by DEFIANCE

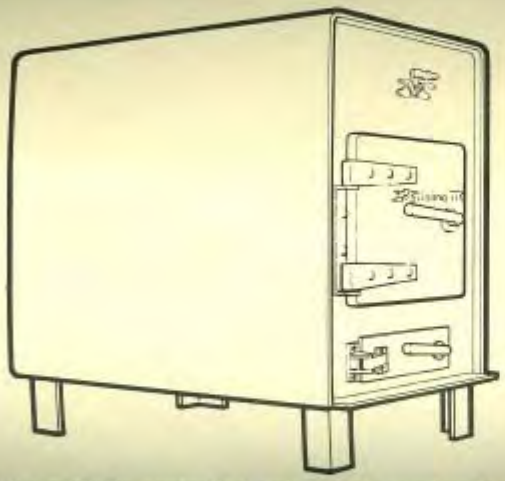
®Volcano III Deluxe

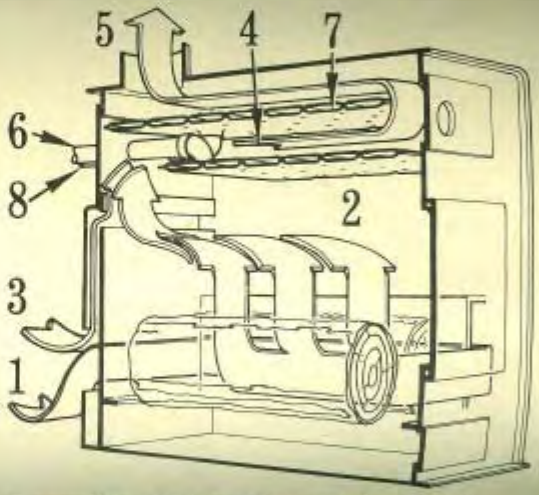
The standard rugged construction of the Volcano III circulating hot water systems now backed by steel heat-exchanging baffles.

The Volcano III Deluxe, as traditional as it may appear, is a modern, efficient home heating unit capable of giving years of service.

Defiance has incorporated the same technology used in the NASA space flight heat exchanging units into the Volcano III Deluxe steel pillow baffles.

We believe that these water-filled baffles, in combination with our intensely hot primary and secondary combustion chambers produce the most efficient wood stove available.





1 A precisely controlled volume of combustion air is pre-heated and

2 ducted evenly through the primary firebox.

3 Added fresh air is introduced to the secondary firebox to

4 ignite escaping gases in a super-hot flame,

5 permitting little fuel loss out the chimney.

6 Water entering at the rear flows through the heat-exchanging hollow steel pillow baffles

7 in the primary and secondary fireboxes and

8 out into your hydronic heating system.

Defiance Volcano III Deluxe Specifications

- Heat Exchanger: 1728 square inches of water-filled heat exchanging pillow baffles.
- 38½Hx21Wx28½ in deep; 585 lb.
- Firebox: 16Hx15½Wx24½ in. deep
- Door Opening: 10-3/4"Hx11"W
- Ash Pit: 4Hx13Wx23½ in. deep
- Ash Door: 2½"x10"
- Flue Opening: 8"
- 1/4" plate throughout the firebox
- Takes logs up to 24" in length
- Automatic heat sensing Draft Control in the hot water line makes it impossible to make improper settings.
- Heat Exchanger Bypass eliminates smoking, allows bypass during low grade fires.
- Pressure/Temperature Gauge
- Pressure Relief Valve

Why Volcano III Deluxe water-conducting pillow baffles produce more heat per load.

The baffles in a wood stove (if it is equipped with them) direct the flow of burning gases through the firebox and secondary combustion chamber to obtain the maximum heat before exiting through the chimney. Efficient as they may be, Defiance has now put our Volcano III Deluxe baffles to double use.

By developing hollow steel water-conducting baffles we now have heat-exchangers directly over the heart of the fire and in the secondary combustion chamber.

The flaming gases in the firebox rise and flow over the lower baffle, are re-ignited to blowtorch intensity in the secondary combustion chamber....heating water all the way. Both surfaces of the baffles are covered in flame so water is heated faster and more intensely than in tube or pipe systems.

You'll know what "deluxe" means the first morning you stir the coals and add a few logs.

