

# PELLET STOVE

## OPERATOR'S MANUAL

Installation and Operation

### Castle model HPS09

#### CAUTION



#### **DO NOT DISCARD!**

#### **SAVE THESE INSTRUCTIONS**

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.

#### WARNING



Please read this entire manual before installation and use of this pellet fuel-burning room heater. Failure to follow these instructions could result in property damage, bodily injury or even death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not overfire - If any external part starts to glow, you are overfiring. Reduce feed rate. Overfiring will void the warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause a house fire.

#### WARNING



**HOT! DO NOT TOUCH. SEVERE BURNS MAY RESULT. CLOTHING IGNITION MAY RESULT.**



**Glass and other surfaces are hot during operation and cool down.**

- Keep children away.
- CAREFULLY SUPERVISE children in same room as appliance.
- Alert children and adults to hazards of high temperatures.
- DO NOT operate with protective barriers open or removed.
- Keep clothing, furniture, draperies and other combustibles away.

#### CAUTION

Tested and approved for pellet fuel. Burning any other type of fuel voids warranty.

#### CAUTION

Check building codes prior to installation. Contact the regulating authority prior to installation to determine the need for a permit.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building or fire officials about restrictions and installation inspection requirements in your area.







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## WARRANTY

Ardisam, Inc., a Manufacturing Company warrants this Castle Pellet Stove to be free from defects in the material or workmanship, for the lifetime of the product. Ardisam will furnish 100% parts and labor to correct any defect caused by faulty material or workmanship. For other warranty repairs, please read the one year warranty listed below.

### ONE YEAR WARRANTY

All electrical components such as but not limited to blowers, wiring, vacuum switches, speed controls, control boxes, switches, pilot assemblies, thermostats, and igniters are covered under Ardisam Inc.'s one year warranty. Our firepots and labor are also covered under the one year warranty.

THIS WARRANTY IS LIMITED TO DEFECTIVE PARTS – REPAIR AND/OR REPLACEMENT AT ARDISAM, INC.'S OPTION AND EXCLUDES ANY INCIDENTAL AND CONSEQUENTIAL DAMAGES CONNECTED THEREWITH.

*This warranty is not transferable and supersedes all other warranties either expressed or implied and all other obligations to liabilities on our part. Ardisam, Inc. does not assume, and does not authorize any other person to assume for us, any liability in connection with the sale of our products. The warranty applies only to products which have not been subjected to negligent use, misuse, alteration, accident or repairs made by anyone not certified by Ardisam Inc.. This guarantee is void unless the warranty card is properly filled out and returned to Ardisam, Inc., Cumberland, WI, at the time of purchase.*



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## WARNINGS AND CAUTIONS

### **WARNING**

**INDICATES A HAZARD WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY AND/OR PROPERTY DAMAGE.**

- ❑ Read this entire manual before you install and use your new pellet stove. Failure to follow instructions may result in property damage, bodily injury, or even death.
- ❑ Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid contact to skin and/or clothing.
- ❑ Young children should be carefully supervised when they are in the same room as the stove.
- ❑ Clothing and other flammable materials should not be placed on or near this unit.
- ❑ Flammable or explosive liquids such as gasoline, naphtha, alcohol, or engine oil must **NEVER** be used in or around stove. These liquids must be stored in a separate room as the open flame in the fire box could ignite the fumes of such liquids.
- ❑ **DO NOT** burn garbage in this unit. The burning of other solid fuels such as cord wood or wood chips in this stove is not permitted. Any fuels not certified by Castle Pellet Stoves which are burned in this stove will void the warranty.
- ❑ **DO NOT** route power cord in high traffic areas. A power surge protector plugged into a grounded 110 volt power source is required.
- ❑ **DO NOT** install a flue damper in the exhaust venting system of this unit.
- ❑ **DO NOT** connect this unit to a chimney flue servicing another appliance.
- ❑ **DO NOT** install in a sleeping room.
- ❑ **DO NOT** connect to any air distribution duct or system.
- ❑ **DO NOT** connect directly to a masonry chimney.
- ❑ **DO NOT** terminate vent in any enclosed or semi-enclosed area, such as; carports, garage, attic, crawl space, under a sun deck or porch, narrow walkway or closed area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway etc.
- ❑ **NEVER** touch door latches while stove is in operation, they get extremely hot.

### **WARNING**

- ❑ Proper installation of this stove is necessary for safe and efficient operation. Installing this product improperly may result in a house fire and personal injury. All applicable building codes for your location must be followed. In areas where building codes require additional steps to the installation of this product not included in this manual, the building codes will take precedent and must be followed. Contact your local building inspector to obtain any necessary permits or inspection guidelines before installing the product.

### **CAUTION**

**INDICATES A HAZARD WHICH, IF NOT AVOIDED, MIGHT RESULT IN MINOR OR MODERATE INJURY AND PROPERTY DAMAGE.**

- Contact local building or fire officials about restrictions and installation inspection requirements in your area.
- Contact your local authority (such as municipal building department, fire department, fire prevention bureau, etc.) to determine the need for a permit.
- The Castle Pellet Stoves pellet stove is designed to burn pellet fuel only.
- A working smoke detector is required and must be installed in the same room as the stove.
- This stove is not intended for use in commercial applications.
- Door and ash pan must be closed and latched during operation.
- Notify your insurance company of pellet stove installation.
- This installation must conform with local codes. In the absence of local codes you must comply with ASTM E1509, (UM) 84-HUD, ULC/ORDC-1482.
- The structural integrity of the manufactured home floor, wall, and ceiling/roof must be maintained.
- Keep combustible materials (such as grass, leaves, etc.) at least 3 feet away from the flue outlet on the outside of the building.
- This stove should not be used as the only source of heat in the house. Power outages and periodic maintenance will result in a total loss of heat.
- Do not leave hopper door open while unattended.

