

# Fire Engineering®

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## Automatic Thermal Gas Shut-off Devices for Natural Gas Minimize Property Damage and Protect Lives

**CLARK, NJ** – Many European countries require residential natural gas lines be equipped with automatic thermal shut-off devices to [prevent](#) unrestricted release of [gas during fires](#). In the U.S., Massachusetts requires an automatic thermal [gas shut-off](#) device be installed before the gas meter.

To determine if U.S. fires would have been better contained with automatic gas shut-offs, [TECO Americas](#) surveyed [first responders](#) in Texas, California and Pennsylvania to learn from their experiences.

Reports of unrestricted release of gas during fires were reported, similar to the experience of a Pennsylvanian [firefighter](#). He recalled a fire that originated in a basement. Although the [fire department](#) arrived to the scene of the fire quickly, the fire fighters encountered difficulty in locating the basement door. This slight delay gave the fire extra seconds to burn before the gas was terminated at the curb. During this time, the fire burnt through a hot-water heater line and became gas-fed. When the basement door was finally found, a blue-ish flame was already coming up the stairs.

The time that the fire fighters had lost while searching for the basement door was not much, but by enabling the fire to reach a gas source, the house suffered significantly more damage. Had a thermally activated gas shut-off device been installed, the outcome could have been very different.

"Examining fires such as this one reported from Pennsylvania helps us to understand the importance of thermal automatic shut-offs," reports Wally Armstrong, a principal of the [Liberty Group](#), a supplier to gas utilities. In their survey of first responders, TECO Americas received many similar reports. Departments in all states surveyed reported incidents where fires were inflamed after reaching gas lines.

According to the [National Fire Protection Association \(NFPA\)](#), U.S. fire departments face 2,110 home fires each year where natural gas is the first material ignited, and 1,170 home fires a year where LP-gas is involved with the start of a fire. Most home gas fires originate in the kitchen at the stove or gas range.

U.S. homeowners assume that they have the protection of automatic thermal gas shut-offs. When they learn that a simple and inexpensive automatic thermal gas shut-down is available, they are shocked to learn gas appliances are not required to have this protection, and feel they are exposed to unnecessary risk.

The [National Fire Incident Reporting System \(NFIRS\)](#) is a system established by the National Fire Data Center of the United States Fire Administration (USFA) to document and develop uniform data reporting when gathering and analyzing information on fires across the U.S. The NFIRS is the world's largest national annual database of fire incident information, collecting information from over 11,000 fire departments throughout 49 states and the District of Columbia. According to the NFIRS database, there have been 36,577 fires in the U.S. where gas was the material first ignited resulting in an uncontrolled or self-perpetuating fire in the five year period between 2005-2009.

Massachusetts leads in the U.S. for safety regarding automatic thermally active shut-off devices for natural gas. The [Massachusetts plumbers and gasfitters](#) recently approved the [FireBag®](#) for thermal activated gas shutoffs, as required by the state's [MA CMR 248](#) regulation.

In addition to the Massachusetts approval, the [FireBag®](#) is certified for international thermal gas shutoff standards, including:

- DIN 3586 thermo activated safety device for gas applications ([View PDF](#))
- European UNI EN 1775 Standard for indoor gas installations
- European Directive 90/396/CEE certification for durability in mechanical or thermal stress
- German DVGW TRGI 86/96 Standard for thermo activated locking systems on gas heaters, water heaters & domestic gas fittings
- German Standard Muster-Feuerverordnung (FeuVo v. 02/95 - edition 09/97) for thermo activated devices
- Italian UNI 7129 Ed 2001 Standard for fire protection and gas supply line components

### **Related Links:**

- [FireBag® Product Page](#)
- [FireBag® for the Home: Information on Home Use](#)
- [FireBag® for Industry: Information on Industrial Use Datasheet \(PDF\)](#)
- [Cross Section: View a Cross Section of the FireBag](#)
- [Animation: View the FireBag Animation](#)
- [Demo: View the FireBag Installation Demonstration](#)
- [FireBag Installation Manual](#)

For more information regarding the FireBag Thermal Shutoff Devices, contact Jean Steckler at Assured Automation ([jeans@aa-fs.com](mailto:jeans@aa-fs.com)) or 800 899-0553.

### **About Assured Automation**

Assured Automation is a privately held company that sells automated valves, actuators, flow meters, and valve accessories. Located in Clark NJ, Assured Automations customers include original equipment manufacturers, resellers, and end users. Their products are used for fluid and gas applications in air drying, pollution control, process control, laundry equipment, textile dyeing & drying, bottling & dispensing equipment, ink & paint dispensing, industrial compressors, and others. For more information contact Assured Automation at 800-899-0553, by e-mail at [info@assuredautomation.com](mailto:info@assuredautomation.com) or visit [www.assuredautomation.com](http://www.assuredautomation.com).

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