

SAVE THESE INSTRUCTIONS

OWNERS INSTRUCTIONS FOR
BRUNCO SPITFIRE COAL BURNING FIREPLACE INSERT

"ALL INSTALLATIONS MUST BE IN ACCORDANCE WITH LOCAL
AND STATE CODES WHICH MAY DIFFER FROM THIS MANUAL"

MANUFACTURED BY: L.B. BRUNK & SONS, INC.
L0460 S.R. 45N
SALEM, OH. 44460

BRUNCO SPITFIRE FIREPLACE INSERT

GENERAL INSTRUCTIONS

The Brunco Spitfire Insert is designed as a heat efficiency improvement to be installed in masonry type fireplaces. It has been properly tested and safety labeled by Arnold Green Testing Laboratories, Natick, MA. The standard used for testing and evaluation was Underwriters Laboratories, Inc. Standard for solid fuel type room heaters ANSI-UL 1482, and proposed UL-907. This heater complies with federal regulation 40-CFR-60 as a coal burning heater. Use of any other fuel except for coal ignition purposes is a violation of federal E.P.A. clean air laws.

SAFETY NOTICE: IF THIS BRUNCO SPITFIRE INSERT IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS, AND CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS OR INSTALLATION INSPECTION IN YOUR AREA.

A) Check List of Parts

- | | |
|-------------------------|-------------------------|
| 1 - firebrick (10) | 5 - brass cover screens |
| 2 - grate shaker handle | 6 - insulation roll |
| 3 - 2 blowers | 7 - speed control |
| 4 - top surround shield | 8 - door handle |

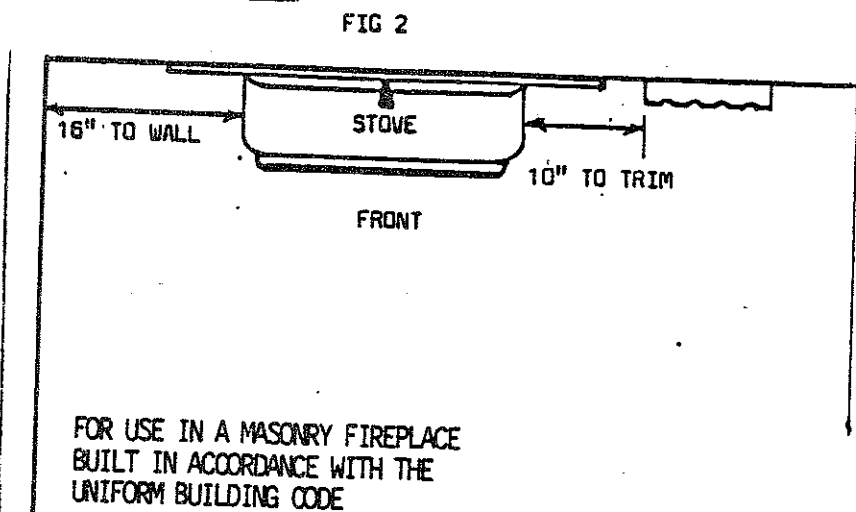
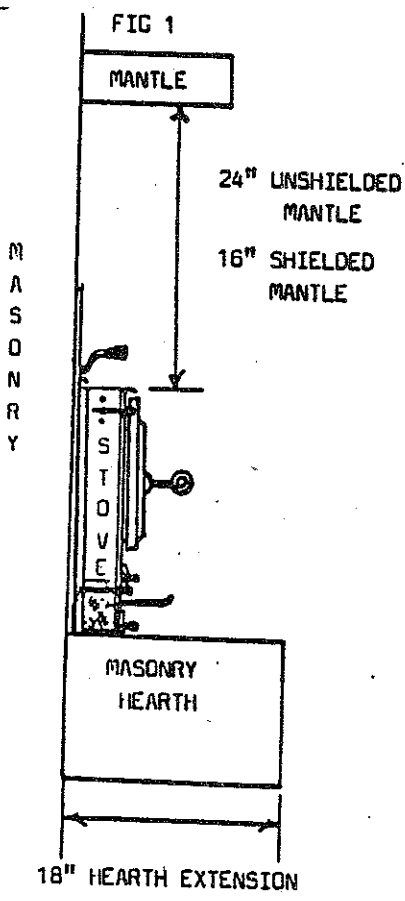
B) Assembly of Insert