**⚠ CAUTION**

- Installation and repair of this pellet stove should be done by a qualified service person. The appliance should be inspected before use and at least once a year by a qualified service person. It is imperative that the control compartments, fire box, and the circulating air passageways of the stove be kept clean.
- The operation of exhaust fans such as bathroom fans, attic fans, etc. might starve the pellet stove of combustible air creating a negative pressure in the room. Provide adequate ventilation of the room accompanying the pellet stove. If not, the pressure switch may shut off operation of the pellet stove.
- The moving parts of this stove are propelled by high torque electric motors. These parts can cause severe damage to body parts that get near them. Keep all body parts away from auger and fans while the stove is plugged into an electrical outlet. These moving parts may begin to move at any time the stove is plugged in.
- Vent surfaces can get hot enough to cause burns if touched. Noncombustible shielding or guards may be required.
- Install vent at clearances specified by the vent manufacturer.
- All venting joints, whether vertical or horizontal, should be made gas-tight with recommended sealants specified by vent manufacturer.
- According to HUD (Housing & Urban Development) requirements, when installed in a mobile home, this stove must be grounded directly to the steel chassis of the mobile home and bolted to the floor. Direct air access must be provided, use a Fresh Air Kit.
- For use in the United States and Canada. Approved for installation in mobile homes.
- Castle Pellet Stoves, producer of this appliance, reserves the right to alter its products, specifications

**⚠ WARNING**

**IF THE ELECTRICAL POWER FAILS ANY TIME WHEN THE STOVE IS HOT, KEEP ALL STOVE DOORS CLOSED. THE AUTOMATIC SAFETY FEATURES MUST NOT BE BYPASSED.**

**AUTOMATIC SAFETY FEATURES**

***POWER OUTAGE***

During a power outage, the stove will shutdown safely. Do not open the main door or ash door. During a power failure the exhaust fan will not run. Keeping the doors sealed will allow the exhaust vent to draft out naturally. When the power is restored, the stove will not restart. If the exhaust temperature is still 120 degrees Fahrenheit when power is restored, the exhaust and convection fans will continue to run until the stove cools. See lighting instructions to restart stove.

***OVERHEATING***

**Over Fire Protection:** If the stove is being over fired or burning too hot, the high limit switches will automatically shut down the stove to avoid damage to components. If the temperature on the hopper reaches 200 degree Fahrenheit, the auger will automatically stop and the stove will shut down. The exhaust fan will continue to run until the proof of fire switch cools. Allow stove to cool before attempting to re-ignite. See lighting instructions.



## INTRODUCTION

Congratulations on your investment in quality. Thank you for your purchase on a Castle Pellet Stove from Ardisam, Inc. We have worked to ensure that this pellet stove meets the highest standards for usability and durability. With proper care, your stove will provide many years of dependable service. Please read entire manual before installation and use.

## BURNING PELLET FUEL

Ashes need to be removed from the stove periodically. See Normal Care & Maintenance section for cleaning procedure. Due to the nature of pellet fuels, this stove will require attention periodically. Regular cleaning is an important part of burning pellet fuel.

### PELLETS

- This pellet stove is designed and approved to burn wood pellets, that comply with pellet fuels industry standards. Minimum of 40 lbs. density per cubic feet, 1/4" to 5/16" in diameter, with a maximum length of 1-1/2", and less than 1% ash.
- The performance of your pellet stove is greatly affected by the type and quality of wood pellets. As the heat output of various quality wood pellets differ, so will the performance and heat output of the pellet stove.
- **Wood pellets** are generally produced out of wood waste such as sawdust and shavings. The raw material is dried, mechanically fractioned to size and extruded into pellets under high pressure. Wood pellets need to be protected from direct exposure to water. Water from sources such as condensation and humidity causes pellets to expand and break down into unusable fuel. **Keep fuel dry.**
- It is important to select and use only pellets that are dry and free from dirt and debris. Dirty fuel will adversely affect the operation and performance of the unit and will void the warranty. The Pellet Fuel Institute (PFI) has established standards for wood pellet manufacturers. Only use pellets that meet or exceed PFI standards for premium fuels.

### CLINKERS

- Impurities, such as silica (clinkers), will need to be regularly cleaned and removed from the pellet stove. Clinkers will form a hard mass and block airflow through the pot liner. High quality fuels will result if fewer clinkers.

## CAUTION

**BURNING WOOD PELLETS ACCORDING TO RECOMMENDATIONS WILL ASSURE LONGER STOVE LIFE AND LESS FUEL RELATED PROBLEMS.**

**THE USE OF GRATES OR OTHER METHODS OF SUPPORTING THE FUEL IN THIS STOVE IS PROHIBITED AND WILL VOID ALL WARRANTIES.**



## SPECIFICATIONS

Model Number	HPS09
BTU/hour input (1)	30,000 max
Heating Capacity (2)	1,200 Sq. Ft.
Electrical Rating (3)	110-120 Volts, 4.5 Amp, 60 Hz
Power Consumption	520 Watts ignition, 200 Watts operating
Fuel Storage Capacity	50 lbs.
Flue Size (4)	3 in.
Width	22 in.
Height	40 in.
Depth	22 in.
Weight	287 lbs.

(1) Heat output will vary, depending on the brand, type and quality of fuel and the moisture content. Consult your dealer for best results.

(2) Based on post 1982 home construction, requiring 35 BTU/Hr. per Sq. Ft.

(3) Install per NFPA 70 and follow all state and local codes, contact licensed electrical contractor for assistance.

(4) Install per NFPA 211 and follow all state and local codes, contact licensed installers for assistance.

Listing label:



Tested to the following standards: UL1482, ASTM E1509, ULC/ORD-C1482-M1990

## GLASS SPECIFICATIONS

This stove is equipped with 5 mm ceramic glass. Replace glass only with Castle Pellet Stoves ceramic glass. Call your Servicing Dealer or Castle Stoves at 1-800-345-6007 for replacement parts.

## CAUTION

**THIS INSTALLATION MUST CONFORM WITH LOCAL CODES. IN THE ABSENCE OF LOCAL CODES YOU MUST COMPLY WITH ASTM E1509, (UM) 84-HUD, ULC/ORD-C-1482.**

**CASTLE PELLET STOVES, MANUFACTURER OF THIS APPLIANCE, RESERVES THE RIGHT TO ALTER ITS PRODUCTS AND/OR THEIR SPECIFICATIONS WITHOUT NOTICE.**

## UNPACKING

Your Castle HPS09 will come fully assembled. Remove all packing material and tape from the inside of the firebox. Remove any tape on the outside of the glass. Open the hopper, remove all packing material and power cord.

**NOTE: Make sure the hopper is free of all foreign matter before filling with fuel. Foreign material will cause auger jams and will void stove warranty.**

## INSTALLATION

It is recommended the stove be installed and serviced by authorized professionals who are certified by the National Fireplace Institute (NFI) as NFI Pellet Specialists.

Proper installation of this stove is necessary for safe and efficient operation. Installing this product improperly may result in a house fire and personal injury. All applicable building codes for your location must be followed. In areas where building codes require additional steps to the installation of this product not included in this manual, the building codes will take precedent and must be followed. Contact your local building inspector to obtain any necessary permits or inspection guidelines before installing the product.

### STOVE PLACEMENT

Sketch out a plan for installing the stove including dimensions before permanent placement. When determining the location for the stove, wall stud location is critical. You may need to adjust the location of the stove to avoid trying to vent through a wall stud. Before placing the pellet stove, connect the vent and allow for minimum clearance to combustible walls.

