



# SELF-CONTAINED HEAT PUMP PACKAGE UNITS

FORM NO. PTZ-762 REV. 1  
Supersedes Form No. PTZ-762

## TZHH- SUPER HIGH EFFICIENCY 13-SEER SERIES NOMINAL SIZES 2-5 TONS [7-17.6 kW]

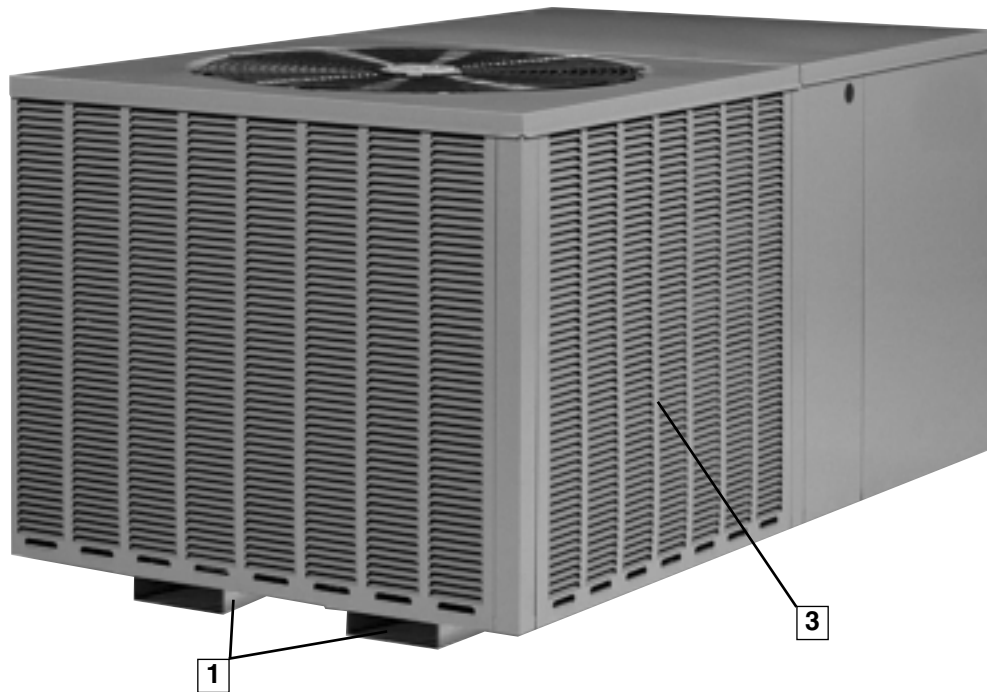


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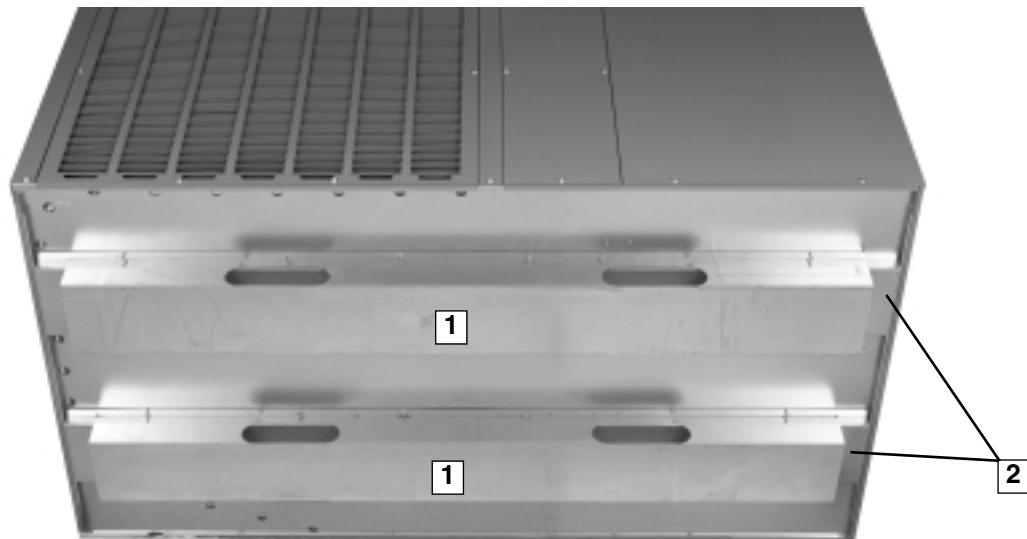
## UNIT FEATURES & BENEFITS—TZHH- SERIES



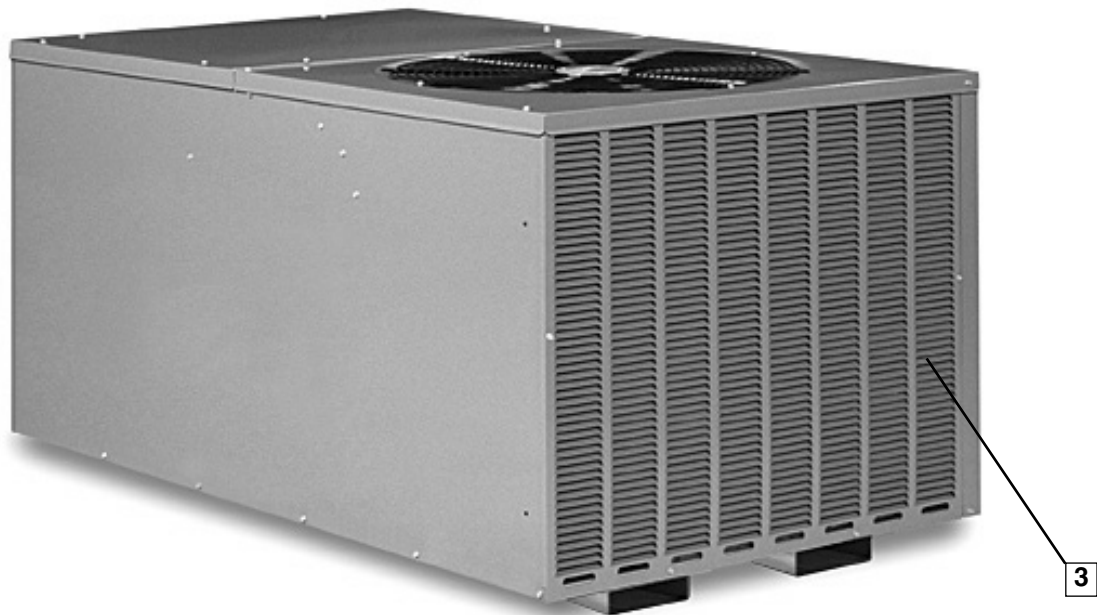
The TZHH- series of Package Heat Pumps are designed to be the most efficient, quickest to install, easiest to service, and most reliable units in the industry - while still maintaining an affordable price. This platform provides you with a full line of nominal capacities from 2 through 5 tons. TZHH- models are 13 SEER and ARI-certified.

As with all units, we started our design process with input from the customer. From fan grille to the base rails, this unit has combined 30 years worth of package unit design experience with input from Contractors to meet the latest application requirements.

Starting at the bottom, the base rails (1) allow for separation between the unit base and the ground level, protecting the base from ground moisture and providing air circulation around the unit. Constructed from sturdy 18-gauge G-90 sheet metal, the base rails also allow for easier maneuverability during installation. In some instances, installers may choose to remove the base rails to allow for the lower installation clearances encountered in some homes. Once the base rails are removed, though, the base of the unit is still positioned above the pad by a shorter secondary base rail (2).

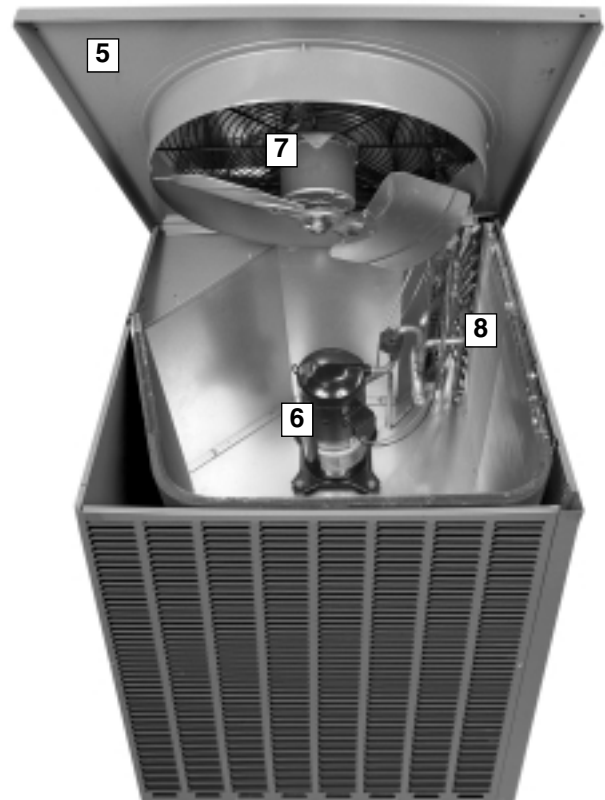


## UNIT FEATURES & BENEFITS—TZHH- SERIES

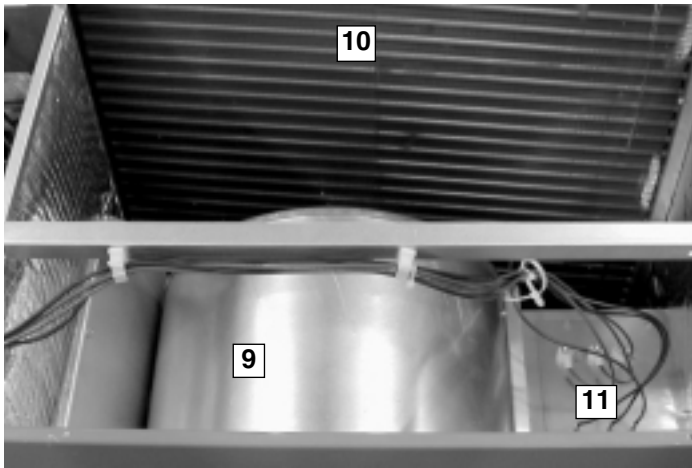


To provide flexibility in space-limited installations, the unit can be installed flush to the structure without blocking airflow over the outdoor coil or making any screws inaccessible for maintenance. Furthermore, the cabinet is a slim 33" wide. Full-louver coil protection (3) makes these units unique in the industry and also totally protects the outdoor coil from vandalism and weather extremes.

Keeping service technicians in mind, pride is taken providing easy access to internal components. The outdoor-section top cover (5) is easily removed to allow access to the scroll compressor (6), outdoor fan motor (7), and refrigerant tubing (8).



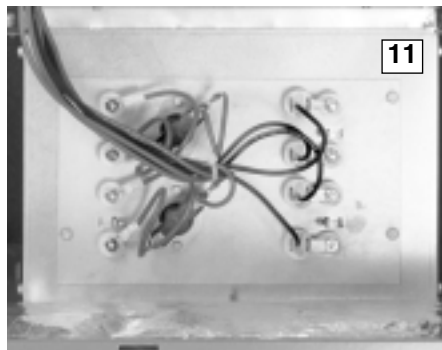
## UNIT FEATURES & BENEFITS—TZHH- SERIES



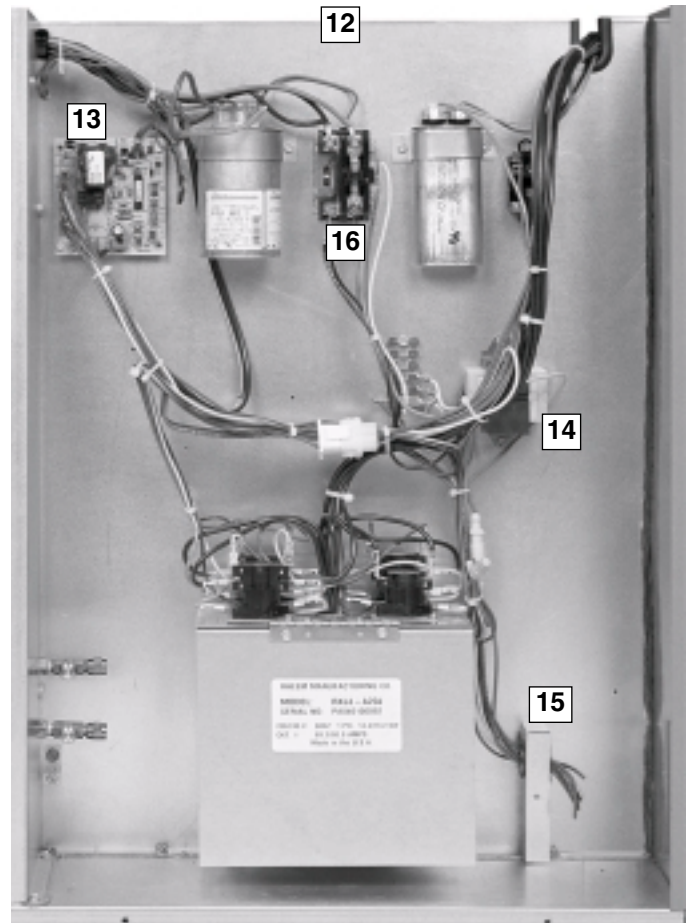
The indoor-section top cover also easily opens to access the removable blower housing and motor (9). This also gains total access to the indoor coil for cleaning and service (10).

The indoor motor and blower system will achieve nominal 400 CFM per ton up to a minimum of .8 inches of static pressure, which helps to eliminate customer dissatisfaction over poor airflow brought about by high-static duct designs.

Optional electric heat (11) can be easily installed in the field, with either dual- or single-point power, and is designed to easily install into the unit. Electric heat can also be specified as factory installed.

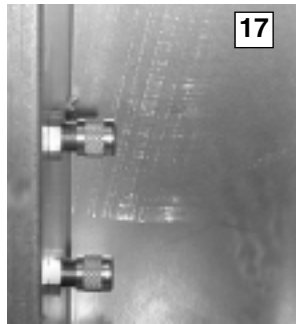


The controls are located in a large, easy-to-access control box (12), which provides plenty of space in which to troubleshoot. A demand defrost control (13) is used to manage the defrost cycle. The transformer (14) is protected by a in-line fuse, which protects the transformer during a low-voltage electrical short. The low-voltage (15) and high-voltage (16) wiring connections are easily accessed and have ample room around which to maneuver. Troubleshooting is further aided with number- and color-coded wiring, which corresponds with the large, easy-to-read wiring diagram located on the inside of the control box access panel.



## UNIT FEATURES & BENEFITS—TZHH- SERIES

High and low pressure can easily and accurately be measured using the two gauge ports (17) located inside the control box.



Foil-faced insulation is securely glued and captured to the cabinet. On the base of the unit, closed-cell insulation is used to prevent moisture from being absorbed and help reduce mold content to provide better indoor air quality.

For reliability and long-lasting operation, 100% scroll compressor technology is used (20) on all package platforms. With over 12 years of history, the scroll compressor has proven to be reliable, efficient, and quiet during operation.



A small side panel grants access to a removable, sloped drain pan (18), which helps to ensure indoor air quality (IAQ) throughout the life of the unit. A 3/4" drain trap (19) assembly is provided for convenience.



