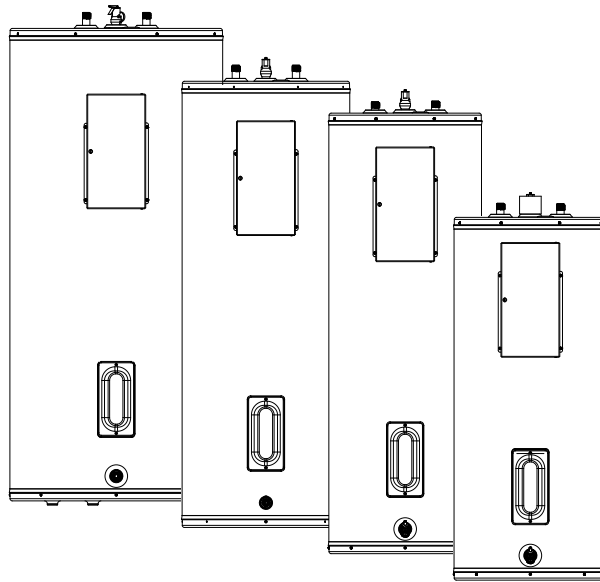




Electric Water Heaters CONVERSION KIT INSTRUCTIONS

FOR INSTALLATION BY QUALIFIED SERVICE PERSONNEL ONLY



ELD
Terminal Block Configuration

**▲ CAUTION: TEXT PRINTED OR OUTLINED IN RED
CONTAINS INFORMATION RELATIVE TO YOUR SAFETY.
PLEASE READ THOROUGHLY BEFORE ATTEMPTING ANY
CONVERSION.**



LISTED
ELD - AP19447 (11/17)

FOREWORD

The purpose of this manual is to explain how to change the voltage and wattage of a Rheem/ Ruud commercial electric water heater when changing the elements. This manual is not intended to explain the reconstruction of commercial electric water heaters in the field.

The addition or subtraction of heating elements to increase or decrease the total number of heating elements in the field is not approved by UL, Inc., and therefore, is not allowed and should not be attempted.

Please note the limitation that both the heater required and the heater to be converted must be found in this manual. Before attempting any conversion read the detailed instructions.

▲ SAFETY

Be sure to disconnect appliance from electrical supply before working on or near the electrical system of the heater. Never touch electrical components with wet hands or when standing in water.

REQUIRED ABILITY

CONVERSION OF ANY WATER HEATER LISTED IN THIS MANUAL REQUIRES ABILITY EQUIVALENT TO THAT OF A LICENSED ELECTRICAL TRADESMAN.

NOTICE!!

You **MUST** use **Factory Authorized Replacement Parts** when converting electric water heaters per this Procedure.

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CONVERSION MATERIALS

1. Element Plug Remover: or 1-1/2" deep well socket and ratchet.
2. Screwdrivers: Two required. One #2 Phillips and one slotted screwdriver.
3. Conversion kit: Includes conversion instructions. Replacement electrical elements, conversion kit label, and caution label.

Heaters being converted should always be placed in a well lit area. Heater may be completely removed from carton. Alternatively, a 3-sided flap may be cut into front of carton. Cut should be on top, bottom and right side. Leave the left side of the flap for hinge effect. Cuts made approximately 4" from edges of carton will allow proper repackaging when conversion is completed.

CONVERSION GUIDELINES

Be sure to read and understand the following guidelines before starting any conversion.

1. **ELD and, ELDS** series water heaters factory configured for **208, 240, 277 or 480** volt operation **MAY** be converted **ONLY** as follows:
 - a. Element wattages and/or voltage within the limits allowed per table below.
 - b. You **CAN NOT** convert these models to 120 V operation.

2. The following factory configurations **MAY NOT** be changed during conversion of **any** water heater under any circumstances:
 - a. Original manufacturer's thermostat **MAY NOT** be removed or replaced. The internal wiring must stay in the water heater. It cannot be added to, removed or replaced.