### FLOOR PROTECTION REQUIREMENTS

The stove must be installed on a noncombustible floor, with proper floor protection, or on a masonry hearth. The hearth or noncombustible floor protector must extend a minimum of 6" in front, and 4" from each side. When a clean out t-vent is installed in the inside of a home, the floor protector must extend 2" beyond rear of t-vent. **SEE FIGURE 1.** When stove is vented straight through the wall and the clean out t-vent is on the exterior of the home, the minimum clearance is 3" from the back of the stove to the edge of floor protector. **SEE FIGURE 2.** The minimum floor protector material is 24 GA. sheet metal.

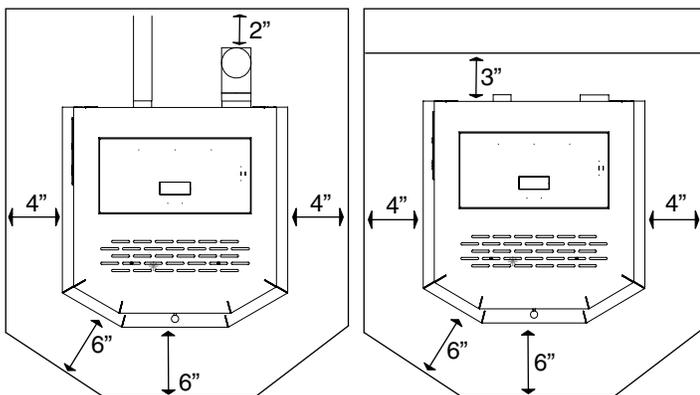


Figure 1

Figure 2

### PELLET STOVE FLOOR PAD CLEARANCES

## WARNING

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

**DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.**

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

**CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURES AND SHOULD STAY AWAY TO AVOID BUMPS TO SKIN AND/OR CLOTHING.**

**YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE STOVE.**

**CLOTHING AND OTHER FLAMMABLE MATERIALS SHOULD NOT BE PLACED ON OR NEAR THIS UNIT.**

## CAUTION

**THIS STOVE SHOULD NOT BE USED AS THE ONLY SOURCE OF HEAT IN THE HOUSE. POWER OUTAGES AND PERIODIC MAINTENANCE WILL RESULT IN A TOTAL LOSS OF HEAT.**

**CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.**

**CONTACT YOUR LOCAL AUTHORITY (SUCH AS MUNICIPAL BUILDING DEPARTMENT, FIRE DEPARTMENT, FIRE PREVENTION BUREAU, ETC.) TO DETERMINE THE NEED FOR A PERMIT.**

**KEEP COMBUSTIBLE MATERIALS (SUCH AS GRASS, LEAVES, ETC.) AT LEAST 3 FEET AWAY FROM THE FLUE OUTLET ON THE OUTSIDE OF THE BUILDING.**

**INSTALLATION AND REPAIR OF THIS PELLET STOVE SHOULD BE DONE BY A QUALIFIED SERVICE PERSON. THE APPLIANCE SHOULD BE INSPECTED BEFORE USE AND AT LEAST ANNUALLY BY A QUALIFIED SERVICE PERSON. IT IS IMPERATIVE THAT CONTROL COMPARTMENTS, FIRE BOX, AND CIRCULATING AIR PASSAGeways OF THE STOVE BE KEPT CLEAN.**

