

# Installation Instructions

## Electric Heat

### Foundation™ Packaged Rooftop Units 3 to 5 Tons

**Model Numbers:** BAYHTFA305\* BAYHTFA405\* BAYHTFAW10\*  
BAYHTFA307\* BAYHTFA407\* BAYHTFAW15\*  
BAYHTFA310\* BAYHTFA410\* BAYHTFAW20\*  
BAYHTFA315\* BAYHTFA415\* BAYHTFAW25\*  
BAYHTFA320\* BAYHTFA420\*  
BAYHTFA325\* BAYHTFA425\*

#### 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.

# Introduction

Read this manual thoroughly before operating or servicing this unit.

## Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

- ⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
- NOTICE** Indicates a situation that could result in equipment or property-damage only accidents.

## Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

## Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

### ⚠ WARNING

#### Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury. All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow requirements for field wiring installation and grounding as described in **NEC** and your local/state/national electrical codes.

### ⚠ WARNING

#### Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST** follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians **MUST** put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). **ALWAYS** refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians **MUST** put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit. **NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

**⚠ WARNING**

**Follow EHS Policies!**

Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

**⚠ WARNING**

**R-454B Flammable A2L Refrigerant!**

Failure to use proper equipment or components as described below could result in equipment failure, and possibly fire, which could result in death, serious injury, or equipment damage.

The equipment described in this manual uses R-454B refrigerant which is flammable (A2L). Use ONLY R-454B rated service equipment and components. For specific handling concerns with R-454B, contact your local representative.

## Copyright

This document and the information in it are the property of Trane, and may not be used or reproduced in whole or in part without written permission. Trane reserves the right to revise this publication at any time, and to make changes to its content without obligation to notify any person of such revision or change.

## Trademarks

All trademarks referenced in this document are the trademarks of their respective owners.

# Table of Contents

General Information .....	5
Inspection .....	5
Parts List .....	5
General .....	5
Installation .....	6
Remove Parts from Packaging .....	6
Heater Installation .....	7
Electrical Data .....	12

# General Information

## Inspection

1. Check carefully for shipping damage. If any damage is found, report it immediately, and file a claim against the transportation company. Replace damaged parts with authorized parts only.
2. Compare the order number on the shipping label with the accessory identification information on the ordering and shipping documents to verify that the correct accessory has been received.

## Parts List

**Table 1. Parts list**

Qty	Description
1	Heater element assembly
1	Heater control assembly
1	Heater support bracket
10	1/2-in. Sheet metal screws
1	Wiring diagram(s)

## General

These instructions cover the installation of accessory electric heat in cooling only units.

**Table 2. Limit control settings (°F)**

Heater Rated Voltage	Downflow and Horizontal	
	Auto Reset	One shots
240V	130	220
480V	130	220
600V	130	220

**Table 3. Air temperature rise across electric heaters (°F)**

kW	Stages	3 Tons	4 Tons	5 Tons
		940 CFM EB*036A* ED*036A*	1280 CFM EB*048A* ED*048A*	1640 CFM EB*060A* ED*060A*
4.7	1	12.38	9.29	7.43
7.5	1	19.76	14.82	11.85
10	1	26.34	19.76	15.81
14.4	1	37.93	28.45	22.76
20	2	–	39.51	31.61
25	2	–	–	39.51

