

\$995

# Fire Chief

## Wood and Coal Burning Furnace

### Model 500, 700 and 1100

### "E" Series Owner's Manual



**MADE  
IN  
USA**

**Volume XII**

*August 2009*



UL391 Tested by PFS

*Manufactured by:* **Victorian Sales**  
**1808 Larkin Williams Road**  
**Fenton, MO 63026**  
**636.343.4747 or 800.875.4788**

# Congratulations!

You have selected the finest quality wood and coal 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.

- ***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. Victorian Sales 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 Victorian Sales 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.

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

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

## **SPECIFICATIONS:**

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 doors are 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 roller grate, designed for maximum heat transfer, aid in convenient ash removal and reduce maintenance.

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

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

### **FORCED HOT AIR CIRCULATION:**

The plenum size of your Fire Chief must not be reduced to less than 12" (twelve inches) round or 79 square inches and must provide a minimum of eighteen inches between the top of your Fire Chief and the main trunk connection.

### **CLEARANCES:**

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

***Heat Plenum 3"; Chimney Connector 18"; Front 36"; 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.

### **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. Insure that the by-pass rod is pulled out allowing heat to go up chimney.
2. Close the spin damper control on the ash door.
3. Close the slide cover on the side of the draft motor (see page 10)
4. **DO NOT** add more fuel (wood) to the firebox.

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

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

## DUCT RUNS:

Duct work should be designed so the external static pressure on high speed 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 registers. The heat outlet area should never be less than 12 sq. in. 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.

## FUEL RECOMMENDATIONS: *Log Size by Model*

**FC500 - 22" Maximum Log Length;**

**FC700 - 28" Maximum Log Length;**

**FC1100 - 34" Maximum Log Length.**

We advise using only dry, seasoned hardwoods in your Fire Chief Furnace rather than highly rosinced 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: 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*.
- **DO NOT** operate your Fire Chief with the Fuel By-pass Rod *OPEN*, the handle must be pushed all of the way *IN* - *except when refueling*.
- **DO NOT** leave the Ash Pan inside your Fire Chief during operation.

## 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

**Due to the risk of uncontrollable fire or explosion DO NOT attempt to use gasoline, flammable liquids, refuse oil or garbage as an agent of combustion for your Fire Chief.**

## 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 your Fire Chief Furnace to any chimney that services **ANY** other appliance. Your furnace must be placed on a non-combustible floor and position it as close to the chimney as possible.

### **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 7**

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 500 and 700, a minimum 6" diameter** and for the **Model 1100, a minimum of 8" diameter**. In order to create the most efficient draft, the chimney size should not exceed 12 inches with a minimum of .08 inches water column of draft. 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.

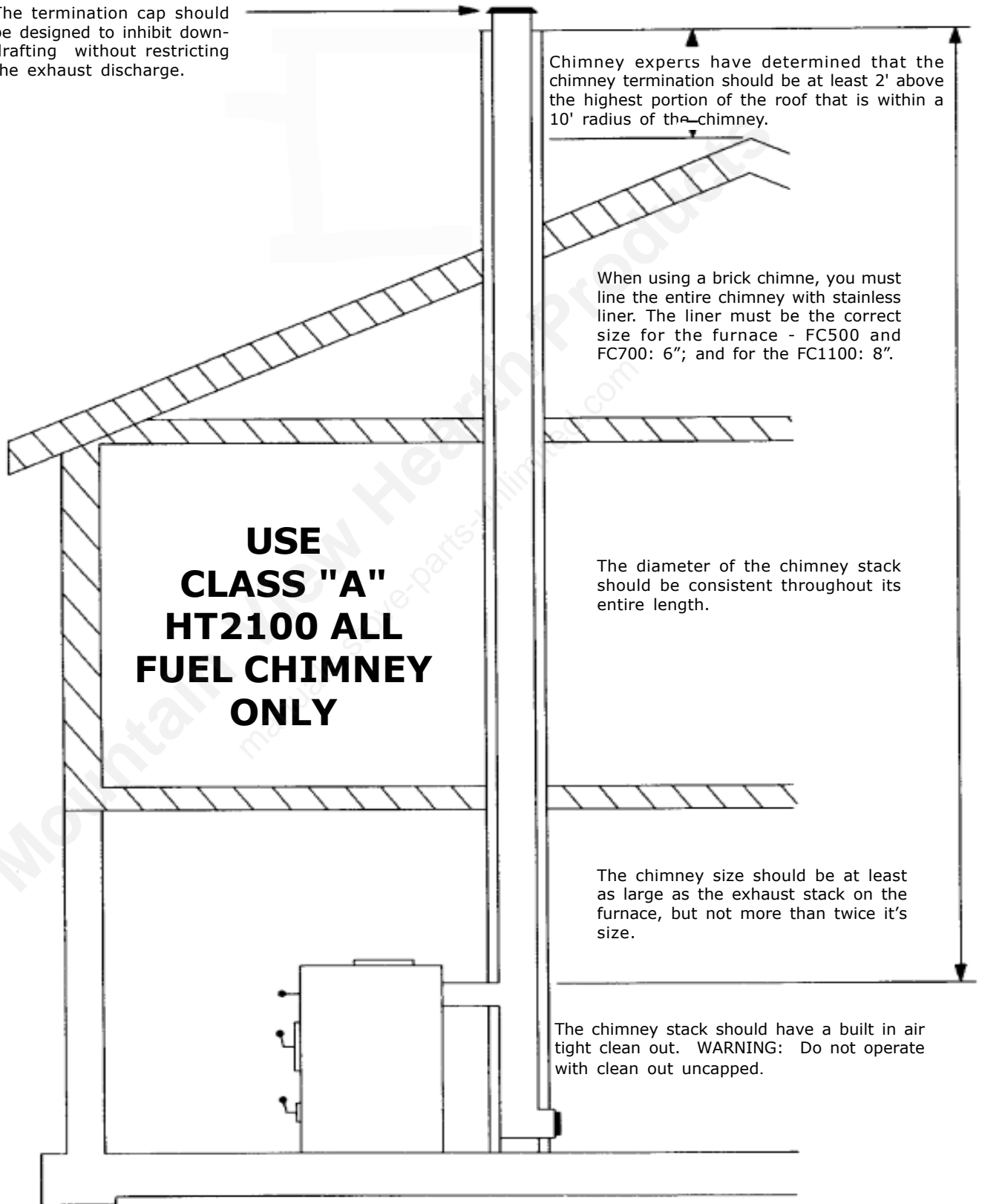
When using a masonry chimney, you must line the chimney with a stainless steel liner. The stainless liner will keep the chimney temperature hotter for better draw and significantly reduce the creosote formation in the chimney. If using this method, use 6" stainless liner for the FC500 and FC700 and 8" stainless liner for the FC1100.