**CLEARANCES TO COMBUSTIBLES**

**NOTE:** These are minimum clearances to combustible walls established by the ASTM testing lab.

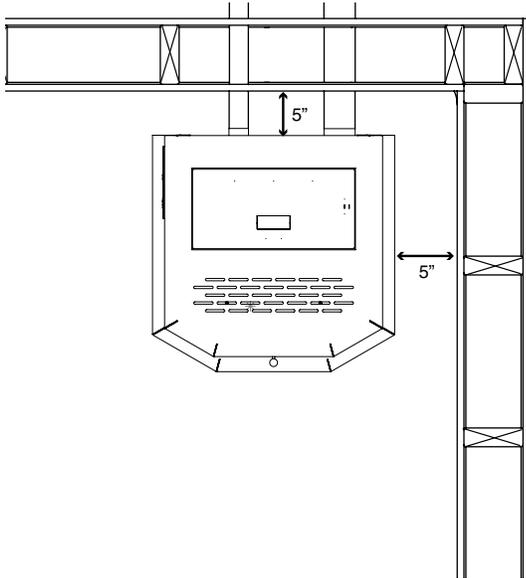


Figure 3  
**STRAIGHT INSTALLATION  
THROUGH WALL**

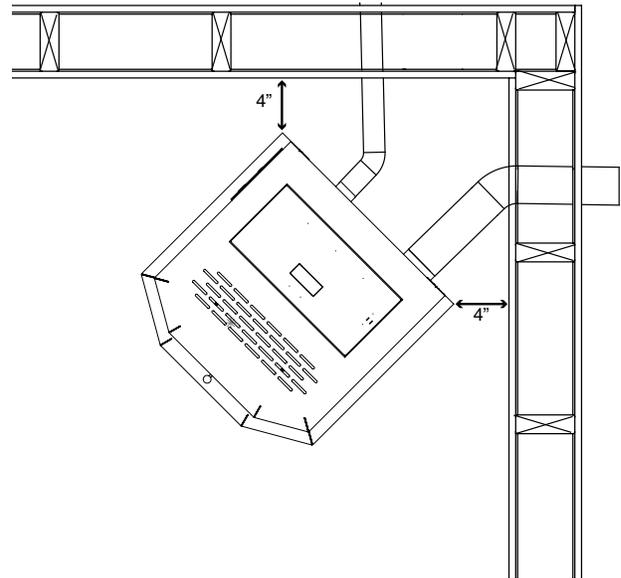


Figure 4  
**CORNER INSTALLATION  
THROUGH THE WALL VENTS**

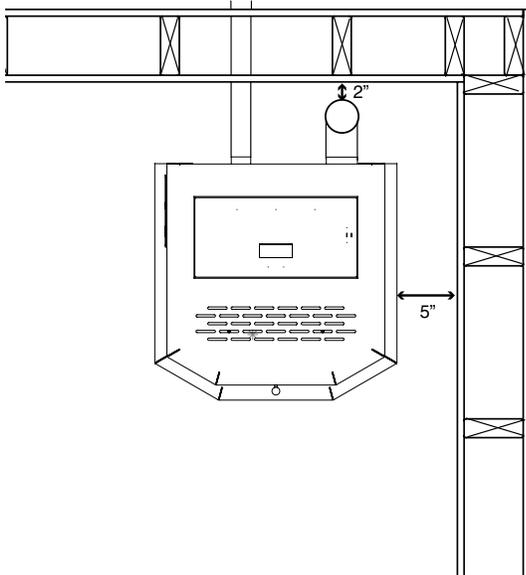


Figure 5  
**STRAIGHT INSTALLATION  
INTERIOR VERTICAL VENTS**

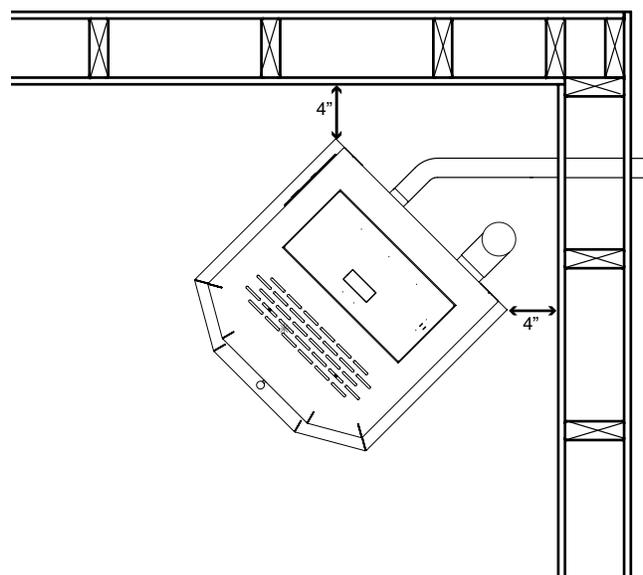


Figure 6  
**CORNER INSTALLATION  
INTERIOR VERTICAL VENTS**

**NOTE:** When interior vent is installed vertically, the clearance to the back wall is determined by the vent size used. Install vent at clearance specified by the vent manufacturer. Take into consideration any upward turning elbows or tees.



## VENTING

Consult vent manufacturer's specifications and recommendations for all venting installations.

The following installation guidelines must be followed to ensure conformity with both the safety listing of this stove and to local building codes.

**NOTE:** *Where passage through a wall, or partition of combustible construction is desired, the installation shall conform to CAN/CSA -8365.*

### TYPE OF VENT

The pellet venting pipe (also known as L vent) is constructed of two layers with air space between the layers. This air space acts as an insulator and reduces outside surface temperature of pipe to allow a clearance to combustibles.

A UL listed 3" or 4" type L pellet vent exhaust system must be used for installation and attached to the pipe connector provided on the back of the stove. Use a 3" to 4" adapter for 4" pipe. A cap must be used at the termination of type L vent chimneys. For elevations above 2,500 feet above sea level, a 4" L is required.

### PELLET VENT INSTALLATION

Termination **MUST** exhaust above air inlet elevation.

It is recommended to install at least 3' of vertical pellet vent pipe. This vertical pipe will create some natural draft to prevent the possibility of smoke or odor during appliance shutdown.

The installation must include a clean out tee to enable collection of fly ash and to permit periodic cleaning of the exhaust system.

Total length of horizontal vent must not exceed 10 feet. The maximum recommended vertical venting height is 18 feet. All joints for pellet vent are required to be fastened with at least three screws and all pellet vent connections must be sealed according to the vent manufacturer's recommendations.

The area where the vent pipe goes through to the exterior of the home must be sealed with silicone or other means to maintain the vapor barrier between the exterior and the interior of the home.

### WARNING

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

DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.

DO NOT CONNECT DIRECTLY TO A MASONRY CHIMNEY.

DO NOT TERMINATE VENT IN ANY ENCLOSED OR SEMI-ENCLOSED AREA, SUCH AS; CARPORTS, GARAGE, ATTIC, CRAWL SPACE, UNDER A SUN DECK OR PORCH, NARROW WALKWAY OR CLOSED AREA, OR ANY LOCATION THAT CAN BUILD UP A CONCENTRATION OF FUMES SUCH AS A STAIRWELL, COVERED BREEZEWAY ETC.

### CAUTION

VENT SURFACES CAN GET HOT ENOUGH TO CAUSE BURNS IF TOUCHED. NONCOMBUSTIBLE SHIELDING OR GUARDS MAY BE REQUIRED.

PELLET VENT MUST MAINTAIN MINIMUM CLEARANCES SPECIFIED BY VENT MANUFACTURER FOR CLEARANCE TO ANY COMBUSTIBLES.

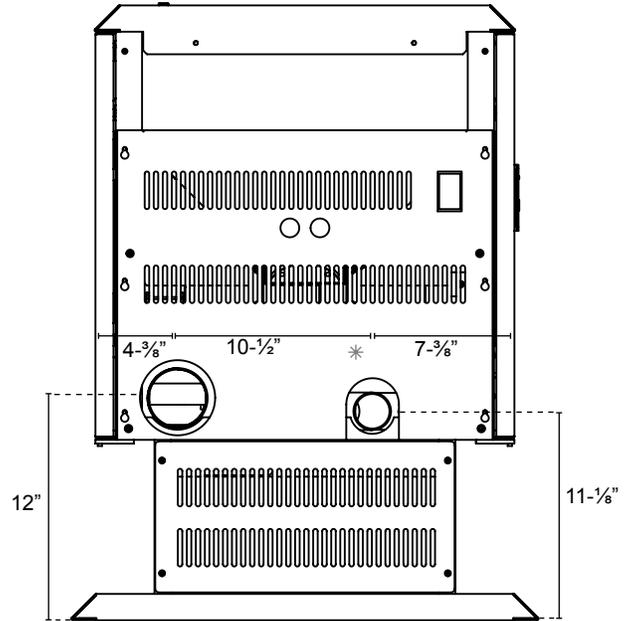
INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.

ALL VENTING, WHETHER VERTICAL OR HORIZONTAL, JOINTS SHOULD BE MADE GAS-TIGHT WITH RECOMMENDED SEALANTS.

**VENT TERMINATION CLEARANCES**

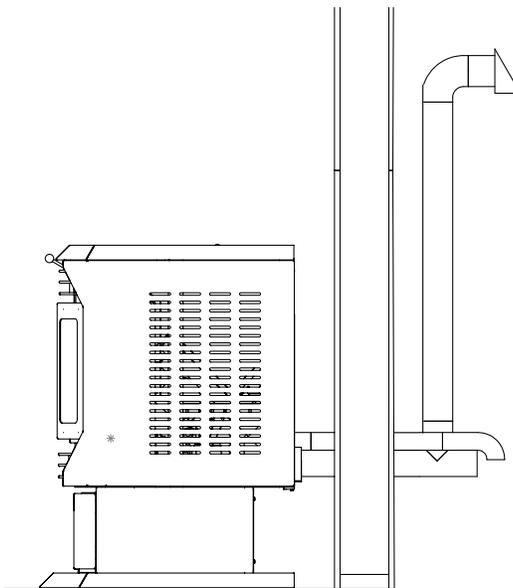
CLEARANCE	
4 feet	Clearance below or beside any door or window that opens.
1 foot	Clearance above any door or window that opens.
3 feet	Clearance from any adjacent building.
7 feet	Clearance from any adjacent public walkways.
2 feet	Clearance above any grass, plants, or other combustible materials.
3 feet	Clearance from any forced air intake of any appliance.
2 feet	Clearance below eaves or overhang.
1 foot	Clearance horizontally from combustible wall.
3 feet	Clearance above the roof.
2 feet	Clearance above the highest point on the roof within 10 feet.

