UnitedEnertech

THE ENERTECH EDGE

Fire & Air: The Damper Series

By Kent Maune

Faster, Smarter Protection: The Advantages of United Enertech's Combination Fire/Smoke Damper Release Devices

Introduction

Combination fire/smoke dampers are critical components in a building's life safety system. As part of the broader category of life safety products, these dampers undergo rigorous testing to meet **UL 555, Standard for Fire Dampers**, and **UL 555S, Standard for Smoke Dampers**. Their performance directly impacts both life safety and property protection – making dependable, responsive operation essential.

The Need for Faster, Smarter Detection

Underwriters Laboratories (UL) testing requires that release devices on fire/smoke dampers respond to heat and fully operate within one minute. Traditional fusible link and fusible rod designs typically meet this requirement—but just barely.

United Enertech enhances reliability and protection with our **Electronic Fuse Link (EFL)**, a fast-acting heat detection system that responds in one-third to one-half the time of standard fusible links. Faster detection means dampers close sooner, limiting smoke and flame spread and providing an added layer of safety for both occupants and property.

EFL: Quick Detection and Controlled Closure

The **EFL** serves critical functions:

1. Preventing Duct Damage – Standard fusible links release instantaneously, causing the damper to slam shut and potentially damage the duct system. The EFL provides a controlled closure, allowing the damper to close smoothly within 3 to 10 seconds – reducing shock and vibration that can lead to duct collapse.

2. Faster Heat Detection – Because fusible links require additional mass to melt before activation, they react more slowly. The EFL's electronic sensing element detects temperature rise much sooner, triggering a faster and more reliable damper response.

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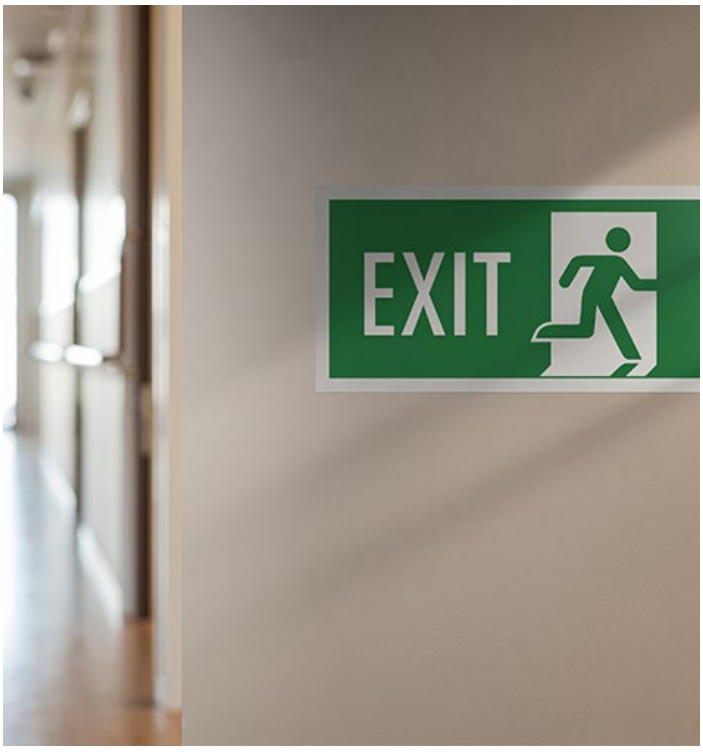
Comprehensive Line of Release Devices

United Enertech offers a full range of quick-release and controlled-closure devices engineered for a variety of system requirements:

- **EFL/MTS (Electronic Fuse Link/Momentary Test Switch)** – Standard on all fire/smoke dampers with electric actuators, providing rapid detection and controlled closure.
- **DTO/R (Dynamic Thermal Operator/ Reopenable/Momentary Test Switch)** – Designed for dynamic smoke control systems, allowing dampers to be reset and reopened from outside the duct for easie maintenance and testing.

All United Enertech release devices combine **fast heat detection, controlled closure, and sevice-friendly operation**—ensuring performance, reliability, and long-term system integrity.



Proven Performance in UL Testing

EFL and PFL devices were tested under stringent UL procedures. Test dampers were installed in concrete slab openings per United Enertech installation instructions, powered open, and subjected to the UL 555 fire endurance test.

Even under a “worst-case” scenario—with the actuator and heat-sensing components located on the non-exposed side of the furnace—the EFL met all performance requirements. In fact, the **EFL 250°F model closed the damper in half the time** required by standard fusible link assemblies.

This improvement translates to faster containment and greater protection against smoke, flame, and property loss.

Commitment to Safety and Innovation

United Enertech’s continued development of quick-detecting, controlled-closure devices underscores our **commitment to advancing life safety technology**. Faster response times mean earlier containment of smoke and flame, while controlled damper operation protects both people and property.

For more information about **United Enertech fire and smoke damper innovations**, contact your local representative or visit www.unitedenertech.com.

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Kent Maune is Senior Product Manager, Life Safety and Control Dampers, for United Enertech. His experience during more than 35 years in the HVAC industry (dampers and louvers) includes engineering, R & D, operations, sales, and extensive experience in the development and marketing of life safety product lines. He has also developed and conducted training seminars for code officials, engineers, fire marshals, architects, and sheet metal contractors on fire/smoke damper installation, options, and variations. Kent is a member of NFPA (National Fire Protection Association) and a chair of CARC (Code Action Review Committee). kmaune@unitedenertech.com