MULTI-BLADE FIRE DAMPERS
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MULTI-BLADE FIRE DAMPERS

GENERAL PRODUCT OVERVIEW
Over the past 100 years, the US and other industrial countries have experienced a dramatic decrease in deaths attributed to fires in commercial and industrial-use buildings. As the focus of modern commercial and industrial building construction continues to become increasingly life safety oriented, fire containment and smoke management systems are being utilized to a higher degree as more sophisticated technology is developed and implemented into building codes. Resulting property damage is minimized and occupant safety is maximized. Nailor Industries’ commitment to the development of new and existing fire and smoke control technology has resulted in a comprehensive line of premium quality smoke, fire and combination fire/smoke dampers and accessories, available at a reasonable cost and in a timely fashion. Nailor’s ‘multi-blade’ type fire dampers are available in several blade and frame styles with a multitude of options to suit most commercial and light industrial applications.

MODEL SERIES D1200 (1 1/2 HR.) & D1200-3 (3 HR.)
DYNAMIC FIRE DAMPER
AIRFOIL BLADE
Model Series D1200 and D1200-3 Airfoil Multi-blade Fire Dampers provide the ultimate in fire containment for both static and dynamic HVAC systems. The design utilizes an innovative inter-locking double skin airfoil blade that maintains a complete barrier throughout the fire test with absolutely no visible through-gaps. Amazingly, the damper gets tighter as it gets hotter! Ideal for use where building codes require a fire damper for the protection of ductwork penetrations in walls or floors with a low pressure drop design suitable for high velocity applications. Premium performance, versatility and assured closure under airflow make the D1200 and D1200-3 series dampers an excellent choice for the majority of today’s commercial applications.

MODEL SERIES 1200 (1 1/2 HR.) & 1200-3 (3 HR.)
STATIC FIRE DAMPER
AIRFOIL BLADE
Model Series 1200 and 1200-3 Airfoil Multi-blade Fire Dampers are classified for use only in static "fans off" systems where the HVAC system is automatically shut down in the event of a fire alarm. Largest fire damper listing in the industry (exceeding curtain dampers) at 144" x 96" (3658 x 2438). Standard features include an innovative inter-locking double skin airfoil blade design that maintains a complete barrier throughout the fire test with absolutely no visible through-gaps. The airfoil blade design and elimination of blade sills, top and bottom, provide a low pressure drop design. The 1200 and 1200-3 series dampers have been especially designed and tested to provide premium performance.

MODEL SERIES D1250 (1 1/2 HR.)
DYNAMIC FIRE DAMPER
VEE-GROOVE BLADE
Model Series D1250 provides 1 1/2 hour UL labeled fire protection suitable for use where ductwork penetrates a wall or floor with a fire resistance rating of up to 2 hours. Nailor’s most popular and economical design features sturdy vee groove style blades and a rugged mitered corner hat channel frame design that virtually eliminates racking. The over-center/knee lock with high torque spring/fusible link assures fail-safe closure during fire conditions under airflow. The D1250 series is approved for use in both static and dynamic HVAC system designs, and is an economical and versatile performer, available with a factory fitted sleeve and choice of transition styles, suitable for use in the majority of today’s commercial applications.
MODEL D1201-DOW (1 1/2 HR.)
OUT OF WALL DYNAMIC FIRE DAMPER
AIRFOIL BLADE • DUCTED BOTH SIDES
Model D1201-DOW is an "out of wall" (vertical mount) or "out of floor" (horizontal mount) high performance dynamic fire damper for through penetration applications (ductwork is connected to both sides) where the damper cannot be installed within the plane of the wall or floor. Innovative design features include inter-locking double skin blades that eliminate combustible seals and provide flame protection under fire conditions at temperatures up to 2000°F (1366°C) and premium performance and a low pressure drop well suited to the majority of commercial applications. The D1201-DOW is ideal for applications where building codes require a fire damper for the protection of ductwork penetrations in walls or floors that have a fire resistance rating of up to 2 hours.

MODEL D1201-OW (1 1/2 HR.)
OUT OF WALL DYNAMIC FIRE DAMPER
AIRFOIL BLADE • GRILLE MOUNT
Model D1201-OW is an "out of wall" high performance dynamic fire damper specifically designed for supply or return ducts that terminate at a grille and provides through the grille access to the damper. Standard sleeve length accommodates most commercial supply and return grilles/registers. It offers premium performance and a low pressure drop well suited to the majority of commercial applications. Unique, inter-locking double skin blade design eliminates combustible seals and provides flame protection under fire conditions at temperatures up to 2000°F (1366°C). The D1201-OW is supplied as standard with an internal locking quadrant which holds the damper in the fully open position, but may also be used for system balancing if required.

MODEL SERIES D1200SS (1 1/2 HR.) & D1200SS-3 (3 HR.)
DYNAMIC FIRE DAMPER
AIRFOIL BLADE • STAINLESS STEEL
Model Series D1200SS and D1200SS-3 Stainless Steel Airfoil Multi-blade Fire Dampers provide the ultimate in fire containment for both static and dynamic HVAC systems, ideal for use high humidity or corrosive environments where building codes require a fire damper for the protection of ductwork penetrations in walls or floors. Available in either Type 304 or 316 Stainless Steel, premium performance, rugged construction and assured closure under airflow make the D1200SS and D1200SS-3 series dampers an excellent choice for the majority of today’s commercial and light industrial applications.

MODEL SERIES 1200SS (1 1/2 HR.) & 1200SS-3 (3 HR.)
STATIC FIRE DAMPER
AIRFOIL BLADE • STAINLESS STEEL
Model Series 1200SS and 1200SS-3 Stainless Steel Airfoil Multi-blade Fire Dampers are classified for use only in static "fans off" systems where the HVAC system is automatically shut down in the event of a fire alarm. The 1200SS and 1200SS-3 series dampers have been designed and tested to provide premium performance, available in either Type 304 or 316 Stainless Steel, ideal for use in high humidity and mildly corrosive environments where building codes require a fire damper for the protection of ductwork penetrations in walls or floors. The airfoil blade design and elimination of blade sills, top and bottom, provide a low pressure drop design.
MODELS 1201-MDG & 1201-MDS
MULTI-BLADE MARINE FIRE DAMPERS
AIRFOIL BLADE • LOW LEAKAGE
Model Series 1201-MDG and 1201-MDS are Multi-Blade Low Leakage Fire Dampers for use in marine applications which require USCG approval for installation on Class A-60 divisions. Unique airfoil blade design provides low pressure drop, particularly suited for high velocity applications. Standard features include a rugged hat channel frame, 12" (305) factory fitted sleeve, concealed in-frame linkage and stainless steel jamb seals for low leakage performance. Models 1201-MDG and 1201-MDS may be installed vertically, with blades running horizontal, or horizontally.

MODEL 1290F (1 1/2 HR.)
DYNAMIC FIRE DAMPER
TRUE ROUND
Model 1290F is an economical true round fire damper designed and qualified for point-of-origin fire containment where round ductwork passes through metal stud drywall partitions or masonry walls that have a fire resistance rating of up to 2 hours and building codes require a fire damper. Features include the industry proven over-center/knee lock design with high torque spring/fusible link closure which provides fail-safe security during fire conditions under airflow. Each damper is supplied as standard with retaining plates for fast secure installation and a hand locking quadrant which holds the damper in the fully open position, but may also be used for system balancing if required.

MODEL 1290F-SS (1 1/2 HR.)
DYNAMIC FIRE DAMPER
TRUE ROUND • STAINLESS STEEL
Model 1290FSS is an economical true round fire damper designed and qualified for point-of-origin fire containment in high humidity or corrosive environments where round ductwork passes through metal stud drywall partitions or masonry walls that have a fire resistance rating of up to 2 hours and building codes require a fire damper. Features include the industry proven over-center/knee lock design with high torque spring/fusible link closure which provides fail-safe security during fire conditions under airflow. Each damper is supplied as standard with retaining plates for fast secure installation and a hand locking quadrant which holds the damper in the fully open position, but may also be used for system balancing if required. The 1290F-SS is available in either Type 304 or 316 Stainless Steel.
Model Series:

D1200  1 1/2 Hour Label  (for fire separations up to 2 hours)
D1200-3  3 Hour Label  (for fire separations up to 4 hours)

Model Series D1200 and D1200-3 Multi-Blade Fire Dampers provide the ultimate in fire containment for both static and dynamic HVAC systems. Unique airfoil blade design provides low pressure drop, particularly suited to high velocity applications. The design utilizes an innovative inter-locking double skin airfoil blade that maintains a complete barrier throughout the fire test. Ideal for use where building codes require a fire damper for the protection of ductwork penetrations in walls or floors, UL approved for installation with airflow in either direction and inverted mounting. Supplied as standard with an internal hand locking quadrant to hold blades in the open position or balancing the system, available with a factory fitted sleeve ready for installation and choice of transition styles to suit duct size and type.

Rugged 16 ga. (1.6) hat channel frames, 14 ga. (2.0) equivalent blades, long lasting self-lubricating bearings, double bolted blade axles and reinforced mitered corners with die formed corner gussets result in one the industry’s most durable fire dampers. Premium performance, versatility and assured closure under airflow make the D1200 and D1200-3 series dampers an excellent choice for the majority of today’s commercial applications.

QUALIFICATIONS:
- UL 555 & CAN/ULC-S112 CLASSIFIED DYNAMIC FIRE DAMPER
  1 1/2 hr. Label or 3 hr. Label (File # R9492).
- Meets NFPA 80, 90A and 101 as well as IBC and NBC (Canada) Building Code requirements.
- City of New York. MEA # 366-03-M.
- California State Fire Marshal: Fire Damper Listing No. 3225-0935:0101.
- Maximum velocity: 4000 fpm @ 4” w.g. (20 m/s @ 1 kPa).

STANDARD CONSTRUCTION:

Frame:  5” x 7/8” x 16 ga. (127 x 22 x 1.6) galvanized steel hat channel.
Blades:  14 ga. (2.0) equivalent galvanized steel formed airfoil on 5 1/2” (140) centers. Opposed action.
Linkage:  Concealed in frame. 12 ga. (2.7) plated steel.
Bearings:  1/2” (13) dia. self-lubricating oilite bronze.
Axles:  1/2” (13) dia. plated steel double bolted to blades.
Jackshaft:  1/2” (13) dia. cadmium plated steel.
Internal locking quadrant is factory installed.
Fusible Link:  165°F (74°C) standard. 212°F (100°C) available on single and double sections only.

COMMON OPTIONS:
- MLS-300 Position Indicator Switch Pack.
- QS1 & QS2 "Quick-Set" Retaining Angles.
- Factory fitted sleeves in custom lengths, gauges and transition styles.
DIMENSIONAL DATA:
Model Series D1200 (1 1/2 hr. label) and D1200-3 (3 hr. label) dampers with duct heights less than 8" (203) in width only, or in both width and height, require a Type ‘B’ sleeve enclosure (Models D1202 [1 1/2 hr. label] and D1202-3 [3 hr. label]). Duct sizes less than 8” (203) in width require a Type ‘C’ enclosure (Models D1203 [1 1/2 hr. label] and D1203-3 [3 hr. label]).

MODELS D1200, D1200-3, D1201 AND D1201-3: TYPE A SLEEVE

Models D1200 (no sleeve), D1201, D1200-3 (no sleeve) and D1201-3 Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Model</th>
<th>Velocity/Pressure Rating</th>
<th>Minimum Single Sect.</th>
<th>Maximum Vertical/Horizontal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Vert./Horiz.</td>
<td>Vertical</td>
</tr>
<tr>
<td>Model D1200</td>
<td>24</td>
<td>8” x 8” (203 x 203)</td>
<td>36” x 48” (914 x 1219)</td>
</tr>
<tr>
<td></td>
<td>34, 44</td>
<td>n/a</td>
<td>72 x 96” (1829 x 2438) or 144” x 48” (3658 x 1219).</td>
</tr>
<tr>
<td>Model D1200-3</td>
<td>24</td>
<td>8” x 8” (203 x 203)</td>
<td>36” x 48” (914 x 1219)</td>
</tr>
<tr>
<td></td>
<td>34, 44</td>
<td>n/a</td>
<td>60” x 96” (1524 x 2438). (Individual sections not to exceed 30” x 48” (762 x 1219).</td>
</tr>
</tbody>
</table>

Standard factory sleeve 16” long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84” [2134] in width). Available up to 36” (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).