**INTAKE & EXHAUST POSITIONS**

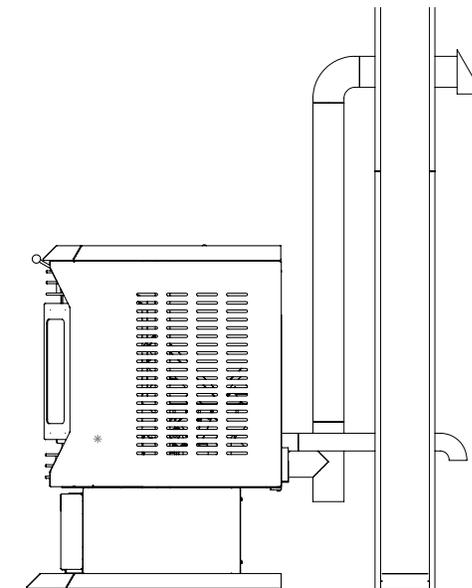


**Figure 7: INTAKE AND EXHAUST POSITIONS**

**VENTING INSTALLATION EXAMPLES**



**Figure 8: STRAIGHT INSTALLATION**  
Outside Vertical Rise, Through Wall Installation



**Figure 9: STRAIGHT INSTALLATION**  
Inside Vertical Rise, Horizontal Termination



## OUTSIDE AIR CONNECTION

Connection from the intake pipe (2" diameter pipe in rear of stove) to the outside of the house is **REQUIRED** for mobile home installation. It is recommended in tightly sealed homes with exhaust fans such as kitchen or bathroom fans. This will eliminate poor performance due to negative pressure.

Only noncombustible pipe 2" (or greater) in diameter is approved to use for outside air connections (straight or flexible). **PVC pipe is NOT approved and should NEVER be connected to the stove.**

If the air inlet is connected to the outside, it **MUST** be terminated with a vertical 90° bend (down) or with a wind hood. Failure to do so could result in a burn back during high winds blowing directly up the air inlet during a simultaneous power failure.

Blockage, excessive length, or extra bends in the air intake pipe will starve the stove of combustion air. A 90° bend is equivalent in restriction to approximately 30" of straight inlet pipe.

## MOBILE HOME

Installation in a mobile home should be in accordance with the manufactured home and safety standard. Department of Housing and Urban Development (HUD) CITE: 24CFR3280.707 stating this stove must be vented to the outside. In addition to the standard installation instructions, the following requirements are mandatory for installation in a mobile home:

1. The stove must be permanently attached to the floor.
2. Stove must have an outside air source.
3. Stove must be electrically grounded to the steel chassis of the mobile home.
4. All vertical chimney vents must have wall supports.
5. All exhaust systems must have a spark arrestor.
6. Check with local building officials to see if other codes may apply.

### **WARNING**

**DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.**

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

### **CAUTION**

**THE OPERATION OF EXHAUST FANS SUCH AS BATHROOM FANS, ATTIC FANS, ETC. MIGHT STARVE THE PELLET STOVE OF COMBUSTIBLE AIR CREATING A NEGATIVE PRESSURE IN THE ROOM. PROVIDE ADEQUATE VENTILATION IN THE ROOM ACCOMPANYING THE PELLET STOVE. IF NOT, THE PRESSURE SWITCH MAY SHUT OFF OPERATION OF THE PELLET STOVE.**

**THE STRUCTURAL INTEGRITY OF THE MANUFACTURED HOME FLOOR, WALL, AND CEILING/ROOF MUST BE MAINTAINED.**

## UNDERSTANDING YOUR STOVE

Your Castle pellet stove utilizes a vertical auger fuel feed system that is operated by a microprocessor controlled digital circuit board. The digital circuit board allows the vertical auger fuel system to run in a timer based, non-continuous cycle; this cycling allows the auger to run for a predetermined amount of time. The auger pushes pellets up a chute located in the hopper. The pellets will then turn and fall through another chute into the burn pot. Your stove is equipped with an automatic ignition system that should ignite the fuel within 3-5 minutes of pressing the On/Off  button. As pellets fill the burnpot and ignite, outside air is drawn across the fuel and heated during the combustion process which is then pulled across the heat exchanger by the exhaust motor or the draft fan. As the stove reaches operating temperature, room air is then circulated around the heat exchanger by a room air blower, distributing warm air into the room.

The amount of heat that is produced by the stove is proportional to the rate of fuel that is burned. This rate is controlled by pressing the fuel control button <->.

Because a forced draft pressure is required for the combustion process inside your stove, it is extremely important that the exhaust system be properly installed and maintained. Also, the doors must remain closed while in operations and the seals on the doors must be properly maintained.

## OPERATING STOVE

Once the stove has been properly installed and plugged into a grounded surge protector you are ready to begin operation.

### START UP PROCEDURE

Turn on the main power switch located on the back of stove. **SEE FIGURE 10.**

Make sure the hopper is clean and free of foreign matter including pellet fines and dust.

Fill the hopper with wood pellets, making sure that NO parts of the bag or any foreign objects enter the hopper as this may cause harm to the auger feed system. **SEE FIGURE 11**

Also take care in making sure there is no pellet material in the hopper lid seating surfaces.

Close the lid. This stove has a safety switch that will not allow pellets to feed with the hopper door open.

Make sure the main glass door is closed. The stove has a safety switch that will not allow the stove to feed fuel unless there is negative draft pressure inside the stove.

Press the **ⓘ** button on the control pad to start stove operation. **SEE FIGURE 12 & 13.**

**NOTE: When starting the unit for the first time or after the hopper has run out of fuel, the auger will not be primed with pellets. This may cause the automatic ignition to time out and the unit will shut down. Pressing the ⓘ button on the control pad again will restart the startup sequence and the stove should start properly.**

Once a consistent flame has been established, you can adjust the heat range to your desired setting, low, medium or high. This is done by pressing the <-> button on the control pad. Indicator lights on the control pad will display the heat setting.

