

**READ AND SAVE THESE INSTRUCTIONS****IMPORTANT INSTRUCTIONS****READ ALL INSTRUCTIONS BEFORE  
INSTALLING OR USING THIS HEATER.**

To reduce the risk of fire, electric shock, or injury to persons, observe the following:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
5. This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, etc. and curtains at least 3 feet (0.9 m) from the front of the heater.
6. Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
7. Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
8. Do not use outdoors.
9. To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel (or operate internal disconnect switch, if provided).
10. Do not insert or allow foreign objects to enter any ventilation or exhaust opening, as this may cause an electric shock or fire, or damage the heater.
11. To prevent a possible fire, do not block air intakes or exhaust in any manner.
12. A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
13. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
14. Install heater at least 6 inches from floor or any adjacent wall.
15. To avoid electrical shock: Do not install unit in a tub or shower enclosure or any location where it may come in contact with water. Never place a switch where it can be reached from a tub or shower.
16. This product may ONLY be installed horizontally in a wall. Do not mount in any other position.
17. Do not connect heater to dimmer switch or speed control.
18. This product must be grounded.

**SAVE THESE INSTRUCTIONS**

# PLANNING

This heater is intended to be used to supply supplemental heat from a wall location in new or existing construction.

The heater can be operated using its built-in thermostat or a remote thermostat (Broan Model 86W Line-Voltage Thermostat - purchase separately).

Plan to supply the heater with proper line voltage and appropriate power cable.

NOTE: Power can be tapped from a nearby circuit depending on the heater wattage required and the amperage rating of the circuit.

The table below lists the ratings for each model.

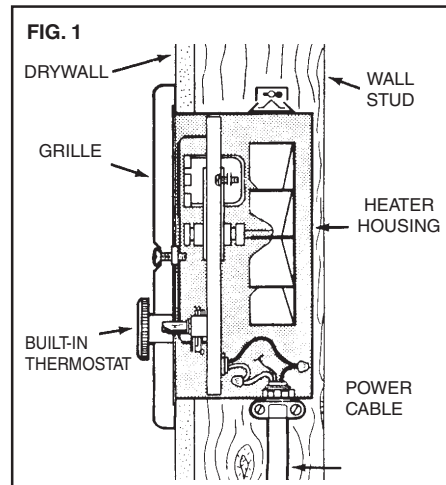
MODELS	VOLTS	AMPS	WATTS	BTU/HR
170	<b>120</b>	<b>8.33/4.16</b>	<b>1000/500</b>	<b>3413/1707</b>
	240	4.16	1000	3413
	208	3.61	750	2560
174	<b>120</b>	<b>12.5/6.25</b>	<b>1500/750</b>	<b>5120/2560</b>
	240	6.25	1500	5120
	208	5.41	1125	3840
178	<b>240</b>	<b>8.33/4.16</b>	<b>2000/1000</b>	<b>6827/3413</b>
	208	7.21/3.61	1500/750	5120/2560

**BOLD** ratings are factory wired. See "OPTIONAL WIRING CONVERSIONS" section on page 3 for wattage and voltage conversion instructions.

Heater can be converted to half-wattage to avoid overloading such circuits.

Follow these basic steps when installing this heater.

- Nail housing to studs.
- Connect power cable.
- Fasten heater assembly and grille to housing. (FIG. 1)



# INSTALLATION

**WARNING:** To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.

**CAUTION:** High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 3 feet (0.9 m) from the front of the heater and away from the side and rear.

1. Remove the retaining screw, unplug wiring harness and lift heater assembly from housing. (FIG. 2)
2. Slide the wiring cover out of housing. (FIG. 3)

## (16"-ON-CENTER STUDS ONLY)

1. Choose which side of housing will be mounted directly to a wall stud. Then, insert a mounting bracket, from the opposite side, into the channel at the top of housing. (FIG. 4)

**NOTE:** Locate housing at least 6" from the floor and any adjacent walls.

2. Use measuring guide on side of housing to position housing so that it will be flush with finished wall. Drive two (2) nails through the holes in side of housing and into stud. (FIG. 5)
3. Extend mounting bracket, level housing, and nail to other stud. (FIG. 6)

## (24"-ON-CENTER STUDS ONLY)

1. Choose which side of housing will be mounted directly to a wall stud. From this side, push a mounting bracket as far as possible into the channel at the top of housing. (FIG. 4)

**NOTE:** Locate housing at least 6" from the floor and any adjacent walls.

2. Use measuring guide on side of housing to position housing so that it will be flush with finished wall. Drive two (2) nails through the holes in side of housing and into stud. (FIG. 5)
3. Secure the two (2) mounting brackets together (with screw supplied). Level housing and nail to opposite stud, as shown. (FIG. 7)

# WIRING

Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.

