

37MHRAQ
Single Zone Outdoor Ductless Unit
Sizes 9K to 36K



Product Data

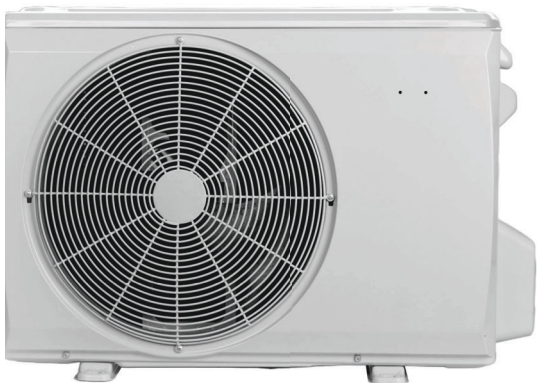


Fig. 1 — Sizes 9K - 36K

NOTE: Images are for illustration purposes **only**. Actual models may differ slightly.

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INDUSTRY LEADING FEATURES / BENEFITS

A PERFECT BALANCE BETWEEN BUDGET LIMITS, ENERGY SAVINGS AND COMFORT.

The **37MHRAQ** series ductless systems are a matched combination of an outdoor condensing unit and an indoor fan coil unit connected only by refrigerant tubing and wires.

The ductless system permits creative solutions to design problems such as:

- Add-ons to current space (an office or family room addition)
- Special space requirements
- When changes in the load cannot be handled by the existing system
- When adding air conditioning to spaces that are heated by hydronic or electric heat and have no ductwork
- Historical renovations or any application where preserving the look of the original structure is essential.

The ideal compliment to your ducted system when it is impractical or prohibitively expensive to use ductwork.

The compact indoor fan coil units take up very little space in the room and do not obstruct windows. The fan coils are attractively styled to blend with most room decors. Advanced system components incorporate innovative technology to provide reliable cooling performance at low sound levels.

Inverter Technology

The inverter driven compressor is designed to run at various input power frequencies (Hz) which controls the compressor's motor speed.

Even Temperature – The control package, including the inverter, monitors the outdoor and indoor temperatures as they relate to the selected indoor set point and adjusts the compressor speed to match the load and keep the system operating continuously rather than cycling and creating temperature swings. This translates to higher comfort levels for the occupants.

Rapid Pull Down/Warm-Up – Comfort is increased by the inverter system's ability to ramp up the compressor speed enabling the system to reach the user selected room temperature set point quicker.

Humidity Control – Running the system for longer periods and continuously varying the compressor speed enhances the humidity control.

Individual Room Comfort

Maximum comfort is provided because each space can be controlled individually based on the usage pattern.

Low Sound Levels

When noise is a concern, ductless systems are the answer. The indoor units are whisper quiet. There are no compressors indoors, either in the conditioned space or directly over it, and there is none of the noise usually generated by air being forced through the ductwork.

When sound ordinances and proximity to neighbors demand quiet operation, the **37MHRAQ** unit is the right choice. With the inverter technology, these units run at lower speeds most of the time resulting in reduced sound levels.

Inverter Technology – Enhanced Economical Operation

Ductless systems are inherently economical to operate. Individual rooms are heated or cooled only when required, and since the air is delivered directly to the space, there is no need to use additional energy to move the air in the ductwork. This economical operation is enhanced further when the inverter system output matches the load resulting in a more efficient system.

Easy-To-Use Controls

The systems have microprocessor-based controls to provide the ultimate in comfort and efficiency. The user friendly wired and wireless remote controls provide the interface between the user and the unit.

Secure Operation

If security is an issue, outdoor and indoor units are connected only by refrigerant piping and wiring to prevent intruders from crawling through ductwork or wall openings. In addition, since the **37MHRAQ** can be installed close to an outside wall, coils are protected from vandals and severe weather.

Fast Installation

This compact ductless system is simple to install. Only wires and piping need to run between the indoor and outdoor units. These units are fast and easy to install ensuring minimal disruption to customers in homes or the workplace. This makes the **37MHRAQ** systems the equipment of choice for retrofit applications.

Simple Servicing and Maintenance

Removing the top panel of the outdoor unit provides immediate access to the control compartment, providing the service technician access to the diagnostic LEDs to facilitate the troubleshooting process. In addition, the draw-thru design of the outdoor unit means that dirt accumulates on the outside surface of the coil. Coils can be cleaned quickly from the inside using a pressure hose and detergent.

On the indoor units, service and maintenance expense is reduced due to the permanent easy to clean filters. Also, error codes are displayed on the front panel to alert the user to certain system malfunctions.

Built-in Reliability

Ductless system indoor and outdoor units are designed to provide years of trouble-free operation. Both the indoor and outdoor units are well protected. Whenever the microprocessor detects abnormal conditions, the unit stops and an error code appears.

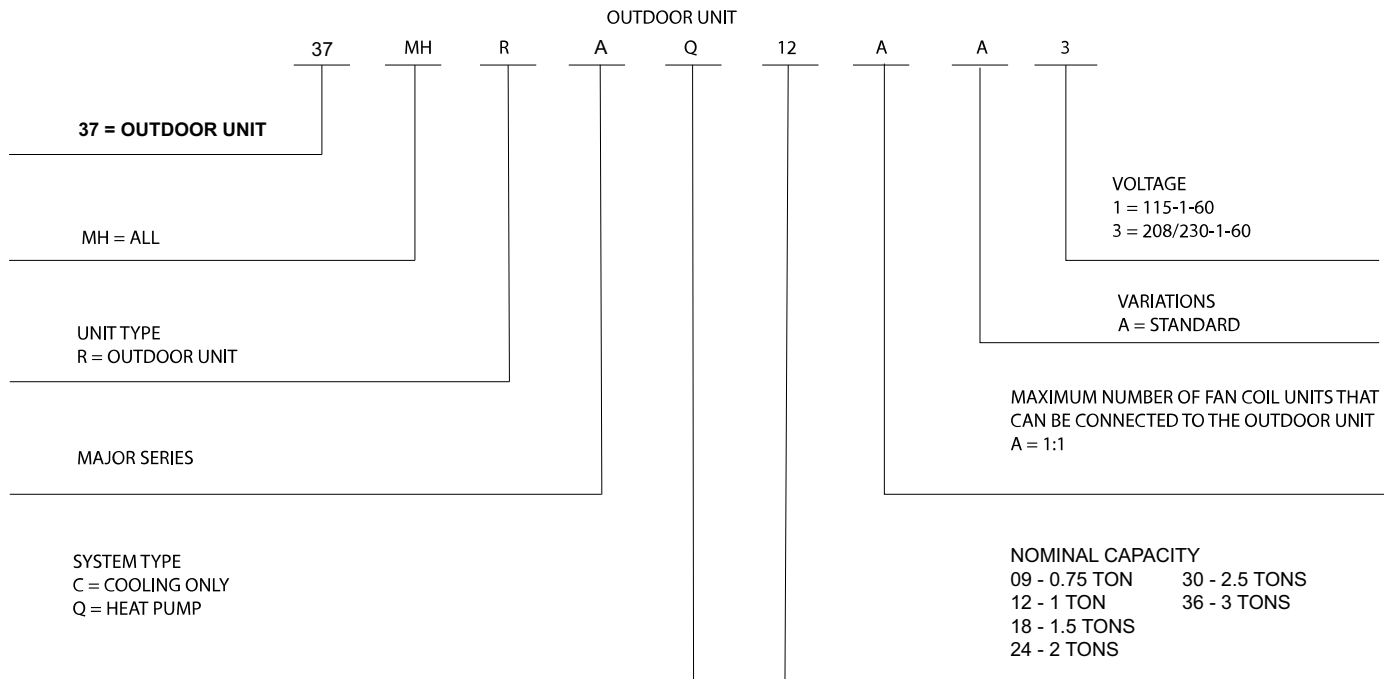
Inverter systems provide additional reliability due to the soft start.

This refers to the ability of the inverter to start the compressor motor using reduced voltage and reduced current. This feature is beneficial from an electrical standpoint (eliminates current spikes) as well as an overall reliability standpoint due to reduced stress on all associated system components.

Agency Listings

All systems are listed with AHRI (Air conditioning, Heating, and Refrigeration Institute) and are UL certified per UL 60335-2-40 standard.

MODEL NUMBER NOMENCLATURE



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



STANDARD FEATURES AND ACCESSORIES

Ease Of Installation	
Low Voltage Controls	S
Comfort Features	
Microprocessor Controls	S
Auto Restart Function	S
Auto Changeover	S
Energy Saving Features	
Inverter Driven Compressor	S
46° F Heating Mode (Heating Setback)	S
Safety And Reliability	
3 Minute Time Delay For Compressor	S
High Compressor Discharge Temperature	S
Low Voltage Protection	S
Compressor Overload Protection	S
Compressor Over Current Protection	S
IPM Module Protection	S
Condenser High Temp Protection in Cooling Mode	S
Aluminum Hydrophilic pre-coated fins	S
Ease Of Service And Maintenance	
Diagnostics	S
Liquid Line Pressure Taps	S
Application Flexibility	
Crankcase Heater	S
Base pan Heater on Heat Pump units only	S

Legend

S - Standard

A - Accessory

Table 1 — Base Pan Rubber Plugs

OUTDOOR UNIT MODEL NUMBER PER UNIT	BASE PAN RUBBER PLUGS RCD PART NUMBER	QTY.
37MHRAQ09AA1 37MHRAQ12AA1	12600801A00077	30
37MHRAQ09AA3 37MHRAQ12AA3	12600801A00077	30
37MHRAQ18AA3	12600801A00077	23
37MHRAQ24AA3	12600801A00077	30
37MHRAQ30AA3 37MHRAQ36AA3	12600801A00117	5

NOTE: The base pan is built in with multiple holes for proper draining during the defrost process. For applications where it is required to seal these holes, and re-direct the condensate drain, rubber plugs are available through RCD.

Outdoor Units

Crankcase Unit

The crankcase heater is standard on all unit sizes. Heater clamps must be placed around the compressor oil stump.

Base pan Heater

The base pan heater is standard on all unit sizes.

DIMENSIONS - OUTDOOR

Table 2 — Dimensions

SYSTEM SIZE		9K 115V	12K 115V	9K	12K	18K	24K	30K	36K
		(115 V)	(115 V)	(208/230 V)	(208/230 V)	(208/230 V)	(208/230 V)	(208/230 V)	(208/230 V)
Height (H)	inch	21.85	21.85	21.85	21.85	21.81	26.5	31.89	31.89
	mm	555	555	555	555	554	673	810	810
Width (W)	inch	30.12	30.12	30.12	30.12	31.69	35.04	37.24	37.24
	mm	765	765	765	765	805	890	946	946
Depth (D)	inch	11.93	11.93	11.93	11.93	12.99	13.46	16.14	16.14
	mm	303	303	303	303	330	342	410	410
Weight - Net	lbs.	56.66	61.29	54.23	59.08	72.31	94.58	142.86	150.35
	kg	25.7	27.8	24.6	26.8	32.8	42.9	64.8	68.2