ELD-TB CONVERSION CHARTS

Element Wattage Upper or Lower	Voltage			
	208	240	277	480
3,000	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)
4,000	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)
4,500	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)
5,000	Zone 1 (Fused)	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)
6,000	Zone 1 (Fused)	Zone 1 (Fused)	Zone 1 (Non-Fused)	Zone 1 (Non-Fused)
6,050	Zone 2 (Fused)	Zone 2 (Fused)	Zone 2 (Non-Fused)	Zone 2 (Non-Fused)

** NON FUSED CONFIGURATIONS CAN NOT CONVERT TO FUSED.

** ZONE 2 HEATERS CAN CONVERT DOWN TO ZONE 1, BUT ZONE 1 CANNOT CONVERT UP TO ZONE 2.

** 6050 HEATERS ARE FOR ELD 66, 80, AND 120 MODELS ONLY.

AVAILABLE KITS FOR THE ELD(S)-TB

TERMINAL BLOCK WIRING				
SINGLE OR THREE PHASE OPERATION				
MODEL	VOLTAGE	ELEMENT KW INPUT	KIT WATTAGE	KIT NUMBER
ELD(S) MODELS UNDER 55 GALLON	208	3.0	3000 / 3000	SP20943
		4.0	4000 / 4000	SP20944
		4.5	4500 / 4500	SP20945
		5.0	5000 / 5000	SP20946
		6.0	6000 / 6000	SP20947
	240	3.0	3000 / 3000	SP20948
		4.0	4000 / 4000	SP20949
		4.5	4500 / 4500	SP20950
		5.0	5000 / 5000	SP20951
		6.0	6000 / 6000	SP20952
	277	3.0	3000 / 3000	SP20953
		4.0	4000 / 4000	SP20954
		4.5	4500 / 4500	SP20955
		5.0	5000 / 5000	SP20956
		6.0	6000 / 6000	SP20957
	480	3.0	3000 / 3000	SP20958
		4.0	4000 / 4000	SP20959
		4.5	4500 / 4500	SP20960
		5.0	5000 / 5000	SP20961
		6.0	6000 / 6000	SP20962
ELD MODELS OVER 55 GALLON	208	6.05	6050 / 6050	SP20963
	240	6.05	6050 / 6050	SP20964
	277	6.05	6050 / 6050	SP20965
	480	6.05	6050 / 6050	SP20966
	208	3.0	3000 / 3000	SP20967
		4.0	4000 / 4000	SP20968
		4.5	4500 / 4500	SP20969
		5.0	5000 / 5000	SP20970
		6.0	6000 / 6000	SP20971
	240	3.0	3000 / 3000	SP20972
		4.0	4000 / 4000	SP20973
		4.5	4500 / 4500	SP20974
		5.0	5000 / 5000	SP20975
		6.0	6000 / 6000	SP20976
	277	3.0	3000 / 3000	SP20977
		4.0	4000 / 4000	SP20978
		4.5	4500 / 4500	SP20979
		5.0	5000 / 5000	SP20980
		6.0	6000 / 6000	SP20981
	480	3.0	3000 / 3000	SP20982
4.0		4000 / 4000	SP20983	
4.5		4500 / 4500	SP20984	
5.0		5000 / 5000	SP20985	
6.0		6000 / 6000	SP20986	

CONVERSION PROCEDURE

NOTICE!!


ANY DEVIATION FROM THE FOLLOWING PROCEDURE WILL RELEASE THE MANUFACTURER FROM ANY LIABILITY AND WARRANTY.