# MODEL IDENTIFICATION—TZHH- SERIES



<b><u>TZ</u></b>	<b><u>H</u></b>	<b><u>H</u></b>	<b>— 024</b>	<b><u>J</u></b>	<b><u>A</u></b>
Thermal Zone®	Heat Pump	Horizontal	Nominal Cooling Capacity (BTUH) [kW]	Voltage J = 208-230V-PH-60Hz	A = R-22 Refrigerant
			24 = 24,000 [7.03 kW]		
			30 = 30,000 [8.79 kW]		
			36 = 36,000 [10.55 kW]		
			42 = 42,000 [12.31 kW]		
			48 = 48,000 [14.07 kW]		
			60 = 60,000 [17.59 kW]		

[ ] Designates Metric Conversions

# GENERAL DATA—TZHH- SERIES

## NOMINAL SIZES 2-5 TONS [7-17.6 kW]

Model TZHH- Series	24JA	30JA	36JA	42JA
<b>Cooling Performance<sup>1</sup></b>				<b>CONTINUED</b> →
Gross Cooling Capacity Btu [kW]	25,000 [7.32]	30,000 [8.79]	37,000 [10.84]	43,500 [12.75]
EER/SEER <sup>2</sup>	11.2/13	11.25/13	11.45/13	11.85/13
Nominal CFM/ARI Rated CFM [L/s]	800/800 [378/378]	1000/1000 [472/472]	1200/1200 [566/566]	1400/1450 [661/684]
ARI Net Cooling Capacity Btu [kW]	24,000 [7.03]	29,000 [8.5]	35,600 [10.43]	42,000 [12.31]
Net Sensible Capacity Btu [kW]	18,200 [5.33]	22,400 [6.56]	27,200 [7.97]	32,200 [9.43]
Net Latent Capacity Btu [kW]	5,800 [1.7]	6,600 [1.93]	8,400 [2.46]	9,800 [2.87]
Net System Power kW	2.11	2.49	3.04	3.5
<b>Heating Performance (Heat Pumps)</b>				
Heating Input Btu [kW] Rating	24,000 [7.03]	28,800 [8.44]	36,000 [10.55]	40,500 [11.87]
System Power KW/COP	2.17/3.26	2.53/3.24	3.07/3.34	3.32/3.4
Low Temp. Btuh [kW] Rating	14,400 [4.22]	16,600 [4.86]	20,400 [5.98]	23,000 [6.74]
System Power KW/COP	1.95/2.18	2.35/2.08	2.79/2.14	3.12/2.2
HSPF (Btu/Watts-hr)	7.7	7.7	7.7	7.7
<b>Compressor</b>				
No./Type	1/Copeland Scroll	1/Copeland Scroll	1/Copeland Scroll	1/Copeland Scroll
<b>Outdoor Sound Rating (dB)</b>	76	76	76	78
<b>Outdoor Coil—Fin Type</b>	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	10.44 [0.97]	12.65 [1.18]	10.44 [0.97]	13.65 [1.27]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	2 / 16 [6]	2 / 18 [7]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
<b>Indoor Coil—Fin Type</b>	Louvered	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	4.33 [0.4]	4.33 [0.4]	4.33 [0.4]	5.78 [0.54]
Rows / FPI [FPcm]	2 / 15 [6]	2 / 15 [6]	3 / 13 [5]	3 / 13 [5]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm] <sup>3</sup>	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	3200 [1510]	3200 [1510]	3200 [1510]	4200 [1982]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075	1075
<b>Indoor Fan—Type</b>	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/10x9 [254x228.6]	1/10x9 [254x228.6]	1/10x9 [254x228.6]	1/11x9 [279.4x228.6]
Drive Type/No. Speeds	Direct/2	Direct/2	Direct/2	Direct/2
No. Motors	1	1	1	1
Motor HP	1/4	1/3	1/2	1/2
Motor RPM	1033	1080	1050	1075
Motor Frame Size	48	48	48	48
<b>Filter—Type</b>	Field Supplied	Field Supplied	Field Supplied	Field Supplied
Furnished	No	No	No	No
(No.) Size Recommended in. [mm]	(1)1x20x16 [25x508x406]	(1)1x20x20 [25x508x508]	(1)1x24x24 [25x610x610]	(1)1x24x24 [25x610x610]
<b>Refrigerant Charge Oz. [g]</b>	70 [1984]	76 [2155]	121 [3430]	156 [4423]
<b>Weights</b>				
Net Weight lbs. [kg]	308 [140]	331 [150]	356 [161]	408 [185]
Ship Weight lbs. [kg]	332 [151]	355 [161]	380 [172]	434 [197]

See Page 10 for Notes.

[ ] Designates Metric Conversions



**NOMINAL SIZES 2-5 TONS [7-17.6 kW]**

<b>Model TZHH- Series</b>	<b>48JA</b>	<b>60JA</b>
<b>Cooling Performance<sup>1</sup></b>		
Gross Cooling Capacity Btu [kW]	49,000 [14.36]	62,000 [18.17]
EER/SEER <sup>2</sup>	11.4/13	11.45/13
Nominal CFM/ARI Rated CFM [L/s]	1600/1550 [755/731]	2000/1900 [944/897]
ARI Net Cooling Capacity Btu [kW]	47,000 [13.77]	59,000 [17.29]
Net Sensible Capacity Btu [kW]	35,600 [10.43]	44,600 [13.07]
Net Latent Capacity Btu [kW]	11,400 [3.34]	14,400 [4.22]
Net System Power kW	4.08	5.11
<b>Heating Performance (Heat Pumps)</b>		
Heating Input Btu [kW] Rating	47,000 [13.77]	57,500 [16.85]
System Power KW/COP	4.06/3.36	4.76/3.48
Low Temp. Btuh [kW] Rating	27,600 [8.09]	33,600 [9.84]
System Power KW/COP	3.64/2.2	4.21/2.34
HSPF (Btu/Watts-hr)	7.7	7.7
<b>Compressor</b>		
No./Type	1/Copeland Scroll	1/Copeland Scroll
<b>Outdoor Sound Rating (dB)</b>		
	78	78
<b>Outdoor Coil—Fin Type</b>		
Tube Type	Louvered	Louvered
Tube Size in. [mm] OD	Rifled	Rifled
Tube Size in. [mm] OD	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	13.65 [1.27]	16.54 [1.54]
Rows / FPI [FPcm]	2 / 18 [7]	2 / 18 [7]
Refrigerant Control	TX Valves	TX Valves
<b>Indoor Coil—Fin Type</b>		
Tube Type	Louvered	Louvered
Tube Type	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	5.78 [0.54]	5.78 [0.54]
Rows / FPI [FPcm]	3 / 13 [5]	4 / 13 [5]
Refrigerant Control	TX Valves	TX Valves
Drain Connection No./Size in. [mm] <sup>3</sup>	1/1 [25.4]	1/1 [25.4]
<b>Outdoor Fan—Type</b>		
	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1
CFM [L/s]	4200 [1982]	4000 [1888]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075
<b>Indoor Fan—Type</b>		
	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/11x9 [279.4x228.6]	1/11x9 [279.4x228.6]
Drive Type/No. Speeds	Direct/2	Direct/2
No. Motors	1	1
Motor HP	3/4	1
Motor RPM	1075	1075
Motor Frame Size	48	48
<b>Filter—Type</b>		
	Field Supplied	Field Supplied
Furnished	No	No
(No.) Size Recommended in. [mm]	(1)1x24x24 [25x610x610]	(1)1x24x24 [25x610x610]
<b>Refrigerant Charge Oz. [g]</b>		
	158 [4479]	195 [5528]
<b>Weights</b>		
Net Weight lbs. [kg]	429 [195]	481 [218]
Ship Weight lbs. [kg]	455 [206]	507 [230]

See Page 10 for Notes.

[ ] Designates Metric Conversions

## GENERAL DATA—TZHH- SERIES

### NOTES:

1. Cooling Performance is rated at 95° F ambient, 80° F entering dry bulb, 67° F entering wet bulb. Gross capacity does not include the effect of fan motor heat. ARI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to  $\pm 20\%$  of nominal cfm. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on ARI Standard 210/240 or 360.
2. EER and/or SEER are rated at ARI conditions and in accordance with DOE test procedures.
3. Standard 3/4" P-Trap provided.

# SYSTEMS PERFORMANCE—TZHH- SERIES

## GROSS SYSTEMS PERFORMANCE DATA—24JA

wbE		ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①									
		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
		CFM [L/s]	880 [415]	800 [378]	680 [321]	880 [415]	800 [378]	680 [321]	880 [415]	800 [378]	680 [321]
DR ①		.10	.08	.05	.10	.08	.05	.10	.08	.05	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	30.4 [8.91]	29.9 [8.76]	29.1 [8.53]	28.5 [8.35]	28.0 [8.21]	27.2 [7.97]	26.8 [7.85]	26.3 [7.71]	25.6 [7.50]
		Sens BTUH [kW]	18.4 [5.39]	17.6 [5.16]	16.4 [4.81]	21.9 [6.42]	21.0 [6.15]	19.5 [5.71]	25.0 [7.33]	23.9 [7.00]	22.2 [6.51]
		Power	1.5	1.4	1.4	1.5	1.5	1.4	1.4	1.4	1.4
	80 [26.7]	Total BTUH [kW]	30.1 [8.82]	29.6 [8.67]	28.8 [8.44]	28.2 [8.26]	27.7 [8.12]	27.0 [7.91]	26.5 [7.77]	26.0 [7.62]	25.3 [7.41]
		Sens BTUH [kW]	18.2 [5.33]	17.4 [5.10]	16.2 [4.75]	21.7 [6.36]	20.7 [6.07]	19.3 [5.66]	24.7 [7.24]	23.6 [6.92]	22.0 [6.45]
		Power	1.6	1.5	1.5	1.6	1.6	1.5	1.5	1.5	1.5
	85 [29.4]	Total BTUH [kW]	29.6 [8.67]	29.1 [8.53]	28.3 [8.29]	27.7 [8.12]	27.2 [7.97]	26.5 [7.77]	26.0 [7.62]	25.5 [7.47]	24.8 [7.27]
		Sens BTUH [kW]	17.9 [5.25]	17.1 [5.01]	15.9 [4.66]	21.4 [6.27]	20.5 [6.01]	19.0 [5.57]	24.4 [7.15]	23.4 [6.86]	21.7 [6.36]
		Power	1.6	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6
	90 [32.2]	Total BTUH [kW]	28.9 [8.47]	28.4 [8.32]	27.7 [8.12]	27.0 [7.91]	26.5 [7.77]	25.8 [7.56]	25.3 [7.41]	24.9 [7.30]	24.2 [7.09]
Sens BTUH [kW]		17.5 [5.13]	16.8 [4.92]	15.6 [4.57]	21.0 [6.15]	20.1 [5.89]	18.7 [5.48]	24.1 [7.06]	23.0 [6.74]	21.4 [6.27]	
Power		1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	
95 [35]	Total BTUH [kW]	28.1 [8.24]	27.6 [8.09]	26.9 [7.88]	26.2 [7.68]	25.7 [7.53]	25.0 [7.33]	24.5 [7.18]	24.0 [7.03]	23.4 [6.86]	
	Sens BTUH [kW]	17.1 [5.01]	16.4 [4.81]	15.2 [4.45]	20.6 [6.04]	19.7 [5.77]	18.3 [5.36]	23.7 [6.95]	22.6 [6.62]	21.0 [6.15]	
	Power	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	
100 [37.8]	Total BTUH [kW]	27.2 [7.97]	26.7 [7.83]	26.0 [7.62]	25.3 [7.41]	24.8 [7.27]	24.1 [7.06]	23.5 [6.89]	23.1 [6.77]	22.5 [6.59]	
	Sens BTUH [kW]	16.7 [4.89]	16.0 [4.69]	14.9 [4.37]	20.2 [5.92]	19.3 [5.66]	18.0 [5.28]	23.2 [6.80]	22.2 [6.51]	20.7 [6.07]	
	Power	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
105 [40.6]	Total BTUH [kW]	26.2 [7.68]	25.8 [7.56]	25.1 [7.36]	24.3 [7.12]	23.9 [7.00]	23.2 [6.80]	22.6 [6.62]	22.2 [6.51]	21.6 [6.33]	
	Sens BTUH [kW]	16.3 [4.78]	15.6 [4.57]	14.5 [4.25]	19.8 [5.80]	18.9 [5.54]	17.6 [5.16]	22.6 [6.62]	21.8 [6.39]	20.3 [5.95]	
	Power	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
110 [43.3]	Total BTUH [kW]	25.3 [7.41]	24.8 [7.27]	24.2 [7.09]	23.4 [6.86]	23.0 [6.74]	22.3 [6.54]	21.6 [6.33]	21.3 [6.24]	20.7 [6.07]	
	Sens BTUH [kW]	15.9 [4.66]	15.2 [4.45]	14.1 [4.13]	19.4 [5.69]	18.5 [5.42]	17.2 [5.04]	21.6 [6.33]	21.3 [6.24]	19.9 [5.83]	
	Power	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	
115 [46.1]	Total BTUH [kW]	24.4 [7.15]	24.0 [7.03]	23.3 [6.83]	22.5 [6.59]	22.1 [6.48]	21.5 [6.30]	20.8 [6.10]	20.4 [5.98]	19.9 [5.83]	
	Sens BTUH [kW]	15.5 [4.54]	14.8 [4.34]	13.8 [4.04]	19.0 [5.57]	18.2 [5.33]	16.9 [4.95]	20.8 [6.10]	20.4 [5.98]	19.6 [5.74]	
	Power	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	

## GROSS SYSTEMS PERFORMANCE DATA—30JA

wbE		ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①									
		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
		CFM [L/s]	1100 [519]	1000 [472]	850 [401]	1100 [519]	1000 [472]	850 [401]	1100 [519]	1000 [472]	850 [401]
DR ①		.13	.11	.07	.13	.11	.07	.13	.11	.07	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW]	34.7 [10.17]	34.0 [9.96]	33.1 [9.70]	33.5 [9.82]	32.9 [9.64]	32.0 [9.38]	30.8 [9.03]	30.3 [8.88]	29.5 [8.65]
		Sens BTUH [kW]	22.0 [6.45]	21.0 [6.15]	19.5 [5.71]	26.3 [7.71]	25.1 [7.36]	23.3 [6.83]	29.5 [8.65]	28.2 [8.26]	26.2 [7.68]
		Power	1.8	1.7	1.7	1.8	1.7	1.7	1.7	1.1	1.1
	80 [26.7]	Total BTUH [kW]	34.3 [10.05]	33.7 [9.88]	32.8 [9.61]	33.1 [9.70]	32.5 [9.52]	31.6 [9.26]	30.5 [8.94]	29.9 [8.76]	29.1 [8.53]
		Sens BTUH [kW]	21.7 [6.36]	20.8 [6.10]	19.3 [5.66]	26.0 [7.62]	24.8 [7.27]	23.1 [6.77]	29.2 [8.56]	28.0 [8.21]	26.0 [7.62]
		Power	1.9	1.9	1.8	1.9	1.9	1.8	1.2	1.2	1.2
	85 [29.4]	Total BTUH [kW]	33.7 [9.88]	33.1 [9.70]	32.2 [9.44]	32.5 [9.52]	31.9 [9.35]	31.0 [9.09]	29.8 [8.73]	29.3 [8.59]	28.5 [8.35]
		Sens BTUH [kW]	21.3 [6.24]	20.4 [5.98]	19.0 [5.57]	25.6 [7.50]	24.5 [7.18]	22.7 [6.65]	29.0 [8.50]	27.6 [8.09]	25.7 [7.53]
		Power	2.0	2.0	1.9	2.0	2.0	1.9	1.3	1.3	1.3
	90 [32.2]	Total BTUH [kW]	32.8 [9.61]	32.2 [9.44]	31.4 [9.20]	31.6 [9.26]	31.1 [9.11]	30.2 [8.85]	29.0 [8.50]	28.5 [8.35]	27.7 [8.12]
Sens BTUH [kW]		20.8 [6.10]	19.9 [5.83]	18.5 [5.42]	25.1 [7.36]	24.0 [7.03]	22.3 [6.54]	28.5 [8.35]	27.1 [7.94]	25.2 [7.39]	
Power		2.1	2.1	2.0	2.1	2.1	2.0	1.4	1.4	1.4	
95 [35]	Total BTUH [kW]	31.8 [9.32]	31.2 [9.14]	30.4 [8.91]	30.6 [8.97]	30.1 [8.82]	29.3 [8.59]	28.0 [8.21]	27.5 [8.06]	26.7 [7.83]	
	Sens BTUH [kW]	20.3 [5.95]	19.4 [5.69]	18.0 [5.28]	24.6 [7.21]	23.5 [6.89]	21.8 [6.39]	27.7 [8.12]	26.7 [7.83]	24.7 [7.24]	
	Power	2.2	2.2	2.1	2.2	2.2	2.1	1.6	1.5	1.5	
100 [37.8]	Total BTUH [kW]	30.7 [9.00]	30.1 [8.82]	29.3 [8.59]	29.5 [8.65]	29.0 [8.50]	28.2 [8.26]	26.9 [7.88]	26.4 [7.74]	25.7 [7.53]	
	Sens BTUH [kW]	19.7 [5.77]	18.9 [5.54]	17.5 [5.13]	24.0 [7.03]	22.9 [6.71]	21.3 [6.24]	26.9 [7.88]	26.0 [7.62]	24.3 [7.12]	
	Power	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.6	1.6	
105 [40.6]	Total BTUH [kW]	29.4 [8.62]	28.9 [8.47]	28.1 [8.24]	28.3 [8.29]	27.8 [8.15]	27.0 [7.91]	25.6 [7.50]	25.2 [7.39]	24.5 [7.18]	
	Sens BTUH [kW]	19.2 [5.63]	18.4 [5.39]	17.1 [5.01]	23.5 [6.89]	22.4 [6.56]	20.9 [6.13]	25.6 [7.50]	25.2 [7.39]	23.8 [6.98]	
	Power	2.4	2.4	2.4	2.4	2.4	2.4	1.8	1.8	1.7	
110 [43.3]	Total BTUH [kW]	28.2 [8.26]	27.7 [8.12]	26.9 [7.88]	27.0 [7.91]	26.5 [7.77]	25.8 [7.56]	24.4 [7.15]	23.9 [7.00]	23.3 [6.83]	
	Sens BTUH [kW]	18.8 [5.51]	17.9 [5.25]	16.7 [4.89]	23.0 [6.74]	22.0 [6.45]	20.5 [6.01]	24.4 [7.15]	23.9 [7.00]	23.3 [6.83]	
	Power	2.5	2.5	2.5	2.5	2.5	2.5	1.9	1.9	1.8	
115 [46.1]	Total BTUH [kW]	26.9 [7.88]	26.4 [7.74]	25.7 [7.53]	25.7 [7.53]	25.3 [7.41]	24.6 [7.21]	23.1 [6.77]	22.7 [6.65]	22.0 [6.45]	
	Sens BTUH [kW]	18.4 [5.39]	17.6 [5.16]	16.4 [4.81]	22.7 [6.65]	21.7 [6.36]	20.2 [5.92]	23.1 [6.77]	22.7 [6.65]	22.0 [6.45]	
	Power	2.6	2.6	2.6	2.6	2.6	2.6	2.0	2.0	1.9	

DR —Depression ratio  
dbE—Entering air dry bulb  
wbE—Entering air wet bulb

Total —Total capacity x 1000 BTUH  
Sens —Sensible capacity x 1000 BTUH  
Power—KW input

NOTES: ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding  $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$ .

