

Mark I-IV

# DAKA CORPORATION

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### BREAKING IN YOUR DAKA FURNACE:

Like a fine car your DAKA Furnace will give you years of trouble free service if you follow these easy instructions:

- 1.- For the first seven days burn only a moderate wood fire so the steel and cast iron parts can cure properly. Failure to do so could cause warpage to your grate, inner housing and front of your stove. This warpage could ruin your airtight function of the doors.
- 2.- Never burn coal, garbage, tires, or chemically-treated wood in your DAKA Furnace.
- 3.- Airtight furnaces burn more efficiently than Franklin type stoves, but create cooler stack gases. You must maintain minimum stack temperature of 350 degrees to prevent creosote buildup. We recommend checking and cleaning all flues frequently to prevent chimney fires.
- 4.- To produce maximum heat when burning wood you must have adequate draft. Failure to have adequate draft (manual or automatic) will reduce the BTU's produced by your furnace. A smoldering fire will last longer but will not produce the desired heat. Remember that a smoldering fire promotes creosote buildup in the flue, which could result in a chimney fire.
- 5.- IMPORTANT: This stove can get very hot on the outside. If touched it could cause a burn. Keep children away at all times. Never touch outside of furnace when in use.

### ELECTRIC OUTAGES:

In the event of electric outages, remove thermostat, blower, cover plate, and your heat pipe (if being used). Under no conditions should you continue adding combustible material to your stove. Let the fire burn out. Failure to follow these instructions could damage your blower, thermostat, and possibly the stove itself. Blower should run whenever wood is burning in furnace.

### BUILDING CODES:

Check with your local building inspector and find out the building codes before you start installation of your DAKA Furnace. (Some local codes require a separate Class "A" chimney for wood burning furnaces).

### CLEARANCES YOU MUST MAINTAIN FOR SAFE USE:

#### 1- WALL AND CEILING CLEARANCES:

You must maintain a 36" clearance from any combustible wall or ceiling.

#### 2- FLOOR CLEARANCE:

Use 1/4" asbestos millboard underneath furnace legs and on top of any combustible floor. The millboard must extend 20" in front of and at least 12" beyond each side of the door opening and to the back of the furnace.

### WHO CAN INSTALL YOUR NEW "DAKA" FURNACE?

Any qualified licensed heating contractor can install your DAKA Furnace or you can install your furnace by following our installation instructions. IMPORTANT: Not for use in mobile homes.

### CHIMNEY:

The chimney must be an approved Class "A" all-fuel chimney. This can be insulated stainless steel chimney or a brick tile lined chimney. You must ensure that all openings are closed to prevent any cold air from entering the chimney. The flue must be larger than the stove pipe to allow for expanded hot air. You must remember wood smoke with it's higher moisture and solid matter content is a very heavy smoke when cooled. As such, chimney requirements are much more critical for wood than for gas or oil. Use approved Class "A" chimney only. Consult your building inspector for chimney codes in your area. We recommend you have your chimney checked by a qualified heating contractor or your local building inspector before installing a wood burning furnace.

### STOVE PIPE AND DRAFT:

Remember, the stove pipe must be fitted tightly to the smoke collar of the furnace to prevent cold air from entering the stove pipe and chimney. (See figure A). Use 24 gauge or heavier stove pipe on the smoke collar, the rear opening on top of the furnace. Maintain at least a 1/4" upslope per foot to your Class "A" chimney from the vertical pipe on the collar on your stove. You must fasten all stove pipe connections securely with 3 or more 1/2" x #7 self tapping screws per connection. (See figure A). To help control the chimney draft, you must install a cast iron damper in the vertical stove pipe leading from the smoke collar on your furnace. (See figure A). CAUTION: Keep smoke pipe as short as possible and use no more than 2 right angle bends in the smoke pipe to prevent creosote buildup.