MODELS D1202 AND D1202-3: TYPE B SLEEVE ENCLOSURE

Models D1202 and D1202-3 Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Model</th>
<th>Velocity/Pressure Rating</th>
<th>Minimum Single Sect.</th>
<th>Maximum Vertical/Horizontal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Vert./Horiz.</td>
<td>Vertical</td>
</tr>
<tr>
<td>Model D1202</td>
<td>24</td>
<td>8” x 4” (203 x 102). Overall damper height is 8” (203).</td>
<td>36” x 48” (914 x 1219)</td>
</tr>
<tr>
<td></td>
<td>34, 44</td>
<td>n/a</td>
<td>144” x 7 1/2” (3658 x 191)</td>
</tr>
<tr>
<td>Model D1202-3</td>
<td>24</td>
<td>8” x 4” (203 x 102). Overall damper height is 8” (203).</td>
<td>36” x 7 1/2” (914 x 191)</td>
</tr>
<tr>
<td></td>
<td>34, 44</td>
<td>n/a</td>
<td>65” x 7 1/2” (1524 x 191). (Individual sections width not to exceed 30” [762]).</td>
</tr>
</tbody>
</table>

Note: Duct sizes less than 8” (203) in width require a Type ‘C’ enclosure (Models D1203 and D1203-3).

Standard factory sleeve 16” long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84” [2134] in width). Available up to 36” (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).
### Models D1203 and D1203-3: Type C Sleeve Enclosures

**Standard factory sleeve 16” long x 20 ga. (406 x 1.0). Available up to 36” (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).**

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Min. Sleeve Length</th>
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<tr>
<td>4 (102)</td>
<td>16 (406)</td>
</tr>
<tr>
<td>8 (203)</td>
<td>20 (508)</td>
</tr>
<tr>
<td>12 (305)</td>
<td>24 (610)</td>
</tr>
<tr>
<td>16 (406)</td>
<td>28 (711)</td>
</tr>
</tbody>
</table>

### Models D1203 and D1203-3 - Round Duct Connection Sizes (Duct Dia.):

<table>
<thead>
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<th>Model</th>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vertical/Horizontal</td>
<td>Vertical</td>
</tr>
<tr>
<td>Model D1203</td>
<td>24</td>
<td>4” (102) dia. Overall damper size is 8” x 8” (203 x 203) min.</td>
<td>34” (864) dia.</td>
</tr>
<tr>
<td>Model D1203-3</td>
<td>24</td>
<td>4” (102) dia. Overall damper size is 8” x 8” (203 x 203) min.</td>
<td>34” (864) dia.</td>
</tr>
</tbody>
</table>

**Note - Model D1203 only:** *Larger sizes up to 94” (2388) dia., Vertical or Horizontal mount, are available but require actuators and ERL heat responsive device.

### Models D1203 and D1203-3 - Square, Rect. or Oval Duct Connection Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Model</th>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vertical/Horizontal</td>
<td>Vertical</td>
</tr>
<tr>
<td>Model D1203</td>
<td>24</td>
<td>4” x 4” (102 x 102). Overall damper size is 8” x 8” (203 x 203) min.</td>
<td>34” x 46” (864 x 1168)</td>
</tr>
<tr>
<td>Model D1203-3</td>
<td>24</td>
<td>4” x 4” (102 x 102). Overall damper size is 8” x 8” (203 x 203) min.</td>
<td>34” x 46” (864 x 1168)</td>
</tr>
</tbody>
</table>

**Note - Model D1203 only:** Larger sizes up to 142” x 94” (3607 x 2388) dia., Vertical or Horizontal mount, are available but require actuators and ERL heat responsive device.
PERFORMANCE DATA:
MODEL SERIES: D1200 - 1 1/2 HOUR LABEL AND D1200-3 - 3 HOUR LABEL

PRESSURE DROP:

<table>
<thead>
<tr>
<th>Air Velocity in feet per minute (m/s)</th>
<th>Static Pressure Drop in inches w.g. (Pa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>0.1 (3)</td>
</tr>
<tr>
<td>500</td>
<td>0.2 (5)</td>
</tr>
<tr>
<td>700</td>
<td>0.3 (8)</td>
</tr>
<tr>
<td>900</td>
<td>0.4 (10)</td>
</tr>
<tr>
<td>1100</td>
<td>0.5 (13)</td>
</tr>
<tr>
<td>1300</td>
<td>0.6 (15)</td>
</tr>
<tr>
<td>1500</td>
<td>0.7 (17)</td>
</tr>
<tr>
<td>1700</td>
<td>0.8 (19)</td>
</tr>
<tr>
<td>1900</td>
<td>0.9 (21)</td>
</tr>
<tr>
<td>2100</td>
<td>1.0 (23)</td>
</tr>
</tbody>
</table>

Pressure drop tested per AMCA Standard 500-D, Figure 5.3. Data corrected to standard air density of 0.075 lbs/ft.³.

HOW TO SPECIFY

SUGGESTED SPECIFICATION:
Provide and install, as shown on plans and/or schedules, Multi-Blade Dynamic Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Fire dampers shall meet the requirements of NFPA 80, 90A and 101 and shall be manufactured, tested and labeled in accordance with UL 555. Each damper shall bear a UL fire resistance rating label of (specifier select rating) 1 1/2 hours or 3 hours, and in addition, a label verifying the airflow and closure pressure ratings of (specifier select rating) 2000 fpm (10 m/s) or 3000 fpm (15 m/s) or 4000 fpm (20 m/s), at 4” w.g. (1 kPa) static pressure differential, as established by the Dynamic Closure Test. Each fire damper shall also be marked with the words "For use in dynamic systems". Dampers marked "For use in static systems only" are not acceptable.

Frame shall be constructed of 16 ga. (1.6) galvanized steel hat channel with mitered corners reinforced with die-formed corner gussets for strength. Blades shall be 14 ga. (2.0) equivalent galvanized steel formed double skin, airfoil design, on 5 1/2” (140) centers. Dampers shall be of opposed blade configuration with an inter-locking blade design. Blade seals are not acceptable. Blade axles shall be plated steel, double bolted at each end of blade to provide positive locking connection. Hex, square friction-fit or press-fit axles are not acceptable. Bearings shall be self-lubricating oilite bronze type. Blade linkage shall be zero-maintenance, concealed in frame, out of airstream.

Each fire damper shall be complete with a (specifier select temperature) 165°F (74°C) or 212°F (100°C) UL Listed fusible link that will cause the damper to close and lock in closed position by means of an over center/knee lock linkage for assured closure. Fire dampers shall each include a steel sleeve of appropriate length/gauge as field verified by contractor, with Nailor ‘Quick-Set’ retaining angles supplied by damper manufacturer to ensure proper installation in accordance with damper manufacturer’s instructions. Each damper shall be supplied with an internal manual quadrant(s) for setting and locking of blades in desired position. Contractor shall provide and install an access door at each fire damper, of appropriate size to allow for inspection, testing and fusible link replacement. Data submitted for approval shall include confirmation of UL qualifications in addition to manufacturer’s installation instructions. Each shipment of fire dampers shall include same installation instructions. Standard of acceptance shall be Nailor Model Series (specifier to select) D1200 (1 1/2 hour label) or D1200-3 (3 hour label).
Model Series 1200 and 1200-3 Multi-Blade Fire Dampers are classified for use only in static "fans off" systems where the HVAC system is automatically shut down in the event of a fire alarm. Unique airfoil design provides low pressure drop, particularly suited for high velocity applications. Ideal for use where building codes require a fire damper for the protection of ductwork penetrations in walls or floors, UL approved for installation with airflow in either direction and inverted mounting. Supplied as standard with an internal locking quadrant which holds the damper in the fully open position, but may also be used for system balancing if required, available with a factory fitted sleeve ready for installation and choice of transition styles to suit duct size and type.

The design utilizes an innovative interlocking double skin airfoil blade that maintains a complete barrier throughout the fire test and also features the industry proven over-center knee-lock design with high torque spring/fusible link closure. Sturdy 16 ga. (1.6) hat channel frames, 14 ga. (2.0) equivalent blades with double bolted axles, long lasting self-lubricating bearings and reinforced mitered corners result in one the industry's most durable fire dampers. Premium performance and versatility make the 1200 and 1200-3 series dampers an excellent choice for the majority of today's commercial applications.

**QUALIFICATIONS:**
- UL 555 & CAN/ULC-S112 CLASSIFIED FIRE DAMPER
  1 1/2 hr. Label or 3 hr. Label (File # R9492).
- Meets NFPA 80, 90A and 101 as well as IBC and NBC (Canada) Building Code requirements.
- City of New York. MEA # 366-03-M.
- California State Fire Marshal: Fire Damper Listing No. 3225-0935:0101.

**STANDARD CONSTRUCTION:**
- Frame: 5" x 7/8" x 16 ga. (127 x 22 x 1.6) galvanized steel hat channel.
- Blades: 14 ga. (2.0) equivalent galvanized steel formed airfoil on 5 1/2" (140) centers. Opposed action.
- Linkage: Concealed in frame. 12 ga. (2.7) plated steel.
- Bearings: 1/2" (13) dia. self-lubricating oilite bronze.
- Axles: 1/2" (13) dia. plated steel double bolted to blades.
- Jackshaft: 1/2" (13) dia. cadmium plated steel.
- Internal locking quadrant is factory installed.
- Fusible Link: 165°F (74°C) standard. 212°F (100°C) available on single and double sections only.

**COMMON OPTIONS:**
- MLS-300 Position Indicator Switch Pack.
- QS1 & QS2 "Quick-Set" Retaining Angles.
- Factory fitted sleeves in custom lengths, gauges and transition styles.
DIMENSIONAL DATA:

Model Series 1200 (1 1/2 hr. label) and D1200-3 (3 hr. label) dampers with duct heights less than 8" (203) in width only, or in both width and height, require a Type 'B' sleeve enclosure (Models 1202 [1 1/2 hr. label] and 1202-3 [3 hr. label]). Duct sizes less than 8" (203) in width require a Type 'C' enclosure (Models 1203 [1 1/2 hr. label] and D1203-3 [3 hr. label]).

MODELS 1200, 1200-3, 1201 AND 1201-3: TYPE A SLEEVE

Models 1200 (no sleeve), 1201, 1200-3 (no sleeve) and 1201-3 Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Model</th>
<th>Minimum Single Sect.</th>
<th>Maximum Single Section</th>
<th>Maximum Multiple Section</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vert./Horiz.</td>
<td>Single Section</td>
<td>Vertical</td>
</tr>
<tr>
<td>Model 1200</td>
<td>8&quot; x 8&quot;</td>
<td>(203 x 203)</td>
<td>36&quot; x 48&quot;</td>
</tr>
<tr>
<td>Model 1200-3</td>
<td>8&quot; x 8&quot;</td>
<td>(203 x 203)</td>
<td>36&quot; x 48&quot;</td>
</tr>
</tbody>
</table>

Standard factory sleeve 16" long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84" [2134] in width). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).

MODELS 1202 AND 1202-3: TYPE B SLEEVE ENCLOSURE

Models 1202 and 1202-3 Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Model</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vert./Horiz.</td>
<td>Single Sect.</td>
</tr>
<tr>
<td>Model 1202</td>
<td>8&quot; x 4&quot;</td>
<td>(203 x 102)</td>
</tr>
<tr>
<td>Model 1202-3</td>
<td>8&quot; x 4&quot;</td>
<td>(203 x 102)</td>
</tr>
</tbody>
</table>

Note: Duct sizes less than 8" (203) in width only, or in both width and height, require a Type 'C' enclosure (Models 1203 and 1203-3).

Standard factory sleeve 16" long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84" [2134] in width). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).
### Models 1203 and 1203-3: Type C Sleeve Enclosures

**Style CR**: For Round Duct

**Style CO**: For Oval Duct

**Style CSR**: For Square or Rectangular Duct

Standard factory sleeve 16" long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84" [2134] in width). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).