1. Determine new element wattage and voltage (if applicable). Determine KIT NUMBER used for the conversion based on the VOLTAGE and WATTAGE and the model per table on page 5.
2. Unpack the water heater and remove the access panels to the upper and lower elements and remove the insulation pad over the thermostat(s).
3. Remove the thermostat protective cover if applicable.
4. On the upper element **ONLY** - Remove the element wires from the retaining screws of the element.
5. With an element wrench, unscrew the old element from the heater tank.
6. Be sure to place a **NEW** gasket on the replacement element. Insert the new element into the tank using an element wrench. Snug the element up firmly.
7. Wire the element by attaching the water heater red and black leads to the elements.
8. Proceed with the conversion of the lower element by following steps 5 through 7.
9. PHASE CHANGES can be made at the terminal block. Please refer to the wiring diagram in the U&C manual
10. When the conversion is complete, replace the thermostat protective covers over the thermostats and elements. Reposition the insulation and the access panels. Reposition power leads in the field wiring junction box as needed (in front of the water heater). Ensure that the cover plate is re-attached to junction box.
11. Proceed to “New Rating Label Instructions” (page 7 for ELD models under 55 gallon and page 8 for ELD models over 55 gallon) for details.
12. After you install the new rating plate and nameplate overlay, re-package the water heater if necessary. Mark new wattage and voltage information on the carton label.

NEW RATING LABEL INSTRUCTIONS

RATING LABEL MODIFICATION FOR ELECTRIC WATER HEATERS UNDER 55 GALLON

The following is a sample of the standard rating label supplied on the front of the ELD.

UPC-A BAR CODE HERE						
SERIAL NO.	A441799999		MFD	26OCT2017		
MODEL NO.	ELD52-TB		CAP.	50		
TEST PRESSURE	300 PSI		 <p>LISTED HOUSEHOLD STORAGE TANK WATER HEATER 786H</p>			
WORKING PRESSURE	150 PSI					
VOLTS (50/60 HZ)	277				AC	
OPERATION	NON-SIM				SIM	
PHASE	1 PH	3 PH			1 PH	3 PH
WATT UPPER	4500	4500			4500	4500
WATT LOWER	4500	4500			4500	4500
WATT TOTAL	4500	4500			9000	9000
AMP	16	16			32	28
RHEEM SALES COMPANY, INC. WATER HEATER DIVISION MONTGOMERY, AL 36117 USA						


CONVERTED RATING LABEL

THE VOLTS, WATTS, AND PHASE INFORMATION OF THE RATING LABEL MUST BE MODIFIED BY COVERING THEM WITH CONVERSION LABEL PROVIDED IN THE CONVERSION KIT.

BE SURE THE NEW RATINGS ON THE LABEL MATCH THE CONVERSION YOU HAVE JUST COMPLETED.

VOLTS (50 / 60 HZ)	240		AC	
OPERATION	NON-SIM		SIM	
PHASE	1 PH	3 PH	1 PH	3 PH
WATT UPPER	3000	3000	3000	3000
WATT LOWER	3000	3000	3000	3000
WATT TOTAL	3000	3000	6000	6000
AMP	13	13	25	22

PEEL OFF THE BACK OF THE LABEL AND PASTE OVER THE ORIGINAL AS SHOWN ON THE REVISED RATING LABEL BELOW.

UPC-A BAR CODE HERE						
SERIAL NO.	A441799999		MFD	26OCT2017		
MODEL NO.	ELD52-TB		CAP.	50		
TEST PRESSURE	300 PSI		 <p>LISTED HOUSEHOLD STORAGE TANK WATER HEATER 786H</p>			
WORKING PRESSURE	150 PSI					
VOLTS (50/60 HZ)	240				AC	
OPERATION	NON-SIM				SIM	
PHASE	1 PH	3 PH			1 PH	3 PH
WATT UPPER	3000	3000			3000	3000
WATT LOWER	3000	3000			3000	3000
WATT TOTAL	3000	3000			6000	6000
AMP	13	13			25	22
RHEEM SALES COMPANY, INC. WATER HEATER DIVISION MONTGOMERY, AL 36117 USA						

USE THE CLEAR OVERLAY TO PROTECT THE CONVERTED RATING PLATE.


