

# ***THE BRYAN FURNACE***

**RIK-MAR FABRICATORS, INC.**

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## **OWNER'S MANUAL INDUSTRIAL MODEL 450**



**EXTERIOR COVERING BUILT FROM 1/16 INCH GALVNZED PLATE**



**FIRE BOX BUILT FROM 3/16" STEEL PLATE, ALL WELDED CONSTRUCTION WITH CAST IRON GRATES**



**CAST-IRON DOORS, FRAMES, GRATES AND DOOR LATCHES**

**U.S. Patent 4,194,688  
Canadian Patent 1,123,295**

**P.N. 3000-002**

*All installations must be in accordance with local and state codes which may differ from this manual.*

**SAVE THESE INSTRUCTIONS**

Thank you for choosing The Bryan Furnace for your solid fuel heating needs. Pride, craftsmanship and high quality materials insure that you have chosen a furnace of the highest quality. This quality construction, together with our patented outdoor installation, guarantees you the safest, cleanest solid fuel heating system available. With minimum maintenance, your furnace should provide you with many years of trouble free service.

Please read through these instructions before beginning installation of your furnace. They contain many helpful tips on installing, maintaining, and operating your Bryan Furnace. Check with your local building officials to be in conformance with local building, plumbing, and electrical codes. These instructions can help you now as well as in the future, and should be retained for your reference.

If after installing your Bryan Furnace you encounter a situation that you are not comfortable with, feel free to call our toll free number 1-800-927-9947 and ask for one of our technicians. You may also reach us on the internet. Our email address is rik-mar@txcyber.com. Most importantly, let safety be your main concern.

## **TRANSPORTATION DAMAGES**

**Before proceeding, please inspect your furnace for any damages which may have occurred in shipping. If you find any damages, please notify your dealer immediately. He will take action to correct the problem**

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# OPERATING INSTRUCTIONS

## HOW IT WORKS

Your Bryan Furnace is an airtight, draft induced furnace located inside an insulated metal shelter. The blower located on top of the furnace pulls cold (return) air from the building, passes it through the shelter where it picks up heat from the combustion chamber, and forces the air back into the building through the hot (supply) air duct. Combustion air is induced into the combustion chamber by a forced air blower located on top of the shelter under the fan cover and exhaust gases leave through the flue on top of the furnace. The two systems are sealed from each other and combustion gases will not normally be released into the building.

## OPERATION

Please keep in mind when operating any solid fuel heater that unlike a gas, oil or electric heater, the fire cannot simply be turned on or off to control building temperature. Once a solid fuel fire is established, it must be allowed to burn to conclusion.

## FIREWOOD

The Bryan Furnace Model 450 will burn any type of wood up to 12" in diameter and 42" in length. Wood can be burned either with or without the provided grates. Store your fuel in a dry covered area with good ventilation. Do not stack wood against the building as this invites an insect infestation. Do not store fuel within the furnace installation clearances or within the space required for refueling and ash removal.

Firewood varies greatly in quality due to species and moisture content. Wood that is seasoned and dry greatly improves the efficiency of the furnace. Wood of over 20% moisture will not burn well. Pine and some other softwoods burn very quickly with high creosote production and very few coals. These woods are best used to start hardwood fires.

## BUILDING A FIRE

Place several pieces of crumbled newspaper on the grate, crisscross the newspaper balls with a couple of

hands full of dry kindling, 3/4" thickness or less, then several small pieces of dry firewood. Be sure that smoke is visible from the chimney cap, indicating the flue is not restricted. It will take 5 to 10 minutes for the fire to establish itself. Once you have some good red hot burning embers, add larger pieces of wood. Do not be afraid to fill the unit full as it takes a lot of heat to get the unit to come on initially. It is best to keep the indoor t-stat in the "off" position until a fire is well established. Once the fire is established, turn the indoor t-stat on and close all doors. Initially it might take up to thirty minutes before the main blowers come on. A lot depends on the outside temperature.

### CAUTION

Never use chemicals or fluids to start or freshen up a fire. Do not burn garbage, gasoline, naphtha, engine oil or any other fuel not approved

### CAUTION

The handle on the doors can become extremely hot, use care when handling. Doors must be closed whenever the furnace is unattended to prevent dangerous overheating.

# OPERATING INSTRUCTIONS

## TEMPERATURE ADJUSTMENTS

A solid fuel burns cleanest in an environment with an unlimited supply of oxygen. Allowing a fire to burn this way, however produces a short , very hot fire with most of the released heat going up the flue and the extreme temperatures causing a safety hazard and possibly damaging the furnace. On the other hand, a smothered fire produces an extremely long, smoldering burn which is inefficient and produces large quantities of soot or creosote with the danger of a clogged flue or stack fire. Temperature adjustments are made by adjusting the inside the building wall mounted thermostat provided with your Bryan Furnace, and never by opening either the loading or ash door. Temperature changes are not noticed immediately and may take 15 to 30 minutes between adjustments to allow the fire to reach equilibrium at the new setting.