## (ALL INSTALLATIONS)

1. Feed electrical power cable through open knockout in corner of housing and attach with appropriate connector. Allow 6" of wire inside of housing.

**NOTE:** Use other housing knockout when wiring units in parallel.

2. Connect black to black, white to white, green to green or bare wire. Replace wiring cover. (FIG. 8)

FIG. 2

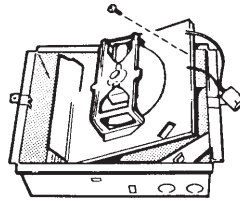


FIG. 3

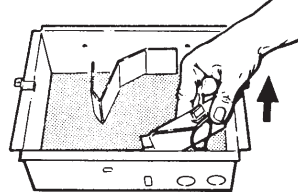


FIG. 4

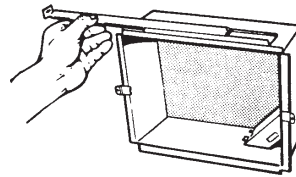


FIG. 5

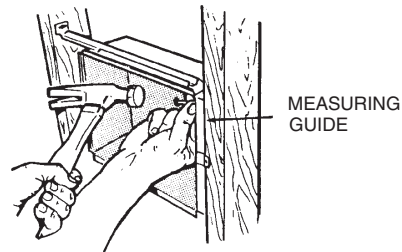


FIG. 6

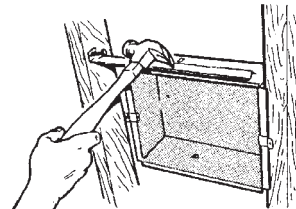
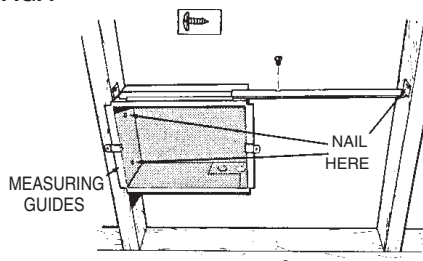


FIG. 7



# OPTIONAL WIRING CONVERSIONS

## 1. Conversion to half-wattage. (FIGS. 9 & 10)

The heater will produce less heat and use less electricity if converted to half-wattage. Disconnect ONE of the two (2) black wires (with insulated terminals) from the motor.

## 2. 120 VAC to 240 VAC Conversion (FIGS. 11 & 12)

(Factory-wired 120 VAC Models 170 and 174 ONLY) These heaters can be converted to operate on 240 VAC.

- 1) Disconnect ONE of the two (2) black wires (with insulated terminals) from the motor.
- 2) Disconnect the two (2) white wires (with insulated terminals) from each other. Do not remove the white wire from beneath plastic wire tie.
- 3) Connect the black wire to the white wire.

**NOTE:** When heater is converted from 120 VAC to 240 VAC, half-wattage conversion is not possible.

# COMPLETE INSTALLATION

## (NEW CONSTRUCTION)

1. A housing mask has been provided to keep construction dust, drywall spray, paint, etc. from damaging heater.

Bend the flaps on the mask and push it into the heater housing.

**NOTE:** Mask can be put in place before or after heater assembly is re-installed.

2. Remove mask before operation.

## (ALL INSTALLATIONS)

3. Secure heater assembly with retaining screw and plug wiring harness into receptacle.
4. Fasten grille to heater with two (2) screws provided. (FIG. 13)
5. Push knob onto thermostat stem.
6. Turn on power at service entrance. Turn thermostat to its highest setting and make sure heating element and blower come on. Then make sure element and blower shut off at lowest thermostat setting.

# OPERATION

Before using heater, make sure heater has been properly installed according to installation steps beginning with the "PLANNING" section on page 1.

# MAINTENANCE

## THERMAL OVERLOAD PROTECTOR

If heater fails to operate when thermostat is turned to its highest setting: Turn power off at service entrance. Remove knob and grille and press button marked "RESET".