**Notes:**

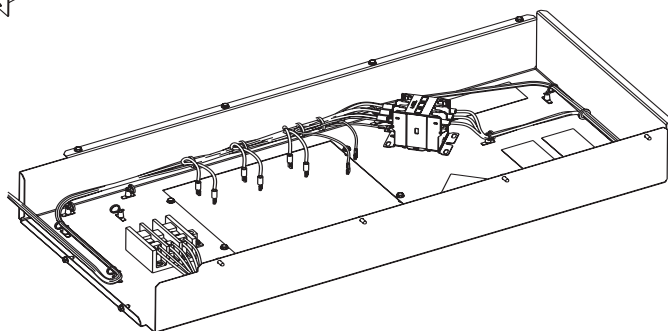
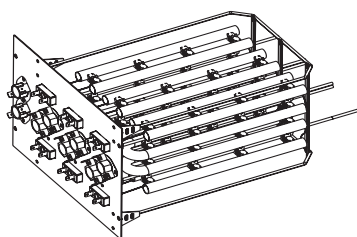
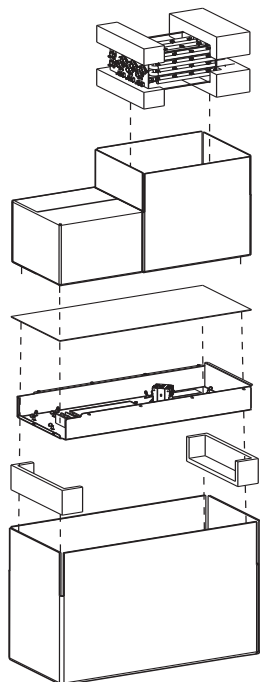
1. For minimum design airflow, see airflow performance table for each unit.
2. To calculate temp rise at different airflow, use the following formula:  
Temp. rise across electric heater = kW x 3414/1.08 x cfm.

# Installation

## Remove Parts from Packaging

1. Remove all components from packaging.
2. Discard foam supports before installing heater.

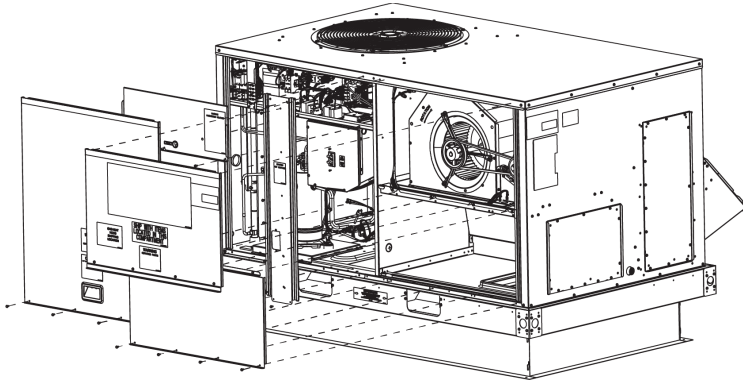
Figure 1. Unpack heater



## Heater Installation

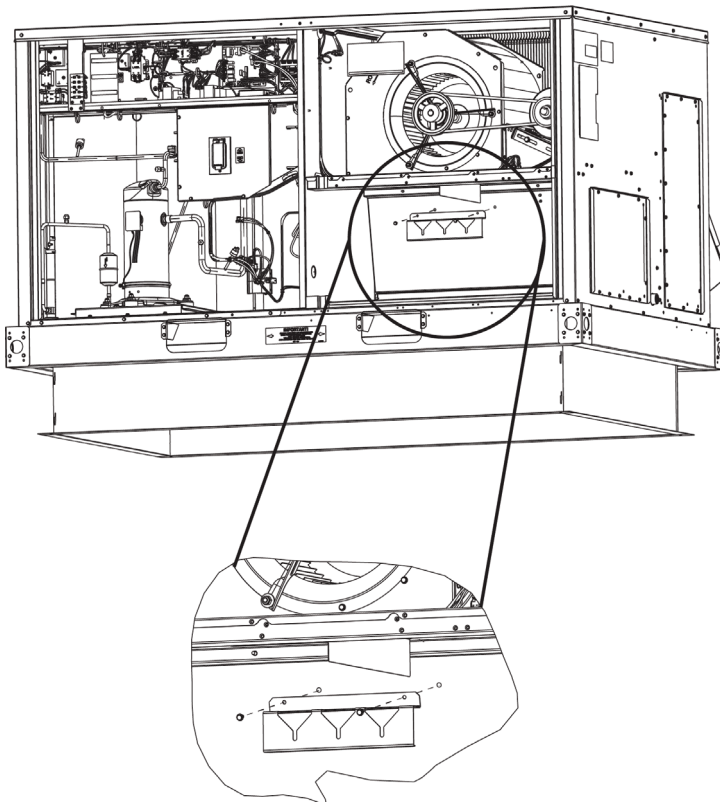
1. Remove indoor fan panel, electric heater panel, compressor access panel, vertical post, and control box panel.