#### Wall Thickness and Min. Sleeve Length

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Min. Sleeve Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (102)</td>
<td>16 (406)</td>
</tr>
<tr>
<td>8 (203)</td>
<td>20 (508)</td>
</tr>
<tr>
<td>12 (305)</td>
<td>24 (610)</td>
</tr>
<tr>
<td>16 (406)</td>
<td>28 (711)</td>
</tr>
</tbody>
</table>

#### Models 1203 and 1203-3 - Round Duct Connection Sizes (Duct Dia.):

<table>
<thead>
<tr>
<th>Model</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td></td>
<td>Vertical/Horizontal</td>
<td>Vertical</td>
</tr>
<tr>
<td>Model 1203</td>
<td>4&quot; (102) dia. Overall damper size is 8&quot; x 8&quot; (203 x 203) min.</td>
<td>34&quot; (864) dia.</td>
</tr>
<tr>
<td>Model 1203-3</td>
<td>4&quot; (102) dia. Overall damper size is 8&quot; x 8&quot; (203 x 203) min.</td>
<td>34&quot; (864) dia.</td>
</tr>
</tbody>
</table>

#### Models 1203 and 1203-3 - Square, Rect. or Oval Duct Connection Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Model</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td></td>
<td>Vertical/Horizontal</td>
<td>Vertical</td>
</tr>
<tr>
<td>Model 1203</td>
<td>4&quot; x 4&quot; (102 x 102). Overall damper size is 8&quot; x 8&quot; (203 x 203) min.</td>
<td>34&quot; x 48&quot; (864 x 1168)</td>
</tr>
<tr>
<td>Model 1203-3</td>
<td>4&quot; x 4&quot; (102 x 102). Overall damper size is 8&quot; x 8&quot; (203 x 203) min.</td>
<td>34&quot; x 48&quot; (864 x 1168)</td>
</tr>
</tbody>
</table>
MULTI-BLADE FIRE DAMPERS • AIRFOIL • STATIC

HOW TO SPECIFY

SUGGESTED SPECIFICATION:

Provide and install, as shown on plans and/or schedules, Multi-Blade Static Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Fire dampers shall meet the requirements of NFPA 80, 90A and 101 and shall be manufactured, tested and labeled in accordance with UL 555. Each damper shall bear a UL fire resistance rating label of (specifier select rating) 1 1/2 hours or 3 hours.

Frame shall be constructed of 16 ga. (1.6) galvanized steel hat channel with mitered corners reinforced with die-formed corner gussets for strength. Blades shall be 14 ga. (2.0) equivalent galvanized steel formed double skin, airfoil design, on 5 1/2” (140) centers. Dampers shall be of opposed blade configuration with an interlocking blade design. Blade seals are not acceptable. Blade axles shall be plated steel, double bolted at each end of blade to provide positive locking connection. Hex, square friction-fit or press-fit axles are not acceptable. Bearings shall be self-lubricating oilite bronze type. Blade linkage shall be zero-maintenance, concealed in frame, out of airstream. Each fire damper shall be complete with a (specifier select temperature) 165°F (74°C) or 212°F (100°C) UL Listed fusible link that will cause the damper to close and lock in closed position by means of an over center/knee lock linkage for assured closure. Fire dampers shall each include a steel sleeve of appropriate length/gauge as field verified by contractor, with Nailor 'Quick-Set' retaining angles supplied by damper manufacturer to ensure proper installation in accordance with damper manufacturer’s instructions. Each damper shall be supplied with an internal manual quadrant(s) for setting and locking of blades in desired position. Contractor shall provide and install an access door at each fire damper, of appropriate size to allow for inspection, testing and fusible link replacement. Data submitted for approval shall include confirmation of UL qualifications in addition to manufacturer’s installation instructions. Each shipment of fire dampers shall include same installation instructions. Standard of acceptance shall be Nailor Model Series (specifier to select) 1200 (1 1/2 hour label) or 1200-3 (3 hour label).
Model Series D1250 Multi-Blade Dynamic Fire Dampers have been especially designed and tested to offer a rugged cost effective damper well suited to the majority of commercial applications. Ideal for applications where building codes require a fire damper for the protection of ductwork penetrations in walls or floors that have a fire resistance rating of up to 2 hours. Engineered to perform, reliable parallel blade action assures closure in dynamic (“fans on”) systems. UL approved for installation with airflow in either direction and inverted mounting. Supplied as standard with an internal crank arm and locking screw which holds the damper in the fully open position, but may also be used for system balancing if required.

**QUALIFICATIONS:**
- UL 555 & CAN/ULC-S112 CLASSIFIED DYNAMIC FIRE DAMPER
  1 1/2 hr. Label (File # R9492).
- Meets NFPA 80, 90A and 101 as well as IBC and NBC (Canada) Building Code requirements.
- City of New York Board of Standards and Appeals. Cal. No. 460-88-8A.
- California State Fire Marshal: Fire Damper Listing No. 3225-0935:0101.
- Maximum velocity: 4000 fpm @ 4" w.g. (20 m/s @ 1 kPa).

**STANDARD CONSTRUCTION:**
- **Frame:** 5" x 7/8" x 16 ga. (127 x 22 x 1.6) galvanized steel hat channel.
- **Blades:** 6" (152) wide on 5 1/2" (140) centers. 16 ga. (1.6) galvanized steel vee groove design. Parallel action.
- **Linkage:** Concealed in frame. 12 ga. (2.7) plated steel.
- **Bearings:** 1/2" (13) dia. self-lubricating oilite bronze.
- **Axles:** 1/2" (13) dia. plated steel double bolted to blades.
- **Jackshaft:** 1/2" (13) dia. cadmium plated steel.
  Internal locking quadrant is factory installed.
- **Fusible Link:** 165°F (74°C) standard. 212°F (100°C) available.

**Models D1250 and D1251 Sizes (Duct W x H):**

<table>
<thead>
<tr>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Section Vertical</td>
<td>8&quot; x 8&quot;</td>
<td>36&quot; x 48&quot;</td>
</tr>
<tr>
<td>Single Section Horizontal</td>
<td>30&quot; x 40&quot;</td>
<td>36&quot; x 90&quot;</td>
</tr>
<tr>
<td>Multiple Section Vertical</td>
<td>72&quot; x 48&quot; (1829 x 1219)</td>
<td>60&quot; x 40&quot; (1524 x 1016)</td>
</tr>
<tr>
<td>Multiple Section Horizontal</td>
<td>30&quot; x 40&quot; (762 x 1016)</td>
<td>30&quot; x 40&quot; (762 x 1032)</td>
</tr>
</tbody>
</table>

**Notes:** Dampers with duct heights less than 8" (203) require a Type 'B' sleeve enclosure (Model D1252). Units less than 8" (203) in width only, or in both width and height, require a Type 'C' enclosure (Model D1253).

**COMMON OPTIONS:**
- MLS-300 Position Indicator Switch Pack.
- QS1 & QS2 "Quick-Set" Retaining Angles.
- Factory fitted sleeves in custom lengths, gauges and transition styles.
DIMENSIONAL DATA:

Model Series D1250 dampers with duct heights less than 8" (203) in width only, or in both width and height, require a Type ‘B’ sleeve enclosure (Model D1252). Duct sizes less than 8" (203) in width require a Type ‘C’ enclosure (Model D1253).

MODEL D1252: TYPE B SLEEVE ENCLOSURE

Standard factory sleeve 16" long x 20 ga. (406 x 1.0). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).

MODEL D1253: TYPE C SLEEVE ENCLOSURES

Standard factory sleeve 16" long x 20 ga. (406 x 1.0). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).

Model D1252 Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Minimum Sleeve Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (102)</td>
<td>16 (406)</td>
</tr>
<tr>
<td>8 (203)</td>
<td>20 (508)</td>
</tr>
<tr>
<td>12 (305)</td>
<td>24 (610)</td>
</tr>
<tr>
<td>16 (406)</td>
<td>28 (711)</td>
</tr>
</tbody>
</table>

Model D1253 - Round Duct Connection Sizes (Duct Dia.):

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Minimum Sleeve Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (102)</td>
<td>16 (406)</td>
</tr>
<tr>
<td>8 (203)</td>
<td>20 (508)</td>
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<tr>
<td>12 (305)</td>
<td>24 (610)</td>
</tr>
<tr>
<td>16 (406)</td>
<td>28 (711)</td>
</tr>
</tbody>
</table>

Model D1253 - Sq., Rect. or Oval Duct Connection Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Single Section</th>
<th>Maximum</th>
<th>Multiple Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical/Horizontal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical</td>
<td>34°</td>
<td>(864 dia.)</td>
<td>28°</td>
<td>(711 dia.)</td>
</tr>
<tr>
<td>Horizontal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical</td>
<td>45°</td>
<td>(1168 dia.)</td>
<td>38°</td>
<td>(965 dia.)</td>
</tr>
<tr>
<td>Horizontal</td>
<td>34, 44</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Model D1253 - Round Duct Connection Sizes (Duct Dia.):

<table>
<thead>
<tr>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Single Section</th>
<th>Maximum</th>
<th>Multiple Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical/Horizontal</td>
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<td>(711 dia.)</td>
</tr>
<tr>
<td>Horizontal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical</td>
<td>45°</td>
<td>(1168 dia.)</td>
<td>38°</td>
<td>(965 dia.)</td>
</tr>
<tr>
<td>Horizontal</td>
<td>34, 44</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Model D1253 - Sq., Rect. or Oval Duct Connection Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Single Section</th>
<th>Maximum</th>
<th>Multiple Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical/Horizontal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical</td>
<td>34°</td>
<td>(864 dia.)</td>
<td>28°</td>
<td>(711 dia.)</td>
</tr>
<tr>
<td>Horizontal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical</td>
<td>45°</td>
<td>(1168 dia.)</td>
<td>38°</td>
<td>(965 dia.)</td>
</tr>
<tr>
<td>Horizontal</td>
<td>34, 44</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>
### PERFORMANCE DATA:
MODEL SERIES: D1250 - 1 1/2 HOUR LABEL

#### PRESSURE DROP:

![Graph showing pressure drop vs. air velocity]

Pressure drop tested per AMCA Standard 500-D, Figure 5.3.
Data corrected to standard air density of 0.075 lbs/ft.³.

#### D1250 Series Maximum Performance Ratings

<table>
<thead>
<tr>
<th>UL 555 Fire Rating</th>
<th>1 1/2 Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Velocity</td>
<td>4000 fpm (20 m/s)</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>4 in. w.g. (1 kPa)</td>
</tr>
</tbody>
</table>

### HOW TO SPECIFY

#### SUGGESTED SPECIFICATION:

Provide and install, as shown on plans and/or schedules, Multi-Blade Dynamic Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Fire dampers shall meet the requirements of NFPA 80, 90A and 101 and shall be manufactured, tested and labeled in accordance with UL 555. Each damper shall bear a UL fire resistance rating label of 1 1/2 hours and in addition, a label verifying the airflow and closure pressure ratings of (specifier select rating) 2000 fpm (10 m/s) or 3000 fpm (15 m/s) or 4000 fpm (20 m/s), at 4" w.g. (1 kPa) static pressure differential, as established by the Dynamic Closure Test. Each fire damper shall also be marked with the words "For use in dynamic systems". Dampers marked "For use in static systems only" are not acceptable.

Frame shall be constructed of 16 ga. (1.6) galvanized steel hat channel with mitered corners reinforced with die-formed corner gussets for strength. Blades shall be of vee-groove design, 16 ga. (1.6) galvanized steel on 5 1/2" (140) centers, and shall be parallel configuration. Blade axles shall be 1/2" (13) dia. plated steel, double bolted at each end of blade to ensure positive locking connection. Hex, square friction-fit or press-fit axles are not acceptable. Bearings shall be self-lubricating oilite bronze type. Blade linkage shall be zero-maintenance, concealed in frame, out of airstream.

Each fire damper shall be complete with a (specifier select temperature) 165°F (74°C) or 212°F (100°C) UL Listed fusible link that will cause the damper to close and lock in closed position by means of an over center/knee lock linkage for assured closure. Fire dampers shall each include a steel sleeve of appropriate length/gauge as field verified by contractor, with Nailor 'Quick-Set' retaining angles supplied by damper manufacturer to ensure proper installation in accordance with damper manufacturer’s instructions. Each damper shall be supplied with an internal manual quadrant(s) for setting and locking of blades in desired position. Contractor shall provide and install an access door at each fire damper, of appropriate size to allow for inspection, testing and fusible link replacement. Data submitted for approval shall include confirmation of UL qualifications in addition to manufacturer’s installation instructions. Each shipment of fire dampers shall include same installation instructions. Standard of acceptance shall be Nailor Model Series D1250.
Model D1201-DOW  1 1/2 Hour Label  (for fire separations up to 2 hours)

Model D1201-DOW is an “out of wall” (vertical mount) or “out of floor” (horizontal mount) Multi-Blade Dynamic Fire Damper intended for use in through applications (ductwork connected on both sides) where the damper cannot be installed within the plane of the wall or floor. Ideal for use where building codes require a fire damper for the protection of ductwork penetrations in walls or floors that have a fire resistance of up to 2 hours. Suitable to retrofit applications to bring older buildings up to current code where existing penetrations require a fire damper but there is no expansion clearance or high security applications where security bars are required in the plane of the wall or floor. Rugged 16 ga. (1.6) hat channel frames, 14 ga. (2.0) equivalent blades, long lasting self-lubricating bearings, double bolted blade axles and reinforced mitered corners with die formed corner gussets result in one the industry’s most durable out of wall fire dampers. Premium performance, versatility and assured closure under airflow make the D1201-DOW damper an excellent choice for the majority of today’s commercial applications where ductwork is connected on both sides of the damper.

