222 Church St. S., Alliston, ON • Phone: 905.857.4700 • www.alumavent.com

PRODUCT SPECIFICATION GUIDE

**MODEL SERIES 5100S (1-1/2 HOUR) & 5300S (3 HOUR) STATIC FIRE DAMPERS**

SERVICE SUBGROUP: **DIVISION 23 HVAC** (FORMERLY DIVISION 15)

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Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) Format - 2004 Edition.

The section must be carefully reviewed and edited by the engineer to meet the requirements of the project and local building code. Coordinate with other specification sections and the drawings.

Delete all unnecessary "Specifier Notes" when editing this section.

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## PART 1 GENERAL

### 1.1 WORK INCLUDED

A. Static fire dampers with curtain style blades meeting requirements of UL Standard 555 7th Edition and CAN/ULC-S112.

### 1.2 RELATED WORK

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Specifier Notes: Edit the following list as required for the project. List other sections with work directly related to the dampers.

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A. Section 23 31 00 – Ducts.
B. Section 23 33 33 – Duct Access Doors

### 1.3 REFERENCES

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Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

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A. AMCA 500-D – Laboratory Methods for Testing Dampers for Ratings.
B. AMCA 511 – Certified Ratings Program for Air Control Devices.
C. IBC – International Building Code.
D. NBC – National Building Code of Canada.
E. NFPA 80 - Fire Doors & Other Opening Protectives.
F. NFPA 90A – Installation of Air Conditioning and Ventilating Systems.

G. NFPA 101 – Life Safety Code.
H. UL 555 (Seventh Edition)– Standard for Safety: Fire Dampers.
I. CAN/ULC-S112 (2010)- Canadian Standard for Safety: Fire Dampers.

## 1.4 SUBMITTALS

A. Comply with requirements of Section 01330 – Submittal Procedures.
B. Product Data: Submit manufacturer's product data.
   1. Include UL/ULC ratings for fire resistance, size limitations and mounting orientation.
   2. Indicate materials, construction, and dimensions.
   3. Verify conformance to NFPA, IBC, NBC (Canada), UL/ULC, and applicable building code as specified in Quality Assurance.
   4. Include a copy of UL/ULC Installation Instructions.

## 1.5 QUALITY ASSURANCE

A. Dampers shall meet requirements for fire dampers in accordance with:
   1. NFPA 80, 90A and 101.
   2. Applicable Building Codes.
B. Dampers shall be tested, rated, and labeled in accordance with:
   1. UL 555 (Seventh Edition), Listing # R25565
   2. CAN/ULC-S112 (2010), Listing # R25565

## 1.6 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver Materials to site in manufacturer's original, unopened containers and packaging, with labels clearly indicating manufacturer, material, and location of installation.
B. Storage: Store materials in a dry area indoor, protected from damage, and in accordance with manufacturer's instructions.
C. Handling: Handle dampers using the frame or sleeve. Do not lift or move dampers using blades or fusible link assembly. Handle and lift dampers in accordance with manufacturer's instructions. Protect materials and finishes during handling and installation to prevent damage.

# PART 2 PRODUCTS

## 2.1 MANUFACTURER

A. Alumavent Inc., 222 Church St. S., Alliston, Ontario, L9R 2B7. Phone 905.857.4700. www.alumavent.com

## 2.2 FIRE DAMPERS

A. Models: 5100S (1-1/2 Hour) or 5300S (3 Hour) Series static fire dampers.
B. Ratings:
   1. Fire Resistance:
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      Specifier Notes: UL 555 and CAN/ULC-S112 provide for classification of fire dampers with fire resistance ratings of either 1 ½ or 3 hours. NFPA 90A requires that HVAC penetration through barriers with fire resistance ratings less than 3 hours be protected by 1 ½ hour rated dampers. Penetrations through barriers with fire resistance ratings of 3 hours or more require 3 hour rated dampers. NFPA 90A also require that all fire damper locations and their hourly rating requirements be shown on the project plans. Specifier, select from the following:
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      - ❑ Dampers shall have a fire resistance rating of 1½ hours.
      - ❑ Dampers shall have a fire resistance rating of 3 hours.

   2. Fire Closure Temperature:
      Each fire damper shall be equipped with a factory installed heat responsive device (fusible link) rated to close the damper when temperature at the damper reaches:

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Specifier Notes: NFPA 90A requires fire dampers to close by the action of a heat responsive device (usually a fusible link) when temperature at the damper reaches a certain temperature. The minimum temperature established by NFPA 90A is 165°F. The maximum temperature permitted by UL555 and CAN/ULC-S112 for a static damper is 212°F. Some building codes may require 165°F, but if allowed by the applicable code, 212°F is the recommended choice. Any other temperature must be approved by the local Authority Having Jurisdiction. Specifier, select one of the following options:

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- ❑ 165°F (74C)
- ❑ 212°F (100C)

C. Static Fire Damper Construction:
   1. Frame: Galvanized steel (in gauges required by manufacturer's UL listing).
   2. Sleeves: Damper shall be supplied as a single assembly with a factory sleeve.
   3. Retaining Angles: Damper shall be supplied with factory retaining angles sized to provide installation overlap in accordance with the manufacturer's UL listing.
   4. Blades: Galvanized steel, interlocking curtain style
   5. Closure Device: Fusible link (replaceable).
   6. Damper Type/Duct Transition Connection:

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Specifier Notes: Type A, B, C, CO, CR. Specifier, select one of the following options.

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- ❑ Type A (all parts in airstream)
- ❑ Type B (blades out of airstream)
- ❑ Type C (square/rectangular transition collars)
- ❑ Type CO (oval transition collars)
- ❑ Type CR (round transition collars)

## 2.3 SOURCE QUALITY CONTROL

A. Factory Tests: Factory cycle damper assemblies to assure proper operation.

# PART 3 EXECUTION

## 3.1 EXAMINATION

A. Examine areas to receive dampers. Notify the Engineer of conditions that would adversely affect installation or subsequent utilization of dampers. Do not proceed with installation until unsatisfactory conditions are corrected.

## 3.2 INSTALLATION

A. Install dampers in accordance with manufacturer's UL/ULC Installation Instructions, labeling, and NFPA 90A at locations indicated on the drawings. Any damper installation that is not in accordance with the manufacturer's UL/ULC Installation Instructions must be approved prior to installation.
B. Dampers must be accessible to allow inspection, adjustment, and replacement of components. The sheet metal contractor shall furnish any access doors in ductwork or plenums required to provide this access. The general contractor shall furnish any access doors required in walls, ceilings, or other general building construction. Location of each damper shall be clearly marked on outside of duct.
C. Install dampers square and free from racking.
D. The installing contractor shall provide and install bracing for multiple section assemblies to support assembly weight and to hold against system pressure.
E. Do not compress or stretch the damper frame into the duct or opening.
F. Attach multiple damper section assemblies together in accordance with manufacturer's instructions. Install support mullions as reinforcement between assemblies as required.
G. Handle dampers using the frame or sleeve only. Do not lift or move dampers using blades or fusible link assembly.

**END OF SECTION**