## ASH REMOVAL

Turn indoor thermostat to the off setting, open the ash door slightly for a few seconds before servicing to allow smoke to clear. Ashes should be removed frequently.

The ash door should not be opened with a full load of burning wood as this allows excess combustion air to enter the chamber and can cause overheating.

After unit has cooled down, open the ash door, remove the ash pan using protective gloves and place ashes in acceptable noncombustible container.

Do not leave the ash door open while emptying ashes as this allows uncontrolled combustion air to enter the chamber and can cause overheating. **NEVER** leave the ash door open with a hot fire going as this can cause the grates to warp.

### CAUTION

Never operate your furnace so that any portion becomes red hot. This is dangerous as well as damaging to the furnace

### CAUTION

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

## CREOSOTE AND SOOT FORMATION AND NEED FOR REMOVAL

When wood is burned slowly, it produces tar and other organic vapors, which combined with expelled moisture may form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow burning fire. As a result creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. The chimney connector and chimney should be inspected monthly during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated, it should be removed to reduce the risk of a chimney fire. Be aware that the hotter the fire the less creosote is deposited. Weekly cleaning may be necessary in mild weather while monthly cleanings may suffice during the coldest months.

**CAUTION** In the event of a chimney fire, close furnace doors, turn off thermostat, call the fire department and leave the building safely.

# OPERATING INSTRUCTIONS

## HELPFUL HINTS

A small hot fire is more efficient and safer than a large smoldering one. During relatively warm weather, add only enough wood so that the fire will burn out in a desired time. If the building becomes too hot, simply open a window. Do not unplug the furnace or block the furnace air flow.

As your fire burns down, the fan will begin to cycle on and off as it moves the heated air out and the fan control thermostat is cooled. If you desire to run the fan below the thermostat temperature range(+90° F ), turn the fan control switch (the toggle switch under the fan enclosure box) to the “on” position. This will cause the fan to run continuously whether there is heat in the furnace or not.

After a week of 10 to 12 hour burns, open the loading door slightly and allow the fire to burn hot for 15 to 20 minutes while in attendance. This will help minimize creosote or soot buildup.

Combustion air must be available above the fuel bed. Try to stack logs so that air can circulate between them.

Loading and ash doors must be kept tightly closed and gaskets in good condition. Inspect the furnace in the dark for light showing around the door. Door gaskets need to be inspected continuously and replaced when showing sign of wear.

A small portable generator or inverter of sufficient amperage can be used to operate the furnace during an extended power outage. Do not operate the furnace without electric power.

## INSTALLATION INSTRUCTIONS

*Please read completely before starting.*

### **Warning**

The installation of this unit must comply with state and local requirements and be inspected by the state or local inspector, if required.

**NOTICE TO OUR CUSTOMERS:** Your Bryan Furnace is absolutely the safest, cleanest solid fuel furnace system available. Your furnace has been assembled from the finest materials available by skilled craftsmen under the supervision of a strict quality control program. Bryan Furnace Works Inc, however has no control over the handling of your furnace during shipment or installation. The possibility does exist, however remote, that a broken seal will allow some smoke or fumes into the home. If the possibility of smoke or fumes in the house is unacceptable, do not install this furnace. Keep in mind that smoke in the home is a certainty with a fireplace or indoor heater.

## GENERAL NOTES

The air from a solid fuel appliance is considerably hotter than from gas, oil or electric furnaces. Do not connect this furnace to anything other than METAL ductwork.

Both hot and cold air ducts must be insulated outdoors with insulation at least 1” in thickness and have a waterproof covering. In addition, the hot air duct must be insulated for its entire length. There must be a minimum of 2” clearance between the hot air duct and any flammable surface.

Supply air can reach temperature of 250° F under certain conditions, i.e. loading or ash door left open, leak in combustion chamber, faulty indoor thermostat or hi-limit switch.

Debris like plastic, paper, dry grass or any flammable materials can ignite if it comes in contact with exposed hot air duct.

Never connect The Bryan Furnace to a chimney serving another appliance.

## **GENERAL NOTES**

If the furnace is to be placed on a flammable surface, the floor must be protected by a fireproof millboard or equivalent. The fireproofing must extend under the furnace and at least 16” in front of and 8” either side of the fuel loading door.

Pull return air from the same area where supply air is being delivered. Do not pull return air from a small or closed area where another appliance is located. The resulting partial vacuum could cause the other appliance to malfunction. If return air is installed in a closed room such as closet, washroom, etc., a 4” under cut door must be installed or a proper sized return air grille must be installed in the door to allow air to be drawn back into the heated area.

Your furnace has been tested to determine the minimum safe clearances to combustible materials. The clearances listed below should be adhered to strictly.

Sides of furnace	8”
Rear of furnace	16”
Top of furnace	24 “
Front of furnace	48”
Chimney pipe	12”
Hot air ducting	6” for first 16” from rear of unit, then 2”

## **FURNACE SET UP**

Your Furnace arrives fully assembled and ready to place at a predetermined location. You may position the furnace with the door facing left or right or away from the wall. Position the furnace on a fireproof base, preferable a concrete base. Your furnace weighs approximately 1400 lbs. Do not install the unit directly onto the ground without adequate foundation.