QUALIFICATIONS:
• UL 555 & CAN/ULC-S112 CLASSIFIED DYNAMIC FIRE DAMPER 1 1/2 Hour Label (File # R9492).
• Meets NFPA 80, 90A and 101 as well as IBC and NBC (Canada) requirements.
• California State Fire Marshal: Fire Damper Listing No. 3225-0935:0101. 
• Maximum velocity 4000 fpm @ 4” w.g. (20 m/s @ 1 kPa).
• For use in vertical or horizontal concrete partitions and vertical steel stud partitions only.

STANDARD CONSTRUCTION:
Frame:  5" x 7/8" x 16 ga. (127 x 22 x 1.6) galvanized steel hat channel.
Blades: 14 ga. (2.0) equivalent galvanized steel formed airfoil on 5 1/2" (140) centers. Opposed action.
Sleeve: 16" x 20 ga. (406 x 1.0) galvanized steel.
Insulation: Intumescent thermal insulation on four sides.
Linkage: Concealed in frame. 12 ga. (2.7) plated steel.
Bearings: 1/2" (13) dia. self-lubricating oilite bronze.
Axles: 1/2" (13) dia. plated steel double bolted to blades.
Jackshaft: 1/2" (13) dia. cadmium plated steel.
Internal locking quadrant is factory installed.
Fusible Link: 165°F (74°C) standard. 212°F (100°C) available.

Model D1201-DOW Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Section</td>
<td>Single Section</td>
</tr>
<tr>
<td></td>
<td>Vertical/Horizontal</td>
<td>Vertical</td>
</tr>
<tr>
<td>24, 34, 44</td>
<td>8&quot; x 8&quot; (203 x 203)</td>
<td>36&quot; x 48&quot; (914 x 1219)</td>
</tr>
</tbody>
</table>

Note: Multiple section assemblies are not permitted.

COMMON OPTIONS:
• MLS-300 Position Indicator Switch Pack.
• QS2 "Quick-Set" Retaining Angles.
• Factory fitted sleeves in custom lengths, gauges and transition styles.
DIMENSIONAL DATA:
MODEL: D1201-DOW - 1 1/2 HOUR LABEL

APPLICATION:
Model D1201-DOW fire damper is specially designed for "out of wall" (vertical mount) or "out of floor" (horizontal mount) through penetration applications (ductwork is connected to both sides) where the damper cannot be installed within the plane of the wall or floor.

ITEMS:
A Duct/sleeve connection.
B Intumescent material (insulation).
C Retaining angles and fasteners.

Note:
Standard sleeve/damper (for 4" [102] wall) provides 1" (25) offset from wall face to edge of damper frame.
For thicker walls or to offset damper farther from wall face (max. 8" [203]) lengthen sleeve accordingly.
PERFORMANCE DATA:
MODEL: D1201-DOW - 1 1/2 HOUR LABEL

PRESSURE DROP:

Pressure drop tested per AMCA Standard 500-D, Figure 5.3. Data corrected to standard air density of 0.075 lbs/ft.³.

D1201-DOW Series Maximum Performance Ratings

<table>
<thead>
<tr>
<th>UL 555 Fire Rating</th>
<th>1 1/2 Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Velocity</td>
<td>4000 fpm (20 m/s) or 3000 fpm (15 m/s) or 2000 fpm (10 m/s)</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>4 in. w.g. (1 kPa)</td>
</tr>
</tbody>
</table>

**SUGGESTED SPECIFICATION:**

Provide and install, as shown on plans and/or schedules, Out of Wall Multi-Blade Dynamic Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Fire dampers shall meet the requirements of NFPA 80, 90A and 101 and shall be manufactured, tested and labeled in accordance with UL 555. Each damper shall bear a UL fire resistance rating label of 1 1/2 hours and in addition, a label verifying the airflow and closure pressure ratings of (specifier select rating) 2000 fpm (10 m/s) or 3000 fpm (15 m/s) or 4000 fpm (20 m/s), at 4" w.g. (1 kPa) static pressure differential, as established by the Dynamic Closure Test. Each fire damper shall also be marked with the words "For use in dynamic systems". Dampers marked "For use in static systems only" are not acceptable. Damper shall be provided from the factory in an integral 16 ga. (1.6) galvanized steel sleeve of appropriate length with intumescent thermal insulation on four sides. Frame shall be constructed of 16 ga. (1.6) galvanized steel hat channel with mitered corners reinforced with die-formed corner gussets for strength. Blades shall be 14 ga. (2.0) equivalent galvanized steel formed double skin, airfoil design, on 5 1/2" (140) centers. Dampers shall be of opposed blade configuration with an inter-locking blade design. Blade seals are not acceptable. Blade axles shall be plated steel, double bolted at each end of blade to provide positive locking connection. Hex, square friction-fit or press-fit axles are not acceptable. Bearings shall be self-lubricating oilite bronze type. Blade linkage shall be zero-maintenance, concealed in frame, out of airstream. Each fire damper shall be complete with a (specifier select temperature) 165°F (74°C) or 212°F (100°C) UL Listed fusible link that will cause the damper to close and lock in closed position by means of an over center/knee lock linkage for assured closure. Each damper shall be supplied with an internal manual quadrant(s) for setting and locking of blades in desired position. Contractor shall provide and install an access door at each fire damper, of appropriate size to allow for inspection, testing and fusible link replacement. Data submitted for approval shall include confirmation of UL qualifications in addition to manufacturer’s installation instructions. Each shipment of fire dampers shall include same installation instructions. Standard of acceptance shall be Nailor Model D1201-DOW.
Model D1201-OW is an “out of wall” (vertical mount) or “out of floor” (horizontal mount) Multi-Blade Dynamic Fire Damper intended for use in supply or return ducts that terminate at a grille where access through the grille to the damper actuator and other components is required. Standard integral sleeve length accommodates most commercial supply and return grilles and registers. Ideal for use where building codes require a fire damper for the protection of ductwork penetrations in walls or floors that have a fire resistance of up to 2 hours.

The design utilizes an innovative inter-locking double skin airfoil blade that maintains a complete barrier throughout the fire test with absolutely no visible through-gaps and also features the industry proven over-center knee-lock design with high torque spring/fusible link closure. Intumescent thermal insulation covers all four sides to reduce thermal transfer. Supplied as standard with an internal locking quadrant which holds the damper in the fully open position, but may also be used for system balancing if required.

Rugged 16 ga. (1.6) hat channel frames, 14 ga. (2.0) equivalent blades, long lasting self-lubricating bearings, double bolted blade axles and reinforced mitered corners with die formed corner gussets result in one the industry’s most durable out of wall fire dampers. Premium performance, versatility and assured closure under airflow make the D1201-OW damper an excellent choice for the majority of today’s commercial applications that terminate at a grille.

QUALIFICATIONS:
- UL 555 & CAN/ULC-S112 CLASSIFIED DYNAMIC FIRE DAMPER
  1 1/2 Hour Label (File # R9492).
- Meets NFPA 80, 90A and 101 as well as IBC and NBC (Canada) requirements.
- California State Fire Marshal: Fire Damper Listing No. 3225-0935:0101.
- Maximum velocity 4000 fpm @ 4” w.g. (20 m/s @ 1 kPa).
- For use in vertical or horizontal concrete partitions and vertical steel stud partitions only.

STANDARD CONSTRUCTION:
Frame: 5” x 7/8” x 16 ga. (127 x 22 x 1.6) galvanized steel hat channel.
Blades: 14 ga. (2.0) equivalent galvanized steel formed airfoil on 5 1/2” (140) centers. Opposed action.
Sleeve: 16” x 20 ga. (406 x 1.0) galvanized steel with 3/4” (19) flange on one end standard.
Insulation: Intumescent thermal insulation on four sides.
Linkage: Concealed in frame. 12 ga. (2.7) plated steel.
Bearings: 1/2” (13) dia. self-lubricating oilite bronze.
Axles: 1/2” (13) dia. plated steel double bolted to blades.
Jackshaft: 1/2” (13) dia. cadmium plated steel. Internal locking quadrant is factory installed.
Fusible Link: 165°F (74°C) standard. 212°F (100°C) available.

Model D1201-OW Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Section Vertical/Horizontal</td>
<td>8” x 8” (253 x 203)</td>
<td>36” x 48” (914 x 1219)</td>
</tr>
<tr>
<td>Single Section Vertical</td>
<td>32” x 48” (813 x 1219)</td>
<td></td>
</tr>
<tr>
<td>Single Section Horizontal</td>
<td>36” x 48” (914 x 1219)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Multiple section assemblies are not permitted.

COMMON OPTIONS:
- MLS-300 Position Indicator Switch Pack.
- QS1 “Quick-Set” Retaining Angles.
- Factory fitted sleeves in custom lengths, gauges and transition styles.
DIMENSIONAL DATA:
MODEL: D1201-OW - 1 1/2 HOUR LABEL

NOTES:
1. Important: Dampers are furnished full ordered size to facilitate grille installation. Opening size in partition should be sized 1/2" (13) larger in all directions to allow for sleeve thickness.

A Typical 2 hour rated vertical concrete or steel stud construction and horizontal concrete fire partition.
B Duct connection.
C Intumescent material (insulation).
D #10 sheet metal screws or concrete anchors.
E Manual Locking Quadrant
F Steel Grille/Diffuser
G Rear retaining angle (required for horizontal mounting).

*Note: Damper to be located maximum 8" (203) out of wall/floor.
MULTI-BLADE FIRE DAMPERS • OUT-OF-WALL

HOW TO SPECIFY

SUGGESTED SPECIFICATION:

Provide and install, as shown on plans and/or schedules, Out of Wall Multi-Blade Dynamic Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Fire dampers shall meet the requirements of NFPA 80, 90A and 101 and shall be manufactured, tested and labeled in accordance with UL 555. Each damper shall bear a UL fire resistance rating label of 1 1/2 hours and in addition, a label verifying the airflow and closure pressure ratings of (specifier select rating) 2000 fpm (10 m/s) or 3000 fpm (15 m/s) or 4000 fpm (20 m/s), at 4” w.g. (1 kPa) static pressure differential, as established by the Dynamic Closure Test. Each fire damper shall also be marked with the words "For use in dynamic systems". Dampers marked "For use in static systems only" are not acceptable.

Damper shall be provided from the factory in an integral 16 ga. (1.6) galvanized steel sleeve of appropriate length with intumescent thermal insulation on four sides. Frame shall be constructed of 16 ga. (1.6) galvanized steel hat channel with mitered corners reinforced with die-formed corner gussets for strength. Blades shall be 14 ga. (2.0) equivalent galvanized steel formed double skin, airfoil design, on 5 1/2” (140) centers. Dampers shall be of opposed blade configuration with an inter-locking blade design. Blade seals are not acceptable. Blade axles shall be plated steel, double bolted at each end of blade to provide positive locking connection. Hex, square friction-fit or press-fit axles are not acceptable. Bearings shall be self-lubricating oilite bronze type. Blade linkage shall be zero-maintenance, concealed in frame, out of airstream.

