



Multi-Room Ductless heat-pump systems

Submittal Data: MULTI42HP230V1B0 42,000 BTU/H Wall Mounted Heat- Pump System

Job Name Location Date

Purchaser Engineer

Submitted To For Reference Approval Construction

Unit Designation Schedule No.

- GENERAL FEATURES**
- Up To Five Indoor Units Comfort (5-Port)
 - G10 DC Inverter Technology
 - Quiet Operation - Both Indoor & Outdoor
 - Wireless Remote Controller
 - Acrylic Resin/Anti-Corrosion Coil Protection Inside & Out
 - Intelligent Defrost
 - Auto Restart on Power Outages
 - Multi-point Diagnostics
 - Limited 7 yr Compressor & 5 yr Parts Warranty



System Ratings

Outdoor Unit Data

Non-Ducted Indoor

Rated Cooling Capacity	39000 BTUH
Cooling Capacity (min-max)	8,871-40,944 BTUH
Rated Heating Capacity	45000 BTUH
Heating Capacity (min-max)	8,871-46,062 BTUH
SEER/EER	21/10.4
HSPF/COP	10.2/3.6

Compressor	Type	DC Inverter Driven Rotary
	RLA	17.8 A
Fan Motor	Output Power	170 W
	FLA	0.8 A
	Air Flow (Max)	4,531 CFM

Ducted Indoor

Rated Cooling Capacity	39500 BTUH
Cooling Capacity (min-max)	13,800-42,800 BTUH
Rated Heating Capacity	46500 BTUH
Heating Capacity (min-max)	7,500-47,000 BTUH
SEER/EER	14.7/9.8
HSPF/COP	9.6/3.1

Sound Pressure

Cooling	61 db(A)
Heating	61 db(A)

Dimensions & Weights

Unit Dimensions (LxHxD)	42.5 x 43.4 x 17.3 -in
Weight (Net/Shipping)	198/216 LBS

Min. Number of Indoor Units 2
Max. Number of Indoor Units 5

Operating Range

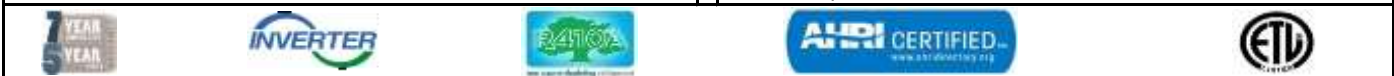
Cooling	(min-max)	0 ~ 118°F
		-18 ~ 48°C
Heating	(min-max)	-4 ~ 75°F
		-20 ~ 24°C

Refrigerant Piping Data

Refrigerant Type	R410A
Refrigerant Charge	128.8
Additional Charge Per Line Length	0.21-oz/ft
Connection Method	Flared
Factory Charge for Total Line Length	131-ft
Total Refrigerant Pipe Length	246-ft
Max Refrigerant Piping Length to any Indoor Unit	82-ft
Min Refrigerant Piping Length to any Indoor Unit	10-ft
Max Elevation between Indoor Units	25-ft
Max Lift from Outdoor to Indoor Unit	49-ft
Max Drop from Outdoor to Indoor Unit	49-ft

Power Supply

Normal Operational Voltage	208/230 V, 1 Phase, 60 Hz
Voltage Range	187 - 253 V
Main Power Wire Size	8-2 AWG
Interconnecting Cable Wire Size	14-4 AWG
MCA	24.0 A
MOCP/Breaker Size	40 A

