



Residential Sprinkler Systems

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Just The Facts

- Every 2 seconds a fire occurs in Canada. Every 21 seconds someone is burned, and every 55 seconds a home burns. (source: [Home-Safe Fire Protection](#))
- In 1992 almost 67,000 fires in Canada killed 400 men, women, and children and injured 3,859 people. 85% of these deaths and 64% of the injuries occurred in residential fires. (source: [Home-Safe Fire Protection](#))
- 8 out of 10 fire deaths occur in the home. Having both a smoke detector and a sprinkler system installed in your home reduces the risk of death by 82%. (source: [Home Fire Sprinkler Coalition](#))
- 21% of fire deaths in Ontario are children. (source: [Home-Safe Fire Protection](#))
- Sprinklers can respond to a flaming fire in as little as 35 seconds. (source: [Home-Safe Fire Protection](#))
- Over 400 lives could be saved per year in Canada if every house had a sprinkler system. (source: [The Cost of Residential Fires in Canada, There is a Better Way](#))
- Home sprinklers can contain and may even extinguish a fire in less time than it would take the fire department to arrive on the scene. (source: [Home Fire Sprinkler Coalition](#))
- Careless smoking is the leading cause of fire deaths, and adults over 65 are at greater risk because they're more likely to fall asleep while smoking. (source: ["Older People Need to be Extra Cautious About Fire Safety"](#))
- On average, 8 Canadians are killed and 68 injured each week by fire. (source: [Chief Life Line](#))
- The National Fire Protection Association (NFPA) has indicated the rate of fire-related deaths in manufactured homes is 2 1/2 times the rates of fire-related deaths in on-site constructed homes. The Loss of lives in homes where NFPA 13D residential fire sprinkler system has been installed is zero. The International Fire Chiefs Association (IAFC) also supports the establishment of a code requiring the installation of an approved NFPA 13D residential sprinkler system in all manufactured homes. The IAFC supports the use of residential sprinkler systems in all residential dwellings. For more information visit the [International Fire Chiefs Association](#) website.

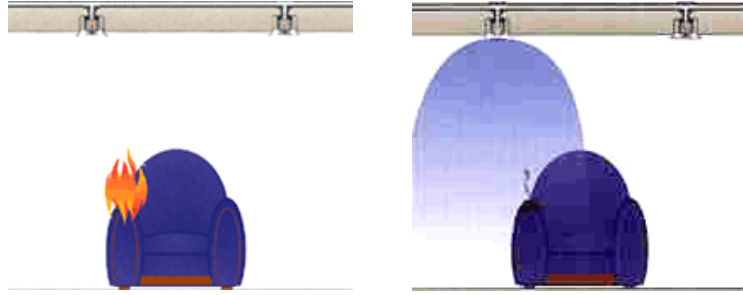
British Columbia has a Residential Sprinkler ByLaw.

How Do Sprinklers Operate?

A common misconception about Residential Sprinkler Systems is that they often cause more damage than a fire itself would cause. This myth stems from the belief that when one sprinkler head goes off, they all do. In fact, **just the opposite is actually true**. Residential Sprinkler Systems are designed so that during most fires, **only one sprinkler head is required to activate** to control a fire and the damage to your home is substantially less than the damage an uncontrolled fire would cause.

Each sprinkler head is connected by a 1/2" pipe system that runs throughout the home, usually concealed in the ceiling space. Sprinkler heads are heat activated and come in a variety of different styles designed to activate at different temperatures. Residential Sprinkler Systems usually incorporate sprinkler heads designed to activate at about 165° F. When the design activation temperature is reached, a "glass bulb" or a "fusible link" inside the sprinkler head senses the heat and releases the water that is being held under pressure in the pipes.

Once the water is released, it showers down on the heat source controlling the fire. Since activation of a sprinkler head requires it to be heated, only the head(s) above the fire are activated.



Why Do Sprinklers Work So Well?

Sprinklers are the most effective method of controlling fires due to the fact that they stop fires from spreading while they are still in their early stages. In addition, sprinklers minimize deadly [Carbon Monoxide Gas](#) which is the leading cause of fire deaths.

