



Hearth Products Controls

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From: **Hearth Products Controls**
RE: **Fire Ring & Fire Pit Testing**

Vented Decorative Appliances: Included in this category are appliances listed to two standards for products that offer a view of the flames however are not subject to AFUE testing requirements:

- 1) **ANSI Z21.60/CGA 2.26:** Decorative Gas Appliances for installation in solid-fuel fireplaces.
- 2) **ANSI Z21.50/CGA 2.22:** Vented Gas Fireplaces.

Document Number: ANSI Z21.50-2003/CSA 2.22-2003

Document Number: ANSI Z21.60-2003/CSA 2.26-2003

Title: Vented Gas Fireplaces

Title: American National Standard/CSA Standard for Decorative Gas Appliances for Installation in Solid-Fuel Burning Fireplaces

Scope:

This standard applies to newly produced vented gas fireplaces (See Part IV, Definitions), hereinafter referred to as appliances, constructed entirely of new, unused parts and materials, and having input ratings up to and including 400,000 Btu per hour.

Scope:

Details test and examination criteria for decorative appliances for installation in solid-fuel burning fireplaces for use with natural gas and propane. This appliance is defined as a self-contained, free-standing, gas-burning appliance designed for installation only in a solid-fuel burning fireplace and whose primary function lies in the aesthetic effect of the flame

Screen Friendly

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Publication Date: 7/10/2003

Publication Date:

Ansi Approved: Yes

Date file last updated on NSSN: 1/24/2006 12:34:06 PM

Date file last updated on NSSN: 1/24/2006 12:35:00 PM

SDO Approval Date: Not Available

SDO Approval Date: Not Available

ANSI Approval Date:

ANSI Approval Date: 7/10/2003

CSA

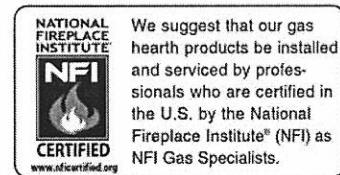
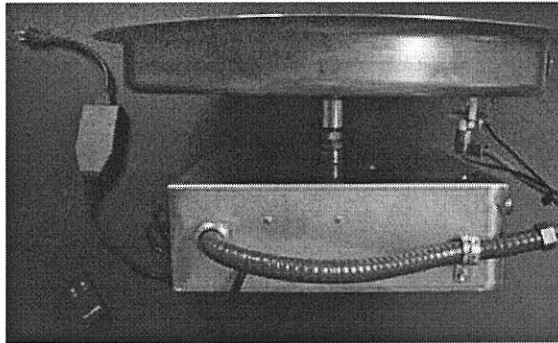
(CSA America, Inc.)



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DIRECT SPARK IGNITION FIRE PITS
(All Sizes....SS90 DSI, SS150 DSI & SS300 DSI)



WARNING: If the information in this manual is not followed, an explosion or fire could result causing property damage, personal injury, or loss of life.

We recommend that our products be installed and serviced by professionals who are certified in the U.S. by NFI (National Fireplace Institute) or in Canada by WETT (Wood Energy Technical Training). Installer must follow all instructions carefully to ensure proper performance and safety.

INSTALLATION PREPARATION

Please carefully follow the steps below when: 1) Selecting the Location. 2) Construction of the Enclosure. 3) Installation of the Complete Fire Pit. **It is the responsibility of the installer to follow all Local and State Codes concerning the installation and operation of the fire pit.**

The steps listed as **WARRANTY REQUIREMENT** must be strictly followed to qualify for product 3 year warranty. **Warranty will be void if not followed.**

1) SELECTING THE LOCATION:

WARNING: COMPLETE FIRE PITS ARE DESIGNED STRICTLY FOR **OUTDOOR USE ONLY**. HEARTH PRODUCTS CONTROLS CO. MUST BE NOTIFIED OF ANY OTHER USE.

WARNING: FIRE PITS CREATE VERY HIGH TEMPERATURES- IT IS VERY IMPORTANT THAT COMBUSTIBLES BE KEPT AT SAFE DISTANCES.

- **WARRANTY REQUIREMENT:** For installation of 110vac powered control systems, it is required to install a wall switch on the fire pit main power line away from the pit enclosure to prevent unauthorized ignition of the fire pit.
- **WARRANTY REQUIREMENT:** The fire pit location must accommodate a gas shut off outside of fire pit enclosure. The gas line should be a minimum of 3/4" or larger based on fire pit size.
- To enjoy your fire pit, select a well drained location that allows for sufficient clearance from combustible materials.
- Choose a location that allows easy access for installation and maintenance of the fire pit. Make sure that trees and shrubbery are well clear around and above the fire pit.

