

# *The Princess Insert*

*By*

# **Blaze King**



## *Model*

## *PI 1010A*

## *Insert*

### *Solid Fuel Heater*

### *Residential*

### *Approved*

Not intended for mobile home installation.

**READ THIS MANUAL PRIOR TO INSTALLATION OR OPERATION OF THIS APPLIANCE.  
PLEASE KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE.**

Valley Comfort Systems Inc.  
1290 Commercial Way  
Penticton, BC V2A 3H5  
CANADA  
Phone: 250-493-7444  
Fax: 250-493-5833



LISTED BY:



Blaze King Industries  
146 A Street  
Walla Walla, WA 99362  
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Phone: (509) 522-2730  
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*Pour la version française de nos manuels S.V.P. vous référez à notre site web: [www.blazeking.com](http://www.blazeking.com)*

# Approval Label



## PRINCESS INSERT

S/N -

**LISTED SOLID FUEL BURNING FIREPLACE INSERT MODEL: PI/1010A Tested to:  
UL 1482 / ULC S628 CERTIFIED IN BOTH UNITED STATES AND CANADA**

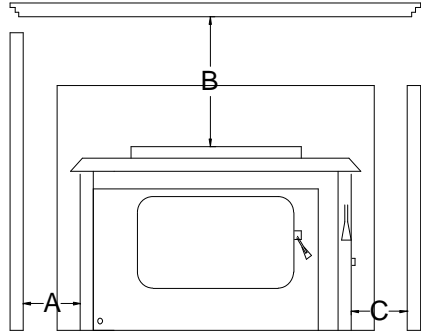
Report No. 142-S-05-2  
EPA Cert. No. 586

**PREVENT HOUSE FIRES-** Install and use only in accordance with Blaze King's installation and operation instructions. Install and use in a code complying fireplace only. Stainless steel flue liner is required in Canada and recommended in the United States. Contact local building or fire officials about restrictions and installation inspection in your area.

**Minimum Clearances To Combustibles**

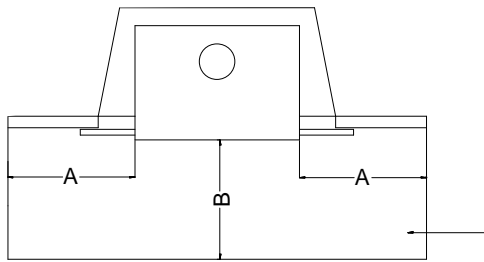
(Measured from Insert/Stove Sides and Top)

- A—Side to Combustible Wall                    7 in / 178 mm
- B—Top to Bottom of Mantel                    22 in / 559 mm
- C—Side to Combustible Facing                7 in / 178 mm



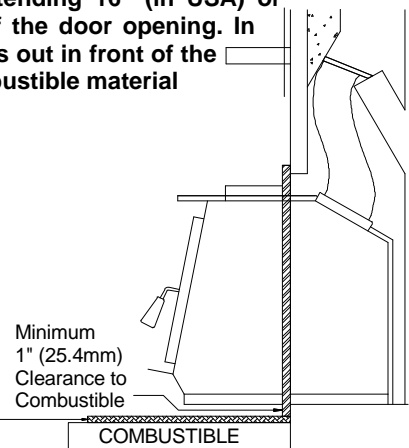
**FLOOR PROTECTION**

A non-combustible floor protection is required for all installations extending 16" (in USA) or 18" (in Canada) in front of the door and extending 8" to either side of the door opening. In addition to the above requirement that portion of the insert which extends out in front of the fireplace hearth must have a minimum of 1" vertical distance to any combustible material



- A = 8" (203 mm) measured from each side of the fuel loading and ash removal openings
- B = 16" (406 mm) in USA
- B = 18" (457 mm) in Canada

NON-Combustible Spark Protection



**Electrical rating:** (115 VAC, 60 Hz, 0.58 Amps. Risk of electrical shock. Disconnect power before servicing unit. Do not route power cord in front of or beneath heater). Do not remove bricks or mortar in masonry fireplace. Do not use grate or elevate fire. Inspect and clean chimney frequently.

**U.S. ENVIRONMENTAL PROTECTION AGENCY-** Certified to comply with July, 1990 particulate emission standards.

**\*Operate with doors closed. Open door to feed fire ONLY. \*Do not obstruct combustion air openings.**

**\*Use only high temperature ceramic glass if replacement is necessary, 5 mm thick.**

**Warning:** Do not operate with cracked or broken glass. Take care not to strike glass with hard objects and do not slam door shut. Do not build fire close to the glass door. For use with solid fuel only. Other fuels may cause a house fire or endanger your safety. **DO NOT OVERFIRE! IF HEATER OR CHIMNEY GLOWS YOU ARE OVERFIRING INSPECT AND CLEAN CHIMNEY FREQUENTLY. UNDER CERTAIN CONDITIONS OF USE CREOSOTE BUILDUP MAY OCCUR RAPIDLY.**



CAUTION:

HOT WHILE IN OPERATION. DO NOT TOUCH. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. READ THIS LABEL AND INSTRUCTION MANUAL BEFORE OPERATING HEATER.

**MANUFACTURED IN:**

USA:  
Blaze King Industries  
146A Street  
Walla Walla, WA.  
99362

Canada:  
Valley Comfort Systems  
1290 Commercial Way  
Penticton, B.C.  
V2A 3H5

**MANUFACTURE DATE**

JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP	OCT	NOV	DEC
2003	2004	2005	2006	2007	2008

#0220

# To Our Valued Customers

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Dear Customer:

Thank you for purchasing the Princess wood burning insert (hereafter referred to as "stove").

This owner's manual explains the steps required to safely assemble, install, operate, and maintain your new stove. **Be a responsible stove owner; PLEASE CAREFULLY READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW STOVE. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, OR EVEN DEATH.**

If local laws require obtain permits from the Building Inspector or Fire Department. Check local building and fire codes before installing your stove. When the installation has been completed by a qualified, licensed installer, have it checked by your local inspector. Disregarding inspection and code requirements may jeopardize your homeowner's insurance. Since some insurance carriers require notification of a stove installation you should contact your insurance agent. We want your stove to give you many years of trouble-free operation.

While we have made every effort to make these instructions as complete as possible, some installation or operating conditions may not be covered. If you have any questions that are not answered here, contact your **BLAZE KING** dealer, Local Building Inspector, Fire Department, or our customer service department. In United States contact **Blaze King**, Walla Walla, WA (509) 522-2730. In Canada Contact Valley Comfort Systems /Blaze King at 250-493-7444.

*Thank you for your purchase,*

The Management and Employees of

*Blaze King*

# Safety Notice

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**IF THIS BLAZE KING STOVE IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT.  
TO REDUCE THE RISK OF FIRE, FOLLOW THE INSTALLATION INSTRUCTIONS.  
CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION  
REQUIREMENTS IN YOUR AREA.**

## **NOT APPROVED FOR MOBILE HOME INSTALLATION**

THIS INSERT IS SUITABLE FOR INSTALLATION IN EITHER:

- A FACTORY BUILT FIREPLACE LISTED TO **UL 127** OR **ULC S620**.
- A CODE-APPROVED MASONRY CHIMNEY WITH A FLUE LINER.

**MANDATORY** in CANADA, Recommended in USA

**PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW ROOM HEATER. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, OR EVEN DEATH.**

This unit is certified by the United States Environmental Protection Agency. Certified to comply with July, 1990 particulate emissions standards.

**The following statement is required by the Environmental Protection Agency:**

"This wood heater contains a catalytic combustor, which needs periodic inspection and replacement for proper operation. It is against the law to operate this wood heater in a manner inconsistent with operating instructions of this manual, or if the catalytic element is deactivated or removed. DO NOT operate this insert without a properly operating catalytic combustor."

See pages 26 & 27 for Catalytic Combustor, Testing and Replacement.

## **CHIMNEYS: MASONRY FIREPLACE**

**In Canada:** A code approved masonry chimney with a 6" listed stainless steel flue liner system and the accompanying vent connector is required.

**In U.S.A.:** A code approved masonry chimney with appropriate vent connector extending from the flue collar of the stove to the first chimney flue liner and adaptor plate. A full length listed flue liner system with vent connector is recommended for all installations.

## **SAVE THESE INSTRUCTIONS**

**CAUTION: HOT WHILE IN OPERATION. DO NOT TOUCH. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. READ NAMEPLATE AND INSTRUCTIONS BEFORE OPERATING THE HEATER.**

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# Warranty

## BLAZE KING LIMITED WOODSTOVE WARRANTY - Princess Insert Blaze King's warranty policy only applies to units sold in the USA or CANADA

### WHAT THE WARRANTY COVERS:

This warranty contains different terms which cover different parts of the stove. BLAZE KING warrants the STEEL COMPONENTS of this BLAZE KING stove, which is delivered with this warranty, against defects in material or workmanship to you, the original retail purchaser (hereafter referred to as purchaser), for a period of up to five (5) years following the date of original retail purchase, subject to the provisions of the RESPONSIBILITIES OF THE COMPANY below. BLAZE KING warrants the FAN ASSEMBLY, MODULAR THERMOSTAT, FRONT DOOR GASKET, and WOOD HANDLES of this BLAZE KING, which is delivered with this warranty, against defects in material or workmanship, to the purchaser, for a period of one (1) year following the date of original retail purchase, subject to the provisions of the RESPONSIBILITIES OF THE COMPANY below. The CATALYTIC COMBUSTOR is under warranty by Süd Chemie Prototech of Needham, Massachusetts for six (6) years. The purchaser shall pay the following share of the then current retail price for the combustor: The first two (2) years no charge, 3rd year 50%; 4th year 70%; 5th year 80%; 6th year 90%. The Combustor must be returned to your dealer along with a completed COMBUSTOR FAILURE REPORT. Warranty WILL NOT BE GIVEN until Süd Chemie Prototech completes an inspection and analysis of the defective combustor.

### WHAT THE WARRANTY DOES NOT COVER:

Unless otherwise provided by law or covered by this warranty, BLAZE KING is not responsible for removal, transportation or re-installation of any product repaired or replaced pursuant to this warranty. BLAZE KING shall in no event be liable for special, incidental, consequential, indirect or other similar damages arising from the breach of the warranty, even if BLAZE KING has been advised of the possibility of such damages. Some states/provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. There are no implied warranties of any kind. Actions for breach of this warranty must be brought within one (1) year of The expiration of this warranty. There is no warranty on paint, ceramics, glass, bricks or gold plating. No person is authorized to modify this warranty or to make any additional warranties on behalf of the manufacturer, BLAZE KING.

### HOW YOU CAN GET SERVICE:

If this product requires repair or replacement due to defects in material or workmanship covered by this warranty, contact your Blaze King dealer and explain the defect. If the dealer does not repair or replace the product to your satisfaction, contact the Service Department of Blaze King in the U.S.A. at 1-509-522-2730 and in Canada at 1-250-493-7444 or write to Blaze King at one of the addresses listed on the front cover of this manual. Please explain the defect and state the model, serial number, date of retail purchase, and the name and address of your Blaze King dealer. Blaze King may request that the defective part, parts, or the entire stove, be shipped to one of Blaze King's manufacturing locations at the purchaser's expense.