### **DOOR MOUNTING:**

- 1.- Ash Tray: Slip asbestos over locking mechanism and inside steel cover plate and bolt securely. (See figure B).
- 2.- Fire Door: Slip asbestos over locking mechanism and mount inside steel cover plate. Fasten with ¼" bolts provided, nuts on inside of door.
- 3.- Slip ¼" diameter rod through hinge brackets provided on stove and door.

### **ASSEMBLY & WIRING INSTRUCTIONS:**

- 1- Slide ¼ x 1½ bar legs into channels mounted on the bottom of the furnace. Legs are designed to self-adjust to minor floor variation, but can be bent for more severe variation.
- 2- For plenum use, mount blower on bottom of furnace with four 10 x ½" sheet metal screws. For non-plenum use, mount the blower on the back of your stove and use the round cap provided to block off air outlet located at top of furnace.
- 3- Fasten 5" x 5½" fan hole cover plate to back of your DAKA furnace with four 10 x ½" sheet metal screws when mounting blower on the bottom of your DAKA Furnace for plenum use.  
NOTICE: When converting your DAKA into a space heater (blowing hot air on to the floor) use a non-combustible material under your stove.
- 4- Mount the Honeywell thermostat on your DAKA furnace with two 10 x ½" sheet metal screws.
- 5- Blower box wiring: (see diagram Figure C).
  - A. Attach ¾ clamp connector screw to bottom of blower box.
  - B. Run thermostat cord thru bottom knock out on blower junction box and clamp in place.
  - C. Attach First BLACK wire from blower to BLACK wire from thermostat cord with plastic wire nuts provided.
  - D. Attach Second BLACK wire from blower to WHITE wire from thermostat cord with plastic wire nuts.
  - E. Attach GREEN wire from thermostat cord to ground on blower box screw bolt.
  - F. CAUTION: CHECK ALL COLOR CODED WIRE CONNECTIONS BEFORE ATTACHING BLOWER BOX COVER PLATE.
- 6- Thermostat Box:
  - A. Set variable Fan shut-off control on thermostat at 80 degrees to start; blower should shut off when internal temperature drops to this point as fire dies out. If blower fails to shut off, the ambient temperature around furnace is probably higher, and you should then set the variable control at 90 degrees or a little higher.
  - B. Knock out hole in top and bottom of thermostat box and screw on two 90 degree clamp connectors; do not tighten clamp wires until thermostat cover is installed.
  - C. Run thermostat cord through top of thermostat box.
  - D. Rubber grommets are to put around cord for tight fit in clamp connectors.
  - E. Run power cord through bottom 90 degree clamp connector. (refer to Fig. C for diagram).
  - F. Attach WHITE wire from thermostat cord to WHITE wire from power cord with plastic wire nut.
  - G. Insert BLACK wire from thermostat cord in load hole at lower left hand corner of thermostat. Use screw driver to push to release clamp.
  - H. Insert BLACK wire from power cord in load hole at top right of thermostat. Use screw driver to push in release clamp.

**CAUTION: THERE ARE 2 HOLES IN TOP OF THERMOSTAT MARKED WITH (COM) MAKE SURE THAT YOU USE RIGHT HAND SIDE FOR BLACK WIRE FROM POWER CORD OR YOU WILL SHORT CIRCUIT THE THERMOSTAT.**

- I. Attach GREEN wire from the thermostat cord to mounting ground screw at top right of thermostat and GREEN wire from power cord to mounting screw at bottom left of thermostat.

**CAUTION: CHECK ALL COLOR CODED WIRE CONNECTIONS, THEN MOUNT COVER ON THERMOSTAT.**

### **CONNECTING DAKA FURNACE TO PRESENT FORCED-AIR SYSTEM.**

CUT 6½" circular hole in hot air plenum above air conditioner coil, if installed. Attach a 90 degree elbow to 6" diameter stove pipe of the desired length to clear furnace. Insert 90 degree elbow into plenum, with opening upward. Slip collar over stove pipe and push up tight against plenum for tight seal. Affix second 90 degree elbow to stove pipe leading from furnace and connect to section already attached to plenum. Set System Fan on "summer" or manual so it will run continuously; DAKA Furnace blower will start automatically when heat in furnace reaches approximately 115 degrees F. Fasten all joints securely with ¼ x #7 self taping screws (refer to figure A).