### **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.
- **NEVER** leave the ash pan in your Fire Chief during operation.

# Chimney Recommendations

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



**USE  
CLASS "A"  
HT2100 ALL  
FUEL CHIMNEY  
ONLY**

Chimney experts have determined that the chimney termination should be at least 2' above the highest portion of the roof that is within a 10' radius of the chimney.

When using a brick chimne, you must line the entire chimney with stainless liner. The liner must be the correct size for the furnace - FC500 and FC700: 6"; and for the FC1100: 8".

The diameter of the chimney stack should be consistent throughout its entire length.

The chimney size should be at least as large as the exhaust stack on the furnace, but not more than twice it's size.

The chimney stack should have a built in air tight clean out. **WARNING:** Do not operate with clean out uncapped.

**STARTING YOUR FIRST "REAL FIRE:** *Set the wall thermostat to 90°. Check to be certain the spin draft is wide open to allow oxygen into the firebox. Adjust slide cover on draft blower*

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. Set the wall thermostat to the desired home temperature.

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 and push the by-pass rod all of the way in. Within thirty to forty minutes, adjust the spin draft and the damper to obtain optimum performance. Finally, adjust the wall thermostat and draft blower cover to a comfortable setting. SEE PAGE 10***

**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, open the Ash Door and slide the Ash Pan to the rear of the furnace. Remove the Ash Pan from the furnace and dump the ashes into an **AIRTIGHT METAL** container. **HOT** ashes must always be placed into an airtight metal container. Always place the metal container on a **NON-COMBUSTIBLE** surface. Emptying hot ashes into a combustible container is an extreme fire hazard.

1. The **Ash Pan should be removed from your Fire Chief during operation.** We recommend this precautionary measure because if the ash pan is allowed to remain

inside the furnace during operation, it will become dangerously hot to touch, block the flow of air under the grates and reduce the efficiency of the furnace.

2. 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.

3. 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.

4. Wood ash is an especially potent fertilizer.

### **GENERAL OPERATION:**

Always pull the By-pass Rod all the way "OUT" before opening the fuel door.

When opening the fuel door during operation, wait ten seconds after releasing the first latch, 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 or coal 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.*

### **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 Draft and slide cover on Draft Motor.
3. Alert the **ENTIRE** household and prepare to evacuate if necessary.
4. Call your local Fire Department.

## ASSEMBLY INSTRUCTIONS

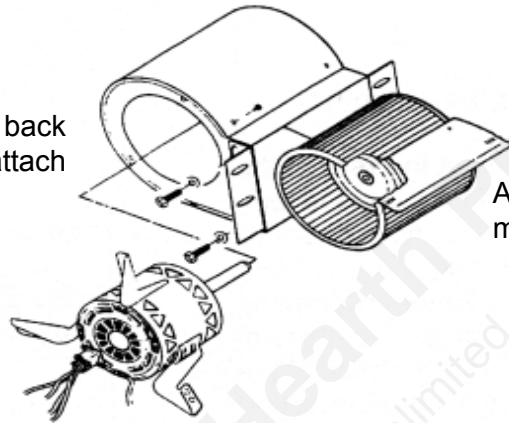
Please review the parts diagram and list contained on pages 14 thru 17 of this manual to be assured that you have received all of the required components. If your inspection reveals a discrepancy, **contact your Dealer or call 800.875.4788 for help.**

**NOTE:** for your convenience your Fire Chief has been factory assembled and the electric wiring harness is pre-wired.

### BLOWER AND FILTER HOUSING

1. Fasten the right and left side angle brackets to the circulation blower using 4 each 1/4" bolts and nuts.

Align Blower with holes on back side of furnace and firmly attach with the screws provided.



Attach Blower to the left and right mounting brackets.

2. Follow the instructions provided with the filter box for assembly. Assemble the Filter Box using the screws provided. **NOTE:** The side with the electrical access hole must be mounted to the right side of the unit.
3. Position filter box at rear of furnace. Cover rear distribution blower. Raise the filter box approximately 4" off of the floor. Tightly press filter box to the back of the furnace and use 8 each #10 self-tapping screws to attach it to sides of furnace.

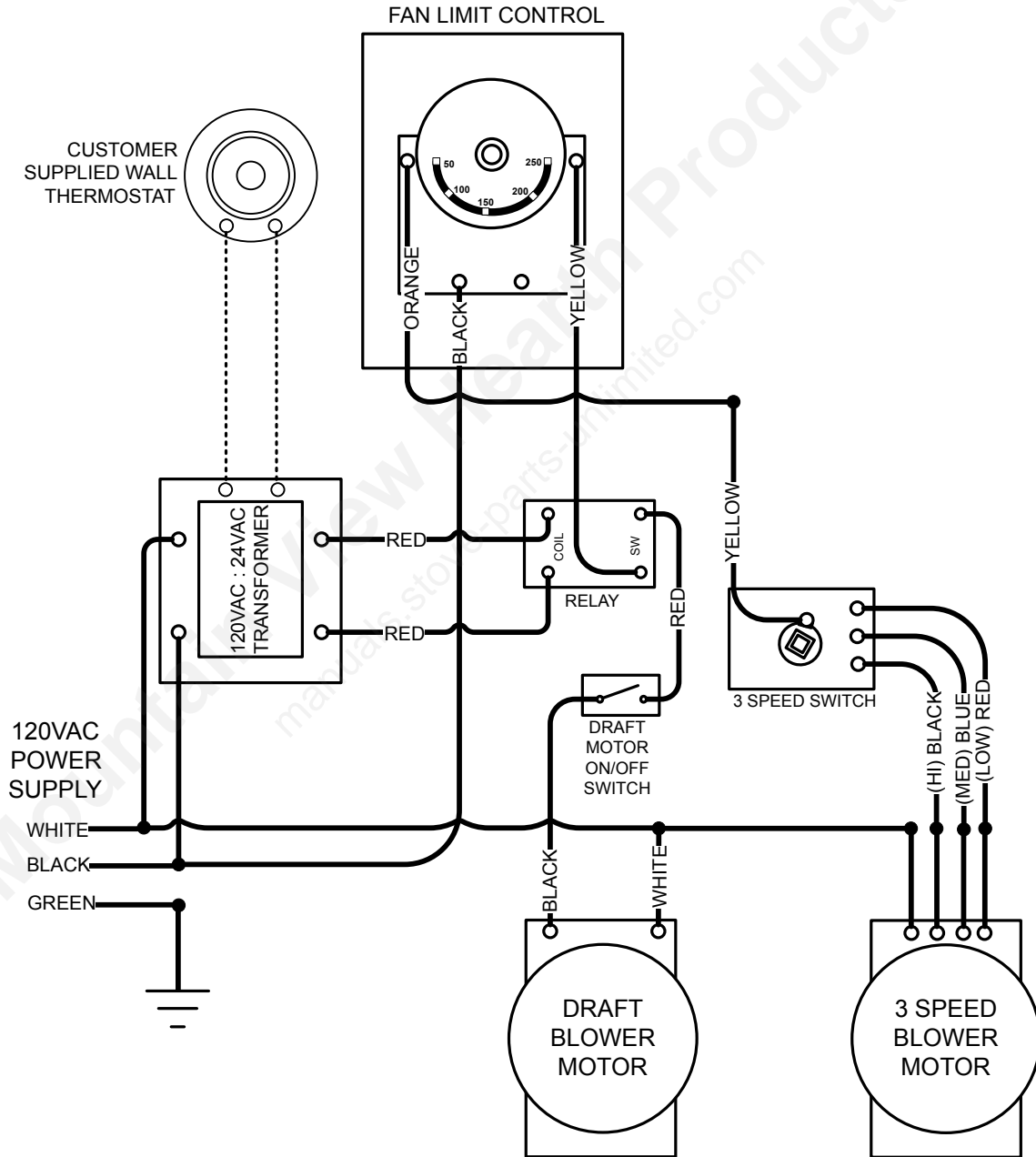
### FORCED DRAFT MOTOR

1. Mount the forced draft blower with 3 - 1/4-20 X 1/2" bolts provided.
2. Attach fan limit with 3 - #10 screws in the holes provided.
3. Mount the electrical control center with 4 #10 screws, provided.
4. Secure the flex conduit to the side of the furnace using the bracket provided.(requires 1 screw, included).
5. Plug motor into the back of the electrical control center.
6. Connect thermostat wire (not provided #28 ga wire) to the two posts located on the side of the control center. You may locate the wall thermostat next to you existing thermostat in the home. The thermostat must be installed for the furnace to operate.
7. Plug the three prong grounded plug into a grounded electrical outlet.

**REFER TO DIAGRAM ON PAGE 11**

# FC500E/FC700E/FC1100E

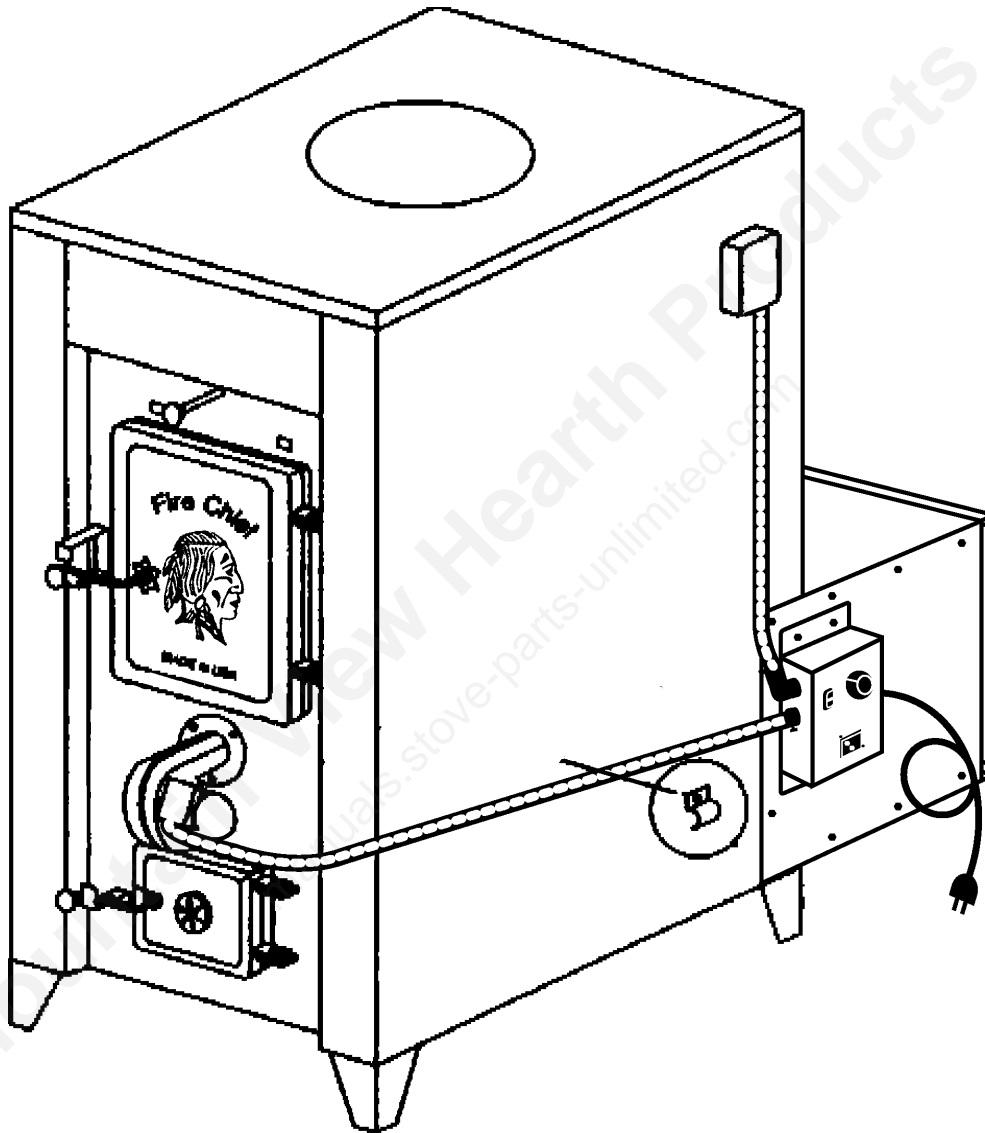
## WIRING DIAGRAM INDOOR FURNACE



# FIRE CHIEF FURNACE

## Model FC500E, FC700E and FC1100E

Refer to Assembly Instructions on Page 11



This drawing shows the furnace with the electrical system and filter box properly installed. The bracket must be attached to the side of the furnace to secure the conduit. With the connection of thermostat, chimney pipe and duct work, your furnace installation is complete. Before firing your furnace, be sure to install a furnace filter - 18" X 25" X 1".

## FRONT DRAFT BLOWER:



The front draft blower plays an important role in your Fire Chief furnace's operation. When the wall thermostat calls for heat, the draft motor turns on and supplies fresh air into the firebox producing a hotter fire which in turns provides more heat in the heat chamber. The heat is then sent through the duct system throughout your home. When the wall thermostat temperature is met, the draft blower shuts off until the wall thermostat calls for heat, beginning the cycle again. The draft blower has a slide cover located on the side of the motor that is factory preset, with an opening of approximately 3/4"; if adjustment is required, the damper may be adjusted manually to increase or decrease the air flow.

The cover should be fully closed only when there is a power failure and electricity is lost. With the cover closed, no air is introduced into the firebox, the fire dies, preventing the furnace from possible overheating and damage.

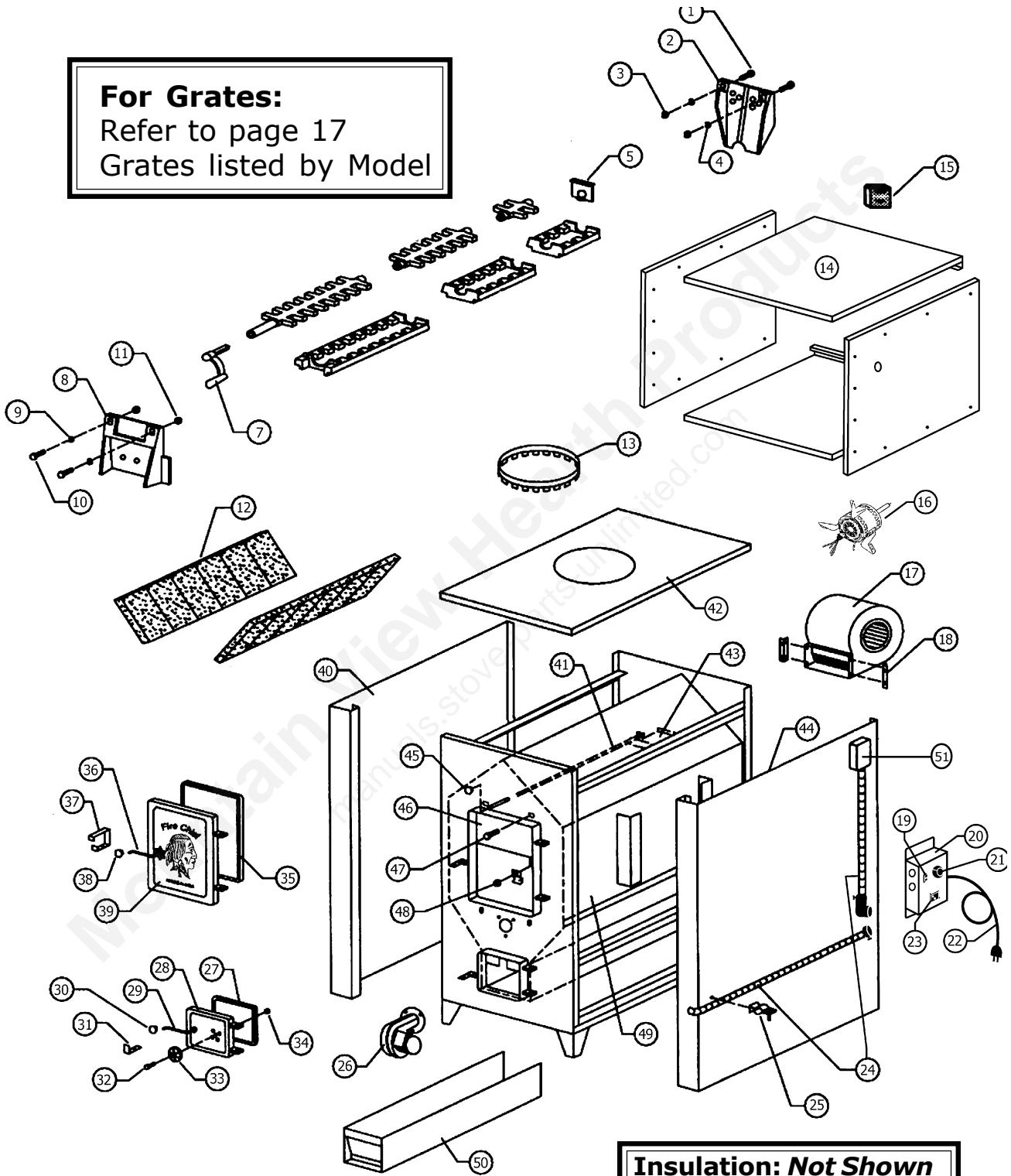
**There is no warranty on electrical components caused by power failure.**

**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.**

# Models 500E, 700E, 1100E Parts Diagram

**For Grates:**  
Refer to page 17  
Grates listed by Model



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

# FIRE CHIEF 500E, 700E AND 1100E PARTS LIST

ITEM #	DESCRIPTION	QUANTITY
1	Hex Bolt - 5/16-18 X 2 3/4"	2
2	Rear Cast Plate - <b>FCRCP</b>	1
3	Hex Lock Nut, 5/16-18	2
4	Flat Washer, 9/16 ID	2
5	Roller Grate Retainer - <b>FCMR</b> - <b>Refer to page 17</b> Grates - <b>Refer to Page 17 for Grates by Model</b>	1
7	Roller Grate Handle - <b>FCSGH</b>	1
8	Front Cast Plate - <b>FCFCP</b>	2
9	Washer, 7/16 ID	2
10	Hex Bolt, 3/8 X1	2
11	Hex Lock Nut, 5/16	2
12	Firebrick - <b>HTFB</b> and <b>HTFB5 (FC500, only)</b> <b>or order as Complete Set by Model, Refer to page 16</b>	
13	12" Duct Collar - <b>SNGCLR12</b>	1
14	Filter Box Assembly - <b>FCFB</b>	1
15	Wall Thermostat - <b>FCTHERM</b>	1
16	Three Speed Blower Motor - <b>FC3SPMOTOR</b>	1
17	Blower Housing - <b>FCBH</b>	1
18	Blower Bracket - <b>FCBR</b>	2
19	Rocker Switch for Draft Blower	1
20	Electrical Control Center - <b>Refer to Page 16</b>	1
21	3 Speed Blower Switch - <b>FC3SPWITCH</b>	1
22	3' Grounded Electric Cord - <b>FC3CORD</b>	1
23	Transformer Relay	1
24	Conduit Assembly 3/8" - <b>FCCON</b>	2
25	Conduit Clip with Screw - <b>FCCH</b>	1
26	Forced Draft Blower - <b>FCDB</b>	1
27	Ash Door Gasket, 1/2" - <b>FCGSKT12</b>	1
28	Ash Door - <b>FCAD</b>	1
29	Ash Door Handle - <b>FCADH</b>	1
30	Ash Door Knob - <b>FCKNOB</b>	1
31	Ash Door Latch	1
32	Spin Draft Bolt` 5 /16-18 X 1 3/4"	1
33	Spin Draft - <b>FCSD</b>	1
34	Hex Lock Nut, 5/16-18	1
35	Fuel Door Gasket, 5/8" - <b>FCGSKT58</b>	1
36	Fuel Door Handle - <b>FCFDH</b>	1
37	Fuel Door Latch	1
38	Fuel Door Knob - <b>FCKNOB</b>	1
39	Fuel Door - <b>FCFD</b>	1
40	Left Side, by Model - <b>FC5LEFT, FC7LEFT, FC11LEFT</b>	1
41	Slider Rod, By Model - <b>FC5BR, FC7BR, FC11BR</b>	1
42	Furnace Top, By Model - <b>FC5TOP, FC7TOP, FC11TOP</b>	1
43	By-Pass Damper	1
44	Right Side, By Model - <b>FC5RIGHT, FC7RIGHT, FC11RIGHT</b>	1
45	Knob - <b>FCKNOB</b>	1
46	Smoke Curtain - <b>FCSC</b>	1
47	Smoke Curtain Bolt	2
48	Smoke Curtain Clip	2
49	Firebox	1
50	Ash Pan, by Model - <b>FC5AP, FC7AP. FC11AP</b>	1
51	Fan Limit Control	1

# **FIRE CHIEF PARTS LIST, *continued***

## **Furnace Parts Sold as Kits: *For Models/Series as Listed***

### **FC500E; FC700E AND FC1100E Series only - 2009 and Newer Production**

**Electrical Control Center:** Wall Thermostat, Draft Blower, Rocker Switch, 3-Speed Blower Switch, Fan Limit Control, Fan Relay Center and 3' Cord for each Model.

**FC5ECC** FC500E Electrical Control Center

**FC7ECC** FC500E Electrical Control Center

**FC11ECC** FC1100E Electrical Control Center

### **FC500; FC700 AND FC1100 Series - 2009 and Earlier Production**

**Wiring Harness Kit:** Includes Wall Thermostat, Fan Relay, Fan Limit Control, Draft Blower, Junction Box and Wiring for each Model.

**FC5HARNES** Wiring Harness for FC500 Series

**FC7HARNES** Wiring Harness for FC700 Series

**FC11HARNES** Wiring Harness for FC1100 Series

**Firebrick Kits:** Set of Firebrick for each Furnace

**FC5FBKT** Complete Set of Firebrick for FC500 Series Furnace - 8 Total -  
**HTFB:** 9" X 4 1/2" X 1 1/4" - 6 pieces and **HTFB5:** 9" X 3" X 1 1/4" - 2 pieces.

**FC7FBKT** Complete Set of Firebrick for FC700 Series Furnace - 12 Total -  
**HTFB:** 9" X 4 1/2" X 1 1/4".

**FC11FBKT** Complete Set of firebrick for FC1100 Series Furnace - 16 total -  
**HTFB:** 9" X 4 1/2" X 1 1/4".

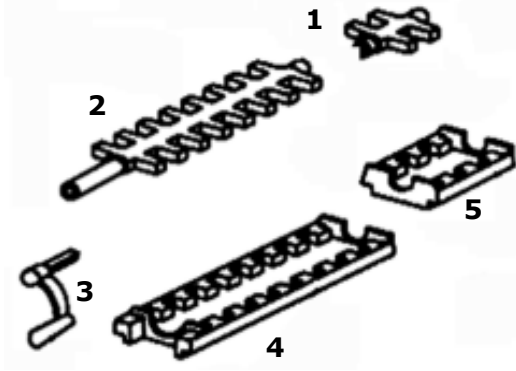
**Furnace filters are available thru most hardware and home supply stores; the filter should be changed monthly, during the heating season.**

**Filter size: 18" X 25" X 1".**

**FOR PARTS, CONTACT YOUR DEALER  
OR CALL 800.875.4788**

# FIRE CHIEF GRATES, BY MODEL

Grates By Model: Refer to Complete Diagram on Page 15 - Diagrams are for Grates only and quantity needed for each model.