### RESPONSIBILITIES OF THE COMPANY:

IF the purchaser has complied with all of the terms and conditions of this warranty and IF the purchaser has notified BLAZE KING of a defect prior to the expiration of the respective warranty period and after shipment, BLAZE KING will either repair or replace the product, AT ITS ELECTION, or MAY ELECT to refund a portion of the purchase price, based on the formula below, if it cannot readily and quickly provide the purchaser with a replacement. The repaired product or replacement will be returned to a BLAZE KING dealer nearest the purchaser at BLAZE KING's expense. IF it is determined by BLAZE KING that there is no defect, or that the defect resulted from causes not within the scope of this warranty, THEN the purchaser must bear the cost of storing the product and of returning the product to the purchaser. For parts of this woodstove or fireplace insert warranted beyond the first year, BLAZE KING will have the same obligations as described in this paragraph, provided, however, that the purchaser shall pay the following percentage of the then-current retail cost of the repair or the replacement, according to the year after purchase in which the defect is brought to the attention of BLAZE KING:

during the 2nd year .....	purchaser pays 20%	during the 3rd year .....	purchaser pays 40%
during the 4th year .....	purchaser pays 60%	during the 5th year .....	purchaser pays 80%

**WARNING: TO VALIDATE THIS WARRANTY YOU MUST COMPLETE AND RETURN THE WARRANTY CARD WITHIN 20 DAYS OF THE DATE OF PURCHASE.**

### MISUSE OF STOVE NULLIFIES WARRANTY:

The above warranty is conditional upon the proper installation and use of the stove according to the manufacturer's directions embodied in the Owner's Installation and Operation Instructions published by BLAZE KING and in compliance with the local building or fire codes in the area where it is installed. The stove should be inspected by the Local Building Inspector or Fire Department prior to beginning use. A copy of the Owner's Installation and Operation Instructions is provided with each unit, or can be obtained by contacting BLAZE KING. READ THE OWNER'S INSTALLATION AND OPERATION INSTRUCTIONS BEFORE INSTALLING OR USING THE STOVE. SAVE THESE INSTRUCTIONS FOR FURTHER MAINTENANCE AND SAFETY PROCEDURES. Alteration of, abuse of, damage to, lack of maintenance of, faulty repair, OR misuse of the stove, VOIDS this warranty. Use of fuel other than natural untreated wood (such as artificial logs, wood exposed to salt water, or coal that may burn at excessively high temperatures or may release fumes that can explode) will VOID this warranty. Burning the stove with the loading door open will also VOID this warranty. Blaze King stoves have been thoroughly tested under extreme conditions, only abuse and over firing may create noticeable warping of components. Over firing of your stove will void all warranties implied or otherwise.

### OTHER LEGAL RIGHTS OF THE PURCHASER:

This warranty gives you specific legal rights, and you may have other rights that vary from state to state or province to province. All parts of this warranty are to be interpreted in accordance with the laws of British Columbia/Canada. If you do not agree to the purchase of the stove on the terms and conditions set out in this warranty, then you must return the stove to the dealer prior to use or installation, and the purchase price will be refunded.

# Definitions

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## **BUILDING CODES AND PERMITS**

Check local building codes before beginning installation. Most areas require a permit from the city or county Building Inspector, Fire Marshal or Authority Having Jurisdiction. After the installation is completed, it should be checked by your local Fire Marshal or Building Inspector.

## **BYPASS**

All catalytic wood burning stoves have a bypass device which allows the smoke from the fire to temporarily bypass, or go around, the catalyst. In Blaze King models, the bypass is located just behind the catalyst. The bypass is a heavy steel plate, hinged inside the stove, and is controlled by the bypass handle on the right front of the stove. When the handle is in the down position the bypass is closed. To open the bypass lift the handle up.

## **CATALYTIC COMBUSTOR**

Warning: This wood heater contains a catalytic combustor which needs periodic inspection and replacement for proper operation. It is against the law to operate the wood heater if the catalytic element is deactivated or removed or to operate it in a manner inconsistent with operating instructions of this manual. **DO NOT** operate this insert without a properly operating catalytic combustor.

The combustor is a ceramic honeycomb which is coated with a catalyst. The catalyst may be a combination of one or more precious metals, including the following: platinum, palladium, rhodium and cerium. The catalyst chemically lowers the combustion temperature of the smoke from a wood fire. This allows more smoke to burn, while increasing efficiency and lowering emissions. The catalyst is generally operational when the stove thermometer registers in the "Active" zone. If the thermometer does not stay in the Active zone, but falls into the "Inactive" zone for most of the burn cycle, the thermostat could be set too low or the catalyst may need cleaning or replacement. The catalyst is located in the top of the firebox, just inside the door. See CATALYTIC COMBUSTOR, TESTING, page 26.

## **COAL**

**DO NOT BURN COAL IN THIS STOVE.** Evidence of coal burning automatically voids all warranties.

## **CHIMNEY**

One or more passageways, vertical or nearly so, for sending flue gases (smoke) to the outside atmosphere.

Stoves must be vented **ONLY** to the outside and never to other rooms or buildings.

Special methods are required when passing through a wall or ceiling. See chimney manufacturers instructions and local building codes.

### **Two types of chimneys are acceptable for use with these stoves:**

- A listed factory built fireplace: Chimney suitable for use with solid fuels and conforming to UL 127 or ULC S620.
- Masonry Chimney: A field-constructed, code-approved, chimney of solid masonry units, bricks, stones, listed masonry chimney units or reinforced Portland cement concrete. It must have at least 5/8" fire clay lining joined with refractory cement or other listed lining system suitable for use with wood stoves. Before connecting to an existing masonry chimney, have it inspected by a certified chimney sweep.

**NEVER VENT THE STOVE INTO A CLASS "B" GAS VENT CHIMNEY. NEVER USE A CHIMNEY CONNECTOR OR CHIMNEY FLUE SMALLER THAN THE STOVE EXHAUST, UNLESS APPROVED BY YOUR LOCAL INSPECTOR.**

Avoid a home fire. Maintain the designated clearance distance to combustibles. Insulation must not touch the chimney. There must be a designated air space clearance around the chimney. This air space around a chimney is necessary to allow natural heat removal from the area. Insulation in this space will cause a heat buildup which may ignite wood framing.

### **DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

Generally, the taller the chimney, the more dependable the draft. The chimney should be kept warm to enhance the draft. This will also protect against creosote accumulation caused by condensation of water vapor and smoke. A build-up of creosote can reduce the draft and become a potential fire hazard. See CREOSOTE, page 9. A chimney should extend at least three feet above a flat roof, or at least two feet above any part of the roof within 10 feet. Chimney tops should **NEVER** be near trees or other tall objects that might cause down-drafts.

## **COMBUSTIBLE MATERIAL**

Material made of or surfaced with wood, compressed paper, plant fibers, plastics, or other materials that will ignite and burn, whether flame proof or not, or whether plastered or un-plastered.

# Definitions

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## COMBUSTION AIR INTAKE

Located on the front right of the stove. In tight contemporary homes, using outside combustion air may be desirable.

## CREOSOTE - FORMATION AND NEED FOR REMOVAL

When wood is burned slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

**PREVENT CREOSOTE FIRES:** Inspect Chimney Connector and Chimney TWICE monthly and clean if necessary. If a chimney fire starts, close the loading door and turn the thermostat to the lowest setting. Call the fire department immediately.

The basic design of this catalyst equipped stove will reduce creosote accumulation to a very low level. However, the frequency of start-up operations and the temperature at which the stove is operated on a regular basis can affect that accumulation. The inspection frequency noted above is still a vital step in the safe operation of any wood burning system.

## LOADING DOOR

The door on the front of the stove with viewing glass installed. This door must be closed and latched tightly whenever the fire is burning. When cleaning the stove, wait 1/2 hour after the fire is out or until the stove is sufficiently cooled before opening the door.

## DRAFT

This appliance may not operate properly if the draft is below .02" wc (water columns) as measured using a water manometer. Draft below .02" wc will cause excessive smoke spillage, incomplete combustion and fire startup problems. Draft ranging from .02" to .10" wc is suggested for normal operation. Low draft may sometimes be improved by making a chimney taller. Exterior chimneys may be too cold to achieve proper draft with these units. If an exterior masonry chimney is being used it should be lined with a listed stainless steel liner. An external factory built chimney should be enclosed in an insulated chase.

## FAN

The fan circulates room air across the firebox and back into the home. The fan speed should be adjusted to match the heat output of the stove.

## FAN SPEED CONTROL

This control is located on the lower left and controls the fan speed. When stove is burning on low, set fan to low. When the stove is burning on high, set fan to high. As much as possible you should adjust fan speed to match the burn rate of the stove.

## FIREBOX

The PI1010A has a steel firebox lined with firebrick. The recommended length of log to be used in this firebox is 16".

## FLAME SHIELD

The flame shield is a stainless steel plate, punched with many 3/8" holes. If the flame shield is shipped in the firebox or has fallen off during shipping then it must be installed before the first fire. Hold it in the firebox with the triangular wings facing away. Lift it between the loading door and the catalyst resting the bottom of the plate on the two holders that protrude below the catalyst. The flame shield should rest at an angle (about 45 degrees) with its bottom near the combustor and its top near the stove front. Do not operate the stove without the flame shield in position.

## FLAMMABLE LIQUIDS

NEVER use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or "freshen up" a fire in this stove. Keep all such liquids well away from the stove while it is in use.

## FLOOR PROTECTOR

Noncombustible surfacing applied to the floor area extending in front of the insert. Floor protector sizes are shown on page 16.

# Definitions

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## CAUTION

**DO NOT USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS APPLIANCE. KEEP THESE FLAMMABLE LIQUIDS WELL AWAY FROM THIS APPLIANCE WHILE IT IS IN USE.**

## FLUE

The general term for a passage through which flue gases (smoke) pass from the combustion chamber to the outside air.

## FUEL

**THIS STOVE IS FOR USE WITH SOLID WOOD FUEL ONLY.**

**Do not burn trash, paper, pine branches or artificial fire logs. Such abuse may void the warranty.**

## HEARTH

The bricked floor area within the fire chamber of a fireplace or stove. The bottom of the firebox. Build the fire directly on the hearth.

## ICE - FORMATION AND PREVENTION

Most of what you see coming out the top of the chimney, connected to a properly operating catalytic stove, is water vapor. In some exterior chimneys, during extremely cold weather, this vapor may freeze in the chimney, actually blocking it and extinguishing the fire. In such weather occasionally burning the stove for 4 or 5 minutes, with the bypass open and the thermostat set at maximum, will melt any possible ice buildup.

**DO NOT BURN THE STOVE WITH THE LOADING DOOR OPEN.**

## INSPECTIONS

The stove should be inspected periodically for missing or damaged firebricks, corroded metal or deterioration of parts. If anything appears unsafe, contact your stove dealer for advice. Do not operate stove until the condition is corrected. The chimney and chimney connector should be inspected at the beginning of each burning season and twice monthly during the winter to determine if a creosote buildup had occurred. If creosote has accumulated it should be removed to reduce the risk of a chimney fire. See CREOSOTE, page 12.

Occasionally chimney caps can become plugged. See, Maintenance, page 27.

## LISTED

Meeting Underwriter's Laboratories, Inc. standards and specifications when properly installed and inspected.

**WARNING: DO NOT INSTALL IN A SLEEPING ROOM.**

## THERMOMETER

The probe of the Blaze King catalyst thermometer rests behind the catalyst. The thermometer gives an indication of the temperature of the gasses leaving the catalyst. Due to its design, the thermometer has a 4 - 8 minute lag time. The thermometer should be periodically cleaned by lifting it from the stove and wiping its probe clean. (be careful, it *may* be hot) When out of the stove, and at room temperature, the thermometer indicator generally points to the bottom of the "Inactive" zone. It may change slightly over time. Adjust it by loosening the bolt above the dial and turning the dial face. Be sure the bolt is retightened before placing it back on stove. See THERMOMETER, page 28.

## THERMOSTAT

The thermostat, sometimes referred to as the Combustion Air Control, is mounted on the right side near the top of the stove. It incorporates a bimetallic coil which responds to the naturally uneven cycles of the burning wood. This automatic response gives you even, comfortable heat. Blaze King stoves burn cleanest when the thermostat is set and left unchanged. Frequent adjustments are unneeded and reduce efficiencies and clean burning capabilities.

## LEVELING SCREWS

On the underside of the unit there are 3/8" welded nuts at each corner. If required the installer can thread a 3/8" NC bolt, of the determined length, into these nuts to assist in leveling the unit. The unit must be firmly supported and sit level with or slightly above the hearth .

# Safety

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## SAFETY NOTICE

IF THIS STOVE IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION REQUIREMENTS IN YOUR AREA.

PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW STOVE. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY OR DEATH.

## CAUTIONS:

**NEVER** vent the stove to other rooms of the building. Stove must be vented **ONLY** to the outside.

**NEVER** use a chimney or chimney connector smaller than the stove exhaust, unless approved by your local inspector.

**NEVER** vent the stove into a "Class B" gas vent chimney.

**NEVER** burn materials other than natural wood. **DO NOT** burn trash, garbage, artificial or paper logs, gift wrappings, coal, lighter fluids, chemical cleaners, chemical starters, treated or painted wood, driftwood or foil-backed paper such as gum wrappers or cigarette packages. Burn natural wood only.

**NEVER** intentionally start a chimney fire to clean the flue.

**NEVER** burn the stove so hot that the stove or chimney connector begins to glow.

**NEVER** burn the stove with the loading door open.

**NEVER** operate stove with broken door glass.

**NEVER** start a fire close to the glass door.

**NEVER** operate stove if catalytic combustor is not operating properly (see page 26).

## CHIMNEY FIRE

### In the event of a fire in the chimney:

- 1) Adjust the thermostat to its lowest setting.
- 2) Check that the Loading Door is tightly closed.
- 3) Get everyone out of the house.
- 4) Call the Fire Department immediately.
- 5) Check the roof for burning embers that might cause a fire.

Your family should have a prearranged plan so that each person knows what to do and will act immediately if an emergency arises.

After the fire is out, have your chimney inspected by a Building Inspector or certified chimney sweep. Any damaged chimney components should be replaced before the stove is used again. A damaged masonry chimney should be repaired or rebuilt. Contact your Fire Department for further advice.

## SMOKE DETECTORS

Install at least one smoke detector on each floor of your home to ensure your safety. It should be located away from the woodstove and close to the sleeping areas. Locating a smoke detector too close to a woodstove can cause the smoke detector alarm to sound if a puff of smoke is emitted during reloading. Follow the smoke detector manufacturers placement, installation, and maintenance instructions. In Canada your local Fire Department may provide assistance in selecting smoke detectors. In the U.S.A. contact the Consumer Product Safety Commission, Washington, D.C. 20207 for more information.

## FIRE EXTINGUISHERS

Every home should have at least one "Class A-B-C" approved fire extinguisher. It should be mounted on the wall, near an exit and close to the stove, but not so close that accessibility to the extinguisher could be blocked by a fire. Your local fire department can advise you concerning the most appropriate location.

## BUILDING AND FIRE CODES, PERMITS, AND INSPECTIONS

The installation of this woodstove must comply with your local building and fire codes. Always contact your local Building Inspector and/or Fire Department before beginning the installation process. If required, obtain a permit before installation and have the completed installation inspected. Remember that noncompliance with building and/or fire codes may jeopardize your homeowner's insurance.

# Safety

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## CHILDREN

Do not allow children to play near the stove or its controls. Severe burns may be result when touching the door, door glass, front, sides or top of the stove. Train children to stay away from the stove and never leave children unattended in the room when the stove is in operation.

## CHIMNEYS

See "Definitions," page 8. The use of uncertified, unapproved chimney is not allowed'.

Before connecting any wood-burning unit to an existing chimney, inspect the chimney to be sure it is in good condition. There must be no cracks or holes. It is often impossible to see these from the outside. A certified chimney sweep should inspect your chimney and give you an accurate assessment of its condition. The cross-sectional area must not be less than that of the flue collar unless approved by your local inspector. Relining or rebuilding *may* be necessary to make a Masonry Chimney safe. A code-approved chimney with a flue liner is most important for safe, satisfactory operation of any wood heating system. Inspect the Chimney at least twice each month during the heating season. Any leak must be repaired. A chimney fire or deterioration can enlarge any holes. This will admit more air and cause exhaust gases to condense and form creosote. Patches of creosote in your chimney indicate that such leaks are present.

**CAUTION: Never look directly up a chimney. The use of a mirror, flashlight and goggles is recommended to prevent eye injury due to falling debris.**

If a significant amount of creosote has accumulated, it should be removed to reduce the risk of a chimney fire. (Refer to Creosote - Formation and Need for Removal, below.)

## CLEARANCES TO COMBUSTIBLE MATERIALS

For a safe installation, proper clearances to combustible materials must be observed; see page 2 & 16 . Failure to follow these guidelines is illegal and voids the certification and warranty. It can also result in a fire, causing property damage, injury, or death. Combustible materials include items such as plasterboard or wood-paneled walls, furniture, wooden mantels, bookshelves, carpets and drapes. Firewood should not be stored within the specified clearances. AVOID FIRE. Maintain the designated clearance distance to combustibles.

## CREOSOTE -- FORMATION AND NEED FOR REMOVAL

When in good condition and operated properly, your Blaze King catalyst-equipped stove is a clean-burning stove. If significant creosote buildup does occurs, re-examine your fire-building and burning procedures. Reread pages 22 through 28 of this owner's manual. Most instances of creosote buildup, in the chimneys attached to catalytic woodstoves, are due to operator error or the use of unseasoned wood. If you still have questions, consult your dealer or contact the Customer Service department at Blaze King.

## INSPECTION:

Inspect your chimney and chimney connector at least twice each month during the heating season. Patches of creosote in your chimney or chimney connector indicate a possible air leak. Any leak must be repaired. A chimney fire or deterioration can enlarge the leak. This will admit more air and cause exhaust gases to condense and form additional creosote. If a significant amount of creosote has accumulated, it must be removed to reduce the risk of a chimney fire.

## CLEANING:

NEVER intentionally start a chimney fire to clean the flue. DO NOT clean the chimney while it is still connected to the stove. Remove the bottom section of pipe and attach a bag to the chimney to catch any creosote removed. Hire a chimney sweep or clean the chimney yourself with a tight-fitting chimney brush. Makeshift equipment-hoses, tire chains, etc. can damage the flue and will probably do an unsatisfactory cleaning job. After cleaning the chimney, clean inside the top of the stove. Scrape and vacuum all creosote and fly ash from around the bypass door if needed, .

# Safety

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## FUEL

THIS WOODSTOVE IS FOR USE WITH SOLID WOOD FUEL ONLY. NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR 'FRESHEN UP' A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE HEATER WHILE IT IS IN USE.

Do not burn trash, garbage, plastics, gift wrappings, coal, charcoal, naphtha, engine oil, chemical cleaners, chemical fire starters, treated or painted wood, saltwater driftwood, railroad ties, plywood, particle board or materials soaked in flammable liquids. Do not burn sawdust, wood shavings or chips in this woodstove. Using saltwater driftwood damages the firebox. Any indication of saltwater driftwood use will void the manufacturers warranty.

Seasoned wood is the best choice for a Blaze King Catalytic Stove. Dry, seasoned wood will burn cleaner and produce less creosote. Store wood in a dry area and away from a combustion source.

The wood for these stoves should be cut to lengths that are not more than 16" long.

**CAUTION: Do not store wood fuel inside clearance areas for even a short period of time.**

## ELECTRICAL POWER

If the optional fans are installed, connect this unit to a properly grounded, 110-volt electrical outlet. Do not route the power in front of, or under, the stove.

## DISPOSAL OF ASHES

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

Do not store other waste in the ash container. Ashes should never be placed in wooden or plastic containers, or in paper or plastic bags, no matter how long the fire has been out. Coals have been known to stay hot for several days when embedded in ashes

## WARNING

**REMOVE ASHES ONLY WHEN THEY ARE COLD. NEVER STORE HOT ASHES IN A GARAGE OR BASEMENT. HOT ASHES WILL GENERATE CARBON MONOXIDE AND/OR FLAMMABLE GASES. THESE GASES MAY CAUSE SUFFOCATION.**

## LOADING DOOR

Do not operate your stove with the loading door open. This stove is not designed or intended to be operated with the loading door open. Do not leave your stove unattended when the loading door is not tightly closed, such as when starting a fire. Leaving the loading door open AFTER the fire is well started can cause overheating of the stove. Such overheating can cause the stove to warp. Check the loading door gasket for deterioration at least twice each heating season. Inspect the gasket for physical deterioration, missing sections, or obvious leakage. To check the gasket further, wait for your stove to cool, insert a piece of paper into the door opening and close and latch the door. Obvious resistance should be felt when pulling the paper out. Repeat this check several times around the perimeter of the door.

# Specifications

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<b>Specification</b>	<b>PI1010A</b>
Minimum heat output	6,200 Btu/hr
Maximum heat output	38,500 Btu/hr
Overall efficiency, weighted average Method,	81 ½%
Wood capacity (approximate)	
White oak	60 lbs.
Fir	40 lbs.
Recommended wood length	15 - 16 inches
Total weight, with firebrick	325 lbs.
Overall Height and Width, (including shroud)	28 ¾ inches x 43 ¼ inches
Width of firebox enclosure (behind shroud)	25 inches
Width of Fan housing to Thermostat housing	34 inches
Overall Depth,	25 ½ inches
Overall Height	23 inches
Distance from shroud front to flue collar	6 inches
Minimum size floor protector (in Canada)	31 ¼ inches x 41 inches
Minimum size floor protector (in USA)	29 ¼ inches x 41 inches
Door opening width	16 ¾ inches
Door opening height	8 3/16 inches
Flue size, diameter	6 inches
Expected Burn Time (Low Setting)	20+ hours
Combustion Chamber Cu. Ft.	2.85
Emissions (Weighted Average EPA)	2.0G
Minimum Fireplace Opening Size	25 ½" (w) x 23 ½" (h) x 13"(d)

Door glass Corning, Pyroceram II, Clear View Plus™ 5 mm thick or equivalent  
10 ¼ x 15 ¾ inches

Minimum chimney cross-sectional area (unless approved by your local inspector)  
6" flue 28.25 sq. inches

## **The Facts On BTU's:**

There are only two rating methods that mean something to you the consumer. The first is the Btu output that is achieved during EPA testing. This testing is quite complicated and involves burning costly milled wood. This is a standard for all manufacturer testing and is not intended to provide consumers with a model for how a stove will burn in their home. The second method that counts is what Blaze King refers to as the "Real World" method. These btu's are achieved during in house testing using the same thing a consumer burns, split, dry, cordwood. In our tests, we use fir. The "Real World" btu's listed are what the average consumer can expect to achieve, with slight variations depending upon geographical location, type of wood, elevation and the amount of fuel added. Higher btu's are possible. If you were to stand in front of your stove and frequently add fuel, burn the unit on high and have optimal conditions, the PI1010 could produce as high as 87,500 btu's. However, maximum btu's would only be achievable at certain "peak" times during the burn. Blaze King does not wish to mislead you so we give you all the facts.

<b>Btu Ratings</b>	<b>PI1010A</b>
Average EPA Test Fuel (Low Burn)	10,633 Btu/hr
Average EPA Test Fuel (High Burn)	35,767 Btu/hr
Average Real World Btu's (Low Burn)	6,200 Btu/hr
Average Real World Btu's (High Burn)	38,500 Btu/hr

Tested and listed to U.L. 1482 and ULC 628 by OMNI-Test Laboratories Inc., (O-TL).

Certified to comply with July 1990 particulate emissions standards of the U.S. Environmental Protection Agency.

# Preparation and Assembly

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## WARNING

**IMPROPER ASSEMBLY AND/OR INSTALLATION OF YOUR BLAZE KING WOODSTOVE OR FAILURE TO OPERATE IT ACCORDING TO THE GUIDELINES DETAILED IN THESE INSTRUCTIONS, WILL VOID THE STOVE WARRANTY, CAN CAUSE A HOUSE OR CHIMNEY FIRE, AND MAY ENDANGER YOUR FAMILY. FOR YOUR SAFETY, FOLLOW THE ASSEMBLY AND INSTALLATION INSTRUCTIONS CAREFULLY. CONTACT LOCAL BUILDING, FIRE OFFICIALS OR THE AUTHORITY HAVING JURISDICTION ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA. PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW STOVE.**

This Blaze King woodstove is Listed by OMNI-Test Laboratories, Inc., (O-TL). ONLY if: It is connected to a code approved masonry chimney with a flue liner, or a listed factory built chimney suitable for use with solid fuels and conforming to, UL127 or ULS620 USA. Minimum clearances to combustible (burnable) materials must also be observed. See label on page 2 for minimum clearances.

**DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

**To ensure safe proper operation, Listed Stainless Steel Flue Liners are required for installation in Canada. A full length listed flue liner system with vent connector is recommended for all installations. Check your local codes and regulations before installing.**

## INSPECT YOUR CHIMNEY

Before connecting any wood-burning unit to an existing chimney, inspect the chimney to be sure that it is in good condition. There must be no cracks or holes. The cross-sectional area can differ from the flue collar as long as sufficient draw is maintained and local codes and jurisdiction are observed.. A proper chimney is crucial for safe, satisfactory operation of any wood heating system. Relining or rebuilding may be necessary to make the chimney safe, efficient, and in conformity with local codes.

Masonry Chimneys that have a very large cross-section , particularly exterior chimneys, may experience poor draft and may require relining to reduce the cross-section-and provide a proper draft. This is also an ideal time to clean the existing chimney. For peak efficiency, a clean chimney flue is essential. A qualified professional chimney sweep can perform both inspection and cleaning. If you choose to clean your own chimney use the proper tools. Homemade cleaners may damage your chimney.

## CHIMNEY HEIGHT AFFECTS DRAFT

Tall chimneys usually provide a strong, dependable draft. The chimney should be kept warm to enhance the draft. This will also reduce creosote accumulation caused by smoke and condensation of water vapor. A buildup of creosote can reduce the draft and become a potential fire hazard. Chimney tops should NEVER be near trees or other tall objects that might cause downdrafts. In new homes, or homes that have been weatherized and are very air-tight, exhaust fans, such as those installed in kitchens and bathrooms, can create a negative pressure in the room. This can result in a downdraft in the chimney when the fans are operating. Smoke may be drawn into the room, particularly when the stove door is open during reloading. If this problem arises, open a window while the exhaust fan is being used or do not operate the exhaust fan while reloading the stove. If make-up air is NOT supplied, the negative pressure *may* also draw gases from a gas furnace.

If you have a Forced-air heating system, you can use the furnace fan to circulate air through the house but DO NOT connect any ducting between the stove and the heating system ducts or any other air-distribution ducts.

## PLANNING FOR YOUR STOVE PLACEMENT

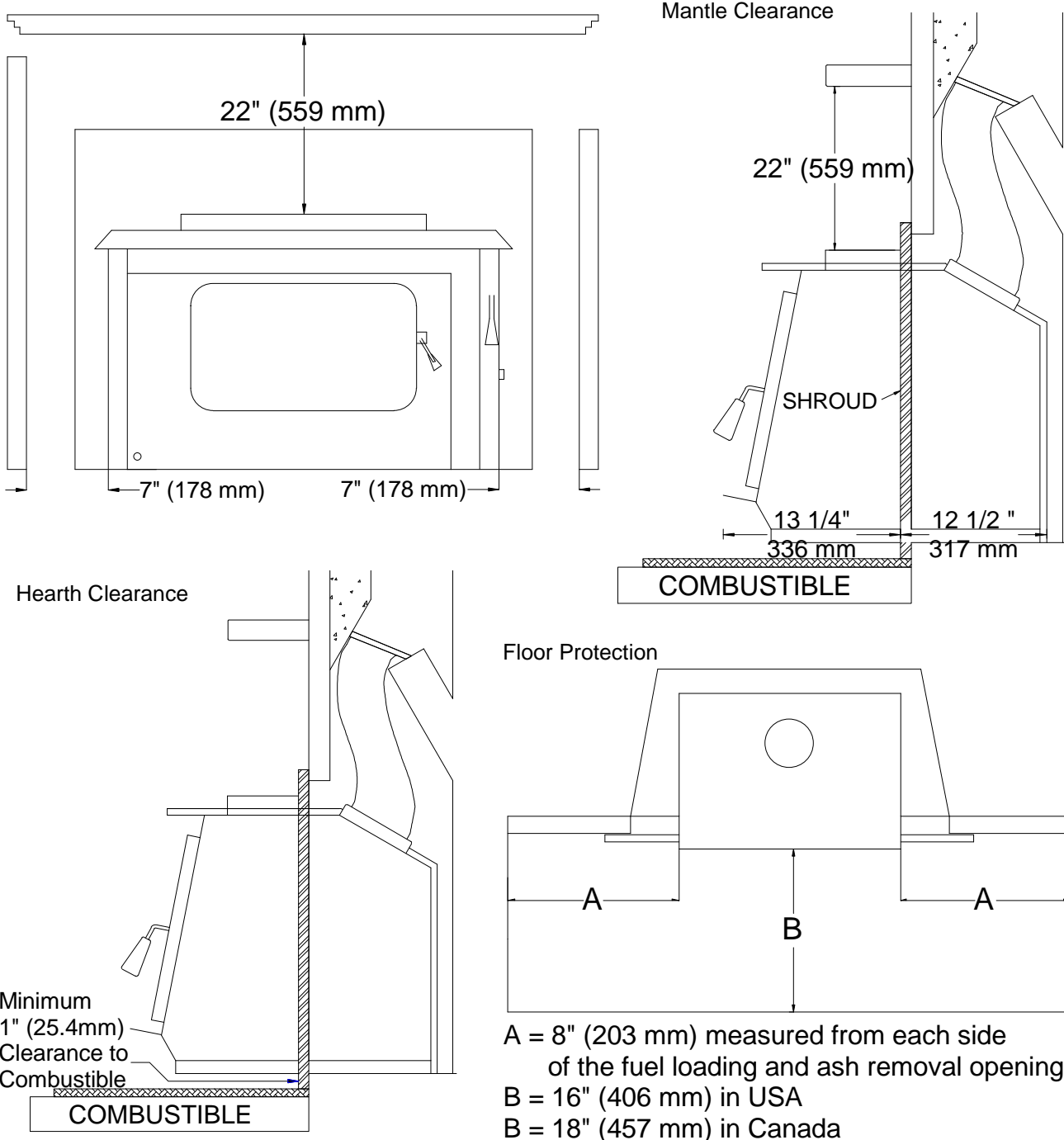
- **Check the fireplace and insert dimensions to ensure the insert will fit properly. While planning your installation keep in mind the required clearances on page 2 of this manual.**
- Plan ahead to be certain that furniture will have ample clearance, and that drapes and curtains cannot come in contact with the room heater. Refer to the approval label on the stove for correct clearances to combustibles.
- This stove must be connected to a chimney. It must be vented to the outside. Never permit your stove to ventilate into any room in the building.
- Consult illustrations on page 16 and the approval label to ensure that you install your stove the proper minimum distances from combustible materials.
- **Minimum fireplace opening size is 25" (w) x 23" (h) x 12.5" (d)**
- Electrical Power - The stove is equipped with a fan assembly with a seven-foot electrical cord. Do not route the cord in front of the stove.

# Preparation and Assembly

## FLOOR PROTECTION

A non-combustible floor protection is required for all installations extending 16" (in USA) or 18" (in Canada) in front of the door and extending 8" to either side of the door opening. In addition to the above requirement that portion of the insert which extends out in front of the fireplace hearth must have a minimum of 1" vertical distance to any combustible material.

### Minimum Clearances To Combustibles (Measured from Insert/Stove Sides and Top)



# Preparation and Assembly

## Princess PI1010A INSERT STOVE INSTALLATION PROCEDURE

**AFTER YOU READ AND FULLY UNDERSTAND THE MATERIAL IN THIS MANUAL, YOU ARE READY TO PROCEED WITH THE INSTALLATION OF YOUR STOVE.**

**Before beginning the installation, thoroughly clean and inspect the fireplace and chimney you are using. Professional assistance is recommended. Your local certified installer should be contacted to provide installation and inspection services.**

### TOOLS NEEDED FOR INSTALLATION

If you are planning to install this stove yourself, you will need the tools listed below. Consult the chimney and flue connector manufacturer's installation instructions for **tools** needed for chimney installation.

- 1/4" Wrench, Nut driver, or Socket with Handle.
- Medium Flat Blade Screwdriver, Phillips Screwdriver and #2 Square Drive Screwdriver
- Tape Measure.
- Carpenter's Level.
- METAL STRIPS (which are included with the stove), these can be used for sliding the unit into the fireplace opening. See OPTIONS section for tools needed.

### STOVE ASSEMBLY

Remove all items packed in the firebox.

IF YOU HAVE NOT ALREADY DONE SO, PLEASE TAKE A FEW MINUTES TO COMPLETE THE WARRANTY CARD FOUND IN THE FIREBOX AND MAIL IT TODAY.

### PRODUCT INSPECTION

BLAZE KING Stoves are known for their quality materials and construction, however, mistakes occasionally occur. Inspect all parts for damage due to shipping and to be sure that all needed parts are enclosed. If you discover a part is missing or damaged, contact your dealer immediately for replacement or repair. Refer to the part number listed on page 32 and the model and serial numbers of your stove (see the tag on the back of the stove).

### COMBUSTOR ASSEMBLY, INSTALLATION

See page 26 for proper parts names. This stove is generally shipped from the factory with the combustor installed. If the combustor is not installed, follow the instructions on page 27 under Catalytic Combustor replacement, beginning with Step 6.

### FLAME SHIELD, INSTALLATION

The flame shield is a stainless steel plate, punched with 3/8" holes. If the flame shield has fallen off during shipping then it must be re-installed before the first fire. Hold it in the firebox with the triangular wings facing away. Lift it between the loading door and the catalyst, resting the bottom of the plate on the two pins that protrude below the catalyst. The flame shield should rest at an angle (about 45 degrees) with its bottom near the combustor, and its top near the stove front.

### OPTIONAL ACCESSORIES

Gold Door—Part# Z4686G-C

### REPLACEMENT PARTS

**BEFORE YOU PUT YOUR STOVE IN PLACE, YOU MUST ATTACH THE WARNING PLATE INCLUDED WITH YOUR STOVE (SHOWN TO THE RIGHT). THIS LABEL PLATE MUST BE ATTACHED TO THE INSIDE WALL OF YOUR FIREPLACE.**

S e e

**This fireplace has been altered to accommodate a fireplace insert and should be inspected by a qualified person prior to re-use as a conventional fireplace.**

# Assembly - General

## Assembly Instructions for Princess PI1010A Insert

There may be local building and fire codes which could affect your installation so be sure to check with your local building inspector, fire inspector or other local authorities having jurisdiction in your area before you begin installation. This insert is certified for installation into a masonry fireplace or factory built fireplace listed to UL 127 or ULC S620 only. They must also be carefully inspected and in good condition.

Blaze King recommends that you use a qualified Blaze King installer to assemble and properly install your PI1010 insert. Technicians are certified by the HPBA in the USA and by WETT in Canada.

We recommend that that our wood hearth products be installed and serviced by professionals who are certified In the U.S. by the National Fireplace Institute\* (NFI) as NFI Wood Specialists.

Provide protection for the hearth to prevent damage while sliding the heavy insert in and out of the fireplace opening.

- 1) Carefully remove and inspect the insert parts in the shipping packages. The parts should include the 2 shroud side panels, 1 shroud top panel, 1 shroud outer trim package, 1 shroud convection deck, 2 #6-32 brass screws .

**Figure 1**



**Figure 2**



- 2) Place the fireplace insert on the work area. Note: This unit is shipped without any shroud parts in place. Attach the two-shroud side panels to the unit by loosening the screws on the covers on either side of the unit and sliding the shroud sides between the covers and the unit. Retighten the screws ( see Fig. 2 ).