Each fire damper shall be complete with a (specifier select temperature) 165°F (74°C) or 212°F (100°C) UL Listed fusible link that will cause the damper to close and lock in closed position by means of an over center/knee lock linkage for assured closure. Each damper shall be supplied with an internal manual quadrant(s) for setting and locking of blades in desired position. Contractor shall provide and install an access door at each fire damper, of appropriate size to allow for inspection, testing and fusible link replacement. Data submitted for approval shall include confirmation of UL qualifications in addition to manufacturer’s installation instructions. Each shipment of fire dampers shall include same installation instructions. Standard of acceptance shall be Nailor Model D1201-OW.
Model Series:
D1200SS 1 1/2 Hour Label (for fire separations up to 2 hours)
D1200SS-3 3 Hour Label (for fire separations up to 4 hours)

Model Series D1200SS and D1200SS-3 Stainless Steel Multi-Blade Fire Dampers provide the ultimate in fire containment for dynamic HVAC systems. Ideal for use in high humidity or corrosive environments where building codes require a fire damper for the protection of ductwork penetrations in walls or floors, UL approved for installation with airflow in either direction and inverted mounting. The design utilizes an innovative inter-locking double skin airfoil blade that maintains a complete barrier throughout the fire test with absolutely no visible through-gaps and also features the industry proven over-center knee-lock design with high torque spring/fusible link closure.

Rugged 16 ga. (1.6) hat channel frames, 14 ga. (2.0) equivalent blades, long lasting self-lubricating bearings, double bolted blade axles and reinforced mitered corners with die formed corner gussets result in one the industry’s most durable fire dampers. Available in either Type 304 (standard) or Type 316 (optional) Stainless Steel. Premium performance, versatility and assured closure under airflow make the D1200SS and D1200SS-3 series dampers an excellent choice for the majority of today’s commercial and light industrial applications.

QUALIFICATIONS:
• UL 555 & CAN/ULC-S112 CLASSIFIED DYNAMIC FIRE DAMPER 1 1/2 hr. Label or 3 hr. Label (File # R9492).
• Meets NFPA 80, 90A and 101 as well as IBC and NBC (Canada) Building Code requirements.
• City of New York. MEA # 366-03-M.
• California State Fire Marshal: Fire Damper Listing No. 3225-0935:0101.
• Maximum velocity: 2000 fpm @ 4” w.g. (10 m/s @ 1 kPa).

STANDARD CONSTRUCTION:
Frame: 5” x 7/8” x 16 ga. (127 x 22 x 1.6) stainless steel hat channel.
Blades: 14 ga. (2.0) equivalent stainless steel formed airfoil on 5 1/2” (140) centers. Opposed action.
Linkage: Concealed in frame. 12 ga. (2.7) stainless steel.
Bearings: 1/2” (13) dia. sintered stainless steel.
Axles: 1/2” (13) dia. stainless steel double bolted to blades.
Jackshaft: 1/2” (13) dia. stainless steel. CCW rotation to open. Internal locking quadrant is factory installed.
Fusible Link: 165°F (74°C) standard.

COMMON OPTIONS:
• Type 304 or 316 Stainless Steel construction.
• MLS-300 Position Indicator Switch Pack.
• QS1 & QS2 "Quick-Set" Retaining Angles.
• Factory fitted sleeves in custom lengths, gauges and transition styles.
DIMENSIONAL DATA:
Model Series D1200SS (1 1/2 hr. label) and D1200SS-3 (3 hr. label) dampers with duct heights less than 8" (203) in width only, or in both width and height, require a Type ‘B’ sleeve enclosure (Models D1202SS [1 1/2 hr. label] and D1202SS-3 [3 hr. label]). Duct sizes less than 8" (203) in width only, or in both width and height, require a Type ‘C’ enclosure (Models D1203SS [1 1/2 hr. label] and D1203SS-3 [3 hr. label]).

MODELS D1200SS, D1200SS-3, D1201SS AND D1201SS-3: TYPE A SLEEVE

Models D1200SS (no sleeve), D1201SS, D1200SS-3 (no sleeve) and D1201SS-3
Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Model</th>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Vertical</td>
<td>Vertical</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td>Model D1200SS</td>
<td>24</td>
<td>8&quot; x 8&quot;   (203 x 203)</td>
<td>36&quot; x 48&quot;   (914 x 1219)</td>
</tr>
<tr>
<td>Model D1200SS-3</td>
<td>24</td>
<td>8&quot; x 8&quot;   (203 x 203)</td>
<td>36&quot; x 48&quot;   (914 x 1219)</td>
</tr>
</tbody>
</table>

Standard factory sleeve 16" long x 20 ga. (406 x 1.0), (18 ga. [1.3] for dampers over 84" [2134] in width). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).

MODELS D1202SS AND D1202SS-3: TYPE B SLEEVE ENCLOSURE

Models D1202SS and D1202SS-3 Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Model</th>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Vertical</td>
<td>Vertical</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td>Model D1202SS</td>
<td>24</td>
<td>8&quot; x 4&quot;   (203 x 102). Overall damper height is 8&quot; (203).</td>
<td>36&quot; x 7 1/2&quot;   (914 x 191)</td>
</tr>
<tr>
<td>Model D1202SS-3</td>
<td>24</td>
<td>8&quot; x 4&quot;   (203 x 102). Overall damper height is 8&quot; (203).</td>
<td>36&quot; x 7 1/2&quot;   (914 x 191)</td>
</tr>
</tbody>
</table>

Standard factory sleeve 16" long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84" [2134] in width). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).
**Models D1203SS and D1203SS-3: Type C Sleeve Enclosures**

![Diagram of fire damper models D1203SS and D1203SS-3 with sleeve enclosures.]

**Models D1203SS and D1203SS-3 - Round Duct Connection Sizes (Duct Dia.):**

<table>
<thead>
<tr>
<th>Model</th>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td></td>
<td>Vertical</td>
<td>Vertical</td>
<td>Horizontal</td>
</tr>
<tr>
<td>Model D1203SS</td>
<td>24</td>
<td>4&quot; (102) dia.</td>
<td>34&quot; (864) dia.</td>
</tr>
<tr>
<td>Model D1203SS-3</td>
<td>24</td>
<td>4&quot; (102) dia.</td>
<td>34&quot; (864) dia.</td>
</tr>
</tbody>
</table>

**Models D1203SS and D1203SS-3 - Square, Rect. or Oval Duct Connection Sizes (Duct W x H):**

<table>
<thead>
<tr>
<th>Model</th>
<th>Velocity/Pressure Rating</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td></td>
<td>Vertical</td>
<td>Vertical</td>
<td>Horizontal</td>
</tr>
<tr>
<td>Model D1203SS</td>
<td>24</td>
<td>4&quot; x 4&quot; (102 x 102)</td>
<td>34&quot; x 46&quot; (864 x 1168)</td>
</tr>
<tr>
<td>Model D1203SS-3</td>
<td>24</td>
<td>4&quot; x 4&quot; (102 x 102)</td>
<td>34&quot; x 46&quot; (864 x 1168)</td>
</tr>
</tbody>
</table>

**Wall Thickness | Min. Sleeve Length**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (102)</td>
<td>16 (406)</td>
</tr>
<tr>
<td>8 (203)</td>
<td>20 (508)</td>
</tr>
<tr>
<td>12 (305)</td>
<td>24 (610)</td>
</tr>
<tr>
<td>16 (406)</td>
<td>28 (711)</td>
</tr>
</tbody>
</table>

**Standard factory sleeve 16" long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84" [2134] in width). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).**
PERFORMANCE DATA:
MODEL SERIES: D1200SS - 1 1/2 HOUR LABEL AND D1200SS-3 - 3 HOUR LABEL

PRESSURE DROP:

D1200SS Series Maximum Performance Ratings

<table>
<thead>
<tr>
<th>UL 555S Fire Rating</th>
<th>1 1/2 Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Velocity</td>
<td>2000 fpm (10 m/s)</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>4 in. w.g. (1 kPa)</td>
</tr>
</tbody>
</table>

D1200SS-3 Series Maximum Performance Ratings

<table>
<thead>
<tr>
<th>UL 555S Fire Rating</th>
<th>3 Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Velocity</td>
<td>2000 fpm (10 m/s)</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>4 in. w.g. (1 kPa)</td>
</tr>
</tbody>
</table>

HOW TO SPECIFY

SUGGESTED SPECIFICATION:
Provide and install, as shown on plans and/or schedules, Stainless Steel Multi-Blade Dynamic Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Fire dampers shall meet the requirements of NFPA 80, 90A and 101 and shall be manufactured, tested and labeled in accordance with UL 555. Each damper shall bear a UL fire resistance rating label of (specifier select rating) 1 1/2 hours or 3 hours, and in addition, a label verifying the airflow and closure pressure ratings of 2000 fpm (10 m/s) at 4" w.g. (1 kPa) static pressure differential, as established by the Dynamic Closure Test. Each fire damper shall also be marked with the words "For use in dynamic systems". Dampers marked “For use in static systems only” are not acceptable.
Frame shall be constructed of 16 ga. (1.6) (specifier to select) Type 304 or Type 316 Stainless Steel hat channel with mitered corners reinforced with die-formed corner gussets for strength. Blades shall be 14 ga. (2.0) equivalent stainless steel formed double skin, airfoil design, on 5 1/2” (140) centers. Dampers shall be of opposed blade configuration with an interlocking blade design. Blade seals are not acceptable. Blade axles shall be stainless steel, double bolted at each end of blade to provide positive locking connection. Hex, square friction-fit or press-fit axles are not acceptable. Bearings shall be sintered stainless steel type. Blade linkage shall be zero-maintenance, concealed in frame, out of airstream.
Each fire damper shall be complete with a (specifier select temperature) 165°F (74°C) or 212°F (100°C) UL Listed fusible link that will cause the damper to close and lock in closed position by means of an over center/knee lock linkage for assured closure. Fire dampers shall each include a stainless steel sleeve of appropriate length/gauge as field verified by contractor, with Nailor ‘Quick-Set’ retaining angles supplied by damper manufacturer to ensure proper installation in accordance with damper manufacturer’s instructions. Each damper shall be supplied with an internal manual quadrant(s) for setting and locking of blades in desired position. Contractor shall provide and install an access door at each fire damper, of appropriate size to allow for inspection, testing and fusible link replacement. Data submitted for approval shall include confirmation of UL qualifications in addition to manufacturer’s installation instructions. Each shipment of fire dampers shall include same installation instructions. Standard of acceptance shall be Nailor Model Series (specifier to select) D1200SS (1 1/2 hour label) or D1200SS-3 (3 hour label).
Model Series:

1200SS  1 1/2 Hour Label  (for fire separations up to 2 hours)
1200SS-3  3 Hour Label  (for fire separations up to 4 hours)

Model 1200SS and 1200SS-3 Stainless Steel Multi-Blade Fire Dampers provide the ultimate in fire containment for static HVAC systems, classified for use only in static “fans off” systems where the HVAC system is automatically shut down in the event of a fire alarm. Ideal for use in high humidity or corrosive environments where building codes require a fire damper for the protection of ductwork penetrations in walls or floors. The design utilizes an innovative inter-locking double skin airfoil blade that maintains a complete barrier throughout the fire test with absolutely no visible through-gaps.

Sturdy 16 ga. (1.6) hat channel frames with reinforced mitered corners, 14 ga. (2.0) equivalent blades, long lasting self-lubricating bearings and double-bolted axles result in one the industry’s most durable fire dampers. Available in either Type 304 (standard) or Type 316 (optional) Stainless Steel. Premium performance and versatility make the 1200SS and 1200SS-3 series dampers an excellent choice for the majority of today’s commercial and light industrial applications.

QUALIFICATIONS:
• UL 555 & CAN/ULC-S112 CLASSIFIED FIRE DAMPER
  1 1/2 hr. Label or 3 hr. Label (File # R9492).
• Meets NFPA 80, 90A and 101 as well as IBC and NBC (Canada) Building Code requirements.
• City of New York. MEA # 366-03-M.
• California State Fire Marshal: Fire Damper Listing No. 3225-0935:0101.

STANDARD CONSTRUCTION:
Frame:  5” x 7/8” x 16 ga. (127 x 22 x 1.6) stainless steel hat channel.
Blades:  14 ga. (2.0) equivalent stainless steel formed airfoil on 5 1/2” (140) centers. Opposed blade action.
Linkage:  Concealed in frame. 12 ga. (2.7) stainless steel.
Bearings:  1/2” (13) dia. sintered stainless steel.
Axles:  1/2” (13) dia. stainless steel double bolted to blades.
Jackshaft:  1/2” (13) dia. stainless steel. CCW rotation to open. Internal locking quadrant is factory installed.
Fusible Link:  165°F (74°C) standard. 212°F (100°C) available.