### **OPTIONAL INSTALLATION:**

You may wish to connect your cold air return to your DAKA blower. This is easily done by bolting a collar to the air intake on the blower instead of grill supplied, and piping fresh air from your cold air return.

Check your building codes as some codes require the use of air from your cold air return.

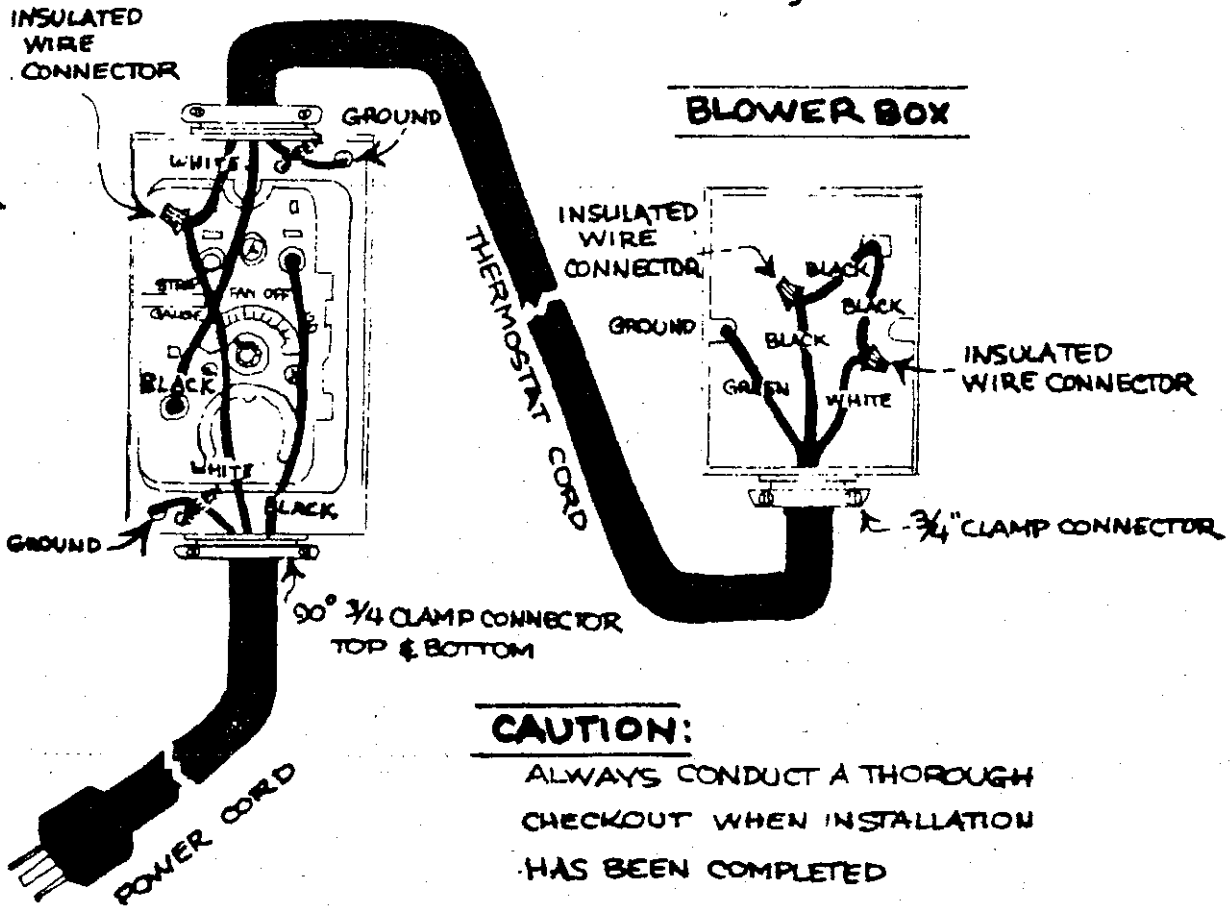
DAKA FURNACE PARTS LIST - MARK I THRU IV

