



Guardian PowerVent Frequently Asked Questions

1. What is FVIR?

It means Flammable Vapor Ignition Resistant. A new ANSI (American National Standards Institute) standard will go into effect that will prevent a water heater from igniting flammable vapors outside the combustion chamber.

2. When does the new ANSI standard go into effect?

The ANSI standard Z21.10.1-2001 affecting PowerVent water heaters will go into effect July 1, 2006.

3. When will the new PowerVent product be available?

Rheem will start production of the new FVIR compliant PowerVent product on July 1, 2006. All units manufactured prior to that date are protected by a grandfather clause in the ANSI standard.

4. What products are being affected?

All PowerVent gas water heaters, both propane and natural gas, will have to meet the FVIR standard effective July 1, 2006.

5. What is the major change to an FVIR compliant PowerVent water heater?

To meet the new ANSI standard, the water heater must not allow flammable vapors from gasoline to be ignited outside the water heater.

6. How do you plan to do this?

Rheem is using its proven Guardian combustion chamber technology. It will be coupled with a sensor that will constantly monitor the local environment for hydrocarbons?

7. What is a hydrocarbon?

Hydrocarbons are the simplest organic compounds containing the elements (and only these two elements) carbon and hydrogen. The simplest hydrocarbon is methane (CH₄), one carbon atom bonded to four hydrogen atoms. When you are testing for flammable vapors, you would test for the presence of hydrocarbons.

8. How does the sensor operate? Under what conditions does the sensor react?

The sensor works similar to a smoke detector. The sensor monitors the local air around the water heater and absorbs hydrocarbons. When this happens, it will change its electrical resistance and provide a signal to the water heater controls.

9. Is the sensor replaceable?

The sensor design allows for replacement with a control module kit.

10. Does the sensor reset itself after exposure to flammable vapors?

No it does not. Once used and tripped due to a flammable vapor incident, the water heater must be replaced.

11. Does the sensor need servicing?

No. The sensor should operate correctly if there are no flammable vapors.

12. Is an override of the sensor possible?

No. The sensor is not able to be overridden or by-passed by a jumper in an attempt to defeat the system.

13. Does PVC glue or cleaning solvents have an effect on the sensor?

Yes, it does. PVC glue and cleaning solvents are extremely flammable substances and will affect the sensor if the vapors are allowed to accumulate or are in direct contact with the sensor. Make sure the installer has adequate ventilation when installing the heater and the heater is not energized until vapors have dissipated.

14. Is there any change to the way the water heater is installed?



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Not a bit. With the exception of an FV sensor, this unit operates closely to previous version of the PowerVent water heater. You will not have to make any special allowances for the installation of an FVIR compliant PowerVent water heater.

15. Will installing the heater in a drain pan affect the sensor reaction time?

No. FVIR tests have been conducted with the heater in a drain pan. The sensor reacts to the level of hydrocarbons in the environment.

16. Does moisture effect the sensor operation?

If the sensor is immersed or flooded with water it will trip.

17. What components are replaceable?

Nominal replacement parts are the blower motor, pressure switch, gas control valve, igniter, T&P valve, drain valve, dip tube and heat trap nipples.

18. Does moisture have an effect on the gas control?

The WIPER control circuit will be coated to protect it from moisture.

19. Is the system polarized?

The system is polarized, just as the previous 2 inch PowerVent.

20. Does the water heater need to be connected to a power surge protector or G.F.C.I.?

No it does not. In fact, it is best if the heater is not installed on a G.F.C.I. circuit or surge protector.

21. What are the risks if the Guardian PowerVent is connected to power surge protector?

Erratic lockout could occur on the part of the water heater or the circuit. There is a 10,000 volt DC spark when the unit goes to pilot and main burner; and a flame rectification circuit through the units grounded chassis. Either of these on a GFI or surge protector may cause unpredictable lockouts.

22. Are all the water heater manufacturers going to utilize the new sensor?

Rheem cannot speak for other manufacturers. We believe that the only safe solution for intermittent ignition systems is the use of a flammable vapor sensor couple with existing proven Guardian technology.

23. How do I get my heater back in operation in the event of an FV trip?

If you have any problems with your new Guardian PowerVent water heater, please call the technical service department at 1-800-432-8373.

24. Can you buy the old style (non-FVIR) PowerVent water heater after July 1, 2006?

Yes, you can. The ANSI standard prevents a manufacturer from producing the non-compliant water heater. Any product manufactured prior to the implementation date is grandfathered.

25. How much noise does the blower motor make?

The blower motor produces approximately 50 decibels of sound.

26. Do I need to put the Guardian PowerVent on an 18 inch stand?

No, however until the local building officials change their codes, you must always put a gas water heater on an 18-inch stand **if** the local codes tell you to. In accordance with paragraph 8.1.10.1 of the 2002 National Fuel Gas Code and paragraph 305.3 of the 2003 International Fuel Gas Code, this product does not have to be placed on an 18-inch stand if installed in a residential garage. Local (city, state, county) codes may override or apply. Please check them.

27. What are the venting requirements?



TECHNICAL SERVICE DEPARTMENT
Technical Service Bulletin
1-800-432-8373



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Depending on the number of elbows and turns, you may vent up to 50 feet with 2 inch pipe, or 100 feet with 3 inch pipe. You may use your choice of PVC (Foam core allowed also), ABS, or CPVC plastic piping.