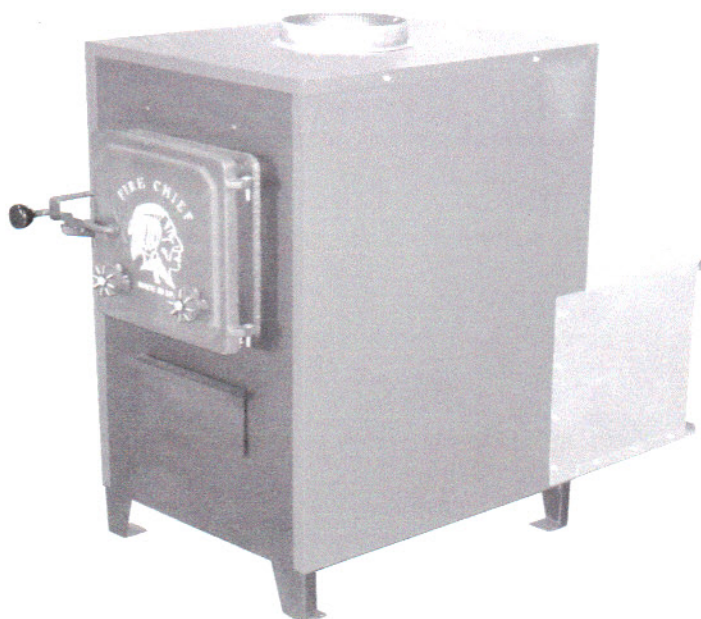


\$9.95

FC300F

Fire Chief Wood Burning Furnace Owner's Manual



**VOLUME II
June 2010**

Manufactured By:

**MADE
IN
USA**

**Fire Chief Industries
7280 Old State Route 21
Barnhart, Mo. 63012
1-800-875-4788 or 636-942-4747**



Intertek

Tested to UL 391

Standards

"Save These Instructions"

Congratulations!

You have selected the finest quality wood burning indoor furnace, manufactured with pride in the USA. Please take a few moments to carefully read the owner's manual. By taking the time to familiarize yourself with your new Fire Chief, you will be able to look forward to years of trouble-free, dependable service.

Installation

First: Check Local Codes. The installation must comply with all local rulings and requirements.

- ***Furnace installation is to be performed by a qualified installer.***
- ***This furnace must not be installed in trailers, modular or mobile homes.***
- ***Always have a properly installed and functioning smoke detector installed in your home.***
- ***To prevent accidental injury, do not allow anyone who is unfamiliar with the furnace to operate it.***
- ***Spend time familiarizing yourself with your Fire Chief Furnace, especially the different settings and the effect they have on burn patterns. It is impossible to state how each setting will affect your furnace due to variations in settings, fuels and temperatures.***

Transportation Damages

Every effort has been made to insure that your Fire Chief will arrive in perfect condition. Any visible damage should be noted on the freight bill at the time of delivery. If upon unpacking your Fire Chief you find damage had occurred during transit, notify your supplier immediately. Your supplier will advise you as to what actions must be taken to correct the problem.

Disclaimer Notice

The listed BTU rating of your new Fire Chief was obtained under ideal laboratory testing conditions. The actual BTU output you experience may vary somewhat depending on the type, condition and moisture content of the fuel used; damper adjustment; chimney type and other variable factors. Therefore, the manufacturer disclaims any guarantee as to the BTU output or capacity of your furnace. Fire Chief Industries will void and disclaim any responsibility for the following:

installation of a furnace that has been altered or modified in any way; installation of the furnace other than as instructed in this manual; installation and/or use of any component or part not approved by Fire Chief Industries for use on this furnace. Be sure to complete and return your warranty card within thirty (30) days of purchase in order to receive warranty coverage on your furnace.

Manufacturer's Notice

Please be advised that we periodically make changes to improve our products - therefore the information in this manual may not be completely compatible with your Fire Chief.'

**THIS IS A WOOD BURNING FURNACE
AND SHOULD NOT BE ALTERED IN ANY WAY**

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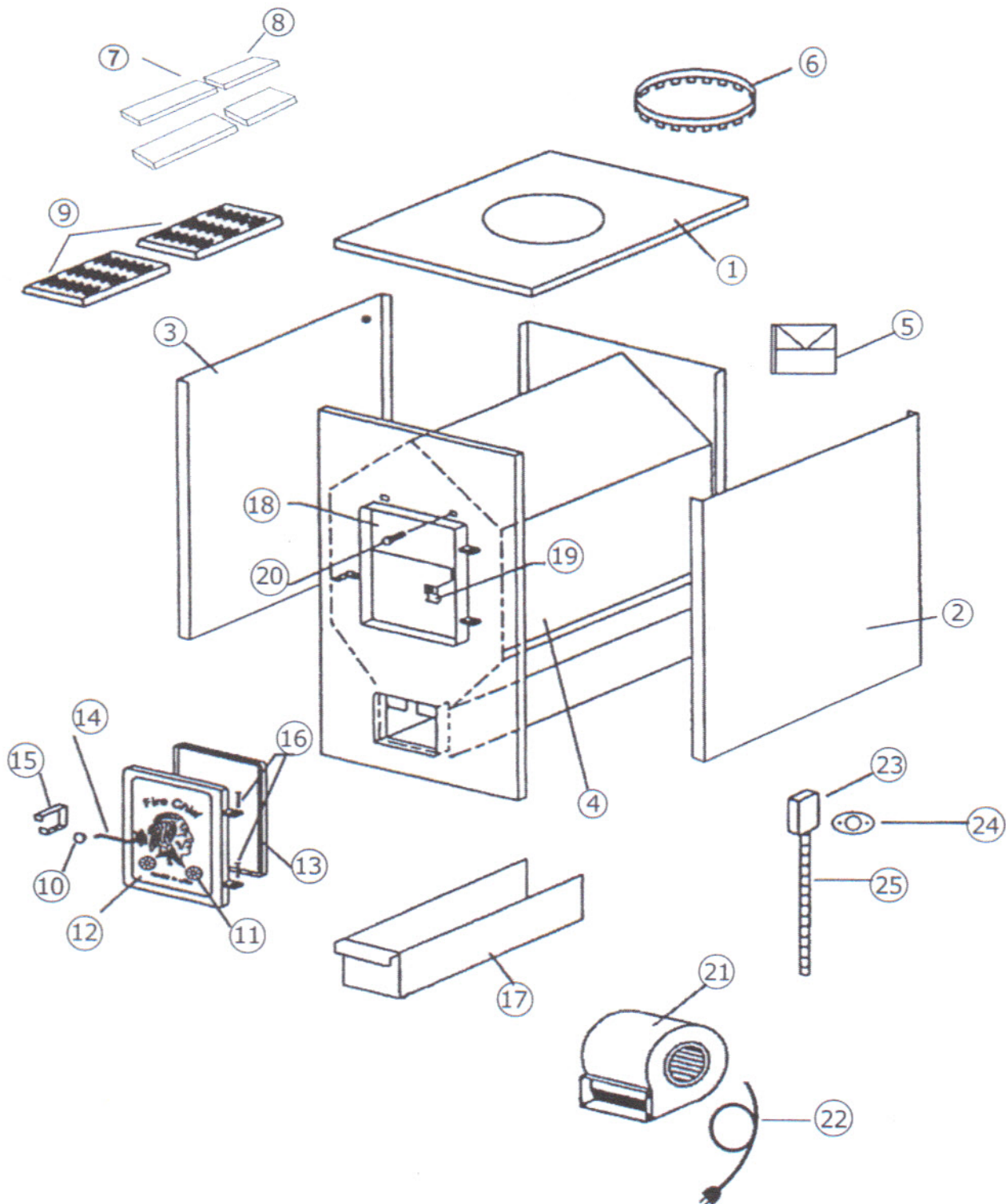
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BURN WOOD ONLY

