

## Product Data

### INDUSTRY LEADING FEATURES / BENEFITS

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



**Fig. 1 — Sizes 09K-24K**

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

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The 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 ductless 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 ductless outdoor 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 ductless 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**

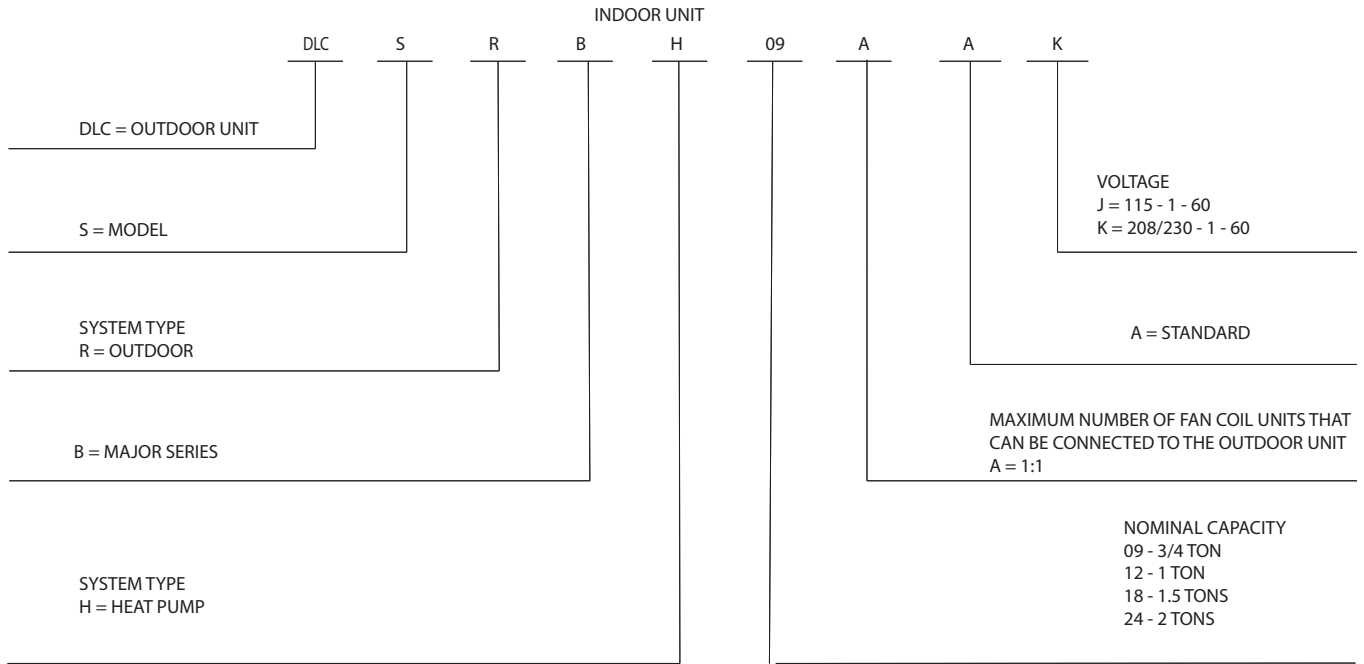
Ductless system indoor and outdoor units are designed to provide years of trouble- free operation. Both the indoor and outdoor units are well protected. Whenever the microprocessor detects abnormal conditions, the unit stops and an error code appears. Inverter systems provide additional reliability due 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 ETL 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](http://www.ahridirectory.org).



# STANDARD FEATURES AND ACCESSORIES

<b>Ease Of Installation</b>	
Low Voltage Controls	S
<b>Comfort Features</b>	
Microprocessor Controls	S
Auto Restart Function	S
Low Ambient Cooling	S
Low Ambient Heating	S
Auto Changeover	S
<b>Energy Saving Features</b>	
Inverter Driven Compressor	S
46° F Heating Mode (Heating Setback)	S
<b>Safety And Reliability</b>	
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 Temperature Protection in Cooling Mode	S
Aluminum Hydrophilic pre-coated fins	S
<b>Ease Of Service And Maintenance</b>	
Diagnostics	S
Liquid Line Pressure Taps	S
<b>Application Flexibility</b>	
Crankcase Heater	S
Base Pan Heater	S

## Outdoor Units

### Crankcase Heater

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.

## Legend

S - Standard  
A - Accessory

## Accessories

Outdoor Unit Model Number	Base Pan Base Rubber Plugs RCD Part Number	Quantity per Unit
DLCSRBH12AAJ DLCSRBH09AAK DLCSRBH12AAK	12600801A00077	13
DLCSRBH18AAK	12600801A00077	25
DLCSRBH24AAK	12600801A00117	5

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

# DIMENSIONS

UNIT SIZES		12K	9K	12K	18K	24K
VOLTAGES		115V	208/230V	208/230V	208/230V	208/230V
HEIGHT (H)	IN (MM)	21.85(555)	21.81 (554)	21.81 (554)	26.50 (673)	31.89 (810)
WIDTH (W)	IN (MM)	30.12(765)	31.69 (805)	31.65 (805)	35.04 (890)	37.24 (946)
DEPTH (D)	IN (MM)	11.93(303)	12.99 (330)	12.99 (330)	13.46 (342)	16.14 (410)
L1	IN (MM)	17.81 (452)	20.10 (511)	20.10 (511)	26.10 (663)	26.50 (673)
L2	IN (MM)	11.25 (286)	12.50 (317)	12.50 (317)	13.70 (347)	15.85 (403)
OPERATING WEIGHT	LBS (KG)	66.80 (30.30)	74.10(33.60)	73.60 (33.40)	101.0 (45.80)	134.50 (61)

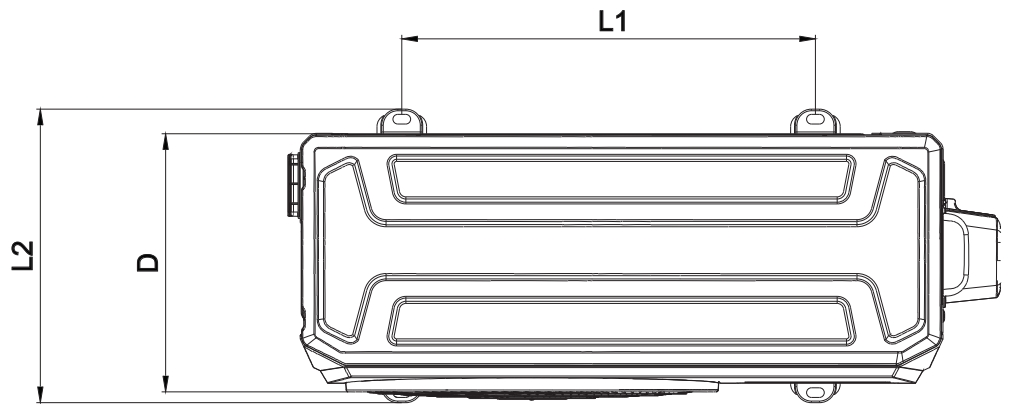
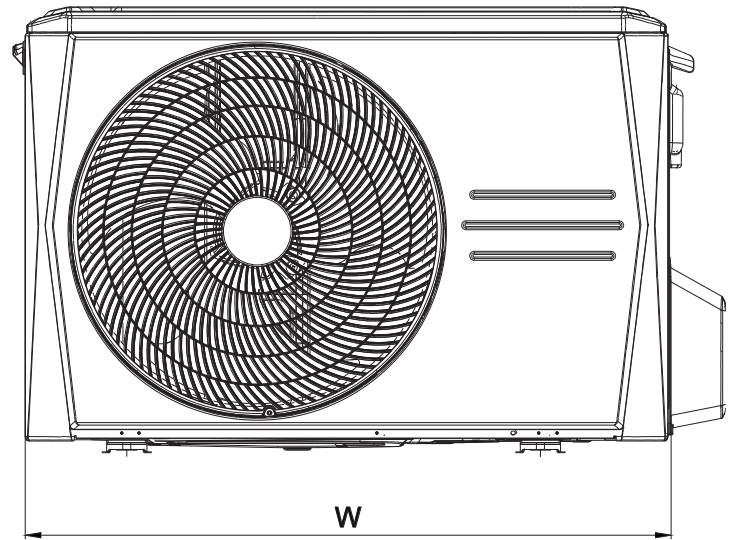
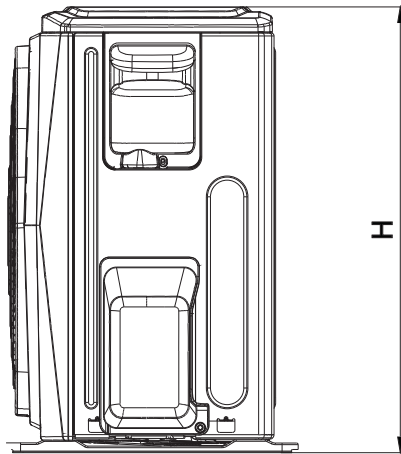


Fig. 2 — Outdoor Unit

# DIMENSIONS (CONT)

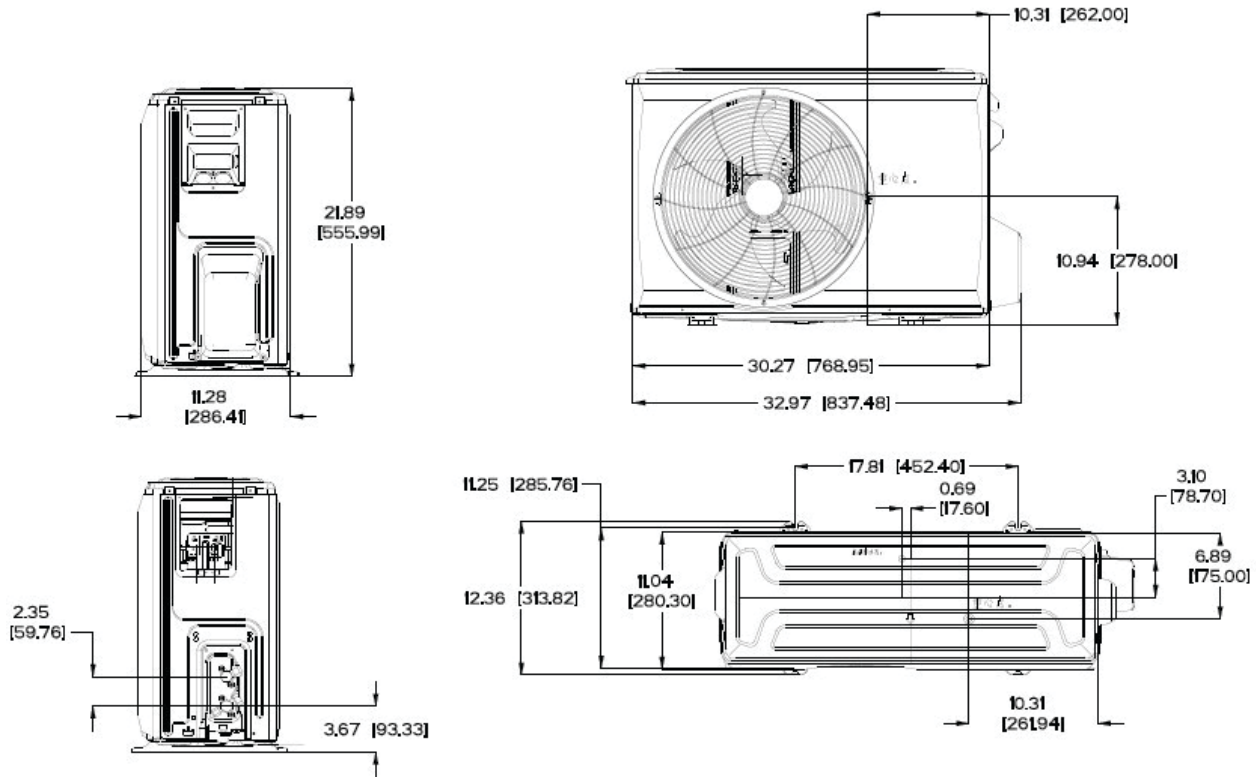


Fig. 3 — Dimension Size 12K (115V)

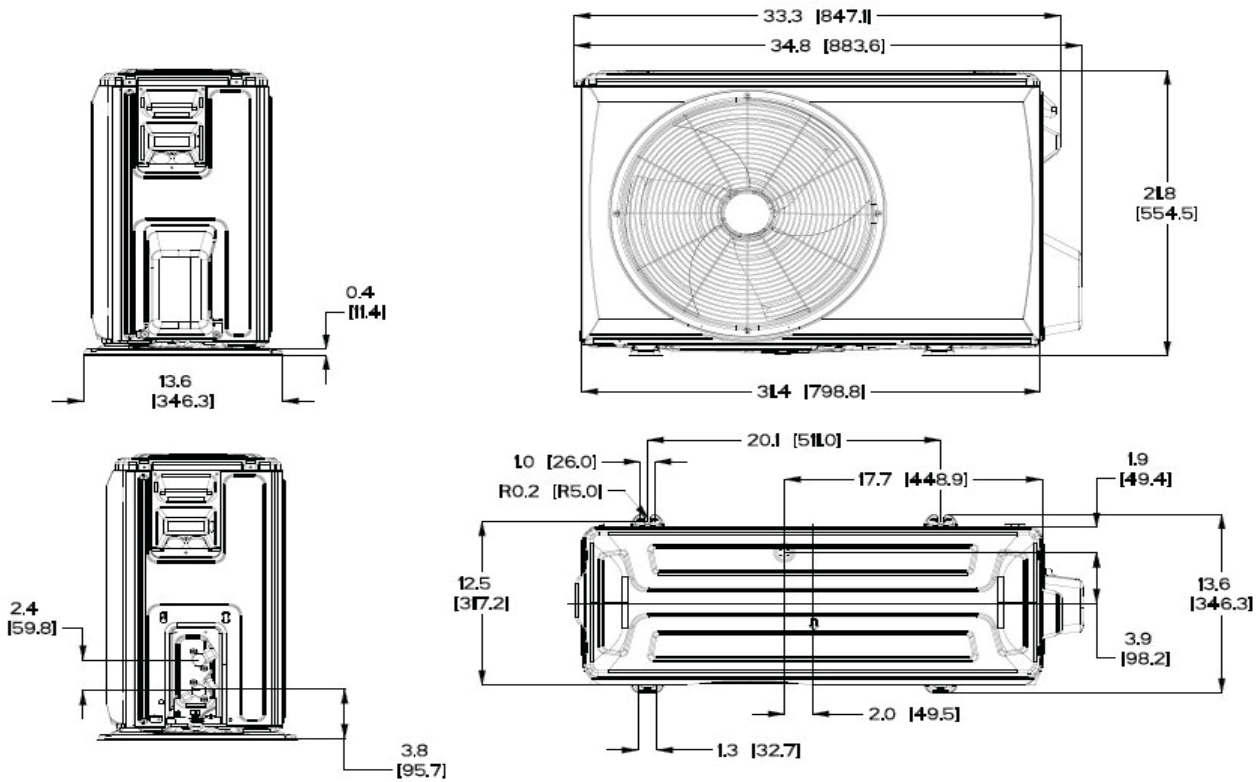


Fig. 4 — Dimension Sizes 9K-12K (208/230V)