[ ] Designates Metric Conversions

# SYSTEMS PERFORMANCE—TZHH- SERIES

## GROSS SYSTEMS PERFORMANCE DATA—36JA

		ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①									
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		1320 [623]	1200 [566]	1020 [481]	1320 [623]	1200 [566]	1020 [481]	1320 [623]	1200 [566]	1020 [481]	
DR ①		.11	.09	.06	.11	.09	.06	.11	.09	.06	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW] Sens BTUH [kW] Power	45.0 [13.19] 26.9 [7.88] 2.1	44.2 [12.95] 25.7 [7.53] 2.1	43.0 [12.60] 23.9 [7.00] 2.1	41.7 [12.22] 31.9 [9.35] 2.1	41.0 [12.02] 30.5 [8.94] 2.1	39.8 [11.66] 28.4 [8.32] 2.1	38.8 [11.37] 36.6 [10.73] 2.1	38.1 [11.17] 35.0 [10.26] 2.1	37.1 [10.87] 32.5 [9.52] 2.1
	80 [26.7]	Total BTUH [kW] Sens BTUH [kW] Power	44.2 [12.95] 26.2 [7.68] 2.3	43.4 [12.72] 25.1 [7.36] 2.3	42.2 [12.37] 23.3 [6.83] 2.2	40.9 [11.99] 31.3 [9.17] 2.3	40.2 [11.78] 29.9 [8.76] 2.2	39.1 [11.46] 27.8 [8.15] 2.2	38.1 [11.17] 35.9 [10.52] 2.3	37.4 [10.96] 34.4 [10.08] 2.2	36.4 [10.67] 32.0 [9.38] 2.2
	85 [29.4]	Total BTUH [kW] Sens BTUH [kW] Power	43.2 [12.66] 25.7 [7.53] 2.4	42.5 [12.46] 24.6 [7.21] 2.4	41.3 [12.10] 22.8 [6.68] 2.4	40.0 [11.72] 30.7 [9.00] 2.4	39.2 [11.49] 29.4 [8.62] 2.4	38.2 [11.20] 27.3 [8.00] 2.3	37.1 [10.87] 35.6 [10.43] 2.4	36.4 [10.67] 33.9 [9.94] 2.4	35.4 [10.37] 31.5 [9.23] 2.3
	90 [32.2]	Total BTUH [kW] Sens BTUH [kW] Power	42.1 [12.34] 25.3 [7.41] 2.5	41.4 [12.13] 24.1 [7.06] 2.5	40.2 [11.78] 22.5 [6.59] 2.5	38.8 [11.37] 30.3 [8.88] 2.5	38.2 [11.20] 28.9 [8.47] 2.5	37.1 [10.87] 26.9 [7.88] 2.5	36.0 [10.55] 35.1 [10.29] 2.5	35.3 [10.35] 33.4 [9.79] 2.5	34.4 [10.08] 31.1 [9.11] 2.5
	95 [35]	Total BTUH [kW] Sens BTUH [kW] Power	40.9 [11.99] 24.9 [7.30] 2.7	40.2 [11.78] 23.8 [6.98] 2.6	39.1 [11.46] 22.1 [6.48] 2.6	37.6 [11.02] 29.9 [8.76] 2.7	37.0 [10.84] 28.6 [8.38] 2.6	36.0 [10.55] 26.6 [7.80] 2.6	34.8 [10.20] 34.4 [10.08] 2.6	34.2 [10.02] 33.2 [9.73] 2.6	33.2 [9.73] 30.7 [9.00] 2.6
	100 [37.8]	Total BTUH [kW] Sens BTUH [kW] Power	39.6 [11.61] 24.5 [7.18] 2.8	38.9 [11.40] 23.4 [6.86] 2.8	37.9 [11.11] 21.8 [6.39] 2.7	36.4 [10.67] 29.5 [8.65] 2.8	35.7 [10.46] 28.2 [8.26] 2.8	34.8 [10.20] 26.2 [7.68] 2.7	33.5 [9.82] 33.5 [9.82] 2.8	32.9 [9.64] 32.6 [9.55] 2.8	32.0 [9.38] 30.4 [8.91] 2.7
	105 [40.6]	Total BTUH [kW] Sens BTUH [kW] Power	38.4 [11.25] 24.1 [7.06] 2.9	37.7 [11.05] 23.0 [6.74] 2.9	36.7 [10.76] 21.4 [6.27] 2.9	35.1 [10.29] 29.1 [8.53] 2.9	34.5 [10.11] 27.8 [8.15] 2.9	33.5 [9.82] 25.9 [7.59] 2.9	32.2 [9.44] 32.2 [9.44] 2.9	31.7 [9.29] 31.7 [9.29] 2.9	30.8 [9.03] 30.0 [8.79] 2.9
	110 [43.3]	Total BTUH [kW] Sens BTUH [kW] Power	37.2 [10.90] 23.6 [6.92] 3.1	36.5 [10.70] 22.6 [6.62] 3.0	35.5 [10.40] 21.0 [6.15] 3.0	33.9 [9.94] 28.7 [8.41] 3.1	33.3 [9.76] 27.4 [8.03] 3.0	32.4 [9.50] 25.5 [7.47] 3.0	31.0 [9.09] 31.0 [9.09] 3.0	30.5 [8.94] 30.5 [8.94] 3.0	29.6 [8.67] 29.6 [8.67] 3.0
	115 [46.1]	Total BTUH [kW] Sens BTUH [kW] Power	36.0 [10.55] 23.1 [6.77] 3.2	35.4 [10.37] 22.1 [6.48] 3.2	34.4 [10.08] 20.5 [6.01] 3.1	32.8 [9.61] 28.1 [8.24] 3.2	32.2 [9.44] 26.9 [7.88] 3.2	31.3 [9.17] 25.0 [7.33] 3.1	29.9 [8.76] 29.9 [8.76] 3.2	29.4 [8.62] 29.4 [8.62] 3.2	28.6 [8.38] 28.6 [8.38] 3.1

## GROSS SYSTEMS PERFORMANCE DATA—42JA

		ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①									
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		1600 [755]	1450 [684]	1230 [580]	1600 [755]	1450 [684]	1230 [580]	1600 [755]	1450 [684]	1230 [580]	
DR ①		.13	.11	.08	.13	.11	.08	.13	.11	.08	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW] Sens BTUH [kW] Power	53.3 [15.62] 32.1 [9.41] 1.2	52.4 [15.36] 30.6 [8.97] 1.2	50.9 [14.92] 28.5 [8.35] 1.2	50.7 [14.86] 38.3 [11.22] 2.5	49.8 [14.59] 36.5 [10.70] 2.5	48.4 [14.18] 34.0 [9.96] 2.4	49.5 [14.51] 44.2 [12.95] 2.0	48.6 [14.24] 42.2 [12.37] 2.0	47.3 [13.86] 39.3 [11.52] 2.0
	80 [26.7]	Total BTUH [kW] Sens BTUH [kW] Power	51.4 [15.06] 31.2 [9.14] 1.4	50.5 [14.80] 29.9 [8.76] 1.3	49.1 [14.39] 27.8 [8.15] 1.3	48.8 [14.30] 37.4 [10.96] 2.6	47.9 [14.04] 35.8 [10.49] 2.6	46.6 [13.66] 33.3 [9.76] 2.6	47.6 [13.95] 43.4 [12.72] 2.2	46.7 [13.69] 41.4 [12.13] 2.2	45.4 [13.31] 38.5 [11.28] 2.1
	85 [29.4]	Total BTUH [kW] Sens BTUH [kW] Power	49.9 [14.62] 30.6 [8.97] 1.5	49.0 [14.36] 29.2 [8.56] 1.5	47.6 [13.95] 27.2 [7.97] 1.5	47.2 [13.83] 36.8 [10.79] 2.8	46.4 [13.60] 35.1 [10.29] 2.7	45.1 [13.22] 32.7 [9.58] 2.7	46.0 [13.48] 42.7 [12.51] 2.3	45.2 [13.25] 40.8 [11.96] 2.3	44.0 [12.90] 37.9 [11.11] 2.3
	90 [32.2]	Total BTUH [kW] Sens BTUH [kW] Power	48.6 [14.24] 30.0 [8.79] 1.6	47.7 [13.98] 28.7 [8.41] 1.6	46.4 [13.60] 26.7 [7.83] 1.6	46.0 [13.48] 36.2 [10.61] 2.9	45.2 [13.25] 34.6 [10.14] 2.9	43.9 [12.87] 32.2 [9.44] 2.8	44.8 [13.13] 42.1 [12.34] 2.5	44.0 [12.90] 40.3 [11.81] 2.4	42.8 [12.54] 37.4 [10.96] 2.4
	95 [35]	Total BTUH [kW] Sens BTUH [kW] Power	47.6 [13.95] 29.5 [8.65] 1.8	46.7 [13.69] 28.2 [8.26] 1.8	45.4 [13.31] 26.2 [7.68] 1.7	44.9 [13.16] 35.7 [10.46] 3.0	44.1 [12.92] 34.1 [9.99] 3.0	42.9 [12.57] 31.7 [9.29] 3.0	43.7 [12.81] 41.7 [12.22] 2.6	43.0 [12.60] 39.8 [11.66] 2.6	41.8 [12.25] 37.0 [10.84] 2.6
	100 [37.8]	Total BTUH [kW] Sens BTUH [kW] Power	46.6 [13.66] 29.1 [8.53] 1.9	45.8 [13.42] 27.8 [8.15] 1.9	44.6 [13.07] 25.8 [7.56] 1.9	44.0 [12.90] 35.3 [10.35] 3.2	43.2 [12.66] 33.7 [9.88] 3.2	42.0 [12.31] 31.3 [9.17] 3.1	42.8 [12.54] 41.2 [12.07] 2.8	42.0 [12.31] 39.4 [11.55] 2.7	40.9 [11.99] 36.6 [10.73] 2.7
	105 [40.6]	Total BTUH [kW] Sens BTUH [kW] Power	45.7 [13.39] 28.6 [8.38] 2.1	44.9 [13.16] 27.3 [8.00] 2.1	43.7 [12.81] 25.4 [7.44] 2.0	43.1 [12.63] 34.8 [10.20] 3.3	42.3 [12.40] 33.3 [9.76] 3.3	41.2 [12.07] 30.9 [9.06] 3.3	41.9 [12.28] 40.7 [11.93] 2.9	41.1 [12.05] 38.9 [11.40] 2.9	40.0 [11.72] 36.2 [10.61] 2.8
	110 [43.3]	Total BTUH [kW] Sens BTUH [kW] Power	44.7 [13.10] 28.1 [8.24] 2.2	43.9 [12.87] 26.9 [7.88] 2.2	42.7 [12.51] 25.0 [7.33] 2.2	42.1 [12.34] 34.3 [10.05] 3.5	41.3 [12.10] 32.8 [9.61] 3.4	40.2 [11.78] 30.5 [8.94] 3.4	40.9 [11.99] 40.2 [11.78] 3.0	40.2 [11.78] 38.4 [11.25] 3.0	39.1 [11.46] 35.7 [10.46] 3.0
	115 [46.1]	Total BTUH [kW] Sens BTUH [kW] Power	43.6 [12.78] 27.5 [8.06] 2.4	42.8 [12.54] 26.3 [7.71] 2.3	41.6 [12.19] 24.4 [7.15] 2.3	40.9 [11.99] 33.7 [9.88] 3.6	40.2 [11.78] 32.2 [9.44] 3.6	39.1 [11.46] 29.9 [8.76] 3.5	39.7 [11.63] 39.6 [11.61] 3.2	39.0 [11.43] 37.8 [11.08] 3.2	38.0 [11.14] 35.2 [10.32] 3.1

DR —Depression ratio  
dbE—Entering air dry bulb  
wbE—Entering air wet bulb

Total —Total capacity x 1000 BTUH  
Sens —Sensible capacity x 1000 BTUH  
Power—KW input

NOTES: ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding  $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$ .