Quick response residential sprinkler systems are designed to control the spread of fire immediately upon detection. Many times they can even extinguish the fire completely before the Fire Department can even be dispatched, let alone arrive on the scene. Toxic smoke and fatal gasses often steal the ability for a 911 call to even be placed, not to mention the possible hurdles that firefighters may encounter on route. The ability for residential sprinkler systems to respond cannot be inhibited by traffic jams, snow storms, incorrect civic addressing or inadequate dispatch information.



Kitchen Fire WITH a Sprinkler



Kitchen Fire WITHOUT a Sprinkler

How Will A Sprinkler System Benefit Me?

Installing a residential sprinkler system combined with a working smoke alarm increases your family's chances of a safe escape in the event of a fire by 82%. (source: [Home Fire Sprinkler Coalition](#)). That about it...that's an **increased survival rate of 82% for you and your loved ones**. More often than not, those members of our families at the greatest risk of death or injury should a fire occur are those who require some assistance to escape. Young children, the elderly, those who are faced with physical and/or mental challenges and pets are all members of this high risk group. These groups are the least likely to be able to escape a burning building fast enough to save themselves. A residential sprinkler system is designed to control the spread of the choking toxic smoke, buying more time for escape.

Sprinkler systems not only have life saving benefits, installing a residential sprinkler system in your home can also **lower your insurance premiums**. Many insurance companies offer discounts to homeowners that have homes with fire sprinkler systems installed. The discount recommended in most provinces is 13%-15%. This discount is from the total homeowner's premium, not just the fire portion. (source: Residential and Quick Response Sprinklers). Having a sprinkler system in your house is also an attractive feature for future buyers.

What Will My Sprinklers Look Like?

Sprinklers are no longer the "ugly things hanging from the ceiling". Due to advances in sprinkler technology, sprinklers look better than ever, if you can see them at all. Sprinklers can be concealed in ceilings, out of sight until needed to extinguish a fire. They are **available**

in a wide range of sizes and colours to blend into the background of almost any room. These newer sprinkler systems are designed to blend in well with any decor.

[Click here to see home sprinklers installed.](#)

How Much Will My Sprinklers Cost?

While prices can be expected to vary within a geographical area, it is generally found that a fire sprinkler system for a typical single-family home with a good municipal water supply costs as little as \$1500 and \$2500. In 1989 the Joint Task Group, formed by the National Research Council in Ottawa, on Mandatory Automatic Sprinklers in houses, wrote their financial report. This report, made public in 1990, indicated the average cost of residential sprinklers, for new construction, would be \$1.00 to \$1.20 per sq. ft. with an adequate municipal water supply available. If no public water supply is available a stored water supply must be provided which will increase the system cost by about \$2500. Several companies market "packed" pump and tank systems. (source: F.Y.I. Residential and Quick Response Sprinklers, published by Canadian Automatic Sprinkler Association)

Do's & Don't For Your Residential Sprinkler System

Do:

1. Test your system monthly. (If your system is monitored by a fire service agency, be sure to notify them before testing the system. This will prevent sending a false alarm). Open the test valve and listen for an alarm bell. Once the alarm sounds, turn off the valve. If the alarm bell does not sound, contact a qualified fire sprnikler contractor.
2. Know the location of the system shutoff valve. Be sure all other adult occupants are aware of its location.
3. Make certain the system control valve is open at all times.
4. Have your system extended if your home is enlarged or remodeled. Contact a licensed fire sprinkler contractor. Submit plans to the local fire department or fire prevention division as required to secure a permit.
5. Contact the fire department when any activation occurs, even if the fire has apparently been extinguished.

Don't:

1. Don't paint the sprinklers.
2. Don't damage the sprinklers.
3. Don't hang objects from the sprinklers.
4. Don't obstruct the sprinklers.
5. Don't cover the sprinklers.
6. Don't remove the sprinklers.
7. Don't turn off or disconnect the system.
8. Don't shut off the system in the even of a fire.

In the event of a fire, be calm and leave your home immediately. Call the fire department from a neighbour's house.

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