***ALWAYS KEEP YOUR WOOD COVERED YEAR ROUND.
DRY WOOD WILL PRODUCE MORE BTU OUTPUT
AND LONGER BURN TIMES.***

Model FC300F

Parts Diagram - REVISED JUNE 2010



Insulation: Not Shown
 Insulation for Furnace Sides,
 FCIN-2 per Furnace

FC300F Exploded Parts List - REVISED JUNE 2010

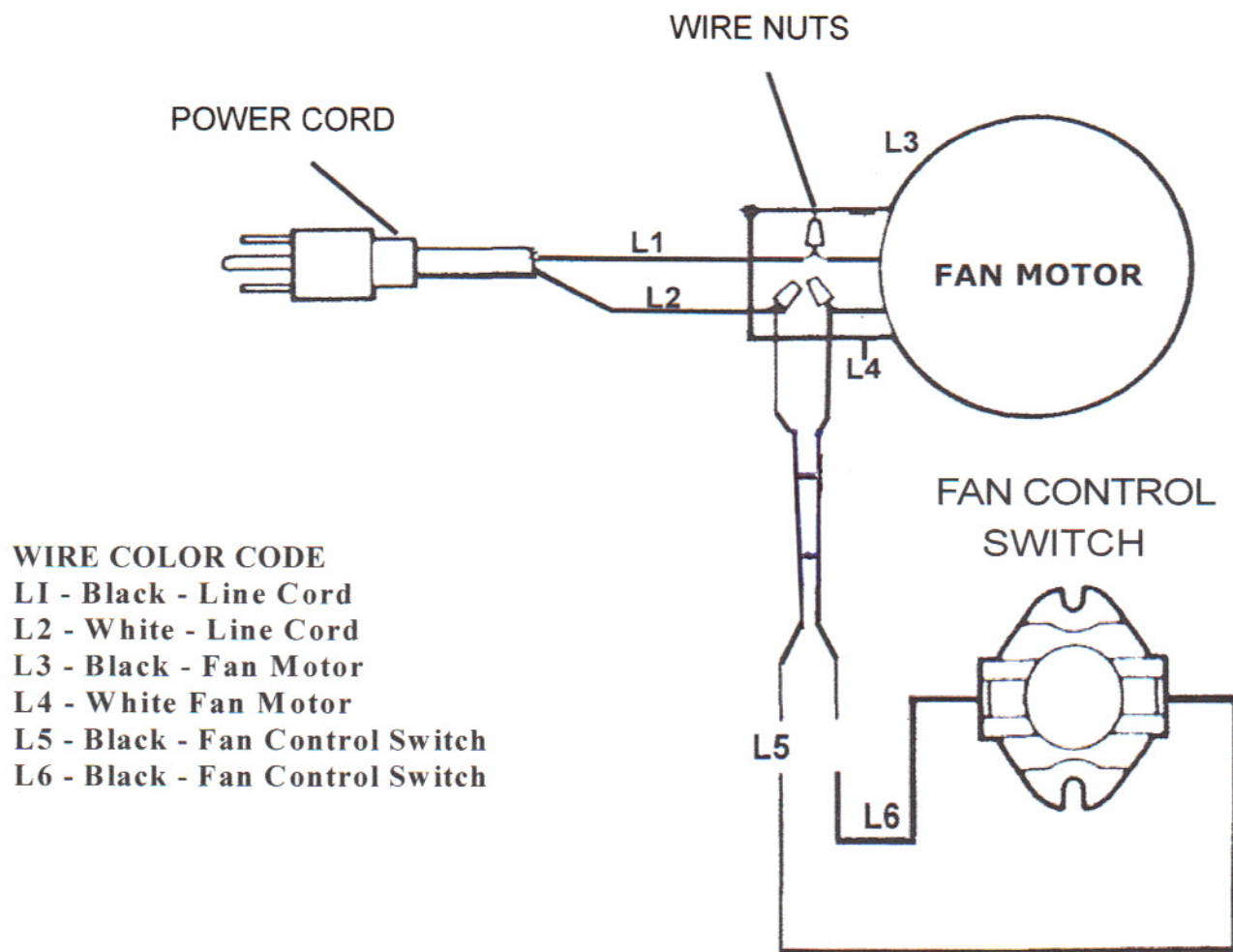
<u>Item #</u>	<u>Description</u>	<u>QUANTITY</u>
1	Cabinet Top - FC3TOP	1
2	Right Side Cabinet - FC3RSF	1
3	Left Side Cabinet - FC3LSF	1
4	Firebox Assembly - FC3SHELL	1
5	Rear Baffle - FC3RB	1
6	8" Duct Ring Collar - FC8C	1
7	Side Firebrick - FCJ5041- 13 1/2" X 4 1/2" X 1 1/4"	2
8	Side Firebrick - HTFB - 9" X 4 1/2" X 1 1/4"	2
9	Wood Grate - FCWG	2
10	Knob - FCKIMOB	1
11	Spin Draft - FCSD	2
12	Fuel Door Assembly - FCFD	1
13	Fuel Door Gasket 5/8" - FCGSKT58	45"
14	Fuel Door Handle - FCFDH	1
15	Fuel Door Latch - FCDL	1
16	Hinge Pin - FCHP	2
17	Ash Drawer Assembly - FC3AD	1
18	Smoke Curtain - FCSC	1
19	Smoke Curtain Clip - FCSCHDW	2
20	1/4" X 20 X 3/4" Bolt - <i>included with FCSCHDW</i>	2
21	Circulation Blower - FC300BM	1
22	Cord for Blower - FC3CORD	1
23	Junction Box - FC670	1
24	Fan Thermo-Disc - FC3DISC90/110	1
25	Conduit Assembly - FCCON	1

