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# Installation & Operating Manual

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HearthCAT™ Wood  
Burning Fireplace  
Retro-Fit Device with  
the Integrate System

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**For Masonry & Factory  
Built Fireplace Retro-Fits**

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P/N AG1930

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Visit our website @ [www.healthyhearth.net](http://www.healthyhearth.net)

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**PN 126573-01**

Congratulations! You have purchased the **HearthCAT™**, a revolutionary new EPA Phase II Qualified Emission Control Device for wood burning Fireplaces. Follow these instructions carefully for safe and efficient operation. You will find additional information @ [www.healthyhearth.net](http://www.healthyhearth.net)

## The HearthCAT Technology with the Integrate System

The **HearthCAT™** Emission Control Technology from Healthy Hearth LLC is an award winning catalytic system designed especially for wood burning fireplaces. The **HearthCAT™** utilizes a patented smoke hood to capture the pollutants from the wood burning fire allowing most of the added combustion air to bypass the hood and exit through the primary flue system. The **HearthCAT™** Catalytic System provides secondary ignition for the wood smoke combustibles preventing them from leaving the firebox as particulate pollution. The direct flame on the catalytic surface actually cleans the catalytic unit.



The **HearthCAT™** Hood is manufactured from high quality stainless steel. The catalytic component is a state-of-the-art ceramic material designed to operate in the direct flame of a fireplace. The **HearthCAT™** can either be installed with special order brackets by a chimney sweep or as a “Do-it-Yourself” project by the homeowner with the **INTEGRATE** System. See Product Catalog @ [www.healthyhearth.net](http://www.healthyhearth.net)

The **INTEGRATE** Fireplace Grate will allow the homeowner to install the **HearthCAT™** catalytic device in one easy operation by replacing the existing grate with the patented **INTEGRATE** System from Healthy Hearth. The installation of the **HearthCAT™** converts a conventional wood burning fireplace into an EPA Phase 2 Qualified Fireplace.

The **INTEGRATE** System allows the catalytic unit to be positioned on top of the **INTEGRATE** structure and easily positioned within the fireplace firebox for efficient catalytic operation. The height adjustments of the **INTEGRATE** System allow the homeowner to install the emission control device in the proper position for safe and efficient use.



## Preparations for Installation of the HearthCAT™

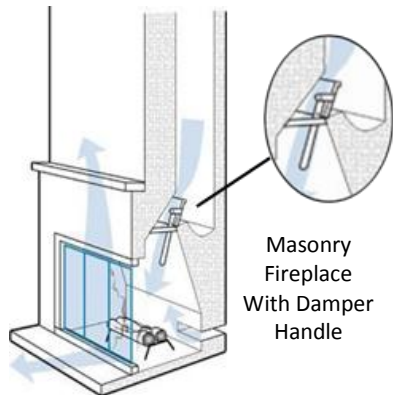
You will need to prepare your wood burning fireplace for the installation of the **HearthCAT™** with the **INTEGRATE** System. You will find additional information @ [www.healthyhearth.net](http://www.healthyhearth.net)

### The Fireplace Must be Cleaned & Inspected

The **HearthCAT™** can create higher temperatures in the top of your fireplace. The presence of creosote in the fireplace and chimney system increases the possibility of a chimney fire, therefore you **MUST** have your chimney inspected and serviced by a certified chimney technician.

The Chimney Safety Institute of America and the National Fire Protection Association recommend annual chimney inspections by a qualified professional and sweeping when necessary. 25,000 chimney fires occur in the US every year. **Be safe and have your chimney cleaned and inspected.**

## Determine Your Fireplace & Damper Type



### Masonry Wood Burning Fireplace

A site-built masonry fireplace will have an elongated damper with a handle hanging down in the top of the firebox. The design of the **HearthCAT™** allows for the damper handle to pass through the center of the catalytic unit and remain operational.

#### CAUTION

*The damper must be in the open position at all times when the fireplace is in use. Never burn a fire with the damper closed!*



### Factory Built Wood Burning Fireplace

A factory built fireplace will have a round “butterfly” style damper with either a handle hanging down or a control in the front of the fireplace. If there is a damper handle, it can either pass through the center of the catalytic unit or in front of the catalytic hood.