# DIMENSIONS (CONT)

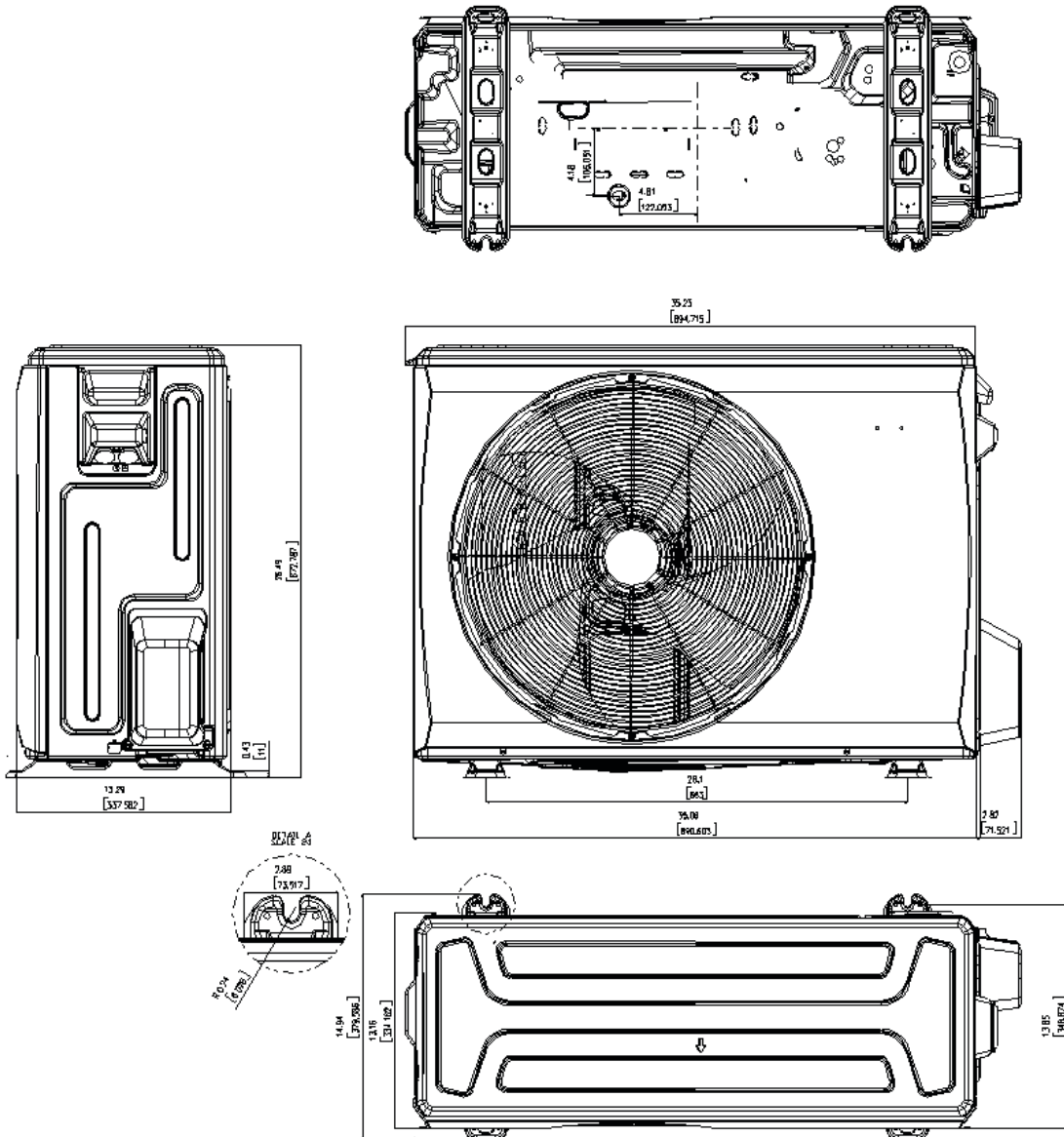


Fig. 5 — Dimension Size 18K (208/230V)

# DIMENSIONS (CONT)

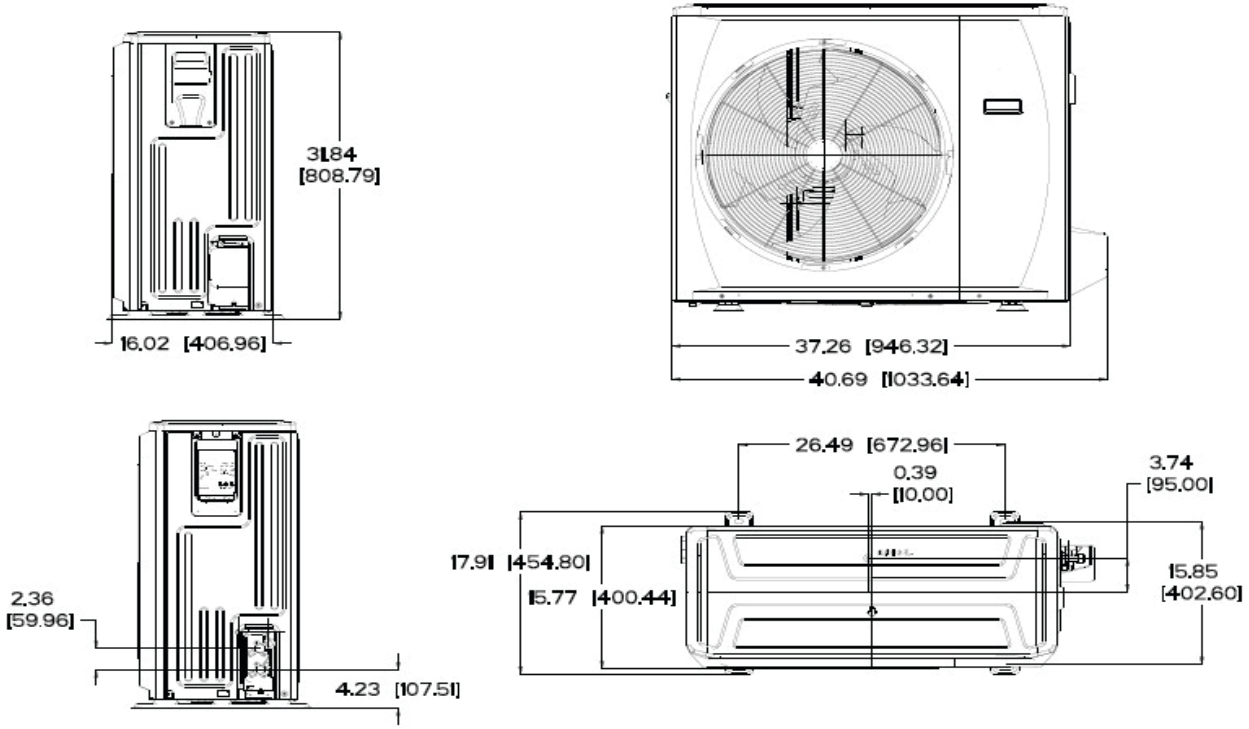
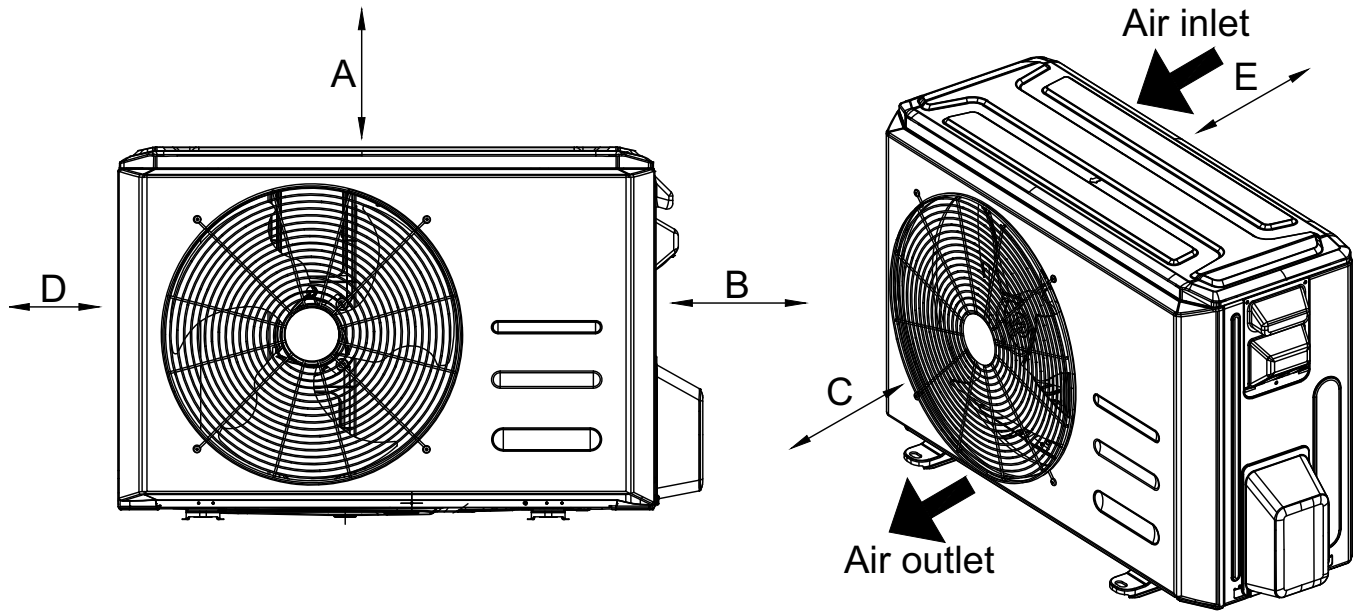


Fig. 6 — Dimension Size 24K (208/230V)



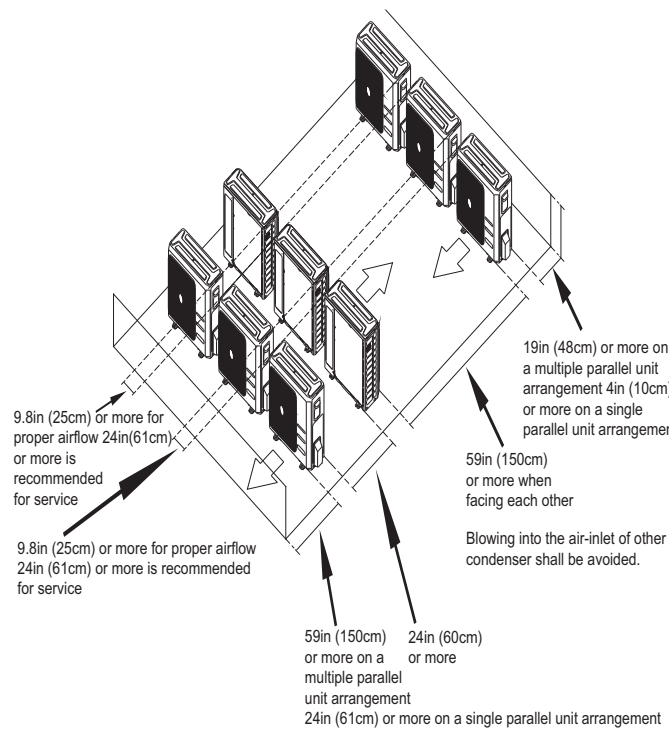
# CLEARANCES



**Fig. 7 — Clearances**

UNIT	MINIMUM VALUE IN. (MM)
A	24 (609)
B	24 (609)
C	24 (609)
D	4 (101)
E	4 (101)

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



**Fig. 8 — Clearances for multiple units**

# SPECIFICATIONS

SYSTEM	SIZE		12K	9K	12K	18K	24K
	Outdoor Model		DLCSRBH12AAJ	DLCSRBH09AAK	DLCSRBH12AAK	DLCSRBH18AAK	DLCSRBH24AAK
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	115-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
	MCA	A.	19	15	15	16	25
	Recommended Fuse Size	A.	20	15	15	20	20
	MOCP - Fuse Rating	A.	25	15	15	25	35
Operating Range	Cooling Outdoor DB Min - Max	°F(°C)	-22~130 (-30~55)	-22~130 (-30~55)	-22~130 (-30~55)	-22~130 (-30~55)	-22~130 (-30~55)
	Heating Outdoor DB Min - Max	°F(°C)	-22~86 (-30~30)	-22~86 (-30~30)	-22~86 (-30~30)	-22~86 (-30~30)	-22~86 (-30~30)
Piping	Total Piping Length	ft (m)	82 (25)	82 (25)	82 (25)	98 (30)	164 (50)
	Piping Lift	ft (m)	32 (10)	32 (10)	32 (10)	65 (20)	82 (25)
	Pipe Connection Size - Liquid	in (mm)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	3/8 (9.52)
	Pipe Connection Size - Suction	in (mm)	1/2 (12.7)	3/8 (9.52)	1/2 (12.7)	1/2 (12.7)	5/8 (16)
Refrigerant	Refrigerant Type		R410A	R410A	R410A	R410A	R410A
	Charge	lbs (kg)	2.47 (1.12)	2.6 (1.18)	2.6 (1.18)	4.08 (1.85)	5.73 (2.6)
	Metering Device		EEV	EEV	EEV	EEV	EEV
Outdoor Coil	Face Area	Sq. Ft.	7.9	4.7	4.7	5.9	8.2
	No. Rows		2	2	2	2	2
	Fins per inch		21	20	20	20	20
	Circuits		4	4	4	6	4
Compressor	Type		Rotary Inverter	Rotary Inverter	Rotary Inverter	Rotary Inverter	Rotary Inverter
	Model		KSK103D33UEZ3	KTN110D42UFZ	KTN110D42UFZ	KTM240D43UKT	KTM240D43UKT
	Oil Type		VG74	VG74	VG74	VG74	VG74
	Oil Charge	Fl. Oz.	10.5	11.8	11.8	21.0	21.0
	Rated Current	RLA	11.5	6.0	8.5	14.3	14.8
Outdoor	Unit Width	in (mm)	30.12 (765)	31.69 (805)	31.69 (805)	35.04 (890)	37.24 (946)
	Unit Height	in (mm)	24.02 (610)	24.21 (615)	24.21 (615)	29.13 (740)	34.84 (885)
	Unit Depth	in (mm)	11.93 (303)	12.99 (330)	12.99 (330)	13.46 (342)	16.14 (410)
	Net Weight	lbs (kg)	66.80 (30.3)	74.07 (33.6)	73.63 (33.4)	100.97 (45.8)	134.48 (61)
	Airflow	CFM	794	1,324	1,324	1,765	2,235
	Sound Pressure	dB(A)	54.0	54.5	56.0	59.0	62.0

