

Installer's Guide

Supplemental Electric Heaters

BAYHTRV105	BAYHTRV305	BAYHTRV405
BAYHTRV108	BAYHTRV308	BAYHTRV408
BAYHTRV110	BAYHTRV310	BAYHTRV410
BAYHTRV115	BAYHTRV315	BAYHTRV415
BAYHTRV120	BAYHTRV320	BAYHTRV420
BAYHTRV125	BAYHTRV325	

SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

SAFETY SECTION

Important — This document contains a wiring diagram, a parts list, and service information. This is customer property and is to remain with this unit. Please return to service information pack upon completion of work.

⚠ WARNING

HAZARDOUS VOLTAGE!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized.

⚠ WARNING

SAFETY AND ELECTRICAL HAZARD!

Failure to follow this Warning could result in property damage, severe personal injury, or death.

These servicing instructions are for use by qualified personnel only. To reduce the risk of electrical shock, do not perform any servicing other than that contained in these operating instructions unless you are qualified to do so.

⚠ CAUTION

GROUNDING REQUIRED!

Failure to inspect or use proper service tools may result in equipment damage or personal injury. Reconnect all grounding devices. All parts of this product that are capable of conducting electrical current are grounded. If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

⚠ WARNING

SAFETY HAZARD!

Operating the unit without the access panels properly installed may result in severe personal injury or death.

Do not operate the unit without the evaporator fan access panel or evaporator coil access panel in place.

⚠ WARNING

SAFETY HAZARD !

This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Important: *Wear appropriate gloves, arm sleeve protectors and eye protection when servicing or maintaining this equipment.*

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Supplementary Electric Heaters

UNIT MODEL	ELECTRIC HEATER MODEL	RATED VOLT-AGE	PHAS-E	AMPS	HEATER CAPACITY		NO. OF STAGES	KW/STAGE		MCA	MAX. FUSE OR HACR CKT BKR SIZE ^(a)	CANADA ONLY MAX. CKT BKR SIZE ^(b)
					KW	BTUH		1	2			
&TCC&024-060#1 &WCC&024-060#1 &TCY&024-060#1 &WCY&024-060#1 &WCZ&024-060#1	BAYHTRV105	208/ 240	1	18/ 21	3.76/ 5.0	12800/ 17100	1	3.76/ 5.0	—	23/ 26	25/30	25/30
&TCC&024-060#1 &WCC&024-060#1 &TCY&024-060#1 &WCY&024-060#1 &WCZ&024-060#1	BAYHTRV108	208/ 240	1	29/ 33	6.0/ 8.0	20500/ 27300	1	6.0/ 8.0	—	36/ 41	40/45	40/45
&TCC&024-060#1 &WCC&024-060#1 &TCY&024-060#1 &WCY&024-060#1 &WCZ&024-060#1	BAYHTRV110	208/ 240	1	36/ 42	7.5/ 10.0	25600/ 34100	1	7.5/ 10.0	—	45/ 52	45/60	45/60
&TCC&030-060#1 &WCC&030-060#1 &TCY&030-060#1 &WCY&030-060#1 &WCZ&036-060#1	BAYHTRV115	208/ 240	1	54/ 63	11.2- 7/ 15.0	38500/ 51200	2	7.5/ 10.0	3.76/ 5.0	68/ 78	70/80	70/80
&TCC&048-060#1 &WCC&048-060#1 &TCY&042-060#1 &WCY&042-060#1 &WCZ&048-060#1	BAYHTRV120#	208/ 240	1	72/ 83	15.0/ 20.0	51200/ 68300	2	7.5/ 10.0	7.5/ 10.0	90/ 104	90/110	90/110
&TCC&060#1 &WCC&060#1 &TCY&042-060#1 &WCY&042-060#1 &WCZ&048-060#1	BAYHTRV125#	208/ 240	1	90/ 104	18.7- 8/ 25.0	64100/ 85300	2	11.2- 6/ 15.0	7.5/ 10.0	113/ 130	125/150	125/150
&W/TCY4036-060#3 &WCZ&036-060#3	BAYHTRV305	208/ 240	3	10/ 12	3.76/ 5.0	12800/ 17100	1	3.76/ 5.0	—	13/ 15	15/15	15/15
&W/TCY4036-060#3 &WCZ&036-060#3	BAYHTRV308	208/ 240	3	17/ 19	6.0/ 8.0	20500/ 27300	1	6.0/ 8.0	—	21/ 24	25/25	25/25
&W/TCY4036-060#3 &WCZ&036-060#3	BAYHTRV310	208/ 240	3	21/ 24	7.5/ 10.0	25600/ 34100	1	7.5/ 10.0	—	26/ 30	30/30	30/30
&W/TCY4036-060#3 &WCZ&036-060#3	BAYHTRV315	208/ 240	3	31/ 36	11.2- 7/ 15.0	38500/ 51200	2	7.5/ 10.0	3.76/ 5.0	39/ 45	40/45	40/45
&W/TCY4048-060#3 &WCZ&048-060#3	BAYHTRV320	208/ 240	3	42/ 48	15.0/ 20.0	51200/ 68300	2	7.5/ 10.0	7.5/ 10.0	52/ 60	60/60	60/60
&W/TCY4048-060#3 &WCZ&048-060#3	BAYHTRV325#	208/ 240	3	52/ 60	18.7- 8/ 25.0	64100/ 85300	2	11.2- 6/ 15.0	7.5/ 10.0	65/ 75	70/80	70/80
&WCZ&036-060#4	BAYHTRV405	480	3	6	5.0	17100	1	5.0	—	8	15	15
&WCZ&036-060#4	BAYHTRV408	480	3	10	8.0	27300	1	8.0	—	13	15	15
&WCZ&036-060#4	BAYHTRV410	480	3	12	10.0	34100	1	10.0	—	15	15	15
&WCZ&036-060#4	BAYHTRV415	480	3	18	15.0	51200	2	10.0	5.0	23	25	25
&WCZ&048-060#4	BAYHTRV420	480	3	24	20.0	68300	2	10.0	10.0	30	30	30