After your furnace is adequately set in place, provide electrical service (single outlet circuit or to a 20 Amp circuit) to the weatherproof junction box located under the left side of the fan cover. The furnace must be grounded either through the electric cord (third prong) or by driving a copper coated steel rod (6) six feet into the ground and attaching it to the base of the furnace with a 14 gauge copper wire. Also, install the provided thermostat at a desired location inside the heated area preferably near the return air. You will need to provide required thermostat wire from the thermostat to the weatherproof junction box located under the right side of the fan cover.

Use only a listed 8” Class “A” Chimney. Your furnace is equipped with an 8” double wall insulated starter section manufactured by Metal-Fab, Inc. of Wichita, Kansas. Use of a non compatible chimney can lead to unsatisfactory performance, damage to the furnace, and possible voiding of the warranty. The Metal-Fab Temp Guard 2100 Degree Chimney and Cap may be purchased from your dealer. Never connect The Bryan Furnace to a chimney serving another appliance.

After your furnace is set up and before connecting the ductwork to the furnace, check the fan operation by turning on power to the unit. If fans are not already running, move the toggle switch located under the left side of the fan cover to the “on” position and let the fans operate for about five minutes, then turn the toggle switch to the “off” position. Next, set your indoor thermostat to a high setting. This should start the combustion air fan to run. When the fans are running the lights located on the front of the fan cover should be illuminated. The light on the left side of the fan cover is the main fan indicator and the one on the right is the combustion air fan indicator.

After assuring that everything is working, start a fire allowing the fan to run until smoke and fumes no longer come out of the warm air opening . Then attach the supply and return air duct to the unit.

# SYSTEM DUCTWORK DESIGN

This installation should be performed by a qualified installer. Observe general rules and the applicable parts required for a safe installation. Observe all local and state codes during installation.

Since all buildings are different, you must select the most adaptable installation for your building. There are many different installation methods available to you. You may prefer a wall-mounted discharge, heat pump, central air tie in, under floor/attic installation or new ductwork design.

## WALL MOUNTED SYSTEM

When penetrating your structure, cut the opening 2" larger than the duct size. Insert the duct through the wall, insulate the duct thoroughly if it may come in contact with any combustional materials. Install metal flashing on the outside around the ductwork and fill any voids with loose insulation and install another metal flashing on inside wall. Caulk outside flashing with a good quality silicone sealer.

## HEAT-PUMP/ CENTRAL HEAT SYSTEM

Using the same structure penetrating method mentioned above, attach the hot air duct from The Bryan Furnace to the down stream side of the hot air plenum or hot air duct of your existing system. Insure that hot air from The Bryan Furnace is not delivered so that it passes through the air conditioning coil. Attach the hot air duct to the hot air plenum or ductwork with an elbow at an angle so that hot air from The Bryan Furnace is delivered down stream from the central system. Run the return air duct separate from the return air from your central system or the hot air from The Bryan Furnace may try to short circuit back through the central system.

## NEW DUCTWORK SYSTEM

If possible, run your ductwork under the floor to deliver heat at floor level, or into the attic where you can locate outlets at an area of your choice. With the Model 450, try to avoid duct length of over 100 feet. With any furnace the farther the length and more turns and branches you use, the less efficient your unit will perform. Try to avoid 90 degree turns. If the ductwork is to be located in a conditioned area, insulation is not required from the wall penetration to any penetrations through a wall of combustion material.

## MAINTENANCE

**UNIT-** Keep the unit clean for extended life. Promptly paint over any rust spots which may appear on the galvanized surfaces with cold galvanizing spray paint available at hardware stores, heating & cooling supply stores, etc.

**FAN- Warning:** always disconnect the electrical supply to the furnace before exposing the fan and electronics for maintenance. Yearly, remove the fan box access panel and visually inspect the wiring connections, automatic damper operation, and remove any debris that may be pulled into the area by the return air or combustion air fan. Periodically remove the return air duct at the fan box and clean the squirrel cage to maintain fan efficiency.

**PARTS-** Contact your dealer or factory for parts. Simply state the model furnace and parts desired. Defective parts must be returned to dealer if it is a warranty item.



