



Consumer Information on New FVIR Water Heaters

On July 1, 2003, a new voluntary safety standard for residential model water heaters sold in the U.S. went into effect. This standard requires that all new conventional (i.e. atmospherically-fired, natural draft vented) 30, 40, and 50-gallon residential gas water heaters incorporate new design features to make them resistant to igniting flammable vapors outside of the water heater. Water heater models incorporating these new design features are commonly referred to as Flammable Vapor Ignition Resistant (FVIR) water heaters. The new water heaters complying with this new standard represent the culmination of years of research to provide this safety feature for consumers. Power vented 30, 40 and 50-gallon models will follow suit by July 1, 2004 and the remaining water heater models (e.g. larger volumes and water heaters for manufactured homes) by July 1, 2005.

Though these new FVIR products provide for an additional level of safety, consumers should never store flammable liquids or other combustible materials near any gas-fired appliance. Everyday household products such as cleaning solvents, aerosols, paint thinner, and vapor from gasoline can ignite if they come in contact with an open flame from a candle, match or pilot light of a gas-fired appliance. Keep flammable products far from gas appliances, in tightly closed approved containers, and out of children's reach.



Some Frequently Asked questions about FVIR water heaters

What does FVIR mean? Flammable Vapor Ignition Resistant (FVIR) water heaters incorporate design features that make them resistant to igniting flammable vapors such as gasoline, cleaning solvents, and paint thinner outside of the water heater.

How does an FVIR water heater work? FVIR water heaters are designed to keep burning vapors inside the combustion chamber of the water heater until they burn out. A sensor inside the water heater will detect if it has ignited a flammable vapor from outside of the water heater and shut off the flow of gas to the burner and pilot light.

How can I tell if my water heater is FVIR? Each manufacturer will have its own particular label for indicating if the model is FVIR. In general, water heaters manufactured to the American National Standard ANSI/CSA Z21.10.1 are required to be FVIR according to the following implementation schedule.

Water Heater Model Type	Implementation Date
30, 40, and 50-gallon conventional gas-fired water heaters	July 1, 2003
30, 40, and 50-gallon power vented gas-fired water heaters	July 1, 2004
All other residential water heaters	July 1, 2005

What is ANSI/CSA Z21.10.1?

ANSI/CSA Z21.10.1, "Gas Water Heaters - Volume 1, Storage Water Heaters With Input Ratings of 75,000 Btu Per Hour or Less," is a voluntary performance, construction, and safety standard developed through the cooperation of representatives in the water heater manufacturing industry, gas utility industry, government, regulatory and testing agencies. All major U.S. water heater manufacturers make models to this standard.

If my water heater is FVIR, do I still need to worry about flammable vapors? YES. Flammable vapors are very dangerous and can be ignited from any number of sources. For this reason, you should never store or use any flammable liquids or combustible materials near a gas-fired appliance. Flammable liquids should only be stored in approved containers, and should be kept far from gas appliances and away from children's reach. Follow all safety precautions on the product label when using flammable liquids.

If my water heater is not FVIR, do I need to purchase a new one? No. Your current water heater is a safe and efficient design. FVIR provides an additional level of safety over older models related to ignition of flammable vapors. If installed and maintained properly, your water heater can last you many years. Remember to follow proper safety precautions when using or storing flammable liquids and combustible materials.

Can my older water heater be changed into an FVIR model? No. The FVIR design features took years of research to incorporate into water heater design. Incorporating this feature is not as simple as it seems. Any device that can restrict airflow into, or exhaust gas out of the water heater can lead to other safety issues such as incomplete combustion and excess production of carbon monoxide gas.

Is any additional maintenance necessary for my FVIR water heater? No, because GAMA recommends that gas-fired appliances be checked regularly for proper performance and maintenance by a professional plumber or HVAC technician. Your professional maintenance technician will check to make sure your water heater is operating properly, combustion air intakes and exhaust vents are free of obstructions, and control systems are properly adjusted.

What should I do if I suspect my water heater has ignited a flammable vapor? FVIR water heaters are designed to stop the flow of gas to the water heater if they ignite a flammable vapor from outside of the combustion chamber. Should this occur, contact a licensed plumber to inspect the water heater and reset the gas supply valve and pilot light. Do not attempt to re-ignite the pilot light yourself. Make sure the area near the water heater is well ventilated and the source of the flammable vapors has been removed.

How can I learn more? You can learn more about FVIR water heaters from the companies that sell them. You can find a list of water heater manufacturers on GAMA's website in the Consumers' Directory of Certified Efficiency Ratings at <http://www.gamanet.org/consumer/certification/certdir.htm>, or in GAMA's online membership directory, by selecting the Water Heater Division at <http://www.gamanet.org/member.cfm>.