\* Condensing unit above or below the indoor unit

## COMPATIBILITY

INDOOR UNIT			OUTDOOR UNIT				
			DLCSRAH12AAJ	DLCSRAH09AAK	DLCSRAH12AAK	DLCSRAH18AAK	DLCSRAH24AAK
			DLCSRBH12AAJ	DLCSRBH09AAK	DLCSRBH12AAK	DLCSRBH18AAK	DLCSRBH24AAK
High Wall	DLFSAH12XAJ	DLFSHB12XAJ	•				
	DLFSAH09XAK	DLFSHB09XAK		•			
	DLFSAH12XAK	DLFSHB12XAK			•		
	DLFSAH18XAK	DLFSHB18XAK				•	
	DLFSAH24XAK	DLFSHB24XAK					•
	DLFSAH30XAK						
Cassette	DLFSCAH09XAK			•			
	DLFSCAH12XAK				•		
	DLFSCAH18XAK					•	
	DLFSCAH24XAK						•
Ducted	DLFSDAH09XAK			•			
	DLFSDAH12XAK				•		
	DLFSDAH18XAK					•	
	DLFSDAH24XAK						•
Console	DLFSAH12XAK				•		
	DLFSAH18XAK					•	
	DLFSAH24XAK						•
Air Handler	DLFSAAH24XAK						•

# PERFORMANCE

## High Wall

	INDOOR MODEL		DLFSHBH12XAJ	DLFSHBH09XAK	DLFSHBH12XAK	DLFSHBH18XAK	DLFSHBH24XAK
High Wall	Energy Star		YES	YES	YES	YES	YES
	NEEP		YES	YES	NO	YES	YES
	MASSCEC		YES	YES	NO	YES	YES
	CCHP		YES	YES	NO	YES	YES
	ASHP		YES	YES	YES	YES	YES
	ASHP COLD CLIMATE		YES	NO	NO	NO	NO
	Cooling System Tons		1.0	0.75	1.0	1.5	2.0
	Cooling Rated Capacity	Btu/h	12,000	9,000	12,000	18,000	24,000
	Cooling Cap. Range Min - Max	Btu/h	3,930~13,200	3,700~13,300	3,300~13,300	4,500~20,000	7,295~26,600
	SEER		22.0	25.5	22.0	21.5	21.5
	EER		12.5	15.8	13	13	12.5
	Heating Rated Capacity (47°F)	Btu/h	12,000	12,000	12,000	18,000	26,000
	Heating Rated Capacity (17°F)	Btu/h	8,200	7,400	12,000	19,000	17,000
	Heating Maximum Capacity (17°F)	Btu/h	9,018	12,000	15,000	19,800	24,000
	Heating Maximum Capacity (5°F)	Btu/h	6,800	10,000	11,000	18,000	23,000
	Heating Cap. Range Min - Max	Btu/h	5,000~12,600	5,100~14,300	5,100~15,000	5,500~21,000	9,500~27,400
	HSPF		11.5	12.5	12.7	11.0	11.5
	COP (47°F)	W/W	3.52	3.90	3.89	3.35	2.99
COP (17°F)	W/W	2.41	2.90	2.90	1.90	2.49	
COP (5°F)	W/W	2.00	1.80	1.64	1.78	1.79	

## Cassette

	INDOOR MODEL		DLFSCAH09XAK	DLFSCAH12XAK	DLFSCAH18XAK	DLFSCAH24XAK
Cassette	Energy Star		YES	YES	YES	NO
	NEEP		YES	YES	NO	YES
	MASSCEC		YES	YES	NO	YES
	CCHP		YES	YES	NO	NO
	ASHP		YES	YES	YES	NO
	ASHP COLD CLIMATE		NO	NO	NO	NO
	Cooling System Tons		0.8	1.0	1.3	2.0
	Cooling Rated Capacity	Btu/h	9,000	12,000	16,000	24,000
	Cooling Cap. Range Min - Max	Btu/h	2,850~11,100	3,000~13,700	5,600~17,000	8,000~25,000
	SEER		20.5	21.5	20.0	20.0
	EER		13.0	12.7	12.5	11.0
	Heating Rated Capacity (47°F)	Btu/h	10,000	12,000	18,000	24,000
	Heating Rated Capacity (17°F)	Btu/h	6,650	8,250	11,200	15,100
	Heating Maximum Capacity (17°F)	Btu/h	11,800	14,000	21,000	24,200
	Heating Maximum Capacity (5°F)	Btu/h	10,200	11,500	17,000	24,100
	Heating Cap. Range Min - Max	Btu/h	1,800~12,500	2,000~15,300	8,700~21,000	11,840~27,000
	HSPF		10.8	10.6	10.3	11.6
	COP (47°F)	W/W	2.93	3.22	2.88	3.50
COP (17°F)	W/W	1.80	2.20	1.80	2.70	
COP (5°F)	W/W	1.79	1.86	1.68	1.75	

# PERFORMANCE (CONT)

## Ducted

	INDOOR MODEL		DLFSDAH09XAK	DLFSDAH12XAK	DLFSDAH18XAK	DLFSDAH24XAK
	Energy Star		YES	YES	YES	YES
Ducted	NEEP		YES	YES	YES	YES
	MASSCEC		YES	YES	YES	YES
	CCHP		YES	YES	NO	YES
	ASHP		YES	YES	YES	YES
	ASHP COLD CLIMATE		NO	NO	NO	YES
	Cooling System Tons		0.75	1.0	1.4	2.0
	Cooling Rated Capacity	Btu/h	9,000	12,000	16,500	24,000
	Cooling Cap. Range Min - Max	Btu/h	2,400~12,500	2,250~14,400	6,500~18,800	6,500~27,800
	SEER		23.0	21.5	19.6	20.6
	EER		14.0	13.0	12.5	12.5
	Heating Rated Capacity (47°F)	Btu/h	10,000	12,000	19,000	24,600
	Heating Rated Capacity (17°F)	Btu/h	6,450	8,350	12,700	16,500
	Heating Maximum Capacity (17°F)	Btu/h	11,600	12,900	21,500	26,500
	Heating Maximum Capacity (5°F)	Btu/h	9,900	12,400	17,400	24,600
	Heating Cap. Range Min - Max	Btu/h	1,700~15,600	1,800~16,300	8,900~22,000	12,200~32,200
	HSPF		12.0	11.5	11.0	12.6
	COP (47°F)	W/W	3.62	3.52	2.93	3.66
	COP (17°F)	W/W	1.90	2.00	1.90	2.80
	COP (5°F)	W/W	1.78	1.87	1.75	2.01

## Console

	INDOOR MODEL		DLFSFAH12XAK	DLFSFAH18XAK	DLFSFAH24XAK
	Console	Energy Star		YES	YES
NEEP			YES	YES	YES
MASSCEC			YES	YES	YES
CCHP			YES	YES	NO
ASHP			YES	YES	NO
ASHP COLD CLIMATE			NO	NO	NO
Cooling System Tons			1.0	1.4	2.0
Cooling Rated Capacity		Btu/h	12,000	17,000	24,000
Cooling Cap. Range Min - Max		Btu/h	2,800~13,500	7,800~19,900	9,000~26,800
SEER			23.0	20.2	20.2
EER			13.0	12.5	11.5
Heating Rated Capacity (47°F)		Btu/h	12,000	18,000	24,600
Heating Rated Capacity (17°F)		Btu/h	8,400	12,000	15,240
Heating Maximum Capacity (17°F)		Btu/h	13,100	20,700	26,661
Heating Maximum Capacity (5°F)		Btu/h	12,100	16,900	24,100
Heating Cap. Range Min - Max		Btu/h	2,350~15,700	8,600~21,500	12,500~30,500
HSPF			11.5	10.6	11.6
COP (47°F)		W/W	3.22	3.19	3.52
COP (17°F)		W/W	2	1.80	2.70
COP (5°F)		W/W	1.84	1.75	1.76

## Air Handler

	Indoor Model		DLFSAAH24XAK
	Outdoor Model		DLCSRAH24AAK
Air Handler	Energy Star		YES
	Cooling System Tons		1.8
	Cooling Rated Capacity	Btu/h	22,000
	Cooling Cap. Range Min - Max	Btu/h	7,500~26,000
	SEER		20.0
	EER		12.5
	Heating Rated Capacity (47°F)	Btu/h	27,000
	Heating Rated Capacity (17°F)	Btu/h	16,500
	Heating Maximum Capacity (17°F)	Btu/h	25,000
	Heating Maximum Capacity (5°F)	Btu/h	22,000
	Heating Cap. Range Min - Max	Btu/h	5,600~31,000
	HSPF		11.6
	COP (47°F)	W/W	3.77
	COP (17°F)	W/W	2.60
	COP (5°F)	W/W	1.75

# COOLING PERFORMANCE DATA - HIGH WALL

## Cooling Performance - High Wall (Sheet 1 of 2)

MODEL	COOLING			OUTDOOR CONDITIONS (DB)												
	Indoor Conditions DB	WB		-22°F (-25°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	47°F (8°C)	77°F (25°C)	86°F (30°C)	95°F (35°C)	104°F (40°C)	113°F (45°C)	122°F (50°C)
12K(115V)	69.8°F (21°C)	59°F (15°C)	TC	13.55	13.20	12.85	12.18	12.29	11.05	11.23	11.23	10.79	10.79	9.11	7.34	5.20
			SC	10.14	9.88	9.62	8.65	8.73	8.12	8.22	8.22	8.03	8.08	6.84	6.18	5.06
			Input	0.82	0.83	0.83	0.86	0.86	0.93	0.54	0.88	0.84	1.03	1.00	0.89	0.73
	75.2°F (24°C)	62.6°F (17°C)	TC	14.57	14.22	13.87	13.20	13.31	12.08	12.25	12.25	11.81	11.81	10.13	8.36	6.22
			SC	10.55	10.30	10.05	9.56	9.64	8.75	8.87	8.87	8.56	8.56	7.34	6.06	4.50
			Input	0.83	0.84	0.84	0.87	0.87	0.94	0.55	0.89	0.85	1.04	1.01	0.90	0.74
	80.6°F (27°C)	66.2°F (19°C)	TC	15.53	15.18	14.83	14.16	14.27	13.04	13.21	13.21	12.77	12.77	11.09	9.32	7.18
			SC	11.02	10.78	10.53	10.05	10.13	9.25	9.38	9.38	9.07	9.06	7.87	6.62	5.10
			Input	0.85	0.85	0.85	0.89	0.88	0.95	0.56	0.90	0.86	1.06	1.02	0.91	0.76
	89.6°F (32°C)	73.4°F (23°C)	TC	17.30	16.95	16.60	15.93	16.04	14.81	14.98	14.98	14.54	14.54	12.86	11.09	8.95
			SC	11.20	10.98	10.75	10.32	10.39	9.59	9.70	9.70	9.42	9.42	8.33	7.18	5.80
			Input	0.87	0.88	0.88	0.91	0.91	0.98	0.59	0.93	0.89	1.08	1.05	0.94	0.78
9K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	12.14	11.96	11.77	10.51	11.00	11.14	11.59	11.12	12.01	11.48	10.21	9.01	5.36
			SC	8.78	8.65	8.52	7.85	8.10	8.22	11.83	8.19	8.57	8.31	7.67	7.06	5.31
			Input	0.20	0.26	0.31	0.26	0.38	0.42	0.59	0.70	1.01	1.10	1.09	1.05	0.68
	75.2°F (24°C)	62.6°F (17°C)	TC	13.10	12.92	12.74	11.47	11.96	12.10	12.56	12.08	12.98	12.45	11.17	9.98	6.33
			SC	9.61	9.48	9.34	8.41	8.77	8.88	9.21	8.86	9.52	9.13	8.19	7.32	4.64
			Input	0.22	0.27	0.32	0.28	0.39	0.43	0.60	0.71	1.03	1.12	1.10	1.07	0.69
	80.6°F (27°C)	66.2°F (19°C)	TC	14.11	13.93	13.75	12.48	12.97	13.11	13.56	13.09	13.98	13.46	12.18	10.99	7.33
			SC	10.20	10.06	9.93	9.02	9.37	9.47	9.80	9.46	10.10	9.72	8.80	7.94	5.30
			Input	0.23	0.28	0.34	0.29	0.40	0.44	0.62	0.73	1.04	1.13	1.12	1.08	0.70
	89.6°F (32°C)	73.4°F (23°C)	TC	16.06	15.88	15.69	14.43	14.92	15.06	15.51	15.04	15.93	15.41	14.13	12.94	9.28
			SC	11.66	11.52	11.39	10.47	10.83	10.93	11.26	10.91	11.56	11.18	10.25	9.39	6.74
			Input	0.26	0.31	0.36	0.32	0.43	0.47	0.64	0.76	1.07	1.16	1.14	1.11	0.73
12K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	12.51	12.30	12.09	11.16	10.76	11.07	11.85	11.50	12.53	12.19	10.59	8.56	4.48
			SC	8.60	8.46	8.31	8.22	7.93	7.79	8.18	8.05	8.57	8.38	7.67	6.68	4.47
			Input	0.24	0.29	0.34	0.34	0.35	0.48	0.59	0.70	1.00	1.21	1.09	1.07	0.69
	75.2°F (24°C)	62.6°F (17°C)	TC	13.65	13.44	13.23	12.30	11.90	12.21	12.99	12.63	13.67	13.33	11.73	9.70	5.62
			SC	9.37	9.23	9.08	8.44	8.17	8.38	8.92	8.67	9.38	9.15	8.05	6.66	3.85
			Input	0.25	0.30	0.36	0.35	0.37	0.49	0.60	0.71	1.01	1.22	1.10	1.08	0.70
	80.6°F (27°C)	66.2°F (19°C)	TC	14.72	14.51	14.30	13.37	12.97	13.28	14.06	13.70	14.74	14.40	12.80	10.77	6.68
			SC	9.90	9.76	9.62	8.99	8.72	8.93	9.46	9.22	9.91	9.69	8.61	7.24	4.50
			Input	0.27	0.32	0.37	0.37	0.38	0.51	0.61	0.72	1.03	1.23	1.12	1.10	0.72
	89.6°F (32°C)	73.4°F (23°C)	TC	16.73	16.52	16.31	15.38	14.98	15.29	16.07	15.72	16.75	16.41	14.81	12.78	8.70
			SC	10.23	10.10	9.97	9.40	9.16	9.35	9.83	9.61	10.24	10.04	9.06	7.81	5.32
			Input	0.30	0.35	0.40	0.40	0.41	0.54	0.64	0.75	1.06	1.27	1.15	1.13	0.75