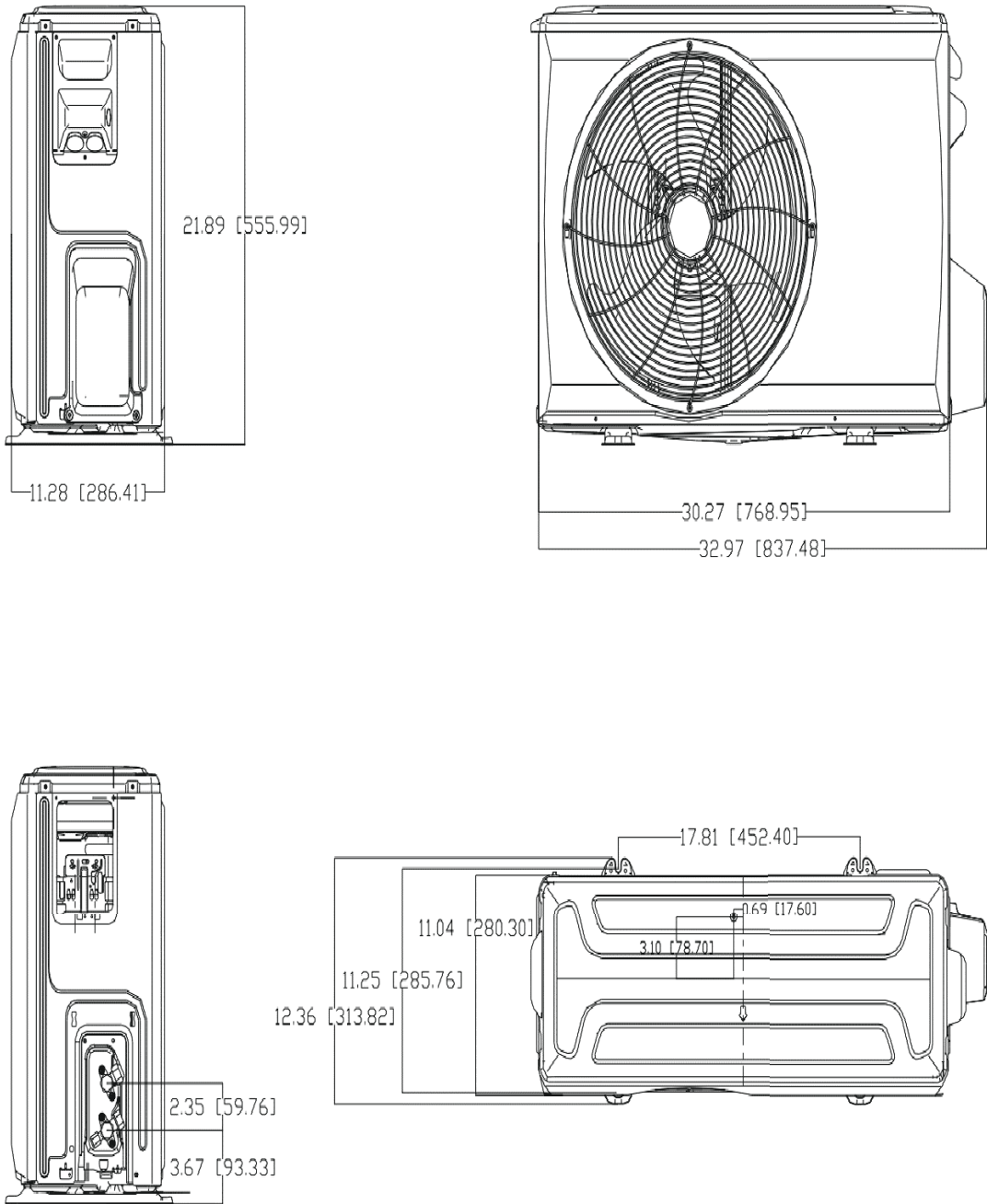


Fig. 2 — Sizes 09K/12K

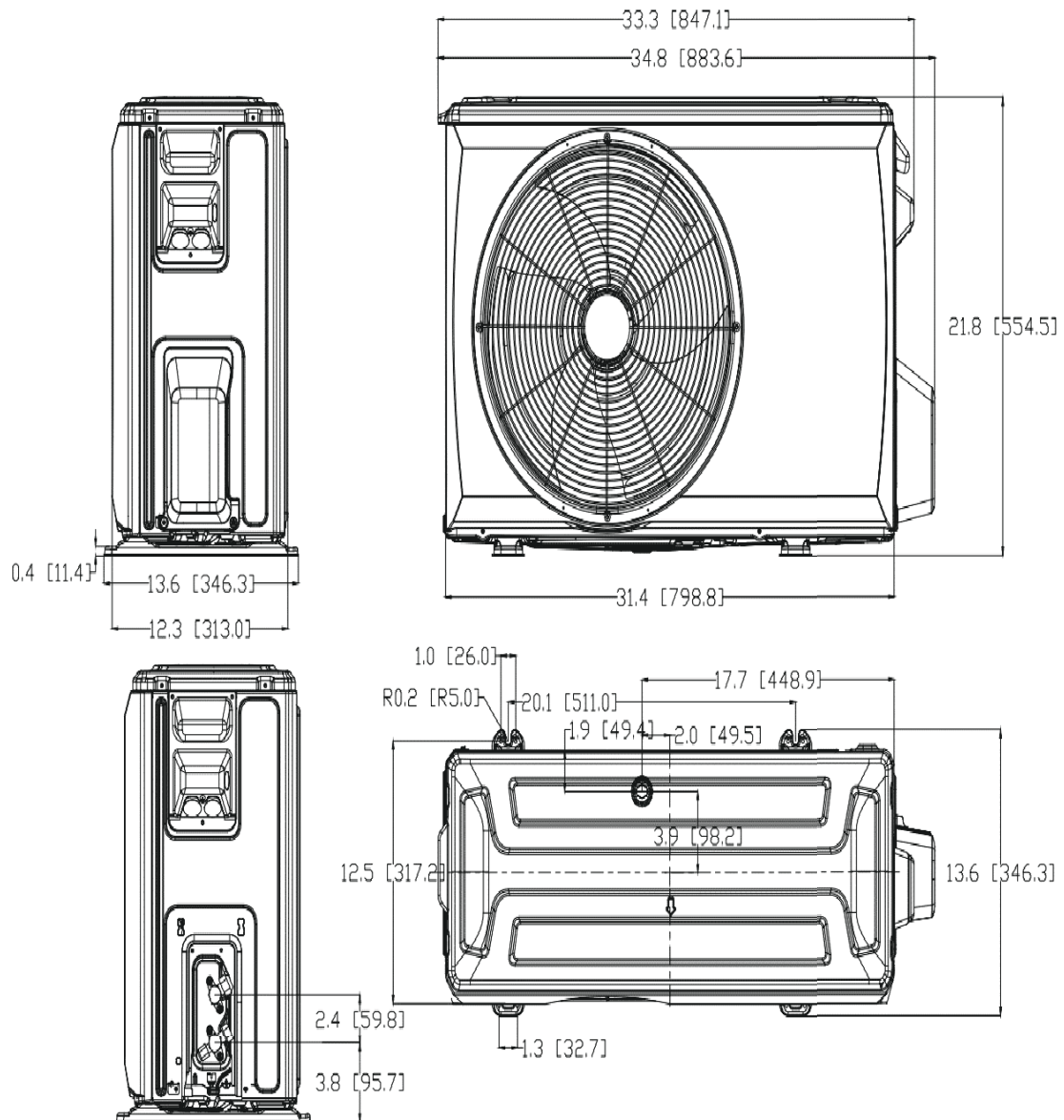


Fig. 3 — Size 18K

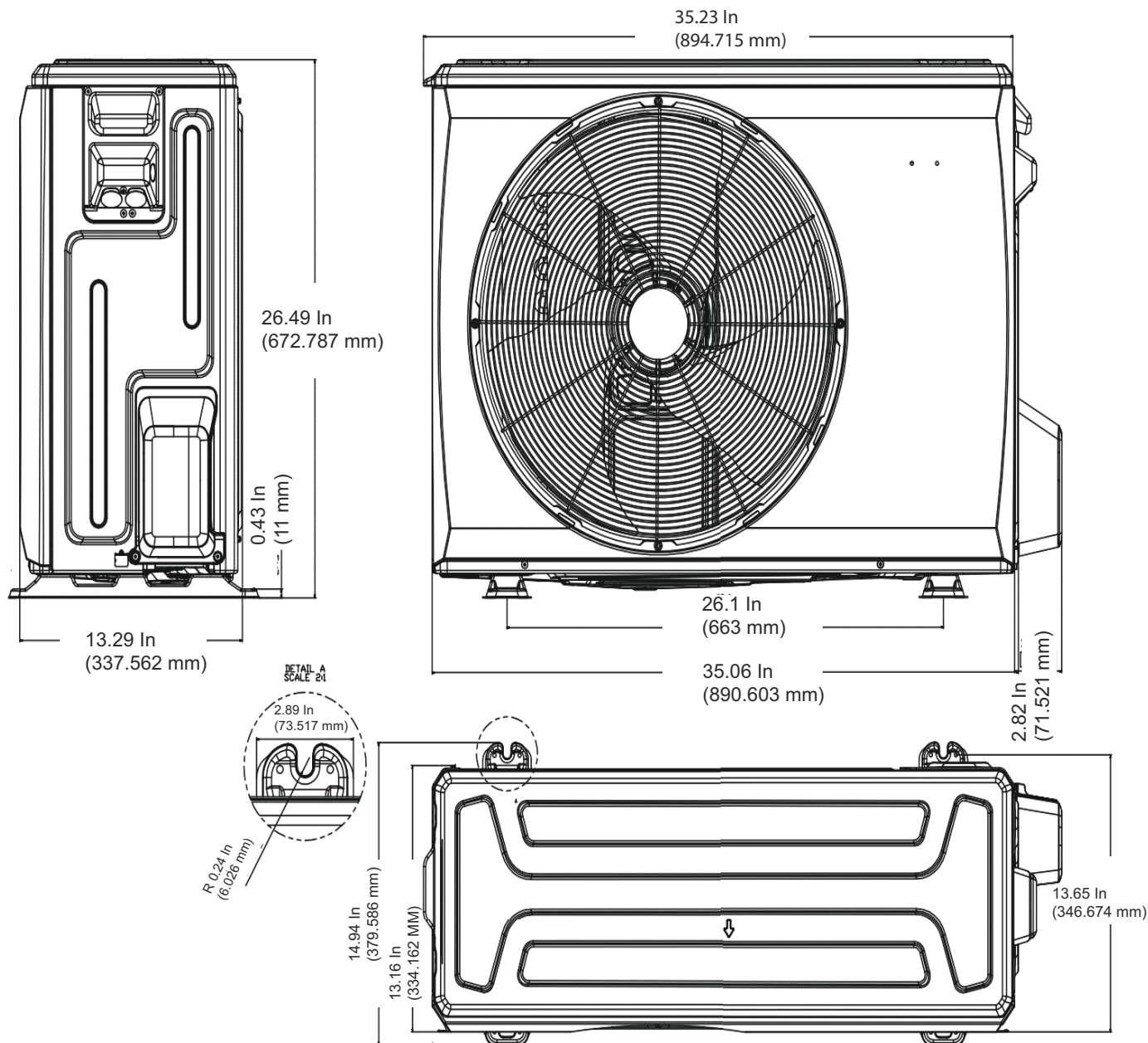


Fig. 4 — Size 24K

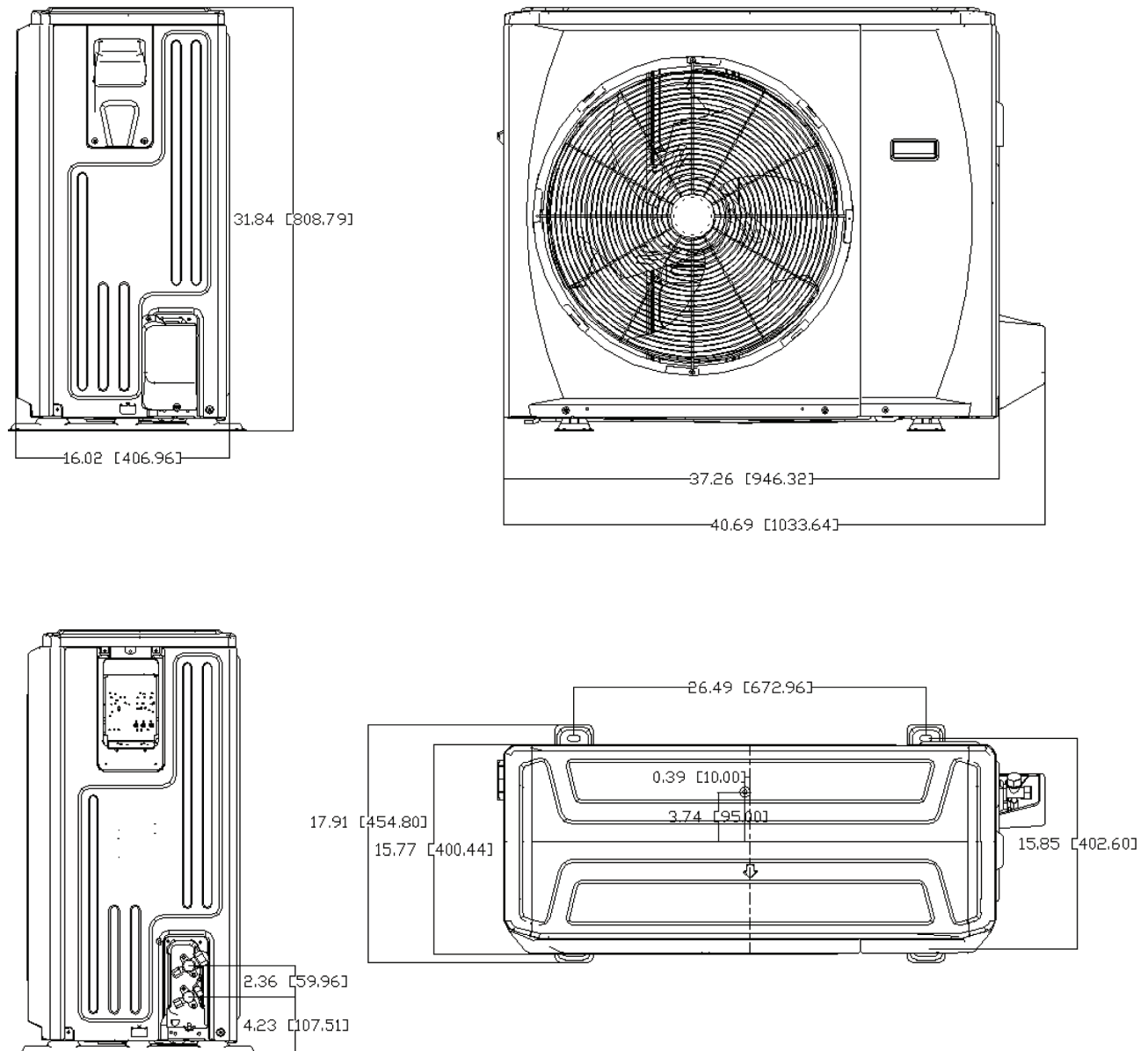


Fig. 5 — Sizes 30K and 36K

Table 3 — Unit Sizes

SYSTEM TONS	BTUH	VOLTAGE	PRODUCT
0.75	9,000	115-1	37MHRAQ09AA1
1	12,000	115-1	37MHRAQ12AA1
0.75	9,000	208/230-1	37MHRAQ09AA3
1	12,000	208/230-1	37MHRAQ12AA3
1.5	18,000	208/230-1	37MHRAQ18AA3
2	24,000	208/230-1	37MHRAQ24AA3
2.5	30,000	208/230-1	37MHRAQ30AA3
3	36,000	208/230-1	37MHRAQ36AA3

NOTE: Before installing the indoor unit, ensure the compatibility with the outdoor unit using the product data as a reference.

CLEARANCES

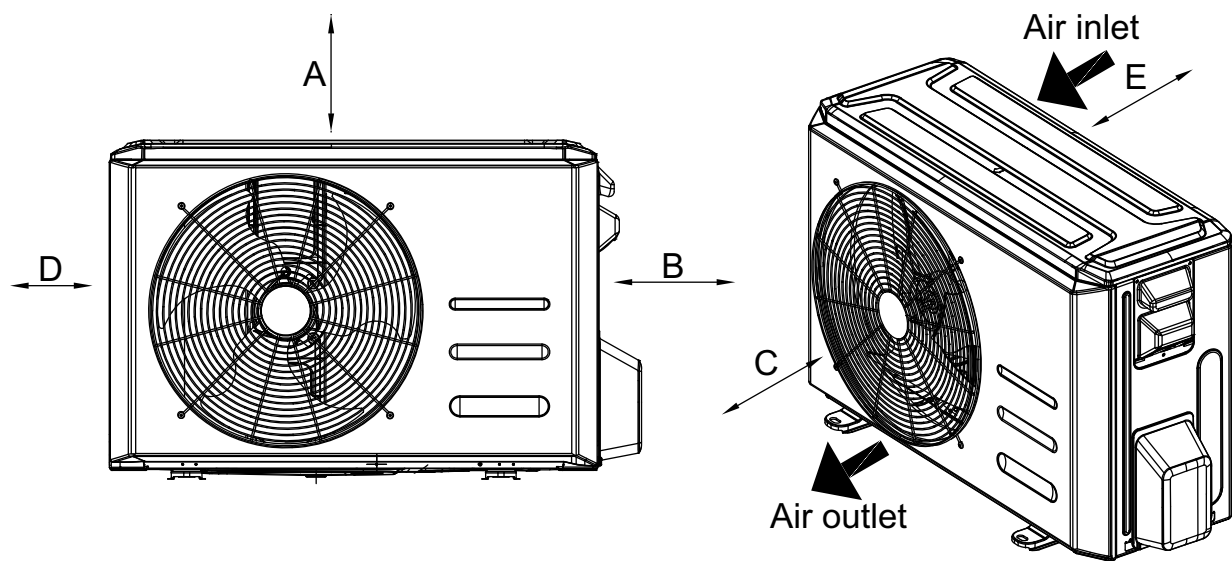


Fig. 6 — Clearances

Table 4 — Clearances

UNIT	MINIMUM VALUE IN. (MM)
A	20 (508)
B	14 (355)
C	20 (508)
D	4 (101)
E	4 (101)

NOTE: The outdoor unit must be mounted at least 2in (50mm) above the maximum anticipated snow depth.

SPECIFICATIONS

Table 5: SPECIFICATIONS

Outdoor model			37MHRAQ09AA1	37MHRAQ12AA1	37MHRAQ09AA3	37MHRAQ12AA3	37MHRAQ18AA3	37MHRAQ24AA3	37MHRAQ30AA3	37MHRAQ36AA3
POWER SUPPLY		V; Ph;Hz	115V; 1Ph;60HZ	115V;1 Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ
COMPRESSOR SPECIFICATIONS	Model		KSK103D33UEZ3	KSN98D64UFZ3	KSK103D33UEZ3	KSN98D64UFZ3	KSN140D21UFZ	KTM240D46UKT2	KTF250D22UMT	KTF250D22UMT
	Type		ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY
	Brand		GMCC	GMCC	GMCC	GMCC	GMCC	GMCC	GMCC	GMCC
	Capacity	W	2035/3255	1930/3100	2035/3255	1930/3100	4385	4780/7600	8095	8095
		Btu/h	11106	10577	11106	10577	14962	25931	27620	27620
	Input	W	826	765	826	765	1140	2045	2200	2200
	Rated current	A	5.65	4.65	5.65	4.65	7.5	9.30	10	10
	Refrigerant Oil		ESTER OIL	ESTER OIL	ESTER OIL	ESTER OIL	ESTER OIL	ESTER OIL	ESTER OIL	ESTER OIL
	Oil Type		VG74	VG74	VG74	VG74	VG74	VG74	VG74	VG74
	Oil Charge	fl. Oz	10.48	10.15	10.48	10.15	14.88	20.97	22.66	22.66
OUTDOOR FAN SPECIFICATIONS	Material	-	Acrylonitrile Styrene +20%GF	Acrylonitrile Styrene +20%GF	Acrylonitrile Styrene +20%GF	Acrylonitrile Styrene +20%GF	Acrylonitrile Styrene +20%GF	Acrylonitrile Styrene +20%GF	Acrylonitrile Styrene +20%GF	Acrylonitrile Styrene +20%GF
	Type	-	ZL-421*133*8-3KN	ZL-421*133*8-3KN	ZL-421*133*8-3KN	ZL-421*133*8-3KN	ZL-434*144*8-3KN	ZL-535*133*12-3KFN	ZL-560*139*12-3KN	ZL-560*139*12-3KN
	Diameter	inch	16.6	16.6	16.6	16.6	17.1	21.1	22.0	22.0
		mm	421	421	421	421	434	535	560	560
	Height	inch	5.2	5.2	5.2	5.2	5.7	5.2	5.5	5.5
		mm	133	133	133	133	144	133	139	139
OUTDOOR MOTOR SPECIFICATIONS	Model	-	ZKFN-34-10-1-3	ZKFN-34-10-1-3	ZKFN-34-10-1-3	ZKFN-34-10-1L-1	ZKFN-34-10-1-3	ZKFN-80-10-1L	ZKFN-120-8-2	ZKFN-120-8-2
	Type	-	DC	DC	DC	DC	DC	DC	DC	DC
	Input	W	35.4	35.4	35.4	35.4	35.4	112.3	107	107
	Max. input	W	81.3	81.3	81.3	81.3	81.3	239	176	176
	Output	W	26.6	26.6	26.6	26.6	26.6	84.2	80.3	80.3
	FLA	A	0.5	0.6	0.35	0.37	0.44	0.8	1.3	1.3
	Rated HP	HP	0.04	0.04	0.04	0.04	0.04	0.11	0.11	0.11
	Range of current	Amps	0.57~0.85	0.57~0.85	0.57~0.85	0.57~0.85	0.57~0.85	0.39~1.85	0.79~1.67	0.79~1.67
	Rated current	Amps	0.62	0.62	0.62	0.62	0.62	0.95	1.21	1.21
	Speed	rev/mi n	800/600	780/700/600	800/600	800/700/600	840/700/650	830/700/550	900/700/500	880/700/500
	Rated RPM	rev/mi n	800	780	800	800	840	830	900	880
	Insulation class	-	E	E	E	B	E	B	E	E
	Safe class	-	IP24	IP24	IP24	IP24	IP24	IP24	IPX4	IPX4

Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.

Table 5: SPECIFICATIONS (Continued)

Outdoor model			37MHRAQ09AA1	37MHRAQ12AA1	37MHRAQ09AA3	37MHRAQ12AA3	37MHRAQ18AA3	37MHRAQ24AA3	37MHRAQ30AA3	37MHRAQ36AA3
OUTDOOR REFRIGERANT COIL SPECIFICATIONS	Number of rows	Rows	1	1	1	1	2	1.6	3	3
	Tube outside dia.	inch	0.276	0.276	0.276	0.276	0.276	0.276	0.276	0.276
		mm	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7	Φ7
	Nominal Tube Wall	mm	0.00945 (0.24)	0.00945 (0.24)	0.00945 (0.24)	0.00945 (0.24)	0.00945 (0.24)	0.00945 (0.24)	0.00945 (0.24)	0.00945 (0.24)
	Tube Enhancement	(Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Tube Material		Copper	Copper	Copper	Copper	Copper	Copper	Copper	Copper
	Tube pitch (a) x row pitch (b)	inch	0.83× 0.53	0.83× 0.87	0.83× 0.53	0.83× 0.87	0.83× 0.87	0.83× 0.87	0.83× 0.53	0.83× 0.53
		mm	21x13.37	21x22	21x13.37	21x22	21x22	21x22	21x13.37	21x13.37
	Fin Spacing	FPI	19	20	19	20	20	20	19	19
		mm	1.4	1.3	1.4	1.3	1.3	1.3	1.4	1.4
	Fin type		Louvered	Plain fin	Louvered	Plain fin	Plain fin	Plain fin	Louvered	Louvered
	Fin Material		Gold hydrophilic aluminum	Gold hydrophilic aluminum	Gold hydrophilic aluminum	Gold hydrophilic aluminum	Gold hydrophilic aluminum	Gold hydrophilic aluminum	Gold hydrophilic aluminum	Gold hydrophilic aluminum
	Coil length x height x width	inch	29.29x19.84x0.53	29.33x19.84x0.87	29.29x19.84x0.53	29.33x19.84x0.87	33.86x19.84x1.73	35.43x23.98x0.87+21.26x23.98x0.87	39.37x29.76x0.53+38.58x29.76x0.53+37.99x29.76x0.53	39.37x29.76x0.53+38.58x29.76x0.53+37.99x29.76x0.53
		mm	744*504*13.37	745*504*22	744*504*13.37	745*504*22	860*504*44	900*609*22+540*609*22	1000x756x13.37+980x756x13.37+965x756x13.37	1000x756x13.37+980x756x13.37+965x756x13.37
	Face area	ft ²	4.04	4.04	4.04	4.04	4.67	5.90	8.14	8.14
	Number of circuits	#	2	2	2	2	4	5	6	6
	High Burst Pressure	Psi (MPa)	550(3.79)	550(3.79)	550(3.79)	550(3.79)	550(3.79)	550(3.79)	550(3.79)	550(3.79)
	Low Burst Pressure	Psi (MPa)	340(2.34)	340(2.34)	340(2.34)	340(2.34)	340(2.34)	340(2.34)	340(2.34)	340(2.34)

Table 5: SPECIFICATIONS (Continued)

Outdoor model			37MHRAQ09AA1	37MHRAQ12AA1	37MHRAQ09AA3	37MHRAQ12AA3	37MHRAQ18AA3	37MHRAQ24AA3	37MHRAQ30AA3	37MHRAQ36AA3
PIPING AND REFRIGERANT INFORMATION	Refrigerant Type	Type	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B
	Charge Amount	lb. (kg)	1.34(0.61)	1.52(0.69)	1.34(0.61)	1.54(0.7)	2.54(1.15)	3.35(1.52)	5.29(2.4)	7.05(3.2)
	Additional refrigerant charge	Oz/ft (g/m)	0.16(15)	0.16(15)	0.16(15)	0.16(15)	0.16(15)	0.32(30)	0.32(30)	0.32(30)
	Liquid Pipe (size - connection type)	In (mm)	1/4in (6.35mm)	1/4in (6.35mm)	1/4in (6.35mm)	1/4in (6.35mm)	1/4in (6.35mm)	3/8in (9.52mm)	3/8in (9.52mm)	3/8in (9.52mm)
	Suction Pipe (size - connection type)	In (mm)	3/8in (9.52mm)	3/8in (9.52mm)	3/8in (9.52mm)	3/8in (9.52mm)	1/2in (12.7mm)	5/8in (15.9mm)	5/8in (15.9mm)	5/8in (15.9mm)
	Min. Piping Length	ft. (m)	10 (3)	10 (3)	10 (3)	10 (3)	10 (3)	10 (3)	10 (3)	10 (3)
	Standard Piping Length	ft. (m)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)
	Max. Piping Length with no additional refrigerant charge per System	ft. (m)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)	24.6 (7.5)
	Total Maximum Piping Length per system	ft. (m)	82.02(25)	82.02(25)	82.02(25)	82.02(25)	98.42(30)	164.04(50)	164.04(50)	213.25(65)
	Max. outdoor-indoor height difference (OU higher than IU)	ft. (m)	49.21(15)	49.21(15)	49.21(15)	49.21(15)	65.62(20)	82.02(25)	82.02(25)	98.43(30)
	Max. outdoor-indoor height difference (IU higher than OU)	ft. (m)	49.21(15)	49.21(15)	49.21(15)	49.21(15)	65.62(20)	82.02(25)	82.02(25)	98.43(30)
AIRFLOW SPECIFICATIONS	Outdoor (CFM)	CFM	1294.9	1236	1294.9	1236	1236	1765.7	2237.9	2237.9
SOUND DATA	Outdoor Sound Pressure Level	dB(A)	53	52.5	53.5	53	58	62	61.5	63

Table 5: SPECIFICATIONS (Continued)