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The Defiance Company

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INSTALLATION OF YOUR

by DEFIANCE Volcano II Deluxe

IMPORTANT - For safety and your peace of mind, we strongly urge that a professional install this heater.

•

The installation must conform with the requirements of any local, state or insurance requirements or codes having jurisdiction.

•

Failure to follow installation instructions and governing code authorities will void your warranty.

NOT FOR USE IN MOBILE HOMES.

CAUTION: Stove is hot when in use.

1. Read these instructions through before starting the installation.

2. In positioning your heater, clearances of at least 36 inches from combustible walls must be maintained. A non-combustible base must be prepared.

Minimum standard clearances are summarized below:

Above Top of Appliance	From the Front	From Sides and Back	From Chimney Connector
18''	48''	36''	18''

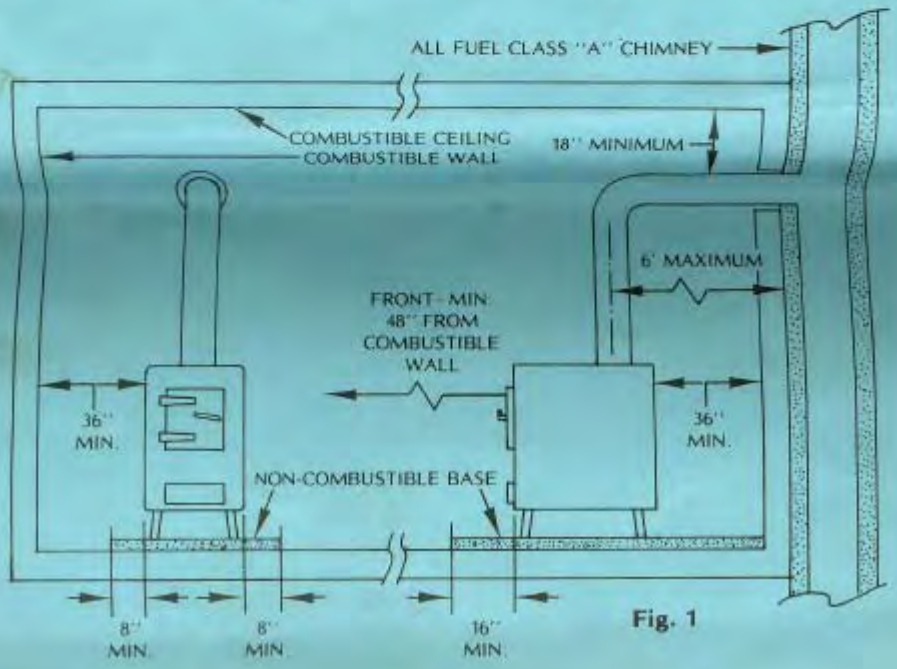


Fig. 1

3. Maintain minimum clearances from combustible surfaces as shown in Fig. 1.

4. Connect an 8 inch stove pipe to chimney. The crimped end of the pipe is to go INSIDE the stove smoke ring.

This heater is designed to be connected to an "All Fuel, Class A Chimney."

Your chimney is a very important part of your heating plant. No woodfired appliance, however efficient its design, can perform satisfactorily if the chimney that serves it is inadequate. Check your chimney to make certain that it is properly sized and constructed (see your heating contractor) and in sound condition. Also make sure there are no obstructions, overhanging trees, etc., to interfere with the chimney draft. A minimum draft of approximately .06 inches of water is necessary.

5. Cut into the main supply line and install 3 gate valves and the PTA gauge as shown in Fig. 2. Locate cuts so that the left pipe coming out of the rear of the Volcano III Deluxe will have a continuous rise up to the radiators above.

6. Install the tee fitting with the threaded outlet up, into the main supply line at the rear of the stove. This will house the Draft Control unit. Locate the Pressure Relief Valve, with the stem vertical, between the tee and the gate valve as shown in Fig. 2. Connect the Volcano III Deluxe to the gate valves.

CAUTION

For installations where a continuous rise is not possible (eg.- homes on crawl spaces or concrete slabs, etc.), provision for CONTINUOUS PUMPING IS REQUIRED. (See operation Note 3 also).

7. Seal pipe exits and clean-out plates at the rear of the unit with furnace (refractory) cement.

CAUTION

A Pressure Relief Valve should be placed between the Volcano III Deluxe and the gate valve.