**Cooling Performance - High Wall (Sheet 2 of 2)**

MODEL	COOLING			OUTDOOR CONDITIONS (DB)												
	Indoor Conditions DB	WB		-22°F (-25°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	47°F (8°C)	77°F (25°C)	86°F (30°C)	95°F (35°C)	104°F (40°C)	113°F (45°C)	122°F (50°C)
18K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	19.68	19.17	18.67	17.08	17.39	17.95	16.75	12.38	16.82	16.19	14.66	10.42	7.58
			SC	14.77	14.40	14.02	12.25	12.39	12.63	12.34	10.41	12.37	12.16	11.41	9.47	7.43
			Input	0.47	0.54	0.61	0.72	0.72	0.74	0.93	0.77	1.47	1.73	1.88	1.47	1.36
	75.2°F (24°C)	62.6°F (17°C)	TC	21.33	20.82	20.32	18.73	19.04	19.60	18.40	14.03	18.47	17.84	16.31	12.07	9.23
			SC	15.31	14.95	14.58	13.45	13.67	14.07	13.21	10.07	13.26	12.80	11.70	8.67	6.62
			Input	0.51	0.58	0.65	0.76	0.76	0.78	0.97	0.81	1.51	1.77	1.92	1.51	1.40
	80.6°F (27°C)	66.2°F (19°C)	TC	22.85	22.35	21.85	20.26	20.57	21.13	19.93	15.56	20.00	19.37	17.83	13.60	10.75
			SC	15.86	15.51	15.16	14.06	14.28	14.67	13.83	10.80	13.88	13.44	12.38	9.44	7.47
			Input	0.56	0.63	0.70	0.81	0.81	0.83	1.01	0.86	1.56	1.82	1.97	1.56	1.44
	89.6°F (32°C)	73.4°F (23°C)	TC	25.72	25.21	24.71	23.12	23.43	23.99	22.79	18.42	22.86	22.23	20.70	16.46	13.62
			SC	15.84	15.53	15.22	14.24	14.43	14.78	14.04	11.35	14.08	13.69	12.75	10.14	8.39
			Input	0.64	0.71	0.79	0.89	0.89	0.92	1.10	0.94	1.64	1.90	2.05	1.64	1.53
24K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	25.33	25.02	24.71	21.71	23.65	21.89	28.18	25.19	24.00	22.65	21.45	18.45	15.41
			SC	18.11	17.89	17.67	15.85	16.72	15.78	19.00	17.47	16.85	16.20	15.56	14.06	12.58
			Input	1.26	1.33	1.40	1.41	1.46	1.79	1.53	1.86	2.04	2.23	2.43	2.31	2.27
	75.2°F (24°C)	62.6°F (17°C)	TC	26.11	25.80	25.49	22.49	24.43	22.67	28.96	25.97	24.78	23.43	22.24	19.23	16.19
			SC	18.93	18.70	18.48	16.31	17.71	16.43	21.00	18.83	17.96	16.99	16.12	13.94	11.73
			Input	1.28	1.34	1.41	1.42	1.48	1.81	1.54	1.87	2.05	2.24	2.44	2.32	2.28
	80.6°F (27°C)	66.2°F (19°C)	TC	26.97	26.66	26.35	23.36	25.29	23.53	29.83	26.84	25.64	24.30	23.10	20.09	17.05
			SC	19.48	19.25	19.03	16.87	18.26	16.99	21.54	19.38	18.51	17.54	16.68	14.51	12.31
			Input	1.29	1.36	1.43	1.44	1.49	1.82	1.55	1.89	2.07	2.26	2.46	2.34	2.30
	89.6°F (32°C)	73.4°F (23°C)	TC	28.76	28.45	28.13	25.14	27.08	25.32	31.61	28.62	27.42	26.08	24.88	21.87	18.83
			SC	20.86	20.63	20.40	18.23	19.64	18.36	22.93	20.76	19.89	18.91	18.05	15.86	13.66
			Input	1.32	1.39	1.46	1.47	1.52	1.85	1.59	1.92	2.10	2.29	2.49	2.37	2.33

**LEGEND**

DB - Dry Bulb  
 WB - Wet Bulb  
 TC - Total Net Capacity (1000 Btu/hour)  
 SC - Sensible Capacity (1000 Btu/hour)  
 Input - Total Power (kW)

# HEATING PERFORMANCE DATA - HIGH WALL

## Heating Performance - High Wall (Sheet 1 of 2)

MODEL	HEATING		OUTDOOR CONDITIONS (DB)											
	Indoor Conditions DB		-22°F (-30°C)	-13°F (-25°C)	-4°F (-20C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	19.4°F (-7°C)	24.8°F (-4°C)	32°F (0°C)	39.2°F (4°C)	44.6°F (7°C)	53.6°F (12°C)
12K(115V)	59°F (15°C)	TC	3.46	4.48	5.65	6.48	6.98	9.23	9.60	10.32	12.25	13.45	13.28	13.57
		Input	0.66	0.72	0.78	0.81	0.84	0.94	0.96	0.98	1.11	1.19	1.08	1.06
		COP	1.53	1.82	2.11	2.35	2.45	2.89	2.94	3.10	3.25	3.30	3.59	3.75
	64.4°F (18°C)	TC	3.36	4.38	5.56	6.38	6.89	9.14	9.51	10.22	12.16	13.36	13.19	13.47
		Input	0.73	0.79	0.85	0.87	0.90	1.00	1.02	1.04	1.17	1.26	1.15	1.13
		COP	1.35	1.63	1.92	2.14	2.24	2.67	2.73	2.88	3.04	3.11	3.36	3.51
	69°F (20.5°C)	TC	3.28	4.30	5.48	6.30	6.81	9.06	9.43	10.14	12.08	13.28	13.11	13.39
		Input	0.66	0.72	0.78	0.81	0.84	0.94	0.96	0.98	1.11	1.19	1.08	1.06
		COP	1.53	1.82	2.11	2.35	2.45	2.89	2.94	3.10	3.25	3.30	3.59	3.75
	71.6°F (22°C)	TC	3.26	4.28	5.46	6.28	6.79	9.04	9.41	10.12	12.06	13.26	13.09	13.37
		Input	0.82	0.88	0.94	0.96	0.99	1.09	1.11	1.13	1.26	1.35	1.24	1.21
		COP	1.17	1.43	1.71	1.91	2.01	2.43	2.48	2.63	2.80	2.88	3.10	3.23
9K(208-230V)	59°F (15°C)	TC	5.58	7.48	9.57	10.94	11.85	14.20	14.69	14.87	15.40	18.62	15.32	14.72
		Input	1.28	1.39	1.44	1.49	1.53	1.69	1.74	1.78	1.81	2.04	1.35	1.14
		COP	1.28	1.58	1.94	2.15	2.27	2.46	2.48	2.44	2.50	2.67	3.31	3.78
	64.4°F (18°C)	TC	5.62	7.51	9.61	10.97	11.88	14.23	14.73	14.90	15.43	18.65	15.35	14.75
		Input	1.28	1.39	1.44	1.49	1.53	1.69	1.73	1.78	1.80	2.04	1.35	1.14
		COP	1.29	1.59	1.95	2.16	2.28	2.47	2.49	2.45	2.51	2.68	3.32	3.80
	69°F (20.5°C)	TC	5.64	7.54	9.64	11.00	11.91	14.26	14.75	14.93	15.46	18.68	15.38	14.78
		Input	1.28	1.39	1.44	1.49	1.53	1.69	1.73	1.78	1.80	2.04	1.35	1.14
		COP	1.30	1.59	1.96	2.17	2.29	2.47	2.49	2.46	2.51	2.68	3.33	3.81
	71.6°F (22°C)	TC	5.66	7.55	9.65	11.01	11.92	14.27	14.77	14.95	15.48	18.69	15.40	14.80
		Input	1.27	1.39	1.44	1.49	1.53	1.69	1.73	1.78	1.80	2.04	1.35	1.14
		COP	1.30	1.60	1.96	2.17	2.29	2.48	2.50	2.46	2.51	2.68	3.33	3.81
12K(208-230V)	59°F (15°C)	TC	6.58	8.18	10.15	11.59	12.16	13.77	14.16	25.16	16.54	16.71	14.12	14.36
		Input	1.41	1.54	1.65	1.73	1.76	1.64	1.69	1.77	1.84	1.89	1.35	1.11
		COP	1.37	1.55	1.81	1.97	2.03	2.46	2.46	2.48	2.64	2.59	3.06	3.79
	64.4°F (18°C)	TC	6.66	8.26	10.23	11.68	12.24	13.85	14.24	25.24	16.62	16.79	14.20	14.44
		Input	1.41	1.55	1.65	1.74	1.77	1.65	1.69	1.77	1.85	1.90	1.36	1.12
		COP	1.38	1.56	1.81	1.97	2.03	2.47	2.47	4.17	2.64	2.59	3.07	3.79
	69°F (20.5°C)	TC	6.73	8.33	10.30	11.74	12.31	13.92	14.31	25.31	16.69	16.86	14.27	14.51
		Input	1.42	1.55	1.66	1.74	1.77	1.65	1.70	1.78	1.85	1.91	1.36	1.12
		COP	1.39	1.57	1.82	1.98	2.04	2.47	2.47	4.17	2.64	2.59	3.07	3.79
	71.6°F (22°C)	TC	6.77	8.36	10.34	11.78	12.35	13.96	14.35	25.35	16.73	16.90	14.30	14.55
		Input	1.42	1.56	1.66	1.74	1.78	1.65	1.70	1.78	1.86	1.91	1.37	1.13
		COP	1.39	1.57	1.82	1.98	2.04	2.47	2.47	4.17	2.64	2.60	3.07	3.79

**Heating Performance - High Wall (Sheet 2 of 2)**

MODEL	HEATING		OUTDOOR CONDITIONS (DB)											
	Indoor Conditions DB		-22°F (-30°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	19.4°F (-7°C)	24.8°F (-4°C)	32°F (0°C)	39.2°F (4°C)	44.6°F (7°C)	53.6°F (12°C)
18K(208-230V)	59°F (15°C)	TC	11.34	13.58	15.44	16.62	17.80	17.63	23.46	24.84	23.15	21.30	21.96	22.42
		Input	1.92	2.24	2.49	2.74	2.60	2.49	3.34	3.21	2.73	1.95	1.93	1.79
		COP	1.73	1.77	1.82	1.78	2.04	2.08	2.06	2.27	2.49	3.21	3.34	3.68
	64.4°F (18°C)	TC	10.79	13.03	14.88	16.07	17.25	17.08	22.90	24.29	22.60	20.75	21.40	21.87
		Input	1.94	2.26	2.51	2.76	2.61	2.51	3.36	3.23	2.75	1.97	1.95	1.80
		COP	1.63	1.69	1.74	1.71	1.93	2.00	2.00	2.20	2.41	3.09	3.22	3.55
	69°F (20.5°C)	TC	10.31	12.56	14.41	15.60	16.78	16.61	22.43	23.82	22.13	20.28	20.93	21.40
		Input	1.92	2.24	2.49	2.74	2.60	2.49	3.34	3.21	2.73	1.95	1.93	1.79
		COP	1.73	1.77	1.82	1.78	2.04	2.08	2.06	2.27	2.49	3.21	3.34	3.68
	71.6°F (22°C)	TC	9.59	11.84	13.69	14.87	16.06	15.89	21.71	23.10	21.40	19.56	20.21	20.67
		Input	1.97	2.29	2.53	2.78	2.64	2.53	3.39	3.25	2.77	1.99	1.97	1.83
		COP	1.43	1.52	1.58	1.57	1.78	1.84	1.88	2.08	2.26	2.88	3.01	3.31
24K(208-230V)	59°F (15°C)	TC	14.33	18.95	23.61	23.38	25.50	28.25	28.63	29.69	32.33	30.80	29.47	28.35
		Input	2.91	3.17	3.45	3.28	3.59	3.46	3.43	3.66	3.79	3.67	2.63	2.22
		COP	1.44	1.75	2.01	2.09	2.08	2.39	2.45	2.38	2.50	2.46	3.28	3.74
	64.4°F (18°C)	TC	14.33	18.94	23.61	23.38	25.50	28.25	28.62	29.69	32.33	30.79	29.47	28.35
		Input	2.91	3.16	3.45	3.27	3.59	3.46	3.43	3.66	3.79	3.66	2.63	2.22
		COP	1.44	1.75	2.01	2.09	2.08	2.39	2.45	2.38	2.50	2.46	3.28	3.74
	69°F (20.5°C)	TC	14.33	18.94	23.60	23.38	25.50	28.24	28.62	29.69	32.33	30.79	29.47	28.35
		Input	2.91	3.16	3.45	3.27	3.59	3.46	3.43	3.66	3.79	3.66	2.63	2.22
		COP	1.44	1.75	2.01	2.09	2.08	2.39	2.45	2.38	2.50	2.46	3.28	3.75
	71.6°F (22°C)	TC	14.33	18.94	23.60	23.37	25.50	28.24	28.62	29.69	32.33	30.79	29.47	28.35
		Input	2.91	3.16	3.44	3.27	3.59	3.46	3.43	3.66	3.79	3.66	2.63	2.22
		COP	1.44	1.75	2.01	2.09	2.08	2.39	2.45	2.38	2.50	2.46	3.28	3.75

