

WARREN ELECTRIC HEATER MODEL WZH	INSTALLATION INSTRUCTIONS Date: 04/22/10	CARRIER / ICP 50ZPA(B)/564B/PA3Z/PA3ZNB/PAT3/WJA3/PAJ3 (024-060) Packaged A/C system 50ZHA(B)/664B/PH3Z/PH3ZNB/PHT3/WJH3/ PHJ3 (024-060) Packaged Heat Pump system
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GENERAL

This electric heater series is engineered, designed, and approved to be installed in the **CARRIER / ICP** 50ZPA, 50ZPB, 564B, PA3Z, PA3ZNB / PAT3, WJA3, PAJ3 (024 through 060) series electrical cooling and 50ZHA, 50ZHB, 664B, PH3Z, PH3ZNB / PHT3, WJH3, PHJ3 (024-through 060) series heat pumps. Before proceeding, check the heater label for correct voltage and KW requirements (see TABLE 2).

Installation and servicing of this equipment should only be performed by trained and qualified personnel. Before proceeding with the heater installation, inspect thoroughly for shipping damage. Notify the shipper immediately if any damage is found. Check all porcelain insulators for breakage and inspect heater element wire to see that none have been deformed. Clean all dirt, dust and moisture from equipment. Check for proper clearances of live parts, between phases, and to ground. Make sure that all required barriers are in place. Check conductors run in multiple to insure that they are properly wired. Refer to installation instructions for complete unit installation details. **Verify that all elements are properly secure in their ceramic holders.**

WARNING



Before performing service or maintenance operations on system, turn off all main power switches. There may be more than one disconnect. Turn off accessory heater power switch if applicable. Electrical shock can cause personal injury. **TAG DISCONNECT SWITCH(ES) WITH A SUITABLE WARNING LABEL.**

HEATER INSTALLATION

1. Refer to the base unit installation instructions as required. Affix Warren installer label to the equipment access panel.
2. Remove blower section access panel to access control box and blower compartment.
3. Disconnect wiring to blower motor by removing speed selection plug and power plug.
4. Remove rear blower support bracket and remove screws securing blower to the front blower support. Slide blower out of the unit.
5. Heater module is installed onto the blower assembly (see fig. 1). Secure the heater to the standoffs on the blower inlet with (3) screws and (3) washers provided.
6. Reinstall blower motor to unit (see fig. 2).

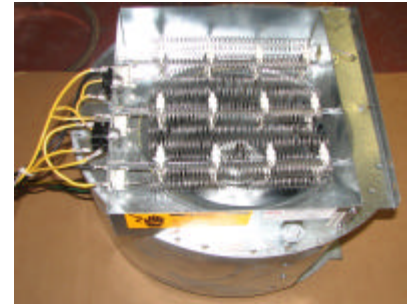


FIG. 1- Heater mounted onto the blower assembly.

CONTROL PANEL INSTALLATION

1. Remove the unit control box cover to install the heater control plate.
2. Secure heater control plate to the upper left side of the unit control panel box with (4) screws provided (see fig. 3).
3. Attach the wiring diagram to the back of access panel near the unit wiring label.
4. Proceed to Electrical Connections section, before re-closing the access panel.



FIG. 2- Blower motor installed

IMPORTANT

Use flexible duct to prevent transmission of vibration. Use suitable gaskets to ensure weather tight and air tight seal. If flexible duct is used, insert a sheet metal sleeve inside duct. Heat resistant duct connector (or sheetmetal sleeve) must extend 24-in. from the unit connection flanges into the duct work.