The room air distribution blower will not operate until the stove has reached the factory preset temperature.

**NOTE: First fire: Adjust the heat setting to medium and allow the stove to operate this way for three hours or more, allowing the stove to cure as residual paint and oils from the manufacturing process will burn off. We recommend that you open doors and windows in your home during this process.**

## WARNING

**NEVER USE FLAMMABLE LIQUIDS SUCH AS GASOLINE, GASOLINE TYPE LIGHTER FUEL, CHARCOAL LIGHTER FUEL OR FIRE STARTING GELS IN OR AROUND THIS STOVE. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE STOVE WHEN IT IS IN USE.**

**NEVER OPEN SIDE PANELS OR MAIN DOOR WHEN STOVE IS IN OPERATION.**

**NEVER TOUCH DOOR LATCHES WHILE IN OPERATION, THEY GET EXTREMELY HOT.**

**NEVER OPEN GLASS DOOR WHILE STOVE IS OPERATING OR WHILE STOVE IS HOT.**

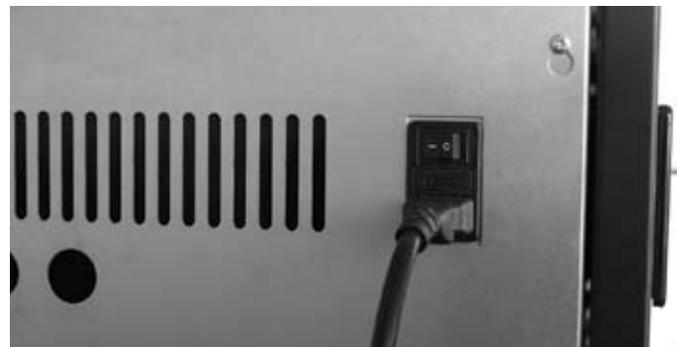


Figure 10: MAIN POWER SWITCH



Figure 11: PELLET LOAD

### SHUT DOWN PROCEDURE

Press the  button on the control pad to initiate the shut down mode. Once this is done the auger will stop feeding pellets, but the room air distribution blower and exhaust fan will continue to operate. When the internal temperature of the unit drops below the factory preset temperature, the room air distribution blower and exhaust fan will cease to operate and the unit will be completely shut down.

Shut down times will vary.

### CONTROL PAD KEY - SEE FIGURE 12

1. On/Off Button - Starts and stops operation of stove.
2. Level Adjustment Button - Adjusts heat range levels to low, med, high.
3. Power Indicator - Illuminates when the main power switch is on. **SEE FIGURE 10.**
4. Fault Indicator - Illuminates when stove is overtemped or if there is loss of fire during startup or during normal operation. **SEE TROUBLESHOOTING SECTION.**
5. Auto Ignition Indicator - Illuminates when igniter is operating.
6. Fuel Feed Indicator - Illuminates when the feed auger is operating.
7. Exhaust Blower Indicator - Illuminates when exhaust blower is operating.
8. Room Air Blower Indicator - Illuminates when room air blower is operating.

**NOTE: Room air blower will not operate until stove has reached factory preset operating temperature.**

9. Heat Level Indicator - Illuminates one bar for low, two bars for med and three bars for high.

### WARNING

**NEVER SHUT THE STOVE DOWN BY UNPLUGGING IT FROM THE POWER SOURCE.**

**NEVER SHUT THE STOVE DOWN BY SWITCHING OFF THE MAIN POWER SWITCH ON THE REAR OF THE STOVE.**

**NEVER OPEN SIDE PANELS OR MAIN DOOR WHEN STOVE IS IN OPERATION.**

**NEVER TOUCH GLASS DOOR AND ASH PAN LATCHES WHILE IN OPERATION, THEY GET EXTREMELY HOT AND WILL BURN YOU.**



Figure 12: CONTROL PAD LOCATION

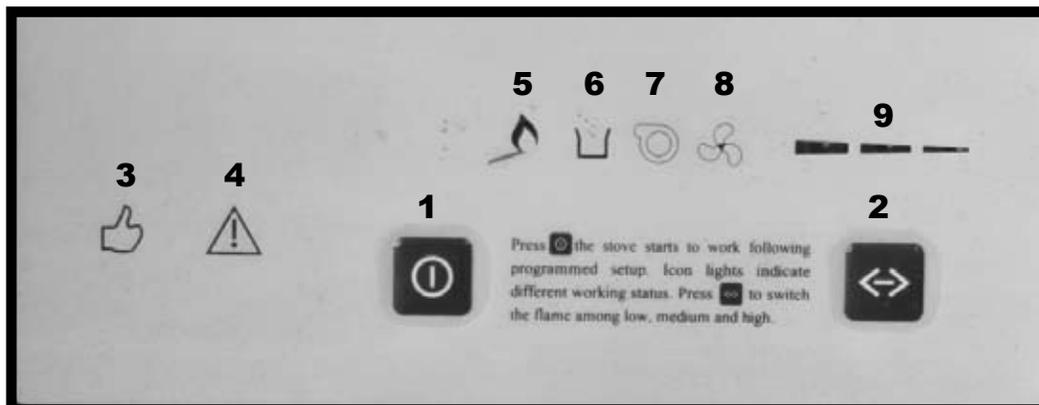


Figure 13: CONTROL PAD KEY

## MAINTENANCE

Due to differences in fuel stove cleaning intervals will vary. The cleaner the stove is, the more efficiently it will burn.

Remove and clean the burn pot periodically. Make sure all holes in the burn pot are unobstructed. Use a small metal pick or drill bit to keep these holes clean. **SEE FIGURE 14.**

Wipe glass off frequently. Using ceramic stove top cleaner can be helpful in removing soot from the glass. Inspect gaskets around the door periodically. Replace any worn, frayed or compacted gaskets. Replace broken glass only with high temperature ceramic glass, available from Castle Pellet Stoves. **SEE FIGURE 15.**

Clean the interior chamber with an ash vacuum. Ash vacuums are specially designed to contain soot and have a metal exterior.

Dump the ash pan regularly. Ashes should be contained in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non combustible floor or on the ground, well away from all combustible materials. If ashes are disposed of by burial or otherwise locally dispersed, they should be retained in the closed container until all cinders have been thoroughly cooled. **SEE FIGURE 16.**

**Soot and Fly ash: Formation and Need for Removal -** The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and restrict the flow of the flue gases. Incomplete combustion, such as occurs during startup, shutdown, or incorrect operation of the room heater will lead to some soot formation which will collect in the exhaust venting system. The exhaust venting system should be inspected at least once every year to determine if cleaning is necessary.