**LEGEND**

DB - Dry Bulb  
 WB - Wet Bulb  
 TC - Total Net Capacity (1000 Btu/hour)  
 Input - Total Power (kW)  
 COP - W/W



# COOLING PERFORMANCE DATA - CASSETTE

## COOLING PERFORMANCE - CASSETTE (Sheet 1 of 2)

MODEL	COOLING			OUTDOOR CONDITIONS (DB)												
	Indoor Conditions DB	WB		-22°F (-25°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	47°F (8°C)	77°F (25°C)	86°F (30°C)	95°F (35°C)	104°F (40°C)	113°F (45°C)	122°F (50°C)
9K (208-230V)	69.8°F (21°C)	59°F (15°C)	TC	7.61	7.71	7.81	7.91	6.60	6.39	9.78	10.52	10.84	11.03	9.63	8.41	4.89
			SC	5.44	5.51	5.58	6.14	5.27	5.08	7.10	7.62	7.79	7.88	7.20	6.58	4.89
			Input	0.01	0.07	0.13	0.17	0.14	0.14	0.46	0.72	0.90	0.92	1.07	1.05	0.37
	75.2°F (24°C)	62.6°F (17°C)	TC	7.69	7.79	7.89	7.98	6.68	6.47	9.86	10.60	10.92	11.11	9.71	8.49	4.97
			SC	5.75	5.83	5.90	5.97	5.00	4.84	7.38	7.93	8.17	8.31	7.26	6.35	3.72
			Input	0.14	0.20	0.26	0.30	0.26	0.27	0.58	0.85	1.03	1.05	1.20	1.18	0.50
	80.6°F (27°C)	66.2°F (19°C)	TC	8.31	8.41	8.51	8.61	7.31	7.09	10.49	11.22	11.54	11.73	10.33	9.11	5.59
			SC	6.23	6.30	6.38	6.45	5.47	5.31	7.86	8.41	8.65	8.79	7.74	6.83	4.19
			Input	0.22	0.28	0.34	0.38	0.35	0.35	0.67	0.93	1.11	1.13	1.28	1.26	0.58
	89.6°F (32°C)	73.4°F (23°C)	TC	9.77	9.87	9.97	10.06	8.76	8.54	11.94	12.68	13.00	13.19	11.79	10.56	7.05
			SC	6.84	6.91	6.98	7.05	6.14	5.99	8.37	8.88	9.11	9.24	8.26	7.40	4.94
			Input	0.40	0.45	0.51	0.55	0.52	0.53	0.84	1.11	1.29	1.30	1.46	1.43	0.76
12K (208-230V)	69.8°F (21°C)	59°F (15°C)	TC	13.83	13.58	13.33	11.49	12.42	13.16	12.03	12.24	13.53	13.45	11.16	9.27	4.84
			SC	9.83	9.65	9.47	8.42	9.12	9.43	8.88	8.98	9.58	9.55	8.42	7.59	4.84
			Input	0.36	0.40	0.45	0.39	0.54	0.57	0.62	0.73	1.06	1.26	1.15	1.12	0.70
	75.2°F (24°C)	62.6°F (17°C)	TC	15.08	14.83	14.58	12.73	13.66	14.40	13.27	13.48	14.77	14.69	12.41	10.52	6.09
			SC	10.64	10.47	10.29	8.99	9.64	10.17	9.37	9.52	10.43	10.37	8.76	7.42	4.30
			Input	0.37	0.41	0.46	0.40	0.55	0.58	0.63	0.73	1.07	1.27	1.16	1.12	0.71
	80.6°F (27°C)	66.2°F (19°C)	TC	16.28	16.03	15.78	13.94	14.87	15.61	14.48	14.69	15.97	15.90	13.61	11.72	7.29
			SC	11.23	11.06	10.89	9.62	10.26	10.77	9.99	10.13	11.02	10.97	9.39	8.09	5.03
			Input	0.38	0.43	0.47	0.42	0.56	0.59	0.64	0.75	1.08	1.29	1.18	1.14	0.73
	89.6°F (32°C)	73.4°F (23°C)	TC	18.61	18.36	18.11	16.27	17.20	17.94	16.81	17.02	18.30	18.23	15.94	14.05	9.62
			SC	12.90	12.73	12.55	11.28	11.92	12.43	11.65	11.80	12.69	12.63	11.05	9.74	6.67
			Input	0.41	0.45	0.50	0.44	0.59	0.62	0.67	0.78	1.11	1.31	1.20	1.17	0.75
18K (208-230V)	69.8°F (21°C)	59°F (15°C)	TC	18.20	17.71	17.21	15.56	15.71	16.44	14.63	14.92	14.78	14.36	11.25	9.23	6.66
			SC	13.65	13.28	12.91	11.23	11.45	11.80	10.73	10.84	10.79	10.77	9.42	8.65	6.65
			Input	0.50	0.56	0.62	0.68	0.70	0.63	0.84	1.36	1.32	1.55	1.33	1.32	1.23
	75.2°F (24°C)	62.6°F (17°C)	TC	19.82	19.33	18.84	17.18	17.33	18.06	16.25	16.54	16.40	15.98	12.87	10.85	8.28
			SC	14.85	14.48	14.11	12.88	12.98	13.53	12.18	12.39	12.29	11.97	9.64	8.13	6.21
			Input	0.55	0.61	0.67	0.73	0.74	0.68	0.89	1.40	1.37	1.60	1.38	1.36	1.28
	80.6°F (27°C)	66.2°F (19°C)	TC	21.39	20.90	20.41	18.75	18.90	19.63	17.82	18.11	17.97	17.55	14.44	12.42	9.85
			SC	15.72	15.36	15.00	13.79	13.89	14.43	13.10	13.31	13.21	12.90	10.61	9.13	7.24
			Input	0.60	0.66	0.72	0.77	0.79	0.72	0.93	1.45	1.41	1.64	1.42	1.41	1.32
	89.6°F (32°C)	73.4°F (23°C)	TC	24.33	23.84	23.34	21.69	21.83	22.57	20.76	21.05	20.91	20.49	17.38	15.36	12.79
			SC	16.11	15.78	15.46	14.36	14.46	14.94	13.75	13.94	13.85	13.57	11.51	10.17	8.47
			Input	0.67	0.73	0.79	0.85	0.87	0.80	1.01	1.53	1.49	1.72	1.50	1.49	1.40

**COOLING PERFORMANCE - CASSETTE (Sheet 2 of 2)**

MODEL	COOLING		OUTDOOR CONDITIONS (DB)													
	Indoor Conditions DB	WB		-22°F (-25°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	47°F (8°C)	77°F (25°C)	86°F (30°C)	95°F (35°C)	104°F (40°C)	113°F (45°C)	122°F (50°C)
24K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	23.15	23.07	22.99	22.21	21.68	21.47	23.77	26.21	24.98	23.18	21.89	19.58	18.65
			SC	16.32	16.26	16.21	15.94	15.34	15.32	16.69	17.91	17.27	16.34	15.74	14.41	14.17
			Input	1.88	1.90	1.92	2.06	2.05	2.06	1.89	1.66	1.74	2.03	2.21	2.31	2.54
	75.2°F (24°C)	62.6°F (17°C)	TC	21.04	20.96	20.88	20.10	19.57	19.36	21.66	24.10	22.87	21.07	19.78	17.47	16.54
			SC	15.87	15.81	15.75	15.16	14.76	14.61	16.34	18.18	17.25	15.90	14.92	13.18	12.48
			Input	2.27	2.29	2.31	2.45	2.44	2.45	2.28	2.05	2.12	2.41	2.59	2.70	2.93
	80.6°F (27°C)	66.2°F (19°C)	TC	21.23	21.14	21.06	20.28	19.75	19.54	21.84	24.28	23.05	21.26	19.96	17.65	16.72
			SC	16.20	16.14	16.07	15.48	15.07	14.91	16.67	18.53	17.59	16.22	15.23	13.47	12.76
			Input	2.47	2.48	2.50	2.64	2.63	2.64	2.47	2.25	2.32	2.61	2.79	2.89	3.12
	89.6°F (32°C)	73.4°F (23°C)	TC	22.04	21.96	21.88	21.10	20.56	20.36	22.66	25.10	23.87	22.07	20.78	18.46	17.54
			SC	16.04	15.98	15.92	15.35	14.97	14.82	16.49	18.27	17.37	16.06	15.12	13.44	12.76
			Input	2.80	2.81	2.83	2.97	2.96	2.97	2.80	2.58	2.65	2.94	3.12	3.22	3.46

**LEGEND**

- DB - Dry Bulb
- WB - Wet Bulb
- TC - Total Net Capacity (1000 Btu/hour)
- SC - Sensible Capacity (1000 Btu/hour)
- Input - Total Power (kW)

# HEATING PERFORMANCE DATA - CASSETTE

MODEL	HEATING		OUTDOOR CONDITIONS (DB)											
	Indoor Conditions DB		-22°F (-30°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	19.4°F (-7°C)	24.8°F (-4°C)	32°F (0°C)	39.2°F (4°C)	44.6°F (7°C)	53.6°F (12°C)
9K(208-230V)	59°F (15°C)	TC	5.23	7.65	9.31	10.43	11.52	13.72	14.05	13.97	15.75	18.01	15.06	14.69
		Input	1.32	1.42	1.54	1.67	1.73	1.98	1.93	2.08	1.97	2.28	1.43	1.17
		COP	1.17	1.58	1.78	1.83	1.95	2.03	2.13	1.97	2.35	2.32	3.08	3.68
	64.4°F (18°C)	TC	5.22	7.64	9.30	10.42	11.51	13.71	14.04	13.96	15.74	18.00	15.05	14.68
		Input	1.35	1.45	1.57	1.70	1.76	2.01	1.96	2.11	2.00	2.31	1.47	1.20
		COP	1.13	1.54	1.74	1.80	1.91	2.00	2.10	1.94	2.31	2.29	3.01	3.58
	69°F (20.5°C)	TC	5.22	7.63	9.29	10.41	11.51	13.70	14.04	13.96	15.74	17.99	15.04	14.68
		Input	1.32	1.42	1.54	1.67	1.73	1.98	1.93	2.08	1.97	2.28	1.43	1.17
		COP	1.17	1.58	1.78	1.83	1.95	2.03	2.13	1.97	2.35	2.32	3.08	3.68
	71.6°F (22°C)	TC	4.25	6.66	8.32	9.44	10.53	12.73	13.07	12.99	14.77	17.02	14.07	13.70
		Input	1.39	1.50	1.61	1.74	1.81	2.06	2.01	2.15	2.04	2.35	1.51	1.25
		COP	0.89	1.30	1.51	1.59	1.71	1.81	1.91	1.77	2.12	2.12	2.73	3.22
12K(208-230V)	59°F (15°C)	TC	5.75	8.02	9.96	11.17	11.99	14.26	13.53	14.87	16.33	17.70	14.30	16.01
		Input	1.46	1.52	1.67	1.72	1.74	1.72	1.63	1.72	1.72	1.76	1.22	1.25
		COP	1.16	1.55	1.75	1.91	2.02	2.44	2.43	2.53	2.77	2.95	3.43	3.74
	64.4°F (18°C)	TC	5.81	8.08	10.02	11.23	12.05	14.32	13.58	14.93	16.39	17.76	14.36	16.07
		Input	1.46	1.52	1.67	1.72	1.74	1.72	1.63	1.72	1.72	1.76	1.22	1.25
		COP	1.17	1.56	1.76	1.92	2.03	2.45	2.44	2.54	2.78	2.96	3.44	3.75
	69°F (20.5°C)	TC	5.86	8.13	10.07	11.28	12.10	14.37	13.63	14.98	16.44	17.81	14.41	16.12
		Input	1.46	1.52	1.67	1.72	1.74	1.72	1.64	1.72	1.73	1.76	1.22	1.26
		COP	1.18	1.57	1.77	1.92	2.04	2.45	2.44	2.55	2.79	2.97	3.45	3.76
	71.6°F (22°C)	TC	5.89	8.16	10.10	11.31	12.13	14.40	13.66	15.01	16.46	17.84	14.44	16.15
		Input	1.46	1.52	1.67	1.72	1.74	1.72	1.64	1.72	1.73	1.76	1.22	1.26
		COP	1.18	1.58	1.77	1.93	2.05	2.46	2.45	2.55	2.80	2.97	3.46	3.77
18K(208-230V)	59°F (15°C)	TC	10.73	13.19	16.59	16.99	18.75	22.87	20.72	24.93	21.75	23.38	22.11	6.66
		Input	1.98	2.34	2.62	2.58	2.84	3.15	3.05	3.27	2.45	2.31	1.96	1.76
		COP	1.58	1.65	1.85	1.93	1.93	2.13	1.99	2.23	2.61	2.96	3.31	1.11
	64.4°F (18°C)	TC	10.16	12.62	16.03	16.43	18.18	22.30	20.15	24.36	21.19	22.82	21.54	6.09
		Input	1.97	2.32	2.61	2.56	2.82	3.13	3.03	3.25	2.43	2.30	1.94	1.74
		COP	1.51	1.60	1.80	1.88	1.89	2.09	1.95	2.19	2.56	2.91	3.25	1.02
	69°F (20.5°C)	TC	9.68	12.14	15.54	15.94	17.70	21.82	19.67	23.88	20.70	22.33	21.06	5.61
		Input	1.95	2.31	2.59	2.55	2.81	3.12	3.02	3.24	2.41	2.28	1.93	1.73
		COP	1.45	1.54	1.76	1.84	1.85	2.05	1.91	2.16	2.51	2.87	3.20	0.95
	71.6°F (22°C)	TC	9.41	11.87	15.27	15.67	17.42	21.54	19.39	23.61	20.43	22.06	20.79	5.34
		Input	1.95	2.30	2.58	2.54	2.80	3.11	3.01	3.23	2.41	2.27	1.92	1.72
		COP	1.42	1.51	1.73	1.81	1.82	2.03	1.89	2.14	2.49	2.84	3.18	0.91
24K(208-230V)	59°F (15°C)	TC	14.80	18.20	23.64	24.95	26.50	26.55	26.91	30.53	34.20	33.37	30.87	30.94
		Input	2.83	3.33	3.60	3.50	3.64	3.26	3.29	3.62	3.75	3.46	2.54	2.19
		COP	5.23	5.47	6.57	7.12	7.28	8.14	8.17	8.42	9.13	9.64	12.15	14.12
	64.4°F (18°C)	TC	14.89	18.30	23.74	25.04	26.59	26.64	27.00	30.62	34.29	33.47	30.96	31.04
		Input	2.90	3.40	3.67	3.57	3.71	3.33	3.37	3.69	3.82	3.53	2.61	2.26
		COP	1.51	1.58	1.90	2.05	2.10	2.34	2.35	2.43	2.63	2.78	3.48	4.02
	69°F (20.5°C)	TC	14.97	18.37	23.81	25.12	26.67	26.72	27.08	30.70	34.37	33.54	31.04	31.12
		Input	2.83	3.33	3.60	3.50	3.64	3.26	3.29	3.62	3.75	3.46	2.54	2.19
		COP	5.23	5.47	6.57	7.12	7.28	8.14	8.17	8.42	9.13	9.64	12.15	14.12
	71.6°F (22°C)	TC	11.94	15.34	20.78	22.09	23.63	23.69	24.05	27.66	31.33	30.51	28.01	28.08
		Input	2.99	3.49	3.76	3.67	3.80	3.43	3.46	3.79	3.91	3.63	2.71	2.36
		COP	1.17	1.29	1.62	1.76	1.82	2.03	2.04	2.14	2.35	2.47	3.03	3.49

