

Residential Fire

Frequently Asked Questions



What is a 13D system?

If your new house has a fire sprinkler system installed, chances are it is a 13D type system. 13D is the National Fire Protection Association's (NFPA) standard for the installation of fire sprinkler systems in one and two family dwellings and mobile homes. The standard was adopted by the NFPA in 1975 with periodic reviews and updates to allow for new technological breakthroughs.

How do sprinklers operate?

Fire sprinklers are individually heat-activated and connected to a network of piping with water under pressure. When the heat of a fire raises the sprinkler to its operating temperature, usually between 155-175°F (68-79°C), a fusible link or glass bulb will activate only that sprinkler over the fire, thereby releasing water only directly over the source of heat. *(statistic per NFPA.org)*

Why are sprinklers so effective?

The key to keeping a fire from reaching potentially dangerous and life-threatening proportions is early detection. Fire sprinklers operate automatically over the fire origin, even if you're not home, releasing water directly over the source of heat.

Fire sprinklers keep fires small. In most cases, fires are controlled with one or two sprinklers. *(statistic per NFPA.org)*

Do sprinklers go off accidentally?

It is possible for a sprinkler to discharge accidentally but it rarely happens. In fact, if a sprinkler is not subjected to freezing, overheating, or mechanical damage, loss records show that only 1 in 16,000,000 sprinklers per year will open accidentally. *(statistic per NFPA.org)*

What about water damage?

Water damage due to sprinkler activation is often grossly exaggerated due to comparisons made to small fire losses thanks to the sprinklers.

Actually, the water discharged by the fire department is typically ten to hundreds of times greater than that discharged from the sprinklers. During a fire only the sprinkler(s) closest to the fire are activated limiting the total amount of water needed to suppress a fire.

How much does a 13D system cost?

A recent 2010 study by PHC News compared the costs of a sprinkler system in a 2,200 sq. foot home built in the mid-west.

- Equipment and installation of the sprinkler system ranged between \$1.66 - \$1.91 per sq. foot. *(per PHC News)*

We have smoke detectors, isn't that enough?

Industry statistics indicate that installing a smoke alarm in your home cuts your chance of perishing in a fire by 50%. Installing a residential sprinkler system increases your survival rate to 97%.

Your home needs working smoke detectors to warn you and your family of an impending fire, but the Watts Residential Fire Protection products offering can suppress a fire before it gets out of control. *(statistics per NFPA.org)*

Won't fire sprinklers detract from the beauty of my home?

Most residential sprinkler heads are fully concealed. Other heads protrude only 3/4 of an inch from the ceiling.

If I burn the toast will the sprinkler activate?

Sprinklers are activated by heat. Smoke from any source including cooking will not activate the sprinkler.

Will my sprinklers freeze in the winter?

The national installation standard provides guidance for proper installation in cold regions.

Since I have smoke alarms, why do I need fire sprinklers?

Smoke alarms are essential, but a residential sprinkler system will control the fire and allow occupants additional time to escape. The best protection from fire is to have smoke alarms and a residential sprinkler system as well as a fire escape plan.

Why are communities adopting the code for adding fire sprinklers to new construction?

A 2009 NFPA study estimates that U.S. fire departments responded to an average of 378,600 reported home structure fires per year during the four-year-period of 2003-2006. These fires caused an estimated average of 2,850 civilian deaths,

13,090 civilian injuries, and \$6.1 billion in direct property damage per year. More than two-thirds (70%) of the reported home structure fires and 84% of the fatal home fire injuries occurred in one or two family dwellings, including manufactured homes. The remainder occurred in apartments or similar properties.

Cooking equipment is the leading cause of home structure fires and home fire injuries, while smoking materials are the leading causes of home fire deaths. Roughly half of all home fire deaths result from incidents reported between 11:00 p.m. and 7:00 a.m. Twenty-four percent of all home fire deaths were caused by fires that started in the bedroom; 23% resulted from fires originating in the living room, family room, or den. Although smoke alarms operated in 52% of the reported home fires, no working smoke alarm was present in 63% of the home fire deaths. *(statistics per NFPA.org)*

What's the difference between PEX and CPVC?

Prior to the adoption of the NFPA 13D multipurpose piping, CPVC has been widely used in residential stand alone fire suppression systems. NFPA 13D multipurpose piping allows PEX products to combine your home's potable cold water plumbing with your fire suppression system.

PEX systems offer:

- Reliable and visual connections
- Flexibility resulting in tighter bend radius
- Fast and easy fitting connections
- Safe air testing
- Fewer fittings saving time and costs



A Watts Water Technologies Company



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