FAQ: Gas logs co emissions

A: Vent free gas appliances have an ODS (oxygen depletion sensor). If the oxygen level drops to a 18% level (from a normal of 20.9%), the set shuts down. The vent free gas logs use the same technology as the vent free wall space heaters that have been around for several years. Do they produce CO (Carbon Monoxide)? The answer is yes, they produce trace amounts. Ours sets produce about 9.5 PPM (parts per million). the AGA code for vent free gas heaters and logs is 20PPM. A gas range is 400PPM. And a cigarette is 800PPM. So yes they do, but not a harmful level. Note on safety, there has never been a fatality with a gas appliance due to a faulty ODS and there are more than 10 million operating in the United States and more than 50 million in use world wide.

Q: I've had unvented gas logs for about five years. Same room, same fireplace. I re-lit the pilot light this fall. It burned fine. The next day we noticed the pilot light was off. I shut them off, the pilot light stayed on. For a few minutes. What can be causing this?
A: The pilot on a vent free is part of the ODS assembly. Yours is just dirty. Take a can of compressed air and blow the dust out. The pilot must be OFF. The ODS is where the pilot flame comes out. Go to the back of the ODS, you will see one or two holes, blow the compressed air in there. Then blow down the barrel of the ODS.

Q: What building code groups permit the installation of listed vent free gas products?
A: National Fire Protection Association (NFPA-54), Building Officials and Code Administrators (BOCA), Southern Building Code Congress International (SBCCI), Council of American Building Officials (CABO), Both the International Mechanical Code (IMC) and International Fuel Gas Code (IFGC) permit the installation of listed and labeled vent free gas products and specify that the product be used as a supplemental heating source. Answer provided by the Vent-Free Products Alliance Brochure - 2002.

Q: How does vent free gas logs affect indoor air quality?
A: Safe Indoor Air Quality. Extensive independent testing has verified that vent free gas appliances meet or exceed the nationally recognized guidelines for indoor air quality, even for the sensitive populations, such as children, pregnant women, and the elderly. Vent free products are tested by independent appliance testing laboratories to assure they comply with ANSI Z21.11.2, a standard established under the auspices of the American National Standards Institute. This standard is maintained by a committee whose members include utilities, manufacturers, government agencies, code officials, and consultants. The committee has removed from the standard all language concerning sensitive populations because of vent free products' excellent health and safety record over the past twenty years. Answer provided by the Vent-Free Products Alliance Brochure - 2002.

Assertion: There are concerns about Carbon Monoxide (CO) emissions from vent-free appliances, especially in households with children, pregnant women, and elderly people.
Fact: The effects of vent-free products' emissions on sensitive populations were tested in the extensive independent study. This research used as its criteria the recommended maximum levels of CO as set by the Consumer Product Safety Commission (CPSC), with sensitive populations - such as children, pregnant women and the elderly - as the benchmark. The results of the research proved that vent-free gas heating products preformed well within the CPSC guidelines for Carbon Monoxide and all other indoor air quality guidelines by OHSA, NIOSH and ASHRAE. Fact provided by the Vent-Free Products Alliance Brochure - 2002.

Assertion: There is nothing to prevent a thrifty homeowner from using a vent-free gas heater as a sold heat source.
Fact: Surprisingly, there are homeowners who improperly use even their cooking ranges as a sole heat source. The fact is, consumers must be informed on how to use any new gas appliance in the home. All

major building codes categorize vent-free products for supplemental use and require that a primary source of heat (e.g., a furnace) be present in the home before a vent-free product can be installed. It is clearly stated in the operating instructions of every vent-free appliance that vent-free gas products are only to be used for supplemental heating. Fact provided by the Vent-Free Products Alliance Brochure - 2002.

Assertion: If a customer buys a vent-free gas appliance, it is necessary to purchase a quality Carbon Monoxide detector as well.
Fact: All homes, whether their energy source is electric, gas, wood, or oil, should have a listed Carbon Monoxide (CO) detector. Primary sources of CO concern are automobiles, indoor grilling on hibachis, and gas appliances that have not been properly maintained. The independent research study on vent-free products concluded after extensive testing that CO emissions from vent-free gas products are well within nationally recognized indoor air quality guidelines, even for sensitive populations. Fact provided by the Vent-Free Products Alliance Brochure - 2002.

Assertion: Ceiling fans should not be installed in rooms with vent-free fireplaces.
Fact: Ceiling fans may be used to help distribute heat, however, fans should not be allowed to blow directly into the fireplace to avoid drafts that alter burner flame patterns, which can result in sooting. Fact provided by the Vent-Free Products Alliance Brochure - 2002.

Q: Do vent free gas appliances produce water?
A: Some people may be surprised to learn that vent-free appliances produce water. This occurs naturally by burning a combination of gas and air. The water is in the form of a vapor rather than a liquid. You can't see it with your eyes. During cold months of the year, the relative humidity - the percentage of water vapor in the air - is low. You've probably experienced a scratchy throat caused by the dryness inside a home during the winter. Health studies have shown that increasing the indoor relative humidity results in a reduction of respiratory illnesses. AHAM, the trade association for the humidifier industry, recommends a 60% indoor relative humidity. Answer provided by the Vent-Free Products Alliance Brochure - 2002.

