



Topping Your Chimney for Energy Savings

By Tom Lienhard, PE, CEM

Sitting in front of your home's fireplace on a snowy evening is the stuff of Norman Rockwell paintings, but do you know what could be going up your chimney? If you have an open wood-burning fireplace, it is your home's heat along with your energy dollars.

When in use a wood-burning fireplace draws a home's heated air up and out the chimney, then it drafts cold air back into the home. This can cause your home heating system to kick in which starts what could be an expensive cycle. According to the U.S. Department of Energy, as much as 24,000 cubic feet of air per hour is drawn out of a home with a roaring fire in an open fireplace.

The best way to save energy and keep warm air in your home is to use your open wood-burning fireplace sparingly in winter and not at all on very cold days. However, if you do use your fireplace in cold weather, make sure to set your thermostat between 50 and 55 degrees and close doors leading into the room. Also, install tempered glass doors and a heat-air exchanger that blows the warmed air back into the room.

What do you do about unwanted air exchange in your fireplace when you're not using it? Most importantly, make sure the fireplace damper is closed. Leaving a damper open is like having an open window in your home. Also, make sure the damper is functioning properly, meaning it closes completely and you can not feel a draft up the flue, and add caulking around the fireplace hearth.

However, a more efficient way to close off your chimney when it's not in use is with a rooftop damper. As the name implies, these are mounted on a roof rather than in the "throat" of a fireplace. Rooftop dampers provide a tighter, more energy efficient seal to outside air and can help manage your energy use; however, they should never be used with natural gas fireplaces or with fireplaces that have any other combustion devices that use the chimney for exhaust. For example, some older homes may have a natural gas furnace that uses the chimney flue to exhaust furnace gases. Like natural gas inserts, wood pellet stoves and wood inserts are designed to be energy efficient and would not benefit from a rooftop damper.

Make sure to work with a trained professional on selecting and installing the rooftop damper best suited for your home. Also, make sure that your home improvement project does not violate building code requirements.



Regardless of how you heat your home, if you use any fossil fuels, make sure you have a carbon monoxide detector (CO monitor) and follow the manufacturers directions for where to place it in your home.

Some electric and natural gas utilities offer rebates and incentives for customers making energy efficiency upgrades to their home or business. It could pay to find out what your energy provider offers.

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