

## Home fire sprinkler systems

### The next generation of fire safety

Contrary to what most Americans think, we are not at greatest risk from fire in hotels or other public places – it is at home, where most of us feel the safest, that we are actually at highest risk of fire. Hotels, in fact, are among the places that are safest from fire, and that is due in large part to the fire protection technology required for them. That technology typically includes automatic fire sprinklers.

Fire sprinklers have been around for more than a century, protecting commercial and industrial properties and public buildings, such as hotels and hospitals and high-rises. What most people don't realize is that the same lifesaving technology that protects these buildings is also available for homes, where 80 percent of all fire deaths occur.

Sprinklers typically reduce the chances of dying in a home fire by one half to two thirds in any kind of property where they are used. Together with smoke alarms, sprinklers cut the risk of dying in a home fire 82 percent, relative to having neither.

### How do they work?

In a home fire sprinkler system, a network of piping filled with water under pressure is installed behind the walls and ceilings, and individual sprinklers are placed along the piping to protect the areas beneath them. Because the water is always in the piping, the fire sprinkler system is always "on call". If fire breaks out, the air temperature above the fire rises and the sprinkler activates when the air temperature gets high enough. The sprinkler sprays water forcefully over the flames, extinguishing them completely in most cases, or at least controlling the heat and limiting the development of toxic smoke until the fire department arrives. Only the sprinkler(s) nearest the fire activate.

### Smoke will not activate sprinklers.

Sprinklers are so effective because they react so quickly. They reduce the risk of death or injury from a fire because they dramatically reduce the heat, flames and smoke produced, allowing people the time to

evacuate the home. Home fire sprinkler systems release approximately 10-25 gallons of water per minute. In a home without sprinklers, a fire is likely to grow to dangerous levels by the time the fire department is able to arrive.

In less time than it typically takes the fire department to arrive on the scene, sprinklers contain and even extinguish a home fire. That not only reduces property damage, it saves lives.

### How are they installed?

Sprinklers are installed by specially trained contractors who follow NFPA Codes and standards, as well as other local requirements.

The best time to install sprinklers is when you are building a new home or remodeling an existing home. Nationally, installing sprinklers adds about 1.0-1.5 percent to the total cost of construction. Installing sprinklers during remodeling, known as *retrofitting*, generally costs more and the cost depends on the existing structure. Many insurance companies offer a range of discounts for homeowners with sprinkler systems, making comparison shopping worthwhile.

### Debunking the myths

Unfortunately, there are many stubborn misconceptions about home fire sprinklers that make some homeowners reluctant to install sprinklers in their homes. These are the facts:

It is extremely rare for sprinklers to operate accidentally. The odds are 1 in 16 million that this will happen as a result of a manufacturing defect. In a typical home, water damage will be considerable less from unwanted sprinkler discharges than from other plumbing mishaps.

Cigar smoke and burned toast cannot cause a sprinkler to operate. Only the high temperature that results from a fire will activate the sprinkler.

All the sprinklers *do not* activate at once. This scenario may be common in movies and TV shows, but it just isn't true for residential fire sprinkler systems. Only the sprinkler closest to the fire activates. Ninety percent of the time, one sprinkler contains the fire.

Home fire sprinklers give you added protection from fire and peace of mind. Although most state and local codes do not require sprinkler systems in all homes, NFPA encourages the use of home fire sprinkler systems.

Ask your builder about installing sprinklers in your home. Free information for both builders and homeowners is available by contacting the nonprofit Home Fire Sprinkler Coalition at + 1 888 635-7222.

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