**Figure 3**



# Assembly - General

- 3) Exact placement of the insert is determined by the overall shape of your fireplace opening and surround etc. First determine whether you will need leveling bolts installed or other devices to ensure a proper level installation of the unit. This is determined by your fireplace construction. Sometimes the hearth is raised from the bottom of the fireplace and sometimes it is lowered. Use only non-combustible material to fill any space under the insert (such as firebricks). The insert must sit level with, or slightly higher than, the hearth front. On each corner of the underside of the fireplace insert there is a 3/8" NC nut welded. If required a 3/8" bolt of determined length can be threaded into these nuts to assist in leveling the unit.

**NOTE:** Blaze King strongly recommends that you install a complete stainless steel flue liner system. This is the safest installation and will ensure proper draft control for ideal and consistent burn times. An approved liner system is required by code for all installations in Canada. The installation codes in some USA locations do not require a full stainless steel liner system.

- 4) Slide the unit into the fireplace opening and attach the chimney liner or flue connector system as required. Work through the opening above the unit where the top shroud panel will fit. If access to the flue outlet on the insert is very restricted by fireplace opening height you may need to temporarily remove a side panel (as fitted in step 2) to allow enough work area to properly connect the stainless steel flue liner. Depending upon the particular installation the unit may need to be pulled out slightly from the front of the fireplace.

In some installations the leveling bolts might make it difficult to slide the unit into a fireplace with a rough hearth. We have provided two metal strips approximately 3" x 16" to help with this problem. Lay the strips down and slide the unit on them. This may not be required in all circumstances. If they are not required discard the strips.

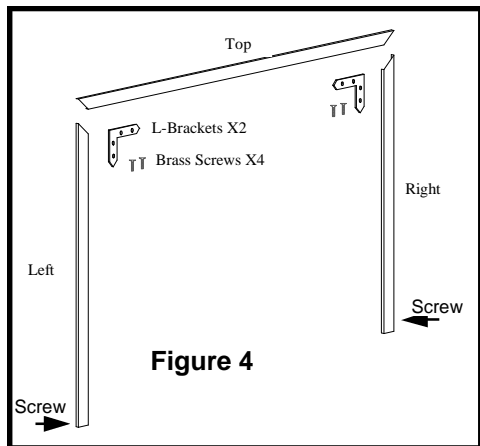


Figure 5

- 5) Assemble the shroud trim as shown in Fig 4. It will be attached to the unit during the next step.
- 6) Place the shroud top on the unit sliding it down so the tabs on the back of the shroud top slide over the tabs on the insert.
- 7) Hold the shroud top panel in place and slide the trim down over the shroud sides and top (see Fig. 6). Secure the trim in place with 2 #10-sheet metal screws provided.



Figure 6

## Assembly - General

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- 8) Slide the completed unit into its final location.
- 9) Place the Convection deck on the top of the firebox and fasten to the shroud top using the 2 screws provided (see Fig. 7).



Figure 7

- 10) Install the catalytic thermometer by inserting the probe into the hole on the top of the stove.
- 11) Plug the fan into a nearby AC plug outlet. NEVER run the AC fan cord under the fireplace insert.

### INSTALLATION INTO FACTORY BUILT FIREPLACES

In addition to the general instructions presented throughout the manual you must ensure the following steps are also taken when installing this insert into a factory built fireplace.

- 1) The factory built fireplace must be listed to **UL 127** or **ULC S620**, and is installed and maintained to comply with all local building codes.
- 2) All clearances to combustibles must be maintained as shown on the label.
- 3) The installation must include a full-length liner, which is attached from the insert to the chimney cap. In Canada, the factory built chimney must be lined from the outlet of the insert to the top of the chimney using a stainless steel liner that meets UL 1777 or ULC S635.
- 4) Air passage to the chimney cavity of the fireplace must be prevented by sealing the damper area around the chimney liner, or sealing the fireplace front.
- 5) The airflow in and around the fireplace must not be altered by the installation of the insert (i.e.: no louvers or cooling air outlet ports should be blocked).
- 6) No alterations of the factory built fireplaces are allowed except as follows:
  - a) External trim which does not affect the operation of the fireplace may be removed providing it can be stored on or within the fireplace for reassembly if the insert is removed.
  - b) The chimney damper may be removed to install the chimney liner.
- 7) Circulating air chambers, in a steel fireplace liner or metal heat circulator, should not be blocked.
- 8) The ability to remove the insert and clean the chimney flue must be provided.
- 9) If the insert protrudes from the front of the fireplace it must be supported and all clearance requirements must be met.
- 10) A permanent metal warning label must be attached to the back of the fireplace stating that once the insert is removed the fireplace must be restored to its original condition .

# Installation - Chimney

## CHIMNEYS: FACTORY-BUILT FIREPLACE

**In Canada and in the U.S.A.:** If the insert is installed into a factory built fireplace the chimney must be lined from the outlet of the insert to the top of the chimney using a Stainless Steel liner which meets **UL1777** or **ULC S635**. The liner must be securely attached to both the insert and the chimney top.

In both Canada and the U.S.A. the existing fireplace damper must be secured in the open position. If this is not possible the damper must be removed. Any openings between the masonry of the fireplace and the facing masonry must be sealed.

## GENERAL CHIMNEY INSTALLATION

Connect the venting system to the flue collar of the insert using three sheet metal screws. There are three predrilled holes in the flue collar. Place a bead of furnace cement around the flue collar connection to ensure the flue pipe is properly connected, secured and sealed.

If this stove and its chimney components are not properly installed, a house fire may result. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation requirements in your area.

We recommend that the inside your chimney be at least the same diameter as the flue of your stove. If you plan to use an existing masonry chimney, be sure it is free of cracks and loose joints. Gases traveling through a chimney can reach extremely high temperatures. Cracks or loose mortar can allow hot gases to reach the wood portion of the structure surrounding the chimney. These toxic gases can also re-enter the house through cracks and small holes in the chimney, or cause back-puffing which will result in excessive smoking. Be on the safe side and have your chimney inspected by a certified chimney sweep. A 6 inch stainless steel chimney liner with a direct connection to the stove is recommended for masonry chimney installations.

A chimney must extend at least three feet above the highest point where it passes through the roof and at least two feet higher than any portion of the building within ten feet of the chimney. Smoke travels up the chimney in a circular, spiraling motion. A 6 inch round stainless steel liner allows the smoke to travel with less resistance. A rough masonry chimney without a good smooth liner can result in the rapid build up creosote..

**Before you begin check all local codes and regulations regarding your installation.**

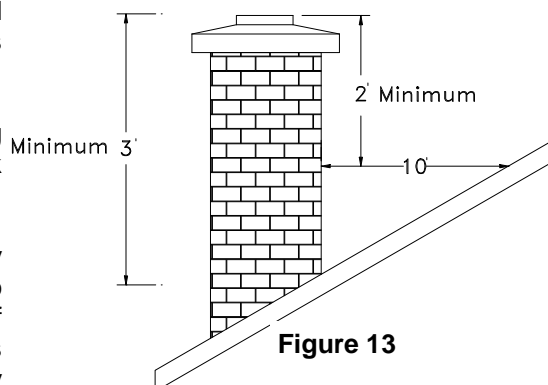
**\*\*\* DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE. \*\*\***  
**CHIMNEY DRAFT**

Draft is the force which moves air from the appliance up the chimney and pulls fresh, oxygen-rich air into the combustion chamber. Your stove cannot force smoke up the chimney but rather your chimney must always "suck" the smoke out of your stove. The smoke will always try to go to the area of lowest pressure. The rate of draft in your chimney depends on many factors including the length of your chimney, local geography and nearby obstructions. Too much draft can cause excessive temperatures in the appliance and may damage the unit.

Inadequate drafting may cause back puffing into the room and plugging of the chimney. Inadequate draft may also cause the appliance to leak smoke into the room through the appliance and flue connector joints.

An uncontrollable burn, glowing red stoves part or flue connectors, may indicate excessive draft. Poor burn times or failure of the appliance to "get hot", or "burn hot", can be the result of inadequate chimney draft. If the stove is vented into an exterior masonry chimney, and the draft is inadequate, you will most likely need to line the inside of the chimney with a stainless steel liner.

Excessive draft can result in over firing, short burn times and can possibly damage the internal components of the stove.



**Figure 13**

# Operation

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How your stove operates (including its efficiency, pollutant emission level and service lifetime) depends largely on how it is operated. You are the most important factor affecting your stoves performance. Read these operation instructions carefully.

**BEFORE PROCEEDING FURTHER, be sure to read the following:**

**SAFETY INFORMATION: Pages 11 through 13.**

**CLEARANCES TO COMBUSTIBLE MATERIALS: Pages 2 & 16.**

**FLOOR PROTECTION INFORMATION: page 16.**

The six major components of a well-controlled fire are:

1. A knowledgeable and conscientious operator
2. Adequate-air supply
3. Firewood of good quality and proper size
4. Catalytic combustor in good condition
5. Clean chimney, properly sized and installed
6. Clean heat exchangers with tight gaskets and seals

Point number one is the most important for the safe and efficient operation of any stove, however, all of these components are interrelated. A deficiency in any one will affect all of the others. If you encounter a problem, determine the source of the problem by checking the above list and continuing to thoroughly read this manual.

## **WARNING - PROVIDE ADEQUATE AIR CIRCULATION**

It is essential that a source of fresh air be provided for combustion when this woodstove is in operation. In extremely tight houses you can partially open a window near the woodstove.

## **FUEL**

THIS WOODSTOVE IS FOR USE WITH SOLID WOOD FUEL ONLY. NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR 'FRESHEN UP' A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE HEATER WHILE IT IS IN USE.

Do not burn materials soaked in flammable liquids, trash, garbage artificial or paper logs, plastics, gift wrappings, coal, charcoal, naphtha, engine oil, chemical cleaners, chemical fire starters, treated or painted wood, saltwater driftwood, railroad ties, plywood, particle board. Do not burn sawdust, wood shavings, pellets or chips in this woodstove. The use of saltwater driftwood will void the warranty.

*CAUTION: Do not place wood fuel within the space heater installation clearances or within the space required for fueling and ash removal.*

*CAUTION: Do not over fire. If heater or chimney connector glows, you are over firing. Keep loading door and bypass door closed when stove is in operation.*

## **YOUR FIRST FIRE**

NOTE: As you heat up the stove for the first time, the paint will go through a curing process and will give off an odor. To minimize the inconvenience, burn the stove at a low temperature setting for several hours. If the odor gets unpleasant, you may have to open a door or window slightly until the odor dissipates. It might even be a good idea to burn the first fire with the stove outside.

**DO NOT USE A GRATE. BUILD THE FIRE DIRECTLY ON THE BRICKS ON THE BOTTOM OF THE STOVE.**

You now own the finest wood stove ever made. In order to get peak performance out of your Blaze King stove you will need to follow a few basic steps outlined in the following chapters. Forget everything you learned about how to burn or operate a run of the mill wood stove. You cannot just throw in some newspaper and a log or two, light a match and expect your Blaze King to work the same way an inefficient wood stoves would. Your Blaze King was designed to burn more efficiently , saving you time and money.

# Operation

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## YOUR FIRST FIRE (continued)

There are four control features on your new Blaze King that are instrumental in getting your first fire started.

- 1) The Thermostat: The thermostat is located on the right front corner of the stove. When lighting the first fire, set the Thermostat on "High". The increased flow of air is necessary in the first few minutes of lighting your stove and getting a good fire going. After awhile you can adjust the thermostat to your comfort zone. Too many people make too many rapid changes to the thermostat. If you are operating your stove on "High" at the start of your fire the coils in the thermostat get very hot. If you turn the thermostat to "Low" too quickly the rapid change can actually cause the fire to go out. All changes to the Thermostat should be done gradually. When you are using the "High" setting it is better to move the Thermostat towards "Medium" at 20 minute intervals. After the stove has been operating at Medium for an hour or so, then you can move towards low. The Thermostat is sensitive and must be adjusted gradually. Rapid adjustments cause the stove to operate improperly. It is the most common mistake new owners make.
- 2) The By-Pass handle: This handle is located on the front right side of the stove. This handle, when lifted up allows increased air flow which is essential to get your stove going. Once the fire is hot and a base of coals is established, close the By-Pass by pointing the handle in the downward position. Do this only after the fire is established.
- 3) Front Loading Door. This door is located at the front of the stove and plays a key role in successful initial firing of the stove.
- 4) Catalytic Thermometer. This thermometer is located on the top of the stove. Its purpose is to will tell you when the Catalytic combustor is in "Active" zone.

