**PRODUCT SPECIFICATION GUIDE**

**MODEL: STATIC FIRE DAMPERS**

**DIVISION 23 - Heating, Ventilation, and Air Conditioning (HVAC)
(PREVIOUSLY DIVISION 15)**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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

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 "Specifier Notes" when editing this section.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**SECTION 233313 (Previously 15820)**

**STATIC FIRE DAMPERS**

1. **GENERAL**
	* + 1. **SECTION INCLUDES**
				1. Dynamic fire dampers with curtain style blades meeting the requirements of the latest edition of UL Standard 555.
			2. **SUMMARY**
				1. Section 233100 – HVAC Ducts and Casings (Previously 15810).
			3. **REFERENCES**
2. AMCA 500-D – Laboratory Test Methods for Testing Dampers for Ratings.
3. AMCA 511 - Certified Ratings Program for Air Control Devices.
4. IBC – International Building Code.
5. CSFM - California State Fire Marshall Listing for Fire Damper.
6. NFPA 90A - Installation of Air Conditioning and Ventilating Systems.
7. NFPA 101 – Life Safety Code.
8. UL 555 - Standard for Safety; Fire Dampers.
	* + 1. **SUBMITTALS**
9. Comply with requirements of Section 013300 - Submittal Procedures.
10. Product Data: Submit manufacturer's product data.
	1. Include UL ratings, fire resistance, size limitations, and mounting orientation.
	2. Indicate materials, construction, dimensions, and installation details.
	3. Verify conformance to NFPA, UL, CSFM, and applicable building code.
	4. Include a copy of UL approved installation instructions.
		* 1. **QUALITY ASSURANCE**
				1. Dampers shall be warranted against manufacturing defects for a period of 5 years.
				2. Dampers shall be tested, rated and labeled in accordance with the latest UL-555 requirements.
				3. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," and with NFPA 90B, "Installation of Warm Air Heating and Air Conditioning Systems."
				4. Damper pressure drop ratings shall be based on tests and procedures performed in accordance with AMCA 500.
			2. **DELIVERY, STORAGE, AND HANDLING**
				1. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly indicating manufacturer, material, and location of installation.
				2. Storage: Store materials in a dry area indoor and protected from damage and in accordance with manufacturer’s instructions.
				3. Handling: Handle and lift dampers by sleeve or frame only. Do not lift damper by blades or jackshaft. Protect materials and finishes during handling and installation to prevent damage.
11. **PRODUCTS**
	* + 1. **MANUFACTURER**
				1. United Enertech, 3005 South Hickory Street, Chattanooga, TN 37407. Phone (423) 698-7715, [www.unitedenertech.com](http://www.unitedenertech.com)
			2. **DYNAMIC FIRE DAMPERS**
				1. Model: FDD-SAHG dynamic curtain fire dampers, for behind grille applications.
				2. Ratings:

Fire Rating:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Specifier Notes: UL 555 provides for classification of fire dampers with fire resistance ratings of either 1 ½ or 3 hours. NFPA 90A requires that HVAC penetrations 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 requires that all fire damper locations and their hourly rating requirements be shown on the project plans. Specifier, select from the following:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

* 1½ hours for dynamic applications in accordance with UL-555: FDD-SAHG
* 3 hours for dynamic applications in accordance with UL-555: FDD-SAHG
	+ - * 1. Construction:

Frame: Minimum 22 gauge (0.85 mm) 3$\frac{11}{16}$ **″** (94mm) roll formed, galvanized steel, with $^{3}/\_{4}$**”**  flange at one end.

Blades: Minimum 24 gauge (0.6 mm) roll formed, galvanized steel, curtain type.

Release Temperature:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Specifier Notes: Building codes typically require the damper releasing temperature to comply with one of the following:

1. The operating temperature shall be approximately 50°F (10°C) above the normal temperature within the duct system, but not less than 160°F (71°C).
2. The operating temperature shall be not more than 286°F (141°C) where located in a smoke control system complying with Section 909.

Consult your local building code for further details and select one of the following.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

* 165 ºF (74 ºC).
* 212 ºF (100 ºC).

Mounting: Vertical and/or Horizontal (1 ½ and 3 hour rated)

Duct Transition Connection:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Specifier Notes: Select one of the following.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

* Rectangular
* Round
* Oval
	+ - 1. **Accessories:**
1. Sleeve: Minimum 20 gauge (1.0 mm), integral to frame.
2. Retaining Angles

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Specifier Notes: Select one of the following

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

* 1. Model Options:
* Factory Sleeve: \_\_\_\_\_\_\_Ga, (20 Ga min.)

Sleeve Length: \_\_\_\_\_\_\_ inches

* Retaining Angles
	+ - One Side
		- Both Side
* 3 Hour Rating
1. **EXECUTION**
	* + 1. **EXAMINATION**
				1. 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
			2. **INSTALLATION**
				1. Install dampers at locations as indicated on the drawings and in accordance with manufacturer’s UL approved installation instructions.
				2. Install dampers square and free from racking with the blades running horizontally. Do not compress or stretch damper sleeve or frame into the duct or opening.
				3. Contractor shall furnish and install duct access door adjacent to dampers for inspection and maintenance. Where duct size permits, install minimum 12 inches x 12 inches (305 x 305 mm) duct access doors.
				4. Handle dampers using the frame or sleeve. Do not lift or move damper using blades or jackshaft.

**END OF SECTION**