1. Any power supply and circuits must be wired and protected in accordance with local electrical codes.
2. The values listed in the above table are for the electric heater only.
3. Field wiring must be rated at least 75° C.
4. * indicates an alpha character.
5. † indicates model letter.
6. # Heater uses fuses.
7. & indicates a digit.

ALL VALUES ARE FOR THE ELECTRIC HEATER ONLY

^(a) The HACR circuit breaker is for U.S.A. installations only.

^(b) For Canada installation reference only.

Installer's Guide

Follow these instructions to install the supplementary heaters in packaged units as described in the heater tables throughout this guide.

These instructions do not purport to cover all variations in system hookups nor to provide for every possible contingency to be met in connection with the installation. Should further information be desired, or should particular problems arise which are not covered sufficiently for the purchaser's purposes, refer the matter to the manufacturer.

1. Check for any shipping damage and report any to the carrier immediately.
2. Check the heater nameplate and compare with the heater tables to ensure the available power supply complies with the table for the particular heater being used.

Install Heaters

1. Remove screws that secure the heater panel (located within control box access panel).
2. Remove and discard the patch plate covering the opening where the heater will be inserted.
3. Slide the heater element section of heater assembly into the opening and, tipping the heater slightly forward against the unit barrier, slide the heater up to engage the lip on the top of the barrier opening. Push forward to engage the slot on the bottom of the heater face into the tongue on the barrier. This will hold the heater in place. Replace the four screws removed in step 1. See [Figure 1, p. 5](#)
4. Connect the polarized plug from the heater control box to the matching polarized plug on the bottom of the air conditioner or heat pump unit control box. See [Figure 1, p. 5](#)