Q: We would like to purchase a set of non-vented firelogs to use with our Heatilator fireplace insert. What we need to know is: a. Can the non-vented firelogs be used with a Heatilator insert? We have gotten conflicting information on whether this is safe to do or not.
A: The question is due to the terminology. A "Heatilator" is a masonry fireplace form with an open front. An "insert" is a wood burning stove inserted into a fireplace. It has air tight doors and could pose an explosion hazard if gas logs were used. If you have an open front fireplace, capable of burning wood, you can use vented gas logs. The Heatilator company does not allow vent free gas logs in their prefab fireplaces.

Q: We are on a Propane fuel system. What brands and models of gas logs would you recommend?
A: All of mine are fine for propane. Be sure to specify when ordering so the right gas valve and burner will be ordered. You must use the safety pilot option on propane (LP) gas.

Q: If I buy a vent-free set of gas logs in the ceramic fiber material, can I add some fiber looking embers and pinecones, etc. at my discretion. Or if I have an old set can I place an old log just on the hearth floor for added realism?
A: You cannot alter or add to the log set in any way. To do so could cause carbon monoxide. These type of materials can be used around the outside of the log set for decoration, but not on the set.

Q: Are the unvented gas fireplaces safe? We are planning a new home and they certainly look attractive but I just feel very uncomfortable not venting combustion products. Besides the safety factor, I would appreciate other comments on how well they work, etc. I really want a wood stove (we had one 20 years ago) but my wife doesn't like the mess. I have to admit that the convenience of gas (over wood) sure makes them look attractive.
A: All of the vent free fireplaces meet AGA (American Gas Association) approval. There are several

factors involved. Vent free gas log put out a lot of heat. This may mean you cannot run your logs for long periods due to the heat output. A vented fireplace with vent free gas logs makes more sense to me. Then, your future options are endless. You could change to wood (you said you like a real fire), you may want to go with the very realistic vented gas logs. If roof venting is not possible, take a look at direct vent units. The flue gasses go out the back through a horizontal flue, the combustion air is pulled around this pipe. This makes the unit sealed from the outdoors. It works very well in tight houses and is approved in bedrooms in many areas.

Q: If one uses a vent-free gas log in a fireplace during a power outage in the winter with the chimney flue closed as recommended, what protects the household from CO buildup and poisoning?
A: The ODS (Oxygen Depletion Devise) does not require power to operate. It will shut off the gas to the appliance when the oxygen in the room drops from 20.9% to 18%. This is a long ways from harmful levels of CO.

Q: Why are vent free gas logs not allowed in a bedroom? Why? I thought they were "safe" to use anywhere.
A: We now have a unit that can be installed in a bedroom. Click here and look at the G8 series. The new AGA (American Gas Association) standard allows for a few approved vent free units to be placed in bedrooms. They must produce less than 10,000 BTUs. Check your local building code.

Q: I am interested in gas logs for my fireplace, and think I would like the vent free kind to prevent heat loss up the chimney. I don't understand how they can be unvented and not present a carbon monoxide problem. Can you clear this up for me?
A: Vent free gas appliances have an ODS (oxygen depletion sensor). If the oxygen level drops to a 18% level (from a normal of 20.9%), the set shuts down. The vent free gas logs use the same technology as the vent free wall space heaters that have been around for several years. Do they produce CO (Carbon Monoxide)? The answer is yes, they produce trace amounts. Ours sets produce about 9.5 PPM (parts per million). the AGA code for vent free gas heaters and logs is 20PPM. A gas range is 400PPM. And a cigarette is 800PPM. So yes they do, but not a harmful level. Note on safety, there has never been a fatality with a gas appliance due to a faulty ODS and there are more than 10 million operating in the United States and more than 50 million in use world wide.

Q: I have heard that vent free gas logs produce water. Is this true?
A: Vent free gas logs produce one quart of water per hour on high. You can crack the damper to let it out the chimney. Most houses like the additional water, but it can become a problem in very well insulated houses. A de-humidifier will take care of it (needed less than 1% of the time).

Q: I have heard that a hood must me used on vent free gas logs. Can you elaborate on the requirements of this hood, like how big and where to put it?
A: The hood is used if the mantle is too close and could overheat. Most of the time it is needed if the mantle is closer than 28" to the firebox opening. It also matters how far out the mantle extends. The less it extends the closer to the firebox opening it can be. The hood is about 4" wide and is available in black or polished brass. The hood goes at the top of the firebox opening.

Q: I have odors coming from our vent free gas logs. Each time we've noticed the odor, it has been while paint has been being applied to the wall. All we can figure is that the vapors from this stuff interact in some way with the gas generated fire and that reaction causes a pretty stinky odor. Any of that sound reasonable?
A: You are correct. The flame processes all impurities in the air. Other items that smell when processed: pet hair, carpet fiber, extreme dust, paint, soot inside firebox, etc.