Outdoor model				37MHRAQ09AA1	37MHRAQ12AA1	37MHRAQ09AA3	37MHRAQ12AA3	37MHRAQ18AA3	37MHRAQ24AA3	37MHRAQ30AA3	37MHRAQ36AA3
ENVIRONMENTAL SPECIFICATIONS	Cooling Operating Range	Indoor Min - Max DB	°F	60~90	60~90	60~90	60~90	60~90	60~90	60~90	60~90
			(°C)	(16?32)	(16?32)	(16?32)	(16?32)	(16?32)	(16?32)	(16?32)	(16?32)
		Indoor Min - Max WB	°F	59-84	59-84	59-84	59-84	59-84	59-84	59-84	59-84
			(°C)	(15-29)	(15-29)	(15-29)	(15-29)	(15-29)	(15-29)	(15-29)	(15-29)
	Heating Operating Range	Outdoor Min - Max DB	°F	5~122	5~122	5~122	5~122	5~122	5~122	5~122	5~122
			(°C)	(-15?50)	(-15?50)	(-15?50)	(-15?50)	(-15?50)	(-15?50)	(-15?50)	(-15?50)
		Indoor Min - Max DB	°F	32~86	32~86	32~86	32~86	32~86	32~86	32~86	32~86
			(°C)	(0?30)	(0?30)	(0?30)	(0?30)	(0?30)	(0?30)	(0?30)	(0?30)
	Cooling Cut-in	Outdoor Min - Max DB	°F	5~75	5~75	5~75	5~75	5~75	5~75	5~75	5~75
			(°C)	(-15?24)	(-15?24)	(-15?24)	(-15?24)	(-15?24)	(-15?24)	(-15?24)	(-15?24)
		Temperature	°F	NA	NA	NA	NA	NA	NA	NA	NA
			(°C)	NA	NA	NA	NA	NA	NA	NA	NA
	Cooling Cut-out	Temperature	°F	NA	NA	NA	NA	NA	NA	NA	NA
			(°C)	NA	NA	NA	NA	NA	NA	NA	NA
		Temperature	°F	NA	NA	NA	NA	NA	NA	NA	NA
			(°C)	NA	NA	NA	NA	NA	NA	NA	NA
	Heating Cut-in	Temperature	°F	NA	NA	NA	NA	NA	NA	NA	NA
			(°C)	NA	NA	NA	NA	NA	NA	NA	NA
	Heating Cut-Out	Temperature	°F	NA	NA	NA	NA	NA	NA	NA	NA
			(°C)	NA	NA	NA	NA	NA	NA	NA	NA
	Non-operating environment Storage	Temperature range (DB)	°F	-49-140	-49-140	-49-140	-49-140	-49-140	-49-140	-49-140	-49-140
			(°C)	(-45-60)	(-45-60)	(-45-60)	(-45-60)	(-45-60)	(-45-60)	(-45-60)	(-45-60)
	Operation Humidity	%		0-80 %	0-80 %	0-80 %	0-80 %	0-80 %	0-80 %	0-80 %	0-80 %
				0-80 %	0-80 %	0-80 %	0-80 %	0-80 %	0-80 %	0-80 %	0-80 %

COMPATIBILITY

INDOOR UNIT		HEAT PUMP OUTDOOR UNIT							
		37MHRAQ09AA1	37MHRAQ12AA1	37MHRAQ09AA3	37MHRAQ12AA3	37MHRAQ18AA3	37MHRAQ24AA3	37MHRAQ30AA3	37MHRAQ36AA3
HIGH WALL COMFORT	45MHHAQ09XA1	●							
	45MHHAQ12XA1		●						
	45MHHAQ09XA3			●					
	45MHHAQ12XA3				●				
	45MHHAQ18XA3					●			
	45MHHAQ24XA3						●		
	45MHHAQ30XA3							●	
	45MHHAQ36XA3								●

PERFORMANCE

INDOOR UNIT TYPE			Entry Tier High Wall							
INDOOR MODEL			45MHHAQ09XA1	45MHHAQ12XA1	45MHHAQ09XA3	45MHHAQ12XA3	45MHHAQ18XA3	45MHHAQ24XA3	45MHHAQ30XA3	45MHHAQ36XA3
OUTDOOR MODEL			37MHRAQ09AA1	37MHRAQ12AA1	37MHRAQ09AA3	37MHRAQ12AA3	37MHRAQ18AA3	37MHRAQ24AA3	37MHRAQ30AA3	37MHRAQ36AA3
POWER SUPPLY		V; Ph;Hz	115V;1 Ph;60HZ	115V; 1Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ	208/230V; 1Ph;60HZ
PERFORMANCE DATA	Cooling Rated Capacity (DOE A2 - 95°F)	Btu/h	9000	12000	9000	12000	18000	24000	30000	36000
	Cooling Capacity Range	Btu/h	2900~10500	3800~12600	2900~10500	2700~13800	2600~18600	6200~24700	6800~33900	6600~36800
	SEER2	Btu/h.W	21.5	21.4	21.7	21.4	20.3	18.5	22.4	19.5
	EER2 (DOE A2 - 95°F)	Btu/h.W	12.5	10	12.6	10.8	11.5	9.7	12	9.4
	Heating Rated Capacity (DOE H12 - 47°F)	Btu/h	10000	12000	10000	12000	18800	24000	30000	36000
	Heating Capacity Range	Btu/h	2400~11200	2730~12500	2400~11200	4200~14100	6100~19200	11900~27200	12300~32100	11400~44000
	COP (DOE H12 - 47°F)	W/W	3.15	3.15	3.27	3.34	3.08	3.22	3.03	2.95
	HSPF IV	Btu/h.W	9.1	8.7	9.4	9.2	9.1	9	9	9.1
	HSPF V	Btu/h.W	7	6.7	7.2	7	7	7.1	7	7
	Cooling Rated Capacity (DOE B2 - 82°F)	Btu/h	9700	13000	9700	13100	19800	27000	32000	38000
	EER2 (DOE B2 - 82°F)	Btu/h.W	16.2	12.8	15.8	13.1	14.4	12.5	14.5	11.4
	Heating Rated Capacity (DOE H32 - 17°F)	Btu/h	6600	7800	6600	8300	11700	17200	20000	25600
	COP (DOE H32 - 17°F)	W/W	2.32	2.3	2.45	2.32	2.62	2.46	2.4	2.3
	Heating Maxi- mum Capacity (17°F)	Btu/h	7400	8100	7500	9200	13300	20200	21500	25600
	Heating Rated Capacity (ODE H42 - 5°F)	Btu/h	7000	7000	7000	8000	11500	17000	20000	24000
	COP (DOE H42 - 5°F)	W/W	1.95	1.85	2	1.8	2	2.11	1.94	2.02
	Heating Maximum Capacity (5°F)	Btu/h	7000	7000	7000	8000	11500	17000	20000	24000

Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.

HEATING PERFORMANCE

Table 14: HEATING PERFORMANCE 9K, 115v

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
135	-22°F(-30.0°C)										
	-13°F(-25.0°C)	2501	2451	2439	2267	2247	0.65	0.65	0.66	0.66	0.66
	-4°F(-20.0°C)	2996	2937	2922	2716	2692	0.68	0.69	0.69	0.69	0.69
	0°F(-17.8°C)	3111	3049	3034	2820	2795	0.72	0.72	0.72	0.73	0.73
	5°F(-15.0°C)	3255	3190	3174	2950	2924	0.77	0.77	0.77	0.77	0.78
	14°F(-10.0°C)	3533	3462	3445	3202	3173	0.82	0.83	0.83	0.83	0.83
	17°F(-8.3°C)	3626	3553	3535	3286	3257	0.84	0.85	0.85	0.85	0.85
	22°F(-5.6°C)	3602	3530	3513	3265	3236	0.80	0.81	0.81	0.81	0.82
	27°F(-2.8°C)	3579	3508	3490	3244	3215	0.77	0.77	0.77	0.77	0.78
	32°F(-0.0°C)	3556	3485	3468	3223	3194	0.73	0.73	0.74	0.74	0.74
	35°F(1.7°C)	3542	3471	3454	3211	3182	0.71	0.71	0.71	0.71	0.72
	37°F(2.8°C)	3789	3713	3694	3434	3403	0.71	0.71	0.71	0.72	0.72
	42°F(5.6°C)	4405	4317	4295	3993	3957	0.71	0.71	0.72	0.72	0.72
	44.6°F(7.0°C)	4651	4558	4535	4216	4178	0.71	0.72	0.72	0.72	0.72
	47°F(8.3°C)	5021	4920	4896	4551	4510	0.71	0.72	0.72	0.72	0.72
	52°F(11.1°C)	4920	4822	4798	4460	4420	0.67	0.67	0.67	0.68	0.68
	57°F(13.9°C)	4820	4723	4700	4369	4330	0.62	0.63	0.63	0.63	0.63
	59°F(15.0°C)	4780	4684	4661	4332	4293	0.61	0.61	0.61	0.61	0.62
	62°F(16.7°C)	4719	4625	4602	4278	4239	0.58	0.59	0.59	0.59	0.59
	64.4°F(18.0°C)	4671	4578	4555	4234	4196	0.56	0.56	0.56	0.57	0.57
69.8°F(21.0°C)	4235	4150	4129	3839	3804	0.51	0.52	0.52	0.52	0.52	
75.2°F(24.0°C)	4107	4025	4005	3723	3690	0.46	0.47	0.47	0.47	0.47	
171	-22°F(-30.0°C)										
	-13°F(-25.0°C)	3224	3160	3144	3025	2998	0.72	0.73	0.73	0.73	0.73
	-4°F(-20.0°C)	3862	3785	3766	3624	3591	0.76	0.76	0.76	0.76	0.77
	0°F(-17.8°C)	4010	3930	3910	3763	3729	0.80	0.80	0.81	0.81	0.81
	5°F(-15.0°C)	4195	4111	4091	3936	3901	0.85	0.86	0.86	0.86	0.86
	14°F(-10.0°C)	4554	4463	4440	4273	4234	0.91	0.92	0.92	0.92	0.93
	17°F(-8.3°C)	4673	4580	4557	4385	4345	0.93	0.94	0.94	0.94	0.95
	22°F(-5.6°C)	4643	4551	4528	4357	4318	0.89	0.90	0.90	0.90	0.91
	27°F(-2.8°C)	4614	4521	4499	4329	4290	0.85	0.86	0.86	0.86	0.86
	32°F(-0.0°C)	4584	4492	4470	4301	4262	0.81	0.82	0.82	0.82	0.82
	35°F(1.7°C)	4566	4475	4452	4284	4245	0.78	0.79	0.79	0.79	0.80
	37°F(2.8°C)	4883	4786	4762	4582	4541	0.79	0.79	0.79	0.79	0.80
	42°F(5.6°C)	5678	5564	5536	5327	5279	0.79	0.79	0.80	0.80	0.80
	44.6°F(7.0°C)	5995	5875	5846	5625	5575	0.79	0.80	0.80	0.80	0.80
	47°F(8.3°C)	6472	6342	6311	6072	6018	0.79	0.80	0.80	0.80	0.80
	52°F(11.1°C)	6342	6215	6184	5951	5897	0.74	0.75	0.75	0.75	0.75
	57°F(13.9°C)	6213	6089	6058	5829	5777	0.69	0.70	0.70	0.70	0.70
	59°F(15.0°C)	6161	6038	6008	5781	5729	0.67	0.68	0.68	0.68	0.68
	62°F(16.7°C)	6083	5962	5932	5708	5656	0.64	0.65	0.65	0.65	0.66
	64.4°F(18.0°C)	6021	5901	5871	5649	5599	0.62	0.63	0.63	0.63	0.63
69.8°F(21.0°C)	5459	5350	5323	5122	5076	0.57	0.57	0.57	0.58	0.58	
75.2°F(24.0°C)	5295	5189	5163	4968	4923	0.52	0.52	0.52	0.52	0.52	

Table 14: HEATING PERFORMANCE 9K, 115v (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
235	-22°F(-30.0°C)										
	-13°F(-25.0°C)	4156	4073	4053	4036	4000	0.80	0.81	0.81	0.81	0.81
	-4°F(-20.0°C)	4979	4879	4855	4835	4792	0.84	0.85	0.85	0.85	0.85
	0°F(-17.8°C)	5169	5066	5041	5020	4975	0.89	0.89	0.90	0.90	0.90
	5°F(-15.0°C)	5408	5299	5273	5252	5205	0.94	0.95	0.95	0.96	0.96
	14°F(-10.0°C)	5870	5752	5724	5701	5649	1.01	1.02	1.02	1.03	1.03
	17°F(-8.3°C)	6024	5903	5874	5850	5798	1.04	1.04	1.05	1.05	1.05
	22°F(-5.6°C)	5985	5866	5836	5813	5761	0.99	1.00	1.00	1.00	1.01
	27°F(-2.8°C)	5947	5828	5799	5776	5724	0.94	0.95	0.95	0.96	0.96
	32°F(-0.0°C)	5908	5790	5761	5738	5687	0.90	0.91	0.91	0.91	0.91
	35°F(1.7°C)	5885	5768	5739	5716	5664	0.87	0.88	0.88	0.88	0.89
	37°F(2.8°C)	6295	6169	6138	6113	6058	0.87	0.88	0.88	0.88	0.89
	42°F(5.6°C)	7318	7172	7136	7108	7044	0.88	0.88	0.88	0.89	0.89
	44.6°F(7.0°C)	7728	7573	7535	7505	7438	0.88	0.88	0.89	0.89	0.89
	47°F(8.3°C)	8342	8175	8134	8102	8029	0.88	0.89	0.89	0.89	0.89
	52°F(11.1°C)	8175	8012	7972	7940	7868	0.82	0.83	0.83	0.83	0.84
	57°F(13.9°C)	8008	7848	7809	7778	7708	0.77	0.78	0.78	0.78	0.78
	59°F(15.0°C)	7941	7783	7744	7713	7643	0.75	0.75	0.76	0.76	0.76
	62°F(16.7°C)	7841	7684	7646	7615	7547	0.72	0.72	0.72	0.73	0.73
	64.4°F(18.0°C)	7761	7606	7568	7538	7470	0.69	0.70	0.70	0.70	0.70
312	69.8°F(21.0°C)	7036	6896	6861	6834	6772	0.63	0.64	0.64	0.64	0.64
	75.2°F(24.0°C)	6825	6688	6655	6628	6568	0.57	0.58	0.58	0.58	0.58
	-22°F(-30.0°C)										
	-13°F(-25.0°C)	5357	5250	5224	5203	5156	0.89	0.90	0.90	0.90	0.90
	-4°F(-20.0°C)	6417	6289	6258	6233	6176	0.93	0.94	0.94	0.94	0.95
	0°F(-17.8°C)	6663	6530	6497	6471	6413	0.98	0.99	0.99	1.00	1.00
	5°F(-15.0°C)	6970	6831	6797	6770	6709	1.05	1.06	1.06	1.06	1.07
	14°F(-10.0°C)	7566	7415	7378	7348	7282	1.13	1.13	1.14	1.14	1.14
	17°F(-8.3°C)	7765	7609	7571	7541	7473	1.15	1.16	1.16	1.17	1.17
	22°F(-5.6°C)	7715	7561	7523	7493	7425	1.10	1.11	1.11	1.11	1.12
	27°F(-2.8°C)	7665	7512	7475	7445	7378	1.05	1.06	1.06	1.06	1.07
	32°F(-0.0°C)	7616	7464	7426	7397	7330	1.00	1.01	1.01	1.01	1.01
	35°F(1.7°C)	7586	7434	7397	7368	7301	0.97	0.98	0.98	0.98	0.98
	37°F(2.8°C)	8114	7952	7912	7880	7809	0.97	0.98	0.98	0.98	0.99
	42°F(5.6°C)	9433	9245	9198	9162	9079	0.97	0.98	0.98	0.98	0.99
	44.6°F(7.0°C)	9961	9762	9713	9674	9587	0.97	0.98	0.98	0.99	0.99
	47°F(8.3°C)	10753	10538	10485	10443	10349	0.98	0.98	0.99	0.99	0.99
	52°F(11.1°C)	10538	10327	10275	10234	10142	0.92	0.92	0.93	0.93	0.93
	57°F(13.9°C)	10322	10116	10065	10025	9935	0.86	0.86	0.86	0.87	0.87
	59°F(15.0°C)	10236	10032	9982	9942	9852	0.83	0.84	0.84	0.84	0.85
	62°F(16.7°C)	10107	9905	9856	9816	9728	0.80	0.80	0.80	0.81	0.81
	64.4°F(18.0°C)	10004	9804	9755	9716	9628	0.77	0.77	0.78	0.78	0.78
	69.8°F(21.0°C)	9070	8888	8844	8809	8729	0.70	0.71	0.71	0.71	0.71
	75.2°F(24.0°C)	8797	8621	8578	8543	8467	0.64	0.64	0.64	0.65	0.65

Table 15: HEATING PERFORMANCE 12K, 115v

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
176	-22°F(-30.0°C)										
	-13°F(-25.0°C)	3300	3234	3218	2952	2926	0.69	0.69	0.69	0.70	0.70
	-4°F(-20.0°C)	4000	3920	3901	3579	3546	0.72	0.72	0.72	0.72	0.73
	0°F(-17.8°C)	4025	3944	3925	3601	3568	0.78	0.79	0.79	0.79	0.79
	5°F(-15.0°C)	4056	3975	3955	3628	3595	0.86	0.87	0.87	0.87	0.88
	14°F(-10.0°C)	4703	4609	4586	4207	4170	0.83	0.84	0.84	0.84	0.84
	17°F(-8.3°C)	4919	4821	4797	4401	4361	0.82	0.83	0.83	0.83	0.83
	22°F(-5.6°C)	5267	5162	5136	4712	4669	0.82	0.83	0.83	0.83	0.84
	27°F(-2.8°C)	5615	5503	5475	5023	4978	0.83	0.83	0.83	0.84	0.84
	32°F(0.0°C)	5963	5844	5815	5334	5286	0.83	0.83	0.84	0.84	0.84
	35°F(1.7°C)	6172	6048	6018	5521	5471	0.83	0.84	0.84	0.84	0.84
	37°F(2.8°C)	6494	6364	6332	5809	5757	0.84	0.85	0.85	0.85	0.85
	42°F(5.6°C)	7298	7152	7116	6528	6470	0.86	0.87	0.87	0.88	0.88
	44.6°F(7.0°C)	7620	7467	7430	6816	6755	0.88	0.88	0.88	0.89	0.89
	47°F(8.3°C)	8102	7940	7901	7248	7183	0.89	0.90	0.90	0.90	0.91
	52°F(11.1°C)	7710	7556	7518	6897	6835	0.80	0.81	0.81	0.81	0.81
	57°F(13.9°C)	7318	7172	7136	6546	6487	0.71	0.72	0.72	0.72	0.72
	59°F(15.0°C)	7161	7018	6983	6406	6348	0.68	0.68	0.68	0.68	0.69
	62°F(16.7°C)	6926	6787	6753	6195	6140	0.62	0.63	0.63	0.63	0.63
	64.4°F(18.0°C)	6737	6603	6570	6027	5973	0.58	0.58	0.59	0.59	0.59
	69.8°F(21.0°C)	8206	8042	8002	7341	7275	0.48	0.49	0.49	0.49	0.49
	75.2°F(24.0°C)	7857	7700	7662	7029	6965	0.39	0.39	0.39	0.39	0.39
235	-22°F(-30.0°C)										
	-13°F(-25.0°C)	3847	3770	3751	3586	3554	0.76	0.77	0.77	0.77	0.78
	-4°F(-20.0°C)	4663	4570	4547	4347	4308	0.80	0.80	0.80	0.81	0.81
	0°F(-17.8°C)	4692	4598	4575	4373	4334	0.87	0.87	0.88	0.88	0.88
	5°F(-15.0°C)	4728	4633	4610	4407	4367	0.96	0.97	0.97	0.97	0.97
	14°F(-10.0°C)	5483	5373	5346	5110	5064	0.92	0.93	0.93	0.93	0.94
	17°F(-8.3°C)	5735	5620	5592	5345	5297	0.91	0.92	0.92	0.92	0.93
	22°F(-5.6°C)	6140	6017	5987	5723	5672	0.91	0.92	0.92	0.93	0.93
	27°F(-2.8°C)	6546	6415	6383	6101	6046	0.92	0.92	0.93	0.93	0.93
	32°F(0.0°C)	6951	6812	6778	6479	6421	0.92	0.93	0.93	0.93	0.93
	35°F(1.7°C)	7195	7051	7015	6706	6646	0.92	0.93	0.93	0.93	0.94
	37°F(2.8°C)	7570	7418	7381	7056	6992	0.93	0.94	0.94	0.94	0.95
	42°F(5.6°C)	8507	8337	8296	7930	7858	0.96	0.97	0.97	0.97	0.98
	44.6°F(7.0°C)	8883	8705	8661	8279	8205	0.97	0.98	0.98	0.98	0.99
	47°F(8.3°C)	9445	9256	9210	8804	8724	0.99	1.00	1.00	1.00	1.01
	52°F(11.1°C)	8988	8808	8764	8377	8302	0.89	0.90	0.90	0.90	0.90
	57°F(13.9°C)	8531	8360	8318	7951	7880	0.79	0.80	0.80	0.80	0.80
	59°F(15.0°C)	8348	8181	8140	7781	7711	0.75	0.76	0.76	0.76	0.76
	62°F(16.7°C)	8073	7912	7872	7525	7457	0.69	0.70	0.70	0.70	0.70
	64.4°F(18.0°C)	7854	7697	7658	7320	7255	0.64	0.65	0.65	0.65	0.65
	69.8°F(21.0°C)	9566	9375	9328	8917	8836	0.54	0.54	0.54	0.54	0.55
	75.2°F(24.0°C)	9159	8976	8931	8537	8460	0.43	0.43	0.43	0.43	0.44