CAUTION

Be sure to install the Pressure Relief Valve with the stem vertical to keep sediment from collecting and freezing stem up.

CAUTION

The expansion tank on the existing system must be checked for adequate size. The Volcano III Deluxe alone adds approximately 1 gallon to the system.

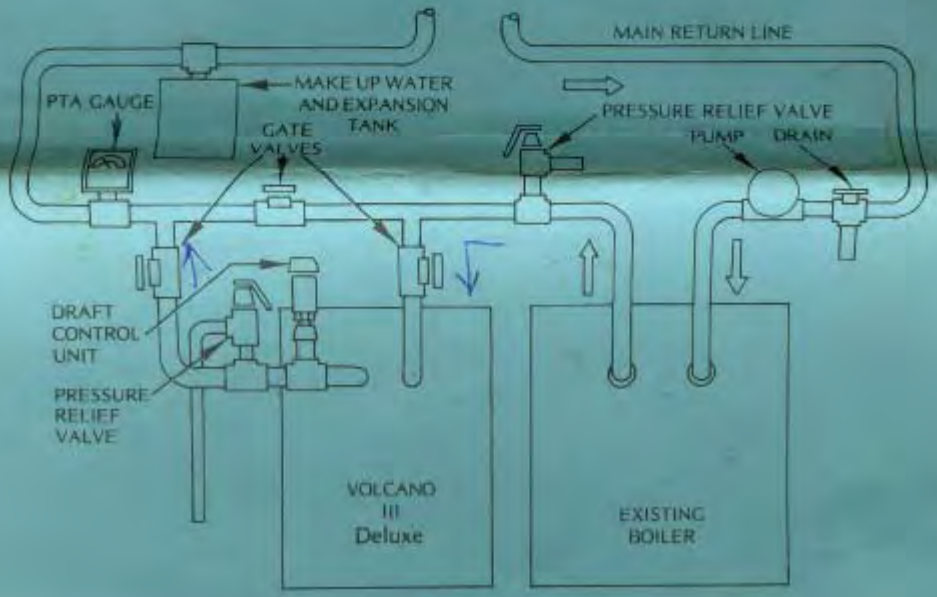


Fig. 2

8. For zoned heating systems, install a bypass around the zone valve controlling the largest heating area (area with most demand, usually your main living area). See Fig. 3.

9. Assemble the draft control unit and pipe fittings as shown in Fig. 4. Install this completed unit into the tee fitting on the main supply line at the rear of the stove. Set the desired temperature using the white numerals on the control knob. Close draft door, adjust chain length until taut, and secure to door and control arm with rings.

10. Install the inspection port cover. It is designed to be normally closed. Its only purpose is for observing the tremendously hot fire in the secondary combustion chamber. Show your friends.

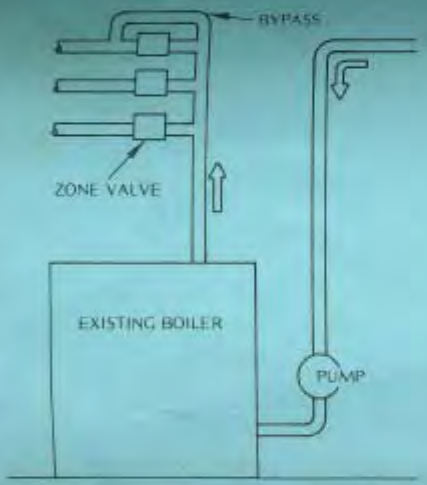


Fig. 3

OPERATION

1. Close gate valve to main return line and open the two gate valves in the lines to and from the Volcano III Deluxe. These two valves must be open whenever the Volcano III Deluxe is being fired.

2. Turn furnace water supply on and bleed ALL lines and radiators.

CAUTION
Never fire the Volcano III Deluxe without water in the pillow baffles or serious damage may result.

3. Set the thermostat as usual.

NOTE: During periods of operating the Volcano III Deluxe, it is advisable to reduce the setting of the high-limit switch on the existing boiler.

NOTE: Even under electrical power failure conditions, the Volcano III Deluxe will continue to function, EXCEPT, in those cases where gravity circulation is not possible (where continuous pumping is required). In these cases the Pressure Relief Valve will repeatedly pop off until power is restored or the fire is put out.