COMMON OPTIONS:
• Type 304 or 316 Stainless Steel construction.
• MLS-300 Position Indicator Switch Pack.
• QS1 & QS2 “Quick-Set” Retaining Angles.
• Factory fitted sleeves in custom lengths, gauges and transition styles.
DIMENSIONAL DATA:
Model Series 1200SS (1 1/2 hr. label) and 1200SS-3 (3 hr. label) dampers with duct heights less than 8" (203) in width only, or in both width and height, require a Type 'B' sleeve enclosure (Models 1202SS [1 1/2 hr. label] and 1202SS-3 [3 hr. label]). Duct sizes less than 8" (203) in width only, or in both width and height, require a Type 'C' enclosure (Models 1203SS [1 1/2 hr. label] and 1203SS-3 [3 hr. label]).

MODELS 1200SS, 1200SS-3, 1201SS AND 1201SS-3: TYPE A SLEEVE

<table>
<thead>
<tr>
<th>Model</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td></td>
<td>Vertical</td>
<td>Horizontal</td>
</tr>
<tr>
<td>Model 1200SS</td>
<td>8&quot; x 8&quot; (203 x 203)</td>
<td>36&quot; x 48&quot; (914 x 1219)</td>
</tr>
<tr>
<td>Model 1200SS-3</td>
<td>8&quot; x 8&quot; (203 x 203)</td>
<td>36&quot; x 48&quot; (914 x 1219)</td>
</tr>
</tbody>
</table>

Standard factory sleeve 16" long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84" [2134] in width). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).

MODELS 1202SS AND 1202SS-3: TYPE B SLEEVE ENCLOSURE

<table>
<thead>
<tr>
<th>Model</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Sect.</td>
<td>Single Section</td>
</tr>
<tr>
<td></td>
<td>Vertical</td>
<td>Horizontal</td>
</tr>
<tr>
<td>Model 1202SS</td>
<td>8&quot; x 4&quot; (203 x 102). Overall damper height is 8&quot; (203).</td>
<td>36&quot; x 7 1/2&quot; (914 x 191)</td>
</tr>
<tr>
<td>Model 1202SS-3</td>
<td>8&quot; x 4&quot; (203 x 102). Overall damper height is 8&quot; (203).</td>
<td>36&quot; x 7 1/2&quot; (914 x 191)</td>
</tr>
</tbody>
</table>

Standard factory sleeve 16" long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84" [2134] in width). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).
MODELS 1203SS AND 1203SS-3: TYPE C SLEEVE ENCLOSURES

Models 1203SS and 1203SS-3 - Round Duct Connection Sizes (Duct Dia.):

<table>
<thead>
<tr>
<th>Model</th>
<th>Minimum Single Sect.</th>
<th>Maximum Single Section</th>
<th>Maximum Multiple Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1203SS</td>
<td>4&quot; (102) dia.</td>
<td>34&quot; (864) dia.</td>
<td>n/a 94&quot; (2388) dia.</td>
</tr>
<tr>
<td>Model 1203SS-3</td>
<td>4&quot; (102) dia.</td>
<td>34&quot; (864) dia.</td>
<td>n/a 94&quot; (2388) dia. duct size (individual sections not to exceed 28&quot; x 46&quot; dia. duct size).</td>
</tr>
</tbody>
</table>

Models 1203SS and 1203SS-3 - Square, Rect. or Oval Duct Connection Sizes (Duct W x H):

<table>
<thead>
<tr>
<th>Model</th>
<th>Minimum Single Sect.</th>
<th>Maximum Single Section</th>
<th>Maximum Multiple Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1203SS</td>
<td>4&quot; x 4&quot; (102 x 102). Overall damper size is 8&quot; x 8&quot; (203 x 203) min.</td>
<td>34&quot; x 46&quot; (864 x 1168)</td>
<td>n/a 142&quot; x 94&quot; (3607 x 2388)</td>
</tr>
<tr>
<td>Model 1203SS-3</td>
<td>4&quot; x 4&quot; (102 x 102). Overall damper size is 8&quot; x 8&quot; (203 x 203) min.</td>
<td>34&quot; x 46&quot; (864 x 1168)</td>
<td>n/a 118&quot; x 94&quot; (2997 x 2388) duct size (individual sections not to exceed 28&quot; x 46&quot; [711 x 1168] duct size).</td>
</tr>
</tbody>
</table>

Standard factory sleeve 16" long x 20 ga. (406 x 1.0). (18 ga. [1.3] for dampers over 84" [2134] in width). Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).
SUGGESTED SPECIFICATION:
Provide and install, as shown on plans and/or schedules, Stainless Steel Multi-Blade Static Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Fire dampers shall meet the requirements of NFPA 80, 90A and 101 and shall be manufactured, tested and labeled in accordance with UL 555. Each damper shall bear a UL fire resistance rating label of (specifier select rating) 1 1/2 hours or 3 hours.
Frame shall be constructed of 16 ga. (1.6) (specifier to select) Type 304 or Type 316 Stainless Steel hat channel with mitered corners reinforced with die-formed corner gussets for strength. Blades shall be 14 ga. (2.0) equivalent stainless steel formed double skin, airfoil design, on 5 1/2” (140) centers. Dampers shall be of opposed blade configuration with an interlocking blade design. Blade seals are not acceptable. Blade axles shall be stainless steel, double bolted at each end of blade to provide positive locking connection. Hex, square friction-fit or press-fit axles are not acceptable. Bearings shall be sintered stainless steel type. Blade linkage shall be zero-maintenance, concealed in frame, out of airstream.
Each fire damper shall be complete with a (specifier select temperature) 165°F (74°C) or 212°F (100°C) UL Listed fusible link that will cause the damper to close and lock in closed position by means of an over center/knee lock linkage for assured closure. Fire dampers shall each include a stainless steel sleeve of appropriate length/gauge as field verified by contractor, with Nailor ‘Quick-Set’ retaining angles supplied by damper manufacturer to ensure proper installation in accordance with damper manufacturer’s instructions. Each damper shall be supplied with an internal manual quadrant(s) for setting and locking of blades in desired position. Contractor shall provide and install an access door at each fire damper, of appropriate size to allow for inspection, testing and fusible link replacement. Data submitted for approval shall include confirmation of UL qualifications in addition to manufacturer’s installation instructions. Each shipment of fire dampers shall include same installation instructions. Standard of acceptance shall be Nailor Model Series (specifier to select) 1200SS (1 1/2 hour label) or 1200SS-3 (3 hour label).
TRUE ROUND DESIGN
• EXCELLENT PERFORMANCE
• LOW PRESSURE DROP
• UL 555 CLASSIFIED
DYNAMIC FIRE DAMPER

Model:
1290F  1 1/2 Hour Label (for fire separations up to 2 hours)

Model 1290F True Round Fire Damper is designed and qualified specifically for applications where round ductwork passes through metal stud drywall partitions or masonry walls and building codes require a fire damper for the protection of ductwork penetrations in walls or floors that have a fire resistance rating of up to 2 hours. The 1290F is classified for use in dynamic “fans on” systems where the HVAC system remains operative in the event of a fire, and damper closure under airflow is assured. The 1290F design features the industry proven over-center knee lock design with high torque spring/fusible link closure, economical galvanized steel construction, heavy duty 14 ga. (2.0) laminated blade and long life self-lubricating bearings. Available in large range of round sizes from 6” – 24” with a multitude of options, supplied as standard with a crank arm and locking screw which holds the damper in the fully open position, but may also be used for system balancing if required.

QUALIFICATIONS:
• UL 555 & CAN/ULC-S112 CLASSIFIED DYNAMIC FIRE DAMPER 1 1/2 hr. Label (File # R9492).
• Meets NFPA 80, 90A and 101 as well as IBC and NBC (Canada) Building Code requirements.
• California State Fire Marshal: Fire Damper Listing No. 3225-0935:0101.
• Maximum velocity: 2000 fpm @ 4” w.g. (10 m/s @ 1 kPa).

STANDARD CONSTRUCTION:
Frame: 20 ga. (1.0) galvanized steel integral sleeve and retaining plates.
Blade: 2 x 20 ga. (1.0) galvanized steel laminated together. 14 ga. (2.0) equivalent thickness.
Linkage: Jackshaft to blade.
Bearings: 1/2” (13) dia. self-lubricating oilite bronze.
Axles: 1/2” (13) dia. plated steel double bolted to blades.
Jackshaft: 1/2” (13) dia. cadmium plated steel. Supplied with factory mounted hand locking quadrant.
Fusible Link: 165°F (74°C) standard. 212°F (100°C) available.

Model 1290F Sizes (Duct Dia.):

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>6” (152) dia.</td>
<td>24” (610) dia.</td>
</tr>
</tbody>
</table>

Note: Dampers available in 1” (25) increments. Vertical or horizontal installation.

COMMON OPTIONS:
• MLS-300 Position Indicator Switch Pack.
Model 1290F-SS Stainless Steel True Round Fire Damper is designed and qualified specifically for applications where round stainless steel ductwork passes through metal stud drywall partitions or masonry walls and building codes require a fire damper for the protection of ductwork penetrations in walls or floors that have a fire resistance rating of up to 2 hours. Ideal for use in commercial and light industrial applications with high humidity or mildly corrosive environments. The 1290F is classified for use in dynamic “fans on” systems where the HVAC system remains operative in the event of a fire, and damper closure under airflow is assured.

The 1290F design features the industry proven over-center knee lock design with high torque spring/fusible link closure, durable stainless steel construction, heavy duty 14 ga. (2.0) laminated blade and long life self-lubricating bearings. Available in large range of round sizes from 6” – 24” with a multitude of options, supplied as standard with a crank arm and locking screw which holds the damper in the fully open position, but may also be used for system balancing if required.

QUALIFICATIONS:
• UL 555 & CAN/ULC-S112 CLASSIFIED DYNAMIC FIRE DAMPER 1 1/2 hr. Label (File # R9492).
• Meets NFPA 80, 90A and 101 as well as IBC and NBC (Canada) Building Code requirements.
• California State Fire Marshal: Fire Damper Listing No. 3225-0935:0101.
• Maximum velocity: 2000 fpm @ 4” w.g. (10 m/s @ 1 kPa).

STANDARD CONSTRUCTION:
Frame: 20 ga. (1.0) stainless steel integral sleeve and retaining plates.
Blade: 2 x 20 ga. (1.0) stainless steel laminated together.
14 ga. (2.0) equivalent thickness.
Linkage: Stainless steel; jackshaft to blade.
Bearings: 1/2” (13) dia. stainless steel.
Axles: 1/2” (13) dia. stainless steel double bolted to blades.
Jackshaft: 1/2” (13) dia. stainless steel. Supplied with factory mounted hand locking quadrant.
Fusible Link: 165°F (74°C) standard. 212°F (100°C) available.

Model 1290F-SS Sizes (Duct Dia.):

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Min. Sleeve Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 to 8 (102 to 203)</td>
<td>16 (406)</td>
</tr>
<tr>
<td>10 to 12 (254 to 305)</td>
<td>20 (508)</td>
</tr>
<tr>
<td>14 to 16 (356 to 406)</td>
<td>24 (610)</td>
</tr>
</tbody>
</table>

Note: Dampers available in 1” (25) increments. Vertical or horizontal installation.

COMMON OPTIONS:
• Type 304 or 316 Stainless Steel construction.
• MLS-300 Position Indicator Switch Pack.
PERFORMANCE DATA:
MODEL SERIES: 1290F - 1 1/2 HOUR LABEL AND 1290F-SS - 1 1/2 HOUR LABEL

PRESSURE DROP

Air Volume in CFM (through face area)
Pressure Drop tested per AMCA Standard 500-D, Fig. 5.5.

