

the future of **fire safety**
here today





UNDERSTANDING FIRE SPRINKLER PROTECTION FOR HOMES

Fire kills more people in the United States annually than all natural disasters combined. Ironically, most fire deaths occur in the very place where we feel safest — our own homes. Those at highest risk are very young children and older adults, who may have difficulty making a quick escape.

Fire sprinklers provide powerful protection from fire. They work automatically and immediately; before a fire spreads. Sprinklers put water right where it is needed, slowing or stopping the flames and poisonous smoke, so people can get out safely.

“Fire sprinklers give me peace of mind, especially at night when my children are sleeping.” SANDRA KUHN, HOMEOWNER, OREGON

The ideal time to install fire sprinklers is during new construction. Many homeowners opt to install, or retrofit, sprinklers when they remodel their homes.

You are at Greatest Danger from Fire at Home

According to the National Fire Protection Association (NFPA), eight out of 10 structure fire deaths happen in homes. Many people don't realize how fast a home fire grows and spreads from room to room. Too often, people think they'll have plenty of time to get out.

Home fire sprinklers can save your life if fire strikes. In fact, when fire strikes at home, it can become deadly in as few as three minutes. Most fatal fires take place at night when people are sleeping. Having fire sprinklers installed is like having a firefighter on duty 24 hours a day.

Watch a video that demonstrates how fast a home fire can become deadly at HomeFireSprinkler.org.

A Total System of Safety

Sprinklers are the ultimate home fire safety technology available today. Experts agree the most comprehensive protection from a home fire is a total system of safety:

- Prevention
- Early warning (working smoke alarms on every level)
- Quick Evacuation (well-planned and practiced home fire drills)
- Suppression (fire sprinklers)





Sidewall Sprinkler



Concealed Sprinkler



Pendent Sprinkler

HOW FIRE SPRINKLERS WORK

Fire sprinklers protect your home around the clock, automatically. The design and layout of fire sprinklers are unique to each home where they are installed. In most cases, fire sprinklers are connected to the household water main. If the water supply is from a well or if the water pressure is too low, a pump and storage tank may be needed.

Fire sprinklers are linked throughout the home by a network of piping, typically comprised of strong, noncombustible plastic pipe known as CPVC or PEX. Just like plumbing, sprinkler piping is typically hidden behind walls and ceilings. In unfinished basements, you may be able to see the piping in the ceiling; and it may be copper rather than plastic.

There are several types of fire sprinklers made just for homes. They can be installed on walls or in ceilings. Some sprinklers are concealed by a plate. Home fire sprinklers are much smaller than the types of sprinklers used in commercial properties and use much less water.

Heat Activates a Sprinkler, Not Smoke

Each sprinkler has a temperature-sensitive element and is individually activated by heat. Water flows from the sprinkler when the temperature reaches between 135°-165°F. In the vast majority of fires in sprinklered homes, only a single sprinkler will operate.

Smoke, cooking vapors or steam cannot cause home fire sprinklers to activate. Only the high temperature of a fire will operate the sprinkler.

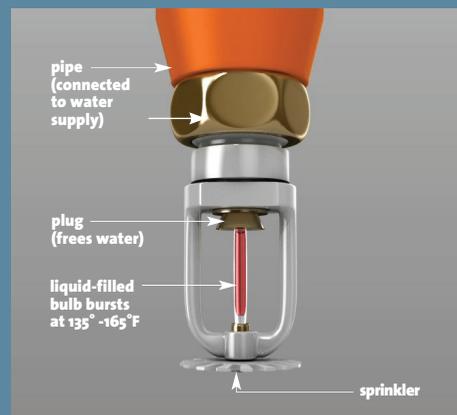
Maintenance is a Snap

Home fire sprinklers require very little maintenance. It's essential to keep the water valve turned on, so a simple visual inspection should be done routinely to ensure the valve is open. (Keeping the valve padlocked in the "on" position is a good idea.)

Inspect the pipes and sprinklers occasionally to make sure nothing is obstructing them.

A water flow test should be conducted on a regular basis. It's a simple test that can be done by the homeowner or a fire sprinkler contractor.