Table 15: HEATING PERFORMANCE 12K, 115v (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
294	-22°F(-30.0°C)										
	-13°F(-25.0°C)	4485	4395	4373	4355	4316	0.85	0.86	0.86	0.86	0.86
	-4°F(-20.0°C)	5436	5327	5301	5280	5232	0.88	0.89	0.89	0.89	0.90
	0°F(-17.8°C)	5469	5360	5333	5312	5264	0.96	0.97	0.97	0.98	0.98
	5°F(-15.0°C)	5511	5401	5374	5352	5304	1.06	1.07	1.07	1.08	1.08
	14°F(-10.0°C)	6391	6264	6232	6207	6151	1.03	1.03	1.04	1.04	1.04
	17°F(-8.3°C)	6685	6551	6518	6492	6434	1.01	1.02	1.02	1.03	1.03
	22°F(-5.6°C)	7158	7014	6979	6951	6889	1.02	1.02	1.03	1.03	1.03
	27°F(-2.8°C)	7630	7478	7440	7411	7344	1.02	1.03	1.03	1.03	1.04
	32°F(-0.0°C)	8103	7941	7901	7870	7799	1.02	1.03	1.03	1.03	1.04
	35°F(1.7°C)	8387	8219	8178	8145	8072	1.02	1.03	1.03	1.04	1.04
	37°F(2.8°C)	8824	8648	8604	8570	8493	1.04	1.04	1.05	1.05	1.05
	42°F(5.6°C)	9917	9719	9670	9632	9545	1.07	1.08	1.08	1.08	1.08
	44.6°F(7.0°C)	10354	10147	10097	10056	9966	1.08	1.09	1.09	1.09	1.10
	47°F(8.3°C)	11010	10790	10736	10693	10597	1.10	1.11	1.11	1.11	1.12
	52°F(11.1°C)	10477	10268	10216	10175	10084	0.99	1.00	1.00	1.00	1.01
	57°F(13.9°C)	9944	9745	9697	9658	9571	0.88	0.89	0.89	0.89	0.89
	59°F(15.0°C)	9731	9536	9489	9451	9366	0.83	0.84	0.84	0.84	0.85
	62°F(16.7°C)	9411	9223	9177	9140	9058	0.77	0.77	0.78	0.78	0.78
	64.4°F(18.0°C)	9155	8972	8927	8892	8812	0.72	0.72	0.72	0.72	0.73
	69.8°F(21.0°C)	11151	10928	10874	10830	10733	0.60	0.60	0.60	0.60	0.61
	75.2°F(24.0°C)	10677	10464	10411	10370	10276	0.48	0.48	0.48	0.48	0.48
353	-22°F(-30.0°C)										
	-13°F(-25.0°C)	5228	5123	5098	5077	5031	0.94	0.95	0.95	0.95	0.96
	-4°F(-20.0°C)	6337	6210	6179	6154	6099	0.98	0.99	0.99	0.99	1.00
	0°F(-17.8°C)	6376	6248	6217	6192	6136	1.07	1.08	1.08	1.08	1.09
	5°F(-15.0°C)	6424	6296	6264	6239	6183	1.18	1.19	1.19	1.20	1.20
	14°F(-10.0°C)	7451	7302	7265	7236	7171	1.14	1.15	1.15	1.15	1.16
	17°F(-8.3°C)	7793	7637	7599	7568	7500	1.13	1.14	1.14	1.14	1.14
	22°F(-5.6°C)	8344	8177	8136	8103	8030	1.13	1.14	1.14	1.14	1.15
	27°F(-2.8°C)	8895	8717	8673	8639	8561	1.13	1.14	1.14	1.15	1.15
	32°F(-0.0°C)	9446	9257	9211	9174	9091	1.13	1.14	1.15	1.15	1.15
	35°F(1.7°C)	9777	9581	9533	9495	9410	1.14	1.15	1.15	1.15	1.15
	37°F(2.8°C)	10286	10081	10030	9990	9900	1.15	1.16	1.16	1.16	1.17
	42°F(5.6°C)	11561	11329	11273	11228	11127	1.19	1.20	1.20	1.20	1.21
	44.6°F(7.0°C)	12070	11829	11770	11723	11617	1.20	1.21	1.21	1.21	1.22
	47°F(8.3°C)	12835	12578	12515	12465	12353	1.22	1.23	1.23	1.24	1.24
	52°F(11.1°C)	12213	11969	11909	11862	11755	1.10	1.11	1.11	1.11	1.12
	57°F(13.9°C)	11592	11360	11303	11258	11157	0.98	0.98	0.99	0.99	0.99
	59°F(15.0°C)	11343	11117	11061	11017	10918	0.93	0.93	0.94	0.94	0.94
	62°F(16.7°C)	10971	10751	10697	10655	10559	0.85	0.86	0.86	0.86	0.87
	64.4°F(18.0°C)	10672	10459	10407	10365	10272	0.79	0.80	0.80	0.80	0.81
	69.8°F(21.0°C)	12999	12739	12676	12625	12511	0.66	0.67	0.67	0.67	0.67
	75.2°F(24.0°C)	12446	12197	12136	12088	11979	0.53	0.53	0.54	0.54	0.54

Table 16: HEATING PERFORMANCE 9K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
135	-22°F(-30.0°C)										
	-13°F(-25.0°C)	3465	3395	3378	1677	1662	0.61	0.62	0.62	0.62	0.62
	-4°F(-20.0°C)	4134	4051	4031	2001	1983	0.65	0.66	0.66	0.66	0.66
	0°F(-17.8°C)	5170	5067	5041	2502	2480	0.73	0.74	0.74	0.74	0.75
	5°F(-15.0°C)	6465	6335	6304	3129	3101	0.84	0.84	0.85	0.85	0.85
	14°F(-10.0°C)	7042	6901	6867	3409	3378	0.88	0.88	0.88	0.89	0.89
	17°F(-8.3°C)	7235	7090	7055	3502	3470	0.89	0.90	0.90	0.90	0.90
	22°F(-5.6°C)	7635	7482	7445	3696	3662	0.90	0.91	0.91	0.92	0.92
	27°F(-2.8°C)	8036	7875	7836	3889	3854	0.92	0.93	0.93	0.93	0.94
	32°F(0.0°C)	8436	8267	8226	4083	4046	0.94	0.94	0.95	0.95	0.95
	35°F(1.7°C)	8676	8503	8460	4200	4162	0.95	0.95	0.96	0.96	0.96
	37°F(2.8°C)	8849	8672	8628	4283	4244	0.94	0.94	0.95	0.95	0.95
	42°F(5.6°C)	9279	9094	9048	4491	4451	0.91	0.92	0.92	0.93	0.93
	44.6°F(7.0°C)	9452	9263	9216	4575	4534	0.91	0.91	0.91	0.92	0.92
	47°F(8.3°C)	9710	9516	9468	4700	4657	0.89	0.90	0.90	0.90	0.91
	52°F(11.1°C)	9447	9258	9212	4573	4531	0.79	0.80	0.80	0.80	0.80
	57°F(13.9°C)	9184	9001	8956	4445	4405	0.69	0.69	0.70	0.70	0.70
	59°F(15.0°C)	9079	8898	8853	4395	4355	0.65	0.65	0.65	0.66	0.66
	62°F(16.7°C)	8922	8743	8699	4318	4279	0.59	0.59	0.59	0.59	0.60
	64.4°F(18.0°C)	8795	8620	8576	4257	4219	0.54	0.54	0.54	0.54	0.55
69.8°F(21.0°C)	7925	7767	7728	3836	3801	0.43	0.43	0.43	0.43	0.44	
75.2°F(24.0°C)	6455	6326	6295	3125	3096	0.32	0.32	0.32	0.32	0.32	
171	-22°F(-30.0°C)										
	-13°F(-25.0°C)	3966	3886	3867	2719	2695	0.68	0.69	0.69	0.69	0.69
	-4°F(-20.0°C)	4732	4638	4614	3244	3215	0.72	0.73	0.73	0.73	0.73
	0°F(-17.8°C)	5918	5800	5771	4057	4021	0.82	0.82	0.82	0.83	0.83
	5°F(-15.0°C)	7400	7252	7216	5074	5028	0.93	0.94	0.94	0.94	0.95
	14°F(-10.0°C)	8061	7900	7860	5527	5477	0.97	0.98	0.98	0.98	0.99
	17°F(-8.3°C)	8281	8116	8075	5678	5627	0.99	1.00	1.00	1.00	1.00
	22°F(-5.6°C)	8740	8565	8522	5992	5938	1.00	1.01	1.02	1.02	1.02
	27°F(-2.8°C)	9198	9014	8969	6306	6250	1.02	1.03	1.03	1.04	1.04
	32°F(0.0°C)	9657	9464	9416	6621	6561	1.04	1.05	1.05	1.05	1.06
	35°F(1.7°C)	9932	9733	9684	6809	6748	1.05	1.06	1.06	1.06	1.07
	37°F(2.8°C)	10129	9926	9877	6945	6882	1.04	1.05	1.05	1.05	1.06
	42°F(5.6°C)	10622	10409	10357	7283	7217	1.02	1.02	1.03	1.03	1.03
	44.6°F(7.0°C)	10819	10603	10550	7418	7351	1.01	1.01	1.02	1.02	1.02
	47°F(8.3°C)	11115	10892	10838	7620	7552	0.99	1.00	1.00	1.00	1.01
	52°F(11.1°C)	10814	10598	10545	7414	7348	0.88	0.88	0.89	0.89	0.89
	57°F(13.9°C)	10513	10303	10251	7208	7143	0.76	0.77	0.77	0.77	0.78
	59°F(15.0°C)	10393	10185	10134	7126	7061	0.72	0.73	0.73	0.73	0.73
	62°F(16.7°C)	10212	10008	9958	7002	6939	0.65	0.66	0.66	0.66	0.66
	64.4°F(18.0°C)	10068	9867	9817	6903	6841	0.60	0.60	0.60	0.61	0.61
69.8°F(21.0°C)	9072	8890	8846	6220	6164	0.48	0.48	0.48	0.48	0.48	
75.2°F(24.0°C)	7389	7242	7205	5066	5021	0.35	0.36	0.36	0.36	0.36	

Table 16: HEATING PERFORMANCE 9K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
235	-22°F(-30.0°C)										
	-13°F(-25.0°C)	4539	4449	4426	4409	4369	0.76	0.76	0.77	0.77	0.77
	-4°F(-20.0°C)	5417	5308	5282	5261	5213	0.80	0.81	0.81	0.81	0.82
	0°F(-17.8°C)	6774	6639	6605	6579	6520	0.91	0.91	0.91	0.92	0.92
	5°F(-15.0°C)	8471	8301	8260	8227	8153	1.03	1.04	1.04	1.05	1.05
	14°F(-10.0°C)	9227	9043	8997	8961	8881	1.08	1.09	1.09	1.09	1.10
	17°F(-8.3°C)	9479	9290	9243	9206	9124	1.10	1.11	1.11	1.11	1.11
	22°F(-5.6°C)	10004	9804	9755	9716	9629	1.12	1.13	1.13	1.13	1.13
	27°F(-2.8°C)	10529	10318	10267	10226	10134	1.14	1.15	1.15	1.15	1.15
	32°F(-0.0°C)	11054	10833	10778	10735	10639	1.16	1.17	1.17	1.17	1.17
	35°F(1.7°C)	11369	11141	11085	11041	10942	1.17	1.18	1.18	1.18	1.19
	37°F(2.8°C)	11594	11362	11306	11260	11159	1.16	1.17	1.17	1.17	1.18
	42°F(5.6°C)	12158	11915	11856	11808	11702	1.13	1.14	1.14	1.14	1.15
	44.6°F(7.0°C)	12384	12137	12076	12028	11919	1.12	1.13	1.13	1.13	1.14
	47°F(8.3°C)	12723	12468	12406	12356	12245	1.10	1.11	1.11	1.11	1.12
	52°F(11.1°C)	12378	12131	12070	12022	11914	0.98	0.98	0.99	0.99	0.99
	57°F(13.9°C)	12034	11793	11734	11687	11582	0.85	0.86	0.86	0.86	0.86
	59°F(15.0°C)	11896	11658	11600	11554	11450	0.80	0.81	0.81	0.81	0.81
	62°F(16.7°C)	11690	11456	11399	11353	11251	0.72	0.73	0.73	0.73	0.74
	64.4°F(18.0°C)	11524	11294	11237	11193	11092	0.66	0.67	0.67	0.67	0.68
	69.8°F(21.0°C)	10384	10177	10126	10085	9994	0.53	0.53	0.53	0.54	0.54
	75.2°F(24.0°C)	8458	8289	8248	8215	8141	0.39	0.40	0.40	0.40	0.40
312	-22°F(-30.0°C)										
	-13°F(-25.0°C)	5196	5092	5067	5047	5001	0.84	0.85	0.85	0.85	0.86
	-4°F(-20.0°C)	6200	6076	6046	6022	5968	0.89	0.90	0.90	0.90	0.91
	0°F(-17.8°C)	7754	7599	7561	7531	7463	1.01	1.01	1.02	1.02	1.02
	5°F(-15.0°C)	9696	9502	9455	9417	9332	1.15	1.16	1.16	1.16	1.17
	14°F(-10.0°C)	10562	10351	10299	10258	10166	1.20	1.21	1.21	1.22	1.22
	17°F(-8.3°C)	10851	10634	10581	10538	10443	1.22	1.23	1.23	1.23	1.24
	22°F(-5.6°C)	11451	11222	11166	11122	11022	1.24	1.25	1.25	1.26	1.26
	27°F(-2.8°C)	12052	11811	11752	11705	11600	1.26	1.27	1.28	1.28	1.28
	32°F(-0.0°C)	12653	12400	12338	12288	12178	1.28	1.30	1.30	1.30	1.31
	35°F(1.7°C)	13013	12753	12689	12638	12525	1.30	1.31	1.31	1.31	1.32
	37°F(2.8°C)	13272	13006	12941	12889	12773	1.29	1.30	1.30	1.30	1.31
	42°F(5.6°C)	13917	13639	13571	13517	13395	1.25	1.26	1.27	1.27	1.27
	44.6°F(7.0°C)	14176	13892	13823	13768	13644	1.24	1.25	1.25	1.26	1.26
	47°F(8.3°C)	14563	14272	14201	14144	14017	1.22	1.23	1.24	1.24	1.24
	52°F(11.1°C)	14169	13886	13816	13761	13637	1.08	1.09	1.09	1.10	1.10
	57°F(13.9°C)	13775	13500	13432	13378	13258	0.94	0.95	0.95	0.96	0.96
	59°F(15.0°C)	13617	13345	13278	13225	13106	0.89	0.90	0.90	0.90	0.90
	62°F(16.7°C)	13381	13113	13048	12996	12879	0.81	0.81	0.81	0.82	0.82
	64.4°F(18.0°C)	13192	12928	12863	12812	12696	0.74	0.74	0.75	0.75	0.75
	69.8°F(21.0°C)	11887	11649	11591	11544	11440	0.59	0.59	0.59	0.60	0.60
	75.2°F(24.0°C)	9682	9488	9441	9403	9319	0.44	0.44	0.44	0.44	0.45

Table 17: HEATING PERFORMANCE 12K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
153	-22°F(-30.0°C)										
	-13°F(-25.0°C)	3535	3464	3447	2082	2064	0.00	0.00	0.00	0.00	0.00
	-4°F(-20.0°C)	4411	4323	4301	2598	2575	0.00	0.00	0.00	0.00	0.00
	0°F(-17.8°C)	4801	4705	4681	2828	2802	0.39	0.39	0.39	0.39	0.39
	5°F(-15.0°C)	5287	5182	5156	3115	3087	0.87	0.88	0.88	0.88	0.89
	14°F(-10.0°C)	6163	6040	6010	3631	3598	0.91	0.92	0.92	0.92	0.92
	17°F(-8.3°C)	6456	6326	6295	3803	3768	0.92	0.93	0.93	0.93	0.93
	22°F(-5.6°C)	6795	6659	6626	4003	3967	0.92	0.92	0.93	0.93	0.93
	27°F(-2.8°C)	7134	6992	6957	4203	4165	0.91	0.92	0.92	0.92	0.93
	32°F(-0.0°C)	7474	7324	7288	4402	4363	0.91	0.92	0.92	0.92	0.93
	35°F(1.7°C)	7677	7524	7486	4522	4482	0.91	0.92	0.92	0.92	0.92
	37°F(2.8°C)	7996	7836	7797	4710	4668	0.92	0.92	0.92	0.93	0.93
	42°F(5.6°C)	8793	8617	8574	5180	5133	0.93	0.94	0.94	0.94	0.95
	44.6°F(7.0°C)	9112	8930	8885	5368	5319	0.94	0.95	0.95	0.95	0.95
	47°F(8.3°C)	9590	9398	9351	5649	5598	0.95	0.96	0.96	0.96	0.96
	52°F(11.1°C)	9168	8985	8940	5401	5352	0.83	0.83	0.83	0.84	0.84
	57°F(13.9°C)	8746	8571	8528	5152	5106	0.70	0.71	0.71	0.71	0.71
	59°F(15.0°C)	8577	8406	8364	5053	5007	0.65	0.66	0.66	0.66	0.66
	62°F(16.7°C)	8324	8158	8117	4903	4859	0.58	0.58	0.58	0.59	0.59
	64.4°F(18.0°C)	8122	7959	7919	4784	4741	0.52	0.52	0.52	0.53	0.53
69.8°F(21.0°C)	6742	6608	6575	3972	3936	0.39	0.39	0.39	0.39	0.39	
75.2°F(24.0°C)	4750	4655	4632	2798	2773	0.25	0.25	0.26	0.26	0.26	
194	-22°F(-30.0°C)										
	-13°F(-25.0°C)	4050	3969	3949	3063	3036	0.00	0.00	0.00	0.00	0.00
	-4°F(-20.0°C)	5054	4952	4928	3822	3788	0.00	0.00	0.00	0.00	0.00
	0°F(-17.8°C)	5500	5390	5363	4160	4122	0.43	0.44	0.44	0.44	0.44
	5°F(-15.0°C)	6057	5936	5906	4582	4540	0.97	0.98	0.98	0.98	0.99
	14°F(-10.0°C)	7061	6920	6885	5341	5293	1.01	1.02	1.02	1.02	1.03
	17°F(-8.3°C)	7396	7248	7212	5594	5544	1.02	1.03	1.03	1.03	1.04
	22°F(-5.6°C)	7784	7629	7591	5888	5835	1.02	1.03	1.03	1.03	1.03
	27°F(-2.8°C)	8173	8010	7970	6182	6126	1.01	1.02	1.03	1.03	1.03
	32°F(-0.0°C)	8562	8391	8349	6476	6418	1.01	1.02	1.02	1.02	1.03
	35°F(1.7°C)	8795	8619	8576	6653	6593	1.01	1.02	1.02	1.02	1.03
	37°F(2.8°C)	9161	8977	8932	6929	6866	1.02	1.03	1.03	1.03	1.03
	42°F(5.6°C)	10074	9872	9823	7619	7551	1.04	1.04	1.05	1.05	1.05
	44.6°F(7.0°C)	10439	10230	10179	7896	7825	1.04	1.05	1.05	1.06	1.06
	47°F(8.3°C)	10987	10767	10713	8310	8235	1.05	1.06	1.06	1.07	1.07
	52°F(11.1°C)	10503	10293	10242	7944	7873	0.92	0.92	0.93	0.93	0.93
	57°F(13.9°C)	10020	9819	9770	7579	7511	0.78	0.79	0.79	0.79	0.79
	59°F(15.0°C)	9826	9630	9582	7432	7366	0.72	0.73	0.73	0.73	0.74
	62°F(16.7°C)	9536	9346	9299	7213	7148	0.64	0.65	0.65	0.65	0.65
	64.4°F(18.0°C)	9304	9118	9073	7037	6974	0.58	0.58	0.58	0.58	0.59
69.8°F(21.0°C)	7724	7570	7532	5842	5790	0.43	0.43	0.43	0.43	0.44	
75.2°F(24.0°C)	5442	5333	5307	4116	4079	0.28	0.28	0.28	0.28	0.29	