Because your Blaze King catalytic wood stove is not like any other wood stove it will not burn the same way other less efficient stoves do. You may not see a of flames once you have the stove in full operation. The only time you will see a lot of flames is when you burn the stove on High (thermostat setting) or when you open the By-Pass or Front Loading door to add wood.

Your first step is to get around 5 pounds of small wood strips, about the size of popsicle sticks or a little larger. Crumple up 3-5 sheets of black & white newspaper. Lay the sticks all across the top of the paper and light the paper. At this time the Thermostat should be set on "High", by-pass handle should be up and the front loading door should be slightly cracked. Allow the sticks to begin burning then over the next few minutes (5-10) add approximately 10 pounds of wood about the size of a baseball bat handle. Now you can close the front door. You should begin to see a good fire developing. Once the baseball bat size kindling is burning well, add a few (3-5) pieces of small split firewood. Again close the front door. The needle on the Catalytic Thermometer, located on the top of the stove, should slowly start to move towards the "Active" zone. This means is the combustor is now coming up to temperature. As soon as you notice that the needle is close to being in the "Active" zone, close the by-pass handle (turn to the down position). Leave the Thermostat setting on High for the next 20 minutes and your fire should be well established. Now, over the next few minutes, you can add larger and larger pieces of wood. Once it is in "Active" range you won't need another match all winter as so long as you keep it in the "Active" zone by continuing to add wood.! Now, like most Blaze King catalytic wood stove owners, you can do something you enjoy with all your extra time you are saving not having to add wood every hour!

**SAFETY NOTICE: Never leave the stove unattended, even for a short time, unless the front door is fully closed. A house fire may result if the stove door is not fully closed during operation.**

### FAN OPERATION

The fan speed adjustment should match the thermostat control setting. i.e. If your thermostat is set at medium then your fan should also be set at medium. If your thermostat is set at low your fan should also be set at low etc.

# Operation

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## A Couple of Tips:

Having your next intended load of wood ready when you open the Front Loading door will decrease the amount of time that the Front Loading Door is open. This not only give you a margin of safety but also allows the Combustor to remain hot. Always open the Front Loading Door SLOWLY. This will reduce the incidence of back puffing which can cause smoke from the fire box to “spill” into your room.

Always put the by-pass handle in the open (upright) position before you open the Front Loading Door. This will decrease the chances of “spilling” smoke into the room when you are adding wood. **REMEMBER TO CLOSE THE BY PASSPASS HANDLE** (downward) as soon as you have loaded your wood.

DO NOT OVER FIRE! Although your fireplace insert has been designed to heat efficiently and operate at high temperatures it is meant to supplement other heating means in your home. Your stove should never be fired to a red hot condition.

Congratulations...You now have the greatest, most efficient burning wood stove in full operation. You can now adjust the Thermostat to fit your needs. Keep in mind that you will not see a lot of flames from this point on. If you burn the stove on a very low setting for extended periods of time, you may begin to see creosote deposits forming on the glass door. To remove these deposits, simple run the stove on “High” for a short time. The “High” setting will burn off most of the deposits.

Thank you again for purchasing a Blaze King catalytic wood stove. We hope you enjoy the money and time you save.

**PLEASE BE CERTAIN TO READ THIS OWNERS & OPERATORS MANUAL THOROUGHLY.**

# Maintenance

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## ASH REMOVAL

Ashes may be removed at any time, but must be removed when they approach the level of the door opening. DO NOT remove all ashes from the stove as a wood fire burns best when made on a bed of ashes. The frequency with which you need to empty the ashes depends on the type of fuel being used. Hardwoods will leave more ashes than softwoods unless the coals are raked to the front of the firebox before each reloading. Remove ashes only when they are cold. Hot coals should be not dumped where they may start a fire.

Ashes should be placed in a metal container with a tight fitting lid until the all cinders have thoroughly cooled. The closed container of ashes should be placed on a non-combustible floor or on the ground. They should be kept well away from all combustible materials pending final disposal.

## AUTHORIZED SERVICE REPRESENTATIVE

Your local BLAZE KING dealer is your authorized service representative. Should you have any problems with operating or maintaining your BLAZE KING stove, contact your dealer as soon as possible. The dealer will help you solve operating problems, provide replacement parts, and/or arrange warranty service repairs as required. Dealers will need information such as model, serial number, date of purchase, and a summary of the problem.

## CREOSOTE FORMATION

When wood is burned slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosote. If not burned by the catalyst, the creosote vapors condense in the flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. When in good condition and operated properly, your Blaze King catalyst-equipped stove is clean-burning. If significant creosote buildup occurs, reexamine your fire building and burning procedures. Most instances of creosote buildup in the chimneys of catalytic woodstoves are due to operator error. If you still have questions consult your dealer or contact the Customer Service department at Blaze King.

## INSPECT CHIMNEY TWICE MONTHLY

Inspect your chimney at least twice each month during the heating season. Creosote may form in the chimney flue and flue cap, or may appear as patches in one or more places in the system. It may appear in the form of a thin, hard glaze, a large fluffy mass, barely harder than cotton candy, or a solid plug, literally closing the chimney so that the fire will not burn. Patches of creosote in your chimney indicate a possible air leak. Any leak must be repaired. A chimney fire or deterioration can enlarge the leak. This will admit more air and cause exhaust gases to condense and form additional creosote. If a significant amount of creosote has accumulated, it must be removed to reduce the risk of a chimney fire.

## CHIMNEY CLEANING

NEVER intentionally start a chimney fire to clean the flue. Hire a certified chimney sweep or clean the chimney yourself with a tight-fitting chimney brush. Makeshift equipment hoses, tire chains, etc. can damage the flue and will probably do an unsatisfactory cleaning job. After cleaning the chimney, clean inside the top of the stove.

If needed, scrape and vacuum all creosote and fly ash from area around the by-pass door. Re-install the first section of pipe to the stove. Refer to the Installation Instructions.

## LOADING DOOR GASKET

INSPECT TWICE YEARLY. REPLACE WHEN NEEDED.

Safe and efficient operation of an airtight woodstove depends greatly on the integrity of the gaskets. Therefore, it is imperative that the loading door gasket be checked at least twice each heating season. A loose or improperly adjusted loading door may make the stove hard to control, and will speed door gasket deterioration.

# Maintenance

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## GASKET INSPECTION

Inspect the gasket for physical deterioration, missing sections or obvious leakage. The stove front should make a groove in the gasket material - one side of the groove (toward the inside) will often be dark or black, and the other side (toward the outside) should be light or white. Dark smudges on the outside of the groove may indicate a smoke leak. If the groove is very shallow or missing, or if there is a heavy ash or creosote deposit along the bottom edge of the gasket, it may need to be replaced. Frayed or broken gasket material, or a gasket that is hard and unyielding, will also indicate need for replacement. Any time a piece of gasket is missing, or is broken anywhere, the entire gasket must be replaced.

To check the gasket further, insert a piece of paper into the door opening and close and latch the door. Obvious resistance should be felt when pulling the paper out. Repeat this check several times around the perimeter of the door.

## GASKET REPLACEMENT

1. If the door gasket is to be replaced, be sure you have some 5/8" fiber glass gasket material on hand to re-install. See your Blaze King dealer for replacement gaskets.
2. Be sure the fire is out and the stove has cooled down. The door does not have to be removed from the stove.
3. With a pair of pliers, pull the old door gasket out of the channel and dispose of it.
4. Thoroughly clean out the channel so the new silicone adhesive will adhere and the gasket will fit smoothly
5. Run a small bead of furnace cement or a high temperature silicone adhesive (such as G.E. Silicone Sealer, or the equivalent) along the center of the channel. **DO NOT USE HOUSEHOLD SILICONE CAULKING.** High temperature silicone may be obtained from your Blaze King dealer or most auto parts stores.
6. Start the new gasket in the lower right corner. Do not stretch or cut the gasket. Distribute the gasket evenly around the frame.
7. Close the Loading Door and allow the adhesive to dry.
8. Door adjustment: The door seal is adjusted by turning the latch catch on the stove in or out. **NOTE: THERE IS A LOCK NUT ON THE LATCH THREAD ON THE OUTSIDE OF THE STOVE. LOOSEN THIS LOCK NUT FIRST.** thread the latch catch in or out to properly adjust the door seal. The gasket should be just tight enough to pass inspection. (see step 9) Do not over tighten the latch making the door difficult to latch.
9. Check the fit of the door gasket. Insert a narrow strip of paper into the door opening and close and latch the door. Obvious resistance should be felt when pulling the paper out. Repeat this check several times around the perimeter of the door.

## CATALYTIC COMBUSTOR, TESTING

Test the catalyst in your Blaze King as follows:

Build a fire using the same technique described on pg 23. Leave the thermostat knob on a medium (#2) setting. When the fire is well established (within one to three hours) turn the thermostat knob to 1.5 or 1.75. A properly operating catalyst will remain active, and the catalyst thermometer will remain in the "active" zone until the wood load is mostly consumed. A "tired" or "dead" catalyst will go out completely and the thermometer needle will fall into the "inactive" zone when the thermostat is set on 1.75 or lower . Repeat this procedure several times over several days. (Remember that the catalyst thermometer has a built-in lag of 4-8 minutes.) If the catalyst does not go into the active zone after several test burns, it may require cleaning or replacement. It is also possible that the thermometer may not be reading accurately. Before replacing the catalyst, read "Thermometer", on page 28.

## CATALYTIC COMBUSTOR, CLEANING

Under certain conditions, ash particles may build up on the face of the catalyst. These particles are visible when the fire is out or when the catalyst is in the glowing stage. Any deposit on the face of the catalyst should be removed. Wait until the fire is out and the stove is cold. Brushing the catalyst with an old toothbrush will remove some deposits. Passing a plastic vacuum cleaner wand or brush near the face of the catalyst will also remove most deposits. (**Caution: Hot ash in a vacuum cleaner bag can ignite causing a fire.**) Never scrape the catalyst with any hard tool. Some stove owners have run pipe cleaner through every individual cell of the catalyst. This is not necessary and may actually do more harm than good. Limit cleaning to the face of the catalyst only.

# Maintenance

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## CATALYTIC COMBUSTOR, REPLACEMENT

After the stove has been in operation for several hours the catalytic thermometer on top of the stove should read in the active zone. If the thermometer's indicator needle does not stay above the 1/3 mark in the active zone, even with a hot burning fire, the catalyst may need replacement. Be sure to observe the stoves operation for a period of 7 to 10 days before considering replacing the combustor.

**If the combustor must be examined or replaced, follow this procedure:**

1. Allow the stove to burn out and cool down.
2. Open the door and remove the flame shield - the perforated plate that is just above the inside of the door opening. Lift it slightly and pull it forward and down.
3. The combustor is held together by a stainless steel band. Using a screwdriver, gently pry under the band at each end. When the combustor is loose it can be inched forward, and lowered through the loading door.
4. The insulating material around the stainless band will probably disintegrate as the combustor is removed. If the combustor is placed back in the stove, the insulating material **MUST** be replaced. Obtain a piece pre cut combustor gasket from your dealer. When installing the insulation, ensure the ends of the gasket meet up.
5. Do not burn the stove with the combustor removed, or without the insulation around the combustor.
6. Before replacing the combustor, clean the combustor seat and the area around it. Also, using a vacuum cleaner, clean the area around the by-pass.
7. With the stainless flanges on each end and the bottom, lift the new combustor into position. The combustor should slide easily into position. Push it back as far as it will go. Don't be concerned if it appears a bit loose. The insulation around the outside of the stainless band will expand during the first fire holding the combustor in place.
8. Replace the flame shield (the Perforated plate) by holding it inside the firebox with the triangular wings facing away from you. Lift it into position, between the door and the catalyst, and rest the bottom of the plate on the two pins that protrude below the catalyst. The flame shield should rest at an angle (about 45 degrees) with its bottom near the combustor, and its top near the stove front.