A SPRINKLER COVERS A MINIMUM 12 X 12 FOOT AREA. EXTENDED COVERAGE SPRINKLERS CAN COVER A MAXIMUM AREA OF 20 X 20 FEET.



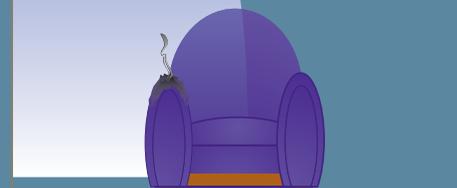
SPRINKLERS ARE LINKED BY A NETWORK OF PIPING, TYPICALLY HIDDEN BEHIND WALLS AND CEILINGS AND USUALLY DRAWING UPON HOUSEHOLD WATER SOURCES.



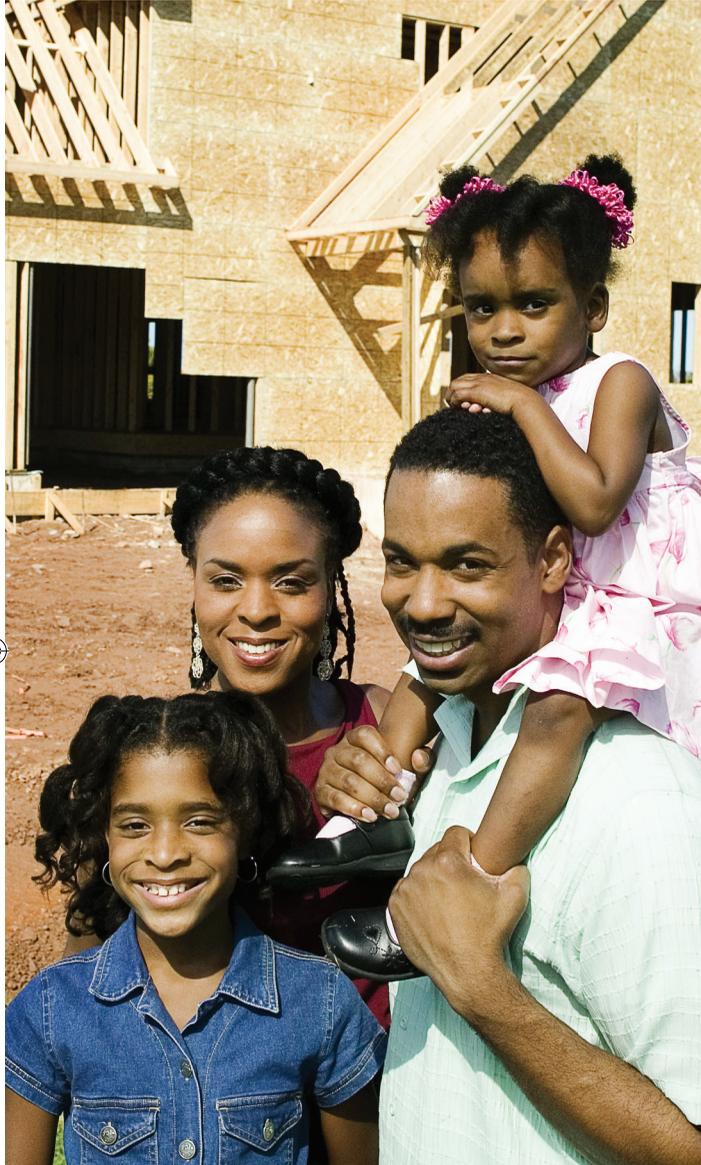
Each sprinkler protects an area below, and when heated by fire, activates.



Only the sprinkler closest to the fire will activate, spraying water directly on the fire.