**Figure 2. Remove panel**



2. Using two sheet metal screws provided, install heater support bracket to the back wall of the fan deck.

**Figure 3. Install support bracket**

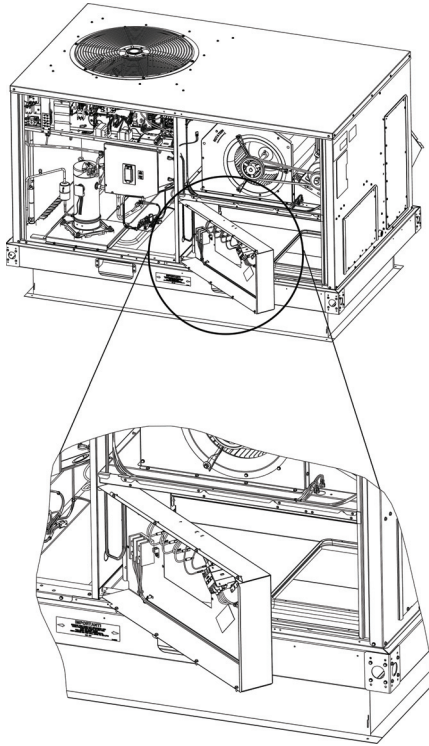


## Installation

---

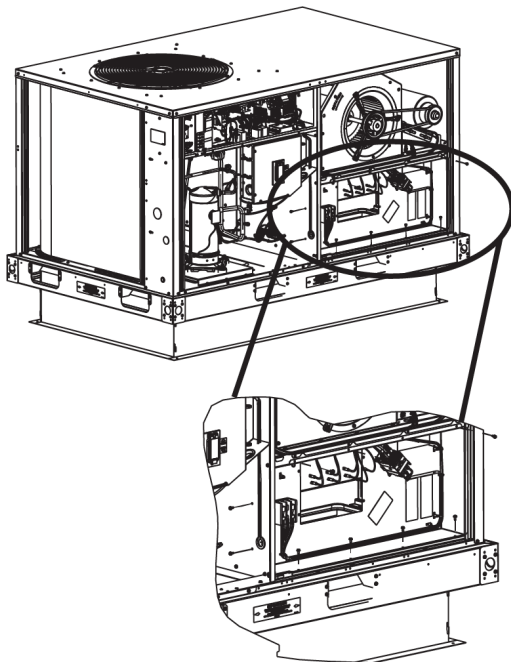
3. Install vestibule by inserting left side then seating the right side against the corner post.

**Figure 4. Install vestibule**



4. Align screw holes and secure vestibule with sheet metal screws provided in the kit.

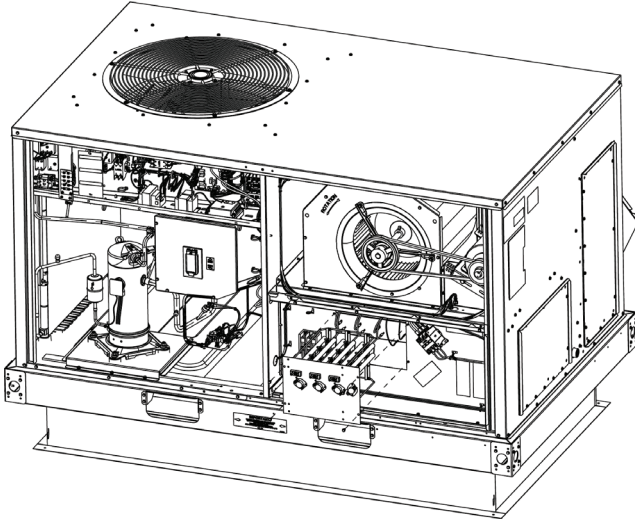
**Figure 5. Secure vestibule with screws**