MFG.#	DESCRIPTION	QUANTITY PER FURNACE			
		MARK I	MARK II	MARK III	MARK IV
100	LEG	4	4	4	4
01	ASH PAN	1	1	1	1
02	DOOR-MANUAL DRAFT	1	1	-	-
103	DOOR-AUTO. DRAFT	-	-	1	1
104	DOOR-ASH PAN	1	1	1	1
105	ASBESTOS LINER-FINER.	1	1	1	1
106	" " -ASH PAN	1	1	1	1
107	BLOWER-265 CFM	1	1	1	1
108	THERMOSTAT FAN CONTROL.	1	1	1	1
109	POWER SUPPLY CORDS	2	2	2	2
110	CAST IRON GRATE	1	1	1	1
111	6" ROUND CAP	1	1	1	1
112	DOOR HINGE ROD	1	1	1	1
113	90° CLAMP CONNECTOR	2	2	2	2
114	WIRE NUT	3	3	3	3
115	STRAIGHT CLAMP CNCTR.	1	1	1	1
116	FAN HOLE COVER PLATE	1	1	1	1
118	#10 x 1/2 SCREW	11	11	11	11
119	1/2" x 3/4" BOLT	11	11	11	11
120	1/2" NUT	11	11	11	11
121	GRATE SPACER	-	2	-	2
122	INSTALLATION INSTRUCTIONS	1	1	1	1
123	WARRANTY	1	1	1	1