Proceed to page 9 "Additional Labeling Instructions".

NEW RATING LABEL INSTRUCTIONS

RATING LABEL MODIFICATION FOR ELECTRIC WATER HEATERS OVER 55 GALLON

The following is a sample of the standard rating label supplied on the front of the ELD.

UPC-A BAR CODE HERE									
SERIAL NO.	A4417999999					MODEL NO.	ELD66-TB		
MANUFACTURE DATE	20OCT2017					TEST PRESSURE	300	PSI.	
CAPACITY	65		US GAL.	WORKING PRESSURE			150	PSI.	
VOL TS (50/60 HZI) AC	277			240			208		
OPERATION	SIM		NONSIM		SIM		NONSIM		
UPPER ELEMENT WATT	6050	6050	4540	4540	3410	3410			
LOWER ELEMENT WATT	6050	6050	4540	4540	3410	3410			
TOTAL WATTAGE	12100	6050	9080	4540	6820	3410			
PHASE	1-PH	3-PH	1-&3-PH	1-PH	3-PH	1-&3-PH	1-PH	3-PH	1-&3-PH
UPPER ELEMENT AMP	22	NA	22	19	NA	19	16.5	NA	16.5
LOWER ELEMENT AMP	22	NA	22	19	NA	19	16.5	NA	16.5
TOTAL AMP	44	38	22	38	33	19	33	29	16.5



LISTED
COMMERCIAL
STORAGE TANK
WATER HEATER
1860

RHEEM SALES COMPANY, INC.
WATER HEATER DIVISION
MONTGOMERY, AL 36117 USA

CONVERTED RATING LABEL


THE VOLTS, WATTS, AND PHASE INFORMATION OF THE RATING LABEL MUST BE MODIFIED BY COVERING THEM WITH CONVERSION LABEL PROVIDED IN THE CONVERSION KIT.

BE SURE THE NEW RATINGS ON THE LABEL MATCH THE CONVERSION YOU HAVE JUST COMPLETED.

VOL TS (50/60 HZI) AC	480								
OPERATION	SIM		NONSIM						
UPPER ELEMENT WATT	6050	6050							
LOWER ELEMENT WATT	6050	6050							
TOTAL WATTAGE	12100	6050							
PHASE	1-PH	3-PH	1-&3-PH						
UPPER ELEMENT AMP	12.6	NA	12.6						
LOWER ELEMENT AMP	12.6	NA	12.6						
TOTAL AMP	25.2	22	12.6						

PEEL OFF THE BACK OF THE LABEL AND PASTE OVER THE ORIGINAL AS SHOWN ON THE REVISED RATING LABEL BELOW.

UPC-A BAR CODE HERE									
SERIAL NO.	A4417999999					MODEL NO.	ELD66-TB		
MANUFACTURE DATE	20OCT2017					TEST PRESSURE	300	PSI.	
CAPACITY	65		US GAL.	WORKING PRESSURE			150	PSI.	
VOL TS (50/60 HZI) AC	480								
OPERATION	SIM		NONSIM						
UPPER ELEMENT WATT	6050	6050							
LOWER ELEMENT WATT	6050	6050							
TOTAL WATTAGE	12100	6050							
PHASE	1-PH	3-PH	1-&3-PH						
UPPER ELEMENT AMP	12.6	NA	12.6						
LOWER ELEMENT AMP	12.6	NA	12.6						
TOTAL AMP	25.2	22	12.6						



