H</td>
<td>36.25&quot;W x 36.25&quot;H</td>
</tr>
<tr>
<td>Horizontal B</td>
<td>6.50&quot;W x 3.25&quot;H</td>
<td>18.25&quot;W x 16.25&quot;H</td>
<td>36.25&quot;W x 32.25&quot;H</td>
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<tr>
<td>Horizontal C</td>
<td>5.50&quot; DIA.</td>
<td>17.25&quot;W x 15.25&quot;H</td>
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MODEL: MDFDS SLIMFRAME

1.5-HOUR RATING

1.5-HOUR RATING:
For use in fire barriers rated for 2 hours or less.

STANDARD CONSTRUCTION:
Frame: Roll Formed 22 Ga. Galvanized Steel with Safety Edge. Width and height dimensions available in 1/4” increments.
Blades: Roll Formed 24 Ga. Galvanized Steel, Curtain Type.
Springs: Stainless Steel.
Fusible link: 165°F.

OPTIONS:
Type-A, Type-B and Type-C
Vertical or Horizontal application.
Sleeve options are 20 Ga., 18 Ga., or 16 Ga. and 12", 14" or 16" long.
Low pressure, medium/high pressure or high pressure. Microswitch.

DUCT SIZE LIMITATIONS:

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<td>N/A</td>
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<td>36.25”W x 33.25”H</td>
<td>N/A</td>
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<td>5.50” DIA.</td>
<td>35.25”W x 31.25”H</td>
<td>N/A</td>
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<tr>
<td>Horizontal A</td>
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<td>18.25”W x 18.25”H</td>
<td>36.25”W x 36.25”H</td>
</tr>
<tr>
<td>Horizontal B</td>
<td>6.50”W x 3.25”H</td>
<td>18.25”W x 16.25”H</td>
<td>36.25”W x 32.25”H</td>
</tr>
<tr>
<td>Horizontal C</td>
<td>5.50” DIA.</td>
<td>17.25”W x 16.25”H</td>
<td>N/A</td>
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MODEL: MDFD3
3-HOUR RATING

3-HOUR RATING:
For use in fire barriers rated for 4 hours or less.

Standard Construction:
Frame: Roll Formed 22 Ga. Galvanized Steel with Safety Edge.
   Width and height dimensions available in 1/4" increments.
Blades: Roll Formed 24 Ga. Galvanized Steel, Curtain Type.
Springs: Stainless Steel.
Fusible link: 165°F.

Options:
Type-A, Type-B and Type-C
Vertical or Horizontal application.
Sleeve options are 20 Ga., 18 Ga., or 16 Ga. and 12", 14" or 16" long.
Low pressure, medium/high pressure or high pressure.
Microswitch.

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<td>N/A</td>
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MODEL: MDFDS3 SLIMFRAME

3-HOUR RATING:
For use in fire barriers rated for 4 hours or less.

STANDARD CONSTRUCTION:
- **Frame:** Roll Formed 22 Ga. Galvanized Steel with Safety Edge. Width and height dimensions available in 1/4" increments.
- **Blades:** Roll Formed 24 Ga. Galvanized Steel, Curtain Type.
- **Springs:** Stainless Steel.
- **Fusible link:** 165°F.
- **Transition:** 20 Ga. Galvanized Steel.
- **Finish:** Mill Galvanized Standard.

OPTIONS:
- **Type-A, Type-B and Type-C**
  - Vertical or Horizontal application.
  - Sleeve options are 20 Ga., 18 Ga., or 16 Ga. and 12", 14" or 16" long.
  - Low pressure, medium/high pressure or high pressure.
  - Microswitch.

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MODEL: MRCD BUTTERFLY
UL 555C LISTED FOR 3-4 HOURS

MODEL MRCD: UL 555C Listed for 3-4 hours
Round, butterfly-type.

STANDARD CONSTRUCTION:
Frame: 22 Ga. galvanized steel.
Blades: 22 Ga. galvanized steel.
Thermal Blanket: Non-asbestos, ceramic blanket on sizes 80 sq. inches and up.
Spring: Corrosion resistant steel spring.
Finish: Mill Galvanized.