1290F Maximum Performance Ratings
- UL 555 Fire Rating: 1 1/2 Hour
- Maximum Velocity: 2000 fpm (10 m/s)
- Maximum Pressure: 4 in. w.g. (1 kPa)

1290F-SS Maximum Performance Ratings
- UL 555 Fire Rating: 1 1/2 Hour
- Maximum Velocity: 2000 fpm (10 m/s)
- Maximum Pressure: 4 in. w.g. (1 kPa)
TRUE ROUND FIRE DAMPERS
MODEL: 1290F - 1 1/2 HOUR LABEL

SUGGESTED SPECIFICATION:
Provide and install, as shown on plans and/or schedules True Round Dynamic Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Fire dampers shall meet the requirements of NFPA 80, 90A and 101 and shall be manufactured, tested and labeled in accordance with UL 555. Each damper shall bear a UL fire resistance rating label of 1 1/2 hours and in addition, a label verifying the airflow and closure pressure rating of 2000 fpm (10 m/s) at 4" w.g. (1 kPa) static pressure differential, as established by the Dynamic Closure Test. Each fire damper shall also be marked with the words "For use in dynamic systems". Dampers marked "For use in static systems only" are not acceptable.
Frame/integral sleeve shall be roll-formed from 20 ga. (1.0) galvanized steel, beaded for structural strength and grooved to accept 20 ga. (1.0) galvanized steel retaining plate. Required sleeve length shall be field verified by contractor. Each damper shall be complete with retaining plate and 20 ga. (1.0) galvanized steel damper plate, supplied by the damper manufacturer to ensure proper fit and installation. Blade shall be of two 20 ga. (1.0) galvanized steel pieces laminated together with an equivalent thickness of 14 ga. (2.0). Blades axles shall be 1/2" (13) dia. plated steel double bolted to blade. Hex, square friction-fit or press-fit axles are not acceptable. Bearings shall be self-lubricating oilite bronze type.
Each fire damper shall be complete with a (specifier select temperature) 165°F (74°C) or 212°F (100°C) UL Listed fusible link that will cause the damper to close and lock in closed position by means of an over center/knee lock linkage for assured closure. Each damper shall be supplied with an internal manual quadrant(s) for setting and locking of blades in desired position. Contractor shall provide and install an access door at each fire damper, of appropriate size to allow for inspection, testing and fusible link replacement. Data submitted for approval shall include confirmation of UL qualifications in addition to manufacturer’s installation instructions. Each shipment of fire dampers shall include same installation instructions. Standard of acceptance shall be Nailor Model 1290F.

STAINLESS STEEL TRUE ROUND FIRE DAMPERS
MODEL: 1290F-SS - 1 1/2 HOUR LABEL

SUGGESTED SPECIFICATION:
Provide and install, as shown on plans and/or schedules Stainless Steel True Round Dynamic Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Fire dampers shall meet the requirements of NFPA 80, 90A and 101 and shall be manufactured, tested and labeled in accordance with UL 555. Each damper shall bear a UL fire resistance rating label of 1 1/2 hours and in addition, a label verifying the airflow and closure pressure rating of 2000 fpm (10 m/s) at 4" w.g. (1 kPa) static pressure differential, as established by the Dynamic Closure Test. Each fire damper shall also be marked with the words "For use in dynamic systems". Dampers marked "For use in static systems only" are not acceptable.
Frame/integral sleeve shall be from 20 ga. (1.0) stainless steel, beaded for structural strength and grooved to accept 20 ga. (1.0) stainless steel retaining plate. Required sleeve length shall be field verified by contractor. Each damper shall be complete with retaining plate and 20 ga. (1.0) stainless steel damper plate, supplied by the damper manufacturer to ensure proper fit and installation. Blade shall be of two 20 ga. (1.0) stainless steel pieces laminated together with an equivalent thickness of 14 ga. (2.0). Blades axles shall be 1/2" (13) dia. plated stainless steel double bolted to blade. Hex, square friction-fit or press-fit axles are not acceptable. Bearings shall be self-lubricating oilite bronze type.
Each fire damper shall be complete with a (specifier select temperature) 165°F (74°C) or 212°F (100°C) UL Listed fusible link that will cause the damper to close and lock in closed position by means of an over center/knee lock linkage for assured closure. Each damper shall be supplied with an internal manual quadrant(s) for setting and locking of blades in desired position. Contractor shall provide and install an access door at each fire damper, of appropriate size to allow for inspection, testing and fusible link replacement. Data submitted for approval shall include confirmation of UL qualifications in addition to manufacturer’s installation instructions. Each shipment of fire dampers shall include same installation instructions. Standard of acceptance shall be Nailor Model 1290F-SS.
HOW TO ORDER

MULTI-BLADE & TRUE ROUND FIRE DAMPERS


EXAMPLE: D1251 - 24 x 24 - V - 24 - FL - 165 - BO - SL = 16 - 20G - L8

1. Models
   Dynamic or Static Applications
   D1200    Airfoil Blade, 1 1/2 Hour Label
   D1200-3  Airfoil Blade, 3 Hour Label
   D1200SS  Stainless Steel, Airfoil Blade, 1 1/2 Hour Label
   D1200SS-3 Stainless Steel, Airfoil Blade, 3 Hour Label
   D1201-OW Out-Of-Wall Airfoil Blade, 1 1/2 Hour Label, Grille Mount
   D1201-DOW Out-Of-Wall Airfoil Blade, 1 1/2 Hour Label, Through Penetrations
   D1250    Vee Blade, 1 1/2 Hour Label
   1290F    True Round, 1 1/2 Hour Label
   1290F-SS Stainless Steel, True Round, 1 1/2 Hour Label

   Static Only Applications
   1200    Airfoil Blade, 1 1/2 Hour Label
   1200-3  Airfoil Blade, 3 Hour Label
   1200SS  Stainless Steel, Airfoil Blade, 1 1/2 Hour Label
   1200SS-3 Stainless Steel, Airfoil Blade, 3 Hour Label

2. Sleeve/Enclosure Style
   (4th digit not applicable to all models)
   0 = No Sleeve
   1 = Type A Sleeve
   2 = Type B Sleeve Enclosure
   3 = Type C Sleeve Enclosure

3. Duct Size
   Width x Height or Diameter (inches [mm's])

4. Construction
   (Stainless Steel models only)
   304 Type 304 Stainless Steel (default)
   316 Type 316 Stainless Steel

5. Mounting
   V Vertical (wall)
   H Horizontal (floor)

6. Max. Velocity/Pressure Rating
   (Dynamic models only)
   24 2000 fpm @ 4° w.g. (default)
   34 3000 fpm @ 4° w.g.
   44 4000 fpm @ 4° w.g.

7. Closure Device
   FL Fusible Link (default)

8. Bearings
   BO Oilite Bronze (default)
   BS Stainless Steel (default on Stainless Steel models)

9. Jamb Seals
   (Not applicable to all models)
   — None
   JSM Flexible metal
   JSS Stainless steel

10. Blade Seals
    (Not applicable to all models)
    — None
    BSS Silicone (D1250 Series only)

11a. Side Mounting Plate
     (No sleeve models only)
     SMP Side Mounting Plate

11b. Sleeve Length
     SL = Specify
     16’ (406) standard (default)
     16’ – 36’ (406 – 914)

12. Sleeve Gauge
    20G 20 ga. standard (default)
    18G 18 ga.
    16G 16 ga.
    14G 14 ga.
    10G 10 ga.

13. Transition
    (Sleeve Type C models only)
    CR Round
    CO Oval
    CSR Square/Rectangular

14. Damper Location
    L8 8” (203) from sleeve end
    LX Other (specify)

15. Retaining Angles
    — None (default)
    QS1 Single set (Not available on Model D1201-DOW)
    QS2 Pair (Not available on Model D1201-OW)

16. Position Indicator
    — None (default)
    300 MLS-300 (4-wire)

17. TDF Flange
    (Type A sleeved models only)
    — None (default)
    TDF1 One end
    TDF2 Both ends

Notes:
1. Not all variants and options are available on all models. Refer to individual model for selection availability.
2. One MLS-300 required per damper assembly.
3. All multi-blade fire dampers are supplied with a locking quadrant.

ACCESSORIES:
15. Retaining Angles
    — None (default)
    QS1 Single set (Not available on Model D1201-DOW)
    QS2 Pair (Not available on Model D1201-OW)
16. Position Indicator
    — None (default)
    300 MLS-300 (4-wire)
17. TDF Flange
    (Type A sleeved models only)
    — None (default)
    TDF1 One end
    TDF2 Both ends

Notes:
1. Not all variants and options are available on all models. Refer to individual model for selection availability.
2. One MLS-300 required per damper assembly.
3. All multi-blade fire dampers are supplied with a locking quadrant.
Models 1201-MDG and 1201-MDS are Multi-Blade Low Leakage Fire Dampers for use in marine applications which require USCG approval for installation on Class A-60 divisions. Unique airfoil blade design provides low pressure drop, particularly suited for high velocity applications. Standard features include a rugged hat channel frame, 12” (305) factory fitted sleeve, concealed in-frame linkage and stainless steel jamb seals for low leakage performance. Models 1201-MDG and 1201-MDS may be installed vertically, with blades running horizontal, or horizontally.

QUALIFICATIONS:
- International Maritime Organization Fire Test Procedures Code USCG Type Approval A-60. Approval Number 164.139/8/0.
- European Wheel Mark 1408/05.
- Southwest Research Institute Test report No. 01.10933.01.701.
- Leakage: Less than 4 cfm/sq. ft. @ 1” w.g. (6.8 L/s/cm² @ 1250 Pa).

STANDARD CONSTRUCTION:
Frame: 5” x 7/8” x 16 ga. (127 x 22 x 1.6) galvanized or stainless steel hat channel.
Blades: 14 ga. (2.0) equivalent galvanized or stainless steel formed airfoil on 5 1/2” (140) centers. Opposed action.
Sleeve: 12” x 16 ga. (305 x 1.6 ga.) with 2” (51) flange on both ends. 10” through 24” (254 through 610) long and 16 ga. through 10 ga. (1.6 through 3.51) available. 12” (305) min. with MLS-300. Flange widths from 1” to 3” (25 to 76) available.
Linkage: Concealed in frame. 12 ga. (2.7) plated or stainless steel.
Bearings: 1/2” (13) dia. self-lubricating oilite bronze or sintered stainless steel.
Axles: 1/2” (13) dia. plated steel or stainless steel double bolted to blades.
Jackshaft: 1/2” (13) dia. plated or stainless steel. CCW rotation to open.
Jamb Seals: Stainless steel.
Fusible Link: 165°F (74°C) standard. 212°F (100°C) available.

COMMON OPTIONS:
- Type 316 Stainless Steel Construction (Model 1201-MDS only)
- Explosion-Proof Motor.
- MLS-300 Position Indicator Switch Pack.
- Factory fitted sleeves.
- 1” (25), 1 1/2” (38), 2” (51), 2 1/2” (64), 3” (76) Sleeve Flange.
**SUGGESTED SPECIFICATION:**

Provide and install, as shown on plans and/or schedules, Multi-Blade Marine Fire Dampers as manufactured by Nailor Industries, Inc. which meet or exceed the following criteria: Dampers shall be tested and rated in accordance with the latest edition of International Maritime Organization Fire Test Procedures Code Coast Guard Approval Type A-60 and also bear the European Wheel Mark in accordance with Marine Equipment Directive 96/98/EC.

Frame shall be constructed of 16 ga. (1.6) \(*\) (specifier to select) galvanized steel (Model 1201-MDG) or Type 304 Stainless Steel (Model 1201-MDS) or Type 316 Stainless Steel (Model 1201-MDS) hat channel with mitered corners reinforced with die-formed corner gussets for strength. Blades shall be 14 ga. (2.0) equivalent \((\text{specifier to select})\) galvanized steel (Model 1201-MDG) or Type 304 Stainless Steel (Model 1201-MDS) or Type 316 Stainless Steel (Model 1201-MDS) formed double skin, airfoil design, on 5 1/2” (140) centers. Dampers shall be of opposed blade configuration with an interlocking blade design. Blade seals are not acceptable. Damper shall be equipped with stainless steel jamb seals for low leakage performance. Bearings shall be \((\text{specifier to select})\) self-lubricating oilite bronze type (Model 1201-MDG) or Stainless Steel (Model 1201-MDS). Blade linkage shall be zero-maintenance, concealed in frame, out of airstream.

The heat responsive device shall have a temperature rating of \((\text{specifier select temperature})\) 165°F (74°C) or 212°F (100°C). Appropriate externally mounted electric actuators shall be installed by the damper manufacturer in the factory. Actuators shall incorporate an OEM internal spring return mechanism, external after-market spring mechanisms are not acceptable. Damper and actuator assembly shall be factory cycled a minimum of 3 times to ensure correct operation.

Standard of acceptance shall be Nailor Model \((\text{specifier to select})\) 1201-MDG (Galvanized Steel) or 1201-MDS (Stainless Steel).