**LEGEND**

- DB - Dry Bulb
- WB - Wet Bulb
- TC - Total Net Capacity (1000 Btu/hour)
- Input - Total Power (kW)
- COP - W/W

# COOLING PERFORMANCE DATA - DUCTED

MODEL	COOLING			OUTDOOR CONDITIONS (DB)												
	Indoor Conditions DB	WB		-22°F (-25°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	47°F (8°C)	77°F (25°C)	86°F (30°C)	95°F (35°C)	104°F (40°C)	113°F (45°C)	122°F (50°C)
9K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	9.94	9.84	9.73	9.25	9.24	7.96	10.57	10.10	9.59	10.32	9.25	8.02	4.73
			SC	6.68	6.61	6.54	6.36	6.36	5.72	7.05	6.81	6.59	6.93	6.37	5.75	4.39
			Input	0.08	0.14	0.20	0.23	0.22	0.28	0.59	0.72	0.79	1.10	1.09	1.06	0.69
	75.2°F (24°C)	62.6°F (17°C)	TC	10.23	10.13	10.02	9.54	9.53	8.25	10.86	10.39	9.88	10.61	9.54	8.31	5.02
			SC	7.00	6.92	6.85	6.52	6.52	5.64	7.42	7.11	6.75	7.25	6.52	5.68	3.43
			Input	0.01	0.07	0.13	0.15	0.15	0.20	0.52	0.65	0.72	1.03	1.01	0.98	0.61
	80.6°F (27°C)	66.2°F (19°C)	TC	10.93	10.82	10.72	10.23	10.22	8.95	11.55	11.09	10.57	11.30	10.24	9.00	5.71
			SC	7.35	7.28	7.21	6.88	6.88	6.02	7.77	7.46	7.11	7.61	6.89	6.06	3.84
			Input	0.00	0.06	0.12	0.15	0.14	0.20	0.51	0.64	0.71	1.03	1.01	0.98	0.61
	89.6°F (32°C)	73.4°F (23°C)	TC	12.49	12.38	12.28	11.79	11.78	10.51	13.11	12.65	12.13	12.86	11.80	10.56	7.27
			SC	7.64	7.58	7.51	7.22	7.21	6.43	8.02	7.74	7.42	7.87	7.22	6.46	4.45
			Input	0.03	0.09	0.15	0.18	0.17	0.23	0.54	0.67	0.74	1.06	1.04	1.01	0.64
12K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	11.90	11.76	11.62	10.53	10.14	12.21	10.60	11.41	12.60	12.55	10.74	9.24	5.40
			SC	8.25	8.16	8.06	7.70	7.59	8.54	7.78	8.08	8.69	8.70	7.84	7.17	5.40
			Input	0.32	0.37	0.42	0.40	0.47	0.58	0.50	0.75	1.07	1.26	1.14	1.10	0.71
	75.2°F (24°C)	62.6°F (17°C)	TC	12.85	12.71	12.57	11.48	11.09	13.16	11.55	12.36	13.55	13.49	11.69	10.19	6.35
			SC	8.77	8.67	8.58	7.83	7.57	8.98	7.88	8.43	9.24	9.21	7.98	6.95	4.33
			Input	0.32	0.37	0.42	0.40	0.48	0.59	0.51	0.75	1.07	1.27	1.15	1.11	0.71
	80.6°F (27°C)	66.2°F (19°C)	TC	13.82	13.68	13.54	12.45	12.07	14.14	12.52	13.33	14.52	14.47	12.67	11.16	7.32
			SC	9.22	9.13	9.03	8.30	8.05	9.43	8.35	8.89	9.68	9.65	8.45	7.44	4.88
			Input	0.34	0.38	0.43	0.42	0.49	0.60	0.52	0.76	1.08	1.28	1.16	1.12	0.72
	89.6°F (32°C)	73.4°F (23°C)	TC	15.67	15.53	15.40	14.30	13.92	15.99	14.37	15.18	16.37	16.32	14.52	13.01	9.17
			SC	10.50	10.40	10.31	9.58	9.32	10.71	9.62	10.17	10.96	10.93	9.72	8.71	6.14
			Input	0.36	0.41	0.45	0.44	0.51	0.62	0.54	0.78	1.10	1.30	1.18	1.14	0.75
18K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	19.53	19.00	18.47	16.70	16.85	17.64	15.70	16.01	15.87	15.41	12.07	9.91	7.15
			SC	14.65	14.25	13.86	12.05	12.29	12.67	11.52	11.63	11.58	11.56	10.11	9.29	7.14
			Input	0.53	0.60	0.66	0.72	0.73	0.66	0.89	1.43	1.40	1.63	1.40	1.39	1.30
	75.2°F (24°C)	62.6°F (17°C)	TC	21.27	20.74	20.21	18.44	18.59	19.38	17.44	17.75	17.60	17.15	13.81	11.65	8.89
			SC	15.94	15.54	15.15	13.82	13.93	14.52	13.07	13.30	13.19	12.85	10.35	8.73	6.66
			Input	0.58	0.65	0.71	0.77	0.79	0.71	0.94	1.48	1.45	1.69	1.45	1.44	1.35
	80.6°F (27°C)	66.2°F (19°C)	TC	22.95	22.43	21.90	20.12	20.28	21.07	19.13	19.43	19.29	18.83	15.50	13.33	10.57
			SC	16.88	16.49	16.10	14.79	14.91	15.49	14.06	14.29	14.18	13.85	11.39	9.80	7.77
			Input	0.63	0.69	0.76	0.82	0.83	0.76	0.99	1.53	1.49	1.73	1.50	1.49	1.40
	89.6°F (32°C)	73.4°F (23°C)	TC	26.11	25.58	25.05	23.28	23.43	24.22	22.28	22.59	22.44	21.99	18.65	16.49	13.73
			SC	17.29	16.94	16.59	15.41	15.51	16.04	14.75	14.96	14.86	14.56	12.35	10.92	9.09
			Input	0.71	0.78	0.84	0.90	0.91	0.84	1.07	1.61	1.58	1.81	1.58	1.57	1.48
24K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	31.53	30.71	29.88	24.57	27.20	29.99	28.58	26.53	25.04	22.40	21.34	18.05	10.69
			SC	26.32	25.63	24.94	18.24	17.55	17.53	19.09	20.49	19.76	18.70	18.01	16.49	16.21
			Input	1.96	1.97	1.99	2.14	2.13	2.14	1.96	1.73	1.80	2.10	2.29	2.40	2.64
	75.2°F (24°C)	62.6°F (17°C)	TC	34.44	33.62	32.80	27.48	30.11	32.90	31.50	29.44	27.96	25.31	24.25	20.97	13.61
			SC	25.23	24.62	24.02	20.13	22.06	24.10	23.07	21.56	20.48	18.54	17.76	15.36	9.97
			Input	2.36	2.37	2.39	2.54	2.53	2.54	2.36	2.13	2.20	2.50	2.69	2.80	3.04
	80.6°F (27°C)	66.2°F (19°C)	TC	37.22	36.40	35.58	30.26	32.90	35.68	34.28	32.22	30.74	28.10	27.03	23.75	16.39
			SC	25.17	24.61	24.05	20.46	22.24	24.12	23.17	21.78	20.78	18.99	18.28	16.06	11.08
			Input	2.56	2.58	2.59	2.74	2.73	2.74	2.56	2.33	2.40	2.71	2.89	3.00	3.24
	89.6°F (32°C)	73.4°F (23°C)	TC	42.44	41.62	40.80	35.48	38.11	40.90	39.49	37.44	35.95	33.31	32.25	28.96	21.60
			SC	28.85	28.29	27.73	24.12	25.91	27.80	26.84	25.45	24.44	22.64	21.92	19.69	14.68
			Input	2.90	2.92	2.94	3.08	3.08	3.08	2.91	2.68	2.75	3.05	3.24	3.34	3.59

**LEGEND**

- DB - Dry Bulb
- WB - Wet Bulb
- TC - Total Net Capacity (1000 Btu/hour)
- SC - Sensible Capacity (1000 Btu/hour)
- Input - Total Power (kW)

# HEATING PERFORMANCE DATA - DUCTED

MODEL	HEATING Indoor Conditions DB		OUTDOOR CONDITIONS (DB)											
			-22°F (-30°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	19.4°F (-7°C)	24.8°F (-4°C)	32°F (0°C)	39.2°F (4°C)	44.6°F (7°C)	53.6°F (12°C)
09K(208-230V)	59°F (15°C)	TC	5.43	7.05	9.61	10.86	10.83	13.82	14.18	14.73	16.31	18.97	16.04	15.47
		Input	1.39	1.45	1.43	1.51	1.51	1.70	1.73	1.77	1.81	2.08	1.36	1.13
		COP	1.15	1.42	1.97	2.11	2.10	2.37	2.39	2.43	2.63	2.67	3.47	4.02
	64.4°F (18°C)	TC	5.47	7.08	9.64	10.90	10.87	13.85	14.21	14.76	16.34	19.00	16.07	15.51
		Input	1.42	1.49	1.46	1.54	1.55	1.74	1.77	1.80	1.85	2.11	1.39	1.16
		COP	1.13	1.40	1.93	2.07	2.06	2.34	2.36	2.40	2.59	2.63	3.39	3.91
	69°F (20.5°C)	TC	5.50	7.11	9.67	10.93	10.90	13.88	14.24	14.79	16.37	19.03	16.10	15.53
		Input	1.39	1.45	1.43	1.51	1.51	1.70	1.73	1.77	1.81	2.08	1.36	1.13
		COP	1.15	1.42	1.97	2.11	2.10	2.37	2.39	2.43	2.63	2.67	3.47	4.02
	71.6°F (22°C)	TC	4.25	5.86	8.42	9.67	9.65	12.63	12.99	13.54	15.12	17.78	14.85	14.28
		Input	1.47	1.53	1.51	1.59	1.59	1.78	1.81	1.85	1.89	2.16	1.44	1.21
		COP	0.85	1.12	1.63	1.78	1.78	2.08	2.10	2.14	2.34	2.41	3.03	3.47
12K(208-230V)	59°F (15°C)	TC	6.24	7.85	10.63	11.81	12.65	13.82	14.25	14.66	15.36	18.19	15.55	15.48
		Input	1.40	1.55	1.70	1.74	1.79	1.64	1.67	1.69	1.65	2.00	1.35	1.12
		COP	1.31	1.48	1.83	1.99	2.07	2.47	2.50	2.55	2.73	2.67	3.38	4.04
	64.4°F (18°C)	TC	6.25	7.86	10.64	11.82	12.66	13.83	14.26	14.68	15.38	18.20	15.56	15.49
		Input	1.40	1.55	1.70	1.74	1.79	1.64	1.67	1.69	1.65	2.00	1.35	1.13
		COP	1.31	1.48	1.83	1.99	2.07	2.47	2.50	2.55	2.73	2.67	3.38	4.04
	69°F (20.5°C)	TC	6.26	7.87	10.65	11.83	12.67	13.84	14.27	14.69	15.38	18.21	15.57	15.50
		Input	1.40	1.55	1.70	1.74	1.79	1.64	1.67	1.69	1.65	2.00	1.35	1.13
		COP	1.31	1.48	1.83	2.00	2.07	2.47	2.50	2.55	2.73	2.67	3.38	4.03
	71.6°F (22°C)	TC	6.27	7.87	10.65	11.83	12.68	13.85	14.27	14.69	15.39	18.21	15.57	15.51
		Input	1.40	1.55	1.70	1.74	1.79	1.64	1.67	1.69	1.65	2.00	1.35	1.13
		COP	1.31	1.49	1.83	2.00	2.07	2.47	2.50	2.55	2.73	2.67	3.38	4.03
18K(208-230V)	59°F (15°C)	TC	11.25	13.83	17.40	17.82	19.66	23.98	21.73	26.15	22.81	24.52	23.19	6.98
		Input	1.90	2.23	2.50	2.46	2.71	3.01	2.91	3.12	2.34	2.21	1.87	1.68
		COP	1.74	1.82	2.04	2.12	2.12	2.34	2.19	2.45	2.86	3.25	3.64	1.22
	64.4°F (18°C)	TC	10.66	13.24	16.81	17.23	19.07	23.39	21.13	25.55	22.22	23.93	22.59	6.39
		Input	1.88	2.22	2.49	2.45	2.70	2.99	2.89	3.11	2.32	2.19	1.85	1.66
		COP	1.66	1.75	1.98	2.06	2.07	2.29	2.14	2.41	2.81	3.20	3.57	1.13
	69°F (20.5°C)	TC	10.15	12.73	16.30	16.72	18.56	22.88	20.63	25.05	21.71	23.42	22.09	5.88
		Input	1.87	2.20	2.48	2.43	2.68	2.98	2.88	3.09	2.31	2.18	1.84	1.65
		COP	1.59	1.69	1.93	2.02	2.03	2.25	2.10	2.37	2.76	3.15	3.52	1.04
	71.6°F (22°C)	TC	9.87	12.45	16.01	16.43	18.27	22.59	20.34	24.76	21.43	23.14	21.80	5.60
		Input	1.86	2.19	2.47	2.42	2.68	2.97	2.87	3.09	2.30	2.17	1.83	1.64
		COP	1.56	1.66	1.90	1.99	2.00	2.23	2.08	2.35	2.73	3.12	3.49	1.00
24K(208-230V)	59°F (15°C)	TC	15.46	19.02	24.71	26.07	27.69	27.74	28.12	31.90	35.73	34.87	32.26	32.33
		Input	2.53	2.98	3.22	3.14	3.26	2.92	2.95	3.24	3.35	3.10	2.27	1.96
		COP	6.11	6.39	7.67	8.31	8.50	9.51	9.53	9.83	10.65	11.25	14.19	16.48
	64.4°F (18°C)	TC	15.56	19.12	24.80	26.17	27.78	27.84	28.22	31.99	35.83	34.97	32.36	32.43
		Input	2.53	2.98	3.22	3.14	3.26	2.92	2.95	3.25	3.36	3.10	2.28	1.96
		COP	1.80	1.88	2.25	2.44	2.50	2.79	2.80	2.89	3.13	3.30	4.17	4.84
	69°F (20.5°C)	TC	15.64	19.20	24.88	26.25	27.86	27.92	28.30	32.08	35.91	35.05	32.44	32.51
		Input	2.54	2.98	3.23	3.14	3.26	2.92	2.95	3.25	3.36	3.10	2.28	1.97
		COP	1.81	1.89	2.26	2.45	2.50	2.80	2.81	2.89	3.13	3.31	4.17	4.85
	71.6°F (22°C)	TC	15.69	19.25	24.93	26.30	27.91	27.97	28.34	32.12	35.96	35.10	32.48	32.56
		Input	2.54	2.98	3.23	3.14	3.26	2.92	2.96	3.25	3.36	3.11	2.28	1.97
		COP	1.81	1.89	2.26	2.45	2.51	2.80	2.81	2.90	3.14	3.31	4.18	4.85