## CLEANING DOOR GLASS

The best way to keep the glass clean is to leave the stove on high burn for a period of time after each reloading. The moisture evaporating off a new load of wood contributes to the amount of the creosote on the inside of the glass. Removing that moisture at the beginning of the burn cycle helps to keep the glass clean. Leaving the thermostat on a higher setting for 30 minutes to an hour before turning to low for an overnight burn will also help. Even then the glass may coat during a low burn. Heavier deposits may require hand cleaning. Manual glass cleaning should be done when the stove and glass are cool. **DO NOT CLEAN THE GLASS WHILE IT IS HOT.** Use a soft cloth and a **NONABRASIVE** household cleaner. After using any cleaner, thoroughly rinse the glass with water to remove any deposits left by the cleaner. Failure to remove all traces of glass cleaner will result in the glass cleaner residue baking on. This residue may be very difficult to remove.

## DOOR GLASS, REPLACEMENT

Your BLAZE KING is equipped with a door containing a strong, heat-resistant ceramic glass. This glass is intended to withstand extremely high temperatures and is tested for continuous use above 1200 degrees Fahrenheit. However, this glass can be broken through improper use. If glass replacement becomes necessary, use only **BLAZE KING GLASS**. **DO NOT SUBSTITUTE ANY OTHER MATERIAL.**

Allow the fire to completely burn out and the stove to cool down.

## WARNING

**BROKEN DOOR GLASS IS SHARP. ALWAYS WEAR EYE PROTECTION AND PROTECTIVE GLOVES WHEN HANDLING GLASS. DISCARD THE GLASS IN A CLOSED CONTAINER INACCESSIBLE TO CHILDREN.**

1. Retain all metal parts for re-installation.
2. Open the door and remove the door gasket. Remove the nuts holding the retainers to the inside of the door.
3. Remove the damaged glass and the old glass gasket.
4. The replacement glass has the gasket around its perimeter. Place the glass in the door frame. Be sure the words "Blaze King" etched in the glass read correctly when the door is closed.
5. Replace the gasket and reinstall the retainers with the proper nuts.

# Maintenance

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## FAN ASSEMBLY

Periodic cleaning of the fan assembly (including fan blades) with a soft brush and vacuum cleaner will ensure longer life and maximum efficiency. Routine lubrication of the fan motor is not required. However, should it become necessary to replace the fan contact your local dealer.

## PAINT

If the finish on the stove ever becomes blemished, you can repaint with high temperature paint available from your dealer. DO NOT paint the stove while it is HOT.

## RHEOSTAT REPLACEMENT

In the rare event that the fan rheostat fails, obtain a replacement from your Blaze King dealer and follow the procedure below.

1. Unplug the fan power cord from the wall.
2. Remove the four screws on the fan cage containing the rheostat switch.
3. Remove the blower from the cage.
4. Locate and unplug the two wires coming from the rheostat switch.
5. Pull the knob straight off the switch.
6. Unscrew the nut holding the switch to the cage.
7. Replace the switch, making sure the small position locating pin is fitted into the hole in the cage.
8. To reinstall the switch, reverse the above steps being sure to tuck the wires back into the assembly so they do not come in contact with the fan blade.

## THERMOMETER

The catalyst thermometer has a built-in lag of 4-8 minutes. That means it will tell you what was happening 4-8 minutes ago. It is only an indication of the temperatures of the gasses after they pass through the catalyst. The thermometer probe must be cleaned at least once a year. Lift the thermometer from the stove once the stove is cooled down and wipe or scrape the probe clean. When the thermometer is out of your stove, and at room temperature, the indicator should point near the bottom of the "Inactive" zone. If the needle no longer points to the bottom of the "Inactive" zone when the thermometer has been at room temperature for 10 minutes or longer, it may need adjustment. Holding the probe with a pair of pliers, loosen the bolt on the top of the dial. Turn the dial to align the pointer with the bottom of the "Inactive" zone, then retighten the bolt.

## THERMOSTAT

Under normal operations, the thermostat should be set on a mid-range setting. At this setting the stove is capable of heating an average sized home. The thermostat is adjusted at the factory and should not be tampered with. If the thermostat breaks, the damper will automatically close.

# Troubleshooting

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Your Blaze King is designed to allow a wide selection of heat output levels. If you begin to lose control of the amount of heat the stove is emitting, determine the cause early so that major problems may be avoided.

The six major components of a well-controlled fire are:

1. A knowledgeable and conscientious operator
2. Adequate-air supply
3. Firewood of good quality and proper size
4. Catalytic combustor in good condition
5. Clean chimney, properly sized and installed
6. Clean heat exchangers with tight gaskets and seals

Considering all of the above, number one is the most important for safe and efficient operation of any woodstove. Please study the operation instructions carefully. If you have any questions not answered in this manual. Consult your BLAZE KING dealer by calling the Customer Service Department at Blaze King in the U.S.A. at 509-522-2730 or in Canada at 250-493-7444

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**PROBLEM:  
CAUSE**

Act immediately regardless of cause

**Chimney Fire  
SOLUTION**

Turn the thermostat to lowest setting, check loading door to be sure it is tightly closed.  
**Call Fire Department.**

After the fire is out, have your chimney and flue connector inspected by a certified chimney sweep. A damaged masonry chimney should be repaired or rebuilt. A prefabricated chimney (factory built) that is damaged should be replaced. Any damage to the flue connector should be corrected before the system is used again.

Possible causes of a chimney fire, and remedies for those causes, can be found further in this section: "Excessive Creosote Formation", and "Spots of Creosote Accumulation in Chimney or Flue Connector".

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**PROBLEM:  
CAUSE**

Green or wet wood.  
Not enough fuel in stove.

**Not enough heat.  
SOLUTION**

Use seasoned wood. Don't be afraid to FULLY load the stove. The thermostat will control the burn rate regardless of load size.

Obstruction in chimney or cap screen.  
Combustor plugged or coated.

Remove obstruction. Test combustor, page 26  
Clean combustor, page 26. Detailed cleaning instructions are also available at [www.blazeking.com](http://www.blazeking.com).

Combustor not functioning.

Test combustor, page 26.  
If needed, replace combustor, page 27.

Thermostat set too low.

Raise thermostat setting.

Thermostat not operating properly.

Consult your Blaze King dealer.

Poor draft caused by an oversize flue.

Measure draft with Manometer.  
See CHIMNEY DRAFTS, page 9 & 21.  
See CHIMNEY, page 8.  
Consult your Blaze King dealer or a chimney sweep.

Strong, gusting winds causing chimney downdrafts.

Install wind-resistant chimney cap. Directional downdraft caps may not continue to rotate freely. If you have a directional cap, check it frequently.

Tightly sealed house, inadequate air supply.

Open a window slightly, near the stove. There must be an adequate fresh air supply to ensure proper combustion.

Reloading too much wood on top of too few coals.

Allow a larger bed of coals to build up.

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# Troubleshooting

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**PROBLEM. Too much heat.****CAUSE**

By-Pass door left open.

Thermostat set too high.

Loading door gasket leaking,  
admitting excess air into firebox

Excessive draft in the chimney

Thermostat not operating properly

Wood is too small.

**SOLUTION**

Close the by-pass door.

Lower thermostat setting.

Replace door gasket  
and/or adjust door, page 27.

Measure draft with a Manometer  
See DRAFTS, page 9 & 21. Consult your Blaze King dealer  
or a chimney sweep. Install a cap.

Consult your Blaze King dealer.

Use larger pieces.

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**PROBLEM: Fan will not run, or there is no adjustment for fan speed.****CAUSE**

Faulty fan motor

**SOLUTION**

Call your Blaze King dealer.

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**PROBLEM: Excessive creosote formation in chimney and chimney Connector.****CAUSE**

By-pass door left open

By-pass door not sealing tightly

Improper operation.

Wood too green or wet.

Catalytic combustor not operating properly.

Poor draft caused by an  
oversize or short flue, etc

Chimney too cold or poorly insulated.

**SOLUTION**

Close by-pass door.

Inspect by-pass door and seal for warping. Ash or creosote buildup  
may occur on door or seat. With stove cold scrape and vacuum area  
around by-pass. Be sure all mating steel surfaces are clean and  
smooth.

Check thermostat setting and operating procedures, page 30.

Use seasoned wood.

Inspect the combustor.  
See catalytic combustor testing, page 28.

Measure draft with Manometer.  
See DRAFTS, page 9 & 21.  
See CHIMNEY, page 8.  
Consult your Blaze King dealer or a chimney sweep.

Upgrade chimney system.  
Consult your Blaze King dealer or a chimney sweep.

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**PROBLEM: Catalytic combustor thermometer (on top of stove) does not go into "Active" zone, or does not stay there for long.****CAUSE**

Improper operation

Obstruction in chimney or cap

Faulty catalyst thermometer.

Wood too green or wet.

Combustor plugged or coated.

Combustor not functioning.

**SOLUTION**

Check thermostat setting and operating procedures.  
See page 28.

Clean chimney, remove obstructions.

Replace thermometer and recheck combustor operating temperature.

Use seasoned wood.

Clean combustor, see page 26.

Check and test combustor  
If needed replace combustor. See page 27.

# Troubleshooting

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Thermostat not operating properly.

Consult your blaze King Dealer.

By-pass door leaking or not closing completely.

Inspect and clean area around by-pass doors.  
Adjust or repair as necessary. Consult your Blaze King Dealer.

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## **PROBLEM: Spots of creosote accumulation in chimney or chimney connector.**

### **CAUSE**

Air leaks in chimney or flue connector.

### **SOLUTION**

Inspect chimney and/or flue connector. Repair or replace as necessary. Check to be sure that the flue connector is installed correctly.

**CAUTION: a leaking flue connector is a fire hazard and demands immediate attention.**

Poor draft caused by an oversize flue, etc.

Measure draft with Manometer.  
See DRAFTS, page 9 & 21.  
See CHIMNEY, page 8.  
Consult your Blaze King dealer or a chimney sweep.

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## **PROBLEM: Door glass quickly becomes coated with creosote.**

If you burn your stove on med-lo for extended time-periods, the glass will become coated with creosote. Usually the creosote can be burned off by burning your stove on high for 1 hour with a fresh fuel load.

### **CAUSE**

Low thermostat setting or lowering the thermostat setting too far, too quickly.

### **SOLUTION**

Turn the thermostat to the warmest setting during the first 20 - 30 minutes or until the fire is well established after each reloading.

Poor draft caused by an oversize or short flue, etc.

Measure draft with Manometer.  
See DRAFTS, page 9 & 21. See CHIMNEY, page 8.  
Consult your Blaze King dealer or a chimney sweep.

Obstruction in chimney or cap screen.

Remove obstruction. Clean chimney and/or cap screen.

Strong, gusting winds causing downdraft in chimney.

Install wind-resistant chimney cap.

Tightly sealed house, inadequate air supply.

Open a window, slightly, near the stove.

Burning poorly seasoned wet wood, or wood with high pitch content,

Use seasoned wood with low pitch content. such as some types of pine.

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## **PROBLEM: The catalyst temperature cannot be controlled. Turning the thermostat down often makes the catalyst temperature go up.**

### **CAUSE**

Turning the thermostat down, particularly in the first half of the burn cycle, causes the fire to emit more smoke. Since smoke is fuel for the catalyst, the catalyst temperature may climb for up to several hours. This is normal, and is of no concern. As long as only the catalyst temperature is elevated, there is nothing to worry about.