- 1 - Remove the shipping pallet by unscrewing the bolts where it is attached to the insert.
- 2 - Install the firebrick on each side and the back of the firebox by sliding the top of the brick under the angle retainer. Three brick on each side and four in the back. The cast iron vented brick below the door is factory installed.
- 3 - The sliding damper should be placed on the top of the insert with the handle in the slot provided. Note that the guides do not allow the damper to close completely to prevent backdrafting problems.
- 4 - Install the right and left blower into the blower chamber. Mount it by sliding the flanges of the blower behind the flat metal plate and then tighten the single screw. Plug the two cord wires into the wire harness provided. Next plug the power cord into the speed control and the control into a regular 115 volt power outlet. Turn the speed control to on (HIGH) until the blowers run full speed at which time you may reduce the speed by turning the speed control dial. The switch on the front of the insert above the ash pan is the automatic/manual switch. When on automatic the blowers will only run when the insert is hot. However, if the switch is on manual the blowers can be turned on or off with the speed control and may even be used for summer circulation.

- 5 - The grates should be checked by putting the shaker handle on the extended grate and rocking back and forth. Check the dimensions and condition of your fireplace and you are ready to install your Brunco.

C) Installation of the Insert -

- 1 - The Brunco Insert is designed to be installed into a brick or stone masonry fireplace. The chimney should be flue lined or stainless steel lined, and at least 6" in diameter. This unit is not designed for use in 0'Clearance type factory built fireplaces.
- 2 - Remove the fireplace damper or at least wire it securely into a full open position so as not to restrict the draft or interfere with the operation of your new insert.
- 3 - The chimney and fireplace should be cleaned before installing the insert. It is recommended that the chimney be cleaned at least one time each year, or more often if necessary to keep dangerous residue from building up which could result in a chimney fire.
- 4 - The Brunco Insert should always be installed on a non-combustable masonry hearth. A non-combustable material should be applied to the floor extending at least 18" out from the front opening of the insert. Decorative wood trim must be kept back at least 10" and combustible walls must be at least 16" from the sides of the insert. A combustible mantel must be at least 24" above the top of the insert or if shielded with a metal deflector, a minimum of 16" may be attained. (See Fig. 1 and Fig. 2)



- 5 - Fill out warranty registration with the model name and serial number of the unit. This information will be found on the name plate (on the jacket behind the right faceplate). File the warranty copy in your file for future reference and mail the card to Brunco. This should be done at the time the unit is installed.
- 6 - Slide the insert back into the fireplace opening about 8".
- 7 - Bolt the top surround shield into place using the bolts provided. Tighten it securely. Note, that under normal conditions a direct flue adapter or pipe is not needed. Optional direct connect adaptors are available, if required.
- 8 - Use a strip of fiberglass insulation approximately 2" wide by 1" thick to seal the insert against the brick surface of the fireplace. It is recommended that a strip be used underneath the insert also to help reduce air and smoke leakage. With these insulation strips in place, simply and carefully slide the insert back against the fireplace until the insulation has made a good seal.

NOTE: It is important to have a good tight seal between the Brunco Insert and the fireplace in order to reduce smoke and increase efficiency. Additional insulation is available from your Brunco dealer if needed.

- 9 - After the unit has been installed, adjust the baffle plate inside the top of the firebox so that it is in the center with equal amount of draft space on both sides. This will balance the draft so that the fire will burn more evenly.

