

# Q & A: Arc Fault Circuit Interrupters

Now more than ever, our homes are being dramatically transformed by in the introduction of new electrical devices. Unfortunately, the electrical systems of many existing homes are simply overwhelmed by these modern electrical demands, putting them at greater risk of arc faults and arc-induced fires.

## *What is an arc fault?*

- An arc fault is a dangerous electrical problem caused by damaged, overheated, or stressed electrical wiring or devices.
- Arc faults can occur when older wires become frayed or cracked, when a nail or screw damages a wire behind a wall, or when outlets or circuits are overburdened.

## *Is this a common problem?*

- More than 56% of the nearly 51,000 home electrical fires that occur in the U.S. each year involve arcing of home electrical equipment. These fires result in more than 1,000 deaths and injuries and more than \$700 million in property damage.

## *What are arc fault circuit interrupters, or AFCIs?*

- AFCIs are devices that replace standard circuit breakers in your home's electrical service panel.
- AFCIs offer greater electrical fire protection than traditional breakers because they are equipped with advanced internal electronics that detect hazardous arcing conditions and shut down the electricity before a fire can start.

## *Are AFCIs effective?*

- The U.S. Consumer Product Safety Commission (CPSC) estimates that AFCIs could prevent more than 50 percent of the electrical fires that occur every year.
- Beginning with the 2008 edition, the National Electrical Code (NEC) has expanded the requirements for AFCI installation beyond bedroom circuits to additional areas of the home, including dining rooms and family rooms.

## *How much do AFCIs cost?*

- These devices can be purchased at any local electrical distributor, hardware store, and home improvement center across the country for approximately \$35 each. Depending on the size of a given home, the cost for installing additional AFCI protection is \$140 - \$350.

## *Can I install them myself?*

- AFCIs should only be installed or replaced by a licensed, qualified electrician.

## *What does the TEST button do?*

- AFCIs should be tested after installation and once each month to make sure they are working properly.
- Follow the device manufacturer's testing instructions.
- If the device does not trip when tested, it should be replaced.

## *What's the difference between an AFCI and a GFCI?*

- The GFCI is designed to protect people from severe or fatal electric shocks while the AFCI protects against fires caused by arcing faults.