Check clean out tees regularly to determine the required cleaning interval. Use a 3" or 4" chimney cleaning brush to clean the exhaust venting. Plugged venting will effect the quality of the fire. Make sure to clean any screens in the venting regularly. A plugged screen will shut off combustion air and cause the fire to die or burn poorly.

## END OF SEASON SHUT DOWN

Make sure hopper and feed system are clear of all pellets. Vacuum the interior of the hopper and spray with a silicone protector to avoid any rusting in high humidity areas. Clean out all fly ash from the exhaust venting system. Vacuum stove interior and the ash pan. Thoroughly clean the burn pot and lightly coat with a rust inhibitor such as silicone or oil to prevent rusting. Remove exhaust motor and clean the fly ash out of the exhaust duct. Clean the radial blades of the exhaust fan.

### WARNING

**NEVER PERFORM CLEANING OR MAINTENANCE ON A HOT STOVE.**

**ALLOW UNIT TO COOL FOR A MINIMUM OF TWO HOURS.**

**NEVER PERFORM SERVICE WITH POWER SUPPLIED TO THE UNIT.**



**Figure 14: FIRE POT CLEAN**



**Figure 15: WIPE GLASS AND INSPECT GASKET**



**Figure 16: ASH PAN DUMP**



Take the venting apart and clean out the fly ash, rinse and let dry. Clean the glass, doors and outer cabinet so that you are ready for the next heating season. Use of an ash vacuum makes cleaning easier and faster.

### TROUBLESHOOTING & REPAIR

At Ardisam, we build quality and durability into the design of our products; but no amount of careful design by us, and careful maintenance by you, can guarantee a repair-free life for your stove. Most repairs will be minor, and easily fixed by following the suggestions in the troubleshooting guide in this section.

The guide will help you pinpoint the causes of common problems and identify remedies.

For more complicated repairs, you may want to rely on your retailer, an authorized service center or Ardisam, Inc. A parts catalog is included in this section.

We will always be glad to answer any questions you have, or help you find suitable assistance. To order parts or inquire about warranty, call or write us at the address found below.

### ORDERING REPLACEMENT PARTS

Parts can be obtained from the store where the stove was purchased or direct from the factory. To order from the factory- call, write or e-mail to:

**Ardisam, Inc.**  
**1360 First Avenue, Cumberland, Wisconsin 54829**  
**1-800-345-6007 • 1-715-822-2415**  
**E-mail: [info@ardisam.com](mailto:info@ardisam.com)**

Please include the following information with your order:

1. Model number and serial number
2. Part description
3. Quantity
4. Part numbers

### WARNING

**WHEN PERFORMING ANY INTERNAL MAINTENANCE.**

- MOVING PARTS INSIDE OF THE CABINET MAY CAUSE INJURY. DO NOT OPERATE UNIT WITH PANELS REMOVED OR OPEN.
- HOT PARTS. DO NOT OPERATE THE UNIT WITH PANEL OPEN.
- RISK OF ELECTRIC SHOCK. DISCONNECT POWER BEFORE SERVICING UNIT.
- IN THE EVENT OF COMPONENT FAILURE, REPLACE WITH THE ORIGINAL FACTORY EQUIPMENT.

### CAUTION

**THIS IS A MINIMUM REQUIREMENT FOR SOOT AND FLY ASH REMOVAL. ASHES SHOULD BE PLACED IN A METAL CONTAINER WITH A TIGHT FITTING LID. THE CONTAINER SHOULD BE PLACED ON A NON-COMBUSTIBLE FLOOR, WELL AWAY FROM COMBUSTIBLE MATERIALS, PENDING FINAL DISPOSAL. IF ASHES ARE DISPOSED OF BY BURIAL IN SOIL OR OTHERWISE LOCALLY DISPERSED, THEY SHOULD BE RETAINED IN THE CLOSED CONTAINER UNTIL ALL CINDERS ARE NO THOROUGHLY COOL.**

### CAUTION

**DO NOT OPERATE STOVE WITH BROKEN GLASS.**  
**DO NOT SLAM THE DOOR SHUT.**  
**DO NOT STRIKE GLASS.**  
**DO NOT USE ABRASIVE CLEANERS.**  
**DO NOT CLEAN HOT GLASS.**  
**REPLACE CERAMIC GLASS WITH FACTORY AUTHORIZED REPLACEMENT PARTS ONLY.**  
**THE CLINKER WILL REMAIN HOT FOR SEVERAL MINUTES AFTER IT IS PULLED OUT OF THE FIRE POT.**

## TROUBLESHOOTING GUIDE

Unplug stove before performing any maintenance.