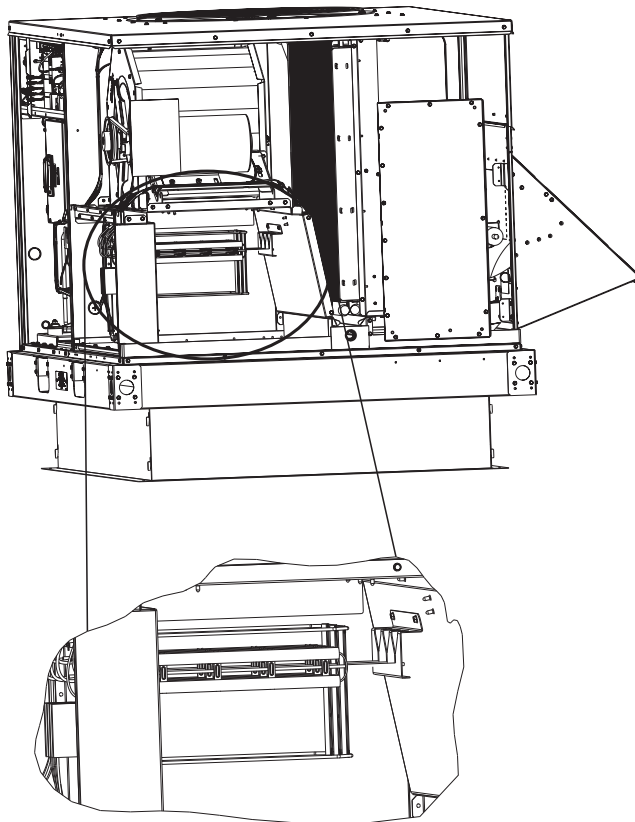


5. Through the opening, locate the bracket attached to the indoor fan panel on the top. Insert heater at an angle into the opening while angling the rear side higher than the front so the heater support wires are above the cutouts in the bracket. Slide heater assembly through cutouts in bracket until faceplate seats against vestibule

**Figure 6. Install heater**



**Figure 7. Install heater - side view**

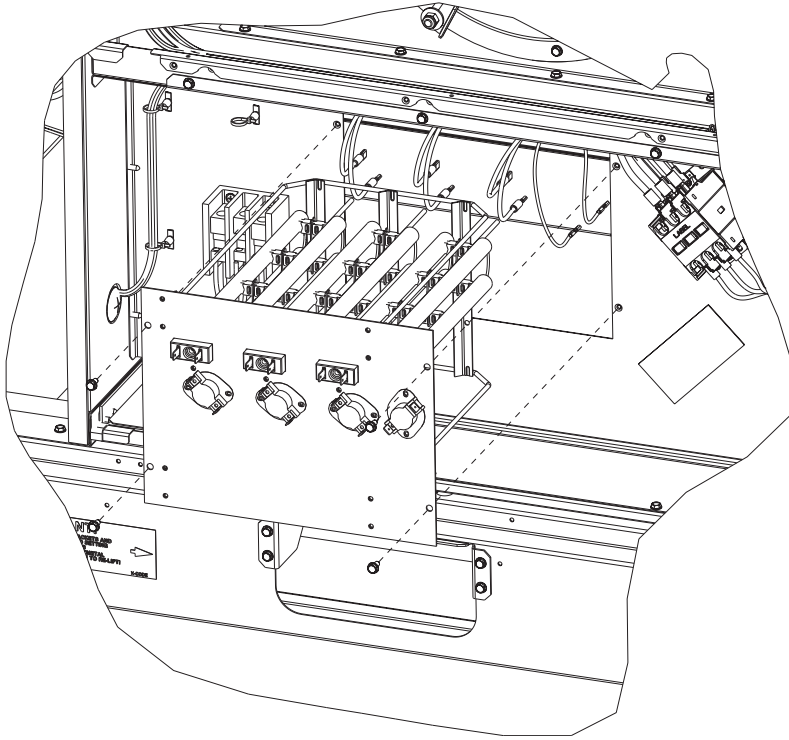


## Installation

---

- Secure heater with 1/2-inch sheet metal screws provided in the ship-with packet, shooting through the pre-drilled holes.