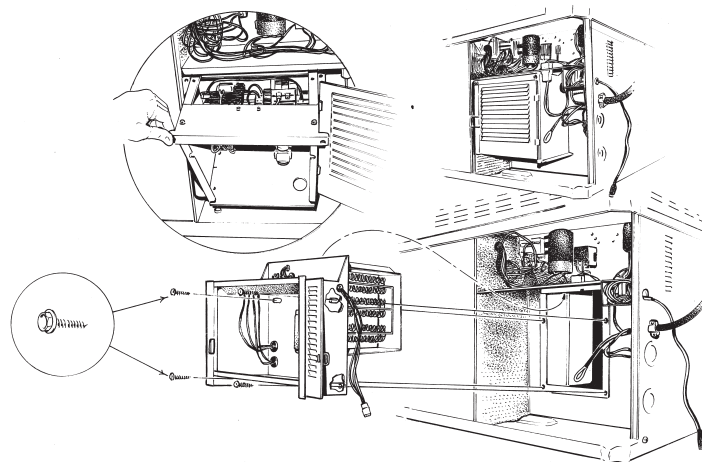
Low Voltage Wiring

All low voltage connections have been made to the heater via the polarized plug. The low voltage controls can be connected to the room thermostat from the air conditioner or heat pump Low Voltage leads. See wiring diagrams. Low voltage is 24 Volts.

1. Open the heater's control box access cover.
2. Remove the unit's power supply knockout.
3. Route the field wire through the heater compartment and strain relief bushing into the bottom of the heater housing.
4. Connect the power supply to the heater's wire leads or fuse block depending on the particular heater being used.
5. Connect the power supply ground lead to the heater's ground lead or ground lug depending on the particular heater being used.
6. Place the included extra heater wiring diagram on the inner surface of the control/heater access panel next to the unit wiring diagram, as the diagram on the heater may be only partially visible when installed.
7. Close the heater housing cover.
8. Reinstall the control box/heater access panel.
9. Restore power to the unit.

The BAYHTRV115, 120, 125, 315, 320, 325, 415, and 420 electric heaters have an inner pivoting control box to allow easy access to fuse links mounted on the heater back plate. Remove the 2 screws from the top front of the heater control box and pull the top of the inner control box toward you. For easier replacement of contactors, after pivoting the inner control box toward you, remove the screws securing the top brace of the heater control box as shown in [Figure 1, p. 5](#)

Figure 1. Typical Heater Installation

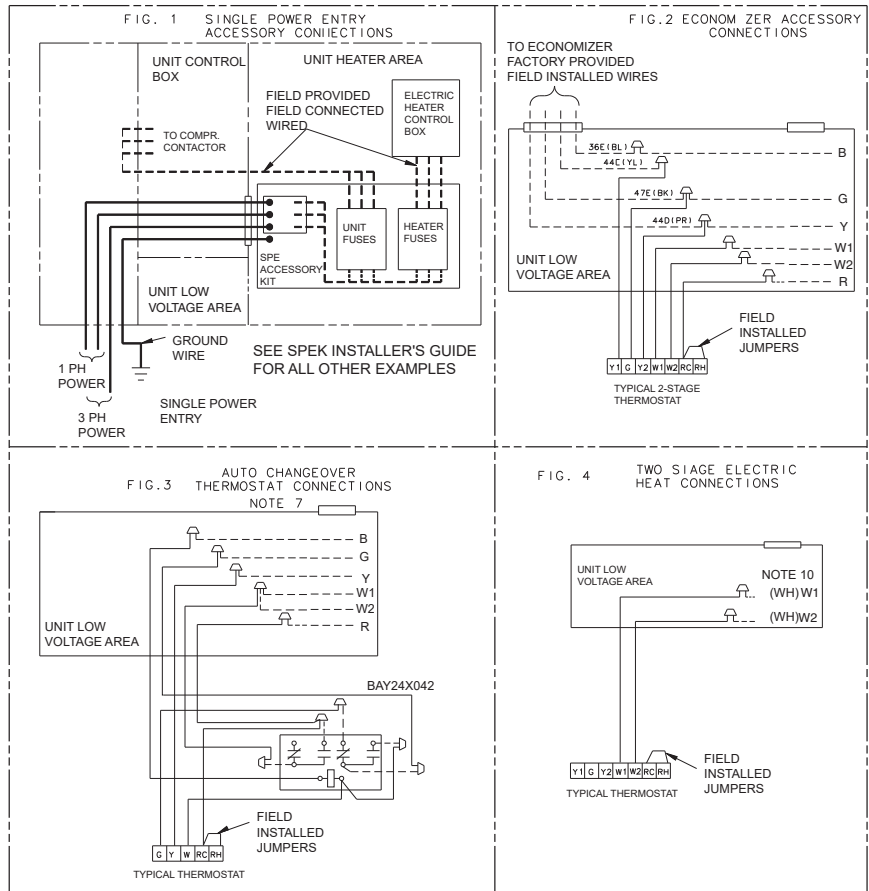
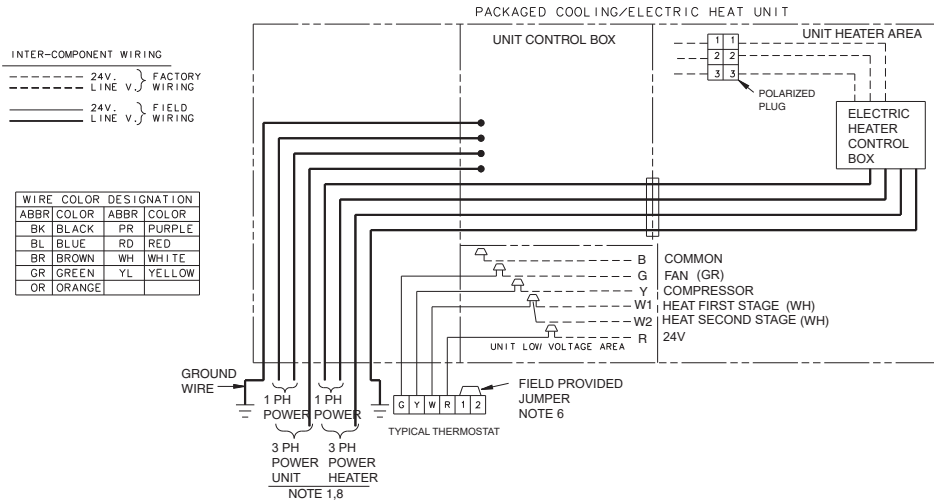


Field Wiring – Air Conditioners

Notes:

1. Fused disconnect size, power wiring and grounding of equipment must comply with codes.
2. Be sure power supply agrees with equipment and heater nameplate.
3. Low voltage wiring to be 18 AWG minimum conductor.
4. See heater nameplate for current rating of heater used.
5. See unit and heater diagram for electrical connection details.
6. Jumper must be connected between 1 and 2 for fan to operate in heating.
7. Some thermostats provide the 'G' signal in the cooling mode only. To provide the 'G' signal in the heating mode an accessory relay is required. See fig. 3 for proper connections.
8. For cooling only omit the electric heater, associated power wires and the 'W' signal thermostat wire.
9. Fig. 4 demonstrates connection of the two stage electric heat thermostat accessory only. For further unit connection details refer to the other figures.
10. The 41A (BR) wire is first stage electric heat. If the electric heater accessory has two heating stages the 41C (BR) wire is second stage electric heat.

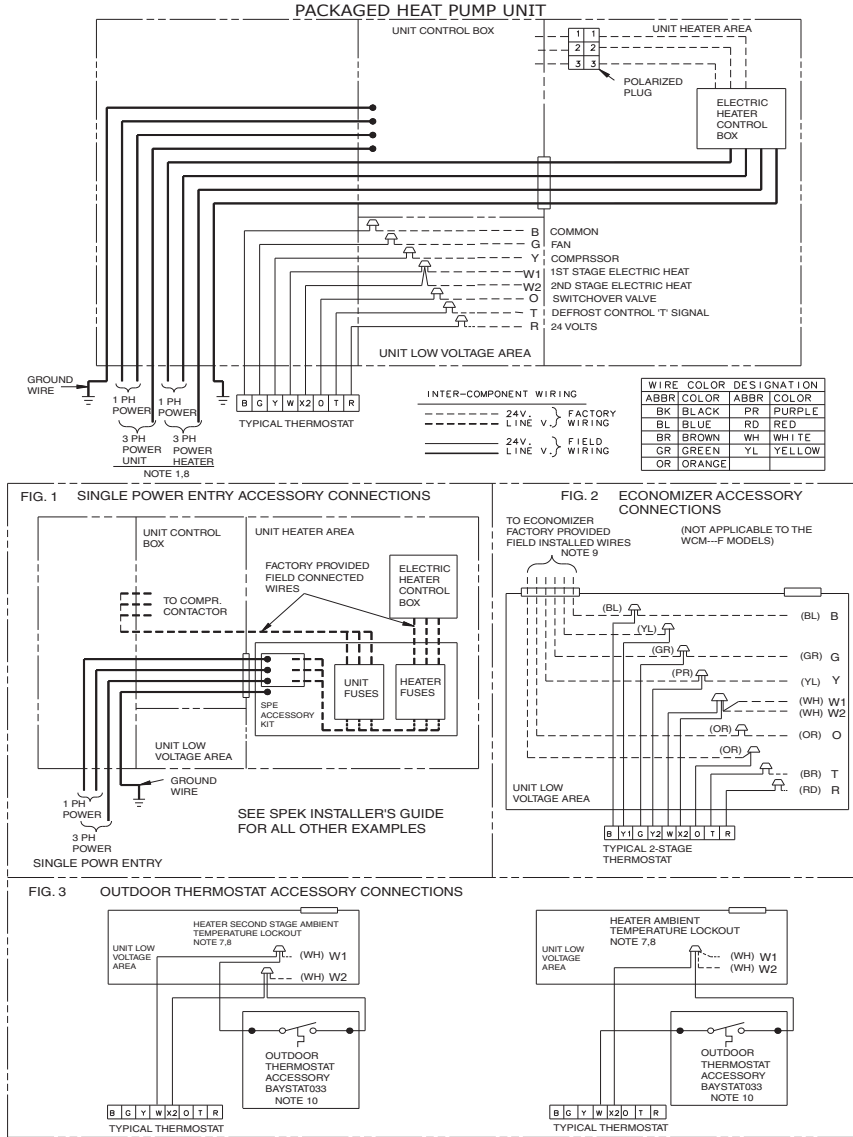
Figure 2. Field Wiring



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Field Wiring – Heat Pumps

Figure 3. Field Wiring



Notes:

1. Fused disconnect size, power wiring and grounding of equipment must comply with codes.
2. Be sure power supply agrees with equipment and heater nameplate.
3. Low voltage wiring to be 18 AWG minimum conductor.
4. See heater nameplate for current rating of heater used.
5. See unit and heater diagram for electrical connection details.
6. If electric heater accessory is not installed, omit the electric heater, associated power wires and the "W" and "X2" thermostat wires.
7. Fig 3 demonstrates connection of the outdoor thermostat accessory only. For further unit connection details refer to the other figures.
8. The W1 wire is first stage electric heat. If the electric heater accessory has two heating stages, the W2 wire is second stage electric heat.
9. When the BAYECON101/102 or BAYECON200/201 economizer is installed, the BAYRLAY004 relay accessory kit is required to interface the economizer to the heat pump for proper system operation.
10. The BAYSTAT033 outdoor thermostat accessory kit contains a thermostat and a relay. The relay is not required to be used in this application.

About Trane and American Standard Heating and Air Conditioning

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