OPTIONAL Filter Box FCFB300 NOTSHOWN
May be ordered thru your Dealer or Fire Chief Industries

*Repair Part Numbers listed in **Bold** may be ordered thru our Customer Service Department with a VISA/MC or Discover, call 800.875.4788.

FC300F

Wiring Diagram Revised June 2010



Installation Instructions - REV JUNE 2010

Please review the parts diagram and list on pages 4 and 5 of this manual to be assured that you have received all of the required components. If your inspection reveals a discrepancy, contact your supplier for help. Examine the grate assembly to verify that it has not loosened during transit. It should rest evenly on the bottom of the fire chamber. Adjust if necessary.

Blower Assembly

The FC300F blower assembly requires the following assembly to complete the installation on your furnace. The components are included with your furnace.

You should have the following items: blower motor with cord; four 1/4" X 20 X 3/4" bolts to attach motor to the back of the furnace; one thermodisc and two #8 X 1/2" screws; junction box with wiring and two #8 X 1/2" screws; cover plate with two screws all are included with the furnace in a separate box along with the owner's manual and 8" starter collar.

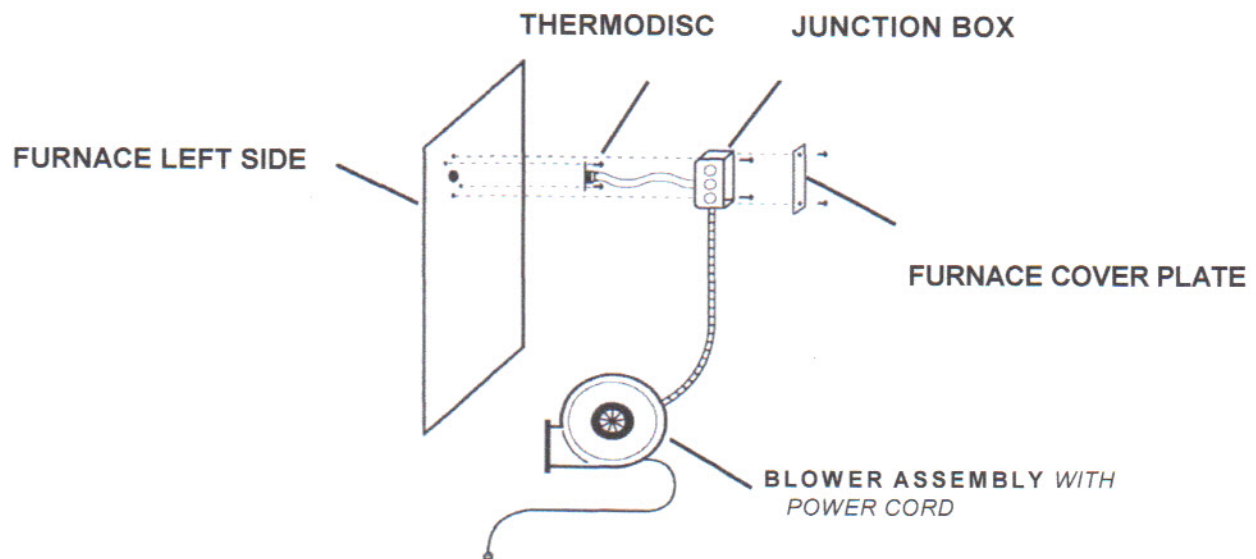
Step 1: Bolt the motor onto the back of the furnace with the 4 - 1/4" X 20 X 3/4" bolts;

Step 2: Attach the thermodisc to the two diagonal holes on the left side of the furnace with the two #8 X 1/2" screws; attach one wire to each terminal on the thermodisc;

Step 3: Mount junction box in the two vertical holes on the left side of furnace with the two #8 X 1/2" screws;

Step 4: Attach cover plate to junction box with the two attached screws;

Step 5: Plug electrical cord into outlet.