#### CAUTION

*The damper must be in the open position at all times when the fireplace is in use. Never burn a fire with the damper closed!*

## Determine the Size of Your Fireplace

The size of your fireplace will determine the orientation of the catalytic unit. The **HearthCAT™** hood is a trapezoidal shape. It is 20” long on one side and 26” long on the other. Therefore, the hood can be installed in two different positions, with either side of the hood facing the back wall of the firebox.



If the fireplace has a back wall width less than 26”, the **HearthCAT™** hood should be installed with the short side against the back wall (as shown on left). If the back wall width is greater than 26”, the long side should face the back wall (as shown on right).



## Will You Need to Install the Smoke Deflector?

The answer is, “Probably not!” The **HearthCAT™** with the **INTEGRATE** is a flexible system that can be installed in a wide range of fireplace types and sizes. However, many of those fireplace designs are dramatically different. As an example, most factory built fireplaces will have a back wall in the firebox that is straight up-and-down. In most of those installations, the short side of the hood will be facing the back wall. Therefore, we have designed the short side of the hood with a flat surface. However, most masonry fireplaces have a back wall that is built at an angle. In most masonry fireplace installations, the long side of the hood will be facing the back wall. We have, therefore, designed the long side of the hood with an angle. However, there will be some masonry installations that require the short side of the hood with the flat surface to be installed against the back wall. This type of installation will require the smoke deflector to be installed. Refer to the “*Installation of the Smoke Deflector*” which is included with these instructions.

# Installation Instructions

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The **HearthCAT™** Emission Control Technology is a unique catalytic system designed and developed especially for open wood burning fireplaces.

The **HearthCAT™** unit is positioned directly above the fire and is suspended in the firebox on the patented **INTEGRATE** System. The **HearthCAT™** doesn't require any power or maintenance. It is a totally passive device.

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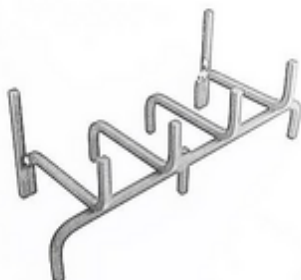
## Remove the Old Grate

Your wood burning fireplace is equipped with a standard wood burning grate must be removed prior to the installation of the **INTEGRATE** System. The **HearthCAT™** cannot be connected to your existing grate.

**CAUTION:** DO NOT ATTEMPT TO REMOVE THE GRATE WHEN THE FIREPLACE HAS RECENTLY BEEN IN USE. ALLOW THE FIREPLACE TO COOL DOWN OVERNIGHT PRIOR TO REMOVAL OF THE GRATE.



## Install the New Grate



The **INTEGRATE** System is comprised of 6 separate components not including the emission control device. The **INTEGRATE** System components include a modified wood burning fireplace grate, two pieces of 7/8" steel square tubing with set screws attached, two pieces of 7/8" steel square stock with 90 degree bends on one end for supporting the emission control device and a smoke deflector (optional use). The modified grate has 7/8" square stock on the back to support the two pieces of square tubing.

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## Install the Square Tubing Supports

The modified grate should be placed directly in front of the fireplace opening with the taller uprights in the back. Those uprights will support the square tubing sections that have the set screws attached. The two pieces of square tubing sections should now be installed on the back of the modified grate to support the structure of the **INTEGRATE** System. The set screws should be on the top and facing out on each side. Insure that the set screws are open.



## Install the Uprights



After connecting the square tubing sections to the new grate, the 7/8" square stock with 90 degree bends should be inserted in the top of the tubing sections. The set screws should be open all the way. The **INTEGRATE** is now in its lowest position setting. The **INTEGRATE** System is now assembled and ready for positioning of the Emission Control Device.

There are no mechanical fasteners required for this assembly. Insure that the set screws are fully opened and the supports are in their lowest position.

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## Height Adjustment (Reference)

The height of the **INTEGRATE** System can be adjusted depending on the height of the firebox. The adjustment range of the **INTEGRATE** System allows for safe and effective installation in most 36", 42" and 48" wood burning fireplaces.

However, there are some 36" fireplace models with smaller fireboxes that will not accommodate the installation of the **INTEGRATE** System.