# TROUBLE SHOOTING

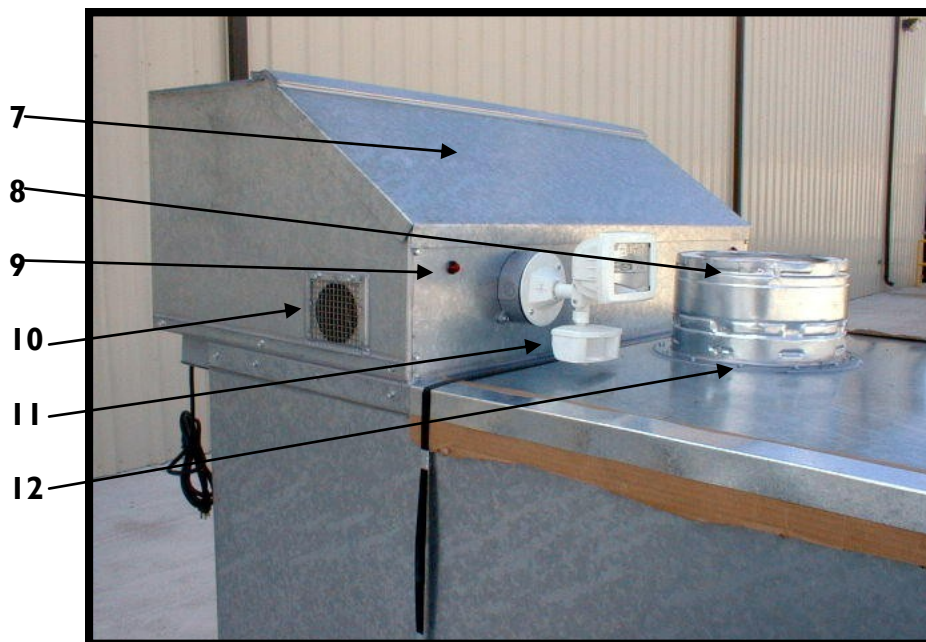
<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
Fire will not stay lit	<p>Combustion air fan not operating.</p> <p>Damp or green wood.</p> <p>Insufficient draft.</p>	<p>1. Make sure there is power to the fan. 2. Make sure that the combustion air slot inside the rear of the fire box is not obstructed.</p> <p>It is advisable to use seasoned wood to build a fire. Later, when a bed of coals is well established, green wood may burn satisfactory if mixed with seasoned wood.</p> <p>Check flue for obstructions. Flue may have to be lengthened.</p>
Building not warm enough.	<p>Unit too small for building. Check specifications.</p> <p>Insufficient insulation in building-heat is escaping.</p> <p>Improper installation.</p>	<p>Add another unit or have regular unit help heat the building. If furnace is producing 200 degree air at outlet, it is performing at or above its rated capacity.</p> <p>Re-insulate.</p> <p>Review installation instructions. Check for hot air leaks in ductwork.</p>
Excessive creosote or soot build-up in stack.	<p>Use of green or wet wood.</p> <p>Burning softwoods with high resin content.</p> <p>Poor draft.</p>	<p>Use seasoned dry wood or burn smaller charges hotter.</p> <p>Avoid using if possible. If you must burn them, burn small charges hotter.</p> <p>See above.</p>
Smoke or fumes from vent.	<p>Normal for new furnace.</p> <p>Smoke entering through combustion air fan.</p>	<p>Disconnect supply duct until it clears.</p> <p>Lengthen stack so that smoke does not settle on furnace.</p>
Leaking seal around door.	<p>Torn or loose gasket.</p> <p>Worn or compressed gaskets.</p>	<p>Reseal or replace gaskets.</p> <p>Reverse latch for tighter fit.</p>
Fans cut off.	<p>Normal if temperature in furnace drops below 90 degree F.</p>	<p>Turn switch on bottom of fan to "on" if you desire fan to run below t-stat range.</p>
Fan runs continuously without heat.	<p>Switch on bottom of fan box is in "on" position.</p> <p>Stuck thermostat or relay.</p>	<p>Move switch to "auto" position.</p> <p>Replace defective parts.</p>

# SHELTER GROUP



Key	Part #	Description	Qty.
1	2000-053	Blower Cover	1
2	2000-042	Outside Enclosure	1
3	2000-005	Support Legs	4
4	909-003	Shipping Pallet	1
5	1000-015	Thermometer	1
6	2000-050	Galvanized Door Frame	1
	2000-037	Insulation Set	1
	2000-048	10" Galvanized Collar	1

Key	Part #	Description	Qty.
7	2000-059	Removable Panel	1
8	1000-003	Starter Collar	1
9	1000-012	Fan Indicator Light	1
10	1000-023	Comb. Air Intake	1
11	1000-009	Motion Detecting Light	1
12	2000-044	Adaptor Plate	1
	1000-028	Stack Seal Rope	1
	2000-032	Inside Enclosure	1