## LUBRICATION

The heater is permanently lubricated and never needs oiling or disassembly.

## CLEANING

Clean heater once a month as follows:

1. Turn off power at service panel.
2. Make sure heating element is cool.
3. Use a soft brush attachment to gently vacuum grille openings or wipe grille clean with a soft cloth.
4. Restore power.

**CAUTION: METAL AND ELECTRICAL PARTS SHOULD NEVER BE IMMERSSED IN WATER.**

FIG. 9

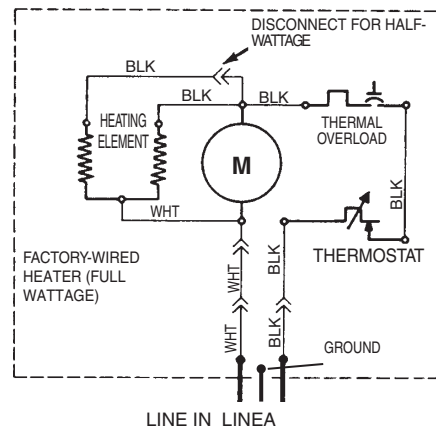


FIG. 10 - HALF-WATTAGE CONVERSION

(2) BLACK WIRES (connected to motor)

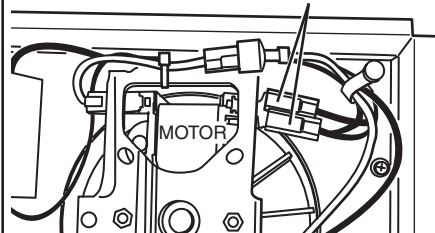


FIG. 11 - 120VAC TO 240VAC CONVERSION

WHITE WIRES      BLACK WIRE (from motor)