**LEGEND**

- DB - Dry Bulb
- WB - Wet Bulb
- TC - Total Net Capacity (1000 Btu/hour)
- Input - Total Power (kW)
- COP - W/W

# COOLING PERFORMANCE DATA - CONSOLE

MODEL	COOLING			OUTDOOR CONDITIONS (DB)												
	Indoor Conditions DB WB			-22°F (-25°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	47°F (8°C)	77°F (25°C)	86°F (30°C)	95°F (35°C)	104°F (40°C)	113°F (45°C)	122°F (50°C)
12K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	11.56	11.38	11.20	10.46	10.20	10.74	10.46	10.77	10.67	10.65	10.23	8.81	4.90
			SC	7.86	7.74	7.62	7.14	7.02	7.28	7.12	7.33	7.26	7.24	6.97	6.32	4.63
			Input	0.37	0.41	0.45	0.52	0.47	0.58	0.47	0.68	0.80	0.96	1.10	1.07	1.07
	75.2°F (24°C)	62.6°F (17°C)	TC	13.50	13.32	13.14	12.41	12.14	12.69	12.41	12.72	12.62	12.59	12.17	10.76	6.85
			SC	9.10	8.97	8.85	8.36	8.18	8.55	8.36	8.57	8.50	8.48	8.20	7.25	4.61
			Input	0.60	0.63	0.67	0.74	0.69	0.80	0.69	0.90	1.02	1.18	1.32	1.29	1.29
	80.6°F (27°C)	66.2°F (19°C)	TC	15.01	14.83	14.65	13.92	13.65	14.20	13.92	14.23	14.13	14.10	13.68	12.27	8.36
			SC	9.79	9.67	9.56	9.08	8.90	9.26	9.08	9.28	9.21	9.20	8.92	8.00	5.45
			Input	0.72	0.75	0.79	0.86	0.81	0.93	0.81	1.02	1.14	1.30	1.44	1.41	1.41
	89.6°F (32°C)	73.4°F (23°C)	TC	18.02	17.84	17.67	16.93	16.66	17.21	16.93	17.24	17.14	17.11	16.69	15.28	11.37
			SC	10.29	10.19	10.09	9.67	9.52	9.83	9.67	9.85	9.79	9.77	9.53	8.73	6.49
			Input	0.96	0.99	1.03	1.10	1.05	1.17	1.05	1.26	1.38	1.54	1.68	1.65	1.65
18K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	20.67	20.11	19.56	17.68	17.84	18.68	16.62	16.95	16.79	16.31	12.78	10.49	7.57
			SC	15.51	15.09	14.67	12.76	13.01	13.41	12.19	12.31	12.26	12.24	10.70	9.83	7.56
			Input	0.54	0.61	0.67	0.74	0.75	0.68	0.91	1.47	1.43	1.67	1.43	1.42	1.33
	75.2°F (24°C)	62.6°F (17°C)	TC	22.51	21.96	21.40	19.52	19.68	20.52	18.46	18.79	18.63	18.15	14.62	12.33	9.41
			SC	16.87	16.45	16.03	14.63	14.75	15.37	13.84	14.08	13.96	13.60	10.95	9.24	7.05
			Input	0.60	0.66	0.73	0.79	0.80	0.73	0.96	1.52	1.48	1.72	1.49	1.47	1.38
	80.6°F (27°C)	66.2°F (19°C)	TC	24.30	23.74	23.18	21.30	21.47	22.30	20.25	20.57	20.42	19.94	16.40	14.11	11.19
			SC	17.86	17.45	17.04	15.66	15.78	16.39	14.89	15.12	15.01	14.66	12.06	10.38	8.23
			Input	0.64	0.71	0.77	0.84	0.85	0.78	1.01	1.57	1.53	1.77	1.53	1.52	1.43
	89.6°F (32°C)	73.4°F (23°C)	TC	27.64	27.08	26.52	24.64	24.80	25.64	23.59	23.91	23.76	23.27	19.74	17.45	14.53
			SC	20.42	20.01	19.59	18.20	18.33	18.94	17.43	17.67	17.55	17.20	14.59	12.89	10.73
			Input	0.73	0.79	0.86	0.92	0.94	0.86	1.09	1.65	1.61	1.86	1.62	1.61	1.51
24K(208-230V)	69.8°F (21°C)	59°F (15°C)	TC	25.58	25.49	25.40	24.53	23.95	23.72	26.26	28.95	27.59	25.61	24.18	21.63	20.60
			SC	18.03	17.96	17.90	17.61	16.94	16.92	18.43	19.79	19.08	18.05	17.39	15.92	15.65
			Input	1.96	1.98	2.00	2.15	2.14	2.15	1.97	1.73	1.81	2.11	2.30	2.41	2.65
	75.2°F (24°C)	62.6°F (17°C)	TC	23.23	23.14	23.05	22.19	21.60	21.37	23.91	26.61	25.25	23.26	21.83	19.28	18.25
			SC	17.52	17.46	17.39	16.74	16.29	16.12	18.04	20.07	19.05	17.55	16.47	14.54	13.77
			Input	2.37	2.38	2.40	2.55	2.54	2.55	2.37	2.14	2.21	2.51	2.70	2.81	3.05
	80.6°F (27°C)	66.2°F (19°C)	TC	23.42	23.33	23.24	22.37	21.78	21.56	24.10	26.79	25.43	23.45	22.02	19.46	18.44
			SC	17.87	17.80	17.73	17.07	16.62	16.45	18.39	20.44	19.41	17.89	16.80	14.85	14.07
			Input	2.57	2.59	2.60	2.75	2.74	2.75	2.57	2.34	2.41	2.72	2.90	3.01	3.25
	89.6°F (32°C)	73.4°F (23°C)	TC	24.29	24.20	24.11	23.25	22.66	22.43	24.97	27.67	26.31	24.32	22.89	20.34	19.31
			SC	17.68	17.61	17.55	16.92	16.49	16.33	18.18	20.14	19.15	17.70	16.66	14.80	14.06
			Input	2.91	2.93	2.95	3.10	3.09	3.10	2.92	2.69	2.76	3.06	3.25	3.36	3.60

## LEGEND

DB - Dry Bulb  
 WB - Wet Bulb  
 TC - Total Net Capacity (1000 Btu/hour)  
 SC - Sensible Capacity (1000 Btu/hour)  
 Input - Total Power (kW)

# HEATING PERFORMANCE DATA - CONSOLE

MODEL	HEATING		OUTDOOR CONDITIONS (DB)											
			-22°F (-30°C)	-13°F (-25°C)	-4°F (-20°C)	0°F (-17°C)	5°F (-15°C)	17°F (-8°C)	19.4°F (-7°C)	24.8°F (-4°C)	32°F (0°C)	39.2°F (4°C)	44.6°F (7°C)	53.6°F (12°C)
12K (208-230V)	59°F (15°C)	TC	5.70	6.00	10.42	11.53	12.30	13.48	13.93	14.55	15.90	11.91	14.27	14.66
		Input	1.44	1.39	1.69	1.75	1.80	1.60	1.69	1.69	1.69	1.48	1.27	1.07
		COP	1.16	1.27	1.81	1.94	2.01	2.46	2.42	2.53	2.76	2.36	3.30	4.03
	64.4°F (18°C)	TC	5.81	6.10	10.52	11.64	12.41	13.58	14.03	14.66	16.00	12.02	14.38	14.76
		Input	1.49	1.44	1.75	1.80	1.85	1.66	1.74	1.74	1.74	1.54	1.32	1.12
		COP	1.14	1.24	1.77	1.90	1.96	2.40	2.36	2.47	2.69	2.29	3.19	3.86
	69°F (20.5°C)	TC	5.90	6.19	10.61	11.72	12.49	13.67	14.12	14.74	16.09	12.11	14.46	14.85
		Input	1.44	1.39	1.69	1.75	1.80	1.60	1.69	1.69	1.69	1.48	1.27	1.07
		COP	1.16	1.27	1.81	1.94	2.01	2.46	2.42	2.53	2.76	2.36	3.30	4.03
	71.6°F (22°C)	TC	5.86	6.16	10.58	11.69	12.46	13.64	14.09	14.71	16.06	12.07	14.43	14.82
		Input	1.57	1.51	1.82	1.87	1.93	1.73	1.82	1.81	1.82	1.61	1.39	1.19
		COP	1.10	1.19	1.70	1.83	1.90	2.31	2.27	2.38	2.59	2.20	3.04	3.64
18K(208-230V)	59°F (15°C)	TC	10.99	13.51	17.00	17.41	19.20	23.42	21.22	25.54	22.28	23.95	22.65	6.82
		Input	1.90	2.23	2.50	2.46	2.71	3.01	2.91	3.12	2.33	2.21	1.87	1.68
		COP	1.70	1.78	1.99	2.07	2.07	2.28	2.14	2.40	2.80	3.18	3.55	1.19
	64.4°F (18°C)	TC	10.41	12.93	16.42	16.83	18.62	22.84	20.64	24.96	21.70	23.37	22.07	6.24
		Input	1.88	2.21	2.49	2.44	2.70	2.99	2.89	3.11	2.32	2.19	1.85	1.66
		COP	1.62	1.71	1.93	2.02	2.02	2.24	2.09	2.35	2.74	3.12	3.49	1.10
	69°F (20.5°C)	TC	9.92	12.44	15.92	16.33	18.13	22.35	20.15	24.46	21.21	22.88	21.57	5.75
		Input	1.87	2.20	2.47	2.43	2.68	2.98	2.88	3.09	2.31	2.18	1.84	1.65
		COP	1.56	1.66	1.89	1.97	1.98	2.20	2.05	2.32	2.70	3.08	3.44	1.02
	71.6°F (22°C)	TC	9.64	12.16	15.64	16.05	17.85	22.07	19.87	24.18	20.93	22.60	21.29	5.47
		Input	1.86	2.19	2.47	2.42	2.68	2.97	2.87	3.09	2.30	2.17	1.83	1.64
		COP	1.52	1.62	1.86	1.94	1.96	2.18	2.03	2.30	2.67	3.05	3.41	0.98
24K(208-230V)	59°F (15°C)	TC	15.30	18.82	24.45	25.80	27.39	27.45	27.82	31.56	35.36	34.51	31.92	31.99
		Input	2.89	3.40	3.68	3.58	3.72	3.33	3.37	3.70	3.83	3.54	2.60	2.24
		COP	5.29	5.54	6.65	7.21	7.37	8.24	8.26	8.52	9.23	9.75	12.30	14.29
	64.4°F (18°C)	TC	15.40	18.92	24.54	25.89	27.49	27.55	27.92	31.66	35.45	34.60	32.02	32.09
		Input	2.89	3.40	3.68	3.58	3.72	3.33	3.37	3.71	3.83	3.54	2.60	2.24
		COP	1.56	1.63	1.95	2.12	2.16	2.42	2.43	2.50	2.71	2.86	3.61	4.19
	69°F (20.5°C)	TC	15.48	19.00	24.62	25.98	27.57	27.63	28.00	31.74	35.53	34.68	32.10	32.17
		Input	2.90	3.41	3.68	3.58	3.72	3.34	3.37	3.71	3.83	3.54	2.60	2.24
		COP	1.57	1.63	1.96	2.12	2.17	2.43	2.43	2.51	2.72	2.87	3.62	4.20
	71.6°F (22°C)	TC	15.52	19.04	24.67	26.02	27.62	27.67	28.05	31.78	35.58	34.73	32.14	32.22
		Input	2.90	3.41	3.69	3.59	3.73	3.34	3.37	3.71	3.84	3.54	2.60	2.25
		COP	1.57	1.64	1.96	2.13	2.17	2.43	2.44	2.51	2.72	2.87	3.62	4.20

**LEGEND**

DB - Dry Bulb  
 WB - Wet Bulb  
 TC - Total Net Capacity (1000 Btu/hour)  
 Input - Total Power (kW)  
 COP - W/W

# 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. 7 — 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 (size 12K 115V)	- 13 / 122 (- 25 / 50)	- 13 / 86 (- 25 / 30)
Outdoor DB (All sizes 208/ 230V)	- 13 / 122 (- 25 / 50)	- 13 / 86 (- 30 / 30)

**NOTE:** Reference the product installation instructions for more information.

## Cut In/Out Temperatures

CUT IN/OUT TEMPERATURES° F (° C)									
		STANDBY MODE				RUNNING MODE			
		COOLING		HEATING		COOLING		HEATING	
		Cut In	Cut Out	Cut In	Cut Out	Cut In	Cut Out	Cut In	Cut Out
<b>12K</b>	<b>(115V)</b>	-7.6 (-22)	-13 (-25)	-7.6 (-22)	-13 (-25)	-7.6 (-22)	-13 (-25)	-7.6 (-22)	-13 (-25)
<b>9K-24K</b>	<b>(208/230V)</b>	-25.6 (-32)	- 31(-35)	-25.6 (-32)	-31(-35)	-25.6 (-32)	-40 (-40)	-25.6 (-32)	-40 (-40)



## Metering Devices

The outdoor unit has an expansion valve to manage the refrigerant flow of the connected fan coil.