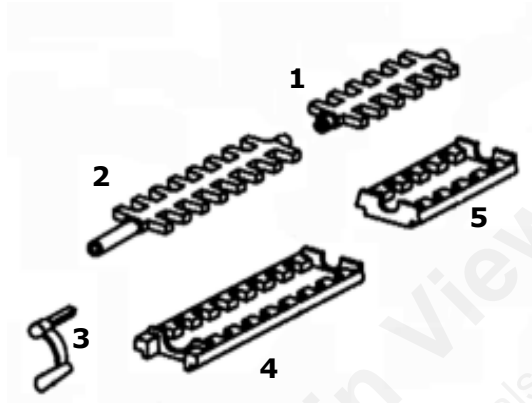


## Model 500 Grates -

<b>1</b>	Rear Grate, L - <b>FC5RG</b> .....	1
<b>2</b>	Front Roller Grate, F - <b>FCFG</b> .....	1
<b>3</b>	Roller Grate Handle, - <b>FCSGH</b> .....	1
<b>4</b>	Front Grate Housing, B - <b>FCFGH</b> .....	1
<b>5</b>	Rear Grate Housing, M - <b>FC5RGH</b> .....	1

**Not Shown** - refer to diagram page 14

	Middle Retainer, Z - <b>FCMR</b> .....	1
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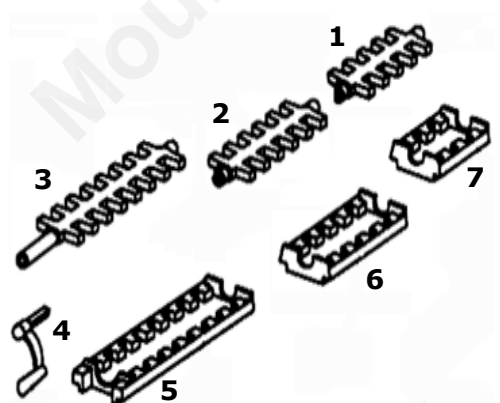


## Model 700 Grates -

<b>1</b>	Rear Grate, G - <b>FC711RG</b> .....	1
<b>2</b>	Front Roller Grate, F - <b>FCFG</b> .....	1
<b>3</b>	Roller Grate Handle, - <b>FCSGH</b> .....	1
<b>4</b>	Front Grate Housing, B - <b>FCFGH</b> .....	1
<b>5</b>	Rear Grate Housing, C - <b>FC711RGH</b> .....	1

**Not Shown** - refer to diagram page 14

	Middle Retainer, Z - <b>FCMR</b> .....	1
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## Model 1100 Grates -

<b>1</b>	Rear Grate, Y - <b>FC11RG</b> .....	1
<b>2</b>	Middle Grate, G - <b>FC711RG</b> .....	1
<b>3</b>	Front Roller Grate, F - <b>FCFG</b> .....	1
<b>4</b>	Roller Grate Handle, - <b>FCSGH</b> .....	1
<b>5</b>	Front Grate Housing, B - <b>FCFGH</b> .....	1
<b>6</b>	Middle Grate Housing, C - <b>FC711RGH</b> ...	1
<b>7</b>	Rear Grate Housing, X - <b>FC11RGH</b> .....	1

**Not Shown** - refer to diagram page 14

	Middle Retainer, Z - <b>FCMR</b> .....	2
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# Installation of Optional Equipment

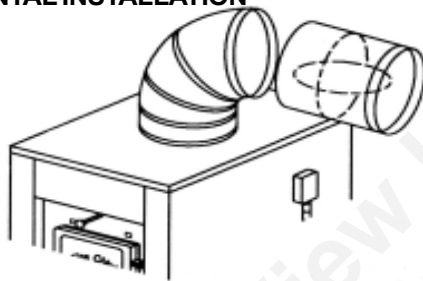
## MANUAL BACK DRAFT DAMPER

### **OPTIONAL ACCESSORY #AM-MD12 Manual Back Draft Damper**

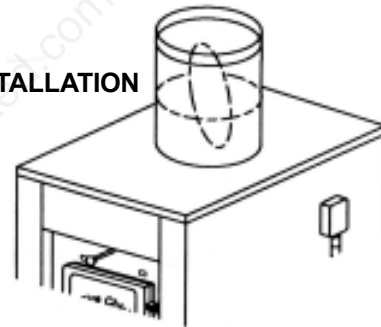
The Back Draft Damper may be installed in either a vertical or horizontal section of the 12" round hot air duct. It should be positioned as close to the plenum opening of the Fire Chief as practical. Press the female end of the damper over the Fire Chief Furnace collar or male end of the duct pipe. When properly positioned, the arrows on the air flow 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 below 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.**

#### HORIZONTAL INSTALLATION



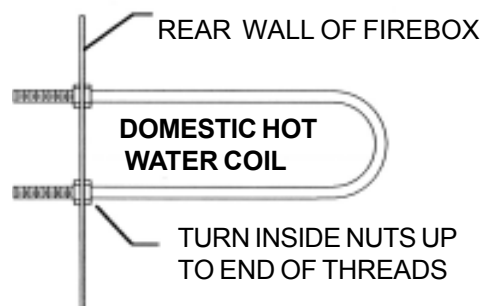
#### VERTICAL INSTALLATION



## INSTALLING HOT WATER COIL

### **OPTIONAL ACCESSORY PART #TB-24S Water Coil with Hole Saw**

1. Drill two one inch holes at the rear of the furnace just above the firebrick using the coil as a template with the hole saw provided in the Water Coil Kit.
2. Place one nut on each end of the water coil and thread each as far as they will go.
3. Open the loading door and insert the coil through the holes at the end of the firebox just above the firebrick.
4. From the rear of the furnace, thread on the remaining two nuts and tighten securely.
5. Have a qualified plumber connect your domestic hot water pipe to the coil with the appropriate fittings.