Table 17: HEATING PERFORMANCE 12K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
294	-22°F(-30.0°C)										
	-13°F(-25.0°C)	4640	4547	4524	4506	4465	0.00	0.00	0.00	0.00	0.00
	-4°F(-20.0°C)	5789	5674	5645	5623	5572	0.00	0.00	0.00	0.00	0.00
	0°F(-17.8°C)	6301	6175	6144	6119	6064	0.48	0.48	0.48	0.49	0.49
	5°F(-15.0°C)	6939	6801	6767	6740	6679	1.08	1.09	1.09	1.09	1.10
	14°F(-10.0°C)	8089	7928	7888	7856	7786	1.12	1.13	1.13	1.13	1.14
	17°F(-8.3°C)	8473	8303	8262	8229	8155	1.14	1.14	1.15	1.15	1.15
	22°F(-5.6°C)	8918	8740	8696	8661	8583	1.13	1.14	1.14	1.15	1.15
	27°F(-2.8°C)	9364	9176	9130	9094	9012	1.13	1.14	1.14	1.14	1.15
	32°F(-0.0°C)	9809	9613	9565	9526	9441	1.12	1.13	1.14	1.14	1.14
	35°F(1.7°C)	10076	9875	9825	9786	9698	1.12	1.13	1.13	1.14	1.14
	37°F(2.8°C)	10495	10285	10233	10192	10101	1.13	1.14	1.14	1.14	1.15
	42°F(5.6°C)	11541	11310	11253	11208	11108	1.15	1.16	1.16	1.16	1.17
	44.6°F(7.0°C)	11959	11720	11661	11615	11510	1.16	1.17	1.17	1.17	1.18
	47°F(8.3°C)	12587	12335	12273	12224	12114	1.17	1.18	1.18	1.18	1.19
	52°F(11.1°C)	12033	11792	11733	11686	11581	1.02	1.03	1.03	1.03	1.04
	57°F(13.9°C)	11479	11249	11193	11148	11048	0.87	0.87	0.88	0.88	0.88
	59°F(15.0°C)	11258	11032	10977	10933	10835	0.81	0.81	0.81	0.82	0.82
	62°F(16.7°C)	10925	10707	10653	10611	10515	0.71	0.72	0.72	0.72	0.73
	64.4°F(18.0°C)	10659	10446	10394	10352	10259	0.64	0.65	0.65	0.65	0.65
	69.8°F(21.0°C)	8849	8672	8629	8594	8517	0.48	0.48	0.48	0.48	0.48
	75.2°F(24.0°C)	6235	6110	6079	6055	6001	0.31	0.31	0.32	0.32	0.32
347	-22°F(-30.0°C)										
	-13°F(-25.0°C)	5315	5209	5183	5162	5116	0.00	0.00	0.00	0.00	0.00
	-4°F(-20.0°C)	6633	6500	6467	6442	6384	0.00	0.00	0.00	0.00	0.00
	0°F(-17.8°C)	7218	7074	7038	7010	6947	0.53	0.54	0.54	0.54	0.54
	5°F(-15.0°C)	7950	7791	7752	7721	7652	1.20	1.21	1.21	1.21	1.22
	14°F(-10.0°C)	9267	9082	9037	9001	8920	1.25	1.26	1.26	1.26	1.27
	17°F(-8.3°C)	9707	9512	9465	9427	9342	1.26	1.27	1.27	1.28	1.28
	22°F(-5.6°C)	10217	10013	9962	9923	9833	1.26	1.27	1.27	1.27	1.28
	27°F(-2.8°C)	10727	10513	10460	10418	10324	1.25	1.26	1.27	1.27	1.27
	32°F(-0.0°C)	11237	11013	10958	10914	10816	1.25	1.26	1.26	1.26	1.27
	35°F(1.7°C)	11544	11313	11256	11211	11110	1.25	1.26	1.26	1.26	1.27
	37°F(2.8°C)	12023	11783	11724	11677	11572	1.26	1.27	1.27	1.27	1.28
	42°F(5.6°C)	13221	12957	12892	12841	12725	1.28	1.29	1.29	1.29	1.30
	44.6°F(7.0°C)	13701	13427	13360	13306	13186	1.29	1.30	1.30	1.30	1.31
	47°F(8.3°C)	14420	14132	14061	14005	13879	1.30	1.31	1.31	1.32	1.32
	52°F(11.1°C)	13785	13510	13442	13388	13268	1.13	1.14	1.14	1.15	1.15
	57°F(13.9°C)	13151	12888	12823	12772	12657	0.96	0.97	0.97	0.97	0.98
	59°F(15.0°C)	12897	12639	12576	12526	12413	0.89	0.90	0.90	0.91	0.91
	62°F(16.7°C)	12516	12266	12205	12156	12046	0.79	0.80	0.80	0.80	0.81
	64.4°F(18.0°C)	12212	11967	11908	11860	11753	0.71	0.72	0.72	0.72	0.72
	69.8°F(21.0°C)	10138	9935	9886	9846	9757	0.53	0.53	0.53	0.54	0.54
	75.2°F(24.0°C)	7143	7000	6965	6937	6874	0.35	0.35	0.35	0.35	0.35

Table 18: HEATING PERFORMANCE 18K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
271	-22°F(-30.0°C)										
	-13°F(-25.0°C)	6063	5942	5912	5527	5478	0.95	0.96	0.96	0.96	0.97
	-4°F(-20.0°C)	7305	7159	7123	6660	6600	1.01	1.02	1.02	1.02	1.03
	0°F(-17.8°C)	7574	7422	7385	6905	6842	1.07	1.08	1.08	1.08	1.09
	5°F(-15.0°C)	7909	7751	7712	7211	7146	1.14	1.15	1.15	1.15	1.16
	14°F(-10.0°C)	8844	8667	8624	8063	7990	1.16	1.17	1.18	1.18	1.18
	17°F(-8.3°C)	9155	8972	8928	8347	8271	1.17	1.18	1.19	1.19	1.19
	22°F(-5.6°C)	9663	9470	9422	8809	8730	1.24	1.25	1.26	1.26	1.26
	27°F(-2.8°C)	10170	9967	9917	9272	9188	1.31	1.32	1.32	1.33	1.33
	32°F(0.0°C)	10678	10464	10412	9735	9647	1.38	1.39	1.39	1.40	1.40
	35°F(1.7°C)	10982	10763	10709	10012	9922	1.42	1.43	1.44	1.44	1.45
	37°F(2.8°C)	11350	11123	11067	10347	10254	1.43	1.44	1.44	1.44	1.45
	42°F(5.6°C)	12268	12023	11963	11184	11084	1.44	1.45	1.45	1.45	1.46
	44.6°F(7.0°C)	12635	12383	12321	11519	11415	1.44	1.45	1.46	1.46	1.46
	47°F(8.3°C)	13186	12923	12858	12021	11913	1.45	1.46	1.46	1.47	1.47
	52°F(11.1°C)	13121	12858	12794	11961	11854	1.31	1.32	1.32	1.32	1.33
	57°F(13.9°C)	13055	12794	12730	11901	11794	1.16	1.17	1.18	1.18	1.18
	59°F(15.0°C)	13028	12768	12704	11877	11771	1.11	1.12	1.12	1.12	1.13
	62°F(16.7°C)	12989	12729	12666	11841	11735	1.02	1.03	1.03	1.03	1.04
	64.4°F(18.0°C)	12957	12698	12635	11813	11706	0.95	0.96	0.96	0.97	0.97
	69.8°F(21.0°C)	12361	12114	12053	11269	11167	0.80	0.81	0.81	0.81	0.81
	75.2°F(24.0°C)	12938	12680	12616	11795	11689	0.65	0.65	0.65	0.66	0.66
329	-22°F(-30.0°C)										
	-13°F(-25.0°C)	6925	6787	6753	6516	6458	1.06	1.06	1.07	1.07	1.07
	-4°F(-20.0°C)	8344	8177	8136	7851	7781	1.12	1.13	1.14	1.14	1.14
	0°F(-17.8°C)	8651	8478	8435	8140	8067	1.19	1.20	1.20	1.20	1.21
	5°F(-15.0°C)	9034	8853	8809	8501	8424	1.27	1.28	1.28	1.28	1.29
	14°F(-10.0°C)	10102	9900	9850	9505	9420	1.29	1.30	1.31	1.31	1.32
	17°F(-8.3°C)	10457	10248	10197	9840	9751	1.30	1.31	1.32	1.32	1.32
	22°F(-5.6°C)	11037	10816	10762	10385	10292	1.38	1.39	1.39	1.40	1.40
	27°F(-2.8°C)	11617	11384	11327	10931	10832	1.46	1.47	1.47	1.48	1.48
	32°F(0.0°C)	12196	11952	11893	11476	11373	1.53	1.55	1.55	1.55	1.56
	35°F(1.7°C)	12544	12293	12232	11804	11697	1.58	1.59	1.60	1.60	1.61
	37°F(2.8°C)	12964	12704	12641	12198	12089	1.58	1.60	1.60	1.60	1.61
	42°F(5.6°C)	14013	13732	13664	13185	13067	1.60	1.61	1.61	1.62	1.62
	44.6°F(7.0°C)	14432	14144	14073	13580	13458	1.60	1.61	1.62	1.62	1.63
	47°F(8.3°C)	15062	14760	14686	14172	14045	1.61	1.62	1.63	1.63	1.63
	52°F(11.1°C)	14986	14687	14613	14101	13975	1.45	1.46	1.47	1.47	1.47
	57°F(13.9°C)	14911	14613	14540	14031	13904	1.29	1.30	1.31	1.31	1.31
	59°F(15.0°C)	14881	14584	14511	14002	13876	1.23	1.24	1.24	1.25	1.25
	62°F(16.7°C)	14836	14539	14467	13960	13834	1.14	1.15	1.15	1.15	1.15
	64.4°F(18.0°C)	14800	14504	14431	13926	13801	1.06	1.07	1.07	1.07	1.08
	69.8°F(21.0°C)	14118	13836	13767	13285	13165	0.89	0.90	0.90	0.90	0.90
	75.2°F(24.0°C)	14778	14483	14410	13906	13781	0.72	0.73	0.73	0.73	0.73

Table 18: HEATING PERFORMANCE 18K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
400	-22°F(-30.0°C)										
	-13°F(-25.0°C)	7910	7752	7713	7682	7613	1.17	1.18	1.18	1.19	1.19
	-4°F(-20.0°C)	9531	9340	9293	9256	9173	1.25	1.26	1.26	1.26	1.27
	0°F(-17.8°C)	9881	9683	9635	9596	9510	1.32	1.33	1.33	1.34	1.34
	5°F(-15.0°C)	10319	10112	10062	10022	9931	1.41	1.42	1.42	1.42	1.43
	14°F(-10.0°C)	11538	11307	11251	11206	11105	1.44	1.45	1.45	1.46	1.46
	17°F(-8.3°C)	11945	11706	11647	11601	11496	1.45	1.46	1.46	1.47	1.47
	22°F(-5.6°C)	12607	12354	12293	12244	12133	1.53	1.55	1.55	1.55	1.56
	27°F(-2.8°C)	13269	13003	12938	12887	12771	1.62	1.63	1.64	1.64	1.65
	32°F(0.0°C)	13931	13652	13584	13530	13408	1.70	1.72	1.72	1.73	1.73
	35°F(1.7°C)	14328	14041	13971	13915	13790	1.76	1.77	1.77	1.78	1.78
	37°F(2.8°C)	14807	14511	14439	14381	14251	1.76	1.78	1.78	1.78	1.79
	42°F(5.6°C)	16005	15685	15607	15544	15404	1.77	1.79	1.79	1.80	1.80
	44.6°F(7.0°C)	16484	16155	16074	16010	15866	1.78	1.79	1.80	1.80	1.81
	47°F(8.3°C)	17203	16859	16775	16708	16557	1.79	1.80	1.81	1.81	1.82
	52°F(11.1°C)	17117	16775	16691	16624	16475	1.61	1.63	1.63	1.63	1.64
	57°F(13.9°C)	17032	16691	16608	16541	16392	1.44	1.45	1.45	1.45	1.46
	59°F(15.0°C)	16997	16657	16574	16508	16359	1.37	1.38	1.38	1.38	1.39
	62°F(16.7°C)	16946	16607	16524	16458	16310	1.26	1.27	1.28	1.28	1.28
	64.4°F(18.0°C)	16905	16567	16484	16418	16270	1.18	1.19	1.19	1.19	1.20
	69.8°F(21.0°C)	16126	15804	15725	15662	15521	0.99	1.00	1.00	1.00	1.01
	75.2°F(24.0°C)	16880	16542	16460	16394	16246	0.80	0.81	0.81	0.81	0.81
471	-22°F(-30.0°C)										
	-13°F(-25.0°C)	9035	8854	8810	8775	8696	1.30	1.31	1.32	1.32	1.32
	-4°F(-20.0°C)	10886	10668	10615	10572	10477	1.39	1.40	1.40	1.40	1.41
	0°F(-17.8°C)	11286	11060	11005	10961	10862	1.47	1.48	1.48	1.48	1.49
	5°F(-15.0°C)	11786	11551	11493	11447	11344	1.56	1.58	1.58	1.58	1.59
	14°F(-10.0°C)	13179	12915	12851	12799	12684	1.60	1.61	1.61	1.62	1.62
	17°F(-8.3°C)	13643	13370	13303	13250	13131	1.61	1.62	1.63	1.63	1.64
	22°F(-5.6°C)	14399	14111	14041	13985	13859	1.70	1.72	1.72	1.73	1.73
	27°F(-2.8°C)	15156	14852	14778	14719	14587	1.80	1.81	1.82	1.82	1.83
	32°F(0.0°C)	15912	15594	15516	15454	15314	1.89	1.91	1.91	1.92	1.92
	35°F(1.7°C)	16366	16038	15958	15894	15751	1.95	1.97	1.97	1.97	1.98
	37°F(2.8°C)	16913	16575	16492	16426	16278	1.96	1.97	1.98	1.98	1.99
	42°F(5.6°C)	18281	17916	17826	17755	17595	1.97	1.99	1.99	2.00	2.00
	44.6°F(7.0°C)	18829	18452	18360	18286	18122	1.98	1.99	2.00	2.00	2.01
	47°F(8.3°C)	19650	19257	19160	19084	18912	1.99	2.00	2.01	2.01	2.02
	52°F(11.1°C)	19552	19161	19065	18989	18818	1.79	1.81	1.81	1.81	1.82
	57°F(13.9°C)	19454	19065	18969	18893	18723	1.60	1.61	1.61	1.62	1.62
	59°F(15.0°C)	19414	19026	18931	18855	18686	1.52	1.53	1.53	1.54	1.54
	62°F(16.7°C)	19356	18968	18874	18798	18629	1.40	1.41	1.42	1.42	1.43
	64.4°F(18.0°C)	19309	18922	18828	18752	18584	1.31	1.32	1.32	1.33	1.33
	69.8°F(21.0°C)	18419	18051	17961	17889	17728	1.10	1.11	1.11	1.11	1.12
	75.2°F(24.0°C)	19280	18895	18800	18725	18556	0.89	0.90	0.90	0.90	0.90