UNIT TYPE	Minimum Airflow (CFM)				
	5 kW	7.5 kW	10 kW	15 kW	20 kW
Electric Cooling 50ZPB, PA3ZNB					
24	600	750	750	X	X
30	600	750	750	X	X
36	600	750	750	1050	X
42	600	750	750	1050	X
48	600	750	750	1050	1400
60	600	750	750	1050	1400
Heat Pump 50ZHB, PH3ZNB					
24	750	800	800	X	X
30	750	800	800	X	X
36	750	800	800	1200	X
42	750	800	800	1200	X
48	750	800	800	1200	1700
60	750	800	800	1200	1700

UNIT TYPE	Minimum Airflow (CFM)				
	5 kW	7.5 kW	10 kW	15 kW	20 kW
Electric Cooling 50ZPA/564B/PA3Z					
24	400	550	650	X	X
30	450	600	800	850	X
36	450	600	800	850	900
42	450	600	800	850	900
48	450	600	800	850	900
60	450	600	800	850	900
Heat Pump 50ZHA/664B/PH3Z					
24	500	650	750	X	X
30	600	800	1050	X	X
36	600	800	1050	1150	1200
42	600	800	1050	1150	1200
48	600	800	1050	1150	1200
60	600	800	1050	1150	1200

TABLE 1 - Min. Airflow operation charts

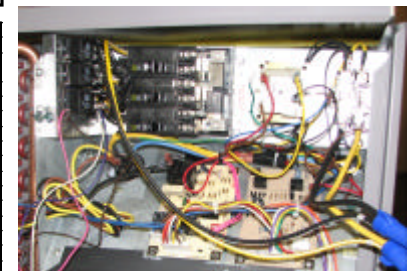


FIG. 3- Control panel installed.

STAGING AND MOTOR SPEED SELECTION

1. Refer to unit installation instructions for staging options.
2. The blower speed is preset at factory. For optimum system performance refer to the motor speed selection chart and base unit instructions for changing the factory set motor speed.

ELECTRICAL CONNECTIONS

1. All electrical connections, wire sizes and type and conduit sizes shall meet the National Electric Code, State and Local Codes. Main power supply, minimum wire sizes, circuits, fusing, etc. is shown on schematic wiring diagrams. **NOTE:** Use copper wire only.
2. Refer to base unit instructions for recommended wiring procedures.
3. **50ZPA, 564B, PA3Z, PAT3, 50ZHA, 664B, PH3Z, PHT3 units:** Connect the (5-pin) low voltage harness plug from the heater to the fan control board at position **P4** located inside the unit control box compartment (see fig. 3). Connect Black & Yellow "pigtails" from unit contactor using the connectors provided with the heater.
50ZHB, 50ZPB, PA3ZNB, PH3ZNB, WJA3, WJH3 units: Route low voltage leads from the heater through hole in unit control box and into low voltage splice box. Dress wires and secure them to existing unit control wires with wire ties provided. Connect Black & Yellow "pigtails" from unit contactor using the connectors provided with the heater.
4. Heater module wires are connected to heater control section of heater through panel mounted plugs. Use plug attachment plate to secure wires to unit. Insure that plug labels and color wires (yellow & black wires) match. Secure wires to fan wires with wire ties provided.
5. Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding. **Verify that there are no possible shorts to ground.**
6. Check wiring diagram supplied with heater for specific connections and information. Affix the wiring diagram to the "fishpaper" insulation cover in the control box. Check operation as described in start-up section.

START-UP AND CHECK-OUT

CAUTION: Before proceeding, verify that all wiring is correct per factory approved schematic. Notify factory immediately of any discrepancies.

1. Refer to base unit installation instructions as required.
2. Check for loose terminal connections.
3. Check that all fuse and circuit breaker short circuit interrupting ratings are adequate.
4. Turn on unit and heater power.
5. Set thermostat to call for heat.
6. Check operation of heater.
7. Check that air flow across heater is at or above minimum recommended fan speed (see table 1).
8. Any modification or repairs to this equipment without written permission from the factory will be done at the installer's own risk and expense.

SERVICE

Limit Switch/Fusible Link - Malfunction prevents heating element(s) from being energized. Replace switch if malfunction occurs.