[ ] Designates Metric Conversions

# SYSTEMS PERFORMANCE—TZHH- SERIES

## GROSS SYSTEMS PERFORMANCE DATA—48JA

		ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①									
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		1700 [802]	1550 [732]	1320 [623]	1700 [802]	1550 [732]	1320 [623]	1700 [802]	1550 [732]	1320 [623]	
DR ①		.11	.10	.06	.11	.10	.06	.11	.10	.06	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW] Sens BTUH [kW] Power	60.3 [17.67] 36.3 [10.64] 2.9	59.2 [17.35] 34.7 [10.17] 2.9	57.6 [16.88] 32.3 [9.47] 2.9	55.7 [16.32] 42.1 [12.34] 2.9	54.7 [16.03] 40.2 [11.78] 2.9	53.2 [15.59] 37.4 [10.96] 2.8	53.0 [15.53] 48.3 [14.16] 2.8	52.1 [15.27] 46.2 [13.54] 2.8	50.7 [14.86] 42.9 [12.57] 2.8
	80 [26.7]	Total BTUH [kW] Sens BTUH [kW] Power	58.8 [17.23] 35.4 [10.37] 3.1	57.8 [16.94] 33.8 [9.91] 3.1	56.2 [16.47] 31.4 [9.20] 3.0	54.2 [15.88] 41.2 [12.07] 3.0	53.2 [15.59] 39.4 [11.55] 3.0	51.8 [15.18] 36.6 [10.73] 3.0	51.5 [15.09] 47.4 [13.89] 3.0	50.6 [14.83] 45.3 [13.28] 3.0	49.2 [14.42] 42.1 [12.34] 2.9
	85 [29.4]	Total BTUH [kW] Sens BTUH [kW] Power	57.4 [16.82] 34.7 [10.17] 3.2	56.3 [16.50] 33.1 [9.70] 3.2	54.8 [16.06] 30.8 [9.03] 3.2	52.7 [15.44] 40.5 [11.87] 3.2	51.8 [15.18] 38.6 [11.31] 3.2	50.4 [14.77] 35.9 [10.52] 3.1	50.1 [14.68] 46.6 [13.66] 3.2	49.2 [14.42] 44.6 [13.07] 3.1	47.8 [14.01] 41.4 [12.13] 3.1
	90 [32.2]	Total BTUH [kW] Sens BTUH [kW] Power	55.9 [16.38] 34.0 [9.96] 3.4	54.9 [16.09] 32.5 [9.52] 3.4	53.4 [15.65] 30.3 [8.88] 3.3	51.3 [15.03] 39.8 [11.66] 3.4	50.4 [14.77] 38.1 [11.17] 3.3	49.0 [14.36] 35.4 [10.37] 3.3	48.6 [14.24] 46.0 [13.48] 3.3	47.8 [14.01] 44.0 [12.90] 3.3	46.5 [13.63] 40.9 [11.99] 3.3
	95 [35]	Total BTUH [kW] Sens BTUH [kW] Power	54.5 [15.97] 33.5 [9.82] 3.6	53.5 [15.68] 32.0 [9.38] 3.5	52.1 [15.27] 29.8 [8.73] 3.5	49.9 [14.62] 39.3 [11.52] 3.5	49.0 [14.36] 37.6 [11.02] 3.5	47.6 [13.95] 34.9 [10.23] 3.5	47.2 [13.83] 45.6 [13.36] 3.5	46.4 [13.60] 43.5 [12.75] 3.5	45.1 [13.22] 40.4 [11.84] 3.4
	100 [37.8]	Total BTUH [kW] Sens BTUH [kW] Power	53.0 [15.53] 33.1 [9.70] 3.7	52.1 [15.27] 31.6 [9.26] 3.7	50.6 [14.83] 29.4 [8.62] 3.6	48.4 [14.18] 38.9 [11.40] 3.7	47.5 [13.92] 37.1 [10.87] 3.7	46.2 [13.54] 34.5 [10.11] 3.6	45.7 [13.39] 45.0 [13.19] 3.7	44.9 [13.16] 43.0 [12.60] 3.6	43.7 [12.81] 40.0 [11.72] 3.6
	105 [40.6]	Total BTUH [kW] Sens BTUH [kW] Power	51.5 [15.09] 32.6 [9.55] 3.9	50.6 [14.83] 31.1 [9.11] 3.8	49.2 [14.42] 29.0 [8.50] 3.8	46.9 [13.75] 38.4 [11.25] 3.8	46.0 [13.48] 36.7 [10.76] 3.8	44.8 [13.13] 34.1 [9.99] 3.8	44.2 [12.95] 44.2 [12.95] 3.8	43.4 [12.72] 42.6 [12.48] 3.8	42.2 [12.37] 39.6 [11.61] 3.7
	110 [43.3]	Total BTUH [kW] Sens BTUH [kW] Power	49.9 [14.62] 32.1 [9.41] 4.0	49.0 [14.36] 30.7 [9.00] 4.0	47.6 [13.95] 28.5 [8.35] 4.0	45.2 [13.25] 37.9 [11.11] 4.0	44.4 [13.01] 36.2 [10.61] 4.0	43.2 [12.66] 33.7 [9.88] 3.9	42.6 [12.48] 42.6 [12.48] 4.0	41.8 [12.25] 41.8 [12.25] 3.9	40.7 [11.93] 39.2 [11.49] 3.9
	115 [46.1]	Total BTUH [kW] Sens BTUH [kW] Power	48.1 [14.10] 31.5 [9.23] 4.2	47.3 [13.86] 30.1 [8.82] 4.2	46.0 [13.48] 28.0 [8.21] 4.1	43.5 [12.75] 37.3 [10.93] 4.2	42.7 [12.51] 35.6 [10.43] 4.1	41.6 [12.19] 33.1 [9.70] 4.1	40.8 [11.96] 40.8 [11.96] 4.1	40.1 [11.75] 40.1 [11.75] 4.1	39.0 [11.43] 38.6 [11.31] 4.0

## GROSS SYSTEMS PERFORMANCE DATA—60JA

		ENTERING INDOOR AIR @ 80°F [26.7°C] dbE ①									
wbE		71°F [21.7°C]			67°F [19.4°C]			63°F [17.2°C]			
CFM [L/s]		2090 [000]	1900 [000]	1620 [000]	2090 [000]	1900 [000]	1620 [000]	2090 [000]	1900 [000]	1620 [000]	
DR ①		.09	.07	.04	.09	.07	.04	.09	.07	.04	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	75 [23.9]	Total BTUH [kW] Sens BTUH [kW] Power	76.7 [22.48] 45.6 [13.36] 3.4	75.3 [22.07] 43.6 [12.78] 3.4	73.2 [21.45] 40.6 [11.90] 3.4	70.7 [20.72] 53.4 [15.65] 3.4	69.4 [20.34] 51.0 [14.95] 3.4	67.5 [19.78] 47.4 [13.89] 3.3	67.7 [19.84] 61.0 [17.88] 3.3	66.5 [19.49] 58.3 [17.09] 3.3	64.6 [18.93] 54.2 [15.88] 3.3
	80 [26.7]	Total BTUH [kW] Sens BTUH [kW] Power	74.9 [21.95] 44.4 [13.01] 3.7	73.6 [21.57] 42.4 [12.43] 3.6	71.6 [20.98] 39.5 [11.58] 3.6	68.9 [20.19] 52.2 [15.30] 3.6	67.7 [19.84] 49.8 [14.59] 3.6	65.9 [19.31] 46.3 [13.57] 3.5	65.9 [19.31] 59.8 [17.53] 3.6	64.7 [18.96] 57.1 [16.73] 3.5	63.0 [18.46] 53.1 [15.56] 3.5
	85 [29.4]	Total BTUH [kW] Sens BTUH [kW] Power	73.0 [21.39] 43.4 [12.72] 3.9	71.7 [21.01] 41.5 [12.16] 3.9	69.8 [20.46] 38.6 [11.31] 3.8	67.0 [19.64] 51.2 [15.01] 3.8	65.8 [19.28] 48.9 [14.33] 3.8	64.0 [18.76] 45.5 [13.33] 3.8	64.0 [18.76] 58.8 [17.23] 3.8	62.9 [18.43] 56.2 [16.47] 3.8	61.2 [17.94] 52.3 [15.33] 3.7
	90 [32.2]	Total BTUH [kW] Sens BTUH [kW] Power	71.0 [20.81] 42.7 [12.51] 4.1	69.8 [20.46] 40.8 [11.96] 4.1	67.9 [19.90] 37.9 [11.11] 4.0	65.0 [19.05] 50.4 [14.77] 4.1	63.9 [18.73] 48.2 [14.13] 4.0	62.1 [18.20] 44.8 [13.13] 4.0	62.0 [18.17] 58.1 [17.03] 4.0	60.9 [17.85] 55.5 [16.27] 4.0	59.3 [17.38] 51.6 [15.12] 3.9
	95 [35]	Total BTUH [kW] Sens BTUH [kW] Power	69.1 [20.25] 42.0 [12.31] 4.3	67.8 [19.87] 40.1 [11.75] 4.3	66.0 [19.34] 37.3 [10.93] 4.2	63.1 [18.49] 49.8 [14.59] 4.3	61.9 [18.14] 47.5 [13.92] 4.2	60.2 [17.64] 44.2 [12.95] 4.2	60.0 [17.58] 57.4 [16.82] 4.2	59.0 [17.29] 54.8 [16.06] 4.2	57.4 [16.82] 51.0 [14.95] 4.2
	100 [37.8]	Total BTUH [kW] Sens BTUH [kW] Power	67.2 [19.69] 41.4 [12.13] 4.6	66.0 [19.34] 39.5 [11.58] 4.5	64.2 [18.82] 36.8 [10.79] 4.5	61.2 [17.94] 49.1 [14.39] 4.5	60.1 [17.61] 46.9 [13.75] 4.5	58.5 [17.14] 43.7 [12.81] 4.4	58.2 [17.06] 56.8 [16.65] 4.5	57.1 [16.73] 54.2 [15.88] 4.4	55.6 [16.29] 50.4 [14.77] 4.4
	105 [40.6]	Total BTUH [kW] Sens BTUH [kW] Power	65.5 [19.20] 40.7 [11.93] 4.8	64.3 [18.84] 38.9 [11.40] 4.7	62.6 [18.35] 36.2 [10.61] 4.7	59.5 [17.44] 48.5 [14.21] 4.7	58.4 [17.12] 46.3 [13.57] 4.7	56.8 [16.65] 43.1 [12.63] 4.6	56.5 [16.56] 56.1 [16.44] 4.7	55.5 [16.27] 53.6 [15.71] 4.7	54.0 [15.83] 49.8 [14.59] 4.6
	110 [43.3]	Total BTUH [kW] Sens BTUH [kW] Power	64.1 [18.79] 39.9 [11.69] 5.0	62.9 [18.43] 38.2 [11.20] 5.0	61.2 [17.94] 35.5 [10.40] 4.9	58.1 [17.03] 47.7 [13.98] 5.0	57.1 [16.73] 45.6 [13.36] 4.9	55.5 [16.27] 42.4 [12.43] 4.9	55.1 [16.15] 55.1 [16.15] 4.9	54.1 [15.86] 52.9 [15.50] 4.9	52.6 [15.42] 49.2 [14.42] 4.8
	115 [46.1]	Total BTUH [kW] Sens BTUH [kW] Power	63.1 [18.49] 39.0 [11.43] 5.2	61.9 [18.14] 37.2 [10.90] 5.2	60.2 [17.64] 34.6 [10.14] 5.1	57.1 [16.73] 46.7 [13.69] 5.2	56.0 [16.41] 44.6 [13.07] 5.1	54.5 [15.97] 41.5 [12.16] 5.1	54.1 [15.86] 54.1 [15.86] 5.1	53.1 [15.56] 51.9 [15.21] 5.1	51.6 [15.12] 48.3 [14.16] 5.0

DR —Depression ratio  
dbE—Entering air dry bulb  
wbE—Entering air wet bulb

Total —Total capacity x 1000 BTUH  
Sens —Sensible capacity x 1000 BTUH  
Power—kW input

NOTES: ① When the entering air dry bulb is other than 80°F [27°C], adjust the sensible capacity from the table by adding  $[1.10 \times \text{CFM} \times (1 - \text{DR}) \times (\text{dbE} - 80)]$ .

[ ] Designates Metric Conversions

# SYSTEMS PERFORMANCE—TZHH- SERIES

## HEATING PERFORMANCE DATA—24JA

IDB		60°F [15.5°C]			70°F [21.1°C]			80°F [26.7°C]			
CFM [L/s]		880 [415]	800 [378]	680 [321]	880 [415]	800 [378]	680 [321]	880 [415]	800 [378]	680 [321]	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	0 [-17.8]	Total BTUH [kW] Power	9.8 [2.87] 1.3	9.7 [2.84] 1.3	9.6 [2.81] 1.3	8.8 [2.58] 1.5	8.7 [2.55] 1.5	8.6 [2.52] 1.5	7.9 [2.32] 1.6	7.8 [2.29] 1.6	7.7 [2.26] 1.6
	5 [-15]	Total BTUH [kW] Power	11.3 [3.31] 1.3	11.2 [3.28] 1.3	11.1 [3.25] 1.3	10.3 [3.02] 1.5	10.3 [3.02] 1.5	10.1 [2.96] 1.6	9.4 [2.75] 1.6	9.4 [2.75] 1.6	9.3 [2.73] 1.7
	10 [-12.2]	Total BTUH [kW] Power	12.9 [3.78] 1.3	12.8 [3.75] 1.4	12.6 [3.69] 1.4	11.9 [3.49] 1.5	11.8 [3.46] 1.6	11.7 [3.43] 1.6	11.0 [3.22] 1.7	10.9 [3.19] 1.7	10.8 [3.17] 1.7
	15 [-9.4]	Total BTUH [kW] Power	14.4 [4.22] 1.4	14.3 [4.19] 1.4	14.2 [4.16] 1.4	13.4 [3.93] 1.6	13.3 [3.90] 1.6	13.2 [3.87] 1.6	12.5 [3.66] 1.7	12.4 [3.63] 1.7	12.3 [3.60] 1.8
	20 [-6.7]	Total BTUH [kW] Power	16.0 [4.69] 1.4	15.9 [4.66] 1.5	15.7 [4.60] 1.5	15.0 [4.40] 1.6	14.9 [4.37] 1.7	14.7 [4.31] 1.7	14.1 [4.13] 1.7	14.0 [4.10] 1.8	13.8 [4.04] 1.8
	25 [-3.9]	Total BTUH [kW] Power	17.6 [5.16] 1.5	17.4 [5.10] 1.5	17.3 [5.07] 1.5	16.6 [4.86] 1.7	16.4 [4.81] 1.7	16.3 [4.78] 1.7	15.7 [4.60] 1.8	15.6 [4.57] 1.8	15.4 [4.51] 1.8
	30 [-1.1]	Total BTUH [kW] Power	19.2 [5.63] 1.5	19.0 [5.57] 1.5	18.8 [5.51] 1.6	18.2 [5.33] 1.7	18.0 [5.28] 1.8	17.8 [5.22] 1.8	17.3 [5.07] 1.8	17.1 [5.01] 1.9	17.0 [4.98] 1.9
	35 [1.7]	Total BTUH [kW] Power	20.8 [6.10] 1.6	20.6 [6.04] 1.6	20.4 [5.98] 1.6	19.8 [5.80] 1.8	19.7 [5.77] 1.8	19.4 [5.69] 1.8	18.9 [5.54] 1.9	18.8 [5.51] 1.9	18.6 [5.45] 1.9
	40 [4.4]	Total BTUH [kW] Power	22.5 [6.59] 1.6	22.3 [6.54] 1.6	22.1 [6.48] 1.7	21.5 [6.30] 1.8	21.3 [6.24] 1.8	21.1 [6.18] 1.9	20.6 [6.04] 1.9	20.4 [5.98] 2.0	20.2 [5.92] 2.0
	45 [7.2]	Total BTUH [kW] Power	24.2 [7.09] 1.7	24.0 [7.03] 1.7	23.7 [6.95] 1.7	23.2 [6.80] 1.9	23.0 [6.74] 1.9	22.7 [6.65] 1.9	22.3 [6.54] 2.0	22.1 [6.48] 2.0	21.9 [6.42] 2.0
50 [10]	Total BTUH [kW] Power	25.9 [7.59] 1.7	25.7 [7.53] 1.7	25.4 [7.44] 1.8	24.9 [7.30] 1.9	24.7 [7.24] 1.9	24.5 [7.18] 2.0	24.0 [7.03] 2.0	23.8 [6.98] 2.0	23.6 [6.92] 2.1	