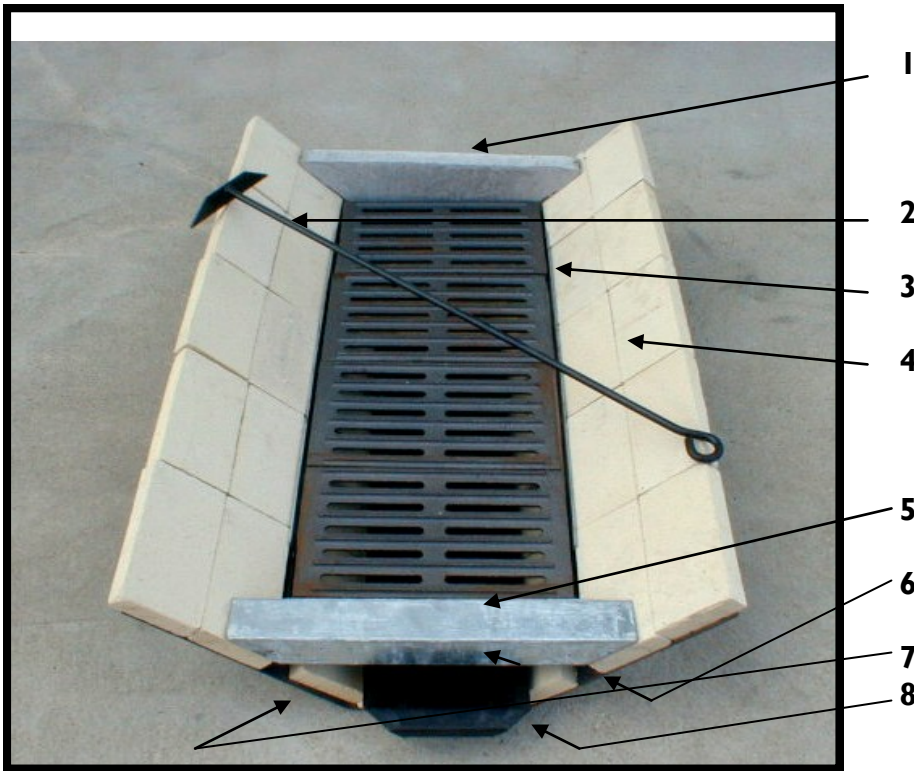
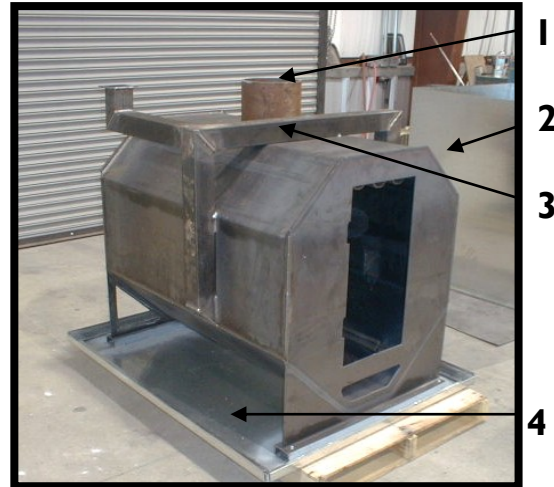
# SHELTER GROUP



Key	Part #	Description	Qty
1	1000-007	Back Draft Damper	1
2	1000-024	T-Stat Junction Box	1
3	2000-055	Blower Chute	2
4	1000-017	Serial No. ID Tag	1
5	2000-028	Ash Pan	1
6	1000-024	Elect. Supply J-Box	1
7	2000-026	Poker	1
8	1000-015	Thermostat Probe	1
9	1000-002	Frame, Door Main	1
10	2000-011	Baffle Plate	1
11	1000-001	Door, Main	1
12	903-042	Fire Brick, 1 inch	30
13	904-048	Grates, Cast Iron	4
14	2000-024	Front Bridge Brick	1
15	950-1400	Fire Brick, Tapered	10
16	904-043	Frame, Ash Door	1
17	904-042	Door, Ash	1