OPTIONS:
Frame Height: 2.5" or 3.5".
Adjustable Volume Control
Fusible Link: Replaceable 165°F or 212°F.
Outlet Transition: Round to Square.
Thermal Blanket: TB5000, 24" x 24" x 1/8"
non-asbestos, ceramic blanket.

SIZE LIMITATIONS:
Minimum 3.875" dia., Maximum 18" dia.
MODEL: MSCD BUTTERFLY
UL 555C LISTED FOR 3-4 HOURS

MODEL MSCD: UL 555C Listed for 3-4 hours.
Square or rectangular butterfly-type.

STANDARD CONSTRUCTION:
Frame: Roll formed, 22 Ga. galvanized steel.
Blades: 22 Ga. galvanized steel.
Thermal Blanket: Non-asbestos, ceramic blanket on sizes 80 sq. inches and up.
Spring: Corrosion resistant steel spring.
Finish: Mill galvanized.

OPTIONS:
Adjustable Volume Control
Fusible Link: Replaceable 165°F or 212°F.
Outlet Transition: Square to Round.
Thermal Blanket: TB5000, 24" x 24" x 1/8" non-asbestos, ceramic blanket.

SIZE LIMITATIONS:
Sizes: Minimum 3.75" W or 3.75" H.
Minimum area: 24 sq. inch (nominal).
Maximum 22" W x 22" H.
MODEL: MSCDSB SINGLE BLADE
UL 555C LISTED FOR 3-4 HOURS

MODEL MSCD: UL 555C Listed for 3-4 hours.
Square or rectangular single blade type.

STANDARD CONSTRUCTION:
Frame: Roll formed, 22 Ga. galvanized steel.
Blades: 22 Ga. galvanized steel.
Thermal Blanket: Non-asbestos, ceramic blanket on sizes 80 sq. inches and up.
Spring: Corrosion resistant steel spring.
Finish: Mill galvanized.

OPTIONS:
Fusible Link: Replaceable 165°F or 212°F.
Thermal Blanket: TB5000, 24” x 24” x 1/8” non-asbestos, ceramic blanket.

SIZE LIMITATIONS:
Sizes: Minimum: 3.75” W or 3.75” H.
Minimum area: 16 sq. inch (nominal).
Maximum 22” W x 6” H.
MODEL: MCCD
UL 555C LISTED FOR 3-4 HOURS

MODEL MCCD: UL 555C Listed for 3-4 hours.

Square or rectangular damper with quilted ceramic thermal blanket, (non-asbestos).

STANDARD CONSTRUCTION:
Frame: Roll formed, 22 Ga. galvanized steel.
Blades: Roll formed, 24 Ga. galvanized steel.
Thermal Blanket: Non-asbestos, ceramic blanket.
Springs: Stainless steel.
Finish: Mill galvanized.

OPTIONS:
Type-B: B channels installed (see below).
Fusible Link: Replaceable 165°F, 212°F.
Thermal Blanket: TB5000 24" x 24" x 1/8", non-asbestos, ceramic blanket.

SIZE LIMITATIONS:
Minimum: 4.00" W or 4.25" H.
Minimum area: 24 sq. inch (nominal).
Maximum 23.75" W x 23.75" H.
 Ceiling Radiation Dampers in boot assemblies for use in UL fire resistance floor-ceiling & roof-ceiling designs as listed in the UL fire resistance directory. Metal-Fab ceiling radiation damper assemblies are classified and compliant to ANSI/UL263 testing requirements.

Metal-Fab’s MRCDHC, MSCDHC and MSCDSBHC Ceiling Radiation Dampers may also be substituted into any UL design which incorporates a hinged blade damper as outlined in the UL fire resistance directory. Models MRCDHC, MSCDHC and MSCDSBHC are 3-hour rated dampers, for use in registers or drop duct applications.

**UL Designs L501, L502 and L563.**

Metal-Fab ceiling radiation dampers are 1-hour fire rated for the following UL approved ceiling/floor and ceiling/roof assemblies - L-501, L-502, and L-563 designs, similar to designs; L-521, L-574, L-585, P533, P544, P545, and P547.**

**Other designs mentioned have not been evaluated and are not considered UL classified for use with the associated Metal-Fab products.

