



 Your Safety...
is the heart of our business! ©

Vent Free Gas Fireplaces

Article by Tom Quinlan©

The first vent free fire was invented in a cave long, long ago.

The story goes that a very popular family from prehistoric times did not make it to the morning tribal meeting. A group of concerned tribal members went looking for their friends. As they entered the cave of their friends they found them all dead. After some very primitive investigation, the tribal members found the cave to have some black dust on the ceiling and walls. They named this dust 'soot'. They concluded this soot must be accompanied by a silent killer they called 'Carbon Monoxide'. The next morning the tribal leaders told the entire community that all fires must have a way to breath. They called the breathing mechanism a 'chimney'. Until modern times all tribes around the world vented their fires. Today we have marketing experts who say our forefathers were wrong.

Throughout our world we have numerous examples of the importance of venting. We humans vent, plants vent (give off carbon dioxide), and anything that combusts also vents. How is it then possible to have a 'vent free' gas fireplace in your home?

As a gas fireplace technician with 21 certifications and over 45,000 gas fireplaces personally serviced in 17 years, I have never come across a situation where a vent free gas fireplace and a good home environment co-existed.

The manufacturers of these vent free gas fireplaces claim that a device called an 'Oxygen Depletion System' is protecting us. The function of the ODS device is to shut off the fireplace if the oxygen level of the room drops below 17.5%.

Actually, what the ODS device does is to keep the gas fireplace venting into your home until the unit itself has only 17.5% oxygen. How then does this gas appliance that is being provided all the oxygen it needs with an opened window ever run short of oxygen and shut off?

When humans sleep (this includes infants, the elderly and those with respiratory problems) our breathing slows down and our need for oxygen slightly decreases, whereas a fire in your vent free gas fireplace gets hotter and demands **more** oxygen. The fireplace that is being supplied all of the oxygen it needs will outlast a sleeping human being!

A serious technical shortcoming of the ODS is that **THERE IS NO WAY TO FIELD TEST THIS DEVICE!**

I was told by a fireplace manufacturer that in 40 years there has **never** been a defective ODS device and that its perfect record **eliminates any need to field-test these devices**. Can we really believe in the assumed perfection of a piece of fireplace hardware to keep us and our family safe?

A scientific question I have for this industry is how does a gas fireplace that is being fed oxygen (you're instructed to always open a window when burning this fireplace) ever get less than the 20.9 % of oxygen? The barometric pressure of the Earth stabilizes the oxygen at 20.9%, with nitrogen making up another 78.1 % with a remaining 1% of trace elements in the air. With a window opened to provide fresh oxygen, why would a ODS device ever need to shut off? The fireplace then continues to vent in the house leaving our children's bedrooms contaminated with carbon monoxide, five different acids and the out-gassing of the fiber logs in the fireplace.

As for the general safety aspects of a vent free gas fireplace, here are a few things to consider:

1. You need to leave safety instructions openly displayed for all that would use the unit when you are out of the home such as the baby sitter, house cleaning service or relatives.
2. The decorative logs cannot be moved from the manufactures position or mass amounts of carbon monoxide will spill into your home.
3. The Oxygen Depletion Sensor cannot be tested in your home to determine if it is functioning properly.
4. The manufacturers advise us to install a Carbon Monoxide detector in every room. These devices are only a little better as the ODS device and neither of them will detect the acids we are breathing.

A few safety tips for your vent free gas fireplace:

1. Any amount of soot in the firebox or logs is potentially lethal.
2. If the pilot is not burning, there is a good reason why. Protect yourself, do not use the fireplace.
3. Discoloration of the mantles or surrounding area is not acceptable.

Symptoms of Carbon Monoxide poisoning are:

1. Mild headaches
2. Fatigue
3. Nausea
4. Dizziness
5. Flu-like symptoms

Sources of information for this article came from;

Physiological Effects of Reduced Barometric Pressure, Wayne State University School of Medicine	Newtron Products Company
U.S. Environmental Protection Agency	MSNBC TV News
United States Air Force	Popular Science
Energy Efficient Building Association	Xcell Energy
Lance O'Hearn of Markham, Ohio	American Gas Association
The Journal of Light Construction	Canada Safety Association
	International Approval Services
	American National Services

Quinlan Gas Fireplaces, Inc. PO Box 2589, Littleton, CO 80161
info@quinlangasfireplaces.com 303-946-6535