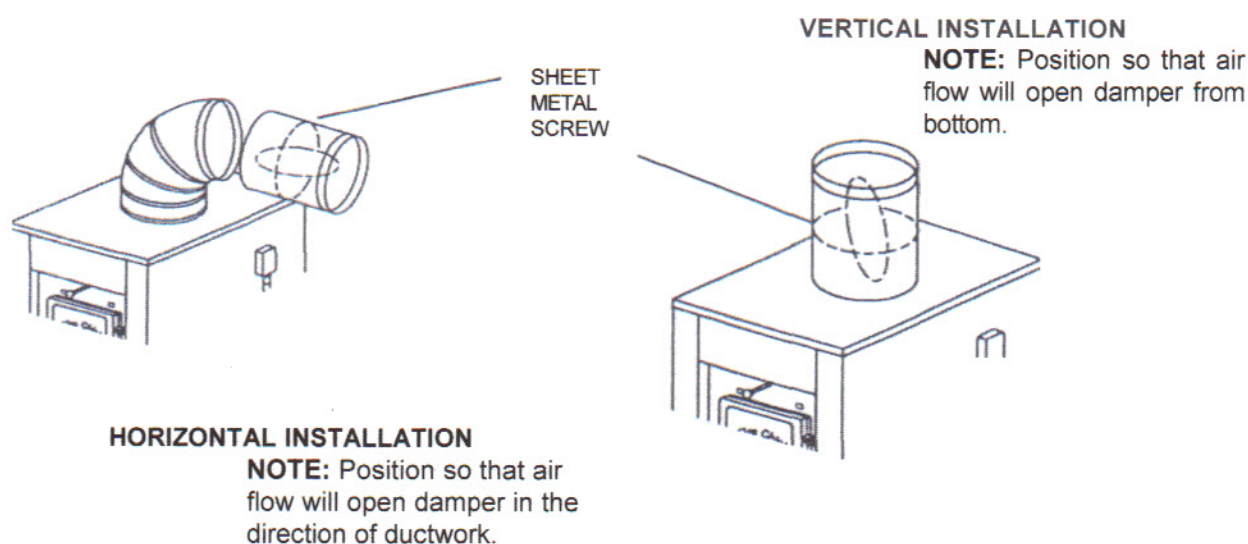
Installation of Optional Equipment

Back Draft Damper

OPTIONAL ACCESSORY PART # AM-BD8 Back Draft Damper

The Back Draft Damper may be installed in either a vertical or horizontal section of the 8" round hot air duct. It should be positioned as close to the plenum opening of the FC300F as practical. Press the female end of the damper over the FC300F furnace collar or male end of the duct pipe. When properly positioned, the arrows on the air flow decal point "away" from the FC300F.

NOTE: The back draft damper may cause the blower to cycle on and off frequently. If this occurs, install a sheet metal screw inside of the damper to prevent the flapper from closing completely. This will allow heat to rise off of the furnace.



Manual Back Draft Dampers

OPTIONAL ACCESSORY #AM-MD8 Manual Back Draft Damper

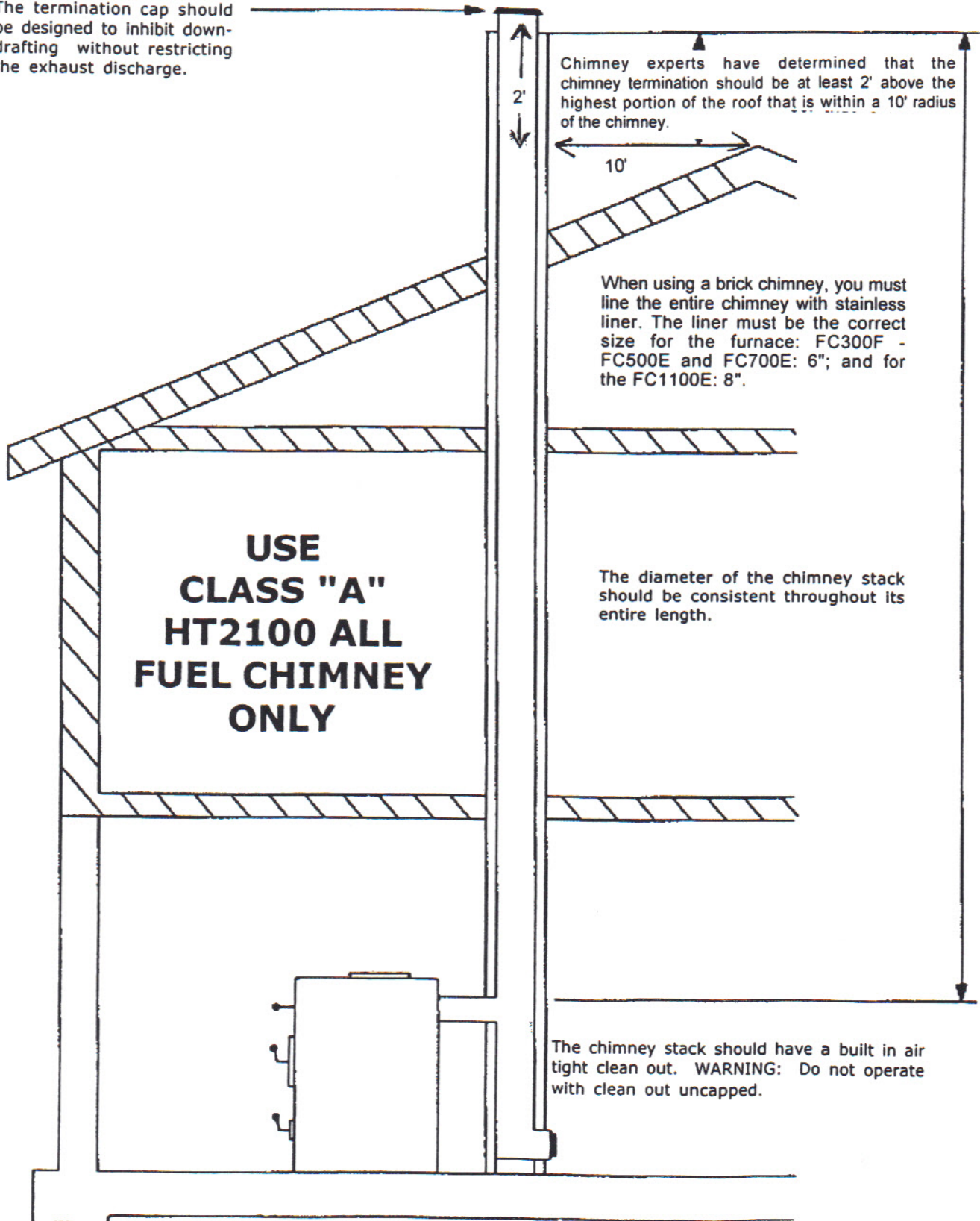
The Back Draft Damper may be installed in either a vertical or horizontal section of the 8" round hot air duct. It should be positioned as close to the plenum opening of the Fire Chief as practical. Press the female end of the damper over the Fire Chief Furnace collar or male end of the duct pipe. When properly positioned, the arrows on the airflow decal point "away" from the Fire Chief Furnace.