**NOTE: Do NOT adjust the height of the INTEGRATE until it is positioned inside the fireplace firebox.**

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## Position the HearthCAT on the INTEGRATE Structure



The **INTEGRATE** System is now assembled and ready for positioning of the Emission Control Device. The catalytic emission control device is **NOT** mechanically connected to the **INTEGRATE** System. The unit simply rests on the top of the assembly.

There are two locating surfaces in the **HearthCAT™** hood for positioning the hood on the **INTEGRATE**. The 90 degree bends on the top of the **INTEGRATE** structure should be positioned inside of the locating surfaces in the hood. No other connections are necessary.

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## Position the Integrate Assembly in the Fireplace

With the two set screws fully open, the assembled **INTEGRATE** System is at its lowest position. In this position, the assembled unit should be inserted into the fireplace opening. Once the assembly is in the firebox of the wood burning fireplace, it should be positioned against the back wall and centered in the firebox from side-to-side.

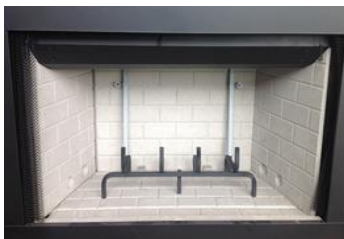
Now, with the set screws loose, the top assembly with catalytic system in place should be elevated until it is at least 1" above the fireplace opening or until it makes contact with the top structure of the fireplace with the damper in the open position. Now the set screws should be tightened with the Allen wrench provided. Make sure that the fireplace damper is still operational.

Visibly inspect that the **HearthCAT™** hood is flush against the back wall of the fireplace. If there is a gap of more than  $\frac{1}{2}$ ", then the smoke deflector must be installed in the back of the hood. Refer to the *"Installation of the Smoke Deflector"*.

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## Installation Complete



The installation is now complete. With the EPA Qualified Emission Control Device in place, the wood burning fireplace is now EPA Phase II Qualified and ready for efficient catalytic operation. The homeowner can display the EPA Hangtag that officially designates the wood burning fireplace as an EPA Phase II Qualified unit. When using the fireplace for the first time after installation of the emission control system, insure that you follow the **SAFETY WARNING** below:

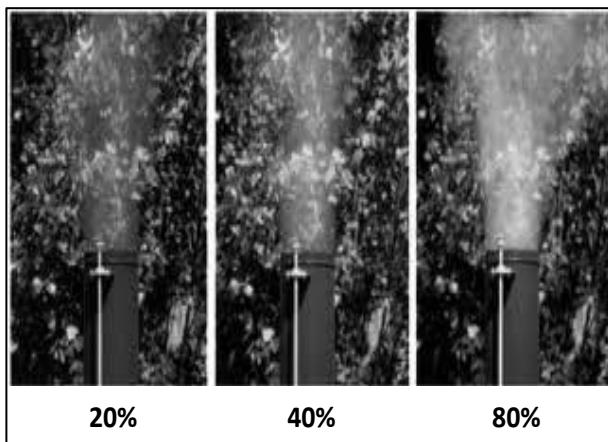
**SAFETY WARNING:** It is very important to monitor for any smoke spillage during the first fire after the installation. Insure that the fireplace damper is in the open position. If any spillage occurs you should ventilate the room immediately and allow the fire to go out. Contact a chimney sweep for assistance.

# Proper Use & Maintenance

Proper use of a wood burning fireplace equipped with the **HearthCAT™** is important to insure maximum pollution reduction. Simple fuel considerations with regard to moisture content, size, and quality of wood fuel will help control the wood smoke and ultimately improve the performance of the catalyst and the fireplace. With proper care, the unit will provide years of fuel savings and lowered emissions. By following some simple guidelines, you will ensure maximum performance and longevity. The smoke that is usually seen coming out of a chimney is essentially a combination of unburned fuel (carbon and hydrogen) and moisture in the form of water vapor. The **HearthCAT™** will remove most of the pollutants from the wood smoke. However, you may see a modest vapor plume coming from the chimney.