D) THE FIRST FIRE -

- 1 - Blower should be plugged into regular 115 volt wall outlet and checked for good operation. The stove may be operated under normal conditions with the blower either in the on or off position. We recommend that the blower should be left running when the stove is burning at a hotter than average temperature, or to achieve best heat performance and air circulator.
- 2 - Burn a small newspaper fire in the stove to check the draft of the chimney. A poor drafting chimney may cause the stove to smoke. If this should be the case, necessary steps should be taken to improve the chimney draft.
- 3 - Build a wood fire in the stove and fire up slowly so that the paint and stove can cure properly. There will be some smoke smell during the first few fires as the paint on the stove cures from the heat. The wood fire will then be used to ignite the coal fuel. The use of wood for heat in this stove except for coal ignition purposes is a violation of the U.S. E.P.A. clean air laws.
- 4 - The glass window is designed for better heat performance as well as good looks. Treat it carefully and you will get very little breakage problem. It is designed to withstand both wood or coal heat. The glass may become smoked over when the stove is being used. You will find that a hotter fire will help to keep the glass clean.

- 5 - Always use leather gloves when servicing an operating stove.

E) OPERATION

- 1 - Build your solid fuel fire directly on top of the cast iron shaker grates. No additional grate is needed. Ignite a small amount of wood fuel and then cover it with stove size bituminous or anthracite coal which in turn will become ignited. The draft controls should be set for maximum output until the coal begins to burn. When the coal bed becomes hot, then more coal, as needed, may be added and the draft control settings should be set to the desired heating requirements.
 - 2 - A coal fire should not be built above the top of the firebrick or the bottom of the loading door. The grates will need to be kept free of dead ash to gain maximum heat efficiency with coal.
 - 3 - A good grade of clean washed coal is recommended for use in this stove. It will achieve better, cleaner combustion and will not jam up the grates as badly and will make less clinker ash. A clean coal and proper draft settings will produce a finer ash rather than a clinker.
 - 4 - The bi-metal draft control on the front of the stove should be adjusted, so that the stove is burning at the desired temperature. The lever may be raised to decrease heat output or lowered to increase output. The heat sensitive bi-metal spring will automatically open or close the damper then to help maintain proper stove temperature. The bi-metal spring is activated by the temperature of the stove, not by room temperature. The bi-metal spring tension is set by adjustment of the lever in any of the four positions.
 - 5 - The manual spinner knobs are located behind the brass screens on each side of the ash pan area. These may be used to allow additional primary air into the firebox for easier starting, or to help balance the fire along with the automatic control. Be careful to not allow the stove to over draft and at no time should the stove be operated to such an extent that any portion ever becomes "Red Hot".
- NOTE: THE FIREPLACE STOVE SHOULD BE OPERATED ONLY WITH DOORS FULLY OPEN OR DOORS FULLY CLOSED. IF DOORS ARE LEFT PARTLY OPEN GAS AND FLAME MAY BE DRAWN OUT OF THE FIREPLACE OPENING, CREATING RISKS FROM BOTH FIRE AND SMOKE.**
- 6 - The ash pan should be emptied on a regular basis so that no ashes build up to the bottom of the grates. If ashes touch the grates it reduces draft efficiency and could cause the grates to burn out. Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustable floor or on the ground, well away from all combustable materials, pending final disposal. If ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.
 - 7 - Never use gasoline, gasoline type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or freshen up a fire in this heater. Keep all such liquids away from the heater while it is in use.