NOTE: The back draft damper handle closes off the duct, stopping the cool air from your air-conditioner from flowing back thru the furnace. Diagrams above show horizontal and vertical installation. OPEN THE DAMPER AT THE BEGINNING OF HEATING SEASON - IF THE DAMPER IS IN THE "CLOSED" POSITION, IT WILL CAUSE THE BLOWER TO RUN CONTINUOUSLY AND CAUSE THE FURNACE TO OVERHEAT CAUSING THE BLOWER TO FAIL.

Chimney Recommendations

****Do not connect this unit to a chimney flue serving another appliance****

The termination cap should be designed to inhibit down-drafting without restricting the exhaust discharge.



SPECIFICATIONS:

Your Fire Chief Furnace is designed to be a supplemental or central heating source for your home. This wood burning furnace may be installed parallel with a properly operating electric, gas or oil-fired central furnace that is listed or certified in accordance with a nationally recognized safety standard within installation clearances as specified on the Fire Chief nameplate. When in a parallel installation the static pressure of the central furnace plenum may not exceed 0.15 inch of water column and maximum setting on central furnace limit switch is 182°F. With the Fire Chief wood burning furnace in an "Interconnection Arrangement" your wood burning furnace should be upstream of the central furnace. The Fire Chief furnace warm air supply should never be connected to return air of the central furnace. Installation should be performed by a qualified installer.

Laboratory testing has proven that a central solid fuel furnace provides the most viable solution to the on going problem of homeowner utility dependence. In consideration of this fact, the Fire Chief has been engineered to accommodate the heating requirements of the average sized home, even during winter's coldest months. It is constructed with high grade, heavy gauge steel and is continually welded to assure the utmost in structural strength. In addition, the firebox is lined with firebrick to ensure many years of energy efficient service. The design of the secondary combustion chamber increases fuel efficiency by creating a "secondary burn" of smoke and wood gases before they are vented up the chimney. The cast iron door is custom fitted to provide an air tight seal, greatly extending the burn time and insuring maximum efficiency in fuel consumption. The heavy-gauge cast iron grate, designed for maximum heat transfer, aid in convenient ash removal and reduce maintenance.

For total comfort and convenience, we added a thermostatically controlled circulation blower system. These fully automatic components furnish rapid heat disbursement to your home, minimizing recovery time.

We have included all of these features as standard equipment, offering you the most efficient, durable and affordable indoor wood burning furnace possible.

FORCED HOT AIR CIRCULATION:

The plenum size of your Fire Chief must not be reduced to less than 8" (eight inches) round or 50 square inches and must provide a minimum of eighteen inches between the top of your Fire Chief and the main trunk connection. The plenum installed to the furnace must be constructed of metal. The warm air supply duct system should be constructed of materials with a minimum temperature rating of 250° Fahrenheit.

CLEARANCES:

Unit must be placed on a non-combustible floor; non-combustible floor must extend at least 16" in front; 8" on either side of fuel loading and ash removal doors; underneath the chimney connector and extending 2" on either side of the chimney connector

The furnace must maintain the following clearances to combustibles:
(all measurements are in inches)

Heat Plenum 2"; Chimney Connector 18"; Front 48"; Rear 31"; Side 12"; Main Furnace 12".

These are minimum clearances and should be strictly adhered to because should a power outage occur, a dangerous level of heat accumulation may develop. Do not store fuel or other combustible materials within marked installation clearances.

POWER FAILURE:

In case of power failure to keep your Fire Chief from over-heating and causing damage to the electrical components, follow these steps:

1. Close the spin damper controls on fuel and ash doors.
2. DO NOT add more fuel (wood) to the firebox.

There is no warranty on electrical components due to power failure.

LOCATION AND INSTALLATION:

NOTE: *Before beginning your installation, consult with proper local authorities regarding local codes governing all such applications and installations.*

DO NOT connect this unit to a chimney flue serving another appliance. Your furnace must be placed on a non-combustible floor and position it as close to the chimney as possible. Air for combustion must be provided into room where furnace is located. Allow air free access to furnace for combustion and ventilation. **Recommendation:**

We recommend the purchase of **Chimfex™** Dry Chemical Chimney Fire Extinguisher. These are readily available at most stove shops and hardware stores. Smoke detectors should be installed on all levels of your home. Finally, we recommend installing a fire extinguisher within the furnace room or area.

CHIMNEY TYPE AND RECOMMENDATION: See diagram on Page 9

Safety requirements demand that your Fire Chief be connected to **"Class A" HT2100 All Fuel or stainless-lined masonry chimney ONLY.**

By definition, **"Class A"** refers to either a lined masonry chimney or all fuel factory-built chimney. Although experts have expressed differing opinions as to which system is superior; we feel it is a matter of what you find most suitable. Regardless of your choice of flue type, for **Models 300F, 500E and 700E, a minimum 6" diameter** and for the **Model 1100E, a minimum of 8" diameter**. In order to create the most efficient draft, the chimney size should not exceed 12 inches with a maximum of .08 inches water column of draft. With the use of a draft gauge or manometer, the flue draft can be measured if more than .08 inches of water column draft can be adjusted with the installation of a flue damper. The stove pipe required to connect your furnace to the chimney should be a minimum of 24 gauge thickness. **NEVER USE GALVANIZED PIPE.** Horizontal run should not exceed five feet and should have a minimum rise of two inches per foot. **No installation should have more than two elbows and a 45° elbow is preferable to a 90° elbow.**

As a safety precaution, all pipe sections should be fastened together with a minimum of three sheet metal screws. For your convenience, the crimped male ends of the pipe should point toward the furnace to form drip-free connections, thereby reducing the possibility of creosote leakage from the joints. Installing a heat reclaimer in the pipe is not recommended because it reduces the stack temperature thus causing creosote formation. Finally, we recommend installing a manually operated cast iron damper in the stove pipe, between the furnace and the chimney pipe. The addition of the damper will greatly assist you in regulating your fire and achieving optimum results. Always install a tee with clean-out cap to the chimney outlet on the back of the furnace. This allows for easy clean-out of the chimney system.

When using a masonry chimney, you must line the chimney with a stainless steel liner. The stainless liner will keep the chimney temperature hotter for better draw and significantly reduce the creosote formation in the chimney. If using this method, use 6" stainless liner for the FC300F, FC500E and FC700E and 8" stainless liner for the FC1100F.

DANGER - Risk of Fire and Explosion.

Do not burn garbage, gasoline, drain oil or other flammable liquids

WARNING

- **NEVER** use galvanized pipe in your chimney connection - it produces poisonous gases when subjected to extreme temperatures.
- **USE** only Masonry or manufactured "Class A" HT2100 All Fuel Chimney for your Fire Chief.
- **INSPECT** chimney system periodically for structural integrity.
- **CLEAN** the chimney system regularly to prevent creosote accumulation.

DUCT RUNS:

Duct work should be designed so the external static pressure does not exceed .02 water column inches while developing air velocities of 600 feet to 1,000 feet per minute in the main trunk duct and 400 feet to 600 feet per minute at the 8" registers. The heat outlet area should never be less than 8 inches round. The Fire Chief **MUST** be installed with a cold air return system. The system should be a minimum of 10% larger than the heat outlet to readily transfer the cold air back to the furnace. Avoid using 90° elbows in duct runs; 45° elbows provide a better air flow and less resistance. **CAUTION:** The warm air supply outlet of the supplementary furnace should not be connected to the cold air return inlet of the central furnace, because a possibility exists of components of the central furnace overheating and causing the central furnace to operate other than as intended.

FUEL RECOMMENDATIONS: *Log Size 22"*

BURN WOOD ONLY

We advise using only dry, seasoned hardwoods in your Fire Chief Furnace rather than highly resined woods such as pine. Firewood should be cut at least one full season prior to the time of its intended use for optimum heat output. Firewood should be stacked to provide a free flow of air between the logs, thus allowing more rapid seasoning of the wood. If wood is stored outdoors, it should be completely covered year round to protect it from moisture and exposure to the elements.

Use extreme caution when opening the door during operation, temperatures can exceed 300° - wait at least 10 (ten) seconds after releasing the latch, then proceed to the fully open position. Opening the door in this manner is designed to eliminate the possibility of gaseous ignition. **Heat resistant gloves are recommended** when opening the fuel door, regulating the spin draft or emptying the ash pan.

CAUTION: Hot Surfaces: Keep Children away. Do Not touch during operation.

CAUTION: NEVER use chemicals or gasoline to start or maintain your fire. Do not burn oil, garbage, trash, plastic or any fuel other than wood in your furnace, doing so will void the warranty.

DO NOT operate your Fire Chief with the Fuel or Ash Door *OPEN*.

WARNING - RISK OF FIRE

- DO NOT operate with fuel draft exceeding .08" (19.9 Pa) in. of water column.
- DO NOT operate with fuel loading or ash removal doors open.
- DO NOT store fuel or other combustible materials within marked installation clearances.
- Inspect and clean flues and chimney regularly.

WARNING

NEVER fuel your Fire Chief with wet, unseasoned wood or wood that has been exposed to a recent rainfall. *Burning wood with a high moisture content will cause a rapid accumulation of hazardous creosote, which has been proven to be the most common cause of flue fires.*

NEVER burn plastics, any wood product containing glue, paraffin or those treated with chemical preservatives in your Fire Chief. *The combustion of these substances may release harmful, toxic gases.*

DANGER - Risk of Fire and Explosion.

Do not burn garbage, gasoline, drain oil or other flammable liquids

STARTING YOUR FIRST "REAL" FIRE: *Check to be certain the spin draft is wide open to allow oxygen into the firebox.*

Place several crumpled newspapers on the grate with some dry kindling layered on top of the papers, ignite the newspaper. When the kindling is burning, add several small pieces of wood - allow the wood to fully engage in flames. After about 20 minutes the fire should be established, allowing you to add more wood - do not overload and smother the fire. Add more wood slowly, so the flames have time to engulf the fresh wood. Once the fire is burning and there is a glowing ember bed, adjust the draft to achieve the desired burn pattern. Learning how to adjust the draft to maintain the desired temperature for your home may take a few days. After a short time you will know which settings and adjustments work best for your home.

Do not over-fire the furnace. Over-firing by overloading/over-fuelling the furnace causes the metal to superheat and expand, then cool rapidly which causes cracking, therefore voiding the warranty. Over-firing or abuse can easily be determined upon inspection.

It will take about forty minutes to establish a bed of hot embers. When you have achieved the hot ember bed, add larger pieces of firewood. Within thirty to forty minutes, adjust the spin drafts to obtain optimum performance.

NOTE:

Your new Fire Chief is capable of producing a very high output of Btu's. Do not fuel your furnace to capacity upon initial firing. Instead, we recommend becoming thoroughly familiar with your Fire Chief Furnace before operating at full capacity.

The new steel and metal components in the furnace will have a protective coating or paint on the surface which could produce an odor during the break-in period. Adequate ventilation within the home and furnace room or area is recommended during the initial firing and break-in period to accommodate this possibility. Your new Fire Chief is classified as having airtight construction. This type of design should enable you to experience an average burn time between six and eight hours per full load of fuel (dry, seasoned hardwood). However, abnormally cold weather may reduce the burn time somewhat; therefore if your burn cycle is significantly less, for instance, two to four hours, you are over-firing your Fire Chief.

This type of occurrence is usually symptomatic of heat demands in excess of furnace capacity. Contact an authorized professional to determine if your Fire Chief has been improperly sized for your home.

ASH REMOVAL: *Heat resistant gloves are recommended.*

In order to remove ashes from your Fire Chief, remove the Ash Pan from the furnace and dump the ashes into 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, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed metal container until all cinders have thoroughly cooled.

1. Remove the ashes from your Fire Chief Furnace at least once a day - or as often as necessary to ensure the ashes do not accumulate to the height of the grates. If ash build-up occurs at grate level, it will cause premature failure of the grates, voiding the warranty on the grates. Unacceptably high temperatures will result because the ashes have restricted the flow of cooling air beneath the grate. This flow of air was designed to not only cool the grates, but to also provide warmed air for better combustion. If the ash level is improperly maintained the fire box will be starved for combustion air, greatly reducing the efficiency and heat output of your Fire Chief.
2. Place hot ashes in a covered, air tight metal container - place the container on a non-combustible surface. Discard the hot ashes in a safe manner.
3. Wood ash is an especially potent fertilizer.