## Burn Clean Dry Firewood Only

Burn only dry, seasoned (cured) wood with less than 20% moisture. Avoid the use of treated, painted and laminated wood. Never burn garbage or other foreign materials. Avoid artificial logs, colored newspaper or petroleum based fire starters. Avoid wood with high salt content. These materials could affect the efficient operation of the fireplace. Wet or unseasoned wood may lower catalytic temperatures and result in inefficient operation. The catalyst is designed to function at optimum efficiency when the fireplace is burning clean, dry cordwood as fireplace fuel. A simple visual inspection of the chimney during the wood burning process will determine catalyst performance. The opacity photos below show the opacity levels of visible smoke. Optimum **HearthCAT™** performance is at 20% opacity or better.



**Opacity:** Chimney smoke may be visible during the first 8-10 minutes of fireplace operation when the fire is first started and also during the final 8-10 minutes of operation when the fire is dissipating. Under normal operating conditions, you should see little or no smoke coming out the chimney. The **HearthCAT™** will reduce wood smoke below 20% opacity. If a continuous plume is visible from the chimney, make sure you are burning only dry seasoned wood (<20% moisture content). In most cases, a visible plume is the result of high moisture content in your wood fuel.

## Maintenance & Catalyst Replacement

The **HearthCAT™** Wood Burning Fireplace System does NOT require any maintenance. It utilizes a “self- cleaning” catalytic component. The only time you should remove the catalytic component is for replacement purposes. There are four (4) screws holding the catalytic unit in the **HearthCAT™** hood. Once the screws are removed, the catalytic block is easily removed. New screws are provided with the replacement catalyst.

## Enjoy More Heat from Your Fireplace with the **HearthCAT™**

The **HearthCAT™** Wood Burning Fireplace System is sold as an emission control device ONLY. It is guaranteed to reduce the particulates, carbon monoxide and volatile organic compounds from for wood burning fireplace emissions. However, the **HearthCAT™** will improve the heating efficiency of your fireplace. Even when your wood burning fireplace is operating @ temps as low as 300° F, the **HearthCAT™** Catalytic Technology is generating over 1000° in radiant heat and much of that heat is directed back into your living area instead of going up the chimney. More heat, lower costs!



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# Warranty

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Healthy Hearth LLC hereby warrants to the consumer who purchases a **HearthCAT™** Emission Control System for Wood Burning Fireplaces as a new product, to replace the catalytic component at no charge should it cease to function as an emission control device within three years from the date of purchase.

The **HearthCAT™** Catalytic System is designed to perform efficiently for a minimum of three years or 3000 hours of normal operation. ONLY recommended fuels should be burned. Follow the fueling directions in the manufacturers operating manual. For warranty replacement, proof of **HearthCAT™** purchase and return of defective unit is required. Labor for removal and/or re-installation of the catalytic component will NOT be the responsibility of Healthy Hearth. This warranty applies only to **HearthCAT™** catalytic components distributed by Healthy Hearth LLC.

Healthy Hearth also warrants **HearthCAT™** and the **INTEGRATE** System to be free of defects in materials and workmanship for a period of one (1) year from the date of purchase. If the unit should malfunction, it must be returned to the factory for evaluation. The Healthy Hearth Customer Service Department will issue an Authorized Return (AR) number immediately upon request by the customer. Upon examination by Healthy Hearth, if the unit is still under warranty and found to be defective it will be repaired or replaced at no charge.

For replacement of a **HearthCAT™** catalytic combustor or to file a warranty claim under the conditions of this warranty, please contact Healthy Hearth LLC at the email address below or complete the Warranty Return Form found @ [www.healthyhearth.net](http://www.healthyhearth.net)

## Warranty/Disclaimer

This WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper use, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of misapplication; or misuse. The **HearthCAT™** device is an Emission Control Device for Wood Burning Fireplace ONLY!

Healthy Hearth is pleased to offer suggestions to customers regarding its products. However, Healthy Hearth neither assumes responsibility for any omissions or errors nor assumes liability for any damages that may result from the misuse of its products resulting from information provided by Healthy Hearth, either verbal or written. Healthy Hearth warrants only that the products provided will be as specified and free of defects.

**HEALTHY HEARTH MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE. ANY WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OTHER THAN EMISSION CONTROL ARE HEREBY DISCLAIMED.**

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