## Drain Connections

Install drains to meet the local sanitation codes.

## Refrigerant Lines

### General refrigerant line sizing:

1. The outdoor units are shipped with a full charge of R410A 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), review the "Long Line Applications:" on page 25 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 (Review "Long Line Applications:" on page 25 for details).
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 the line sizing is required.
2. Add refrigerant per the Additional Charge Table.

ADDITIONAL CHARGE TABLE

UNIT SIZE	TOTAL LINE LENGTH ft (m)		ADDITIONAL CHARGE, oz/ft. ft (m)			
	Min	Max	10 - 25 (3 - 8)	>25 - 82 (8 - 25)	>82 - 98 (25 - 30)	>98 - 164 (30 - 50)
9	10(3)	82(25)	None	0.16		
12						
18		98(30)			0.16	
24						

## 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 exist, 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.  
 Use copper conductors only with a 600 volt insulation rating wire.

**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.

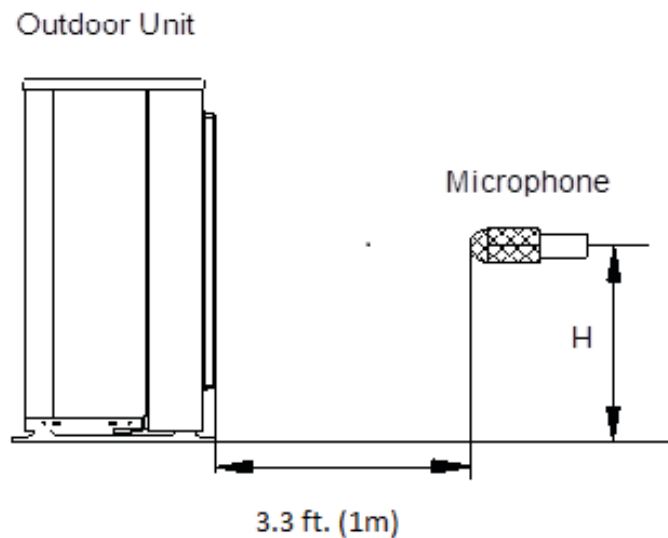
## Air Flow Data

SYSTEMS	12K (115V)	9K (208/230V)	12K (208/230V)	18K (208/230V)	24K (208/230V)
Outdoor (CFM)	794.12	1324	1324	1765	2235

## Sound Pressure

SYSTEMS		12K (115V)	9K (208/230V)	12K (208/230V)	18K (208/230V)	24K (208/230V)
Outdoor Sound Pressure Level	dB(A)	54	54.4	56	59	62

## Outdoor Unit Sound Pressure Test Conditions



**Fig. 9 — Outdoor Unit Sound Pressure Test Conditions**

**NOTE:** H=0.5 x Height of outdoor unit

	INDOOR CONDITION		OUTDOOR CONDITION	
	DB	WB	DB	WB
<b>Cooling</b>	80.6F (27C)	66.2F (19C)	95F (35C)	75.2F (24C)
<b>Heating</b>	68F (20C)	59F (15C)	44.6F (7C)	42.8F (6C)

## ELECTRICAL DATA

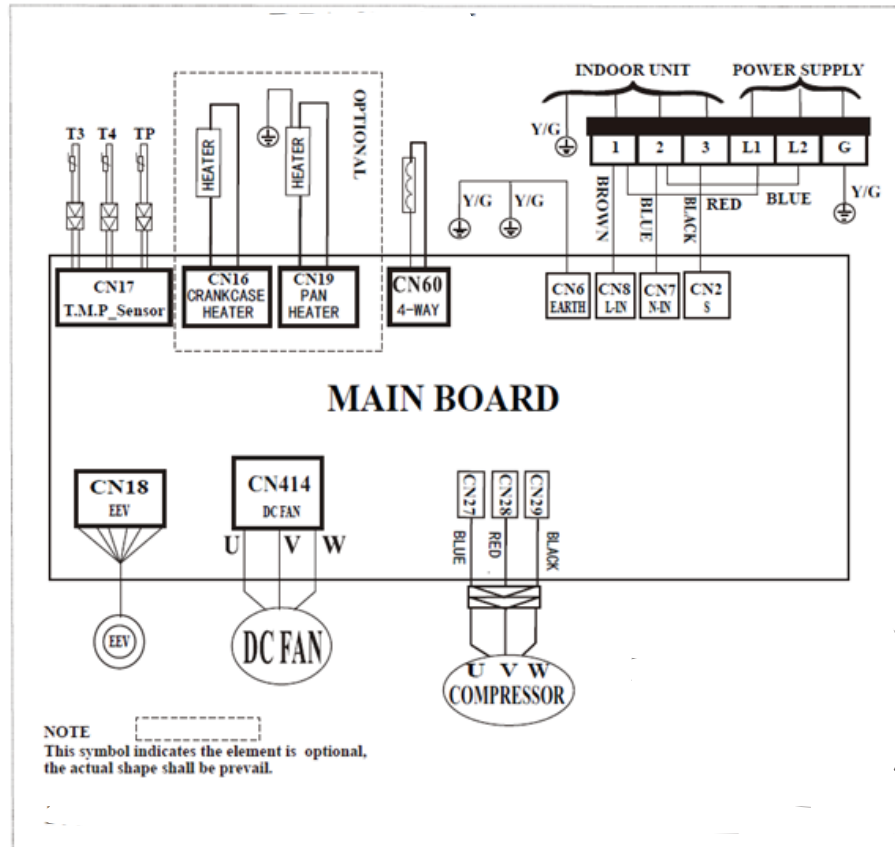
OUTDOOR UNIT SIZE		12K	9K	12K	18K	24K
<b>Power Supply</b>	Volts – PH- Hz	115 - 1 - 60	208/230 - 1 - 60	208/230 - 1 - 60	208/230 - 1 - 60	208/230 - 1 - 60
	Max – Min*	127 - 104	253 - 187	253 - 187	253 - 187	253 - 187
	MCA	15	9	9	17	20
	Recommended Fuse Size	20	15	15	20	25
	Max Fuse/ CB AMP	20	15	15	25	30
<b>Compressor</b>	Volts – PH – Hz	115 - 1 - 60	208/230 - 1 - 60	208/230 - 1 - 60	208/230 - 1 - 60	208/230 - 1 - 60
	RLA	10	5.25	5.65	12.3	14

\*Permissible limits of the voltage range at which the unit operates satisfactorily.

### LEGEND

**FLA** - Full Load Amps  
**MCA** - Minimum Circuit Amps  
**RLA** - Rated Load Amps

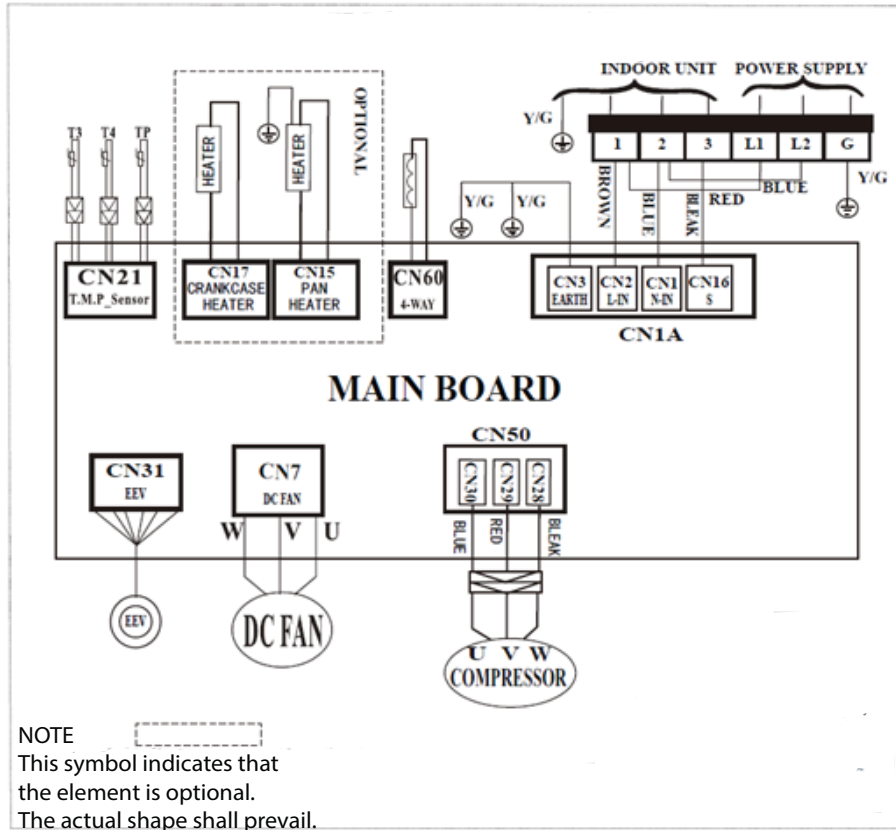
# WIRING DIAGRAMS



**Fig. 10 — Wiring Diagram - Sizes 12K (115V)**

		CN2/7/8	INPUT	230V	AC
		CN18	OUTPUT	0~12V	DC
		CN414	OUTPUT	0~310V	AC
		CN60	OUTPUT	230V	AC
		CN17	OUTPUT	0~5V	DC
T3	Condenser TEMP. Sensor	CN16	OUTPUT	230V	AC
T4	Ambient TEMP. Sensor	CN19	OUTPUT	230V	AC
TP	Discharge TEMP. Sensor	CN27/28/29	OUTPUT	0~310V	AC

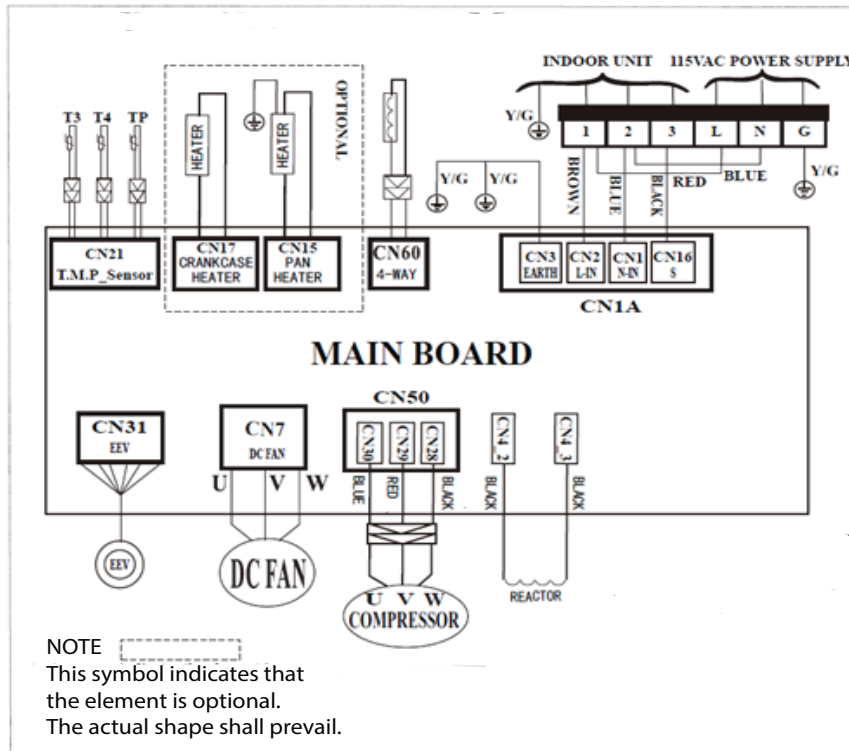
# WIRING DIAGRAMS (CONT)



**Fig. 11 — Wiring Diagram - Sizes 9-12K (208/230V)**

		CN1A	INPUT	230V	AC
		CN31	OUTPUT	0~12V	DC
		CN7	OUTPUT	0~310V	AC
		CN60	OUTPUT	230V	AC
		CN21	OUTPUT	0~5V	DC
T3	Condenser TEMP. Sensor	CN15	OUTPUT	230V	AC
T4	Ambient TEMP. Sensor	CN17	OUTPUT	230V	AC
TP	Discharge TEMP. Sensor	CN30	OUTPUT	0~310V	AC

# WIRING DIAGRAMS (CONT.)



**Fig. 12 — Wiring Diagram Sizes 18 - 24K**

		CN1A	INPUT	115V	AC
		CN4_2/4_3	INPUT	115V	AC
		CN7	OUTPUT	0~310V	AC
		CN60	OUTPUT	115V	AC
		CN21	OUTPUT	0~5V	DC
T3	Condenser TEMP. Sensor	CN15	OUTPUT	115V	AC
T4	Ambient TEMP. Sensor	CN17	OUTPUT	115V	AC
TP	Discharge TEMP. Sensor	CN50	OUTPUT	0~310V	AC

# GUIDE SPECIFICATIONS

## HORIZONTAL DISCHARGE DUCTLESS UNITS

Size Range: 3/4 to 3 Ton Nominal Cooling and Heating Capacity  
Model Number: **DLCSRB**

### 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 1995.
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 discharge 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.

##### **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. A time delay control sequence is provided standard through the fan coil board
- b. Automatic outdoor fan motor protection.

###### **2. Safeties:**

- a. System diagnostics
- b. Compressor motor current and temperature overload protection
- c. Outdoor fan failure protection.

##### **H. Electric Requirements:**

1. Unit operates on single- phase, 60 Hz power at 115V for unit size 12 and 208/230V for unit sizes 09, 12, 18 and 24 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.