




GreenTronic 7000 T
Hybrid Electric Water Heaters
TR7000T-50 | TR7000T-65 | TR7000T-80

Engineering
 Submittal
 Sheet



BOSCH

Overview and Project Information

  	Project Name	
	Location	
	Architect	
	Engineer	
	General Contractor	
	Reference #	
	Date	
<p>Features & Benefits:</p> <ul style="list-style-type: none"> ▶ 3-4x more efficient than traditional electric water heater ▶ Designed for indoor residential applications ▶ Demand response capable (includes CTA-2045 port) ▶ An integrated handle on each side of the water heater ▶ Terminal block wiring ▶ Pre-mounted feet ▶ Pre-installed brass drain valve ▶ Pre-installed T&P valve ▶ Metal water connections ▶ Condensate drainpipe ▶ Insulation sleeve 		

Basic Product Information

Model	TR7000T-50US	TR7000T-50CA	TR7000T-65US	TR7000T-65CA	TR7000T-80US	TR7000T-80CA
Bosch Part Number	7738007434	7738007436	7-738-007-484	7-738-007-485	7738007435	7738007437
Water Connections	3/4" NPT					
Max. Water Pressure	150 PSI					
Temperature Setpoint Range	109 – 149 °F (43°C – 65°C)					
Factory Setpoint	120 °F (US)	60 °C (CA)	120 °F (US)	60 °C (CA)	120 °F (US)	60 °C (CA)
Condensor Coil Construction	Aluminum Microchannel					
Ingress Protection Rating	IP21					
Product Net Weight	218 lbs		271 lbs		293 lbs	
Product Operating Weight	593 lbs		771 lbs		901 lbs	
Product Shipping Weight	265 lbs		335 lbs		360 lb	

Certifications

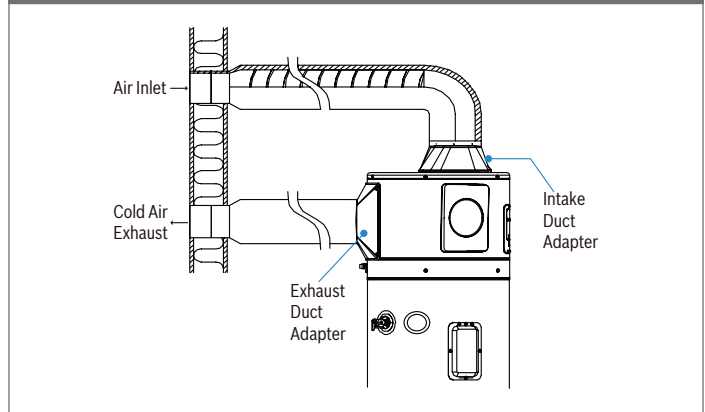
Product Safety Certifications	UL 174 and UL 60335-2-40 certified
Low lead compliant	NSF372 certified
Performance	AHRI certified, Energy Star certified



Electrical Specification						
Model	TR7000T-50US	TR7000T-50CA	TR7000T-65US	TR7000T-65CA	TR7000T-80US	TR7000T-80CA
Power Supply	208/240VAC 30A (1Ph 60Hz)					
Required Circuit Breaker	25A / 30A					
(HACR) size	(208VAC / 240VAC)					
Min. Circuit Amps	23.6A / 26.8A (208VAC / 240VAC)					
Total Current	21.5A					
Copper Wire Size	10 AWG					
Electric Heating Elements	2 per unit					
Electric Heating Elements Rating at 208V	16.3A, 12.8 Ω, 3380W					
Electric Heating Elements Rating at 240V	18.8A, 12.8Ω, 4500W					
Refrigerant Specification						
Refrigerant Type	R134a					
Refrigerant Charge	18.3 oz, 0.52 kg					
Refrigerant Design Pressure - High Side	333.59PSIG / 2.3MPa					
Refrigerant Design Pressure - Low Side	87PSIG / 0.6MPa					
Refrigerant Max. Allowed Pressure - High Side	435.11PSIG / 3.0MPa					
Refrigerant Max. Allowed Pressure - Low Side	188.5PSIG / 1.3Mpa					
Compressor Specification						
Compressor Rated Amps	0.16A, 1/13HP					
Compressor Locked Rotor Amps	12A					
Compressor Rated Input	408 W					
Compressor Heating Capacity	1,593 W					
Operational Specification						
Ambient Operation Temperature	5 – 115 °F					
Ambient Operation Temperature for Heat Pump	37 – 109 °F					
Noise Level (under normal conditions)	Operates at 49dB(A)					