FIG. C

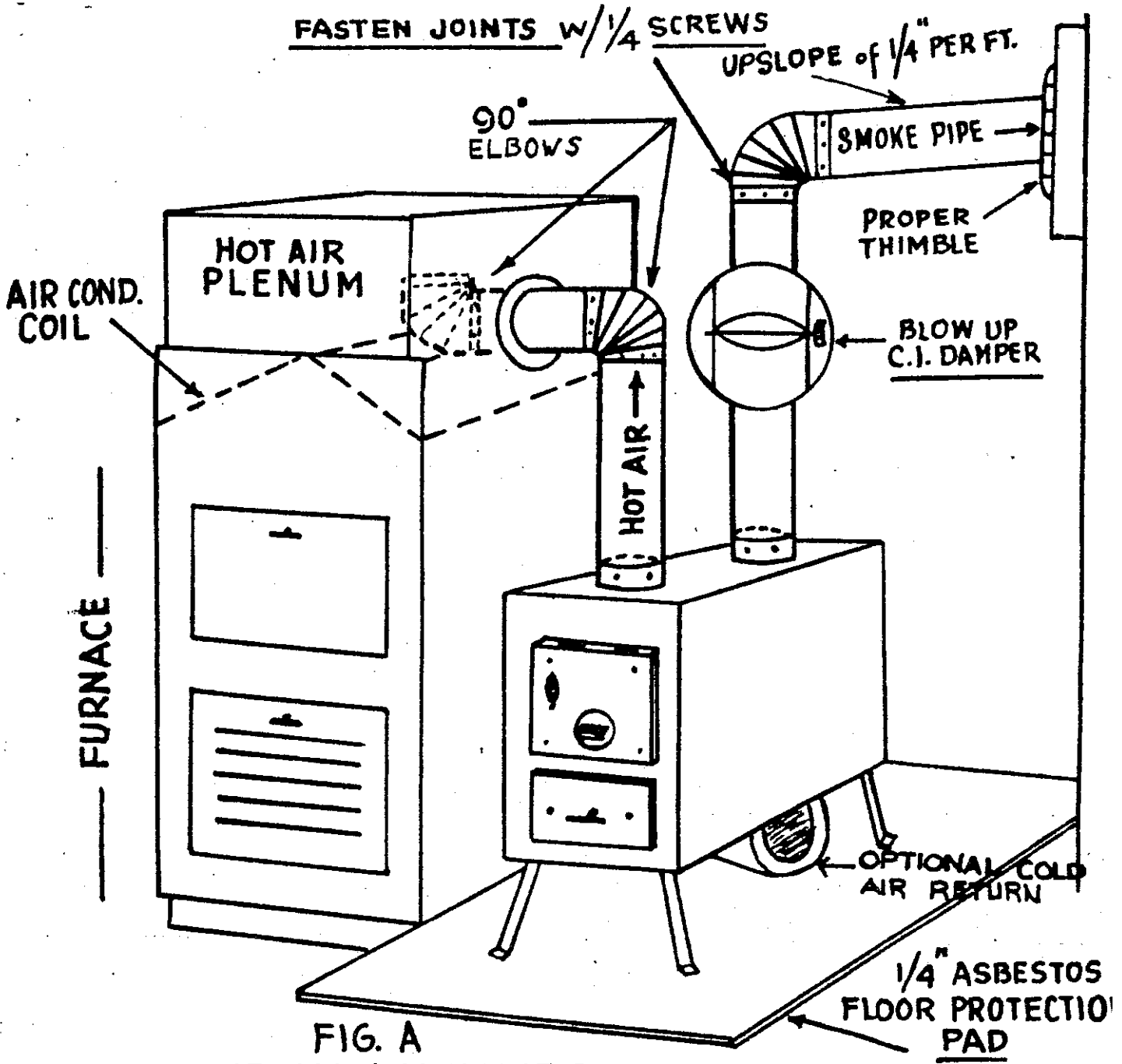
**THERMOSTAT BOX**

wiring instructions

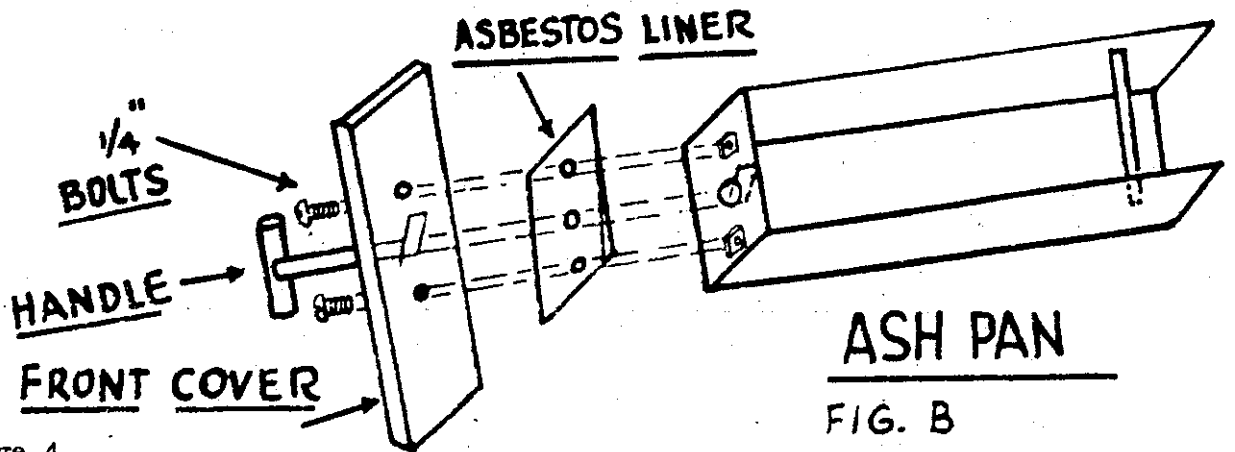


**CAUTION:**

ALWAYS CONDUCT A THOROUGH CHECKOUT WHEN INSTALLATION HAS BEEN COMPLETED



**FIG. A**  
**TYPICAL INSTALLATION**



**FIG. B**