IDB—Indoor air dry bulb

## HEATING PERFORMANCE DATA—30JA

IDB		60°F [15.5°C]			70°F [21.1°C]			80°F [26.7°C]			
CFM [L/s]		1100 [519]	1000 [472]	850 [401]	1100 [519]	1000 [472]	850 [401]	1100 [519]	1000 [472]	850 [401]	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	0 [-17.8]	Total BTUH [kW] Power	9.3 [2.73] 1.6	9.2 [2.70] 1.6	9.1 [2.67] 1.6	8.7 [2.55] 1.8	8.6 [2.52] 1.8	8.5 [2.49] 1.8	7.7 [2.26] 2.0	7.6 [2.23] 2.1	7.6 [2.23] 2.1
	5 [-15]	Total BTUH [kW] Power	11.1 [3.25] 1.6	11.0 [3.22] 1.6	10.9 [3.19] 1.7	10.5 [3.08] 1.8	10.4 [3.05] 1.8	10.3 [3.02] 1.9	9.5 [2.78] 2.1	9.4 [2.75] 2.1	9.3 [2.73] 2.1
	10 [-12.2]	Total BTUH [kW] Power	13.0 [3.81] 1.7	12.9 [3.78] 1.7	12.8 [3.75] 1.7	12.4 [3.63] 1.9	12.3 [3.60] 1.9	12.2 [3.58] 1.9	11.4 [3.34] 2.1	11.4 [3.34] 2.1	11.2 [3.28] 2.2
	15 [-9.4]	Total BTUH [kW] Power	15.0 [4.40] 1.7	14.9 [4.37] 1.7	14.8 [4.34] 1.8	14.4 [4.22] 1.9	14.3 [4.19] 1.9	14.2 [4.16] 2.0	13.4 [3.93] 2.2	13.3 [3.90] 2.2	13.2 [3.87] 2.2
	20 [-6.7]	Total BTUH [kW] Power	17.1 [5.01] 1.7	17.0 [4.98] 1.8	16.8 [4.92] 1.8	16.5 [4.84] 2.0	16.4 [4.81] 2.0	16.2 [4.75] 2.0	15.5 [4.54] 2.2	15.4 [4.51] 2.2	15.2 [4.45] 2.3
	25 [-3.9]	Total BTUH [kW] Power	19.2 [5.63] 1.8	19.1 [5.60] 1.8	18.9 [5.54] 1.8	18.6 [5.45] 2.0	18.5 [5.42] 2.0	18.3 [5.36] 2.1	17.6 [5.16] 2.2	17.5 [5.13] 2.3	17.3 [5.07] 2.3
	30 [-1.1]	Total BTUH [kW] Power	21.4 [6.27] 1.8	21.2 [6.21] 1.9	21.0 [6.15] 1.9	20.8 [6.10] 2.0	20.6 [6.04] 2.1	20.4 [5.98] 2.1	19.8 [5.80] 2.3	19.6 [5.74] 2.3	19.4 [5.69] 2.4
	35 [1.7]	Total BTUH [kW] Power	23.5 [6.89] 1.9	23.3 [6.83] 1.9	23.1 [6.77] 1.9	22.9 [6.71] 2.1	22.7 [6.65] 2.1	22.5 [6.59] 2.2	21.9 [6.42] 2.3	21.7 [6.36] 2.4	21.5 [6.30] 2.4
	40 [4.4]	Total BTUH [kW] Power	25.6 [7.50] 1.9	25.4 [7.44] 1.9	25.2 [7.39] 2.0	25.0 [7.33] 2.1	24.8 [7.27] 2.2	24.6 [7.21] 2.2	24.0 [7.03] 2.4	23.9 [7.00] 2.4	23.6 [6.92] 2.5
	45 [7.2]	Total BTUH [kW] Power	27.7 [8.12] 2.0	27.5 [8.06] 2.0	27.2 [7.97] 2.0	27.1 [7.94] 2.2	26.9 [7.88] 2.2	26.6 [7.80] 2.2	26.1 [7.65] 2.4	25.9 [7.59] 2.5	25.6 [7.50] 2.5
50 [10]	Total BTUH [kW] Power	29.7 [8.70] 2.0	29.5 [8.65] 2.0	29.2 [8.56] 2.1	29.1 [8.53] 2.2	28.9 [8.47] 2.2	28.6 [8.38] 2.3	28.1 [8.24] 2.5	27.9 [8.18] 2.5	27.6 [8.09] 2.5	

IDB—Indoor air dry bulb

[ ] Designates Metric Conversions

# SYSTEMS PERFORMANCE—TZHH- SERIES

## HEATING PERFORMANCE DATA—36JA

IDB		60°F [15.5°C]			70°F [21.1°C]			80°F [26.7°C]			
CFM [L/s]		1320 [623]	1200 [566]	1020 [481]	1320 [623]	1200 [566]	1020 [481]	1320 [623]	1200 [566]	1020 [481]	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	0 [-17.8]	Total BTUH [kW] Power	14.5 [4.25] 1.7	14.4 [4.22] 1.7	14.2 [4.16] 1.7	13.5 [3.96] 2.0	13.4 [3.93] 2.1	13.3 [3.90] 2.1	11.8 [3.46] 2.3	11.7 [3.43] 2.4	11.6 [3.40] 2.4
	5 [-15]	Total BTUH [kW] Power	15.6 [4.57] 1.7	15.5 [4.54] 1.8	15.3 [4.48] 1.8	14.6 [4.28] 2.1	14.5 [4.25] 2.1	14.4 [4.22] 2.2	12.9 [3.78] 2.4	12.8 [3.75] 2.4	12.7 [3.72] 2.5
	10 [-12.2]	Total BTUH [kW] Power	17.2 [5.04] 1.8	17.1 [5.01] 1.8	16.9 [4.95] 1.9	16.3 [4.78] 2.2	16.1 [4.72] 2.2	16.0 [4.69] 2.2	14.5 [4.25] 2.5	14.4 [4.22] 2.5	14.3 [4.19] 2.5
	15 [-9.4]	Total BTUH [kW] Power	19.3 [5.66] 1.9	19.1 [5.60] 1.9	18.9 [5.54] 1.9	18.3 [5.36] 2.2	18.2 [5.33] 2.2	18.0 [5.28] 2.3	16.6 [4.86] 2.5	16.4 [4.81] 2.6	16.3 [4.78] 2.6
	20 [-6.7]	Total BTUH [kW] Power	21.7 [6.36] 1.9	21.5 [6.30] 2.0	21.3 [6.24] 2.0	20.7 [6.07] 2.3	20.5 [6.01] 2.3	20.3 [5.95] 2.4	18.9 [5.54] 2.6	18.8 [5.51] 2.6	18.6 [5.45] 2.7
	25 [-3.9]	Total BTUH [kW] Power	24.3 [7.12] 2.0	24.1 [7.06] 2.0	23.8 [6.98] 2.1	23.3 [6.83] 2.4	23.1 [6.77] 2.4	22.9 [6.71] 2.4	21.5 [6.30] 2.7	21.4 [6.27] 2.7	21.2 [6.21] 2.7
	30 [-1.1]	Total BTUH [kW] Power	27.0 [7.91] 2.1	26.8 [7.85] 2.1	26.5 [7.77] 2.1	26.0 [7.62] 2.4	25.8 [7.56] 2.4	25.5 [7.47] 2.5	24.3 [7.12] 2.7	24.1 [7.06] 2.8	23.8 [6.98] 2.8
	35 [1.7]	Total BTUH [kW] Power	29.8 [8.73] 2.1	29.6 [8.67] 2.2	29.3 [8.59] 2.2	28.8 [8.44] 2.5	28.6 [8.38] 2.5	28.3 [8.29] 2.6	27.1 [7.94] 2.8	26.9 [7.88] 2.8	26.6 [7.80] 2.9
	40 [4.4]	Total BTUH [kW] Power	32.5 [9.52] 2.2	32.3 [9.47] 2.2	31.9 [9.35] 2.3	31.5 [9.23] 2.5	31.3 [9.17] 2.6	31.0 [9.09] 2.6	29.8 [8.73] 2.9	29.6 [8.67] 2.9	29.3 [8.59] 2.9
	45 [7.2]	Total BTUH [kW] Power	35.1 [10.29] 2.3	34.9 [10.23] 2.3	34.5 [10.11] 2.3	34.1 [9.99] 2.6	33.9 [9.94] 2.6	33.5 [9.82] 2.7	32.4 [9.50] 2.9	32.1 [9.41] 3.0	31.8 [9.32] 3.0
50 [10]	Total BTUH [kW] Power	37.5 [10.99] 2.3	37.2 [10.90] 2.4	36.8 [10.79] 2.4	36.5 [10.70] 2.7	36.2 [10.61] 2.7	35.8 [10.49] 2.8	34.7 [10.17] 3.0	34.5 [10.11] 3.0	34.1 [9.99] 3.1	

IDB—Indoor air dry bulb

## HEATING PERFORMANCE DATA—42JA

IDB		60°F [15.5°C]			70°F [21.1°C]			80°F [26.7°C]			
CFM [L/s]		1600 [755]	1450 [684]	1230 [580]	1600 [755]	1450 [684]	1230 [580]	1600 [755]	1450 [684]	1230 [580]	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	0 [-17.8]	Total BTUH [kW] Power	15.8 [4.63] 1.8	15.7 [4.60] 1.8	15.5 [4.54] 1.9	14.5 [4.25] 2.1	14.4 [4.22] 2.1	14.2 [4.16] 2.2	13.3 [3.90] 2.5	13.3 [3.90] 2.5	13.1 [3.84] 2.6
	5 [-15]	Total BTUH [kW] Power	17.4 [5.10] 1.9	17.2 [5.04] 1.9	17.1 [5.01] 1.9	16.0 [4.69] 2.2	15.9 [4.66] 2.2	15.7 [4.60] 2.3	14.9 [4.37] 2.6	14.8 [4.34] 2.6	14.6 [4.28] 2.7
	10 [-12.2]	Total BTUH [kW] Power	19.2 [5.63] 2.0	19.1 [5.60] 2.0	18.9 [5.54] 2.0	17.9 [5.25] 2.3	17.7 [5.19] 2.3	17.5 [5.13] 2.3	16.7 [4.89] 2.6	16.6 [4.86] 2.7	16.4 [4.81] 2.7
	15 [-9.4]	Total BTUH [kW] Power	21.3 [6.24] 2.0	21.1 [6.18] 2.1	20.9 [6.13] 2.1	20.0 [5.86] 2.3	19.8 [5.80] 2.4	19.6 [5.74] 2.4	18.8 [5.51] 2.7	18.7 [5.48] 2.8	18.5 [5.42] 2.8
	20 [-6.7]	Total BTUH [kW] Power	23.7 [6.95] 2.1	23.5 [6.89] 2.1	23.2 [6.80] 2.2	22.3 [6.54] 2.4	22.2 [6.51] 2.4	21.9 [6.42] 2.5	21.2 [6.21] 2.8	21.0 [6.15] 2.8	20.8 [6.10] 2.9
	25 [-3.9]	Total BTUH [kW] Power	26.3 [7.71] 2.2	26.1 [7.65] 2.2	25.8 [7.56] 2.2	24.9 [7.30] 2.5	24.8 [7.27] 2.5	24.5 [7.18] 2.6	23.8 [6.98] 2.9	23.6 [6.92] 2.9	23.4 [6.86] 3.0
	30 [-1.1]	Total BTUH [kW] Power	29.1 [8.53] 2.3	28.9 [8.47] 2.3	28.6 [8.38] 2.3	27.8 [8.15] 2.6	27.6 [8.09] 2.6	27.3 [8.00] 2.6	26.7 [7.83] 2.9	26.5 [7.77] 3.0	26.2 [7.68] 3.0
	35 [1.7]	Total BTUH [kW] Power	32.2 [9.44] 2.3	32.0 [9.38] 2.4	31.6 [9.26] 2.4	30.9 [9.06] 2.6	30.7 [9.00] 2.7	30.3 [8.88] 2.7	29.8 [8.73] 3.0	29.5 [8.65] 3.0	29.2 [8.56] 3.1
	40 [4.4]	Total BTUH [kW] Power	35.5 [10.40] 2.4	35.3 [10.35] 2.4	34.9 [10.23] 2.5	34.2 [10.02] 2.7	33.9 [9.94] 2.7	33.6 [9.85] 2.8	33.1 [9.70] 3.1	32.8 [9.61] 3.1	32.5 [9.52] 3.2
	45 [7.2]	Total BTUH [kW] Power	39.0 [11.43] 2.5	38.7 [11.34] 2.5	38.3 [11.22] 2.5	37.7 [11.05] 2.8	37.4 [10.96] 2.8	37.0 [10.84] 2.9	36.6 [10.73] 3.2	36.3 [10.64] 3.2	35.9 [10.52] 3.3
50 [10]	Total BTUH [kW] Power	42.7 [12.51] 2.5	42.4 [12.43] 2.6	42.0 [12.31] 2.6	41.4 [12.13] 2.8	41.1 [12.05] 2.9	40.7 [11.93] 2.9	40.3 [11.81] 3.2	40.0 [11.72] 3.3	39.5 [11.58] 3.3	

IDB—Indoor air dry bulb

[ ] Designates Metric Conversions

# SYSTEMS PERFORMANCE—TZHH- SERIES

## HEATING PERFORMANCE DATA—48JA

IDB		60°F [15.5°C]			70°F [21.1°C]			80°F [26.7°C]			
CFM [L/s]		1700 [802]	1500 [732]	1320 [623]	1700 [802]	1500 [732]	1320 [623]	1700 [802]	1500 [732]	1320 [623]	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	0 [-17.8]	Total BTUH [kW] Power	16.4 [4.81] 2.3	16.2 [4.75] 2.4	16.1 [4.72] 2.4	15.5 [4.54] 2.7	15.4 [4.51] 2.7	15.3 [4.48] 2.8	14.0 [4.10] 3.1	13.9 [4.07] 3.1	13.7 [4.02] 3.2
	5 [-15]	Total BTUH [kW] Power	19.1 [5.60] 2.4	19.0 [5.57] 2.5	18.8 [5.51] 2.5	18.3 [5.36] 2.8	18.2 [5.33] 2.8	18.0 [5.28] 2.9	16.7 [4.89] 3.2	16.6 [4.86] 3.2	16.4 [4.81] 3.3
	10 [-12.2]	Total BTUH [kW] Power	22.1 [6.48] 2.5	22.0 [6.45] 2.5	21.7 [6.36] 2.6	21.3 [6.24] 2.9	21.2 [6.21] 2.9	20.9 [6.13] 3.0	19.7 [5.77] 3.3	19.6 [5.74] 3.3	19.4 [5.69] 3.4
	15 [-9.4]	Total BTUH [kW] Power	25.3 [7.41] 2.6	25.1 [7.36] 2.6	24.9 [7.30] 2.7	24.5 [7.18] 2.9	24.3 [7.12] 3.0	24.1 [7.06] 3.0	22.9 [6.71] 3.3	22.8 [6.68] 3.4	22.5 [6.59] 3.4
	20 [-6.7]	Total BTUH [kW] Power	28.6 [8.38] 2.7	28.4 [8.32] 2.7	28.1 [8.24] 2.7	27.8 [8.15] 3.0	27.6 [8.09] 3.1	27.3 [8.00] 3.1	26.2 [7.68] 3.4	26.0 [7.62] 3.5	25.7 [7.53] 3.5
	25 [-3.9]	Total BTUH [kW] Power	32.0 [9.38] 2.7	31.7 [9.29] 2.8	31.4 [9.20] 2.8	31.2 [9.14] 3.1	30.9 [9.06] 3.1	30.6 [8.97] 3.2	29.6 [8.67] 3.5	29.4 [8.62] 3.5	29.1 [8.53] 3.6
	30 [-1.1]	Total BTUH [kW] Power	35.3 [10.35] 2.8	35.1 [10.29] 2.8	34.7 [10.17] 2.9	34.5 [10.11] 3.2	34.3 [10.05] 3.2	33.9 [9.94] 3.3	32.9 [9.64] 3.6	32.7 [9.58] 3.6	32.4 [9.50] 3.7
	35 [1.7]	Total BTUH [kW] Power	38.7 [11.34] 2.9	38.4 [11.25] 2.9	38.0 [11.14] 3.0	37.9 [11.11] 3.2	37.6 [11.02] 3.3	37.2 [10.90] 3.4	36.3 [10.64] 3.6	36.0 [10.55] 3.7	35.6 [10.43] 3.8
	40 [4.4]	Total BTUH [kW] Power	41.9 [12.28] 3.0	41.6 [12.19] 3.0	41.2 [12.07] 3.1	41.1 [12.05] 3.3	40.8 [11.96] 3.4	40.4 [11.84] 3.4	39.5 [11.58] 3.7	39.2 [11.49] 3.8	38.8 [11.37] 3.8
	45 [7.2]	Total BTUH [kW] Power	45.0 [13.19] 3.0	44.7 [13.10] 3.1	44.2 [12.95] 3.1	44.2 [12.95] 3.4	43.9 [12.87] 3.4	43.4 [12.72] 3.5	42.6 [12.48] 3.8	42.3 [12.40] 3.8	41.8 [12.25] 3.9
50 [10]	Total BTUH [kW] Power	47.9 [14.04] 3.1	47.5 [13.92] 3.2	47.0 [13.77] 3.2	47.0 [13.77] 3.5	46.7 [13.69] 3.5	46.2 [13.54] 3.6	45.5 [13.33] 3.9	45.1 [13.22] 3.9	44.7 [13.10] 4.0	

