

READ AND SAVE THESE INSTRUCTIONS

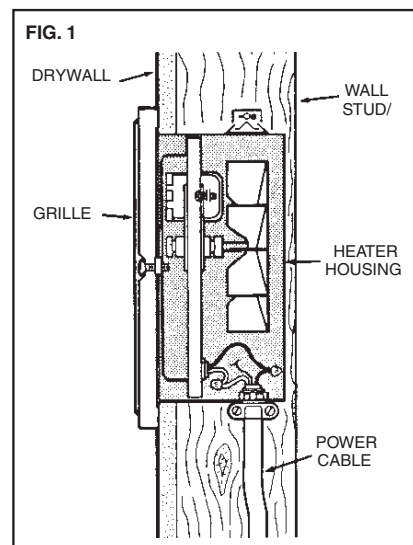
IMPORTANT INSTRUCTIONS

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 the Broan Model 86W Line-Voltage Thermostat from a wall location. Purchase the control 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.

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

The table below lists the ratings for each model.

MODELS	VOLTS	AMPS	WATTS	BTU/HR
120	120	8.33/4.16	1000/500	3413/1707
	240	4.16	1000	3413
	208	3.61	750	2560
124	120	12.5/6.25	1500/750	5120/2560
	240	6.25	1500	5120
	208	5.41	1125	3840
128	240	6.33/4.16	2000/1000	6827/3413
	208	7.21/3.61	1500/750	5120/2560

BOLD ratings are factory wired. See "OPTIONAL WIRING CONVERSION" section for wattage and voltage conversion instructions.

Follow these basic steps when installing this heater.

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

PREPARATION

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)

WIRING

(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. (FIG. 8)
2. Connect black to black, white to white. Use grounding clip to attach green or bare wire to housing. Replace wiring cover. (FIG. 9)

OPTIONAL WIRING CONVERSIONS

(FIGS. 10, 11, 12)

1. **Conversion to half-wattage. (FIG. 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 120 and 124 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.

FIG. 2

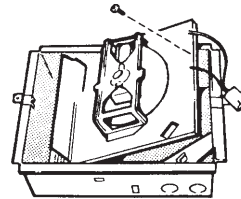


FIG. 3

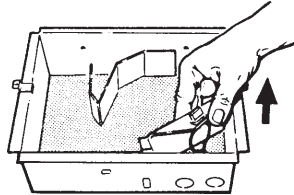


FIG. 4

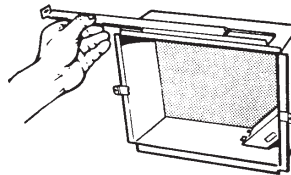


FIG. 5

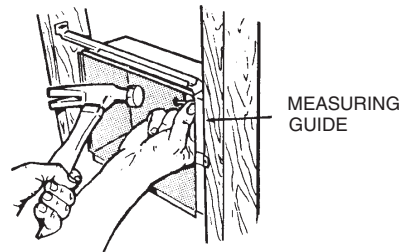


FIG. 6

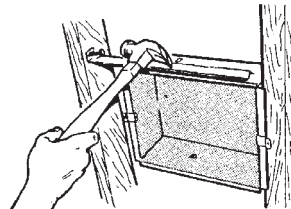
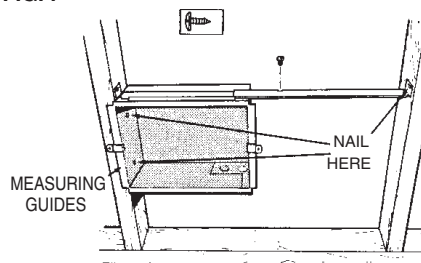


FIG. 7



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.

(16"-ON-CENTER STUDS ONLY)

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

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 the housing. (FIG. 4)
2. Use measuring guide on side of housing to position housing so that it will be flush with finished wall. Drive to (2) nails through the holes on 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 the housing.

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. 7)
3. Secure the two (2) mounting brackets together (with screw supplied). Level housing and nail to opposite stud, as shown.

WIRING

(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)

OPTIONAL WIRING CONVERSIONS

(FIGS. 9, 10, 11)

1. **Conversion to half-wattage. (FIG. 9)**
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. 10 & 11)**
(Factory-wired 120 VAC Models 120 and 124 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.