CAUTION: Hot Surfaces: Keep Children away. Do Not touch during operation.

GENERAL OPERATION:

When opening the fuel door during operation, wait ten seconds after releasing the first latch, and then proceed to the fully open position. The dual latch system has been incorporated as a safety feature designed to eliminate the possibility of gaseous ignition. Laboratory testing has determined that when incomplete combustion occurs, the partially spent fuel sometimes concentrates large amounts of potentially hazardous gases within the fire chamber. If the door is opened suddenly under these conditions, the oxygen may combine with these gases and cause ignition referred to as backflash. Use **EXTREME CAUTION** when opening the fuel door.

When reloading the Fire Chief, spread the embers evenly over the grate. Place smaller pieces of wood on the hot embers and layer larger pieces on top of them. Finally, due to the wide variety of temperature ranges during the winter, you may experience periods when it is not necessary to fully load the fire chamber in order to maintain an overnight burn. Your Fire Chief will operate at the highest efficiency by adding fuel in amounts to maintain comfortable temperatures in your home.

CREOSOTE PREVENTION

To help prevent the formation of creosote within the flue, **ALWAYS BURN DRY SEASONED WOOD.** *Dry wood burns hotter, allowing flue gases to maintain temperatures above 212°F which should prevent the formation of creosote in the chimney.* If the flue gas temperature falls below 212°F, condensation occurs causing the formation and accumulation of creosote within the chimney.

As an added precaution, periodic chimney inspections are recommended during the heating season to determine if creosote formation has occurred. *For safety and efficiency, it is recommended that the chimney system be inspected and cleaned prior to each heating season.*

CREOSOTE FORMATION AND THE NEED FOR REMOVAL:

When wood is burned slowly, it produces organic vapors which combine with expelled moisture to form creosote, the creosote vapors condense in the relatively cooled 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. The chimney connector and the chimney should be inspected at least twice monthly during the heating season to determine if a creosote build-up has occurred. If creosote has accumulated it should be removed to reduce risk of a chimney fire.

CHIMNEY FIRE WARNING:

In the event of a chimney fire, take the following actions immediately:

1. Activate and toss a **ChimFex** Dry Chemical Chimney Fire Extinguisher into the firebox.
2. Close the Ash Door, Fuel Door, Spin Drafts.
3. Alert the **ENTIRE** household and prepare to evacuate if necessary.
4. Call your local Fire Department.

NOTE: OVER-FIRING OR DELIBERATE ABUSE CAN EASILY BE DETERMINED UPON INSPECTION AND WILL VOID YOUR WARRANTY.

Always keep your wood covered year round.

Dry wood will produce more Btu output and a longer burn time.

Refer to nameplate on furnace for additional information.

WARNING - RISK OF FIRE

- DO NOT operate with fuel draft exceeding .08" (19.9 Pa) in. of water column.
- DO NOT operate with fuel loading or ash removal doors open.
- DO NOT store fuel or other combustible materials within marked installation clearances.
- Inspect and clean flues and chimney regularly.

For your convenience, you may wish to record the following information:

Furnace Model Number: _____

Purchase Date: _____

Serial Number: _____

Dealer Where Purchased: _____

Additional Service Information: _____

TROUBLESHOOTING

<u>PROBLEM</u>	<u>PROBABLE CAUSE</u>	<u>SUGGESTED REMEDY</u>
1. Bugs found in wood.	• Wood has rotted or has been laying around for an extended period of time.	Inspect the wood for obvious signs of insect infestation such as burrows or holes and avoid using if possible. Do not store indoors.
2. Circulation blower will not turn on.	• Defective fan thermodisc switch. • Defective motor. • Improper wiring.	If the blower fails to run, replace the fan thermodisc switch. Contact your supplier for replacement. Review wiring diagram. If wired correctly, seek professional assistance.
3. Circulation blower runs continuously.	• Defective fan thermodisc switch. • Improper wiring.	Replace fan thermodisc switch. Review wiring diagram. If wired correctly, seek professional assistance.
4. Circulation blower vibrates during operation.	• Foreign material in housing, • Balance weights on squirrel cage have become dislocated.	Clean and remove foreign material from squirrel cage.

TROUBLESHOOTING

<u>PROBLEM</u>	<u>PROBABLE CAUSE</u>	<u>SUGGESTED REMEDY</u>
5, Odor detected in home during initial firing.	• There is an oil film that has remained on the steel after the manufacturing process. Firing the unit has raised the temperature of the firebox to a level that is sufficient to vaporize the residue. • Unit is drawing smoke fumes from the flue.	The odor should disappear after a few hours of usage. Make sure chimney pipes are connected and the ash cleanout is closed or sealed.
6. Smoke from fire chamber is puffing back through spin draft.	• Excessively long run of stove pipe from furnace to flue. Too many elbows. Insufficient flue size.	Relocate the unit so that the horizontal run does not exceed five feet and has a two inch rise per foot. The run should not contain more than 2 elbows. Replace with a larger flue providing a minimum of twenty-eight square inches of draft area, but not more than one hundred square inches of draft area. If flue is within these specifications, check the draft with a gauge. Your flue should provide a minimum of .04" WC.
	• Cast iron damper is in closed position. <u>Down draft on chimney is caused by one or more of the following:</u> • Flue has a cold spot which inhibits its exhaust discharge from rising properly. This symptom may occur in factory built flues because the insulation has settled or a seam has ruptured, • In masonry flues, mortar loss may be causing the aspiration of cooler outside air into the stack.	Open damper. Check entire flue for structural integrity and leakage. Correct or repair as needed.