# FIREBOX, BRICK AND GRATES

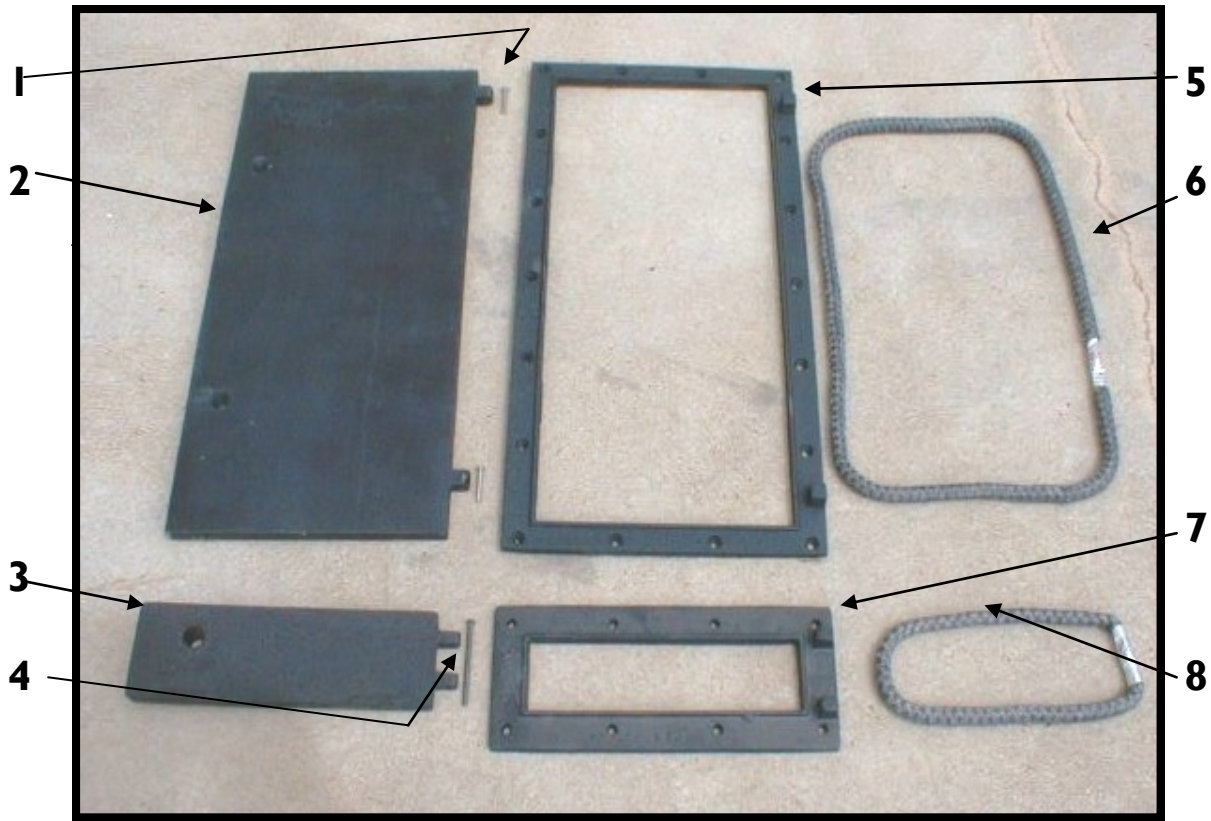
Key	Part #	Description	Qty
1	2000-017	Firebox Stack Assembly	1
2	2000-007	Combustion Chamber	1
3	2000-018	Combustion Air Pipe Assembly	1
4	2000-000	Base Pan	1



Key	Part #	Description	Qty.
1	2000-025	Rear Brick	1
2	2000-026	Poker	1
3	904-048	Grate	4
4	903-041	Fire Brick, 1"	30

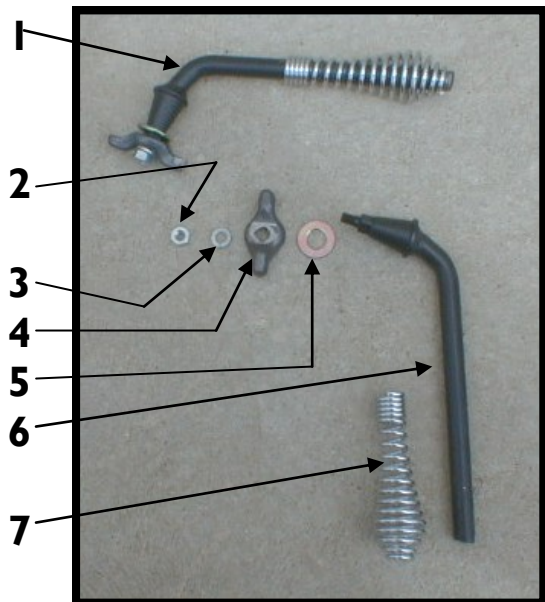
Key	Part #	Description	Qty.
5	2000-024	Front Brick	1
6	2000-015	S/S Grate Support	2
7	903-042	Fire Brick, Tapered	10
8	2000-028	Ash Pan, Steel	1

# DOOR ASSEMBLIES



Key	Part #	Description	Qty.
1	102-006	Door Hinge Pin	2
2	1000-001	Main Door	1
3	904-042	Ash Door	1
4	102-006	A.D. Hinge Pin	1