Q: Is there any maintenance on vent free gas logs that needs to be done on a regular basis?
A: Maintenance for the most part can be done yourself. Just good housekeeping! Take the logs off the

burner. Take a brush (1-2" paint brush with all but 1/2" of the bristles taped up works good) and clean the burner ports. Clean the air intake. Clean everywhere that there is dust, pet hair, carpet fuzz, etc. There should be no soot on the burner at all. Make sure that nothing has changed with the set. Like extra logs or pine cones, or the logs positioned wrong. The pilot on a vent free is part of the ODS assembly. It gets dirty over time. Take a can of compressed air and blow the dust out. The pilot must be OFF. The ODS is where the pilot flame comes out. Go to the back of the ODS, you will see one or two holes, blow the compressed air in there. Then blow down the barrel of the ODS. Read over the installation instructions again and be sure everything is correct. Or call a gas fitter to perform the maintenance and perform a CO test.

Q: Are vent free gas logs legal in all states?
A: They are not legal in all states. California does not allow them at all. Other states have different restrictions. Some states do not allow them in commercial buildings. Nationwide they are not allowed in recreational vehicles. Check with your local building code official, ask him what restrictions, if any, are placed on "vent free gas space heaters". Your answer will be the same whether you are installing : a vent free wall hung gas space heater, a vent free gas stove, or vent free gas logs.

Q: I just bought an old house and the fireplace hadn't been used in years. I called a chimney sweep (who's also a firefighter) to clean it for me. He said there was no point because it's an old "Shaker coal firebox" and the chimney's all full of junk (bird's nests and stuff). So, I said, "OK, I'll just put in a vent-free decorative gas log set." He said, "Don't do that. It must be vented." I said, "V-e-n-t-f-r-e-e. That means, no venting needed." He said, "I wouldn't do that." I don't want to kill my family, but I he couldn't explain what the concern is. I've read all about ODS sensors and stuff. Is there anything to worry about if I just seal off the fireplace and put the vent-free unit in? Oh, also, the firefighter was very concerned about the distance from the firebox to the mantle. It is very short, say 6-10 inches. Is that a problem? Would a fireplace hood be appropriate?
A: I sounds as if your chimney sweep was not certified. He does not appear trained in servicing fireplaces. "Birds nests and stuff" - The chimney swifts nest is so small it can fit in the palm of your hand. They pose no fire hazard. "Stuff", I can only guess! Gas logs, both vented and vent-free require a working wood burning fireplace. The mantle could be a problem, even with a hood. If your fireplace is unsafe for a wood fire, it is unsafe for a gas fire. Call a certified sweep and let someone qualified and trained inspect your fireplace.

Q: Now, explain to me why on earth you'd need a working fireplace with a vent free system? Do you see the obvious confusion I have? You guys even sell mantles that you just push against the wall and then put the logs in there. I mean, maybe my dumbness is caused by not understanding what "working" means. Is the fake fireplace setup called a "working fireplace"?
A: It is confusing. The problem is the building codes and the NFPA (National Fire Protection Association). There is no code for a fireplace without a chimney. Therefore the vent-free gas logs must be put into a vented fireplace, but you can close the damper. No one is willing to go out on a limb and say that 2", 4", or even 20" of masonry over the top of the fireplace is safe. How long would a fire have to be going before heat would transmit, a day, week, month, etc. The AGA (American Gas Association) and building codes allow a tested and approved pre-fab firebox to be used, hence the box that can slide back into a wood wall.

Q: I was considering a gas log for one of my fireplaces and noticed that they have vent-free models. How well do these work? To me initially, they seemed kind of dangerous, but then I thought that gas stoves and ovens work without a vent. Is there a moisture problem? How is the look compared to a vented model? Is the amount of heat given off really that great? Can you run the ventless with the flue open at all? Maybe to take some of the spent air out?
A: Vent free gas logs put out a tremendous amount of heat, up to 40,000 BTUs into the room. The safety factor has been addressed by adding an ODS (Oxygen Depletion Device), all sets on the market have AGA (American Gas Association) approvals. Moisture can be a problem if you already have a moisture problem. If you currently have moisture on the inside of you windows, then you may need a de-humidifier. Vent Free gas logs put out up to one quart of water per hour. The average house has 5 gallons of water

in the air at all times. Looks, a vented gas log looks much better, but does not have the heating capability. There is a trade off to looks verses heat. Heating - yes it is that great with vent free. 40,000 BTUs is a lot of heat. Yes, we do recommend opening the damper when you want to see the fire and not have all the heat. The damper can be left open just a little and your get most of the heat into the room and let most of the moisture out of the house. Then, when it is very cold or in a power outage, close the damper entirely for maximum heat.

Q: I need to find several sets of logs that will fit in the fireplaces in my house. The house is 106 years old and three of the fireplaces are the old coal burning ones that are approximately 12 inches wide and 5 inches deep. I am looking for unvented gas logs. I am looking for something to give a little extra heat. The chimneys are not really usable that is why I want unvented logs.
A: The shallowest vent free I know of is Peterson's G8 at 9 1/2". Both vented and vent free gas logs require a working wood burning fireplace. Your fireplace would have to be brought up to working condition for use with either style of gas logs.