LISTED
COMMERCIAL
STORAGE TANK
WATER HEATER
1860

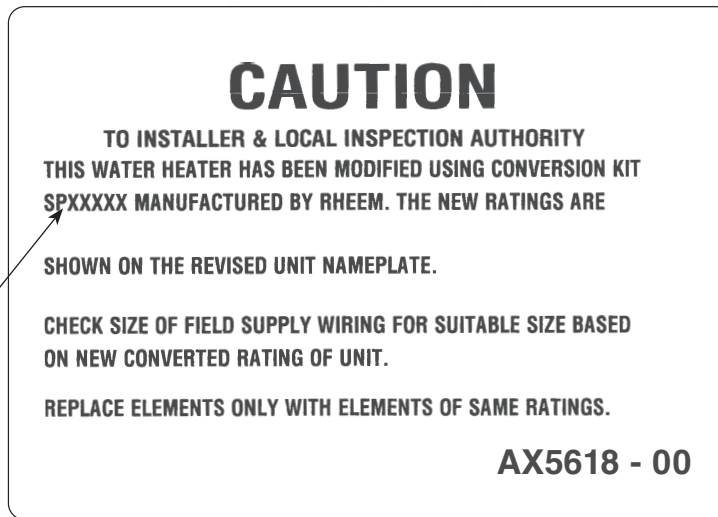
RHEEM SALES COMPANY, INC.
WATER HEATER DIVISION
MONTGOMERY, AL 36117 USA

USE THE CLEAR OVERLAY TO PROTECT THE CONVERTED RATING PLATE.

Proceed to page 9 "Additional Labeling Instructions".

ADDITIONAL LABELING INSTRUCTIONS

Verify that this number matches the conversion kit that was ordered.



Peel off the back of the caution label and attach to the upper right hand corner of the control panel door.