---

**PERFORMANCE DATA:**

**MODELS: 1201-MDG AND 1201-MDS**

**PRESSURE DROP:**

<table>
<thead>
<tr>
<th>Air Velocity in feet per minute (m/s)</th>
<th>Static Pressure Drop in inches w.g. (Pa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.01</td>
<td>(3)</td>
</tr>
<tr>
<td>0.02</td>
<td>(5)</td>
</tr>
<tr>
<td>0.03</td>
<td>(8)</td>
</tr>
<tr>
<td>0.04</td>
<td>(10)</td>
</tr>
<tr>
<td>0.05</td>
<td>(13)</td>
</tr>
<tr>
<td>0.06</td>
<td>(15)</td>
</tr>
<tr>
<td>0.08</td>
<td>(20)</td>
</tr>
<tr>
<td>0.1</td>
<td>(25)</td>
</tr>
<tr>
<td>0.2</td>
<td>(50)</td>
</tr>
<tr>
<td>0.5</td>
<td>(125)</td>
</tr>
<tr>
<td>0.6</td>
<td>(150)</td>
</tr>
<tr>
<td>0.8</td>
<td>(200)</td>
</tr>
<tr>
<td>1.0</td>
<td>(250)</td>
</tr>
<tr>
<td>1.5</td>
<td>(263)</td>
</tr>
<tr>
<td>2.0</td>
<td>(275)</td>
</tr>
</tbody>
</table>

Pressure drop tested per AMCA Standard 500-D, Figure 5.3. Data corrected to standard air density of 0.075 lbs/ft.$^3$.
# HOW TO ORDER

## MULTI-BLADE MARINE FIRE DAMPERS

**MODELS:** 1201-MDG, 1201-MDS

**EXAMPLE:** 1201-MDG - 24 x 24 - V - FL - 165 - BO - SL = 12 - 16G - FD20 - AUTO - 120 - EXT - RH - CL - 412

### 1. Models
- **1201-MDG** Galvanized Steel, Airfoil Blade
- **1201-MDS** Stainless Steel, Airfoil Blade

### 2. Duct Size
- Width x Height or Diameter (inches [mm's])

### 3. Mounting
- **V** Vertical (default)
- **H** Horizontal

### 4. Stainless Steel Construction (Model 1201-MDS only)
- **304** Type 304 Stainless Steel (default)
- **316** Type 316 Stainless Steel

### 5. Closure Device
- **FL** Fusible Link (default)

### 6. Elevated Temperature
- **165** 165°F (74°C) (default)
- **212** 212°F (100°C)

### 7. Bearings
- **BO** Oilite Bronze (default on Model 1201-MDG)
- **BS** Stainless Steel (default on Model 1201-MDS)

### 8. Sleeve Length
- **SL** = Specify
- 12 12" (305) standard (default)
- 10 10" (254)
- 14 14" (356)
- 16 16" (406)
- 18 18" (457)
- 20 20" (508)
- 24 24" (610)

### 9. Sleeve Gauge
- **16G** 16 ga. standard (default)
- 14G 14 ga.
- 10G 10 ga.

### 10. Sleeve Flange
- **FD20** 2" (51) standard (default)
- **FD10** 1" (25)
- **FD15** 1 1/2" (38)
- **FD25** 2 1/2" (64)
- **FD30** 3" (76)

### 11. Bolt Holes
- **—** None (default)
- **BH1** In One Flange
- **BH2** In Both Flanges

### 12. Actuator Selected by
- **AUTO Least Cost (Auto-Select) (default)**
- **MAN Manually Select**

### 13. Power Requirement
- 120 120 VAC (default)
- 230 230 VAC
- 24 24 VAC
- 25 25 psi Pneumatic
- **MAN Manual**

### 14. Actuator Mounting
- **EXT External (default)**

### 15. Actuator Location
- **RH** Right-Hand (default)
- **LH** Left-Hand

### 16. Fail Position
- **CL** Close (default)
- **OP** Open

### 17. Actuator Models
- **Electric:**
  - **MS4** MS4X0F 120 VAC
  - **MS8** MS8X0F 24 VAC
  - **4Y0** MS4Y0F 230 VAC
  - **412** MS4120F 120 VAC
  - **812** MS8120F 24 VAC
  - **462** MS4620F 230 VAC
- **Pneumatic:**
  - **296** 331-2961 #4
  - **306** 331-3060 #3

### OPTIONS & ACCESSORIES:

#### 18. Position Indicator
- **—** None (default)
- **300** MLS-300 - 4 wire

#### 19. E. P. Switch
- **EP1** 2651008 120 V
- **EP2** 2651007 24 V

#### 20. Explosion-Proof Motor
- **—** None (default)
- **EPH** Explosion-Proof Motor

#### 21. Outdoor Motor Housing
- **—** None (default)
- **OMH4** Type 304 Stainless Steel (NEMA 4X)
- **OMH6** Type 316 Stainless Steel (NEMA 4X)

#### 22. Continuous Weld Sleeve
- **—** None (default)
- **CWS** Continuous Weld Sleeve

### Notes:
1. Standard sleeve is 12" (305 long x 16 ga. (1.6) with a 2" (51) flange at both ends.
2. Refer to actuator price sheet for selection availability. Contact factory for availability of other actuators.
3. One MLS-300 required per damper assembly.
4. EP (electric-pneumatic) switch optional accessory is applicable only to pneumatic actuators and is shipped loose.
Nailor multi-blade fire dampers are tested by and listed with Underwriters Laboratories Inc. and are manufactured within UL procedural requirements. Approved variables including a variety of options and accessories are available to suit specific applications.

### MATERIAL OPTIONS:

- **OPTION CODE 304**
  - STAINLESS STEEL CONSTRUCTION
  - All parts of damper (except blade seals) will be constructed of 304 stainless steel. Provides higher corrosion resistance against harsh atmospheric and process elements. Consult your Nailor representative for specific application suitability.

- **OPTION CODE 316**
  - STAINLESS STEEL CONSTRUCTION
  - All parts of damper (except blade seals) will be constructed of 316 stainless steel. Provides higher corrosion resistance against harsh atmospheric and process elements. Consult your Nailor representative for specific application suitability.

### BEARING OPTIONS:

- **OPTION CODE BO**
  - OILITE® BRONZE BEARINGS
  - Bronze sintered (oil impregnated) self-lubricating oilite bearings provide long time lubrication making them ideal for use in applications where proper maintenance is uncertain or difficult.

- **OPTION CODE BS**
  - STAINLESS STEEL BEARINGS
  - 304 grade stainless steel bearings provide corrosion resistance in a wide variety of corrosive media. In higher heat applications, provides good oxidation resistance. Standard for stainless steel models.

### CLOSURE TEMPERATURES:

- **OPTION CODES 165 212**
  - FUSIBLE LINK TEMPERATURE
  - Fusible links for Model Series (D)1200, D1250 and 1290F fire dampers are available with a choice of several melting temperature ratings. Nailor fire dampers are provided as standard with 165°F (74°C) fusible link. Optional 212°F (100°C) link can be installed on damper at time of manufacturing, or can be ordered separately as a replacement part for field installation as part of a regular maintenance program or after a fire emergency (providing damper is still functional). The National Fire Protection Association Standard 90A states that "fusible links shall have a temperature rating approximately 50°F (28°C) above the maximum temperature that normally is encountered when the system is in operation or shut down, but not less than 160°F (71°C)." Adhering to this guideline helps prevent 'nuisance trips' resulting in unnecessary replacement costs and labor time. Note that local building codes may also stipulate a maximum closure temperature rating.
OPTIONAL SEALS:

OPTION CODE JSM
FLEXIBLE METAL JAMB SEALS

OPTION CODE JSS
STAINLESS STEEL JAMB SEALS

OPTION CODE BSS
SILICONE SEALS

Option Code JSM (Option Code JSS on stainless steel models) provides damper with flexible metal jamb seals to minimize air leakage between blade ends and frame. Suitable for use in applications that may require damper to be used as a shut-off damper for example, as well as a fire damper.

Option Code BSS provides damper with Silicone blade edge seals. Blade seals minimize air leakage between blades, and are a suitable option for use in applications that may require damper to be used as a shut-off damper for example, as well as a fire damper.
The majority of installing contractors view fire damper installation as a costly time-consuming and troublesome procedure. Eight conventional angles must be custom fabricated for each damper either in a sheet metal shop or at the job site and sized to suit each individual damper. Invariably, they are mislaid or lost and must be matched to each factory supplied damper. The Nailor "Quick-Set" solution solves the majority of problems. They are pre-formed to fit each damper and shipped with the individual damper units for ultimate convenience.

Nailor "Quick-Set" retaining angles are an accessory option for all dampers ordered with factory sleeves.

**QS2:** Two sides (pair). For standard installations where angles are installed on both sides of the fire partition.

**QS1:** One side (single set). For use in a single side retaining angle installations and with grille mount and "out of wall" damper models. "Quick-Set" angles are supplied with correctly spaced pre-drilled screw-holes to ensure a quick, easy and accurate installation for all Nailor fire dampers - no measuring required.

"Quick-Set" retaining angles when specified and supplied with Nailor integral sleeve fire dampers provide the "complete" installation package. Simple, fast, convenient.

**Style 1:** 1 1/2" x 1 1/2" x 20 ga. (38 x 38 x 1.0) Four sides are connected together with rivets in three corners. Standard for the majority of applications with the following limitations:
- 1 1/2 hour label fire dampers.
- Maximum Size: 36" x 36" (914 x 914).
- Two sided installation only.

**Style 2:** 1 1/2" x 1 1/2" x 16 ga. (38 x 38 x 1.6) Slot and tab design. The retaining angle assembly for each side has four angles, each with a tab end and a slot end (Detail A). The tabs are to be inserted into the slots and knocked down either before or after fastening to the sleeve (Detail B).
- 1 1/2 or 3 hour label fire dampers.
- Maximum Size: 90" x 48" (2286 x 1219) or 48" x 90" (1219 x 2286).
- Single side (1 1/2 hour only. Refer to Single Side Retaining Angles Supplementary Installation Instructions for size limitations) or two sided installation.
SLEEVES OR SIDE MOUNTING PLATE:

All fire dampers require a steel sleeve of correct length and gauge in order to be installed in accordance with the product's UL approved installation instructions. Nailor recommends that all multi-blade fire dampers, including Type A models, are specified and ordered complete with a factory installed full sleeve (Type B and C models are manufactured as standard with a transition casing that acts as a sleeve). Nailor can provide a factory furnished sleeve that allows the units to ship directly to job site ready for installation, saving time, money and costly shop or field fabrication, as well as helping to ensure proper installation to UL requirements. A factory furnished sleeve also permits factory mounting of Nailor's MLS-300 Position Indicator Switch Pack. Standard sleeve is 16” (406) long. For further damper/sleeve details, see Models (D)1201 and D1251.

The following indicates model numbers to order for multi-blade fire dampers with factory fitted Type A sleeves:

<table>
<thead>
<tr>
<th>Standard Model #</th>
<th>With Type A Sleeve</th>
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<tbody>
<tr>
<td>(D)1200</td>
<td>Model (D)1201</td>
</tr>
<tr>
<td>D1250</td>
<td>Model D1251</td>
</tr>
</tbody>
</table>

OPTION CODE SMP
SIDE MOUNTING PLATE

Nailor's SMP, Side Mounting Plate is required for factory mounting of the MLS-300 Position Indicator Switch Pack when a full factory sleeve is not requested. As with all fire dampers, an appropriate steel sleeve is required for installation of damper in wall or floor.
OPTION CODES
TDF FLANGE
TDF2 BOTH ENDS
TDF1 ONE END

**FLANGED SLEEVE:**

**TDF** (by Engle) and **TDC** (by Lockformer) proprietary flange systems are approved as breakaway connections for connecting a combination fire/smoke damper Type A sleeve (22 or 20 gauge) to ductwork. They may be used in place of the approved slip joints shown in standard installation instructions.

- For Option **TDF1** the sleeve is factory flanged on one end only.
- For Option **TDF2** the sleeve is factory flanged on both ends.

Note that the maximum wall/floor opening size permitted by UL, relative to the damper size, may not physically allow the flange to fit through the opening. Consultation and co-ordination with the wall/floor contractor is recommended.

**Maximum TDF1/TDF2 Sleeve Size Allowed:**

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>For Curtain Type Fire Damper:</td>
<td>60&quot; wide x 60&quot; high (1524 x 1524).</td>
</tr>
<tr>
<td>For Multi-Blade Type Fire Damper:</td>
<td>36&quot; wide x 48&quot; high (914 x 1219).</td>
</tr>
</tbody>
</table>

Note: Reference IOM-FDTCFINST for more details.