Relay - Malfunction will cause heater to not come on or shut off. Replace faulty relay. Relays utilize **22VDC** coils, replace with factory authorized parts only. **Do not attempt to replace coil or dress contacts.**

PACKAGE CONTENTS

1. Heater assembly
2. Installation Instructions
3. Installer label
4. Wiring Diagram
5. (3) sets (screws + washers)
6. (1) Plug attachment plate
7. S/M Screws + Connectors

UNIT TYPE	WZH502	WZH0502S	WZH752	WZH0752S	WZH1002	WZH1002S	WZH1502S	WZH2002S
Electric Cooling								
50ZPA/564B/PA3Z								
24	X	X	X	X	X	X		
30	X	X	X	X	X	X	X	
36	X	X	X	X	X	X	X	X
42	X	X	X	X	X	X	X	X
48	X	X	X	X	X	X	X	X
60	X	X	X	X	X	X	X	X
Heat Pump								
50ZHA/664B/PH3Z								
24	X	X	X	X	X	X		
30	X	X	X	X	X	X		
36	X	X	X	X	X	X	X	X
42	X	X	X	X	X	X	X	X
48	X	X	X	X	X	X	X	X
60	X	X	X	X	X	X	X	X

TABLE 2 - Heater Application Chart

WARREN ELECTRIC HEATER MODEL WZH	DUAL POINT INSTALLATION INSTRUCTIONS Date: 04/12/11	CARRIER / ICP 50ZPA(B)/564B/PA3Z/PA3ZNB/PAT3/WJA3/PAJ3 (024-060) Packaged A/C system 50ZHA(B)/664B/PH3Z/PH3ZNB/PHT3/WJH3/ PHJ3 (024-060) Packaged Heat Pump system
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WARNING



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DUAL POINT DESCRIPTION

Use this instruction sheet for a scenario where dual source circuit is required to power the electric heater and the unit contactor separately.

Installation:

1. Refer to the base unit installation instructions as required. Affix Warren installer label to the equipment access panel.
2. Remove blower section access panel to access control box and blower compartment.
3. Disconnect wiring to blower motor by removing speed selection plug and power plug.
4. Remove rear blower support bracket and remove screws securing blower to the front blower support. Slide blower out of the unit.
5. Heater module is installed onto the blower assembly (see fig. 1). Secure the heater to the standoffs on the blower inlet with (3) screws and (3) washers provided.
6. Reinstall blower motor to unit (see fig. 2).

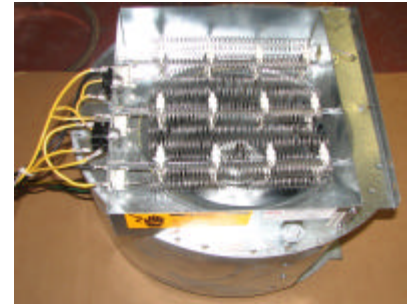


FIG. 1- Heater mounted onto the blower assembly.



FIG. 2- Blower motor installed

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3. Attach the wiring diagram to the back of access panel near the unit wiring label.
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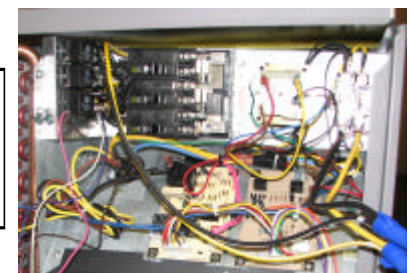


FIG. 3- Control panel installed.

IMPORTANT

Use flexible duct to prevent transmission of vibration. Use suitable gaskets to ensure weather tight and air tight seal. If flexible duct is used, insert a sheet metal sleeve inside duct. Heat resistant duct connector (or sheetmetal sleeve) must extend 24-in. from the unit connection flanges into the duct work.