Table 19: HEATING PERFORMANCE 24K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
329	-22°F(-30.0°C)										
	-13°F(-25.0°C)	4788	4692	4668	4419	4380	1.45	1.46	1.46	1.46	1.47
	-4°F(-20.0°C)	6085	5963	5933	5616	5566	1.58	1.60	1.60	1.60	1.61
	0°F(-17.8°C)	6835	6698	6665	6309	6253	1.63	1.64	1.64	1.65	1.65
	5°F(-15.0°C)	7773	7618	7580	7176	7111	1.68	1.70	1.70	1.70	1.71
	14°F(-10.0°C)	9094	8912	8868	8395	8319	1.84	1.85	1.86	1.86	1.87
	17°F(-8.3°C)	9535	9344	9297	8801	8722	1.89	1.90	1.91	1.91	1.92
	22°F(-5.6°C)	10232	10027	9977	9445	9360	1.97	1.99	1.99	2.00	2.00
	27°F(-2.8°C)	10929	10710	10656	10088	9997	2.06	2.07	2.08	2.08	2.09
	32°F(0.0°C)	11625	11393	11336	10731	10635	2.14	2.16	2.16	2.16	2.17
	35°F(1.7°C)	12044	11803	11744	11117	11017	2.19	2.21	2.21	2.22	2.22
	37°F(2.8°C)	12177	11934	11874	11241	11139	2.16	2.17	2.18	2.18	2.19
	42°F(5.6°C)	12512	12261	12200	11549	11445	2.08	2.09	2.10	2.10	2.11
	44.6°F(7.0°C)	12645	12392	12330	11673	11568	2.04	2.06	2.06	2.07	2.08
	47°F(8.3°C)	12846	12589	12526	11858	11751	2.00	2.01	2.02	2.02	2.03
	52°F(11.1°C)	12854	12597	12534	11865	11758	1.85	1.87	1.87	1.87	1.88
	57°F(13.9°C)	12861	12604	12541	11872	11765	1.71	1.72	1.72	1.73	1.73
	59°F(15.0°C)	12864	12607	12544	11875	11768	1.65	1.66	1.66	1.67	1.67
	62°F(16.7°C)	12869	12612	12549	11879	11772	1.56	1.57	1.58	1.58	1.59
	64.4°F(18.0°C)	12873	12615	12552	11883	11776	1.49	1.50	1.51	1.51	1.51
	69.8°F(21.0°C)	11518	11287	11231	10632	10536	1.33	1.34	1.35	1.35	1.36
	75.2°F(24.0°C)	10163	9960	9910	9381	9297	1.18	1.19	1.19	1.19	1.20
400	-22°F(-30.0°C)										
	-13°F(-25.0°C)	6198	6074	6043	5868	5815	1.61	1.62	1.62	1.63	1.63
	-4°F(-20.0°C)	7876	7719	7680	7458	7391	1.76	1.77	1.78	1.78	1.79
	0°F(-17.8°C)	8848	8671	8628	8378	8302	1.81	1.82	1.83	1.83	1.84
	5°F(-15.0°C)	10063	9862	9812	9528	9442	1.87	1.89	1.89	1.89	1.90
	14°F(-10.0°C)	11773	11537	11479	11147	11046	2.04	2.06	2.06	2.07	2.08
	17°F(-8.3°C)	12343	12096	12035	11686	11581	2.10	2.12	2.12	2.13	2.13
	22°F(-5.6°C)	13245	12980	12915	12541	12428	2.19	2.21	2.21	2.22	2.23
	27°F(-2.8°C)	14147	13864	13795	13395	13274	2.28	2.30	2.31	2.31	2.32
	32°F(0.0°C)	15049	14748	14674	14249	14121	2.38	2.40	2.40	2.41	2.41
	35°F(1.7°C)	15590	15279	15202	14762	14629	2.43	2.45	2.46	2.46	2.47
	37°F(2.8°C)	15764	15448	15371	14925	14791	2.40	2.42	2.42	2.43	2.43
	42°F(5.6°C)	16196	15872	15793	15335	15197	2.31	2.33	2.33	2.33	2.34
	44.6°F(7.0°C)	16369	16042	15962	15499	15360	2.27	2.29	2.29	2.30	2.31
	47°F(8.3°C)	16629	16296	16215	15745	15603	2.22	2.24	2.24	2.24	2.25
	52°F(11.1°C)	16639	16306	16225	15754	15613	2.06	2.07	2.08	2.08	2.09
	57°F(13.9°C)	16649	16316	16234	15764	15622	1.90	1.91	1.91	1.92	1.93
	59°F(15.0°C)	16653	16320	16238	15768	15626	1.83	1.85	1.85	1.85	1.86
	62°F(16.7°C)	16659	16326	16244	15773	15631	1.73	1.75	1.75	1.75	1.76
	64.4°F(18.0°C)	16664	16331	16249	15778	15636	1.66	1.67	1.67	1.68	1.68
	69.8°F(21.0°C)	14910	14612	14539	14117	13990	1.48	1.49	1.50	1.50	1.51
	75.2°F(24.0°C)	13156	12893	12828	12456	12344	1.31	1.32	1.32	1.32	1.33

Table 19: HEATING PERFORMANCE 24K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
547	-22°F(-30.0°C)										
	-13°F(-25.0°C)	8023	7862	7823	7792	7722	1.79	1.80	1.80	1.81	1.82
	-4°F(-20.0°C)	10196	9992	9942	9902	9813	1.95	1.97	1.97	1.98	1.99
	0°F(-17.8°C)	11454	11225	11169	11124	11024	2.01	2.03	2.03	2.03	2.04
	5°F(-15.0°C)	13026	12766	12702	12651	12537	2.08	2.10	2.10	2.10	2.11
	14°F(-10.0°C)	15240	14935	14860	14801	14668	2.27	2.29	2.29	2.30	2.31
	17°F(-8.3°C)	15977	15658	15580	15517	15378	2.33	2.35	2.36	2.36	2.37
	22°F(-5.6°C)	17145	16802	16718	16652	16502	2.44	2.46	2.46	2.46	2.47
	27°F(-2.8°C)	18313	17947	17857	17786	17626	2.54	2.56	2.56	2.57	2.58
	32°F(0.0°C)	19481	19091	18996	18920	18750	2.64	2.66	2.67	2.67	2.68
	35°F(1.7°C)	20182	19778	19679	19601	19424	2.70	2.72	2.73	2.73	2.75
	37°F(2.8°C)	20406	19998	19898	19818	19640	2.66	2.68	2.69	2.69	2.71
	42°F(5.6°C)	20966	20547	20444	20362	20179	2.56	2.58	2.59	2.59	2.60
	44.6°F(7.0°C)	21190	20766	20663	20580	20395	2.52	2.54	2.55	2.55	2.56
	47°F(8.3°C)	21526	21096	20990	20906	20718	2.46	2.48	2.49	2.49	2.50
	52°F(11.1°C)	21539	21108	21003	20919	20731	2.28	2.30	2.31	2.31	2.32
	57°F(13.9°C)	21552	21121	21016	20931	20743	2.11	2.12	2.13	2.13	2.14
	59°F(15.0°C)	21557	21126	21021	20936	20748	2.03	2.05	2.05	2.06	2.07
	62°F(16.7°C)	21565	21134	21028	20944	20756	1.93	1.94	1.95	1.95	1.96
	64.4°F(18.0°C)	21571	21140	21034	20950	20762	1.84	1.86	1.86	1.86	1.87
	69.8°F(21.0°C)	19301	18915	18820	18745	18576	1.65	1.66	1.66	1.67	1.67
	75.2°F(24.0°C)	17030	16689	16606	16540	16391	1.45	1.47	1.47	1.47	1.48
729	-22°F(-30.0°C)										
	-13°F(-25.0°C)	10385	10178	10127	10086	9996	1.99	2.00	2.01	2.01	2.02
	-4°F(-20.0°C)	13199	12935	12870	12819	12703	2.17	2.19	2.19	2.20	2.21
	0°F(-17.8°C)	14827	14531	14458	14400	14270	2.23	2.25	2.26	2.26	2.27
	5°F(-15.0°C)	16862	16525	16443	16377	16229	2.31	2.33	2.33	2.34	2.35
	14°F(-10.0°C)	19728	19333	19236	19160	18987	2.52	2.54	2.55	2.55	2.56
	17°F(-8.3°C)	20683	20269	20168	20087	19906	2.59	2.61	2.62	2.62	2.63
	22°F(-5.6°C)	22195	21751	21642	21555	21361	2.71	2.73	2.73	2.74	2.75
	27°F(-2.8°C)	23706	23232	23116	23024	22816	2.82	2.84	2.85	2.85	2.87
	32°F(0.0°C)	25218	24714	24590	24492	24272	2.93	2.96	2.96	2.97	2.98
	35°F(1.7°C)	26125	25603	25475	25373	25145	3.00	3.03	3.03	3.04	3.05
	37°F(2.8°C)	26415	25887	25758	25655	25424	2.96	2.98	2.99	2.99	3.01
	42°F(5.6°C)	27141	26598	26465	26359	26122	2.85	2.87	2.88	2.88	2.89
	44.6°F(7.0°C)	27431	26882	26748	26641	26401	2.80	2.83	2.83	2.84	2.85
	47°F(8.3°C)	27866	27308	27172	27063	26820	2.74	2.76	2.77	2.77	2.78
	52°F(11.1°C)	27882	27325	27188	27079	26836	2.54	2.56	2.56	2.57	2.58
	57°F(13.9°C)	27899	27341	27205	27096	26852	2.34	2.36	2.36	2.37	2.38
	59°F(15.0°C)	27906	27348	27211	27102	26858	2.26	2.28	2.28	2.29	2.30
	62°F(16.7°C)	27916	27358	27221	27112	26868	2.14	2.16	2.16	2.17	2.18
	64.4°F(18.0°C)	27924	27366	27229	27120	26876	2.04	2.06	2.07	2.07	2.08
	69.8°F(21.0°C)	24985	24485	24363	24265	24047	1.83	1.84	1.85	1.85	1.86
	75.2°F(24.0°C)	22045	21604	21496	21410	21218	1.62	1.63	1.63	1.63	1.64

Table 20: HEATING PERFORMANCE 30K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
353	-22°F(-30.0°C)										
	-13°F(-25.0°C)	8385	8218	8177	6265	6209	2.07	2.08	2.09	2.09	2.10
	-4°F(-20.0°C)	9782	9586	9538	7309	7243	1.44	1.45	1.46	1.46	1.47
	0°F(-17.8°C)	10357	10150	10099	7739	7669	1.73	1.75	1.75	1.75	1.76
	5°F(-15.0°C)	11076	10854	10800	8276	8201	2.10	2.11	2.12	2.12	2.13
	14°F(-10.0°C)	10315	10109	10059	7708	7638	2.08	2.09	2.10	2.10	2.11
	17°F(-8.3°C)	10062	9861	9811	7518	7451	2.07	2.09	2.09	2.09	2.10
	22°F(-5.6°C)	10629	10416	10364	7942	7870	2.05	2.06	2.07	2.07	2.08
	27°F(-2.8°C)	11195	10971	10916	8365	8290	2.02	2.04	2.05	2.05	2.06
	32°F(0.0°C)	11762	11526	11469	8788	8709	2.00	2.02	2.02	2.03	2.04
	35°F(1.7°C)	12102	11860	11800	9042	8961	1.99	2.01	2.01	2.01	2.02
	37°F(2.8°C)	13079	12818	12754	9773	9685	1.99	2.01	2.01	2.01	2.02
	42°F(5.6°C)	15523	15213	15137	11599	11495	1.99	2.01	2.01	2.02	2.02
	44.6°F(7.0°C)	16501	16171	16090	12329	12218	1.99	2.01	2.01	2.02	2.02
	47°F(8.3°C)	17967	17608	17520	13425	13304	1.99	2.01	2.01	2.02	2.03
	52°F(11.1°C)	17281	16936	16851	12913	12796	1.80	1.81	1.82	1.82	1.83
	57°F(13.9°C)	16596	16264	16182	12400	12288	1.60	1.61	1.62	1.62	1.63
	59°F(15.0°C)	16321	15995	15915	12195	12085	1.52	1.53	1.54	1.54	1.55
	62°F(16.7°C)	15910	15591	15513	11888	11781	1.40	1.42	1.42	1.42	1.43
	64.4°F(18.0°C)	15580	15269	15192	11642	11537	1.31	1.32	1.32	1.33	1.33
	69.8°F(21.0°C)	14382	14094	14024	10746	10649	1.10	1.11	1.11	1.11	1.12
	75.2°F(24.0°C)	9288	9103	9057	6940	6878	0.89	0.89	0.90	0.90	0.90
471	-22°F(-30.0°C)										
	-13°F(-25.0°C)	10265	10060	10009	8744	8666	2.30	2.31	2.32	2.32	2.33
	-4°F(-20.0°C)	11974	11735	11676	10200	10108	1.60	1.62	1.62	1.62	1.63
	0°F(-17.8°C)	12678	12425	12363	10800	10703	1.93	1.94	1.95	1.95	1.96
	5°F(-15.0°C)	13558	13287	13221	11550	11446	2.33	2.35	2.35	2.36	2.37
	14°F(-10.0°C)	12628	12375	12313	10757	10660	2.31	2.32	2.33	2.33	2.34
	17°F(-8.3°C)	12317	12071	12011	10493	10398	2.30	2.32	2.32	2.33	2.34
	22°F(-5.6°C)	13011	12751	12687	11084	10984	2.27	2.29	2.30	2.30	2.31
	27°F(-2.8°C)	13704	13430	13363	11674	11569	2.25	2.27	2.27	2.28	2.29
	32°F(0.0°C)	14398	14110	14040	12265	12155	2.23	2.24	2.25	2.25	2.26
	35°F(1.7°C)	14814	14518	14445	12620	12506	2.21	2.23	2.23	2.24	2.25
	37°F(2.8°C)	16011	15691	15612	13639	13516	2.21	2.23	2.23	2.24	2.25
	42°F(5.6°C)	19003	18623	18530	16188	16042	2.21	2.23	2.24	2.24	2.25
	44.6°F(7.0°C)	20200	19796	19697	17207	17052	2.21	2.23	2.24	2.24	2.25
	47°F(8.3°C)	21995	21555	21447	18736	18568	2.22	2.23	2.24	2.24	2.25
	52°F(11.1°C)	21155	20732	20628	18021	17859	2.00	2.01	2.02	2.02	2.03
	57°F(13.9°C)	20315	19909	19809	17306	17150	1.78	1.79	1.80	1.80	1.81
	59°F(15.0°C)	19979	19580	19482	17020	16867	1.69	1.71	1.71	1.71	1.72
	62°F(16.7°C)	19476	19086	18991	16591	16441	1.56	1.57	1.58	1.58	1.59
	64.4°F(18.0°C)	19073	18691	18598	16247	16101	1.46	1.47	1.47	1.47	1.48
	69.8°F(21.0°C)	17605	17253	17167	14997	14863	1.22	1.23	1.23	1.24	1.24
	75.2°F(24.0°C)	11370	11143	11087	9686	9599	0.99	0.99	1.00	1.00	1.00

Table 20: HEATING PERFORMANCE 30K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
676	-22°F(-30.0°C)										
	-13°F(-25.0°C)	12566	12314	12253	12204	12094	2.55	2.57	2.58	2.58	2.59
	-4°F(-20.0°C)	14658	14365	14293	14236	14108	1.78	1.80	1.80	1.80	1.81
	0°F(-17.8°C)	15520	15210	15134	15073	14937	2.14	2.16	2.16	2.17	2.17
	5°F(-15.0°C)	16597	16266	16184	16119	15974	2.59	2.61	2.61	2.62	2.63
	14°F(-10.0°C)	15458	15149	15073	15013	14878	2.56	2.58	2.59	2.59	2.60
	17°F(-8.3°C)	15078	14777	14703	14644	14512	2.55	2.57	2.58	2.58	2.59
	22°F(-5.6°C)	15927	15609	15531	15469	15329	2.53	2.55	2.55	2.56	2.57
	27°F(-2.8°C)	16776	16441	16359	16293	16146	2.50	2.52	2.52	2.53	2.54
	32°F(0.0°C)	17625	17273	17186	17118	16964	2.47	2.49	2.50	2.50	2.51
	35°F(1.7°C)	18135	17772	17683	17612	17454	2.46	2.48	2.48	2.49	2.50
	37°F(2.8°C)	19600	19208	19112	19035	18864	2.46	2.48	2.48	2.49	2.50
	42°F(5.6°C)	23262	22797	22683	22592	22389	2.46	2.48	2.48	2.49	2.50
	44.6°F(7.0°C)	24727	24233	24111	24015	23799	2.46	2.48	2.48	2.49	2.50
	47°F(8.3°C)	26925	26386	26254	26149	25914	2.46	2.48	2.49	2.49	2.50
	52°F(11.1°C)	25897	25379	25252	25151	24925	2.22	2.24	2.24	2.25	2.25
	57°F(13.9°C)	24869	24372	24250	24153	23935	1.98	1.99	2.00	2.00	2.01
	59°F(15.0°C)	24458	23969	23849	23753	23540	1.88	1.89	1.90	1.90	1.91
	62°F(16.7°C)	23841	23364	23247	23154	22946	1.73	1.75	1.75	1.76	1.76
	64.4°F(18.0°C)	23348	22881	22766	22675	22471	1.62	1.63	1.63	1.64	1.64
	69.8°F(21.0°C)	21552	21121	21015	20931	20743	1.36	1.37	1.37	1.37	1.38
	75.2°F(24.0°C)	13919	13640	13572	13518	13396	1.09	1.10	1.11	1.11	1.11
853	-22°F(-30.0°C)										
	-13°F(-25.0°C)	15382	15075	14999	14939	14805	2.83	2.86	2.86	2.87	2.88
	-4°F(-20.0°C)	17944	17585	17497	17427	17270	1.98	1.99	2.00	2.00	2.01
	0°F(-17.8°C)	18999	18619	18526	18452	18285	2.38	2.40	2.40	2.41	2.42
	5°F(-15.0°C)	20318	19911	19812	19733	19555	2.88	2.90	2.90	2.91	2.92
	14°F(-10.0°C)	18923	18544	18452	18378	18212	2.85	2.87	2.88	2.88	2.89
	17°F(-8.3°C)	18458	18089	17998	17926	17765	2.84	2.86	2.87	2.87	2.88
	22°F(-5.6°C)	19497	19107	19012	18936	18765	2.81	2.83	2.84	2.84	2.85
	27°F(-2.8°C)	20537	20126	20025	19945	19766	2.78	2.80	2.81	2.81	2.82
	32°F(0.0°C)	21576	21144	21039	20955	20766	2.75	2.77	2.78	2.78	2.79
	35°F(1.7°C)	22200	21756	21647	21560	21366	2.73	2.75	2.76	2.76	2.77
	37°F(2.8°C)	23993	23513	23395	23302	23092	2.73	2.75	2.76	2.76	2.77
	42°F(5.6°C)	28476	27907	27767	27656	27407	2.73	2.75	2.76	2.77	2.78
	44.6°F(7.0°C)	30270	29664	29516	29398	29133	2.73	2.76	2.76	2.77	2.78
	47°F(8.3°C)	32960	32300	32139	32010	31722	2.73	2.76	2.76	2.77	2.78
	52°F(11.1°C)	31701	31067	30912	30788	30511	2.47	2.49	2.49	2.50	2.51
	57°F(13.9°C)	30443	29834	29685	29566	29300	2.20	2.21	2.22	2.22	2.23
	59°F(15.0°C)	29940	29341	29194	29078	28816	2.09	2.11	2.11	2.11	2.12
	62°F(16.7°C)	29185	28601	28458	28344	28089	1.93	1.94	1.95	1.95	1.96
	64.4°F(18.0°C)	28581	28009	27869	27758	27508	1.80	1.81	1.82	1.82	1.83
	69.8°F(21.0°C)	26382	25855	25725	25623	25392	1.51	1.52	1.52	1.53	1.53
	75.2°F(24.0°C)	17039	16698	16614	16548	16399	1.22	1.23	1.23	1.23	1.24