## TROUBLESHOOTING

<b>PROBLEM</b>	<b>PROBABLE CAUSE</b>	<b>SUGGESTED REMEDY</b>
1. Bugs found in wood.	<ul style="list-style-type: none"><li>• Wood has rotted or has been laying around for an extended period of time.</li></ul>	Inspect the wood for obvious signs of insect infestation such as burrows or holes and avoid using if possible. Do not store indoors.
2. Draft Blower will not run. <b>NOTE:</b> Please verify switch is in the "ON" position.	<ul style="list-style-type: none"><li>• Defective rocker switch on control center.</li><li>• Defective wall thermostat.</li></ul>	Replace rocker switch.  This can be checked by turning the thermostat to a temperature setting that is higher than the temperature in your home. If the draft blower does not operate, the thermostat may be defective. Replace if necessary.
	<ul style="list-style-type: none"><li>• Defective fan relay center.</li></ul>	Replace fan relay center.
	<ul style="list-style-type: none"><li>• Defective draft motor.</li></ul>	Replace draft motor.
	<ul style="list-style-type: none"><li>• Improper wiring.</li></ul>	Review wiring diagram. If wired correctly, seek professional assistance.
3. Draft blower runs continuously.	<ul style="list-style-type: none"><li>• Defective wall thermostat.</li></ul>	Check by turning indicator to a lower setting than the temperature in your home. If the draft blower continues to run, the thermostat may be defective. Replace if necessary.
	<ul style="list-style-type: none"><li>• Thermostat wire is short circuited.</li></ul>	Check for defective wiring.
	<ul style="list-style-type: none"><li>• Defective fan relay center.</li></ul>	Replace fan relay center.
	<ul style="list-style-type: none"><li>• Home is not being supplied with a sufficient amount of heat to satisfy the wall thermostat.</li></ul>	Have a professional determine the proper size furnace and insulation factor of your home.

## TROUBLESHOOTING

<b>PROBLEM</b>	<b>PROBABLE CAUSE</b>	<b>SUGGESTED REMEDY</b>
4. Circulation blower will not turn on.	• Defective fan limit control.	Check by moving "ON" position indicator to temperature position where the blower should turn on. If the blower fails to run, replace the fan limit.
	• Defective Blower.	Contact your supplier for replacement.
	• Improper wiring.	Review wiring diagram. If wired correctly, seek professional assistance.
5. Circulation blower runs continuously.	• "OFF" setting on fan limit control is low.	Remove cover on fan limit and check for the proper setting. The point indicators should be set at 100° "OFF" and 150° "ON". DO NOT attempt to adjust the fan limit by manually adjusting the dial.
	• Defective fan limit.	Check by moving "ON" or "OFF" point indicator to a temperature position where blower should turn off. If the blower continues to run, replace the fan limit.
	• Improper wiring.	Review wiring diagram. If unit is wired correctly, seek professional assistance.
6. Circulation blower vibrates during operation.	• Backdraft damper is in the "Closed" position.	Open backdraft damper.
	• Screw on squirrel cage is not tight.	Check squirrel cage alignment and position so that it does not drag on the housing during rotation; then tighten the screw sufficiently to fasten the squirrel cage securely to the shaft.
	• Balance weights on squirrel cage have become dis-	You may attempt to adjust the weights yourself to obtain

## TROUBLESHOOTING

<b>PROBLEM</b>	<b>PROBABLE CAUSE</b>	<b>SUGGESTED REMEDY</b>
6. Circulation blower vibrates , continued.	located. <ul style="list-style-type: none"><li>• Defective main bearings</li></ul>	an acceptable balance. If you are unsuccessful, contact your supplier.  Return the blower to your supplier for replacement.
7. Odor detected in home during initial firing.	<ul style="list-style-type: none"><li>• There is an oily film that remained on the steel after the manufacturing process. Firing the furnace has raised the temperature of the fire-box to a level that is sufficient to vaporize the residue.</li></ul>	This odor should disappear after a few hours of usage.
8. Smoke from the fire chamber is puffing back through forced draft motor.	<ul style="list-style-type: none"><li>• Furnace is not connected to return air and is drawing smoke fumes from the flue.</li><li>• Excessively long run of stove pipe from furnace to flue.</li><li>• Too many elbows.</li><li>• Insufficient flue size.</li></ul>	Connect to return air duct system.  Relocate the furnace so that the horizontal run does not exceed five feet (5') and has a two inch (2") rise per foot.  The run should not contain more than two (2) elbows.  Replace with a larger flue providing a minimum of 50 (fifty) square inches of draft area but not more than 100 square inches of draft area. If flue is within these specifications, check the draft with a gauge. Your flue should provide a minimum of .08 water column inches.
9. Down draft on chimney caused by one or more of the following:	<ul style="list-style-type: none"><li>• Cast iron damper in "CLOSED" position.</li><li>• Flue has a cold spot which inhibits exhaust discharge from rising properly. This</li></ul>	Open damper.  Check entire flue for structural integrity and leakage. Correct or repair as needed.

## TROUBLESHOOTING

<b>PROBLEM</b>	<b>PROBABLE CAUSE</b>	<b>SUGGESTED REMEDY</b>
9. Down draft on chimney, continued.	<p>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.</p> <ul style="list-style-type: none"> <li>• There is an obstruction outside the chimney, such as a tree.</li> <li>• Flue is located too close to the peak of the roof or does not rise above it to provide the proper draft.</li> <li>• Flue is located too close to another building.</li> <li>• Obstruction in chimney.</li> <li>• Excessive ash accumulation.</li> </ul>	<p>Replace or re-line chimney.</p> <p>Remove obstruction.</p> <p>Increase chimney height.</p> <p>Increase chimney height.</p> <p>Check entire chimney system including stove pipe run. Utilize chimney cleaning device to remove any obstruction or foreign matter.</p> <p>Remove as necessary.</p>
10. Excessive smoke discharge from fuel door during reloading.	<ul style="list-style-type: none"> <li>• Exhaust by-pass rod in "CLOSED" position.</li> <li>• Cast iron damper in the "CLOSED" position.</li> <li>• Excessively long stove pipe run from furnace flue.</li> <li>• Too many elbows.</li> <li>• Insufficient draft.</li> <li>• Excessive smoke accumulation.</li> </ul>	<p>Always pull the exhaust by-pass rod completely forward before opening the loading door.</p> <p>Open damper.</p> <p><b>SEE #8</b></p> <p><b>SEE #8</b></p> <p><b>SEE #8</b></p> <p><b>SEE #9</b></p>

## TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SUGGESTED REMEDY
11. Flames discharging from fuel door during reloading.	<ul style="list-style-type: none"><li>• Opening the door has provided additional oxygen which has ignited accumulated gases from partially spent fuel.</li></ul>	Always open the door cautiously and allow the safety latch system to perform its designed function of containing ignite gases within the fire chamber.
	<ul style="list-style-type: none"><li>• Cast iron damper in "CLOSED" position.</li></ul>	Open damper.
	<ul style="list-style-type: none"><li>• Insufficient natural draft or an obstruction in the flue system.</li></ul>	<b>SEE #8 AND #9</b>
12. Excessive dirt accumulation surrounding air registers within the home.	<ul style="list-style-type: none"><li>• Fire chamber filled to capacity with unburned fuel.</li></ul>	Do not attempt to overload furnace.
	<ul style="list-style-type: none"><li>• Smoke discharge from loading door while refueling.</li></ul>	Always pull exhaust by-pass rod completely forward before opening fuel door.
	<ul style="list-style-type: none"><li>• Furnace is not connected to return air duct and is drawing dirt from furnace room floor and discharging through the home.</li></ul>	Connect to return air duct system.  Check for proper draft with gauge. If inadequate, <b>SEE #8.</b>
13. Home does not achieve comfortable temperature.	<ul style="list-style-type: none"><li>• Filter box not installed or no filter in filter box.</li></ul>	Install filter box on furnace. Install filter in filter box.
	<ul style="list-style-type: none"><li>• Improper connection to existing furnace.</li></ul>	Refer to information in the manual relating to the proper installation procedures or contact your local heating and cooling contractor.
	<ul style="list-style-type: none"><li>• Improperly sized ducting.</li></ul>	Refer to information in the manual relating to proper ducting procedures or consult your local heating and cooling contractor.
	<ul style="list-style-type: none"><li>• Excessive dirt accumulation in air filter.</li></ul>	Check and replace filter. <b>FILTER 18" X 25" X 1"</b>
	<ul style="list-style-type: none"><li>• Combustion chamber</li></ul>	Furnace room may be too

## TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SUGGESTED REMEDY
13. Home does not achieve comfortable temperature, <i>continued</i>	<p>not receiving an adequate amount of oxygen.</p> <ul style="list-style-type: none"><li>• Inadequate insulation in the home.</li><li>• Your furnace is of inadequate size for your home.</li><li>• Slide cover on draft blower "closed".</li><li>• Fueling furnace with wet or unseasoned wood.</li></ul>	<p>airtight. We recommend installing an aperture to the outside consisting of a minimum of twelve square inches or 4" round.</p> <p>Provide additional insulation.</p> <p>Consult a professional to determine correct sizing.</p> <p>Open slide cover. <b>See Page 10.</b></p> <p>Completely avoid using if at all possible. If circumstances necessitate the use of wet or unseasoned wood, then fuel the furnace with smaller loads. This will call for the thermostat to call for heat more often, which will initiate the running of the draft blower. Consequently, the fires will be hotter, thereby reducing the accumulation of creosote.</p>
14. Rapid accumulation of creosote in furnace and flue.	<ul style="list-style-type: none"><li>• Use of highly rosined wood, such as pine.</li><li>• Under-firing the furnace has caused low flue gas temperature.</li></ul>	<p>Completely avoid using if at all possible. If hardwoods are not available then fuel the furnace with smaller loads. This will cause the thermostat to call for the heat more often, which will initiate the running of the draft blower. Consequently, the resultant fires will be hotter, thereby retarding the accumulation of creosote.</p> <p>Install a flue gas thermometer and maintain stack temperatures between 300° and 400° F.</p>

## TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SUGGESTED REMEDY
14. Rapid accumulation of creosote, <i>continued</i> .	<ul style="list-style-type: none"><li>• Insufficient chimney draft.</li><li>• Using Un-insulated stove pipe for the chimney, especially if the construction is on the exterior of the home.</li><li>• Improper connection in stove pipe causing air leakage or a structural defect in the chimney itself.</li><li>• Firebox not receiving adequate amount of oxygen.</li><li>• Use of an unlined masonry chimney with a large clay tile opening.</li></ul>	<p>SEE #9</p> <p><b>DANGER:</b> Never use un-insulated stove pipe as chimney. It must not be used on the inside of your home due to high stack temperatures create an extreme fire hazard. Un-insulated pipe can not be used as an outside flues as it causes rapid cooling of the stack gases, thereby causing them to condense as creosote on the inside of the flue.</p> <p>Inspect entire flue run - from the exhaust stack of the furnace to the termination cap. Repair as necessary.</p> <p>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 fifteen square inches or 4" round.</p> <p>Install stainless steel liner in the masonry chimney to reduce creosote formation and improve draw. Use appropriately sized stainless liner for the furnace.</p>

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

**Fire Chief Model Number:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Purchase Date:** \_\_\_\_\_

**Dealer Where Purchased:** \_\_\_\_\_

**Additional Service Information:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Mountain View Hearth Products  
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# CERTIFICATE OF LIMITED WARRANTY

**Extent of Coverage:** *This warranty covers any Fire Chief Furnace sold in the United States. This warranty applies only if the Fire Chief 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 Fire Chief 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.

Victorian Sales warrants the **firebox** to be free of defects in material and workmanship for **five (5) years** from date of purchase. The **cast iron grates, fuel door, ash door, cast iron front and rear baffle** are warranted from breakage for the **life** of the Fire Chief Furnace so long as the furnace may be operated safely in accordance with the owner's manual. Cast iron grates and air baffle are not covered by warranty for burn through caused by the accumulation of ash build-up. The manufacturer warrants all electrical components **one (1) year**. Please be advised that the firebrick and door gaskets are excluded from this warranty. Over firing the furnace will cause the front face of the furnace to expand and contract which may cause the face to crack and therefore is not covered by warranty. Furthermore, some aesthetic deterioration can be expected as the result of normal operation, 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 or she must submit a written statement to Victorian Sales 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. Victorian Sales will then authorize repair or replacement as warranted by the submitted claim. Victorian Sales 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 Victorian Sales. Victorian Sales 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, Victorian Sales 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 Victorian Sales with all pertinent information, including a daytime phone number, a detailed description of the type of problem you are having and Fire Chief Technical Service will contact you.*

**Mail To: Victorian Sales 1808 Larkin Williams Road Fenton, MO 63026**

**Or call 800.875.4788 - be sure to have model, serial number and purchase date.**

Mountain View Hearth Products  
manuals.stove-parts-unlimited.com