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ELECTRICAL CONNECTIONS

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50ZHB, 50ZPB, PA3ZNB, PH3ZNB, WJA3, WJH3 units: Route low voltage leads from the heater through hole in unit control box and into low voltage splice box. Dress wires and secure them to existing unit control wires with wire ties provided. Connect Black & Yellow "pigtailes" from unit contactor using the connectors provided with the heater.
4. Heater module wires are connected to heater control section of heater through panel mounted plugs. Use plug attachment plate to secure wires to unit. Insure that plug labels and color wires (yellow & black wires) match. Secure wires to fan wires with wire ties provided.
5. Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding. **Verify that there are no possible shorts to ground.**
6. Check wiring diagram supplied with heater for specific connections and information. Affix the wiring diagram to the "fishpaper" insulation cover in the control box. Check operation as described in start-up section.

CAUTION: Before proceeding, verify that all wiring is correct per factory approved schematic.
Notify factory immediately of any discrepancies.

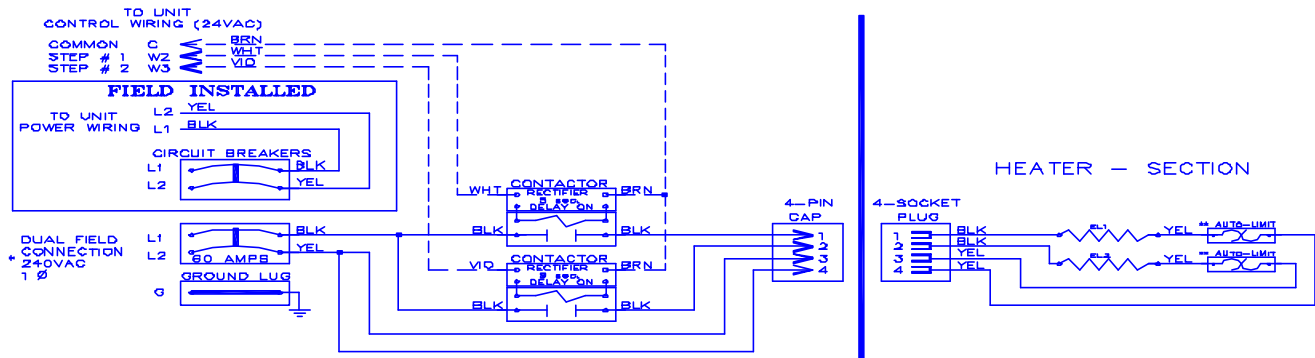


FIG. 4 - Wiring schematic for dual source connection.

UNIT TYPE	Minimum Airflow (CFM)				
	5 kW	7.5 kW	10 kW	15 kW	20 kW
Electric Cooling					
50ZPA/564B/PA3Z					
24	400	550	650	X	X
30	450	600	800	850	X
36	450	600	800	850	900
42	450	600	800	850	900
48	450	600	800	850	900
60	450	600	800	850	900
Heat Pump					
50ZHA/664B/PH3Z					
24	500	650	750	X	X
30	600	800	1050	X	X
36	600	800	1050	1150	1200
42	600	800	1050	1150	1200
48	600	800	1050	1150	1200
60	600	800	1050	1150	1200

UNIT TYPE	Minimum Airflow (CFM)				
	5 kW	7.5 kW	10 kW	15 kW	20 kW
Electric Cooling					
50ZPB, PA3ZNB					
24	600	750	750	X	X
30	600	750	750	X	X
36	600	750	750	1050	X
42	600	750	750	1050	X
48	600	750	750	1050	1400
60	600	750	750	1050	1400
Heat Pump					
50ZHB, PH3ZNB					
24	750	800	800	X	X
30	750	800	800	X	X
36	750	800	800	1200	X
42	750	800	800	1200	X
48	750	800	800	1200	1700
60	750	800	800	1200	1700

TABLE 2 - Heater Application Chart

PACKAGE CONTENTS

1. Heater Assembly.
2. Installation Instructions.
3. Installer Label.
4. Wiring Diagram.
5. (3) sets screws + washers.
6. (1) plug attachment plate.
7. Sheet metal screws + connectors.