Table 21: HEATING PERFORMANCE 36K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
329	-22°F(-30.0°C)										
	-13°F(-25.0°C)	7933	7774	7735	5573	5523	1.98	2.00	2.00	2.01	2.01
	-4°F(-20.0°C)	9274	9089	9043	6515	6457	2.01	2.02	2.03	2.03	2.04
	0°F(-17.8°C)	11115	10893	10838	7809	7738	2.22	2.24	2.24	2.25	2.26
	5°F(-15.0°C)	13416	13148	13082	9425	9340	2.49	2.51	2.51	2.52	2.53
	14°F(-10.0°C)	12329	12082	12022	8662	8584	2.39	2.41	2.41	2.42	2.43
	17°F(-8.3°C)	11967	11727	11669	8407	8331	2.36	2.38	2.38	2.39	2.40
	22°F(-5.6°C)	12075	11833	11774	8483	8407	2.28	2.30	2.30	2.31	2.32
	27°F(-2.8°C)	12183	11939	11880	8559	8482	2.20	2.22	2.22	2.23	2.24
	32°F(0.0°C)	12291	12045	11985	8635	8557	2.12	2.14	2.14	2.15	2.16
	35°F(1.7°C)	12356	12109	12048	8680	8602	2.07	2.09	2.09	2.10	2.11
	37°F(2.8°C)	13665	13392	13325	9600	9514	2.18	2.20	2.21	2.21	2.22
	42°F(5.6°C)	16939	16600	16517	11900	11793	2.46	2.48	2.48	2.49	2.50
	44.6°F(7.0°C)	18249	17884	17794	12820	12705	2.57	2.59	2.59	2.60	2.61
	47°F(8.3°C)	20213	19809	19710	14200	14072	2.73	2.76	2.76	2.77	2.78
	52°F(11.1°C)	19192	18808	18714	13483	13362	2.35	2.36	2.37	2.37	2.38
	57°F(13.9°C)	18171	17807	17718	12766	12651	1.96	1.97	1.98	1.98	1.99
	59°F(15.0°C)	17762	17407	17320	12479	12366	1.80	1.82	1.82	1.83	1.83
	62°F(16.7°C)	17150	16807	16723	12048	11940	1.57	1.58	1.59	1.59	1.60
	64.4°F(18.0°C)	16660	16327	16245	11704	11599	1.39	1.40	1.40	1.40	1.41
	69.8°F(21.0°C)	15378	15071	14995	10804	10706	0.97	0.97	0.98	0.98	0.98
	75.2°F(24.0°C)	12174	11931	11871	8553	8476	0.55	0.55	0.55	0.56	0.56
447	-22°F(-30.0°C)										
	-13°F(-25.0°C)	9912	9713	9665	8187	8113	2.20	2.22	2.22	2.23	2.24
	-4°F(-20.0°C)	11588	11356	11299	9572	9485	2.23	2.25	2.25	2.26	2.27
	0°F(-17.8°C)	13888	13610	13542	11472	11368	2.47	2.49	2.49	2.50	2.51
	5°F(-15.0°C)	16763	16428	16346	13846	13722	2.76	2.79	2.79	2.80	2.81
	14°F(-10.0°C)	15405	15097	15021	12725	12610	2.66	2.68	2.68	2.69	2.70
	17°F(-8.3°C)	14952	14653	14580	12351	12239	2.62	2.64	2.65	2.65	2.66
	22°F(-5.6°C)	15087	14785	14711	12462	12350	2.53	2.55	2.56	2.56	2.57
	27°F(-2.8°C)	15222	14918	14843	12574	12461	2.44	2.46	2.47	2.47	2.48
	32°F(0.0°C)	15357	15050	14975	12685	12571	2.36	2.38	2.38	2.39	2.39
	35°F(1.7°C)	15438	15130	15054	12752	12638	2.30	2.32	2.33	2.33	2.34
	37°F(2.8°C)	17074	16733	16649	14104	13977	2.43	2.45	2.45	2.46	2.47
	42°F(5.6°C)	21165	20742	20638	17483	17325	2.73	2.75	2.76	2.76	2.78
	44.6°F(7.0°C)	22801	22345	22233	18834	18665	2.85	2.88	2.88	2.89	2.90
	47°F(8.3°C)	25255	24750	24626	20861	20674	3.04	3.06	3.07	3.07	3.09
	52°F(11.1°C)	23980	23500	23383	19808	19629	2.61	2.63	2.63	2.64	2.65
	57°F(13.9°C)	22704	22250	22139	18754	18585	2.18	2.19	2.20	2.20	2.21
	59°F(15.0°C)	22194	21750	21641	18332	18167	2.00	2.02	2.02	2.03	2.04
	62°F(16.7°C)	21428	21000	20895	17700	17541	1.75	1.76	1.76	1.77	1.77
	64.4°F(18.0°C)	20816	20400	20298	17194	17039	1.54	1.55	1.55	1.56	1.56
	69.8°F(21.0°C)	19215	18830	18736	15872	15729	1.07	1.08	1.08	1.09	1.09
	75.2°F(24.0°C)	15212	14907	14833	12565	12452	0.61	0.61	0.62	0.62	0.62

Table 21: HEATING PERFORMANCE 36K

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB °F (°C)	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions(DB °F (°C))					Indoor Conditions(DB °F (°C))				
		60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)	60.8°F (16.0°C)	68°F (20.0°C)	70°F (21.1°C)	71.6°F (22.0°C)	75.2°F (24.0°C)
676	-22°F(-30.0°C)										
	-13°F(-25.0°C)	12384	12137	12076	12028	11919	2.45	2.47	2.47	2.48	2.49
	-4°F(-20.0°C)	14479	14189	14118	14062	13935	2.48	2.50	2.50	2.51	2.52
	0°F(-17.8°C)	17352	17005	16920	16853	16701	2.74	2.76	2.77	2.77	2.78
	5°F(-15.0°C)	20945	20526	20423	20342	20159	3.07	3.10	3.10	3.11	3.12
	14°F(-10.0°C)	19248	18863	18768	18693	18525	2.95	2.98	2.98	2.99	3.00
	17°F(-8.3°C)	18682	18308	18217	18144	17981	2.91	2.94	2.94	2.95	2.96
	22°F(-5.6°C)	18851	18474	18381	18308	18143	2.81	2.84	2.84	2.85	2.86
	27°F(-2.8°C)	19020	18639	18546	18472	18306	2.72	2.74	2.74	2.75	2.76
	32°F(-0.0°C)	19188	18805	18711	18636	18468	2.62	2.64	2.64	2.65	2.66
	35°F(1.7°C)	19290	18904	18809	18734	18566	2.56	2.58	2.59	2.59	2.60
	37°F(2.8°C)	21334	20907	20803	20720	20533	2.70	2.72	2.72	2.73	2.74
	42°F(5.6°C)	26445	25916	25786	25683	25452	3.03	3.06	3.07	3.07	3.08
	44.6°F(7.0°C)	28489	27920	27780	27669	27420	3.17	3.20	3.20	3.21	3.22
	47°F(8.3°C)	31556	30925	30770	30647	30371	3.37	3.40	3.41	3.42	3.43
	52°F(11.1°C)	29962	29363	29216	29099	28837	2.90	2.92	2.93	2.93	2.94
	57°F(13.9°C)	28368	27801	27662	27551	27303	2.42	2.44	2.44	2.45	2.46
	59°F(15.0°C)	27730	27176	27040	26932	26689	2.23	2.24	2.25	2.25	2.26
	62°F(16.7°C)	26774	26238	26107	26003	25769	1.94	1.96	1.96	1.96	1.97
	64.4°F(18.0°C)	26009	25489	25361	25260	25032	1.71	1.72	1.73	1.73	1.74
	69.8°F(21.0°C)	24008	23528	23410	23317	23107	1.19	1.20	1.21	1.21	1.21
	75.2°F(24.0°C)	19006	18626	18533	18459	18293	0.68	0.68	0.68	0.69	0.69
871	-22°F(-30.0°C)										
	-13°F(-25.0°C)	15474	15164	15089	15028	14893	2.72	2.74	2.75	2.75	2.76
	-4°F(-20.0°C)	18090	17729	17640	17569	17411	2.75	2.77	2.78	2.79	2.80
	0°F(-17.8°C)	21681	21248	21142	21057	20867	3.05	3.07	3.08	3.08	3.09
	5°F(-15.0°C)	26170	25647	25518	25416	25188	3.41	3.44	3.45	3.45	3.47
	14°F(-10.0°C)	24050	23569	23451	23357	23147	3.28	3.31	3.31	3.32	3.33
	17°F(-8.3°C)	23343	22876	22761	22670	22466	3.24	3.26	3.27	3.27	3.29
	22°F(-5.6°C)	23554	23083	22967	22875	22669	3.13	3.15	3.16	3.16	3.18
	27°F(-2.8°C)	23765	23289	23173	23080	22872	3.02	3.04	3.05	3.05	3.07
	32°F(-0.0°C)	23975	23496	23378	23285	23075	2.91	2.93	2.94	2.94	2.96
	35°F(1.7°C)	24102	23620	23502	23408	23197	2.84	2.87	2.87	2.88	2.89
	37°F(2.8°C)	26656	26123	25993	25889	25656	3.00	3.02	3.03	3.03	3.04
	42°F(5.6°C)	33042	32381	32220	32091	31802	3.37	3.40	3.41	3.41	3.43
	44.6°F(7.0°C)	35597	34885	34710	34571	34260	3.52	3.55	3.56	3.57	3.58
	47°F(8.3°C)	39428	38640	38446	38293	37948	3.75	3.78	3.79	3.79	3.81
	52°F(11.1°C)	37437	36688	36504	36358	36031	3.22	3.24	3.25	3.26	3.27
	57°F(13.9°C)	35445	34736	34562	34424	34114	2.69	2.71	2.71	2.72	2.73
	59°F(15.0°C)	34648	33955	33786	33650	33348	2.47	2.49	2.50	2.50	2.51
	62°F(16.7°C)	33453	32784	32620	32490	32197	2.16	2.17	2.18	2.18	2.19
	64.4°F(18.0°C)	32497	31847	31688	31561	31277	1.90	1.92	1.92	1.92	1.93
	69.8°F(21.0°C)	29998	29398	29251	29134	28871	1.33	1.34	1.34	1.34	1.35
	75.2°F(24.0°C)	23748	23273	23157	23064	22857	0.75	0.76	0.76	0.76	0.76

APPLICATION DATA

Unit Selection

Select equipment that either matches or supports slightly more than the anticipated peak load. This provides better humidity control, fewer unit cycles, and less part-load operation.

For units used in spaces with high sensible loads, base equipment selection on unit sensible load, not on total anticipated load. Adjust for anticipated room wet bulb temperature to avoid undersizing the equipment.

Unit Mounting (Outdoor)

Refer to the unit's installation instructions for further details.

Unit leveling - For reliable operation, units should be level in all planes.

Clearance - Minimum clearance (see Fig. 6 — on page 9) must be provided for airflow. The condensing units are designed for free-flow application. Air inlets and outlets should not be restricted.

Unit location - A location which is convenient to installation and not exposed to strong winds. A location that can bear the weight of the outdoor unit and where the outdoor unit can be mounted in a level position.

Do not install the indoor or outdoor units in a location with special environmental conditions. For those applications, contact your sales representative.

System Operating Conditions

OPERATING RANGE MIN / MAX °F (°C)		
	Cooling	Heating
Outdoor DB	5~122 (-15~50)	5 ~ 75 (-15~24)

NOTE: Reference the product installation instructions for more information.

Metering Devices

The outdoor unit utilizes a capillary tube (sizes 9K-24K) and EEV (30K-36K) to manage the connected fan coil's refrigerant flow.

Drain Connections

Install drains to meet the local plumbing codes.

Refrigerant Lines

General refrigerant line sizing:

1. The outdoor units are shipped with a full charge of R-454B refrigerant. All charges, line sizing, and capacities are based on runs of 25 ft. (7.6 m). For runs over 25 ft. (7.6 m), refer to Specifications Table 5 on page 10 for the proper charge adjustments.
2. Refrigerant lines should not be buried in the ground. If it is necessary to bury the lines, do not bury more than 36-in (914 mm). Provide a minimum 6-in (152 mm) vertical rise to the service valves to prevent refrigerant migration.
3. Both lines must be insulated. Use a minimum of 1/2-in. (12.7 mm) thick insulation. Closed-cell insulation is recommended in all long-line applications.
4. Special consideration should be given to isolating the interconnecting tubing from the building structure. Isolate the tubing so vibration or noise is not transmitted into the structure.

Long Line Applications:

1. No change in line sizing is required.
2. Add refrigerant per the **Additional Charge** table.

ADDITIONAL CHARGE								
UNIT SIZE	INDOOR UNIT METERING DEVICE	TOTAL LINE LENGTH, FT. (M)		ADDITIONAL CHARGE, OZ/FT. FT (M)				
		MIN	MAX	10-24.6 (3-7.5)	>24.6-82 (7.5-25)	>82-98.4 (25-30)	>98.4-164 (30-50)	>164-213.2 (50-65)
	None	10 (3)		None	0.16			
9			82 (25)					
12								
18			98.4 (30)			0.16		
24			164 (50)		0.32			
30			213.2 (65)					
36								0.32

WIRING

All wires must be sized per NEC (National Electrical Code) or CEC (Canadian Electrical Code) and local codes. Use Electrical Data table MCA (minimum circuit amps) and MOCP (maximum over current protection) to correctly size the wires and the disconnect fuse or breakers respectively.

Recommended Connection Method for Power and Communication Wiring:

The main power is supplied to the outdoor unit. The field supplied 14/3 stranded wire with ground with a 600 volt insulation rating, power/communication wiring from the outdoor unit to indoor unit consists of four (4) wires and provides the power for the indoor unit.

Two wires are line voltage AC power, one is communication wiring (S) and the other is a ground wire. Wiring between indoor and outdoor unit is polarity sensitive. The use of BX wire is NOT recommended.

If installed in a high Electromagnetic field (EMF) area and communication issues exists, a 14/2 stranded shielded wire can be used to replace L2/N and (S) between outdoor unit and indoor unit landing the shield onto ground in the outdoor unit only.

 CAUTION
EQUIPMENT DAMAGE HAZARD Failure to follow this caution may result in equipment damage or improper operation. Wires should be sized based on NEC and local codes.

 CAUTION
EQUIPMENT DAMAGE HAZARD Failure to follow this caution may result in equipment damage or improper operation. Be sure to comply with local codes while running wire from the indoor unit to the outdoor unit. Every wire must be connected firmly. Loose wiring may cause the terminal to overheat or result in unit malfunction. A fire hazard may also exist. Ensure all wiring is tightly connected. No wire should touch the refrigerant tubing, compressor or any moving parts. Disconnecting means must be provided and shall be located within sight and readily accessible from the air conditioner. Connecting cable with conduit shall be routed through the hole in the conduit panel.

Outdoor Unit Sound Pressure Test Conditions

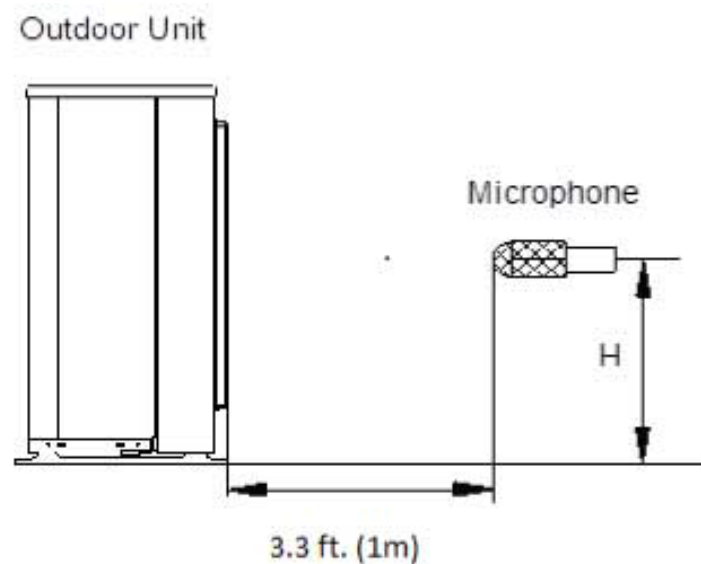


Fig. 7 — Outdoor Unit Sound Pressure Test Conditions

ELECTRICAL DATA - HEAT PUMP

ELECTRICAL DATA									
OUTDOOR UNIT		9K 115V	12K 115V	9K	12K	18K	24K	30K	36K
MINIMUM CIRCUIT AMPACITY (MCA)	A	18	19	12	13	15	19	28	33
MAXIMUM OVERCURRENT PROTECTION AMPACITY (MOPA)	A	20	20	15	15	20	20	30	35
VOLTAGE-PHASE-F REQUENCY	V-P-Hz	115-1-60		208/230-1-60					
MAX – MIN VOLTAGE RANGE	V	127-104		253-187					
COOLING (WITH ENTRY TIER HIGH WALL IDU)									
RUNNING CURRENT	(A)	7.6	12.3	4.8	4.9	7	11.1	11	17
POWER CONSUMPTION	(W)	720	1200	714	1111	1565	2474	2500	3830
HEATING (WITH ENTRY TIER HIGH WALL IDU)									
RUNNING CURRENT RANGE	(A)	9.4	11.4	4	4.7	8	9.9	12.6	16
POWER CONSUMPTION	(W)	930	1116	896	1053	1790	2275	2900	3580

*Permissible limits of the voltage range at which the unit will operate satisfactorily.

LEGEND

FLA - Full Load Amps
MCA - Minimum Circuit Amps
MOP - Maximum OverCurrent Protection
RLA - Rated Load Amps

WIRING DIAGRAMS

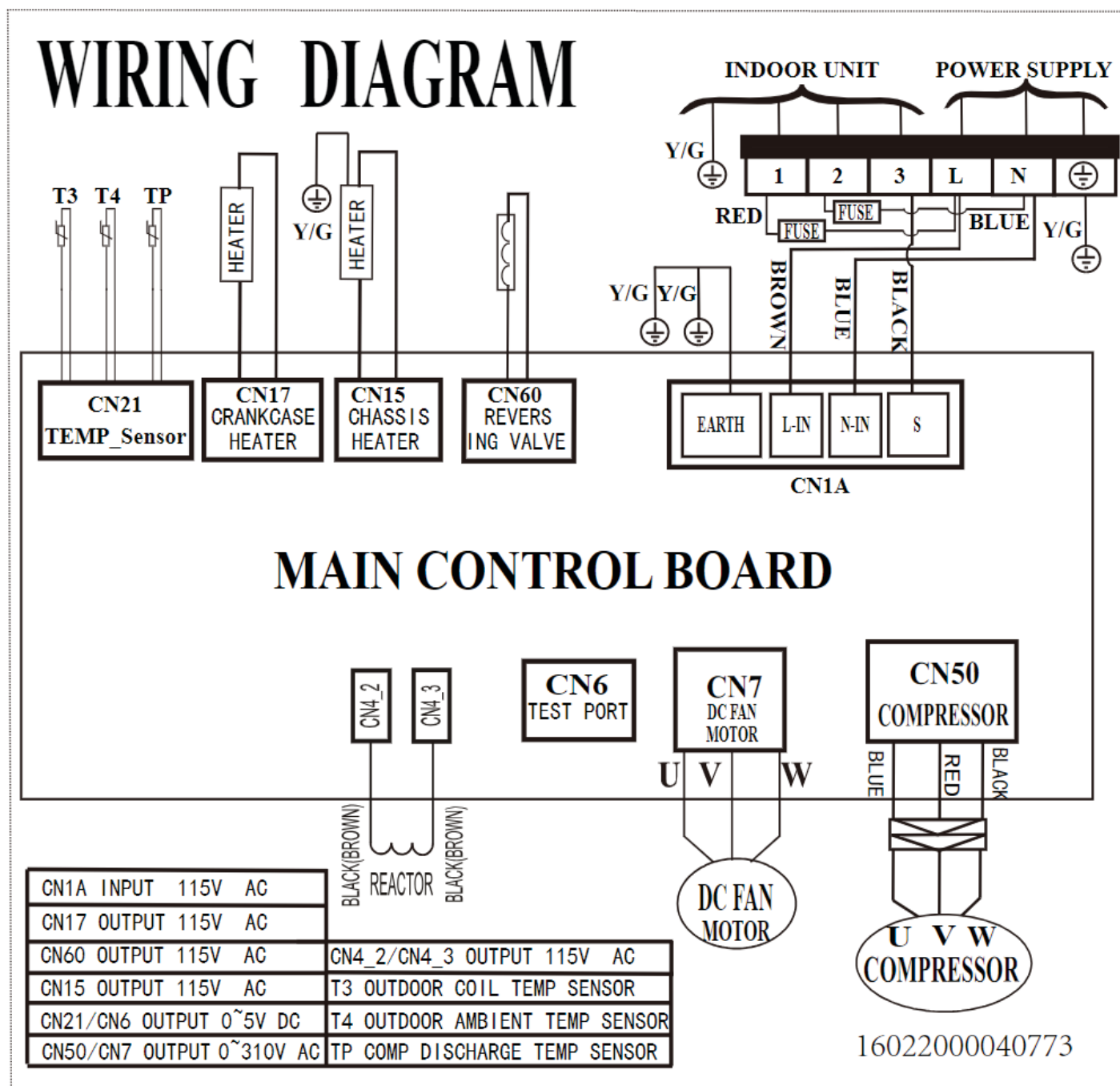


Fig. 8 — Wiring Diagram Size 9K, 12K (115V)