- 8 - When coal is burned, the products of combustion combine with moisture to form a soot residue which accumulates on the flue lining. When ignited, this soot makes an extremely hot fire. The chimney connector and chimney should be inspected at least twice 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. In order to make this as easy as possible, the Brunco has been designed so that the surround shield may be removed without needing to move the heavy insert. Be sure that the gasket insulation is sealed well when shields are re-installed. Cleaning may be done with mechanical chimney cleaners or wire brushes and rods that are available through your Brunco dealer. Also you will find certified chimney sweeps available in most areas who provide cleaning services.
- 9 - The door may be opened for fireviewing with the optional fireview screen installed for spark protection. It is not recommended to leave the stove unattended with the doors open. DO NOT leave the ash door open at any time except to remove ashes.
- 10 - If your stove is equipped with the fireview glass window in the door, it will need to be cleaned periodically. To do this, open the door and use a cleaner formulated to remove creosote and smoke or soot buildup. An oven cleaner may be used, but could etch the glass and cause it to smoke over even more quickly. Keep logs from hitting against the glass to prolong its life. Replacement windows are available from your Brunco dealer.
- F) Further information - For further information on using your heater safely, obtain a copy of the National Fire Protection Assoc. publication "Using Coal and Wood Stoves Safely", NFPA No. HS-8-1974. Batterymarch Park, Quincy, Mass. 12269.
- G) RECOMMENDED FUEL: This Coal Brunco heater requires the use of stove size bituminous or anthracite coal fuel.
- H) WARNING: The installation of this stove must comply with state and local requirements and be inspected by the state or local building inspector if required.
DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.
- I) Note: This stove is not approved or recommended for use in mobile homes.
- J) ENJOY the warmth and beauty of your new Brunco Insert and use wisdom and common sense in the operation of the solid fuel heater. However inconvenient or unhandy, always put safety first.

Manufactured by: L.B. BRUNK & SONS, INC.
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CHECK LIST -

- 1 - _____ Have you read all instructions?
- 2 - _____ Is your chimney clean and of approved style?
- 3 - _____ Do you have proper draft on the flue?
- 4 - _____ Is the stove installed to code?
- 5 - _____ Do you have proper wall and floor clearance?
- 6 - _____ Are the flue connections properly made?
- 7 - _____ Are you burning the proper size fuel?
- 8 - _____ Is your coal of good clean quality?
- 9 - _____ Are all electrical connections correct and protected from hot areas?
- 10 - _____ Have you sent in your warranty card?

PARTS LIST FOR BR 70 SPITFIRE INSERT

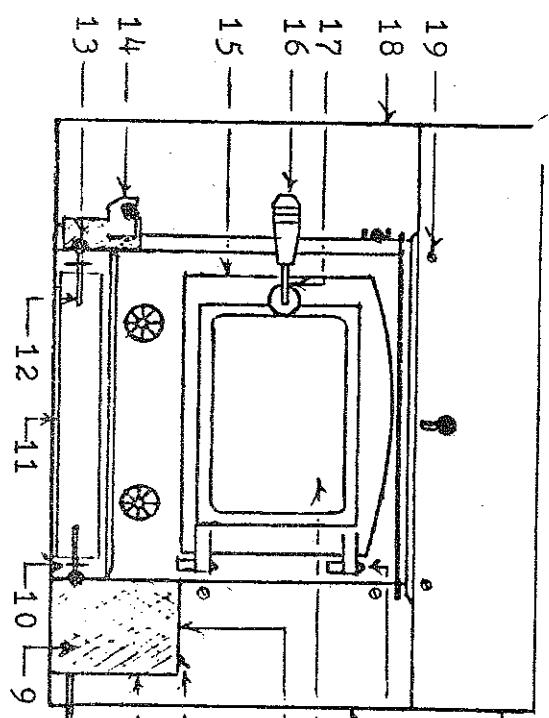


Figure #1

- 1 - SFI1 Top Face Plate (1)
- 2 - SFI2 Hinge Pins (2)
- 3 - SFI3RH3 Side Face Plate (1)
- 4 - SFI4 9 x 13 Hi-Temp Glass (1)
- 5 - SFI5 Blower Box (1)
- 6 - SFI6 Blower Switch (1)
- 7 - SFI7 250 cfm Blower (1)
- 8 - SFI8 Power Cord (1)
- 9 - SFI9 Blower Screen (1)
- 10 - SFI10 Latch Plate (Welded) (2)
- 11 - SFI11 Ash Pan (1)
- 12 - SFI12 Ash Pan Latch (2)
- 13 - SFI13 Ash Pan Spring Handle (2)
- 14 - SFI14 Shaker Handle Lock (Welded) (1)
- 15 - SFI15 Cast Iron Door (1)
- 16 - SFI16 Wood Door Handle (1)
- 17 - SFI17 Door Handle Rod (1)
- 18 - SFI18 Side Face Plate (1)
- 19 - SFI19 Face Plate Bolts (6)