TROUBLESHOOTING

<u>PROBLEM</u>	<u>PROBABLE CAUSE</u>	<u>SUGGESTED REMEDY</u>
	• There is an obstruction outside the chimney, such as a tree.	Remove obstruction.
	• Flue is located too close to the peak of the roof or does not rise above it to provide the proper draft.	Relocate flue termination or increase height as required.
	« Flue is located too close to another building.	Relocate flue termination.
	• Obstruction in chimney.	Check entire chimney system including stove pipe run. Utilize chimney cleaning device to remove any foreign debris.
7. Excessive smoke discharge from fuel door during reloading.	• Excessive ash accumulation.	Remove if necessary.
	• Cast iron damper in closed position.	Open damper.
	• Excessively long run of stove pipe from furnace flue.	See remedy #6.
	Too many elbows.	See remedy #6.
	Insufficient draft.	See remedy #6.
	• Obstructed flue or clogged chimney cap.	See remedy #6.
8. Flames discharging from fuel door during reloading.	• Excessive smoke accumulation.	See remedy #6.
	• Opening the door has provided additional oxygen which has ignited accumulated gases from partially spent fuel.	Always open the door cautiously and allow the safety latch system to perform its designed function of containing ignited gases within the fire chamber.
	• Cast iron damper is in the closed position.	See remedy #6.
	• Insufficient draft or obstruction in flue system.	Do not overload unit. Always open cast damper before opening loading door.
	• Fire chamber filled to capacity with unburned fuel.	

TROUBLESHOOTING

<u>PROBLEM</u>	<u>PROBABLE CAUSE</u>	<u>SUGGESTED REMEDY</u>
9. Excessive dirt accumulation surrounding air registers in the home.	• Filter not installed.	Install filter kit.
	Filter not installed.	Install filter on return air.
	• Excessive dirt accumulation in air filter.	Replace air filter.
10. Home does not achieve comfortable temperatures.	• Improper connection to the existing furnace.	Refer to information in the manual relating to the proper installation procedures or contact your local heating and cooling contractor.
	Improperly sized ducting.	**See above - contact heating and cooling contractor.
	• Excessive dirt accumulation in air filter.	Check and replace if necessary.
	• Combustion not receiving an adequate amount of oxygen.	Furnace room may be too air tight. We recommend installing an aperture to the outside consisting of a minimum of fifteen square inches.
	• Inadequate insulation in the home.	Provide adequate insulation.
11. Rapid accumulation of creosote in furnace and flue.	• Your unit is of inadequate size for your home.	Consult a professional heating and cooling contractor to determine correct sizing.
	• Fueling furnace with wet or unseasoned wood.	Completely avoid using if at all possible. If circumstances necessitate the use of wet or unseasoned wood, fuel the furnace with smaller loads. The fires will be hotter, thereby retarding the accumulation of creosote.
	• Use of highly rosined wood, such as pine.	Completely avoid using.

TROUBLESHOOTING

PROBLEM

PROBABLE CAUSE

SUGGESTED REMEDY

- Underfiring has caused low flue gas temperature.

Install a flue gas thermometer and maintain a minimum stack temperature between 300° and 400° F.

- Insufficient flue draft.

See remedy #6.

- Using uninsulated stove pipe for the chimney flue, especially if the construction is on the exterior of the home.

DANGER: NEVER use non-insulated stove pipe as chimney. It must not be used on the inside of your home because of the high stack temperatures create an extreme fire hazard. Non-insulated pipe cannot be used as an outside flue, as it causes rapid cooling of the stack gases, causing them to condense as creosote on the inside of the flue.

- Improper connection in stove pipe causing air leakage or a structural defect in the chimney itself.

Inspect entire flue run from the exhaust stack of the furnace to the termination cap. Repair where necessary.

- Firebox not receiving adequate amount of oxygen.

Furnace room may be too airtight to supply sufficient amount of oxygen for combustion. We recommend installing an aperture to the outside consisting of a minimum of 4" round or 12.5 square inches.

Certificate of Limited Warranty

Extent of Coverage: *This warranty covers any FC300F Furnace sold in the United States. This warranty applies only if the FC300F Furnace is installed, maintained and operated in accordance with the instructions in the owner's manual and local codes. This warranty applies to the original purchaser/owner of the FC300F Furnace and is not transferable. Replacement or repair parts are warranted for the remaining period of the original part.*

All warranty claims must include: **date of purchase, model and serial number of furnace, proof of purchase** (*dated invoice, bill of sale, cancelled check or payment record*) and **the name and address of the dealer** from whom you purchased the furnace.

Fire Chief Industries warrants *the firebox* to be free of defects in material and workmanship for *five (5) years* from date of purchase. The **cast iron grates** are warranted for five (5) years so long as the furnace may be operated safely in accordance with the owner's manual. ***The firebox and cast iron grates will be prorated after one (1) year at a 20% rate each year thereafter. Intentional misuse, abuse, or burn through of cast iron components is NOT warranted.*** The manufacturer warrants all electrical components for **one (1) year**. Cast iron grates are not covered by warranty for burn through caused by the accumulation of ash build-up. Over-firing the furnace will cause the front face to crack and therefore is not covered by warranty. Please be advised that the firebrick and door gaskets are excluded from this warranty. Furthermore, some aesthetic deterioration can be expected as the result of normal operation, and therefore the physical appearance is not guaranteed to remain unchanged.

In order to exercise the aforementioned warranty, a certified professional must determine the appliance/part to be defective. He must submit a written statement to Fire Chief Ind. detailing his assessment of the problem. This assessment **must** be accompanied by substantiating proof of purchase (*dated invoice, bill of sale, cancelled check or payment record*), model and serial number. Fire Chief Ind. will then authorize repair or replacement as warranted by the submitted claim. Fire Chief Ind. will not honor expenses incurred from any action that was not expressly consented to in writing. The owner is hereby notified that he will be obligated to assume liability for removal, reinstallation, shipping and labor cost involved in servicing/repairing or replacing the part/unit. The merchandise in question must be shipped via **"PREPAID FREIGHT"** to Fire Chief Ind. Fire Chief Ind. will return the repaired or replacement part to the purchaser on a **"Freight Collect"** basis.

This warranty will be rendered null and void if this part/unit exhibits symptoms of obvious over-firing, deliberate abuse or negligence, improper installation or is used for commercial purposes.

Finally, Fire Chief Ind. will not be responsible for any claim not stated in our warranty nor does any implied warranty extend beyond the limits stated above.

If you are unable to receive satisfactory service from your local dealer, write Fire Chief Ind. and include all pertinent information, including a daytime phone number and a detailed description of the type of problem you are having and Fire Chief Technical Service will contact you.

Mail To: Fire Chief Industries 7280 Old State Route 21 Barnhart, MO 63012

1-800-875-4788 or 636-942-4747