“An electrical short started a fire in our house. That fire was so fast and furious. The sprinkler system activated immediately. Our house is still standing. We are all still alive including our pets.” JIM MCCOLLISTER, HOMEOWNER, ARIZONA



THE ADVANTAGES OF HOME FIRE SPRINKLERS

With Fire Sprinklers

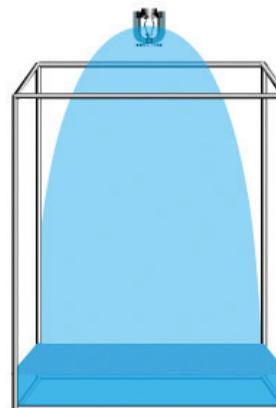
- The sprinkler closest to the fire activates
- Water contains or extinguishes fire
- Residents have time to safely escape
- Surrounding rooms are protected from damage

Fire sprinklers work so fast they often put out a home fire before the fire department arrives. Instead of launching a major fire suppression effort, arriving firefighters will simply turn off the fire sprinklers and mop up the water.

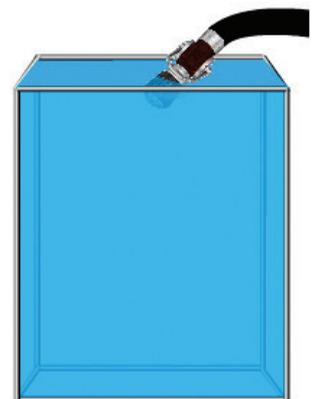
Without Fire Sprinklers

- Flames grow and move room to room
- Heat and toxic gases spread
- In as few as three minutes, the fire becomes deadly
- Flashover occurs and the gases and combustible materials burst into flames

It typically takes 9-12 minutes from the time a fire starts to the time the fire department arrives. In that time, the fire will be so advanced that firefighters will have to use high-pressure hoses, applying water at 250 gallons per minute. Even if the family is lucky enough to get out unharmed, the home will likely be lost and the family displaced.



Sprinkler - 25 Gallons of Water/Minute



Fire Hose - 250 Gallons of Water/Minute

Learn more about how home fire sprinklers work at HomeFireSprinkler.org.

HOME FIRE SPRINKLERS ARE A SMART CHOICE

Homebuilders know that homeowners are safety conscious. They want to protect their families and they want to secure their investment. That's why more and more homebuilders are offering their customers the option of installing fire sprinklers in new homes. Installing fire sprinklers is a smart choice. Unlike the many upgrades that are available in new construction – such as gourmet kitchen amenities, whirlpool tubs and high-end flooring – only home fire sprinklers can save your life if there is a fire. And, fire sprinklers also protect your home and your valuables. No other upgrade can do that.

Nearly 70% of homeowners believe having fire sprinklers increases the value of a home, according to a survey conducted by Harris Interactive. Nearly half say a sprinklered home is more desirable than an unsprinklered home.

Affordable Fire Protection

The cost to install fire sprinklers is rolled into a new home mortgage, as are the plumbing and electrical systems.

Sprinklered homes qualify for valuable discounts on homeowner insurance premiums. Discounts vary by company and by state, so shop around to find the best discount in your area.

The cost to install home fire sprinklers also varies by region. Nationally on average, the cost to install sprinklers is \$1.61 per sprinklered square foot. Retrofitting a home with sprinklers is typically higher. In many municipalities, increased installations have brought the cost down significantly.

Unmatched Peace of Mind

Home fire sprinklers are proven lifesavers. In Scottsdale, Arizona, sprinklers have been required in new homes since 1986. A 15-year study of fire loss in Scottsdale found that no deaths occurred in the fires that took place in sprinklered homes during the period; 13 people died in unsprinklered homes.

Fire sprinklers also protect property and valuables. The Scottsdale study showed that where fires occurred in sprinklered homes, there was less fire damage and less water damage from suppression. The average loss per sprinklered single-family home fire was \$2,166, compared to \$45,019 for the unsprinklered home fires.



HARRIS INTERACTIVE® SURVEY FINDINGS

- 59 PERCENT OF HOMEOWNERS SAY FIRE SAFETY IS IMPORTANT TO THEM.
- 69 PERCENT OF HOMEOWNERS BELIEVE HAVING A FIRE SPRINKLER SYSTEM INCREASES THE VALUE OF A HOME.
- 74 PERCENT SAY THEY WOULD BE MORE LIKELY TO PURCHASE A NEW HOME WITH SPRINKLERS THAN WITHOUT.
- 70 PERCENT SAY A SPRINKLERED HOME IS MORE DESIRABLE THAN AN UNSPRINKLERED HOME.
- 78 PERCENT OF HOMEOWNERS BELIEVE FIRE SPRINKLERS PROVIDE THE ULTIMATE PROTECTION FROM FIRE.