- Pick a location that allows sufficient horizontal room to enjoy the fire pit while allowing a safe distance from the heat and flame.
- Select a location where the fire pit can be attended during operation. Never leave an operating fire pit unattended or by someone not familiar with its operation or emergency shut off locations.
Wooden or solid surfaces such as granite or marble must be located far enough away that they do not reach a temperature of more than 100 degrees F plus ambient air temperature. **Example:** If surrounding air temperature is 70, the wood surface temperature must stay at or below 170 degrees F.

Complete Fire Pit with Valve box

Under Valve Box	6"
Sides Surrounding Fire Pit	14"
Above Fire Pit	96"

2) CONSTRUCTION OF THE ENCLOSURE:

WARNING: THERE MUST BE AN ELECTRICAL AND GAS SHUTOFF ON THE EXTERIOR OF THE FIRE PIT TO ALLOW FOR EASY ACCESS IN THE CASE OF AN EMERGENCY.

WARNING: ALWAYS USE PROPER MATERIALS AND CONSTRUCTION FOR GAS SUPPLY, POWER, AND ENCLOSURE.

- A template is provided with your fire pit that can be used to draw the I.D. of the enclosure. Simply trace the circumference of the template with a marking device to provide a visual aid, and then erect your stone or brick structure around the marking. The enclosure I.D. will be the size of your Complete Fire Pit + 1.25". Example: 25" Fire Pit + 1.25" = 26.25" enclosure I.D. If using installation collar (optional), the template can still be used.
- **WARRANTY REQUIREMENT:** The enclosure must be constructed on a stable surface. Make sure that the fire pit is high enough that the control box is above the grade to prevent water damage to the controls inside the box. **NEVER** install a fire pit below ground level. Drainage must be provided for the enclosure to prevent water accumulation leading to damage to components in the valve box.
- **WARRANTY REQUIREMENT:** The enclosure must incorporate a vent on at least one side at a minimum size of **18 sq. inches** (Example: 3"x 6" or larger) to allow heat within the enclosure to escape from void around valve box. Failure to do so will result in the fire pit automatically shutting down when internal valve box temperature reaches 175° F. This could lead to heat damage to internal components. **Some enclosures may require more ventilation based on material, size, and extended use.** This vent may work as a drain as well to prevent water build up in enclosure.
- **WARRANTY REQUIREMENT:** The interior void space of the enclosure surrounding the valve box cannot be filled with any material (gravel, crushed rock, concrete, etc.)- It is a requirement to have a **minimum of 6"** under the valve box for proper ventilation.
- Select materials that are non-combustible in both initial installation as well as over time.
- Make sure that the structure is level. We recommend the use of the installation collar (optional) that may be mortared into the surround.

3) INSTALLATION OF THE COMPLETE FIREPIT ASSEMBLY:

- **WARRANTY REQUIREMENT:** The fire pit assembly should be **recessed a minimum of 4"** from the top of the enclosure to protect flame from being blown out. Some areas may require more- 8" is not uncommon.
- **WARRANTY REQUIREMENT:** All firepits come with a 2' x 2' sheet of insulation between the pan and valve box to protect internal components from heat damage. This may need to be trimmed on smaller enclosures for proper fit. **PLEASE USE THIS AT ALL TIMES.**
- **WARRANTY REQUIREMENT:** When filling the pan with lava rock and/or decorative glass, the instructions on Pg. 5 must be followed. **Only use stainless mesh provided on fire ring.**
- **Gas Pressure Input:** The input should be: Natural Gas- 5~7" W/C; LP Gas- 13 ~ 15" W/C. **Anything above this could damage unit.**
- The main gas should already be plumbed to the location of the fire pit area. The 24" flex line coming from the fire pit should be connected to the main gas line. Tighten the flex line fittings to the gas supply stub and to the fire pit. **Avoid sharp bends with flex line to prevent whistling.**

- Turn on main gas supply and check all fittings in and around fire pit for leaks using a leak reactant, leak detector or soapy water. If leaks are found, shut off gas supply repair leaks and retest.
- The 3' power cord can be either tied into the main power supply for use with wall switch or directly plugged into an outlet to use remotely.