4. Periodically depress the Pressure Relief Valve to flush out dirt and to check for proper operation.

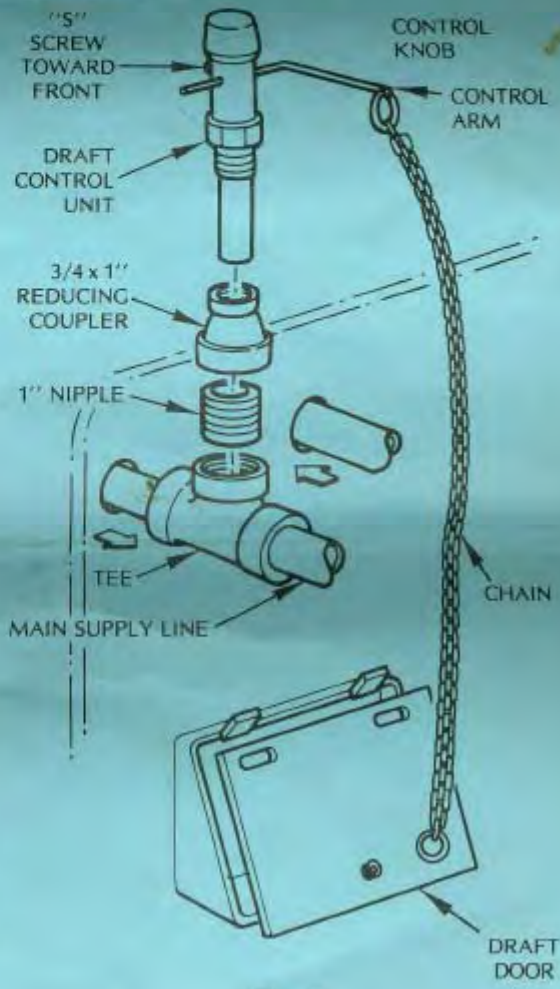


Fig. 4

CAUTION

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 well away from the heater while it is in use.

DISPOSAL OF ASHES

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 ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

CREOSOTE - FORMATION AND NEED FOR REMOVAL

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to create 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 at least twice monthly during the heating season to determine if a creosote buildup has occurred.

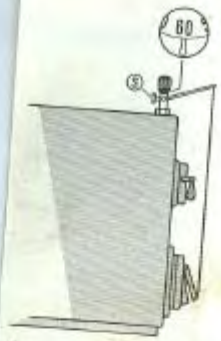
If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

For further information on using your heater safely, obtain a copy of the National Fire Protection Association publication "Using Coal and Wood Stoves Safely" NFPA No. HS-8-1974. The address of the NFPA is 470 Atlantic Ave., Boston, MA 02210.

Feuerungsregler Typ 5d
Boiler controller type 5d
Régulateur de tirage type 5d

samson

Einbau- und Bedienungsanleitung
Mounting and operating instruction
Montage et mise en service **EB 0530**



Bei **senkrechtem Einbau** muß die Sechskantschraube (S) von der Vorderseite des Kessels her gesehen nach hinten zeigen. Für die Einregulierung gelten **die weißen Zahlen und die weiße Marke** (Bild 3)

Bild / fig. 3

Mounting

The immersion pocket must be firmly connected to the controller. Screw controller into the boiler by using hemp or sealing compound (do not use washers). If the lever arm (1) impedes this slacken hexagon screw (2) so that the lever arm can be turned or if removal of the lever arm is unavoidable then loosen hexagon screw, remove lever arm and extract connecting piece (3) from hole (5).

Do not damage the thread when tightening.

When reassembling the lever arm, insert the connecting piece so that rectangular recess (4) faces the hexagon of the immersion pocket (fig. 4, page 6).

Operation

The desired flow temperature is set by turning the hand knob of the controller. The scale to be used and the corresponding mark on the cover depends on the installed position of the controller:

In **horizontal** position: — **red** figures and **red** mark.

In **vertical** position: — **white** figures and **white** mark.

Adjustment

Set required flow temperature by means of hand knob. Allow boiler to heat up slowly until the set temperature is reached. Arrange the lever arm so that the short section **points to the front, lies approximately horizontal and is such that the chain vertically overhangs the air inlet flap.** It is secured in this position by tightening hexagon screw (2). Please note that the hexagon screw must bear on a flat surface of the lever arm and not on an edge. Shorten the chain so that the damper flap remains open to about 1 mm's extent.