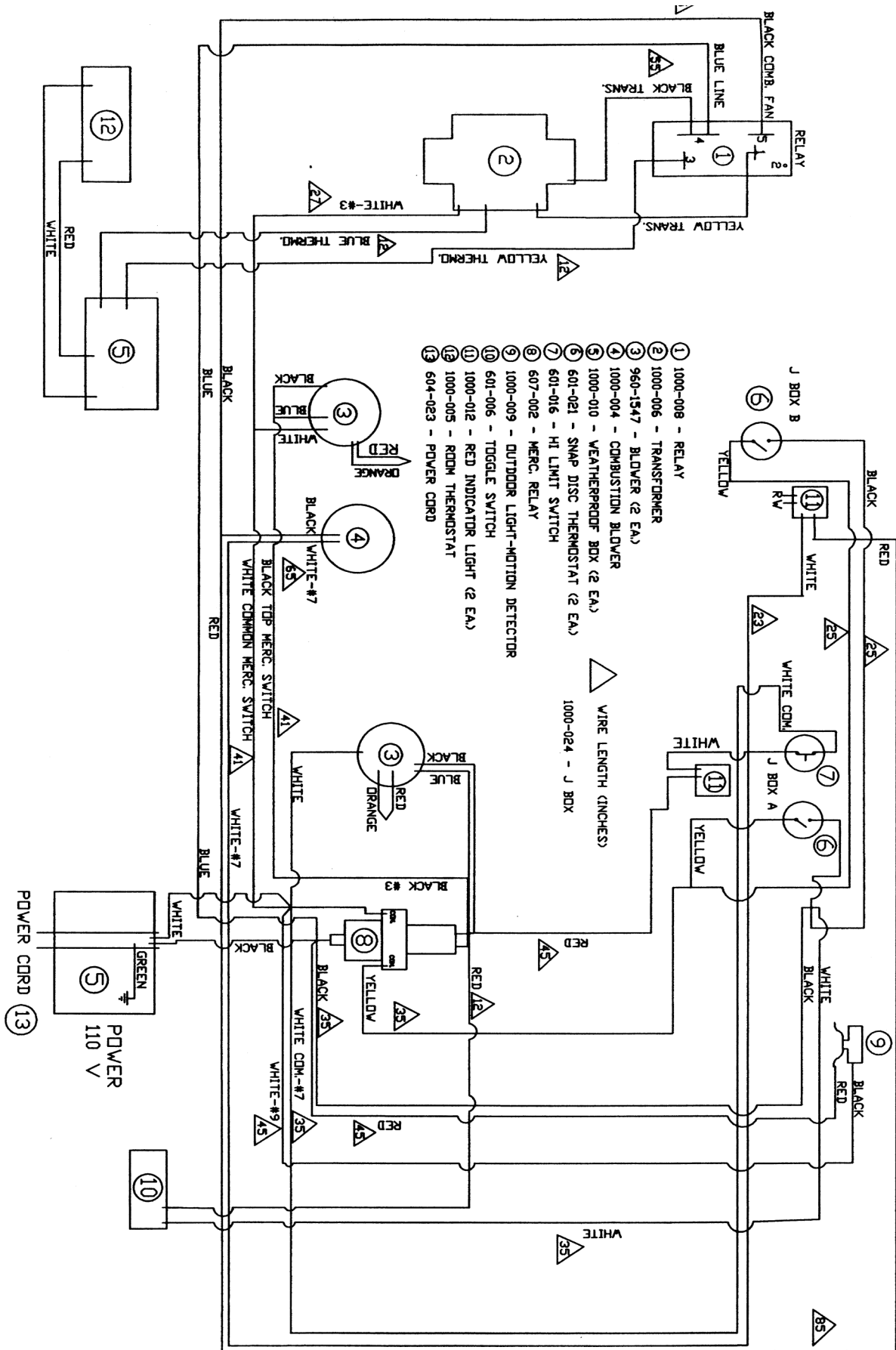
Key	Part #	Description	Qty.
5	1000-002	Door Frame	1
6	1000-029	Door Gasket 54"	1
7	904-043	Ash Door Frame	1
8	950-1351	Ash Door Gasket	1



# DOOR HANDLE ASSEMBLY

Key	Part #	Description	Qty.
1	960-1350	Door Handle Assembly	1
2	103-024	5/16" Lock Nut	1
3	103-015	5/16" Lock Washer	1
4	904-041	Door Latch	1
5	101-000	1/2" Comp. Washer	1
6	960-1349	Handle Rod/Button	1
7	904-073	Wire Spring Grip	1

# WIRING DIAGRAM MODEL 450



# ELECTRICAL SYSTEM

<b>Part #</b>	<b>Description</b>	<b>Quantity</b>
960-1547	Blower, Supply Air	2
1000-004	Blower, Combustion Air	1
601-021	Thermostat Button	2
601-006	On/Off Switch	1
601-016	Hi-Limit Switch	1
607-002	Mercury Relay, 35 Amp	1
1000-005	Room Thermostat	1
1000-006	Transformer, 24 Volt	1
1000-008	Relay	1
1000-009	Motion Detector Light	1
1000-010	Weatherproof Junction Box	2
1000-012	Fan Indicating Light	2
1000-016	Plastic Flex Wire Shield	8 ft.
604-022	Wiring Harness	1
1000-024	4" X 4" Junction Box	2
604-023	Power Cord SJO, 8 ft.	1
603-013	3/8" Heyco Straight Fittings	6
1000-027	1/2" Romex Clamps	2
603-011	3/8" Liqueite Conduit	8 ft.

# SUPPLIES

## CHIMNEY PARTS GROUP

Part #	Description
2000-031	Chimney Stack Band
3000-003	8" X 48" Long Chimney Pipe
3000-004	8" Spark Arrestor Cap

## DAMPER GROUP

Part #	Description
1000-007	Supply Back draft Damper
1000-007	Return Air Back Draft Damper
2000-019	Combustion Air Back Draft Damper

## MISCELLANEOUS SUPPLIES

Part #	Description
101-001	#14 X 1 ¼" Self Drill Screw
101-002	#10 X ¾" Self Drill Screw
111-016	1/8" Stainless Steel Rivet
908-014	Refractory Cement Pint
908-013	Silicone Sealer, Aluminum; 10 oz.
908-001	Door Gasket Cement; 3 oz.
908-002	Door Gasket Cement; 11 oz.
903-017	Door Gasket; 5'-5" Bulk
921-022	Cold Galvanize Paint; 16 oz.
921-015	Black Spray Paint; 16 oz.
3000-002	Owners/Parts Manual Model
1000-000	1 ½" Insulation Sq. Ft.
1000-030	Caution Labels Set
1000-005	Indoor Wall Mounted Thermostat



# GENERAL INSPECTION AND CARE FOR YOUR FURNACE

Periodic inspections need to be made on your furnace. Inspect for loose hardware, damaged or worn and bad seals on joint areas.