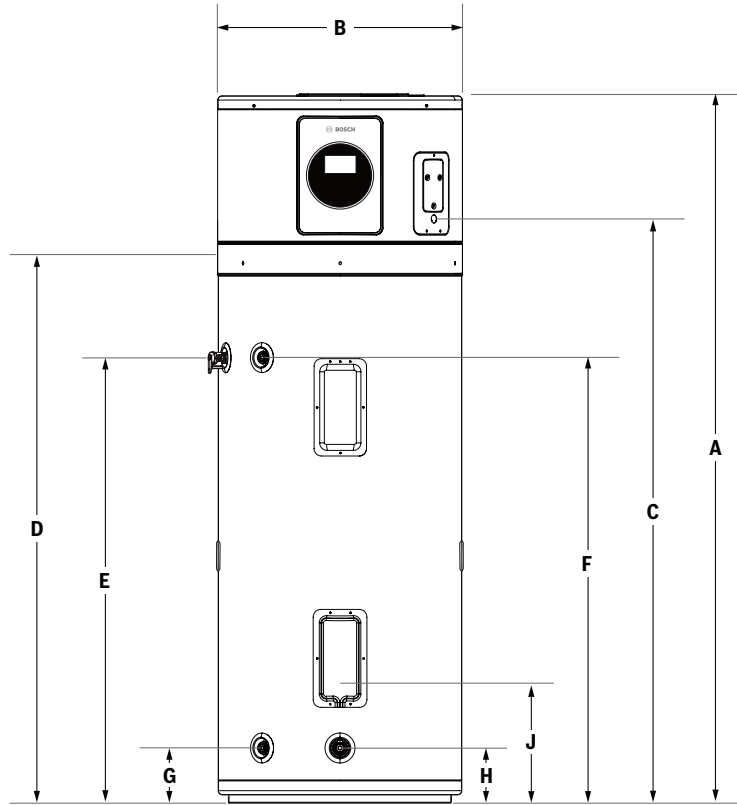
Optional Accessories	
Description	Part Number
Leak Protection Kit	7738007445
Duct Adapter Kit	7738007443

Duct Adapter Accessory Example





Dimensions



Dimensions

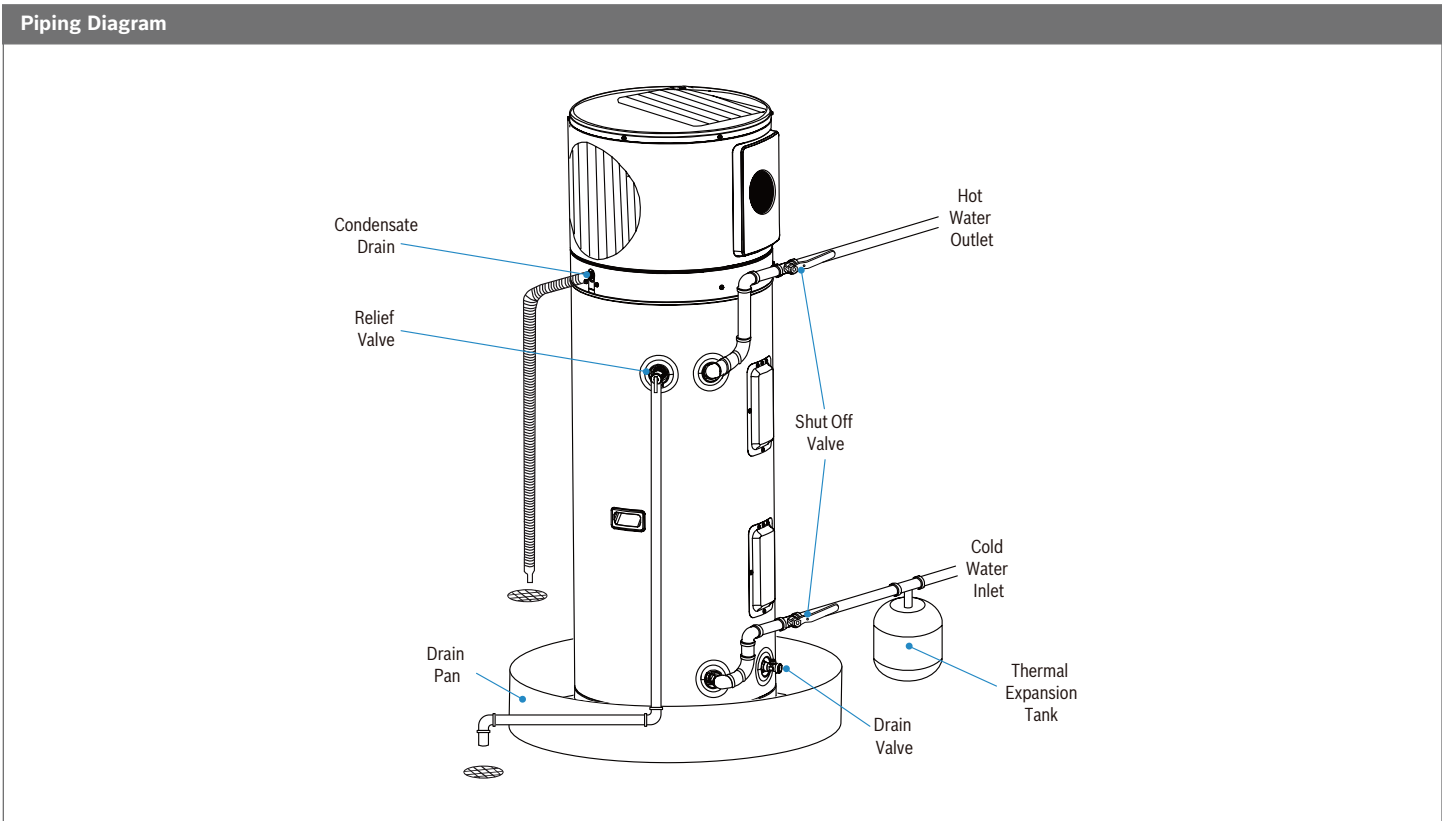
Model Number	Dimensions in inches (floor to)								
	Height	Diameter	Electrical Knockout	Condensate Drain*	T&P Relief Valve	Hot Water Outlet	Cold Water Inlet	Drain Valve	Lower Heating Element
	A	B	C	D	E	F	G	H	J
TR7000T-50US TR7000T-50CA	66 ½ (169 cm)	21 ¾ (56 cm)	53 ½ (136 cm)	49 ½ (126 cm)	39 ¾ (101 cm)	39 ¾ (101 cm)	5 ½ (14 cm)	5 ½ (14 cm)	14 (36 cm)
TR7000T-65US TR7000T-65CA	65 ¾ (167 cm)	25 ¾ (66 cm)	52 ¾ (134 cm)	48 ¾ (124 cm)	37 ¾ (96 cm)	37 ¾ (96 cm)	5 ½ (14 cm)	5 ½ (14 cm)	13 ¼ (34 cm)
TR7000T-80US TR7000T-80CA	74 ½ (190 cm)	25 ¾ (66 cm)	61 ½ (157 cm)	57 ½ (146 cm)	46 ¾ (119 cm)	46 ¾ (119 cm)	5 ½ (14 cm)	5 ½ (14 cm)	12 (31 cm)