NATIONAL SURVEY CONDUCTED IN MAY 2014;
COMMISSIONED BY HFSC

“We’ve lived in a sprinklered home for 25 years – nothing has made us feel safer.” JAN AND RICH GRATTON, HOMEOWNERS, CALIFORNIA

Protect the Earth One Home at a Time

FIRE SPRINKLERS ARE GREEN

AN FM GLOBAL STUDY PROVED THAT FIRE SPRINKLERS ARE GOOD FOR THE ENVIRONMENT. IN A FIRE, FIRE SPRINKLERS:

- REDUCE GREENHOUSE GAS EMISSIONS BY 98%
- REDUCE FIRE DAMAGE BY UP TO 97%, WHICH MEANS LESS WASTE IS SENT TO LANDFILLS
- REDUCE WATER USAGE TO FIGHT A HOME FIRE BY AS MUCH AS 91% VERSUS FIRE HOSES
- REDUCE RUNOFF WATER POLLUTION

HOME FIRE SPRINKLER FAQs

If one sprinkler activates, will they all activate?

No. Sprinklers activate independently; only the sprinkler(s) closest to the fire will activate. In most home fires, only one sprinkler is needed to control the fire.

If I burn toast, will the sprinkler activate?

No. Fire sprinklers do not respond to smoke; they respond to the high temperature of a fire at about 135° to 165°F. Smoke caused by cooking or cigars cannot and will not cause a sprinkler to activate.

Will my sprinklers leak?

Sprinkler mishaps are generally less likely and less severe than conventional home plumbing system problems. Choose an experienced residential sprinkler contractor to install your fire sprinklers. Contractors follow national installation standards, which help ensure proper operation.

Is post-fire water damage from sprinklers worse than fire damage would be without sprinklers?

Fire damage and water from high-pressure fire hoses are far greater. A residential sprinkler flows 10-26 gallons of water per minute, for approximately 10 minutes (or less if the fire department turns the water off sooner). An uncontrolled fire will cause far greater fire destruction and smoke damage, requiring a tremendous amount of water from fire department hoses – more than 10 times the water per minute. The property loss in a sprinklered home fire is typically only a fraction of the loss in an unsprinklered home fire.

Won't the fire department be able to put out the fire and save my things?

From the time the fire starts, it typically takes about nine to 12 minutes for the fire department to arrive. In that time, an uncontrolled fire will have grown and spread throughout the home, causing tremendous smoke and fire damage before the fire department can get there.

Will my sprinklers freeze in the winter?

Freezing is not a problem with proper installation. The national sprinkler installation standard provides guidance for proper installation in cold regions, including appropriate additional insulation and moving fire sprinklers to interior walls.