IDB—Indoor air dry bulb

## HEATING PERFORMANCE DATA—60JA

IDB		60°F [15.5°C]			70°F [21.1°C]			80°F [26.7°C]			
CFM [L/s]		2090 [986]	1900 [897]	1620 [765]	2090 [986]	1900 [897]	1620 [765]	2090 [986]	1900 [897]	1620 [765]	
OUTDOOR DRY BULB TEMPERATURE °F [°C]	0 [-17.8]	Total BTUH [kW] Power	20.6 [6.04] 2.3	20.4 [5.98] 2.3	20.2 [5.92] 2.4	19.8 [5.80] 2.8	19.7 [5.77] 2.9	19.4 [5.69] 2.9	19.0 [5.57] 3.2	18.8 [5.51] 3.2	18.6 [5.45] 3.3
	5 [-15]	Total BTUH [kW] Power	23.1 [6.77] 2.4	22.9 [6.71] 2.4	22.7 [6.65] 2.5	22.3 [6.54] 2.9	22.2 [6.51] 3.0	21.9 [6.42] 3.0	21.5 [6.30] 3.3	21.4 [6.27] 3.3	21.1 [6.18] 3.4
	10 [-12.2]	Total BTUH [kW] Power	26.3 [7.71] 2.5	26.1 [7.65] 2.5	25.9 [7.59] 2.6	25.5 [7.47] 3.0	25.3 [7.41] 3.1	25.1 [7.36] 3.1	24.7 [7.24] 3.4	24.5 [7.18] 3.4	24.3 [7.12] 3.5
	15 [-9.4]	Total BTUH [kW] Power	30.1 [8.82] 2.6	29.8 [8.73] 2.7	29.5 [8.65] 2.7	29.3 [8.59] 3.1	29.0 [8.50] 3.2	28.7 [8.41] 3.2	28.4 [8.32] 3.5	28.2 [8.26] 3.6	27.9 [8.18] 3.6
	20 [-6.7]	Total BTUH [kW] Power	34.1 [9.99] 2.7	33.9 [9.94] 2.8	33.5 [9.82] 2.8	33.4 [9.79] 3.3	33.1 [9.70] 3.3	32.8 [9.61] 3.4	32.5 [9.52] 3.6	32.3 [9.47] 3.7	32.0 [9.38] 3.7
	25 [-3.9]	Total BTUH [kW] Power	38.5 [11.28] 2.8	38.2 [11.20] 2.9	37.8 [11.08] 2.9	37.7 [11.05] 3.4	37.4 [10.96] 3.4	37.0 [10.84] 3.5	36.8 [10.79] 3.7	36.6 [10.73] 3.8	36.2 [10.61] 3.8
	30 [-1.1]	Total BTUH [kW] Power	42.8 [12.54] 2.9	42.5 [12.46] 3.0	42.0 [12.31] 3.0	42.0 [12.31] 3.5	41.7 [12.22] 3.5	41.3 [12.10] 3.6	41.2 [12.07] 3.8	40.9 [11.99] 3.9	40.5 [11.87] 4.0
	35 [1.7]	Total BTUH [kW] Power	47.0 [13.77] 3.1	46.7 [13.69] 3.1	46.2 [13.54] 3.2	46.2 [13.54] 3.6	45.9 [13.45] 3.6	45.4 [13.31] 3.7	45.4 [13.31] 3.9	45.1 [13.22] 4.0	44.6 [13.07] 4.1
	40 [4.4]	Total BTUH [kW] Power	51.0 [14.95] 3.2	50.6 [14.83] 3.2	50.1 [14.68] 3.3	50.2 [14.71] 3.7	49.8 [14.59] 3.7	49.3 [14.45] 3.8	49.4 [14.48] 4.1	49.0 [14.36] 4.1	48.5 [14.21] 4.2
	45 [7.2]	Total BTUH [kW] Power	54.5 [15.97] 3.3	54.1 [15.86] 3.3	53.5 [15.68] 3.4	53.7 [15.74] 3.8	53.3 [15.62] 3.9	52.8 [15.47] 3.9	52.9 [15.50] 4.2	52.5 [15.39] 4.2	52.0 [15.24] 4.3
50 [10]	Total BTUH [kW] Power	57.4 [16.82] 3.4	57.0 [16.71] 3.4	56.4 [16.53] 3.5	56.6 [16.59] 3.9	56.2 [16.47] 4.0	55.6 [16.29] 4.0	55.8 [16.35] 4.3	55.4 [16.24] 4.3	54.8 [16.06] 4.4	

IDB—Indoor air dry bulb

[ ] Designates Metric Conversions



## INDOOR AIRFLOW PERFORMANCE—230 VOLTS

Nominal Cooling Capacity Tons [kW]	Motor Speed from Factory	Manufacturer Recommended Air-Flow Range (Min/Max) CFM	Blower Size/ Motor HP [W] & # of Speeds	Motor Speed	CFM [L/s] Air Delivery/RPM/Watts—230 Volts Side Discharge—Wet Coil											
					External Static Pressure—Inches W.C. [kPa]											
					0.1 [0.02]	0.2 [0.05]	0.3 [0.07]	0.4 [0.10]	0.5 [0.12]	0.6 [0.15]	0.7 [0.17]	0.8 [0.20]	0.9 [0.22]	1.0 [0.25]		
2.0 [7.03]	Low	700/900	10x9 1/4 HP [186] 2 Speed Motor	Low	CFM	827 [390]	811 [383]	782 [369]	740 [349]	684 [323]	614 [290]	531 [251]	435 [205]	—	—	
				High	RPM	450	533	626	742	799	894	932	985	—	—	
	2.5 [8.79]	Low	875/1125	10x9 1/3 HP [249] 2 Speed Motor	Low	CFM	1032 [487]	1030 [486]	1014 [478]	979 [462]	923 [436]	843 [398]	735 [347]	596 [281]	423 [200]	—
					High	RPM	533	570	659	746	795	863	934	1019	1050	—
3.0 [10.55]	Low	1050/1350	10x9 1/2 HP [373] 2 Speed Motor	Low	CFM	1261 [595]	1253 [591]	1225 [578]	1177 [555]	1110 [524]	1023 [483]	915 [432]	788 [372]	641 [303]	—	
				High	RPM	648	705	754	802	854	896	985	1008	1041	—	—
	3.5 [12.31]	Low	1225/1575	11x9 1/2 HP [373] 2 Speed Motor	Low	CFM	1431 [675]	1394 [658]	1348 [636]	1302 [614]	1258 [594]	1208 [570]	1140 [538]	1030 [486]	849 [401]	557 [263]
					High	RPM	540	579	633	686	724	776	831	868	1035	1076
4.0 [14.07]	Low	1400/1800	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	1674 [790]	1638 [773]	1595 [753]	1547 [730]	1492 [704]	1432 [676]	1365 [644]	1293 [610]	1214 [573]	1129 [533]	
				High	RPM	703	727	750	780	809	846	877	910	940	975	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	1960 [925]	1936 [914]	1903 [898]	1859 [877]	1806 [852]	1742 [822]	1669 [788]	1585 [748]	1491 [704]	1387 [655]
					High	RPM	783	782	776	759	750	729	712	686	656	625
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]
					High	RPM	754	782	806	838	881	907	936	960	996	1032
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	
				High	RPM	754	782	806	838	881	907	936	960	996	1032	—
	5.0 [17.6]	Low	1750/225													

# AIRFLOW PERFORMANCE—TZHH- SERIES

## INDOOR AIRFLOW PERFORMANCE—208 VOLTS

Nominal Cooling Capacity Tons [kW]	Motor Speed from Factory	Manufacturer Recommended Air-Flow Range (Min/Max) CFM	Blower Size/ Motor HP [W] & # of Speeds	Motor Speed	CFM [L/s] Air Delivery/RPM/Watts—208 Volts Side Discharge—Wet Coil												
					External Static Pressure—Inches W.C. [kPa]												
					0.1 [1.02]	0.2 [0.05]	0.3 [1.07]	0.4 [1.10]	0.5 [1.12]	0.6 [1.15]	0.7 [1.17]	0.8 [1.20]	0.9 [1.22]	1.0 [1.25]			
2.0 [7.03]	Low	700/900	10x9 1/4 HP [186] 2 Speed Motor	Low	CFM	723 [341]	692 [327]	654 [309]	609 [287]	556 [262]	496 [234]	428 [202]	—	—	—		
					RPM	443	528	651	710	819	863	914	—	—	—		
					Watts	230	222	219	214	202	196	184	—	—	—		
	High	CFM	1062 [501]	1062 [501]	1058 [499]	1043 [492]	1013 [478]	962 [454]	884 [417]	774 [365]	627 [296]	437 [206]	1080	—	—		
		RPM	528	618	674	735	812	895	936	985	1055	1080	—	—			
		Watts	396	393	384	376	361	335	318	297	244	223	—	—			
2.5 [8.79]	Low	875/1125	10x9 1/3 HP [249] 2 Speed Motor	Low	CFM	923 [435]	904 [426]	874 [413]	832 [393]	774 [365]	698 [329]	602 [284]	483 [228]	—	—		
					RPM	498	543	648	728	806	853	947	989	—	—		
					Watts	280	278	268	259	252	243	219	201	—	—		
	High	CFM	1164 [549]	1154 [545]	1143 [539]	1124 [530]	1090 [514]	1034 [489]	948 [447]	826 [390]	660 [311]	445 [210]	1078	—	—		
		RPM	526	596	670	744	803	864	945	971	1051	1078	—	—			
		Watts	401	398	388	379	371	350	322	310	259	235	—	—			
3.0 [10.55]	Low	1050/1350	10x9 1/2 HP [373] 2 Speed Motor	Low	CFM	1145 [540]	1142 [539]	1118 [528]	1073 [506]	1006 [475]	918 [433]	—	—	—	—		
					RPM	556	645	703	769	828	909	—	—	—	—		
					Watts	346	340	335	326	321	298	—	—	—	—		
	High	CFM	1884 [889]	1850 [873]	1815 [856]	1772 [836]	1712 [808]	1630 [769]	1516 [715]	1363 [643]	1164 [549]	910 [430]	1097	—	—		
		RPM	791	834	871	912	946	975	1004	1032	1083	1083	1097	—	—		
		Watts	704	694	675	655	638	606	581	548	464	440	—	—			
3.5 [12.31]	Low	1225/1575	11x9 1/2 HP [373] 2 Speed Motor	Low	CFM	1279 [604]	1237 [584]	1196 [564]	1151 [543]	1098 [518]	1032 [487]	950 [448]	846 [399]	717 [338]	558 [263]		
					RPM	490	539	598	653	709	772	811	887	928	978	—	—
					Watts	401	400	393	391	381	373	364	343	329	305	—	—
	High	CFM	1751 [826]	1729 [816]	1698 [801]	1658 [782]	1608 [759]	1549 [731]	1481 [699]	1404 [663]	1317 [622]	1221 [576]	968	—	—		
		RPM	640	668	706	734	781	813	851	888	937	968	—	—			
		Watts	660	658	651	644	628	617	603	581	557	524	—	—			
4.0 [14.07]	Low	1400/1800	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	1400 [661]	1393 [658]	1373 [648]	1337 [631]	1288 [608]	1225 [578]	1147 [541]	1055 [498]	949 [448]	828 [391]		
					RPM	536	578	623	677	718	782	830	863	902	976	—	—
					Watts	471	466	458	455	453	442	429	420	403	374	—	—
	High	CFM	1786 [843]	1764 [832]	1734 [818]	1695 [800]	1649 [778]	1595 [753]	1532 [723]	1462 [690]	1384 [653]	1297 [612]	955	—	—		
		RPM	618	643	684	726	757	805	841	883	924	955	—	—			
		Watts	665	660	651	646	638	626	612	596	573	555	—	—			
5.0 [17.6]	Low	1750/2250	11x9 3/4 HP [559] 2 Speed Motor	Low	CFM	1953 [922]	1916 [904]	1880 [887]	1846 [871]	1812 [855]	1779 [840]	1747 [824]	1714 [809]	1681 [793]	1647 [777]		
					RPM	681	720	757	792	823	855	889	922	955	994	—	—
					Watts	432	455	485	496	518	540	554	571	582	605	—	—
	High	CFM	2201 [1039]	2168 [1023]	2134 [1007]	2101 [992]	2067 [976]	2035 [960]	2004 [946]	1975 [932]	1947 [919]	1922 [907]	1032	—	—		
		RPM	754	782	806	838	881	907	936	960	996	1032	—	—			
		Watts	627	641	668	682	718	739	754	770	792	820	—	—			

[ ] Designates Metric Conversions

# ELECTRICAL DATA—TZHH- SERIES

Model No. TZHH-	Unit Information				Evaporator Fan					
	Unit Operating Voltage Range	Minimum Circuit Ampacity	Minimum Overcurrent Protection Device Size	Maximum Overcurrent Protection Device Size	No.	Volts	Phase	HP	Amps (FLA)	Amps (LRA)
24JA	187-253	17/17	20/20	25/25	1	208/230	1	1/4	1.5	2.6
30JA	187-253	19/19	25/25	30/30	1	208/230	1	1/3	1.7	2.6
36JA	187-253	23/23	30/30	35/35	1	208/230	1	1/2	2.5	5
42JA	187-253	26/26	30/30	40/40	1	208/230	1	1/2	2.7	4.6
48JA	187-253	28/28	35/35	45/45	1	208/230	1	3/4	3.2	4.4
60JA	187-253	41/41	50/50	60/60	1	208/230	1	1	7.6	0

Model No. TZHH-	Compressor Motor							Condenser Motor					
	No.	Volts	Phase	HP	RPM	Amps (RLA)	Amps (LRA)	No.	Volts	Phase	HP	Amps (FLA)	Amps (LRA)
24JA	1	208/230	1	2	3450	10.9/10.9	54/54	1	208/230	1	1/3	1.5	3
30JA	1	208/230	1	2.5	3450	12.2/12.2	67/67	1	208/230	1	1/3	1.5	3
36JA	1	208/230	1	3	3450	14.9/14.9	83/83	1	208/230	1	1/3	1.5	3
42JA	1	208/230	1	3.5	3450	16.7/16.7	95/95	1	208/230	1	1/3	1.8	4
48JA	1	208/230	1	4	3450	18.3/18.3	109/109	1	208/230	1	1/3	1.8	4
60JA	1	208/230	1	4.5	3450	25/25	148/148	1	208/230	1	1/3	1.8	4