COMPLETE FIREPIT OPERATION

WARNING: BEFORE USE, BE SURE TO TEST ALL GAS CONNECTIONS FOR LEAKS. DO NOT USE FIRE PIT IF THERE IS ANY EVIDENCE OF LEAKING GAS. IF LEAKING GAS IS SUSPECTED, TURN OFF THE MAIN GAS SUPPLY AND REPAIR IMMEDIATELY.

WARNING: WHEN FIRE PIT IS NOT IN OPERATION, ELECTRIC POWER AND GAS SUPPLY MUST BE TURNED OFF AT LOCATION OUTSIDE ENCLOSURE.

WARNING: NEVER USE ANY MATERIAL THAT IS NON-POROUS AND HOLDS MOISTURE LIKE GRAVEL, PEBBLES, RIVER ROCK, ETC. THIS MATERIAL, WHEN HEATED WILL CAUSE THE TRAPPED MOISTURE TO BOIL, AND FRACTURE UNEXPECTEDLY. THIS MATERIAL IS NOT SUFFICIENTLY POROUS TO ALLOW HEATED STEAM TO READILY ESCAPE WHICH CAN BREAK AND CAUSE PERSONAL INJURY OR DAMAGE.

WARNING: LEAVES, STICKS, WOOD, PAPER, CLOTHING, FOOD MATERIAL, SHOULD ALWAYS BE KEPT AWAY FROM THE FIREPIT. MAKE SURE THAT THERE IS NO VEGETATION OR OTHER OBJECTS OVER THE TOP OR SIDES OF THE FIREPIT THAT COULD INTERFERE WITH SAFE & PROPER OPERATION.

WARNING: IF LAVA ROCK IS WET, ALLOW FIRE PIT TO BURN FOR 30 MINUTES PRIOR TO COMING 15 FEET WITHIN FIRE PIT.

Fire Pit Start Up:

Initial Start Up: Several “on / off” cycles may be necessary to purge air in gas lines after pit installation. On pits built for LP (propane) usage, adjust air mixer under pan- turn nut to increase or reduce air mixture to gas.

Normal Operation:

- 1) Turn “on” electrical power and gas to fire pit.
- 2) Confirm there is no debris in fire pit (as mentioned in warnings) including water.
- 3) Using remote or wall switch, turn “on” fire pit- this may take a few cycles to purge any air.
- 4) Once fire pit has ignited, do NOT leave unattended.

OVERHEATING: The firepit will automatically close gas valve if temperature exceeds 175° F inside valve box to prevent component damage. When unit cools below 175° F, the unit will automatically restart. To correct overheating, ensure enclosure has adequate ventilation- see “Construction of Enclosure”.

Fire Pit Shutdown:

- 1) Turn “off” fire pit using remote or wall switch.
- 2) Turn “off” electrical power and gas to fire pit.
- 3) Once fire pit has cooled completely, use appropriate cover to protect fire pit.

Fire Pit Maintenance:

- 1) Keep fire pit covered at all times when not in use.
- 2) Keep any debris out of fire pit- clean as needed.
- 3) **Flame Sensor Cleaning of Soot:** Remove lava rock or glass from stainless mesh. Remove stainless mesh over flame sensor assembly cage as shown in Fig. 1. Clean flame sensor, spark igniter, and inside of cage of any soot. Be careful not to damage ceramic insulators. Place stainless mesh back in place and cover per instructions on Page 5. **For LP usage, this will be every ~15 hrs. of use is normal; for Natural Gas usage, this will be every ~50 hrs of use is normal.**



Fig. 1

Here is some additional helpful information to keep in mind:

Fire Pits Dimensions: Are approximately 12” from the bottom of the valve box to the lip of the burner pan. HPC can provide drawings if so desired.

Installation Collars are available that can be mortared into enclosure and allow for fire pit to be easily removed for maintenance. Installation Collars measure as follows:

<u>Fire Pit Size</u>	<u>Collar I.D.</u>	<u>Collar O.D.</u>
19”	20”	26”
25”	26”	32”
31”	32”	38”
37”	38”	44”

Gas Line Construction: Main fire pit gas supply lines that transition from large ID to smaller ID (i.e. 1” ID supply line to ½” ID) line will result in more noticeable noise when burner is in operation. This is particularly noticeable when transition is installed inside fire pit structure. Installer should also minimize long runs of corrugated supply lines to fire pit. Utilizing smooth bore gas supply (hard pipe) lines, shorter flex lines and avoid steep ID transitions near interior of fire pit will reduce but not eliminate operational noise. Some noise is normal in burner operation.

FIRE PIT ACCESSORIES

You may want to use one of our log sets to further enhance the appearance. Our log sets come in Campfire style and Woodland style and are especially made for outdoor use.

You can visit our website at www.hearthproductscontrols.com to view our entire line of indoor and outdoor products. We design and build “CUSTOM FIRE PITs”

3 Year Limited Warranty

Hearth Products Controls Company (HPC) warranties complete firepits against manufacturing defects that prevent safe and correct function for a 3 year period-commencing from the date of original sale / shipment from HPC FOB Dayton, Ohio.

This warranty is for parts and in-house (HPC) labor. The defective product must be sent back to HPC with a Return Merchandise Authorization (RMA) issued by HPC for that specific product and any other additional information for the nature of the defect or warranty claim.

The warranty does not cover items that have been damaged by overheating, modification, abuse, or improper storage. Also any labor involving installation or maintenance with the unit is not covered.

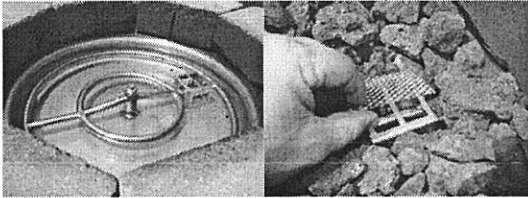
This warranty excludes claims for consequential, indirect-collateral expenses arising from product defects or warranty recovery.

Lava Rock & Glass Application

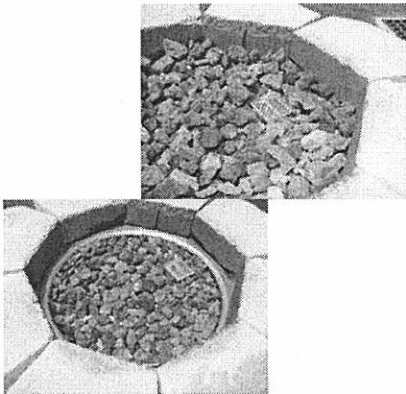
Please follow the instructions below to add the finishing touch to your fire pit. Remember the deeper your lava rock or glass the more risk of reducing if not smothering the flame. Particular attention needs to be on the sensor assembly area- if sensor is covered too much, this will cause the pit to shutdown due to smothering flame around sensor.

Lava Rock Only Application

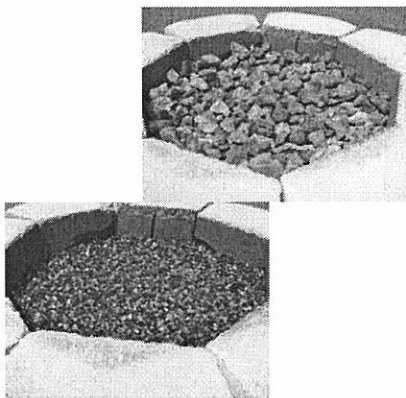
- 1) Install your fire pit per instructions. Place mesh over sensor assembly.



- 2) Apply lava rock deep enough to just hide fire ring and pan- less than 2" slightly above ring.

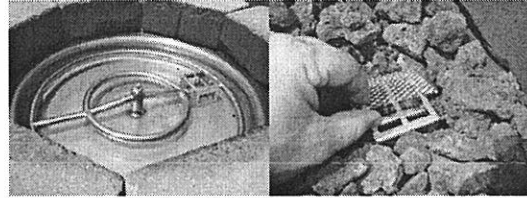


- 3) Cover mesh with lava rock- again only deep enough to hide mesh.

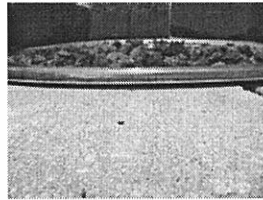


Decorative Glass Application

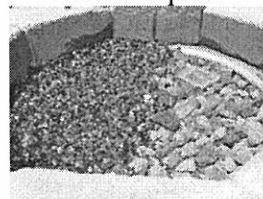
- 1) Install your fire pit per instructions. Place mesh over sensor assembly.



- 2) Add base layer of lava rock as filler and to enhance flame. Height should be above fire ring- use **smaller** pieces of rock supplied on top of ring. DO NOT cover mesh over sensor assembly with lava rock- will do in Step #4 with glass.



- 3) Apply top coat of glass to lava rock, again just deep enough to hide lava rock and pan.



4) Add log set to lava rock if desired.

4) IMPORTANT: Lightly cover the mesh with glass as shown below to prevent smothering flame around sensor.

