

<b>Electric Heater Model WEM series</b>  208/240-1-60 208/240-3-60 480-3-60	<b>INSTALLATION INSTRUCTIONS</b>  Date: 08/25/2017	<b>TRANE</b>  <b>TEM3, TEM4, TEM6, TEM8 Air Handlers</b>
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## GENERAL

This electric heater series is engineered, designed, and approved to be installed in the Trane / American Standard TEM3, TEM4, TEM6, TEM8 series air handlers. Before proceeding, check the heater label for the correct voltage and KW requirements.

**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 base installation instructions for complete unit installation details. **Verify that all elements are properly secure in their ceramic holders.**

## HEATER INSTALLATION

1. Refer to the base unit installation instructions as required. Affix Warren Heater installer label to the equipment access panel.
2. Remove blower access panel of the air handler unit.
3. Remove cover plate from back panel of air handler control and wiring compartment (see fig. 1). A tin snip will be required to cut the tabs of the cover plate. Discard the cover plate.
4. Position and slide heater assembly into blower section through the access opening (mounting position is important, check the label "AIR FLOW" on the heater for correct Air Flow position). Secure heater into place with (4) screws provided.
5. Terminal Block, Pull Disconnect, or Breakers are shipped installed onto the heater bracket. For installation locate special tab at the top edge of bracket and insert tab into slot located on the top side of the air handler (see fig. 3). Use screws provided to secure bracket into place. All excess wires need to be routed away from sharp edges.
6. Remove pull disconnect or circuit breaker knockout(s) in unit access panel.
7. Remove circuit breaker knockout(s) in unit access panel and ensure alignment of breakers or pull disconnect through access panel. Install breaker filler plate by aligning the filler plate cut-out with upper section of the breaker (see fig. 2).
8. Install blower access panel.
9. Apply wiring diagram to the cabinet for future reference.
10. **Breaker Cover:** Install cover by peeling the protective film on the back of the breaker cover and by pressing this cover firmly onto the access door. Verify, that the breaker cover completely seals.

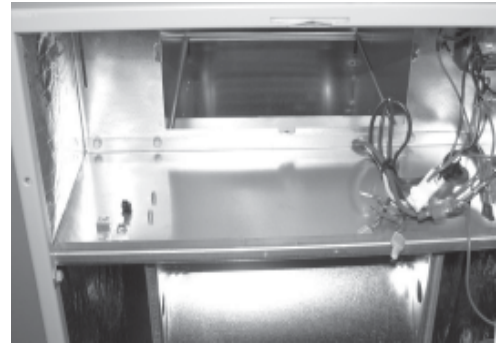
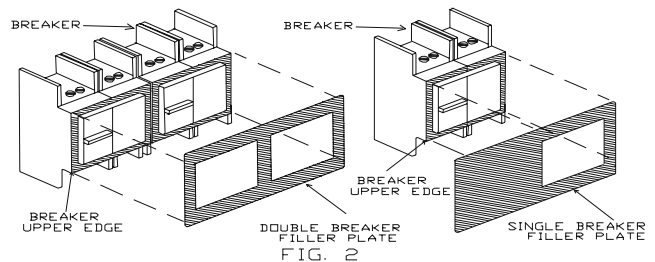


Fig. 3 - Heater bracket installation.

### **FILLER PLATE INSTALLATION INSTRUCTIONS (see fig. 2):**

- A. **Align breaker filler plate cut-out with the upper edge section of the breaker.**
- B. **Press the filler plate firmly around the upper edge of the breaker(s). Apply even pressure to all sides of the filler plate. Check that the filler plate is wrapped around the top edge of the breaker(s)**



## 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.** When installed in a garage, heater elements should have a clearance of 18" from the floor, insure that the area is ventilated.

## 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. Use copper wire only.
2. Power may be brought into the unit through the top..
3. Refer to base unit instructions for recommended wiring procedures.
4. **TEM3(4)(6):** Connect the 6-pin plug to the receptacle of the air handler.  
**TEM6:** Cap the low voltage wires on the heater (use wire nuts provided).
5. **480V "A" model:** The transformer is for use on applications were 480V heaters are being wired into 208/240 volt single phase AHU. The single point transformer must be externally mounted and secured with screws onto the air handler unit. Use the louvered transformer cover (provided) for protection of this part (see fig. 4). For wiring purposes the wiring on the transformer is labeled and color coded (refer to schematic).
6. 480V "non transformer" model: Dual source circuit is required to power the electric heater and unit separately. Remove (2) "480V" labeled wires from terminal block. Tighten remaining wire connections on the terminal block
7. Separate all wires from incoming power leads.
8. **Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding. Verify that there are no possible shorts to ground.**
9. Check wiring diagram supplied with heater for specific connections and information.
10. Check operation as described in start-up section.

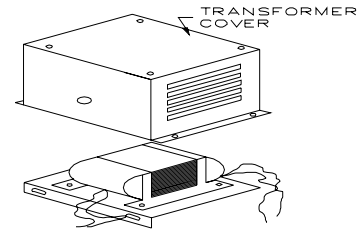


Fig. 4 - Transformer Cover.

## 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. Refer to air flow data table for adjustment of Fan motor speed.**

MINIMUM HEATING AIR FLOW CHART					
TEM3	WEM HEATER MODEL				
	5.0 Kw models	8.0 Kw models	10.0 Kw models	15.0 Kw models	20.0 Kw models
MODEL NUMBER					
TEM3A0B18	L	M	M		
TEM3A0B24	L	M	M		
TEM3A0B30	L	L	L	L	
TEM3A0B36	L	L	L	L	
TEM3A0C42	L	L	L	L	
TEM3A0C48	L	L	L	L	
TEM3A0C60	L	L	L	L	M

Note: Refer to air handler performance data for recommended speed settings.

**Air Flow Data Table**

**CAUTION:** When commissioning any AHU with electric heat, **ALWAYS** check to see if the heater is cycling on its automatic reset high temperature limit when the system is producing the highest temperature leaving the AHU coil. **If the heater is cycling increase the air flow by increasing the fan speed or lowering the ductwork static pressure**

## HEATER KIT CONTENTS

1. Heater assembly.
2. Installation Instructions.
3. Installer label.
4. Wiring diagram.
5. (1) filler plate (Breaker models only).
6. (1) Breaker Cover (breaker models only).
7. (6) screws.

**USER CAUTION:** The use of improperly selected air filters/ and or operation with dirty filters may result in insufficient airflow which may result in abnormal operation of electric heaters and tripping of temperature safety limits. Also, insufficient airflow will degrade the efficiency of the system (SEER rating) and excessive wear and premature failure of the system compressor may result. Other conditions, such as undersized or obstructed ductwork, may also cause insufficient airflow. It is recommended that a qualified technician be consulted to ensure proper airflow and air filtration selection and application. See ([www.lowairflow.com](http://www.lowairflow.com)) for more information.