# ELECTRIC HEATER KITS—TZHH- SERIES

## 208-240 VOLT, SINGLE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KITS CHARACTERISTICS AND APPLICATION

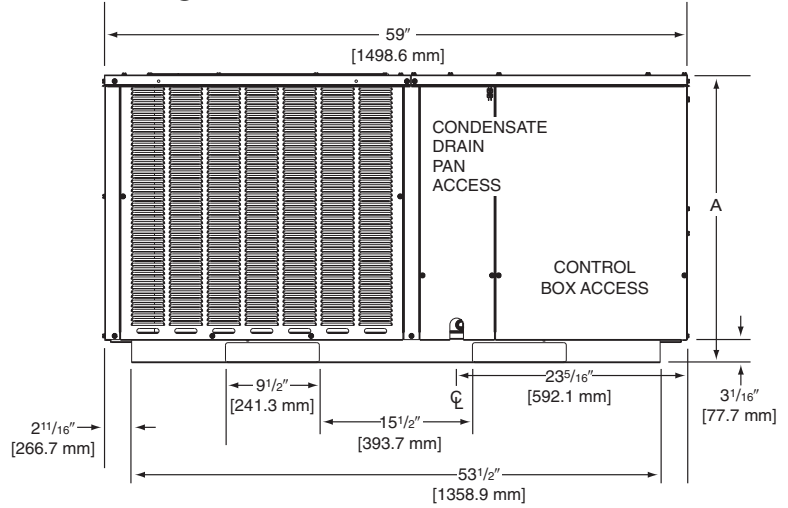
Unit Model No. TZHH-	Single Power Supply For Both Unit and Heater Kit										Separate Power Supply For Both Unit and Heater Kit					
	Heater Kit					Heat Pump					Heater Kit			Heat Pump		
	RX0J- Heater Kit Nominal kW	No. of Elements	No. of Sequence Steps	Rated Heater kW @ 208-240 V	Heater KBTU/Hr @ 208-240 V	Heater Amp. @ 208-240 V	Unit Min. Ckt. Ampacity @ 208-240 V	Over Current Protective Device Size Min./Max. @ 208 V	Over Current Protective Device Size Min./Max. @ 240 V	Min. Ckt. Ampacity 208-240 V	Max. Fuse Size 208/240V	Min. Circuit Ampacity 208-240 V	Over Current Protective Device Size Min./Max. @ 208 V	Over Current Protective Device Size Min./Max. @ 240 V		
24JA	No Heat	—	—	—	—	—	17/17	20/25	20/25	—	17/17	20/25	20/25			
	C05J	1	1	3.6/4.8	12.28/16.38	17.33/20	39/42	40/40	45/45	22/25	25/25	—	—			
	C07J	1	1	5.4/7.2	18.42/24.56	26/30	50/55	50/50	60/60	33/38	35/40	—	—			
30JA	C10J	2	1	7.2/9.6	24.57/32.76	34.7/40	60/67	60/60	70/70	44/50	45/50	—	—			
	No Heat	—	—	—	—	—	19/19	25/30	25/30	—	—	25/30	25/30			
	C05J	1	1	3.6/4.8	12.28/16.38	17.33/20	41/44	45/45	45/50	22/25	25/25	—	—			
36JA	C07J	1	1	5.4/7.2	18.42/24.56	26/30	51/56	60/60	60/60	33/38	35/40	—	—			
	C10J	2	1	7.2/9.6	24.57/32.76	34.7/40	62/69	70/70	70/70	44/50	45/50	—	—			
	C15J	3	2	10.8/14.4	36.85/49.13	52/60	84/94	90/90	100/100	65/75	70/80	—	—			
42JA	C20J	4	2	14.4/19.2	49.12/65.52	69.33/80	110/123	110/110	125/125	87/100	90/100	—	—			
	No Heat	—	—	—	—	—	23/23	30/35	30/35	—	—	30/35	30/35			
	C05J	1	1	3.6/4.8	12.28/16.38	17.33/20	45/48	50/50	50/50	22/25	25/25	—	—			
48JA	C07J	1	1	5.4/7.2	18.42/24.56	26/30	56/61	60/60	70/70	33/38	35/40	—	—			
	C10J	2	1	7.2/9.6	24.57/32.76	34.7/40	66/73	70/70	80/80	44/50	45/50	—	—			
	C15J	3	2	10.8/14.4	36.85/49.13	52/60	88/98	90/90	100/100	65/75	70/80	—	—			
60JA	C20J	4	2	14.4/19.2	49.12/65.52	69.33/80	112/126	125/125	150/150	87/100	90/100	—	—			
	No Heat	—	—	—	—	—	28/28	35/45	35/45	—	—	35/45	35/45			
	C05J	1	1	3.6/4.8	12.28/16.38	17.33/20	50/53	60/60	60/60	22/25	25/25	—	—			
60JA	C07J	1	1	5.4/7.2	18.42/24.56	26/30	61/66	70/70	70/70	33/38	35/40	—	—			
	C10J	2	1	7.2/9.6	24.57/32.76	34.7/40	72/78	80/80	80/80	44/50	45/50	—	—			
	C15J	3	2	10.8/14.4	36.85/49.13	52/60	93/103	100/100	110/110	65/75	70/80	—	—			
60JA	C20J	4	2	14.4/19.2	49.12/65.52	69.33/80	115/128	125/125	150/150	87/100	90/100	—	—			
	No Heat	—	—	—	—	—	41/41	50/60	50/60	—	—	50/60	50/60			
	C05J	1	1	3.6/4.8	12.28/16.38	17.33/20	63/66	80/80	80/80	22/25	25/25	—	—			
60JA	C07J	1	1	5.4/7.2	18.42/24.56	26/30	74/79	90/90	90/90	33/38	35/40	—	—			
	C10J	2	1	7.2/9.6	24.57/32.76	34.7/40	85/91	90/90	100/100	44/50	45/50	—	—			
	C15J	3	2	10.8/14.4	36.85/49.13	52/60	106/116	110/110	125/125	65/75	70/80	—	—			
60JA	C20J	4	2	14.4/19.2	49.12/65.52	69.33/80	128/141	150/150	150/150	87/100	90/100	—	—			

# UNIT DIMENSIONS—TZHH- SERIES

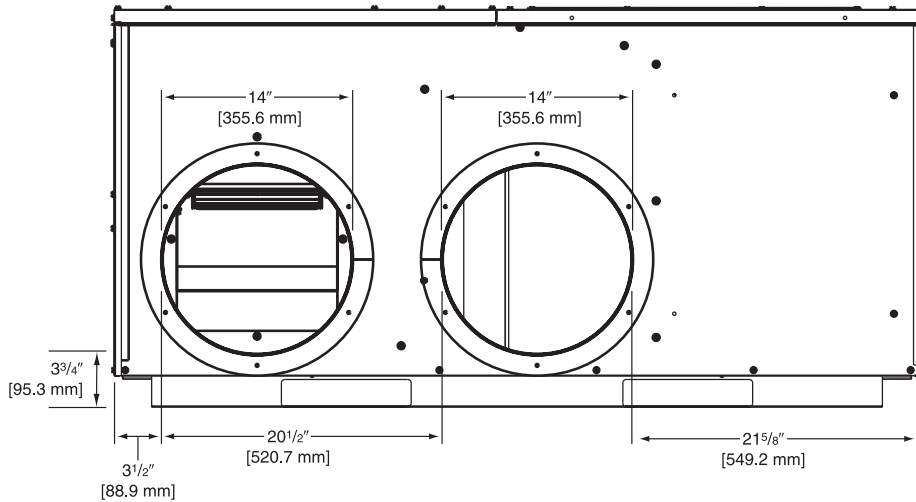
## DIMENSIONS

Model	Height "A"
24, 30, 36	29 1/8"
42, 48, 60	37 1/8"

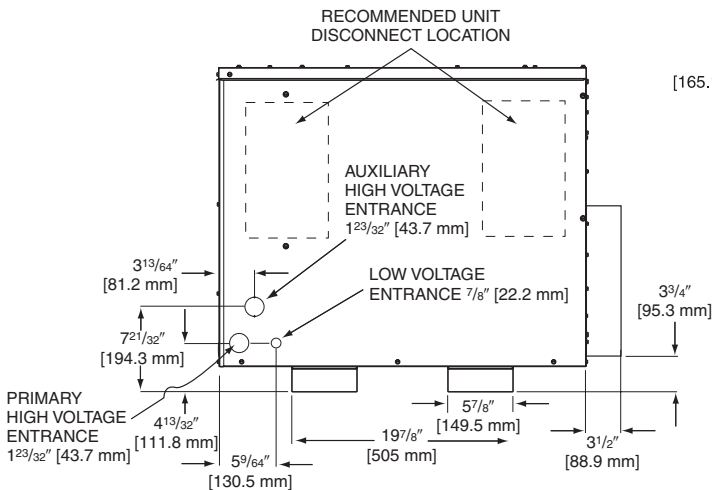
## FRONT VIEW



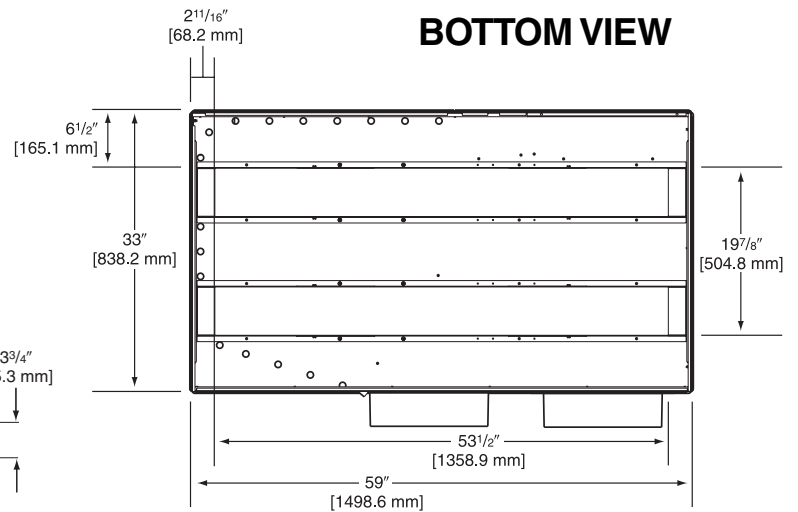
## REAR VIEW



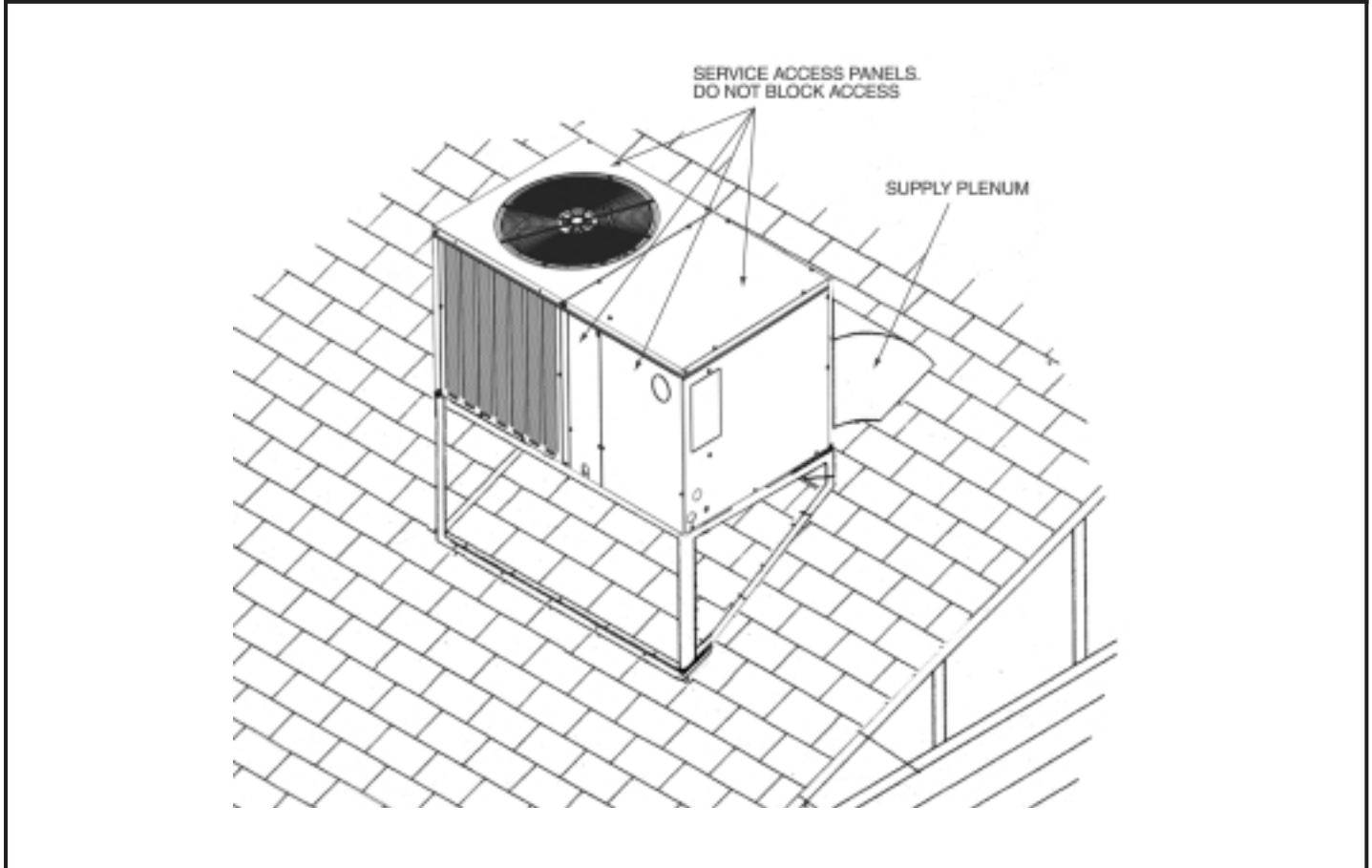
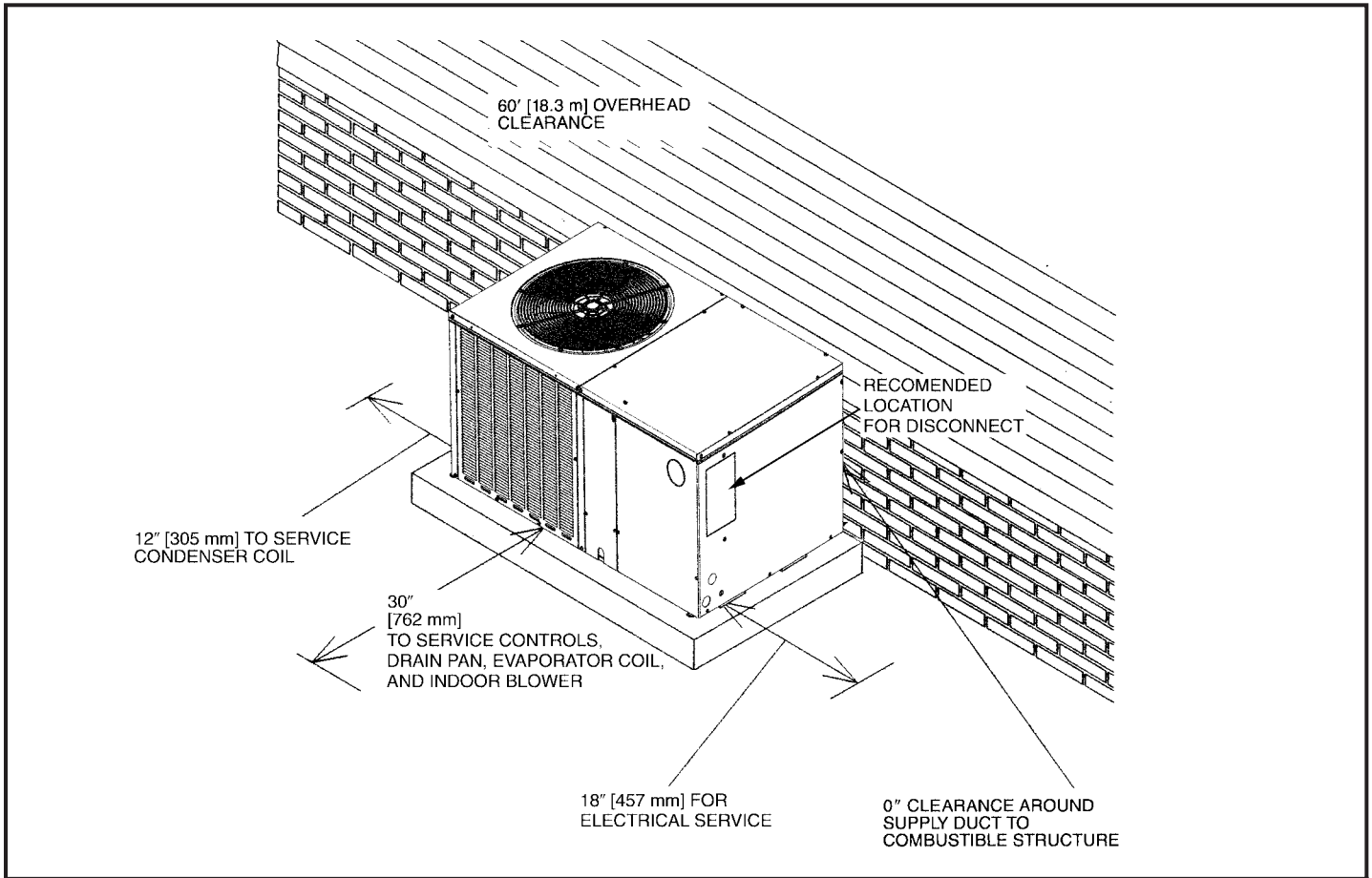
## ELECTRICAL CONNECTIONS