# Standard And Replacement Parts

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## STANDARD & REPLACEMENTS PARTS

<u>Part Name</u>	<u>Part #</u>
Combustor assembly,	Z4400G
Thermometer, for stove top	0342C
Thermostat knob	0102
Wood Handle -loading	0121A
-bypass doors	0121B
Fan rheostat knob	0137
Fan rheostat	0136
Fan motor	0719C

## OPTIONAL KITS

<u>Part Name</u>	<u>Part #</u>
Gold Door	Z4686G-C

To order above replacement parts, contact your local Blaze King dealer.

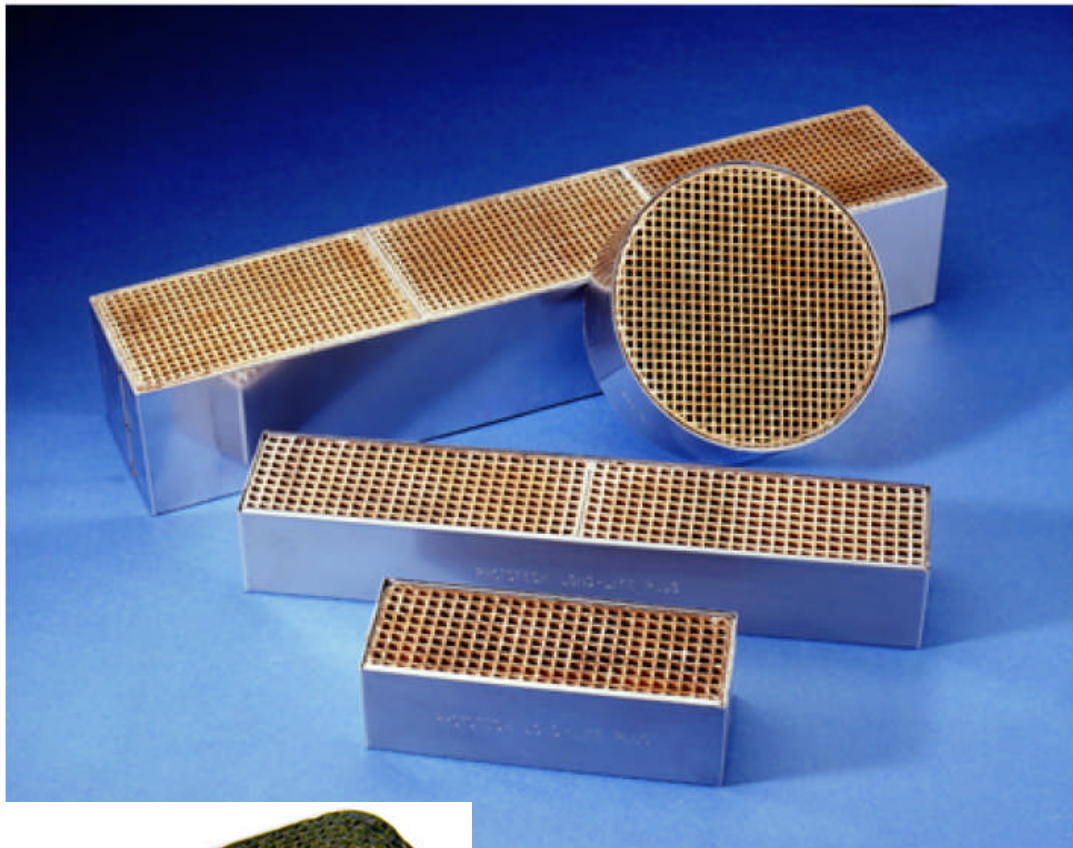
For more information contact our customer service department at Blaze King, Walla Walla, WA (509)-522-2730 or in Canada at Valley Comfort Systems / Blaze King, Penticton, B.C. (250) 493-7444.

# Süd Chemie Prototech

## Major Cleaning Procedures for

## Süd Chemie Prototech Catalytic Combustors

### Ceramic



< **Stainless steel**  
(same cleaning procedure)

# Major Cleaning Procedure for Süd-Chemie Prototech's Catalytic Combustors

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The catalytic activity and effectiveness of a two to three year old Süd-Chemie Prototech Catalytic Combustor can be improved by following this "MAJOR CLEANING PROCEDURE". *For normal maintenance, refer to your stove manufacturer's operation manual.* Major cleaning should not be required more than once a year for heavy-use stoves and every two years for light-use stoves. This procedure should be followed only if the owner feels comfortable with performing this procedure. If not, a trained chimney sweep should be contacted.

Before attempting this cleaning procedure, familiarize yourself with your stove manufacturer's operation manual. Improper removal, handling or reinstallation of the catalytic combustor can damage it or your stove.

This cleaning procedure is for the catalytic combustor only, and it does not reduce or eliminate the need for regular chimney inspection and cleaning.

## Important Tips for Maximum Combustor Effectiveness:

1. Burn natural wood only. Do not burn trash, garbage, artificial or paper logs, gift wrappings, coal, lighter fluids, chemical starters, treated or painted wood, driftwood or chemical cleaners. These may contain chemicals that could de-activate the catalyst.
2. Catalytic combustor temperatures above 1800°F. (1000°C.) will shorten the life of a combustor. Combustor temperatures between 1400°F and 1600°F. (760°C-870°C) are common, but operating temperatures between 700°F and 1400°F (371°C.- 760°C.) are recommended.
3. Full catalytic operation occurs at catalytic combustor temperatures above 700°F. (371°C.). Combustor glowing only occurs at temperatures above 1000°F. (538°C.) With aged combustors, there will be less glowing, but as long as the combustor reaches light-off temperature of 500°F-700°F. (260°C-371°C.) catalytic operation is very effective. **THE COMBUSTOR DOES NOT HAVE TO BE GLOWING TO BE OPERATING EFFICIENTLY.**
4. To prevent damage to your combustor, **do not**
  - drop the combustor
  - run water through the combustor
  - remove the metal band from the combustor
  - scrape the inside walls of the combustor
  - use compressed air to clean the combustor

## Major Cleaning Procedure

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- Inspection
- Necessary Equipment
- Cleaning Steps

### ■ Inspection - Prior to Major Cleaning:

**CAUTION: DO NOT REMOVE THE COMBUSTOR WHILE IT OR ANY PORTION OF THE STOVE IS HOT.**

Carefully remove the combustor from the stove (see your Use & Care Manual). *Do not remove the stainless steel band or manufacturer's combustor holder from around the outside of the combustor.* It is very important that the unit is handled **CAREFULLY**. The combustor is a brittle ceramic and could break if it is handled roughly or dropped. Replace the combustor with a new part if it is damaged or worn out. Consult your Use & Care Manual or Süd-Chemie Prototech's Trouble Shooting Guide.

For the major cleaning to be effective, the combustor must not be coated with creosote, but should be light gray or beige in color. If the combustor is coated with creosote (dark black or dark brown), operate the stove with the combustor in place at a higher than your normal burn rate to burn-off the accumulated soot and creosote (see Süd-Chemie Prototech's Troubleshooting Guide). **USE CAUTION** - do not overheat the stove or chimney. Allow the stove and ash bed to cool completely before proceeding. Re-inspect the combustor. If the creosote build-up remains. repeat the burn-off procedure.

### ■ Necessary Equipment:

- Combustor removal instructions from the Use & Care Manual for your stove.
- Distilled water - 2 to 3 gallons, enough to completely cover the combustor by at least ½", three separate times. Do not use tap water - it may contain minerals that will reduce the effectiveness of the cleaning.
- White vinegar - 2 to 3 quarts, enough to make a 50/50 solution with the distilled water to cover the combustor once.
- A pot - large enough to preheat the cleaning solution and the rinse water.
- An old pot or roasting pan - large enough for the combustor to be covered with at least ½" of cleaning solution. The top surface of the combustor must be covered with cleaning solution at all times. Do not reuse the pot for cooking purposes.
- Plastic-coated wire (16 gauge multi-strand works well) - for use as a grab handle. Do not scrape the inside walls of the combustor.
- Tools and materials required to remove and reinstall the combustor.
- Vacuum cleaner (one used in the home).

# Süd-Chemie Prototech's

## ■ Cleaning Steps

### STEP 1

GENTLY REMOVE ANY LOOSE ASH FROM THE COMBUSTOR.

A home vacuum cleaner is effective, using either suction or exhaust. USE CAUTION - high air velocities can strip catalyst off the ceramic. (Never use a high pressure air hose!!) Any cells that are still plugged should be gently cleared using a cotton swab or pipe cleaner. Never scrub or abrade any part of the catalytic combustor, since this may remove the catalyst or damage the cells.

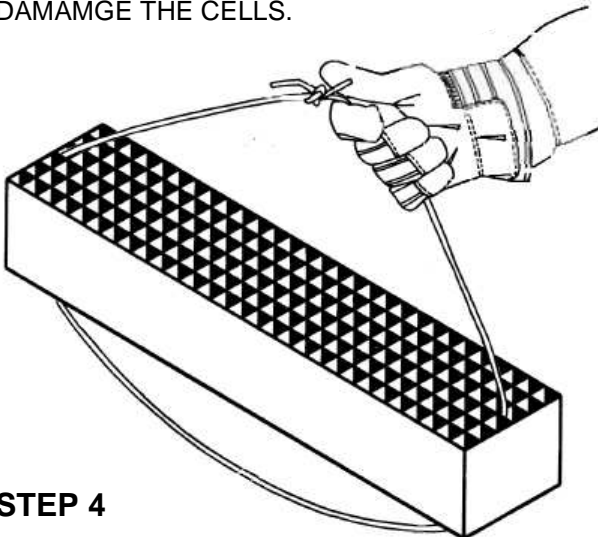
### STEP 2

PREPARE THE CLEANING SOLUTION.

Make a 50/50 mixture of vinegar and distilled water in the large pot. Heat the mixture to a boil.

### STEP 3

THREAD THE WIRE THROUGH THE COMBUSTOR TO MAKE A GRAB-HANDLE FOR LIFTING THE COMBUSTOR IN AND OUT OF THE HOT CLEANING SOLUTION. The wire will elevate the combustor off the bottom of the large pot, allowing the cleaning solution to flow freely through the cells. BE CAREFUL NOT TO DAMAGE THE CELLS.



### STEP 4

GENTLY PLACE THE COMBUSTOR INTO THE CLEANING SOLUTION.

The cleaning solution will evaporate slightly. Keep the combustor covered with at least ½" of solution. Reduce the heat to just below boiling. It is not necessary to boil the cleaning solution once the combustor has been placed into the pot. Allow the combustor to remain in the hot cleaning solution for thirty (30) minutes.

**NOTE:** while the combustor is in the cleaning solution, heat to a boil enough distilled water for the two rinses (STEP 6 & STEP 7).

### STEP 5

After THIRTY MINUTES, remove the combustor from the cleaning solution.

Place it on a towel. Discard the used cleaning solution and rinse out the pot.

### STEP 6

Fill the pot with the boiling rinse water and gently place the combustor in the rinse water.

Allow the combustor to remain in the rinse water for 15 minutes. Keep the rinse water at just below boiling.

Meanwhile, preheat enough water for the second rinse cycle.

### STEP 7

AFTER 15 MINUTES, remove the combustor from the rinse water and gently shake out the excess water.

Repeat STEP 6.

It is unlikely that you will notice a visible difference in the combustor after this cleaning procedure.

### STEP 8

Reinstall the combustor.

After the cleaning procedure, follow the manufacturer's instructions for replacing the combustor and reassembling the stove.

Don't operate the stove for at least 24 hours. This will allow the combustor to dry and prevent steam from causing damage to the combustor. If the stove must be returned to operation immediately the combustor can be dried in an oven. Place the combustor in an oven at 300°F for 60 minutes. Turn off the oven and let it cool to room temperature.

This procedure has been found to be effective for non-damaged and non-worn out catalytic combustors. It will not revitalize a catalytic combustor if the catalyst has been worn out or damaged by use with improper combustibles or otherwise. Check the performance of your catalytic combustor regularly after cleaning. Reduced effectiveness as a result of age or damage may result in an increased rate of creosote accumulation in your chimney.