**Figure 8. Secure heater with screws**

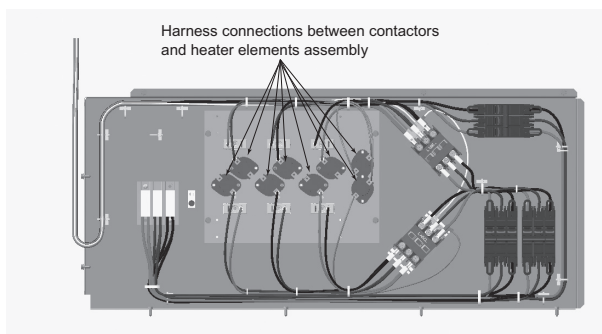


- Punch hole in rubber grommet in mid-panel behind post prior to routing wires.

**Note:** Use wiring diagram provided to perform the following steps.

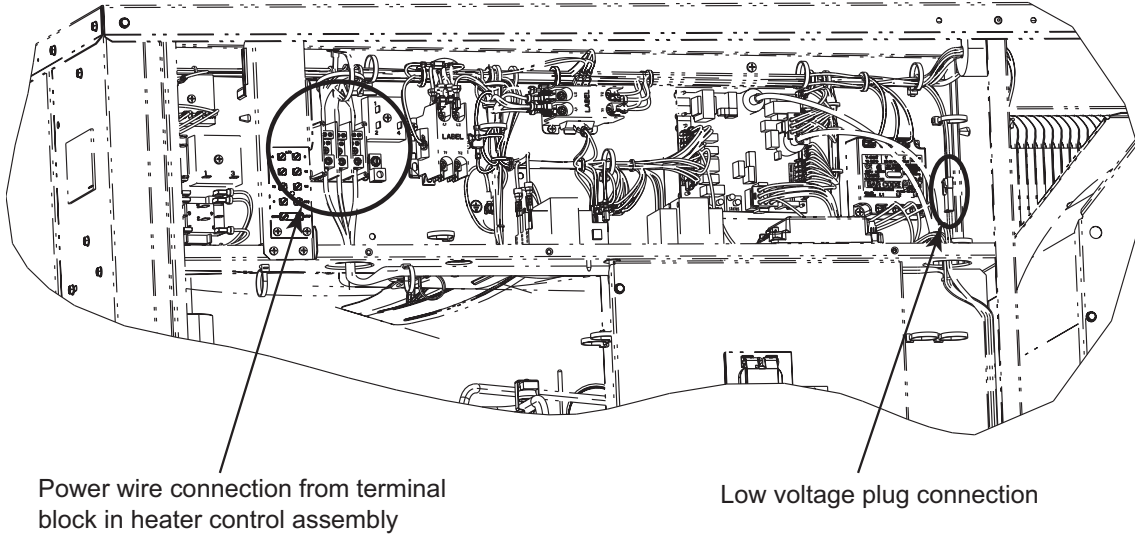
- Attach wires pre-routed in vestibule to heater.

**Figure 9. Attach wires**



- Connect low voltage plug to the mating plug in the unit control box.
- Route and secure the power wire harness, one end to the terminal block in the heater control panel and the other end to the terminal block in the unit control box or terminal block at single point box or TBUE, as required.

