



A smoke alarm is one of those amazing inventions that, due to mass production, costs practically nothing. You can get an effective smoke alarm for as little as \$7. And while they cost very little, smoke alarms save thousands of lives each year.

Minnesota law requires every home to have at least one smoke alarm per level. In new construction, a smoke alarm must be installed in each sleeping room and in a point centrally located in the corridor. These alarms must be interconnected.

All smoke alarms consist of two basic parts — a sensor to sense the smoke and a very loud electronic horn to awaken and alert people. This brochure includes information on different models of the two most common types of smoke detectors: photoelectric detectors and ionization detectors.

In the U.S., roughly 80 percent of fire deaths result from fires in homes without working smoke alarms.

In fact, *half* of home fire deaths occur in the six percent of homes without smoke alarms!



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SELECTING A SMOKE ALARM



**Technology
that
saves lives!**

TAKE A PERSONAL RESPONSIBILITY

Start by being aware of your needs when selecting a smoke alarm. A little research goes a long way when you are protecting your home and family. Smoke alarms can be electrically connected, battery powered, or a combination of both. Two power sources — and a pause feature to reduce nuisance alarms — are highly recommended for the best performance and protection.

Smoke alarm sensors

Ionization Alarms

An ionization smoke alarm uses a harmless, radioactive source that sets up an electric current in the detector chamber. When smoke enters the chamber; the unit senses the change in the electric current and sets off the alarm. Studies have shown that ionization detectors are better at detecting small, invisible particles that are typically produced by fast, hot, flaming fires such as grease or flammable-liquid fires.

Photoelectric Alarms

Photoelectric alarms sound when the smoke is dense enough to deflect a beam of light. Studies have shown that photoelectric detectors are better at detecting larger, visible smoke particles that are more commonly produced by slow, smoldering fires, such as couch or bedding fires.

Both types of smoke alarms have been shown to be effective in detecting typical residential-type fires.

In cases where smoke detectors are subject to frequent false activation due to cooking, smoking or similar causes, the State Fire Marshal encourages the use of photoelectric smoke detectors, as they are less susceptible to false activation.

Smoke Alarm Types

Battery powered:

A battery-powered alarm is a basic smoke alarm with a hinged-cover that opens for easy battery replacement without removing the unit from the ceiling. Many features are available, including an “escape light” to illuminate a path to safety when the alarm sounds. A Silence/Test button tests alarm functions and silences nuisance alarms.

AC powered:

An AC powered (hardwired) smoke alarm. A Test/reset button tests alarm and resets the memory. It may have inter-connect abilities and other features.

AC powered with battery back-up:

A120-Volt, AC powered smoke alarm with battery back-up for single- or multiple-station use. It may include a false alarm control feature that allows the user to quiet an unwanted alarm for up to 15 minutes.

Dual sensor:

This alarm detects both smoldering and fast-flaming fires. Some have extra features including a remote-control to test or silence the unit without getting on a ladder or chair.

“Voice” Smoke & Carbon Monoxide:

A step forward from early combination CO and smoke detectors, with no need to decipher color codes. This unit’s voice alarm tells you the location of the unit and whether you’re dealing with smoke or CO.

Wireless Interconnect:

These smoke alarms enable families to quickly and easily install an interconnected smoke alarm system throughout the home without messy wiring or labor. The battery-powered units are linked, so that when one alarm sounds, it will trigger all to sound. In addition to providing protection to any room in your home, the wireless smoke alarm also can be placed in a detached workshop or shed and linked into the home’s system.

Voice Programmable:

This innovative smoke detector allows you to record escape instructions in your own voice. In case of a fire, this alarm will alternately sound a warning tone and play your message to help guide children to safety.

Special considerations

Smoke Alarm for Hearing Impaired

If you or someone in your home is hearing impaired, your home should be equipped with smoke alarms that have a flashing light powerful enough to wake up a sleeper who may not hear an audible alarm, although an 85-decibel alarm is also included. Some models also include vibrating devices for extra warning.