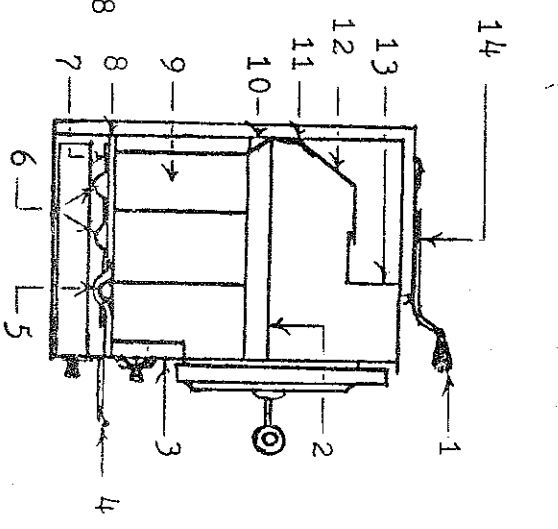


FIGURE #2

- 1 - SFI20 Damper Spring Handle (1)
- 2 - SFI21 Side Brick Retainer Welded (2)
- 3 - SFS4 Vented Cast Iron Brick (1)
- 4 - SFI22 Dust Shelf (Welded) (1)
- 5 - SFS1 Long Cast Iron Grate (1)
- 6 - SFS2 Short Cast Iron Grate (2)
- 7 - SFI23 Grate Tie Bar & Three Keys (1set)
- 8 - SFI24 Cast Iron Grate Support (2)
- 9 - SFI25 1 1/4 x 4 1/2 x 9 Firebrick (10)
- 10 - SFI26 Back Brick Retainer (Welded) (1)
- 11 - SFI27 Lower Baffle Support (Welded) (1)
- 12 - SFI28 Removable Baffle (1)
- 13 - SFI29 Upper Baffle Support (Welded) (1)
- 14 - SFI30 Sliding Damper (1)

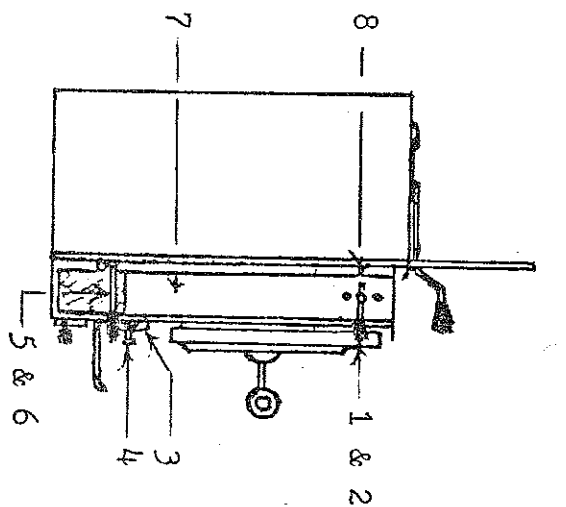


FIGURE #3

- 1 - SFI31 Draft Control Spring Handle (1)
- 2 - SFI32 Draft Control Rod (1)
- 3 - SFI33 Cast Iron Spin Dial (1)
- 4 - SFI34 Spin Dial Bolts & Nuts (2 ea.)
- 5 - SFI35 Shaker Handle Spring (1)
- 6 - SFI36 Shaker Handle Rod (1)
- 7 - SFI37 Bi-Metal Draft Control Assembly (1)
- 8 - SFI38 Bi-Metal Coil (Not Shown) (1)
- SFI39 1/2" Fiberglass Door Seal (Not Shown)
- loading Door Requires 5 Feet
- Ash Pan Door Requires 4 Feet