Required Minimum Clearances

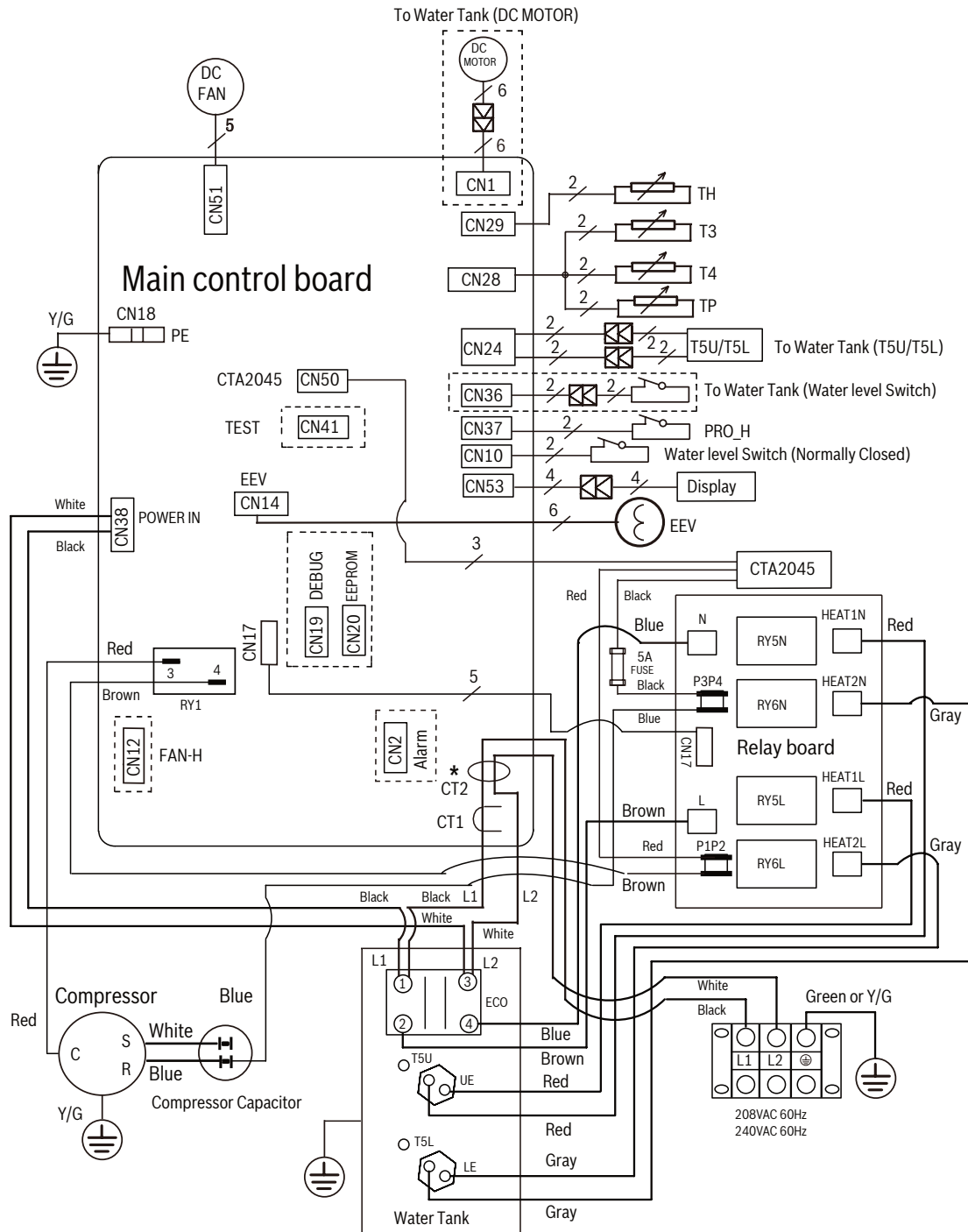
Model Number	Required Clearance for Operation		Required Clearance for Service	
	Air Exhaust	Top	Air Exhaust	Top
TR7000T-50US, TR7000T-50CA, TR7000T-65US, TR7000T-65CA	6" (15.3 cm)	20" (51 cm)	6" (15.3 cm)	25.5" (65 cm)
TR7000T-80US, TR7000T-80CA	6" (15.3 cm)	20" (51 cm)	6" (15.3 cm)	32" (81.3 cm)

Performance					
Model	Capacity	Input / Power Supply		Energy Factor	First Hour Rating
	Nominal Capacity	Watts (upper/lower)	Power Supply		
TR7000T-50US, TR7000T-50CA	50 Gallon	4500W	208/240VAC 30A (1Ph 60Hz)	3.75	69 Gallon
TR7000T-65US, TR7000T-65CA	65 Gallon	4500W	208/240VAC 30A (1Ph 60Hz)	3.90	80 Gallon
TR7000T-80US, TR7000T-80CA	80 Gallon	4500W	208/240VAC 30A (1Ph 60Hz)	4.00	91 Gallon

Equivalent Feet for Duct Accessories / Reduced Diameter Terminations				
Description	8"	7"	6"	5"
Elbow / Flexible Bends (Each) [Maximum Allowed]	5 ft [8]	5 ft [6]	5 ft [4]	5 ft [2]
8 in. UL Certified Termination for Ducting Outside (Each)	5 ft	5 ft	5 ft	5 ft
Reduced diameter UL Certified Termination for Ducting Outside (Each)	N/A	10 ft	15 ft	20 ft
8 in. Register for Ducting Inside (Each)	5 ft	5 ft	5 ft	5 ft
Reduced Diameter Register For Ducting Inside (Each)	N/A	10 ft	15 ft	20 ft
Rodent Screen (must be greater than 83% open area) (Each)	1 ft	1 ft	1 ft	1 ft
Approved 8" Diameter Duct Damper	25 ft	20 ft	10 ft	5 ft



Electrical Diagram





Air Flow Requirements

This water heater uses the heat in the air to heat up the water in the tank. Therefore a minimum enclosed space of 700 ft³ is required to ensure desired operation. Not enough air flow may result in increased usage of the electric heating elements and therefore reduction of efficiency and increased power usage.

If installation place is smaller than 700 ft³, consider louvered door options to the space or ducting the air flow to and from the unit.

Air Flow Options and Space Requirements:			
Air Flow Opening	Ducting	Minimum Installation Space Requirement (ft ³)	Installation Example
Enclosed Room	None	700 (19.8 m3)	
Fully Louvered Door OR Upper & Lower Louvers in Door OR Upper Louver with Undercut Door	None	84 (2.4 m3)	
Upper Louver OR Undercut Door	Inlet OR Outlet	None	
None	Inlet AND Outlet	None	

Components Diagram