**UL DESIGN L-501 & L502 LISTING**

**CEILING RADIATION DAMPER**

- **UL Listed Link:** 165º F or 212ºF
- **Frame & Blades:** 22 Ga. Galvanized Steel
- **Thermal Blanket:** Ceramic Type
- **Spring:** Corrosion-Resistant Steel
- **Rating:** 1 Hour
- **Maximum Size:**
  - 16”x12” or 15” Dia.
  - 16”x6” for MSCDSBHC

**BOOT/REGISTER BOX (Provided by others)**

- 30 Ga. Galvanized Steel Minimum (Sizes up to 12”x12”).
- Standard Drywall Flange (Optional Extended Length).
- Insulation Pre-installed or Supplied by Contractor/Installer.

**UL DESIGN L-563 LISTING**

**CEILING RADIATION DAMPER**

- **UL Listed Link:** 165º F or 212ºF
- **Frame & Blades:** 22 Ga. Galvanized Steel
- **Thermal Blanket:** Ceramic Type
- **Spring:** Corrosion-Resistant Steel
- **Rating:** 1 Hour
- **Maximum Size:**
  - 16”x16” or 16” Dia.
  - 16”x8” for MSCDSBHC

**BOOT/REGISTER BOX (Provided by others)**

- 30 Ga. Galvanized Steel Minimum (Sizes up to 12”x12”).
- Standard Drywall Flange (Optional Extended Length).
- Insulation Pre-installed or Supplied by Contractor/Installer.
- Exterior insulated with foil face plenum box, 1-1/2” (R 6.0) minimum thickness fiberglass.

**ALTERNATIVE PLENUM BOX CONSTRUCTION**

**FIBERGLASS DUCTBOARD PLENUM BOX ASSEMBLY**

Install Metal-Fab Ceiling Radiation Damper/Plenum Box Assemblies in accordance with instruction sheet L2831 & UL 181A. Fabricate the fiberglass ductboard plenum box using the joint methods and materials as shown in installations instructions (L2866).

Use only UL 181 Listed fiberglass ductboard with a density of 4lbs/cubic ft. minimum and thickness of 1” (25.4mm) or 6lbs/cubic ft. and minimum thickness of 1-3/8” (35mm).

Joint preparation shall be in accordance with the joint construction and ductboard foil backing overlap shown in L2866 (Fiberglass Ductboard Plenum Box Installation Instructions).

Use only UL 181 Listed aluminum tape 2” wide minimum sealing all corners, joints and support angle penetrations.

Secure plenum box to the damper sleeve and support angles using UL 181 Listed tape.
MODEL: MFRA FRAMED RETAINING ANGLES

STANDARD CONSTRUCTION:
16 Ga. 1-1/2" x 1-1/2" formed galvanized steel with staked corners.

Sizes: Minimum 6-1/4" x 6-1/4".
Maximum 48" x 48".

NOTE: When the damper or the damper assemblies exceed either 48" in width or height, the retaining angles shall not be less than 1-1/2" x 1-1/2" and shall be attached to the sleeve using 1/4-20 x 3/4" roundhead stove bolts at 8" on center. 1" long welds or #14 x 3/4" sheet metal screws at the same spacing.

APPLICATION:
The model MFRA retaining angles can be installed on Metal-Fab curtain fire dampers. MFRA retaining angles are shipped in sets of two.

Vertical Installation Shown Horizontal is Similar.
The adjustable volume control is available on the MRCD and MSCD 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.

**MODEL: TB5000 THERMAL BLANKET**

**MODEL TB5000:** Ceramic Fiber Thermal Blanket.

**Dimensions:** 24" x 24" x 1/8".

**FEATURES:**
- Listed and labeled by UL for openings up to 576 sq. in., rated 4 hrs. or less.
- Lightweight, non-asbestos fabric can be easily installed in the field.
- Allows for ceiling openings larger than duct size (e.g. lay-in diffusers).
- Tested up to 2000°F at 4 hours.

**NOTE:** TB5000 Thermal Blanket is approved for use with all Metal-Fab ceiling dampers (i.e. Model MCRD with transition).
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