Keep all fasteners tight or properly adjusted.

Replace any damaged or worn parts

Wipe unit down with a light film of oil and paint any rusted parts.

**Note:** *Blowers have sealed bearings and do not require lubrication.*

## ADJUSTING DOOR HANDLE

**Important:** *All doors must seal tightly for safe operation.*

Periodic adjustments will need to be made with the door handle. As the gaskets seal and wear it will be necessary to tighten the door latch. This is done simply by tightening the nut on back of the latch catch. If all adjustments have been taken out it may be necessary to remove door to remove latch catch from handle and rotate catch 180° F. The ear is thicker on the other side and will allow for a tighter fit.

## REPLACING DOOR GASKET

1. Remove door from unit.
2. Remove old gasket from channel and clean old glue & rust from channel.
3. Apply an even film of high temperature adhesive all the way around channel.  
**Note:** *Do not start the gasket on the corner as the gasket may need to be pulled or pushed back to make fit. Make sure gasket is even all the way around door.*
4. Apply adhesive to each end of the gasket, join ends together and insert gasket in frame channel. Close door and leave shut until adhesive has set.

## RE-SEALING DOOR FRAME

1. Remove door from unit
2. Remove door frame. (Remove all screws in frame)
3. Clean all old cement from frame and shelter assembly.
4. Apply refractory cement generously to frame. Fill corner joints in the shelter assembly.
5. Place frame into shelter assembly and clamp in place. Install screws and tighten. If screws will not tighten, it will be necessary to drill holes and install 1/4" bolts and nuts.
6. Remove clamps and clean off any excess cement.
7. Install door on furnace and repaint if necessary.

# LIMITED WARRANTY

1. We warranty each new furnace manufactured by Rik-Mar Inc. and still owned by original purchaser to be free from defects in material and workmanship.
2. This warranty shall become effective from date of purchase and remain in effect for a period of one year for all components with the following exceptions:
  - (A.) The combustion chamber shall remain in effect for a period of five years from date of purchase by original owner.
3. This warranty applies only to defects in material and workmanship. It does not apply to normal worn parts or to damage caused by:
  - (A.) Misuse, neglect, modification or lack of maintenance.
  - (B.) Use of any part not manufactured or approved by Rik-Mar Inc.
  - (C.) Alteration or removal of parts.
  - (D.) Smoke or fumes.
4. Reasonable access must be provided to the product for warranty service.
5. This warranty does not cover the following services:
  - (A.) Telephone or rental charges of any type.
  - (B.) Inconvenience, loss of time or income.
  - (C.) Other consequential damages.
6. After receipt and inspection of unit to insure all parts and workmanship are satisfactory, the following parts are not warranted
  - (A.) Cast iron grates.
  - (B.) Door gasket and latches.
  - (C.) Fire Brick and front and rear refractory.
7. Claims shall be made under this warranty by written notice to Manufacturer's local distributor. If the service is not covered by this warranty, purchaser shall pay for all related labor and material.
8. Our obligation under this warranty shall be limited to repairing a defective part or at our option replacing such part or parts as shall be necessary to remedy any malfunction resulting from defects in material or workmanship as covered by this warranty. We reserve the right to change or improve the design of the product without assuming any obligation to modify any product previously manufactured.
9. Manufacturer hereby disclaims that the furnace is suitable to act as the sole heating unit for any structure.
10. The duration of any implied warranty hereunder is hereby limited to a period of one year from date of purchase.

**THE WARRANTY REGISTRATION CARD ATTACHED TO THE INSIDE COVER OF THIS MANUAL MUST BE COMPLETED AND MAILED WITHIN 10 DAYS OF PURCHASE FOR THE WARRANTY TO BECOME VALID.**



**MODEL 450**

**MODEL 300**

**MODEL 350**

**Rik-Mar Fabricators Inc. was established on November 15, 1976 in Bryan Texas as a custom fabrication and metal shop.**

**Shortly after opening the business, “The Bryan Furnace” was introduced at our plant by Mr. Charles Cobos, inventor of the unit. Rik-Mar became the exclusive manufacturer of the furnace and has continued to build furnaces through the present time at our facility.**

**Rik-Mar Inc. also manufactures scientific animal cages which are shipped world wide. The cages are shipped to hospitals, universities, research facilities and zoos.**

**Rik-Mar’s operation consists of 30,000 sq. ft. of manufacturing facilities and maintains a work force of approximately fifteen full time employees. “The Bryan Furnace” division builds furnaces year round and maintains a large inventory for immediate shipment.**