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

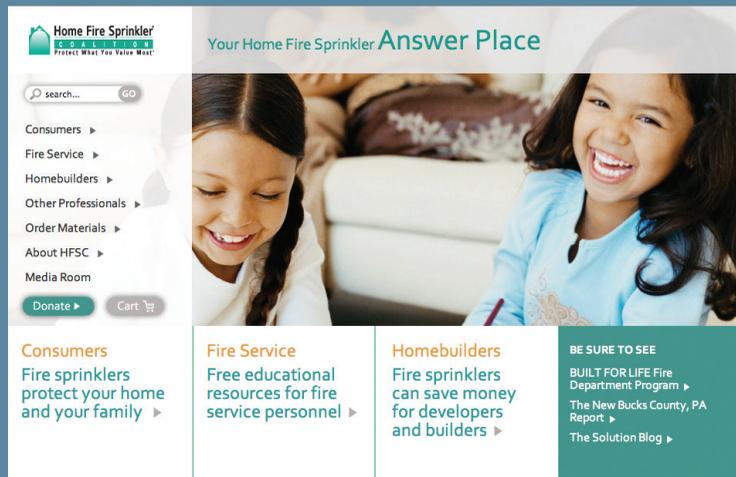
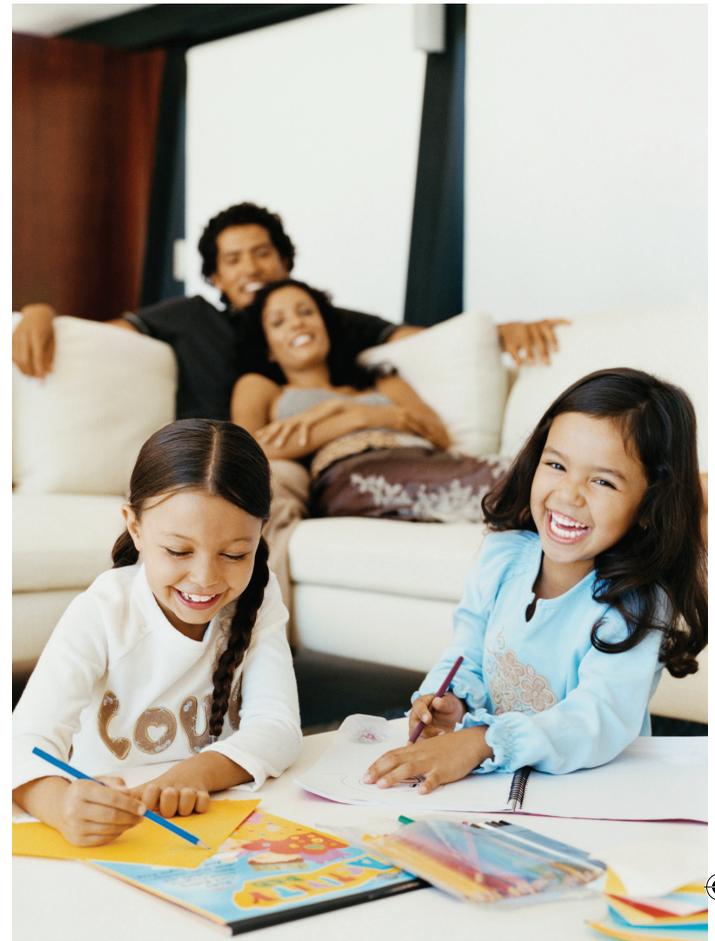
Smoke alarms are essential in every home, but they can only detect a fire. To be effective, residents must be willing and able to respond quickly to the alarm. Only fire sprinklers can detect the fire and automatically control or extinguish it, paving the way for residents to make a safe escape – and also protecting property and valuables. The best protection from fire is having both smoke alarms and fire sprinklers.

Are fire sprinklers difficult to maintain?

No. Home maintenance is simple. Regular flow tests should be conducted and homeowners can do these simple tests themselves or have the sprinkler contractor do it every year or so.

FREE RESOURCES FOR HOMEOWNERS

The Home Fire Sprinkler Coalition (HFSC) is a national, nonprofit organization dedicated to educating the public about the value and availability of fire sprinkler protection for homes. HFSC works with fire departments, local officials, sprinkler contractors and others to help increase awareness of home fire safety.



YOU CAN LEARN MORE ABOUT HOME FIRE SPRINKLERS ON THE NONPROFIT HOME FIRE SPRINKLER COALITION WEBSITE, **HomeFireSprinkler.org**, INCLUDING:

- ANIMATED FIRE SPRINKLER FEATURES
- COMPARISONS OF HOME FIRES WITH AND WITHOUT FIRE SPRINKLERS
- CHECKLIST FOR INSTALLING SPRINKLERS IN YOUR HOME
- HOW TO TALK TO YOUR BUILDER ABOUT INSTALLING FIRE SPRINKLERS
- HOW TO CHOOSE A QUALIFIED SPRINKLER CONTRACTOR

THERE IS NO COST TO DOWNLOAD THE MATERIALS FROM HFSC'S WEBSITE.

FOR ADDITIONAL INFORMATION, CONTACT YOUR LOCAL FIRE DEPARTMENT'S PUBLIC EDUCATOR.



HFSC MEMBERS



State Farm



FEMA



Home Fire Sprinkler
COALITION
Protect What You Value Most™

HomeFireSprinkler.org

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