WIRING DIAGRAMS (CONTINUED)

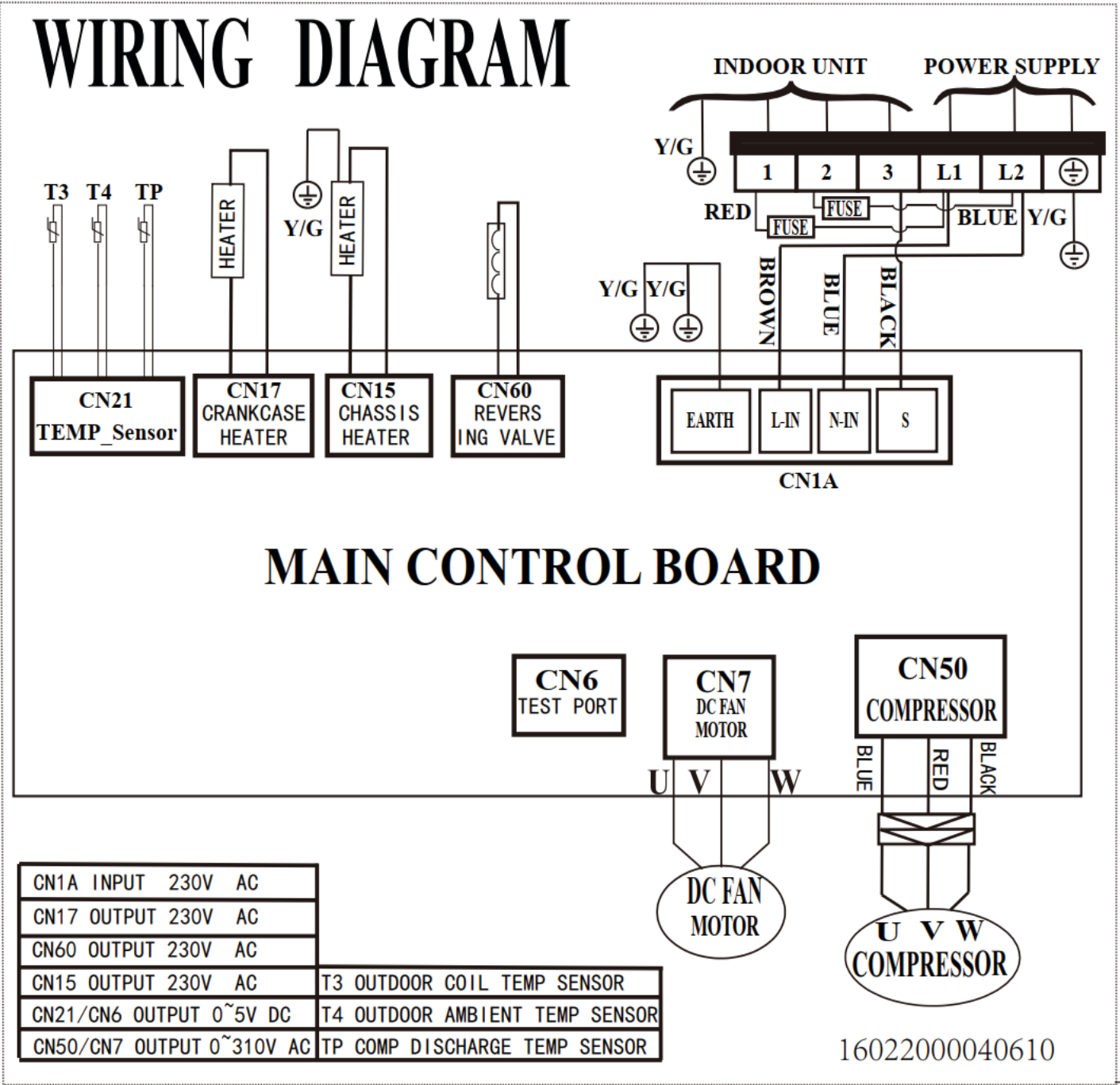


Fig. 9 — Wiring Diagram Sizes 9K, 12K, 18K (208-230V)

WIRING DIAGRAMS (CONTINUED)

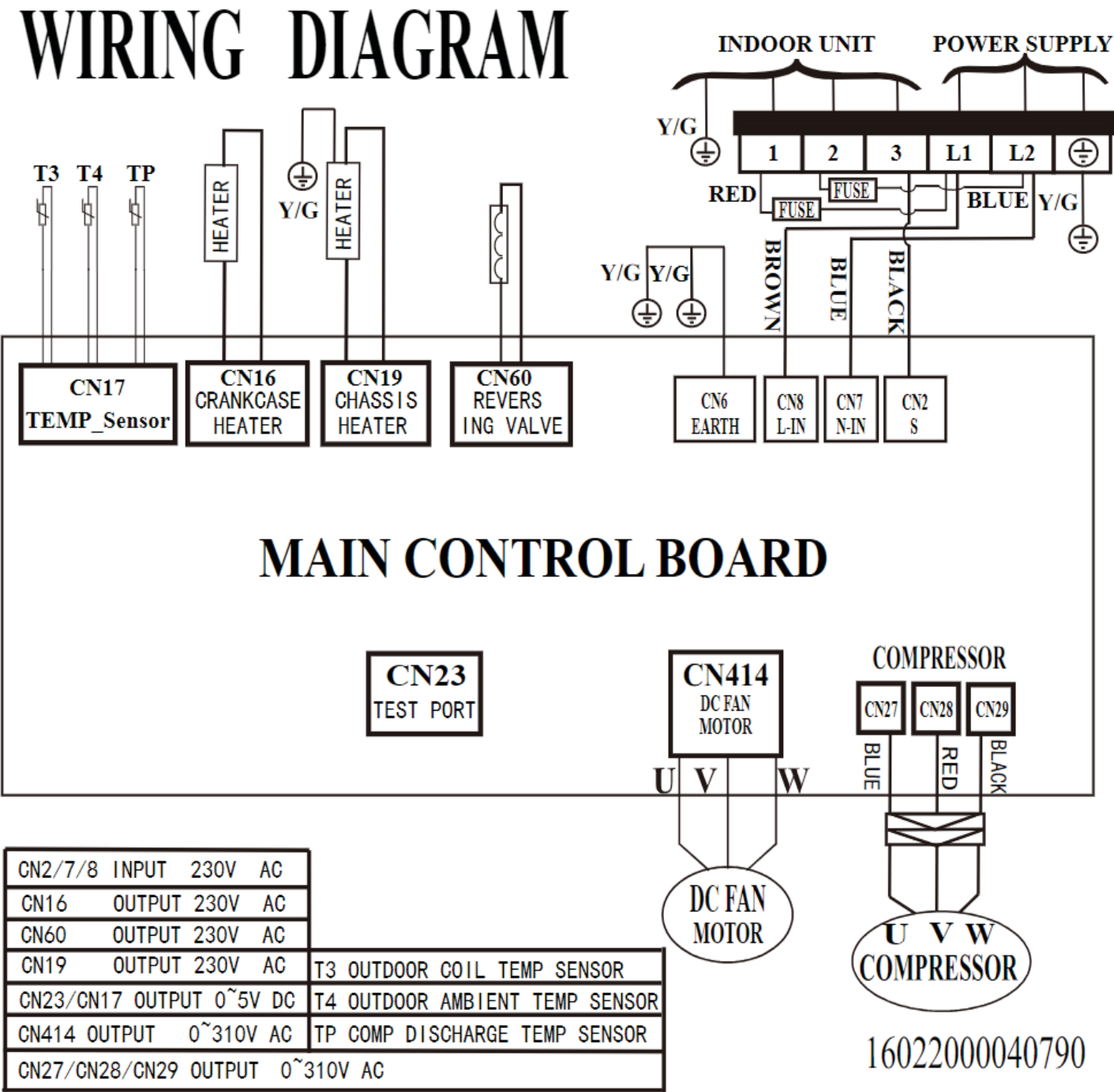


Fig. 10 — Wiring Diagram Size 24K (208/230V)

WIRING DIAGRAMS (CONTINUED)

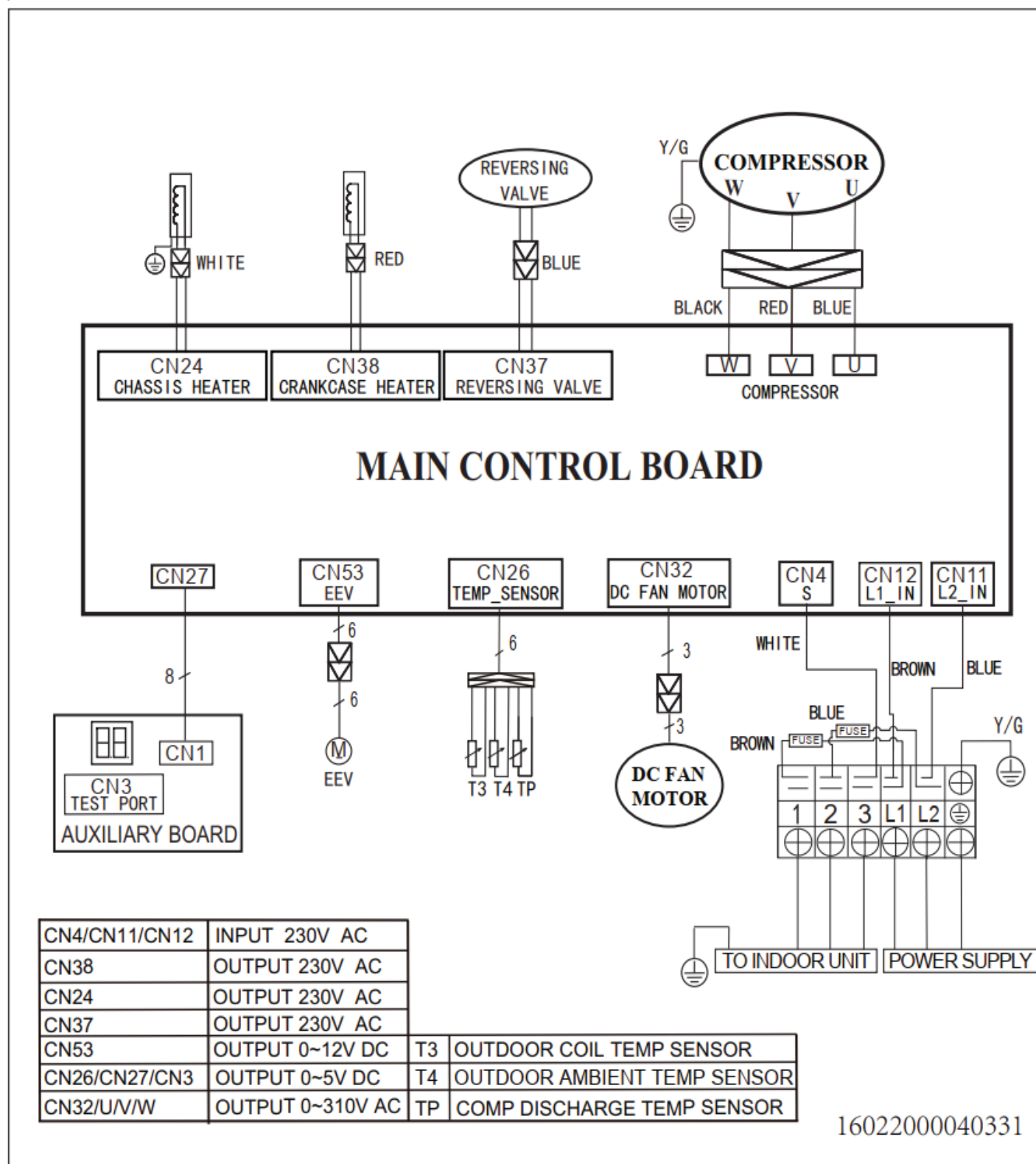


Fig. 10 — Wiring Diagram Size 30K (208/230V)

WIRING DIAGRAMS (CONTINUED)

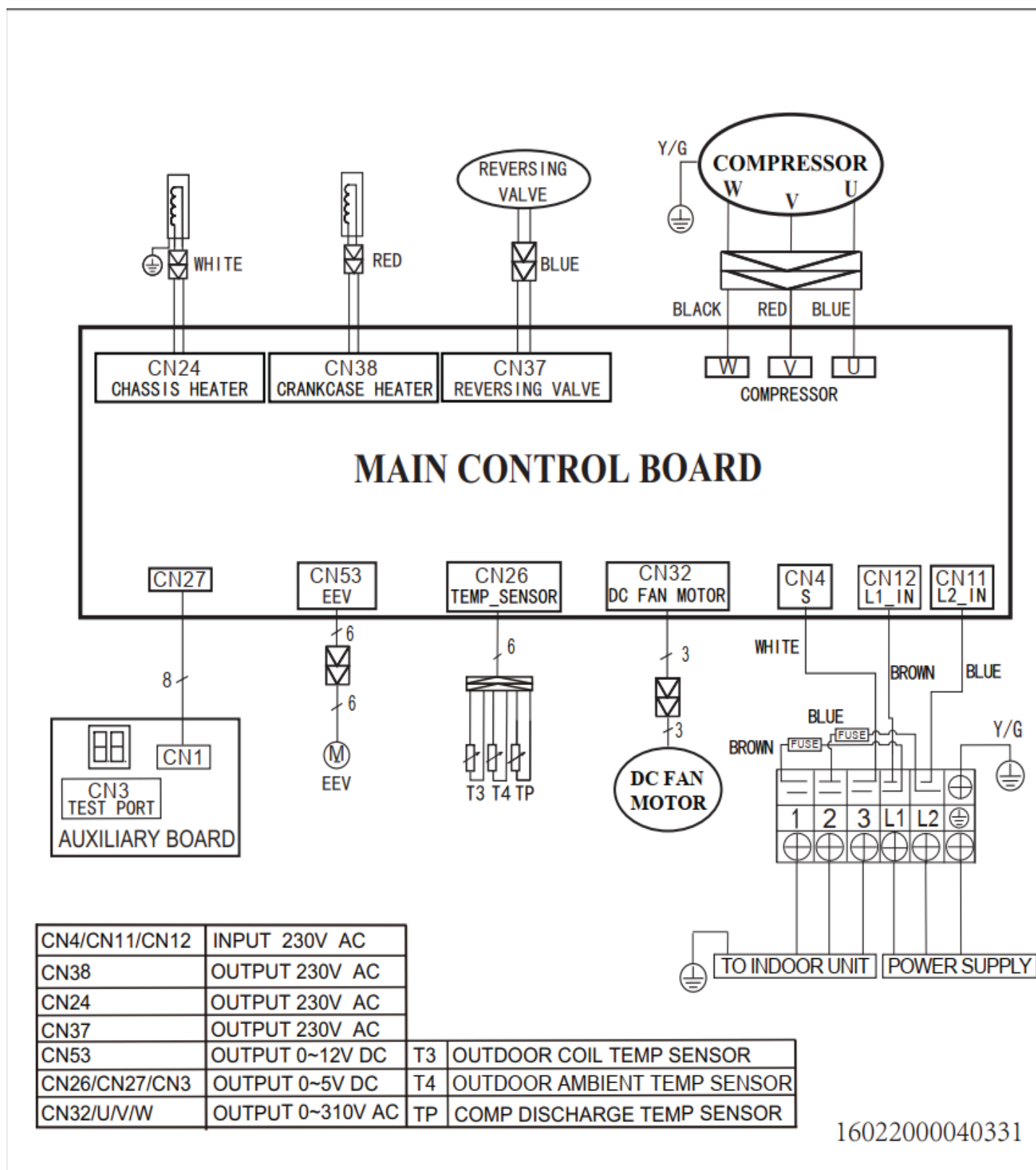


Fig. 11 —Wiring Diagram 36K (208/230V)

GUIDE SPECIFICATIONS

PART 1 - GENERAL

1.01 System Description

1. Outdoor air-cooled split system compressor sections suitable for on-the-ground, rooftop, wall hung or balcony mounting. Units consist of a rotary compressor, an air-cooled coil, propeller-type draw-through outdoor fan, reversing valve (HP), accumulator (HP units), metering device(s), and a control box. Units discharge air horizontally as shown on the contract drawings. Units function as the outdoor component of an air-to-air heat pump system.
2. Units are to be used in a refrigeration circuit matched to ductless heat pump fan coil units.

1.02 Agency Listings

1. Unit construction complies with ANSI/ASHRAE 15, latest revision, and with the NEC.
2. Units are evaluated in accordance with UL standard 60335-2-40.
3. Units are listed in the CEC directory.
4. Unit cabinet is capable of withstanding 500-hour salt spray test per Federal Test Standard No. 141 (method 6061).
5. Air-cooled condenser coils are leak tested at 550 psig.

1.03 Delivery, Storage, And Handling

Units are shipped in one piece and are stored and handled per unit manufacturer's recommendations.

1.04 Warranty (For Inclusion By Specifying Engineer)

Part 2 - PRODUCTS

2.01 Equipment

A. General:

Factory assembled, single piece, air-cooled outdoor unit. Contained within the unit enclosure is all the factory wiring, piping, controls, and the compressor.

B. Unit Cabinet:

1. Unit cabinet is constructed of galvanized steel, bonderized and coated with a baked-enamel finish on the inside and outside.
2. Unit access panels is removable with minimal screws and provides full access to the compressor, fan, and control components.
3. The outdoor compartment is isolated and has an acoustic lining to assure quiet operation.

C. Fans:

1. Outdoor fans are the direct drive propeller type, and discharges air horizontally. Fans draw air through the outdoor coil.
2. Outdoor fan motors are totally enclosed, single phase motors with class E insulation and permanently lubricated ball bearings. Motor shall be protected by internal thermal overload protection.
3. The shaft has inherent corrosion resistance.
4. Fan blades are non-metallic and statically and dynamically balanced.
5. Outdoor fan openings are equipped with a PVC metal/mesh coated protection grille over the fan.

HORIZONTAL DISCHARGE OUTDOOR UNITS

Size Range: 9K, 12K, 18K, 24K, 30K, 36K Ton Nominal Cooling and Heating Capacity Model Number: 37MHRAQ

D. Compressor:

1. Compressor is the fully hermetic rotary type.
2. Compressor is equipped with an oil system, operating oil charge, and a motor.
3. Motor is NEMA rated class E, suitable for operation in a refrigerant atmosphere.
4. Compressor assembly is installed on rubber vibration isolators.

E. Outdoor Coil:

The coil is constructed of aluminum hydrophilic pre-coated fins mechanically bonded to seamless copper tubes, which are cleaned, dehydrated, and sealed.

F. Refrigeration Components:

Refrigerant circuit components include a brass external liquid line service valve with service gage port connections, a suction line service valve with a service gage connection port, service gage port connections on compressor suction and discharge lines with Schrader type fittings with brass caps, accumulator, reversing valve.

G. Controls and Safeties:

Operating controls and safeties are factory selected, assembled, and tested. The minimum control functions include the following:

1. Controls:
 - A time delay control sequence is provided standard through the fan coil board
 - Automatic outdoor fan motor protection.
2. Safeties:
 - System diagnostics
 - Compressor motor current and temperature overload protection
 - Outdoor fan failure protection.

H. Electrical Requirements:

1. Unit operates on single-phase, 60 Hz power at 115V for unit sizes 9 and 12, and 208/230V for unit sizes 09, 12, 18, 24, 30, and 36 as specified.
2. Unit electrical power has a single point connection.
3. Unit Control voltage to the indoor fan coil is 0-15V DC.
4. All power and control wiring must be installed per NEC and all local electrical codes.
5. The unit has high and low voltage terminal block connections.

NOTES: