



Hearth Products Controls Co

www.HPCfire.com

## FPK Spark Ignition Safety Manual

### Installation & Operation Instructions

**This Product is for use with Natural Gas Only.**

If your application is for LP it is recommended to use a match lit, FPPK, or Electronic Ignition.



#### Installation

We suggest that our products be installed by professionals that are locally licensed by the authority having jurisdiction in gas piping.

#### Service



We suggest that our products be serviced by a professional certified in the US by the National Fireplace Institute (NFI) as NFI Gas Specialists.

**⚠ WARNING: FOR OUTDOOR USE ONLY**

#### ⚠ WARNING

•Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.

#### ⚠ WARNING

•Do not store or use gasoline or other flammable vapors and liquids in vicinity of this or any other appliance.  
•An LP-cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.

#### ⚠ DANGER

If you smell gas:

- 1) Shut off gas to appliance.
- 2) Extinguish any open flame.
- 3) If odor continues, keep away from appliance and immediately call gas supplier or fire department.

**⚠ DANGER**



#### CARBON MONOXIDE HAZARD

This appliance can produce carbon monoxide which has no odor.

Using it in an enclosed space can kill you.

Never use this appliance in an enclosed space such as a camper, tent, car or home.

**INSTALLER:** Leave this manual with the appliance.  
**CONSUMER:** Retain this manual for future reference.

# Index:

- 1) General Information
- 2) Selecting the Location
- 3) Construction of Enclosure
- 4) Installation of Fire Pit
- 5) Media

## Product Specific Information

- 6) Parts List
- 7) Assembly
- 8) Fire Pit Operation
- 9) Maintenance
- 10) Troubleshooting
- 11) Warranty

## 1) General Information

Instructions are also available at [HPCfire.com](http://HPCfire.com)

Please carefully follow the instructions in this manual to prevent personal injury or property loss. Instructions are updated as needed. It is the installer's responsibility to periodically review instruction for applicable updates.

The steps listed as:

**WARNINGS:** Contains information critical to the safe installation and operation of the fire-pit.

**WARRANTY REQUIREMENT:** Must be strictly followed to qualify for product warranty. Warranty will be void if not followed.

**IMPORTANT:** Are notes and insights to help ensure product satisfaction and serviceability.

---

**WARNING:** It is the installer's responsibility to ensure a safe installation and to educate the end user as to proper operation. Leave this manual with the end user.

**WARNING:** Never alter product or configuration in any way.

**WARNING:** FOR REMOTE CONTROL USE: This family of product is not for use with any type of remote or start-up timer control.

**WARNING:** We suggest that our products be installed by professionals that are locally licensed by the authority having jurisdiction in gas piping. We suggest that our products be serviced annually by a professional certified in the US by the National Fireplace Institute (NFI) as NFI Gas Specialists or in Canada by WETT (Wood Energy Technical Training). Installer must follow all instructions carefully to ensure proper performance and safety. Hearth Products Controls Company is not responsible for your actions.

**WARNING:** Product is not intended to be a starter for wood or any other combustibles.

**WARNING:** It is the responsibility of the installer to follow:

- The *National Fuel Gas Code, ANSI Z223.1/NFPA 54* or *International Fuel Gas Code*.
- The *National Electrical Code, ANSI/NFPA 70*.
- Local Codes

**WARNING:** Only use gas/fuel type specified for this fire pit see label on the fire pit control Box. Verify correct gas/fuel type and pressure. Never use an alternative fuel to include bio-fuel, ethanol, lighter fluid or any other fuel.

Gas pressure and type should be checked prior to use and installation.

- Natural Gas Fire Pit:

Supply Pressure: Minimum: 3.5" W.C.; Maximum: 7.0" W.C.

- LP Gas: Do not use this product with LP

## 2) Selecting the Location

**WARNING:** All fire pits, match lit kits, spark ignition, safety pilot and electronic ignition systems are designed and intended for outdoor use only.

**WARNING:** For electronic ignition models there must be an electrical shut off ( wall switch or breaker ) on the exterior of the fire pit or on adjacent wall to allow for emergency shutdown and maintenance.

**WARNING:** All fire pits must have a gas shutoff on the outside of the exterior of the fire pit to allow for emergency shut off and maintenance.

**WARNING:** 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.

**WARNING:** Both children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns and clothing ignition.

**WARNING:** Young children should be carefully supervised when they are in the area of fire pit.

**WARNING:** Clothing or other flammable materials should not be placed on or near fire pit.

**WARNING:** Fire pits create very high temperatures - Combustibles must be located far enough away that there is no risk of ignition.

**IMPORTANT:** It is recommended that material such as granite, marble or other dense stone be kept away from heat and especially flame due to risk of cracking. Manufacturer is not responsible for damage.

<b>Fire Pit Clearances – See Figure 1 On Last Page</b>	Up to 200k btu
Under Valve Box When Applicable For Drainage	2"
Sides Surrounding Fire Pit From Structure or Combustibles	36"
Overhead Clearance Above Product	84"

- Select a location with good drainage and allows easy access for installation and maintenance of 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.

## 3) Construction of the Enclosure

**WARNING:** All fire pits must have a gas shutoff on the outside of the exterior of the fire pit to allow for emergency shut off and maintenance.

**WARNING:** Use non-combustible materials and construction for gas supply, power and enclosure. A metal outlet box should be used inside the enclosure for electronic ignition models.

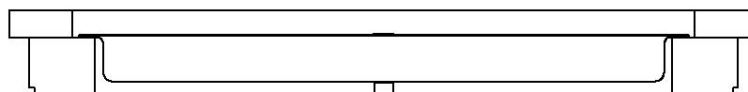
**WARNING:** The enclosure must incorporate 1 vent on at least two opposing sides (2 vents total) at a minimum size of 18 sq. inches each (Example: 3"x 6" or larger). Installation of the vents in the mid to lower area of the enclosure is recommended. Ventilation allows for heat and or residual fuel to escape. Failure to properly vent enclosure may result in the fire-pit overheating or explosion. Overheating could lead to heat damage to internal components. Some enclosures may require more ventilation based on material, size, and extended use. The vent may work as a drain as well when installed at bottom sidewall to prevent water build up.

**WARNING:** 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 2" under the valve box for proper ventilation and drainage.

**WARNING:** The fire pit assembly should be recessed a minimum of 2.25" from the top of the enclosure to protect flame from being blown out. Some areas may require more- 4 to 6" is not uncommon.

**WARRANTY REQUIREMENT:** The enclosure must be constructed on a stable surface. The weight of the fire pit must be supported by the pan and not by any control/valve box. For electronic ignition models the control/valve box must be above grade with adequate drainage to prevent water damage to the controls inside the box.

- Make sure that the structure is level. We recommend the use of the installation collar (optional) that may be mortared into the surround.
- HPC recommends that the pan lip is recessed on trough (linear), and large round products as illustrated below. HPC cannot guarantee the lip on all of our products will be perfectly flat and will not warp due to heat.



**IMPORTANT:** Product must be accessible for service.

## 4) Installation of a Fire Pit

### Installation

We suggest that our products be installed by professionals that are locally licensed by the authority having jurisdiction in gas piping.

**WARNING:** We suggest that our products be installed by professionals that are locally licensed by the authority having jurisdiction in gas piping.

**WARNING:** We suggest that our products be serviced annually by a professional certified in the US by the National Fireplace Institute (NFI) as NFI Gas Specialists.

**WARNING:** Confirm this appliance is built for gas used – natural gas or LP. Do not use natural gas appliance with LP or LP appliance with natural gas. Refer to the label on the appliance.

**WARNING:** To prevent damage, unhook fire pit from gas supply for pressure leak tests.

**WARNING:** Fuel line sizing is the responsibility of the installer and must be able to supply the stated maximum btu for the product.

**WARNING:** Burn Testing- It is the responsibility of the qualified installer to test for gas leaks at all connections.

**WARNING:** When filling the pan with lava rock and/or decorative glass, the instructions in Section 5 must be followed.

**WARNING:** Gas Plumbing Connections: Use only joint compound or tape that is resistant to all gases. Apply joint compound to all male pipe fittings only- DO NOT use on FLARED fittings. Be sure to tighten every joint securely.

**WARNING:** For systems with an extended or detached valve box the area in which the valve box is installed must conform with all installation requirements to include but not limited to location, construction, venting and local codes. Failure to do so may result in personal injury property damage or explosion.

**WARRANTY REQUIREMENT:** Electronic Ignition fire pits come with a 13” x 13” sheet of insulation between 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 insulation at all times.

**WARRANTY REQUIREMENT:** For Electronic Ignition Models the Warranty is void if valve box is opened

- Purge gas lines of air.
- Perform all leak test with leak detector or leak reactant.
- Verify correct gas type and pressure.
- Perform leak test on main gas supply. Repair leaks as necessary.
- Shut Off Gas Supply and Power to fire-pit.
- Connect fire-pit to main gas supply. If using flex line avoid sharp bends with flex line to prevent whistling.
- Turn on gas supply and perform leak test on all inlet connections. Repair as needed.
- For electronic ignition models hook up proper 110VAC or 24VAC electrical power following all local codes.
- On electronic ignition models The 6’ power cord can be either tied into the main power supply for use with wall switch or plugged into remote receiver to use remotely.
- Position fire pit safely with access to all gas connections for testing.
- Light fire pit. It may take several cycles to purge air from the lines.
  - For electronic ignition models apply proper 110VAC or 24 VAC.
- Once fire pit is lit perform leak test on all gas connections. Repair as needed.
- Turn off fire pit and allow to cool.
- Apply media as described in (Section 5).
- Turn on fire pit again and perform leak test with media correctly installed. If gas leak is detected verify correct media application and repair as needed.
- If trimmer valve is installed adjust flame to desired height. Never alter the product configuration
- Set fire pit in properly constructed enclosure (Section 3).
- Verify correct operation and lighting.
- Review safety manual with end user and instruct not to change/ modify fire pit or media.
- Leave manual with end user.



**IMPORTANT:** On electronic ignition models please apply the Start Up and Shutdown decal next to control switch in an obvious position.

## 5) Media

**WARNING:** FOR GLASS MEDIA USAGE WITH LP GAS- WHEN USING APPROVED DECORATIVE GLASS TO COVER BURNER APPLY ONLY ENOUGH TO HIDE BURNER. APPLYING OVER 1/2” MAY CREATE BACK PRESSURE AND GAS LEAKAGE FROM AIR MIXER RESULTING IN LP POOLING UNDER FIRE PIT.

**WARNING:** FOR GLASS MEDIA USAGE WITH LP GAS- THE UNIT MUST BE TESTED WITH MEDIA OVER BURNER FOR CONFIRMATION OF NO BACK PRESSURE CREATING GAS TO LEAK OUT OF AIR MIXER VENTURI HOLES. THIS MAY HAVE TO BE DONE PRIOR TO PLACING IN ENCLOSURE IF NO ACCESS DOOR.



**WARNING:** The fire pit is designed to use approved media correctly installed over the burner to achieve proper combustion.

**WARRANTY REQUIREMENT:** Never install a mesh or screen under the media.

**IMPORTANT:** Media affects flame pattern greatly. It is possible to create an unusual flame pattern that could damage your enclosure. Enclosure damage from an open flame fire feature is not covered under any warranty.

**IMPORTANT:** The use of concrete logs is not recommended.

## Lava Rock & Glass Application

Please follow the instructions below to add the finishing touch to your fire pit. Particular attention needs to be on the pilot assembly area. Incorrect media installation will cause the pilot flame to suffocate and turn off pit or delay main burner ignition.

### Lava Rock Only Application

- 1) Install your fire pit per instructions.



- 2) Apply lava rock ONLY deep enough to cover ring and pan- less than 2" above fire ring.



### For Electronic Ignition

- 3) Blow Out Box: Do not cover vents with lava rock- leave open. Do not allow any rock to block flame opening.



- 4) **Blowout Box:** Do not cover blowout box vents or opening with lava rock or glass. Incorrect media installation will cause the pilot flame to suffocate and turn off pit or delay main burner ignition.

### Decorative Glass Application

- 1) Install your fire pit per instructions.



- 2) Fill Pan with glass. Cover Burner with 1/8 to 1/4" of glass. Do not over fill with glass. All LP installations must be checked for back pressure with media installed. Failure to do so may result in personal injury or property damage.



### For Electronic Ignition

- 3) **Blowout Box:** Do not cover blowout box vents or opening with lava rock or glass. Incorrect media installation will cause the pilot flame to suffocate and turn off pit or delay main burner ignition.



**DO NOT COVER VENTS!**



**DO NOT COVER PILOT OPENING!**

## 6) Parts List

Part/Model	FPK Round/Square	FPK Trough
Burner	*	*
Pan	*	*
Properly Sized Orifice for Natural Gas	For NG < 300 K	All Sizes
Coupler	*	*
Flex Line or Nipple	*	*
Key Valve	*	*
Flare Fittings		*
Elbow	*	*
Lava Rock	*	*
Burner Brackets, Center Hole Cover		*
131 Spark Igniter	*	*
Push Button Switch	*	*
Wire	*	*
FFP Stainless Steel Face Plate	Optional	Optional
Instructions	*	*

## 7) Assembly

**WARNING:** If a fire ring or “T burner” will be used indoors it is the installer’s responsibility to follow all regulations, local codes and achieve independent certifications.

- 1) Ensure gas to the fire pit location is shut off.
- 2) Remove parts from packaging material.
- 3) Read Instructions.
- 4) Call Manufacturer for clarification as needed.
- 5) Inspect the Burner for any signs of damage or corrosion.
- 6) Apply pipe dope or gas rated tape to all threads.
- 7) Hard pipe valve to burner.
- 8) Perform leak test on all fittings.

### Natural Gas Burner Assembly

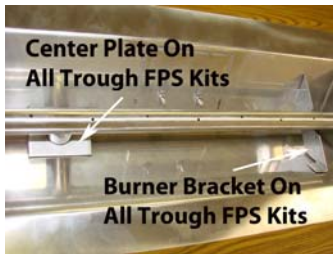
- 9) Natural gas burner assembly sequence.
  - a. T-Burner > Coupler > Orifice > Elbow > Nipple
  - Or
  - b. Burner > Orifice ( For units <300K ) > Elbow > Nipple



### Installation

We suggest that our products be installed by professionals that are locally licensed by the authority having jurisdiction in gas piping.

- 10) For Trough products ensure 2 burner brackets and center bracket.



- 11) For FPS - Key valve assembly.



- a. Nipple > Elbow > Valve > Elbow > Gas Supply

- 12) Attach igniter to pan using bracket and screws provided and align with burner hole.
- 13) Mount push button switch to enclosure or SS face plate.
- 14) Wire push button switch to igniter. One wire to igniter and one wire to ground.
- 15) Install push button AAA batteries.
- 16) Connect fuel supply line to Key Valve.
- 17) Perform leak test as described in this manual.
- 18) Test ignition performance and adjust igniter location as needed.
- 19) Install unit in enclosure.
  - a) To reduce whistling ensure any flex line does not have sharp bends.



## 8) Fire Pit 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 suspected, turn off the main gas supply and repair immediately.

**WARNING:** Wind and gusty conditions will affect the flame in an unpredictable manner. If conditions exist that are not safe for patrons turn the fire pit off.

**WARNING:** Do not use fire pit if any part has been submerged under water. Immediately call a qualified service technician to inspect the fire pit.

**WARNING:** For electronic ignition models power to fire pit must be turned off via wall switch or breaker when not in operation.

**WARNING:** Never use any material that is non-porous and holds moisture such as 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:** Solid fuels shall not be burned in the fire pit. Leaves, sticks, wood, paper, clothing, food material, should be kept away from the fire pit. Make sure that there is no vegetation or other objects over the top or sides of the fire pit that could interfere with safe operation. See clearances in section 2 Selecting the Location.

**WARNING:** If lava rock is wet, allow fire pit to burn for 45 minutes prior to coming within 15 feet of the fire pit.

**WARNING:** When fire pit is not in operation turn off gas valve.

**WARRANTY REQUIREMENT:** When not in use the fire pit must be covered at all times.

**IMPORTANT:** **Initial Start-up:** It may be necessary to purge air in gas lines after system installation.

### **Fire Pit Start Up:**

- 1) Confirm there is no debris in fire pit (as mentioned in warnings) including water.
- 2) Depress push button switch to begin spark.
- 3) Open manual valve by turning counter clockwise SLOWLY.
- 4) Release push button switch when flame is present.
- 5) Adjust valve to desired flame height.
- 6) If Burner does not light turn valve off and allow gas to clear then repeat steps 1 ~ 5.
- 7) Never alter the design of the fire pit.
- 8) Never leave fire pit unattended by an adult that is familiar with emergency shut-down.
- 9) Flammable materials should not be placed on or near the fire pit.
- 10) Children should be supervised when they are in the vicinity of the fire pit.
- 11) Inspect the fuel supply connection ( including all quick disconnect hoses ) before use.
  - a. Replace hose if there is evidence of abrasion or wear.
- 12) The proper hose and regulator must be used. Do not alter or change.
- 13) Turn off fuel supply when not in use.

### **Fire Pit Shutdown:**

- 1) Close manual valve by turning clockwise- flame should extinguish.
- 2) Remove key and place in safe location away from children.
- 3) Turn off fuel supply when not in use.
- 4) Once fire pit has cooled completely, use appropriate cover to protect fire pit.

## 9) Maintenance

**WARNING:** Any guard or protective device removed for servicing must be replaced prior to operating the fire pit.

**WARNING:** Installation and repair should be done by a qualified service person. Fire pits should be inspected prior to use and at least annually by a qualified service person.

**WARNING:** Ensure gas and power (if applicable) are shut off and fire pit is cool before servicing.

- Keep fire pit covered at all times when not in use.
- Keep any debris out of fire pit- clean as needed.
- Ring Cleaning: (1 x YR) If flames exhibit any abnormal shapes or behavior, or if burner fails to ignite properly, then the burner holes may require cleaning. The appliance can be cleaned by carefully removing the logs and media to allow access to burner. Use a brush to carefully remove dust, spider webs, and loose particles from base, logs, and fire ring itself. If evidence of damage, fire ring must be replaced with fire ring specified by manufacturer.
- Ignition Battery: For changing, simply unscrew cap, replace battery, and tighten cap.

### Service



We suggest that our products be serviced by a professional certified in the US by the National Fireplace Institute (NFI) as NFI Gas Specialists.

## 10) Troubleshooting

Below are some potential causes and countermeasures to the symptoms indicated in bold. Please contact your retailer or certified technician for service & repair.

Below are some potential causes and countermeasures to the symptoms indicated in bold. If still unable to resolve issue, please contact your retailer or certified technician.

### Will Not Light

- |                                 |  |
|---------------------------------|--|
| 1. Air in gas line.             | If new install, may take several attempts to purge air                             |
| 2. Debris in gas line.          | Confirm gas line is clear (insulation, dirt, plastic, excessive pipe sealer etc..) |
| 3. Gas Pressure Improper        | Confirm proper gas pressure found (Section 1)                                      |
| 4. Spark Igniter needs adjusted | Spark Igniter Must be correctly aligned with burner holes.                         |
| 5. Weak Batteries               | Replace batteries.   |
| 6. Wire is shorted              | Re-route wire away from conductive materials.                                      |

### Will Not Stay Lit

- |                             |   |
|-----------------------------|---|
| 1. Gas Pressure Improper    | Confirm proper gas pressure found (Section 1) |
| 2. Improperly applied media | Review Media in (Section 5)                   |

### Noise

- |                    |                           |
|--------------------|---------------------------|
| 1. Whistling Sound | Change Flex line routing. |
|--------------------|---------------------------|

## 11) Warranty

### Limited Warranty

Hearth Products Controls Company (HPC) warranties HWI fire pits against manufacturing defects that prevent safe and correct function as follows:

- **Electronics, Gas Valve, : Commercial-1yr; Residential- 3 yr.**
- **Pilot Assy : Commercial-1 yr.; Residential-2 yr.**
- **Stainless Steel Pan, Fire Ring, & Valve Box: Commercial-1yr.; Residential 5yrs.**

This commences from the date of original sale / shipment from HPC FOB Dayton, Ohio.