Figure 10. Route power wire harness



11. Replace panels removed in [Step 1](#).

# Electrical Data

**Table 4. Unit wiring with electric heat (single point connection)**

Tons	Unit Model Number	Heater Model Number	Heater kW Rating <sup>(a)</sup>	Control Stages	Heater Amps	Standard Indoor Motor		Oversize Indoor Motor	
						MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker <sup>(b)</sup>
<b>208/230 Volts Three Phase</b>									
3	EB*036A3 ED*036A3	BAYHTFA305*	3.5/4.7	1	9.8/11.3	23/23	25/25	24/24	30/30
		BAYHTFA307*	5.6/7.5	1	15.6/18.0	26/29	25/30	28/31	30/35
		BAYHTFA310*	7.5/10	1	20.8/24.1	33/37	30/40	34/38	35/40
		BAYHTFA315*	10.8/14.4	1	30.0/34.6	44/50	40/50	46/52	45/60
4	EB*048A3 ED*048A3	BAYHTFA305*	3.5/4.7	1	9.8/11.3	23/23	35/35	25/25	35/35
		BAYHTFA307*	5.6/7.5	1	15.6/18.0	26/29	35/35	28/32	35/35
		BAYHTFA310*	7.5/10	1	20.8/24.1	33/37	35/40	34/38	35/40
		BAYHTFA315*	10.8/14.4	1	30.0/34.6	44/50	40/50	46/52	45/60
		BAYHTFA320*	15/20	2	41.7/48.1	59/67	60/70	60/69	60/70
5	EB*060A3 ED*060A3	BAYHTFA305*	3.5/4.7	1	9.8/11.3	28/28	40/40	29/29	40/40
		BAYHTFA307*	5.6/7.5	1	15.6/18.0	28/29	40/40	29/31	40/40
		BAYHTFA310*	7.5/10	1	20.8/24.1	33/37	40/40	34/38	40/40
		BAYHTFA315*	10.8/14.4	1	30.0/34.6	44/50	40/50	46/52	45/60
		BAYHTFA320*	15/20	2	41.7/48.1	59/67	60/70	60/69	60/70
		BAYHTFA325*	18.8/25	2	52.1/60.1	72/82	70/90	74/84	70/90
<b>460 Volts Three Phase</b>									
3	EB*036A4 ED*036A4	BAYHTFA405*	5	1	6	11	15	12	15
		BAYHTFA407*	7.5	1	9	15	15	16	20
		BAYHTFA410*	10	1	12	19	20	19	20
		BAYHTFA415*	15	1	18	25	30	26	30
4	EB*048A4 ED*048A4	BAYHTFA405*	5	1	6	11	15	12	15
		BAYHTFA407*	7.5	1	9	15	15	17	20
		BAYHTFA410*	10	1	12	19	20	19	20
		BAYHTFA415*	15	1	18	25	30	26	30
		BAYHTFA420*	20	2	24.1	34	35	34	35
5	EB*060A4 ED*060A4	BAYHTFA405*	5	1	6	13	20	13	20
		BAYHTFA407*	7.5	1	9	15	20	16	20
		BAYHTFA410*	10	1	12	19	20	19	20
		BAYHTFA415*	15	1	18	25	30	26	30
		BAYHTFA420*	20	2	24.1	34	35	34	35
		BAYHTFA425*	25	2	30.1	42	45	42	45
<b>575 Volts Three Phase</b>									
3	EB*036AW ED*036AW	BAYHTFAW10*	10	1	9.6	15	15	16	15
		BAYHTFAW15*	15	1	14.4	20	25	21	25
4	EB*048AW ED*048AW	BAYHTFAW10*	10	1	9.6	15	15	16	15
		BAYHTFAW15*	15	1	14.4	20	25	21	25
		BAYHTFAW20*	20	2	19.2	27	30	28	30

**Table 4. Unit wiring with electric heat (single point connection) (continued)**

Tons	Unit Model Number	Heater Model Number	Heater kW Rating <sup>(a)</sup>	Control Stages	Heater Amps	Standard Indoor Motor		Oversize Indoor Motor	
						MCA	Max Fuse Size or Max Circuit Breaker	MCA	Max Fuse Size or Max Circuit Breaker <sup>(b)</sup>
5	EB*060AW ED*060AW	BAYHTFAW10*	10	1	9.6	15	15	16	15
		BAYHTFAW15*	15	1	14.4	20	25	21	25
		BAYHTFAW20*	20	2	19.2	27	30	28	30
		BAYHTFAW25*	25	2	24.1	33	35	34	35

(a) Heater kW ratings are at 208/240V for 208/230V units, 480V for 380V and 460V units, and 600V for 575V units.

(b) Values do not include power exhaust accessory.

## Notes

---



Trane and American Standard create comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit [trane.com](http://trane.com) or [americanstandardair.com](http://americanstandardair.com).

Trane and American Standard have a policy of continuous product and product data improvement and reserve the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.