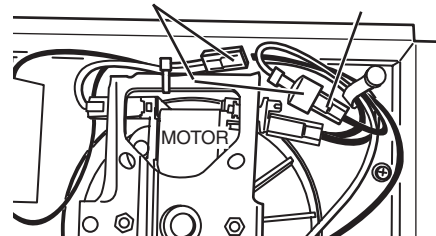


FIG. 12

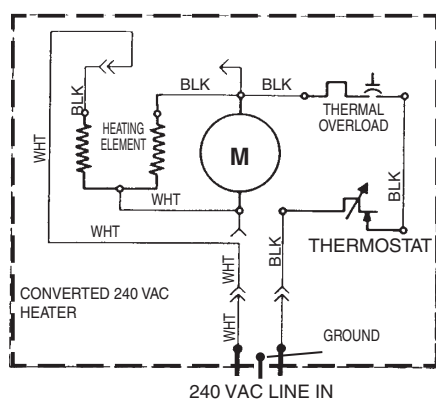
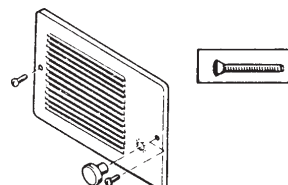
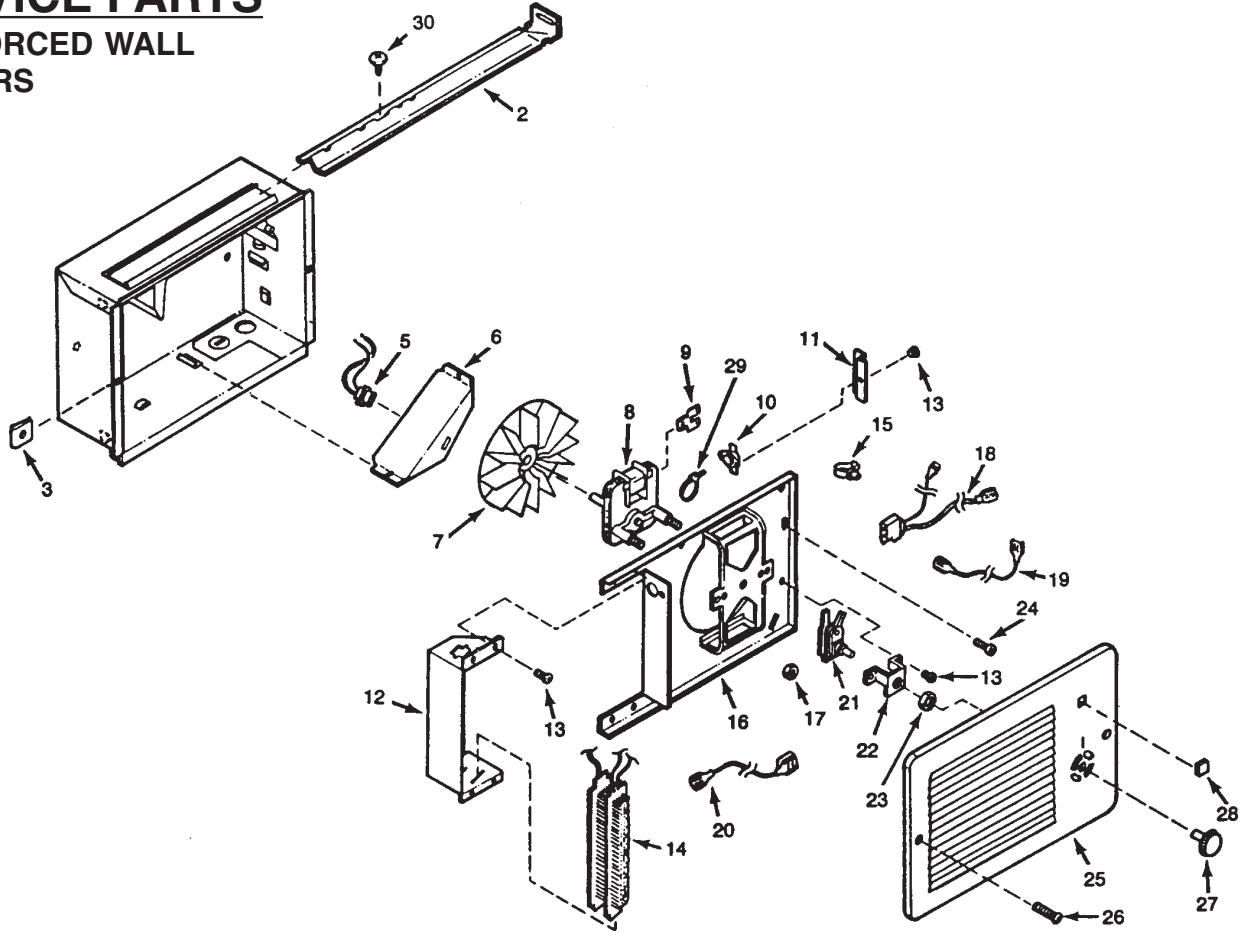


FIG. 13



# SERVICE PARTS

## FAN-FORCED WALL HEATERS



KEY NO.	PART NUMBER	DESCRIPTION	DESCRIPCION
2	98003036	Mounting Bracket (2 Required)	
3	99260512	#8-18 Sheet Metal Nut (2 Required)	
5	97005422	Receptacle Assembly	
6	98006975	Wiring Cover	
7	99020130	Blower Wheel	
8	99080248	Motor (Models 170 & 174)	
	99080252	Motor (Model 178)	
9	99270735	Tab Adaptor	
10	99030194	Thermal Overload	
11	99271091	Guard	
12	98006974	Element Bracket	
13	99150491	Screw, #8-18 x 3/8 Ph. Pan Head (7 Required)	
14	99270741	Heating Element (Model 170)	
	99270725	Heating Element (Model 174)	
	99270742	Heating Element (Model 178)	
15	93270619	Wire Clamp	
16	97008682	Partition Plate Assembly	
17	99260428	Nut, #6-32 x 5/16 Keps (2 Required)	
18	97008675	Plug Assembly	
19	97008677	Thermostat Wire Assembly	
20	97008678	Overload Wire Assembly	
21	99030191	Thermostat	
22	98006973	Thermostat Bracket	
23	99260464	Lock Nut	
24	99150533	Screw, #8-18 x 5/8 Ph. Pan Head	
25	98006970	Grille	
26	99150528	Grille Screw (2 Required)	
27	99360135	Knob	
28	99090681	Grille Logo	
29	93270493	Wire Tie	
30	99150470	Screw, #8-18 x 3/8 Ph. Truss Hd.	

Always order replacement parts by "PART NUMBER" - NOT "KEY NUMBER".