## BOTTOM VIEW



# TYPICAL INSTALLATIONS



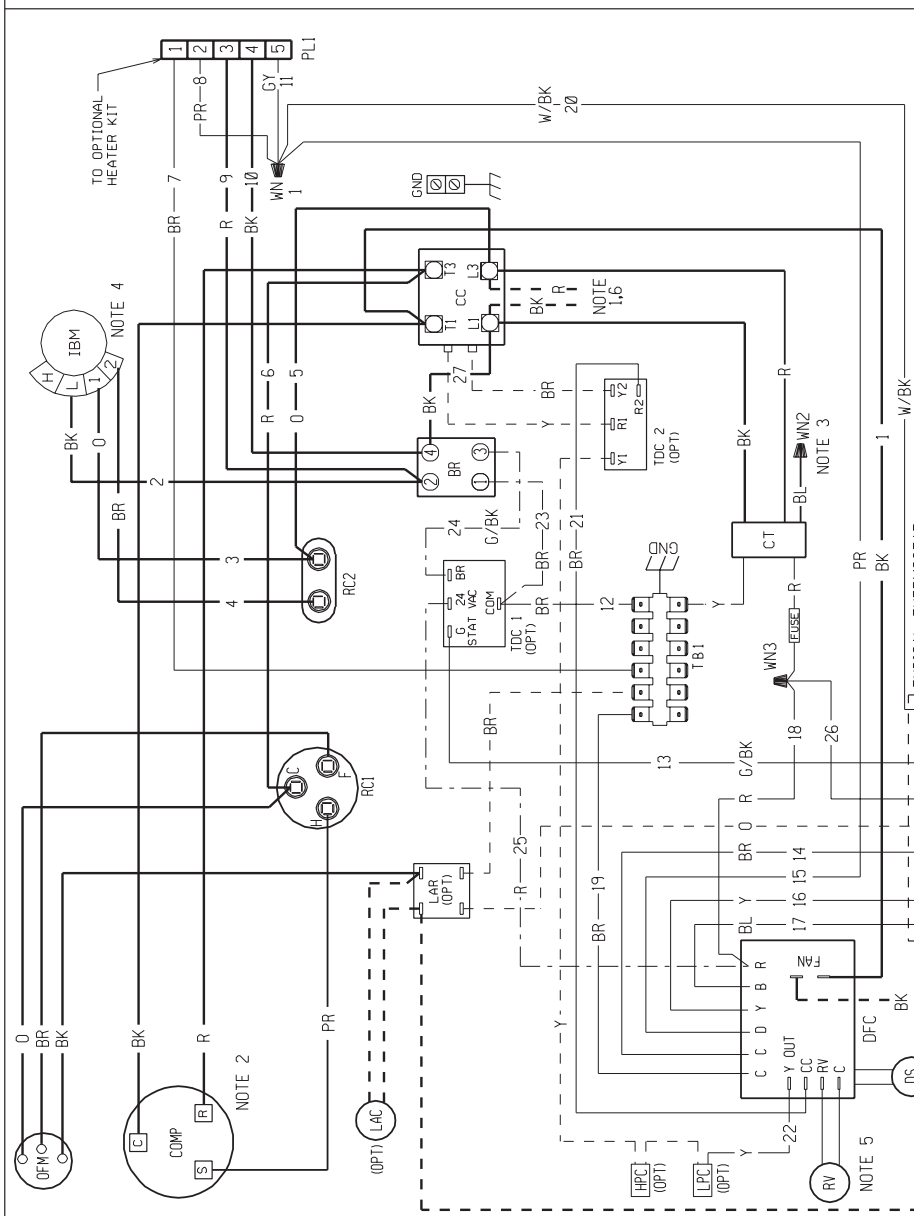
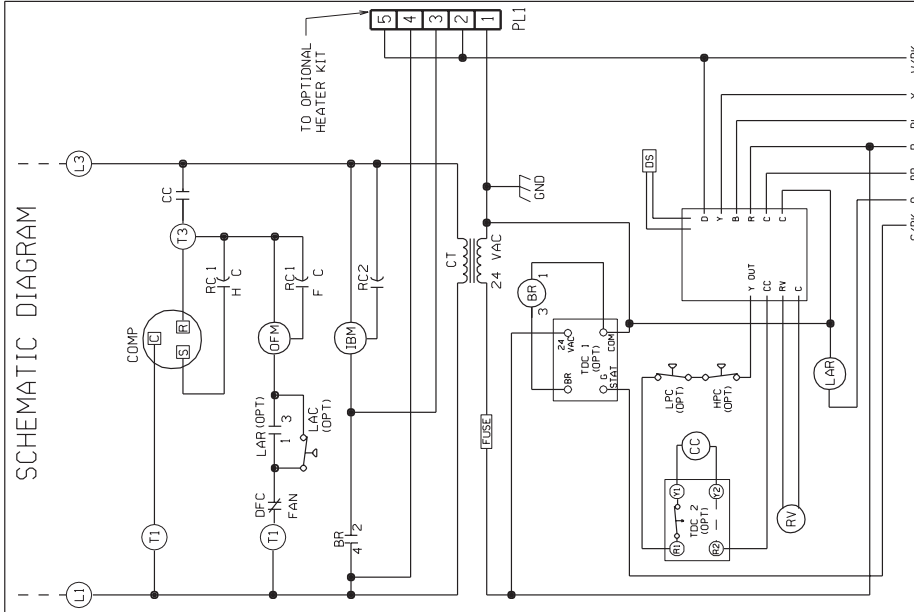
[ ] Designates Metric Conversions

**ACCESSORY EQUIPMENT**

Accessory Description	Model Application	Accessory Model No.
Outdoor Thermostat	TZHH-	RXPT-A01

# WIRING SCHEMATICS—TZHH- SERIES

SCHEMATIC DIAGRAM



**WIRE COLOR CODE**

BK	BLACK
BR	BROWN
BL	BLUE
R	RED
W	WHITE
GY	GRAY
O	ORANGE
PR	PURPLE
Y	YELLOW

**ELECTRICAL WIRING DIAGRAM**

**PACKAGE HEAT PUMP**

1 PH, 208/230 VOLT - 60 HZ

DR. BY: BJJ  
APP. BY: BJJ  
DATE: 02-10-04  
DWG. NO.: 90-23621-08  
REV: 04

**WIRING INFORMATION**

- LINE VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- LOW VOLTAGE
- FACTORY STANDARD
- FACTORY OPTION
- FIELD INSTALLED
- REPLACEMENT WIRE
- MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105 C MIN.)
- WARNING
- CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C. AND LOCAL CODES AS APPLICABLE.

**NOTES:**

- CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
- COMPRESSOR MOTOR THERMALLY PROTECTED.
- TRANSFORMER FACTORY WIRE FOR 230 VOLTS. USE RED AND BLUE LEADS FOR 208 VOLTS.
- MOTOR FACTORY WIRE FOR LOW SPEED. SEE AIRFLOW TABLES IN INSTALLATION INSTRUCTIONS TO DETERMINE CORRECT SPEED FOR UNIT APPLICATION.
- THIS COMPONENT ENERGIZED IN HEATING.
- FIELD WIRING OR CONNECTION FROM HEATER KIT FUSE BLOCK.

**COMPONENT CODE**

ALC	AUX. LIMIT CONTROL
BR	BLOWER RELAY
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
COMP	COMPRESSOR
CT	CONTACTOR TRANSFORMER
DFC	DEFROST CONTROL
DR	DEFROST RELAY
DS	DEFROST SENSOR
GND	GROUND
HPS	HOT GAS SENSOR
IBM	INDOOR BLOWER MOTOR
LAC	LOW AMBIENT COOLING CONTROL
LAR	LOW AMBIENT RELAY
CC	CRANKCASE HEATER
OFM	OUTDOOR FAN MOTOR
OPT	OPTIONAL
PL	PLUG
RC	RELAY
RC1	RELAY CONTROL
RC2	RELAY CONTROL
TS	TERMINAL BLOCK
TB	TIME DELAY CONTROL
WIRE NUT	WIRE NUT

**WIRING INFORMATION**

1. CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.

2. COMPRESSOR MOTOR THERMALLY PROTECTED.

3. TRANSFORMER FACTORY WIRE FOR 230 VOLTS. USE RED AND BLUE LEADS FOR 208 VOLTS.

4. MOTOR FACTORY WIRE FOR LOW SPEED. SEE AIRFLOW TABLES IN INSTALLATION INSTRUCTIONS TO DETERMINE CORRECT SPEED FOR UNIT APPLICATION.

5. THIS COMPONENT ENERGIZED IN HEATING.

6. FIELD WIRING OR CONNECTION FROM HEATER KIT FUSE BLOCK.

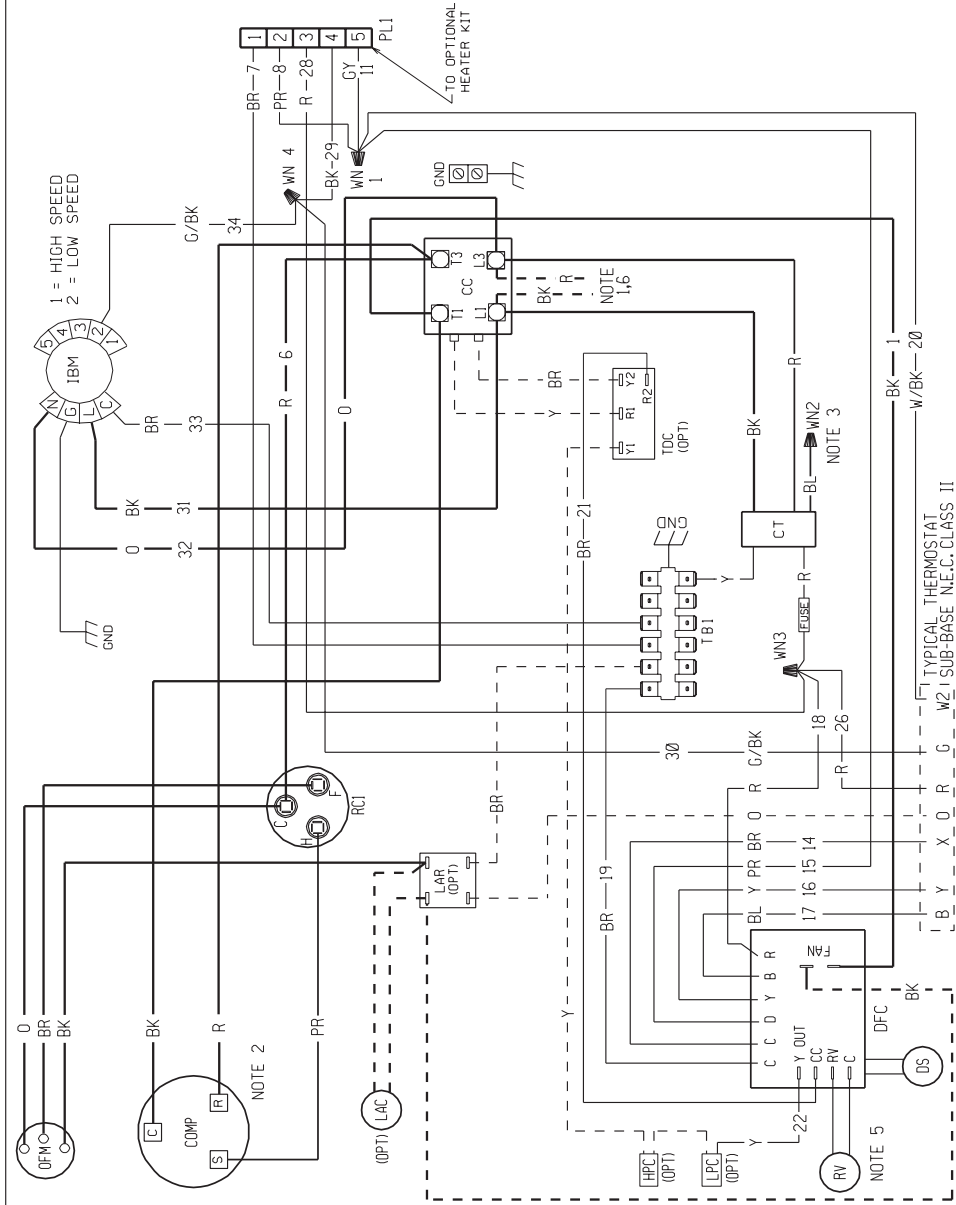
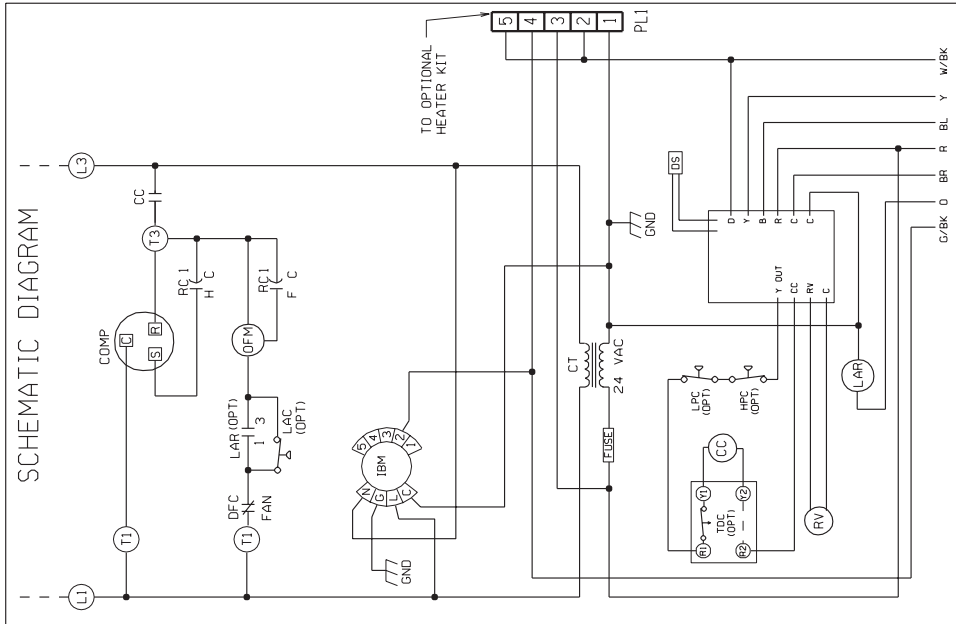
**NOTES:**

1. TYPICAL THERMOSTAT

2. SUB-BASE N.E.C. CLASS II



## SCHEMATIC DIAGRAM



WIRE COLOR CODE	
BK	BLACK
BR	BROWN
BL	BLUE
G	GREEN
GY	GRAY
O	ORANGE
PR	PURPLE
R	RED
W	WHITE
Y	YELLOW

WIRING INFORMATION	
---	LINE VOLTAGE
---	-FACTORY STANDARD
---	-FACTORY OPTION
---	-FIELD INSTALLED
---	LOW VOLTAGE
---	-FACTORY STANDARD
---	-FACTORY OPTION
---	-FIELD INSTALLED
---	REPLACEMENT WIRE
---	-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105 C MIN.)
---	WARNING
---	-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C. AND LOCAL CODES AS APPLICABLE.

NOTES:	
1.	CONNECTORS SUITABLE FOR USE WITH COPPER CONDUCTORS ONLY.
2.	COMPRESSOR MOTOR THERMALLY PROTECTED.
3.	TRANSFORMER FACTORY WIRED FOR 230 VOLTS. USE RED AND BLUE LEADS FOR 208 VOLTS.
4.	MOTOR FACTORY WIRED FOR LOW SPEED. SEE AIRFLOW TABLES IN INSTALLATION INSTRUCTIONS TO DETERMINE CORRECT SPEED FOR UNIT APPLICATION.
5.	THIS COMPONENT ENERGIZED IN HEATING.
6.	FIELD WIRING OR CONNECTION FROM HEATER KIT FUSE BLOCK.

COMPONENT CODE	
ALC	AUX. LIMIT CONTROL
BLR	BLOWER RELAY
CC	COMPRESSOR CONTACTOR
CCH	CRANKCASE HEATER
COMP	COMPRESSOR
CT	CONTROL TRANSFORMER
DFC	DEFROST CONTROL
DR	DEFROST RELAY
DS	DRYING ALIVE
DS	TERMINAL BLOCK
DS	TIME DELAY CONTROL
HCS	HOT GAS SENSOR
HPC	HIGH PRESSURE CONTROL
IBM	INDOOR BLOWER MOTOR

REV	90-23621-16
REV	00





**BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.**

**GENERAL TERMS OF LIMITED WARRANTY**

Thermal Zone® will furnish a replacement for any part of this product which fails in normal use and service within the applicable periods stated, in accordance with the terms of the limited warranty.

**For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.**

Compressor .....Five (5) Years  
Any Other Part  
1 Phase (Residential Applications) .....Five (5) Years  
1 & 3 Phase (Commercial Applications).....One (1) Year

**Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.**

*"In keeping with its policy of continuous progress and product improvement, the right is reserved to make changes without notice."*