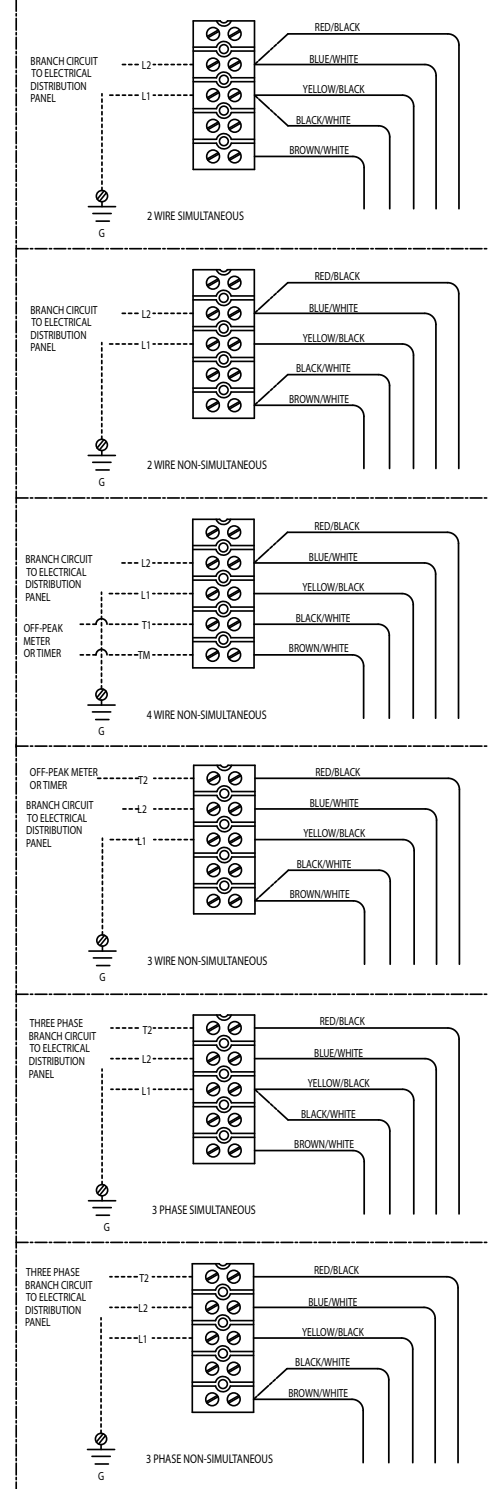
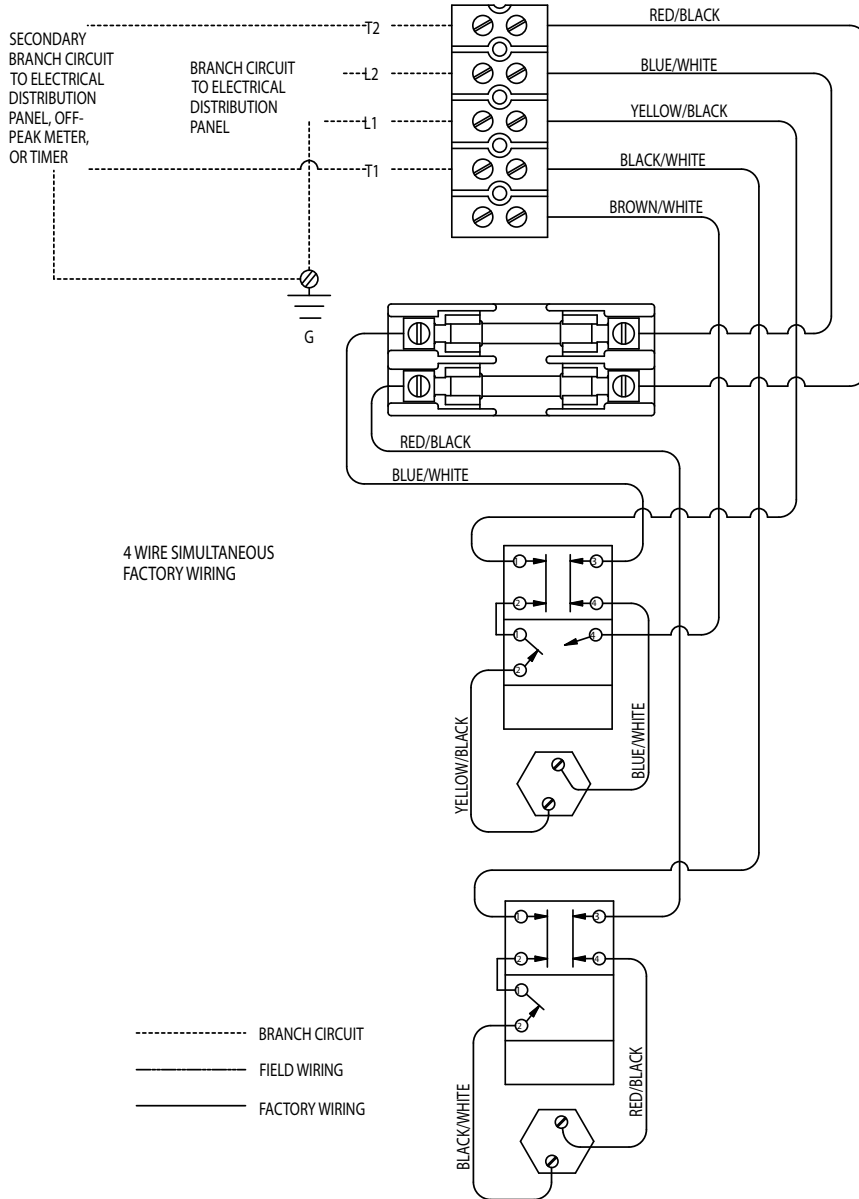
Close and tape cardboard flap on front of carton.

NOTICE: NEVER OPERATE THE HEATER WITHOUT FILLING IT WITH WATER PER THE FILLING INSTRUCTIONS. FAILURE TO DO SO WILL DAMAGE INTERNAL PARTS.

Using a black magic marker, cross out the heater identification on the carton as appropriate. In bold letters, write the new electrical specifications on the carton, which matches those on the revised rating label.

WIRING DIAGRAMS

Fused Model



WIRING DIAGRAMS

Unfused Model