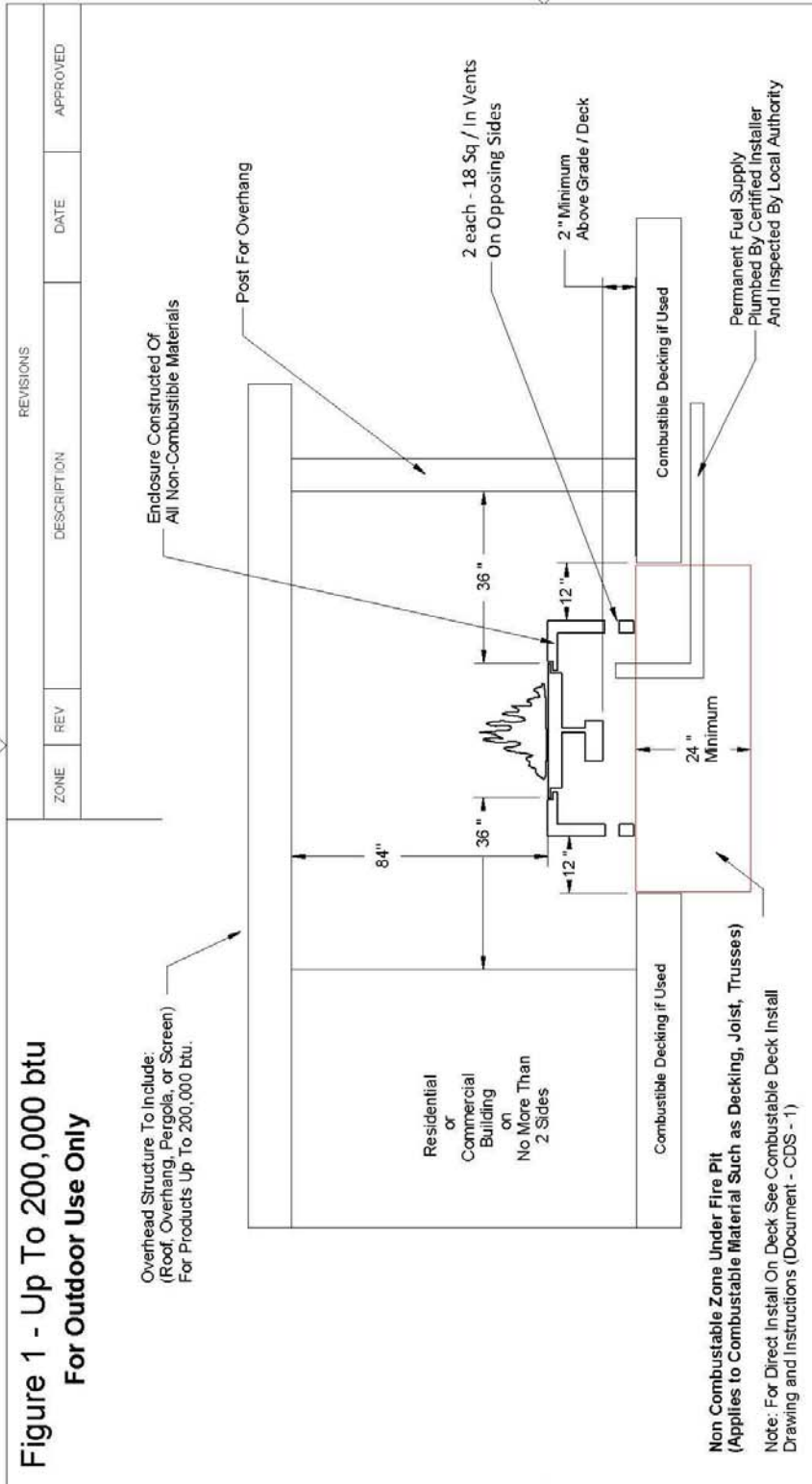
This warranty is for parts and in-house (HPC) labor. The defective product must be sent back to HPC with a Return Merchandise Authorization (RMA) issued by HPC for that specific product and any other additional information for the nature of the defect or warranty claim.

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.



**Figure 1 - Up To 200,000 btu  
For Outdoor Use Only**



REVISIONS		DATE	APPROVED
ZONE	REV	DESCRIPTION	

Overhead Structure To Include: (Roof, Overhang, Pergola, or Screen) For Products Up To 200,000 btu.			
Residential or Commercial Building on No More Than 2 Sides			
Combustible Decking if Used			
Combustible Decking if Used			
Permanent Fuel Supply Plumbed By Certified Installer And Inspected By Local Authority			

Diagram illustrates common clearance questions.	DRAWN	DATE	
* Clearance From Overhead Structure	CHECKED	6/5/2015	
* Clearance From Structure/Combustible Deck Installation			
All items may or may not apply to your project.	Q.A.		
Clearance's apply to any and all sides of the project.	MFG		
Read and Follow All Instructions and Local Codes	APPROVED		

Clearance's - Standard Fire Pit Up To 200k btu			
Hearth Products Controls Co			
SIZE A	FSCM NO.	DWG NO.	REV
SCALE			
			SHEET