FIG. 8

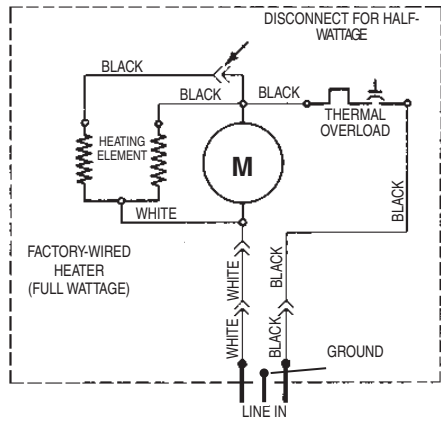


FIG. 9 - HALF-WATTAGE CONVERSION

(2) BLACK WIRES (connected to motor)

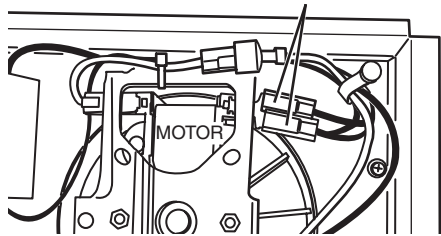


FIG. 10 - 120VAC TO 240VAC CONVERSION

WHITE WIRES BLACK WIRE (from motor)

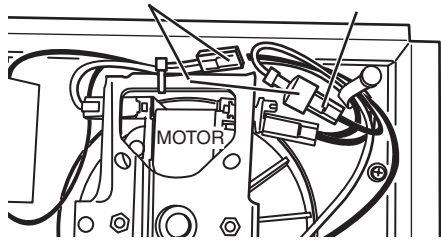
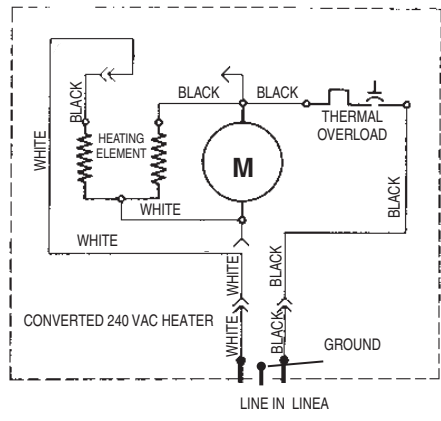


FIG. 11



COMPLETE THE INSTALLATION

(NEW CONSTRUCTION)

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

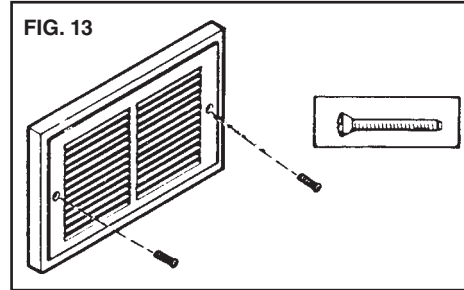
Bend the flaps on the mask and push it into the heater housing.

NOTE: Mask can be put in place before or after heater assembly is reinstalled.

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. Turn on power at service entrance. Turn thermostat to its highest setting and make sure heating element and blower come on. Then turn it to its lowest setting and make sure element and blower shut off.



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.