### **WARNING**

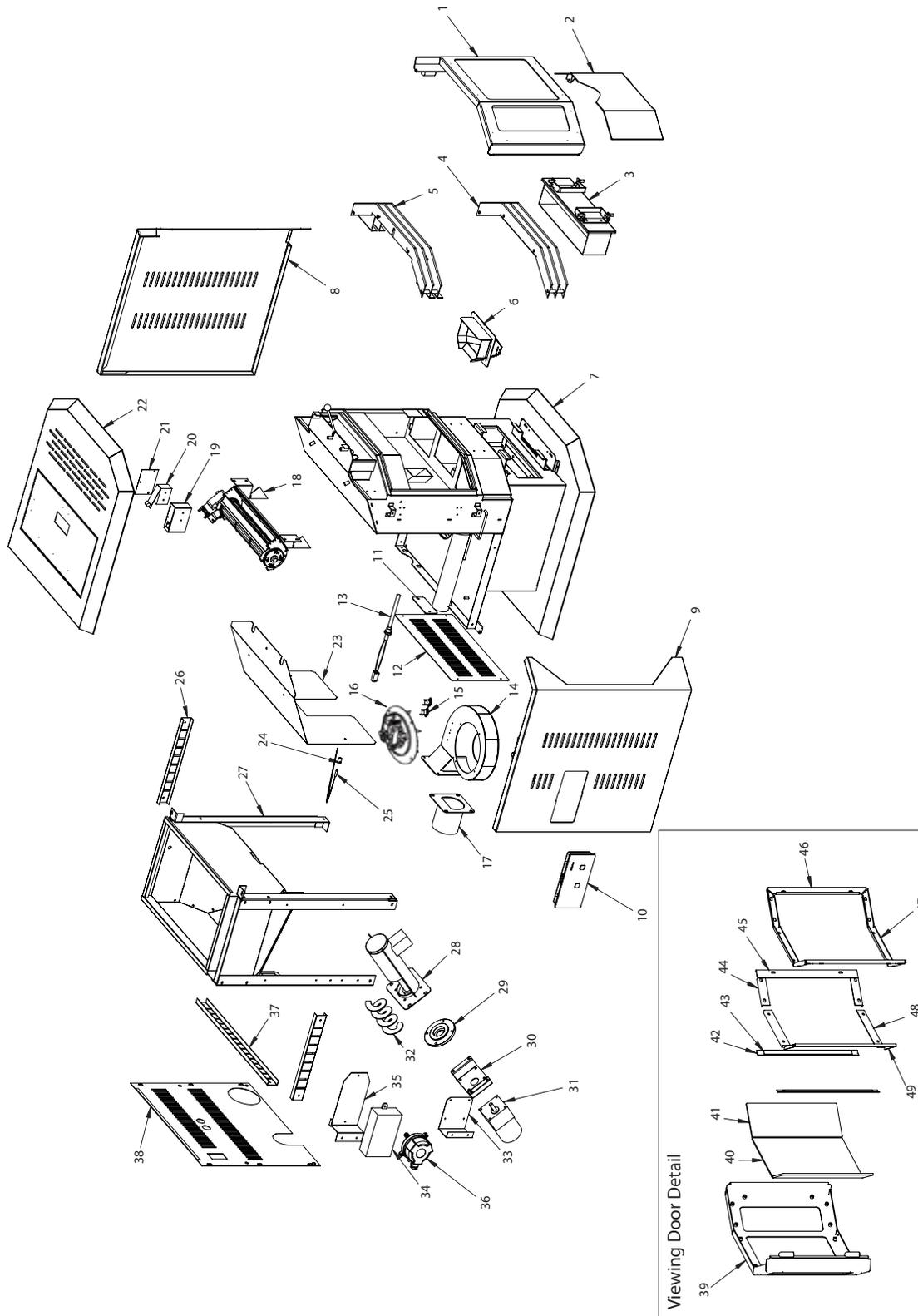
**NEVER SERVICE OR TOUCH THE FEED AUGER WITH THE STOVE PLUGGED IN.**

**NEGATIVE PRESSURE IN A HOME IS A SERIOUS ISSUE. IF THERE IS A PROBLEM, THE STOVE SHOULD BE INSTALLED WITH A FRESH AIR KIT (NOT INCLUDED).**

PROBLEM	CAUSE	SOLUTION
Fault light is on	Fire is out	Check fuel level in hopper. Check auger for obstructions. Check seals around main door.
PROBLEM	CAUSE	SOLUTION
Fault light is on	Hopper overtemp	Allow stove to cool, restart and check room air fan is operating. Check for exhaust fume obstructions.
PROBLEM	CAUSE	SOLUTION
Fuel not feeding	Main door not sealed. No negative pressure in fire chamber.	The pressure sensor shuts off the feed auger when there is no negative pressure in fire chamber. Check door seals. Check viewing glass seals.
PROBLEM	CAUSE	SOLUTION
Fuel not feeding	Auger is obstructed	Remove auger from housing and clean obstruction. Change to a higher quality fuel.
PROBLEM	CAUSE	SOLUTION
Fuel not feeding	Hopper door is open	Close hopper door. Check hopper door seal. Check if hopper safety switch is operating.
PROBLEM	CAUSE	SOLUTION
Fire burns lazy and smoky	Stove is dirty	Clean fire pot. Clean ash pan. Clean exhaust vent system.

Contact service provider if above remedies fail, contact dealer or call Castle Stoves customer service at 800-345-6007.

**MAIN ASSEMBLY PARTS**





**MAIN ASSEMBLY PARTS**

KEY #	PART #	DESCRIPTION
1	HP20-04-00	ASSEMBLY GLASS DOOR
2	HP20S-01-06-01	ASH PAN COVER
3	HP20S-01-05-00	ASH PAN
4	HP20-07-00	GRILL BOTTOM
5	HP20-06-01	GRILL TOP
6	HP20-01-14-00	FIREPOT
7	HP20S-01-00	FIREBOX
8	HP20S-04-00	RIGHT SIDE PANEL
9	HP20S-05-00	LEFT SIDE PANEL
10	720101	CONTROL BOARD CASTLE
11	HP20-01-09	EXHAUST CLEAN OUT PLATE
12	HP20S-01-02-01-04	LOWER BACK PANEL
13	720102	IGNITER
14	HP20S-01-01-02-02-02-03-00	EXHAUST BLOWER HOUSING
15	720103	SWITCH SNAP DISC 52 DEGREE CELSIUS
16	720110	EXHAUST BLOWER
17	HP20S-01-07-00	SQUARE TO ROUND TRANSITION
18	720104	BLOWER CONVECTION
19	HP20-03-02-01	COVER HOPPER SWITCH
20	720105	SWITCH HOPPER LID
21	HP20-03-02-02	COVER PLATE HOPPER SWITCH
22	HP20-03-01-00	STOVE TOP
23	HP20S-01-08-01	HEAT SHIELD
24	HP20-01-12-02	RTD MOUNT
25	720106	RTD OVERTEMP SENSOR 92 DEGREE CELSIUS
26	HP20-02-04	SIDE WIRE CHANNEL
27	HP20S-03-01-00	HOPPER SUPPORT
28	HP20-02-02-00	AUGER HOUSING
29	HP20-02-02-02-02	INBOARD AUGER PLATE
30	HP20-02-02-04	AUGER TORQUE PLATE

KEY #	PART #	DESCRIPTION
31	720107	GEARMOTOR
32	HP20-02-02-03-02	AUGER
33	HP20-02-06	BRACKET VACUUM SWITCH
34	720108	INTERFACE MODULE CASTLE
35	HP20-02-05	BRACKET INTERFACE MODULE
36	720109	SWITCH VACUUM
37	HP20-02-03	BACK WIRE CHANNEL
38	HP20S-06-01	UPPER BACK PANEL

GLASS DOOR COMPONENTS		
KEY #	PART #	DESCRIPTION
39	HP20-04-01-00	DOOR
40	HP20-04-10	MIDDLE GLASS
41	HP20-04-09	SIDE GLASS
42	HP20-04-08-01	GLASS POST
43	HP20-04-08-02	GLASS POST FLASHING
44	HP20-04-03	GLASS CLIP HORIZONTAL UPPER SIDE GLASS
45	HP20-04-05	GLASS CLIP VERTICAL
46	HP20-04-07	GLASS FRAME VERTICAL
47	HP20-04-06	GLASS FRAME HORIZONTAL
48	HP20-04-02	GLASS CLIP HORIZONTAL MIDDLE GLASS



Visit [www.ardisam.com](http://www.ardisam.com) and discover more innovations that will benefit you throughout the year.



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E-mail: [info@ardisam.com](mailto:info@ardisam.com)

\*All weights, specifications and features are approximate and are subject to change without notice. Due to continuous product improvements, product images may not be exact. Items used for props not included. Some assembly may be required