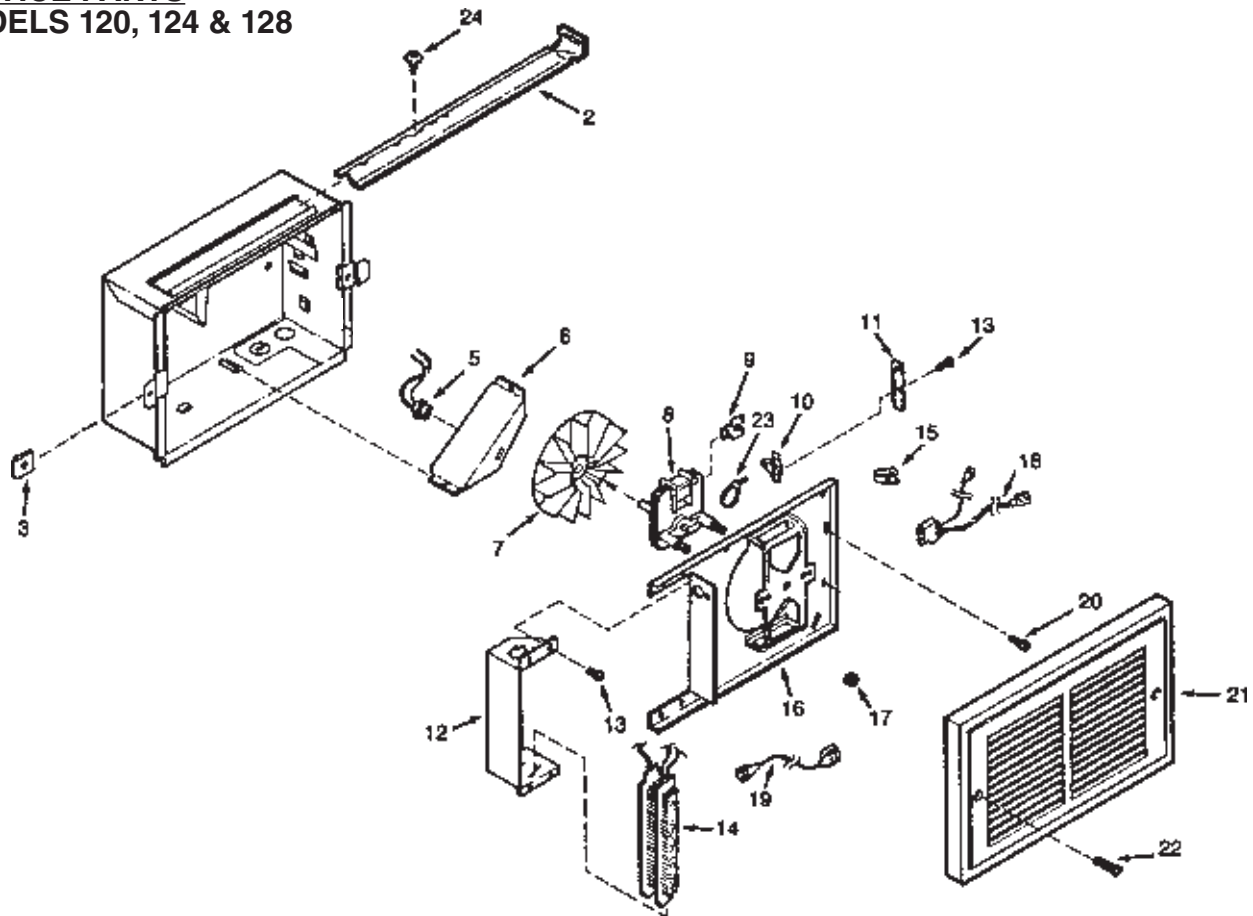
CLEANING

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.

SERVICE PARTS
MODELS 120, 124 & 128



KEY NO.	PART NO.	DESCRIPTION
2	98003036	Mounting Bracket (2 Required)
3	*	#8-18 Sheet Metal Nut (2 Required)
5	97005422	Receptacle Assembly
6	98006975	Wiring Cover
7	99020130	Blower Wheel
8	99080248	Motor (Models 120 and 124)
	99080252	Motor (Model 128)
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 (5 Required)
14	99270741	Heating Element (Model 120)
	99270725	Heating Element (Model 124)
	99270742	Heating Element (Model 128)
15	93270619	Wire Clamp
16	97008682	Partition Plate Assembly
17	99260428	Nut, #6-32 x 5/16 Keps (2 Required)
18	97008856	Plug Assembly
19	97008678	Overload Wire Assembly
20	*	Screw, #8-18 x 5/8 Ph. Pan Head
21	97013821	Grille (Includes Parts Bag**)
22	*	Grille Screw (2 Required)
23	93270493	Wire Tie
24	99140470	Screw, #8-18 x 3/8 Ph. Truss Head
**	97008724	Parts Bag (contains Key Nos. 3, 20 & 21)

*Standard hardware - may be purchased locally.

**Not shown.

Always order replacement parts by "PART NO." — NOT by "KEY NO."