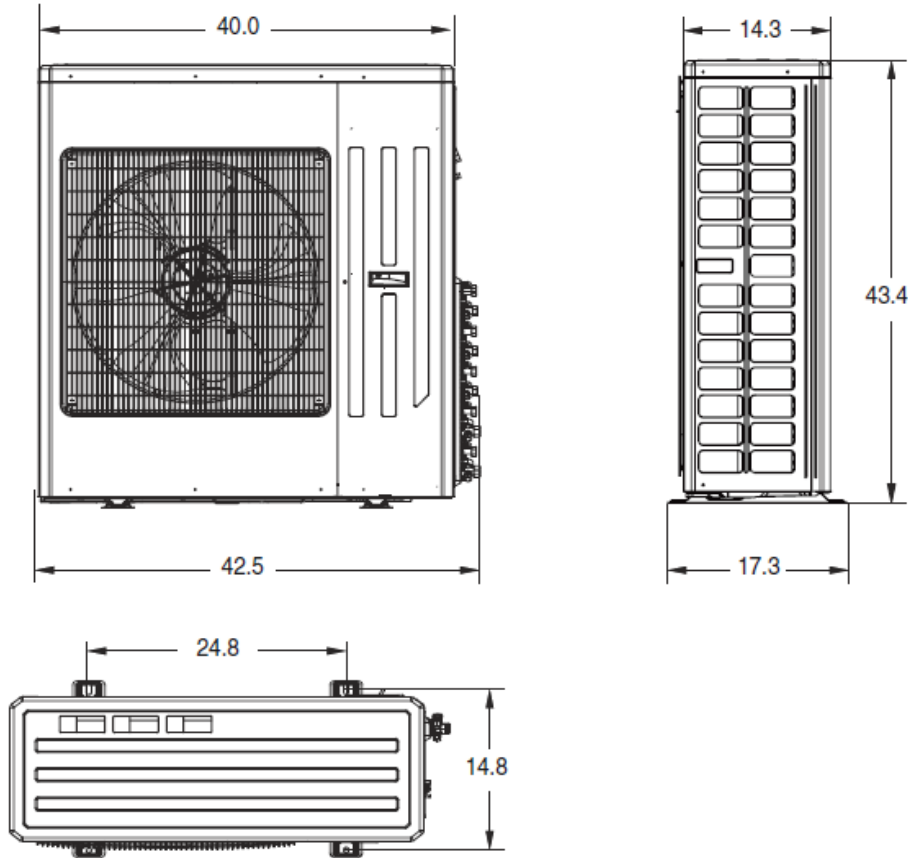


Units: inch



42,000 BTUH MODEL

Model # MULTI42HP230V1BO 42,000 BTUH 230V



Suction/Gas Line Port Size

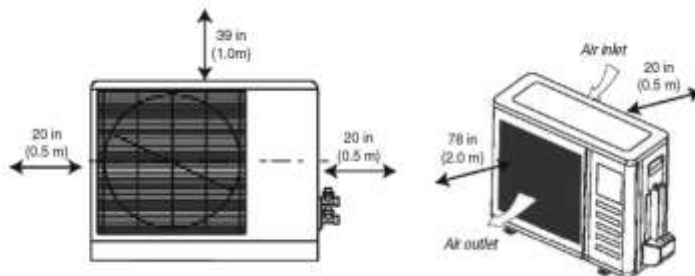
Port #1	3/8-in OD Flared
Port #2	3/8-in OD Flared
Port #3	3/8-in OD Flared
Port #4	3/8-in OD Flared
Port #5	3/8-in OD Flared

Liquid Line Port Size

Port #1	1/4-in OD Flared
Port #2	1/4-in OD Flared
Port #3	1/4-in OD Flared
Port #4	1/4-in OD Flared
Port #5	1/4-in OD Flared

MINIMUM SPACING REQUIREMENTS

Units: inch (mm)



Notes:

1. Recommended Interconnecting Cable Type Stranded Copper Conductors THHN 600V Unshielded Wire
2. Power wiring cable size must comply with applicable national and local codes.
3. Test conditions are based on AHRI 210/240.

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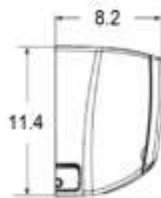


Units: inch

9,000 AND 12,000 BTUH MODELS

Model # VIR09HP230V1AH 9,000 BTUH 230V

Model # VIR12HP230V1AH 12,000 BTUH 230V



9,000 BTU	
Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	3/8-in OD Flared
Drain Connector	5/8-in OD

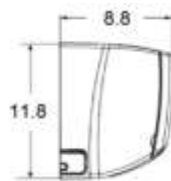
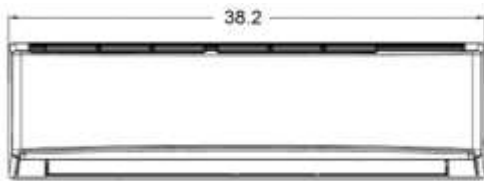
12,000 BTU	
Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	1/2-in OD Flared
Drain Connector	5/8-in OD

Note: Size Refrigerant lines based on evaporator port sizes.

Indoor Capacity Size	Rated Cooling	Rated Heating	Max. CFM	Dehum (Pt/Hr)	Min/Max Sound Power dB(A)**
9,000 BTUH	9,000	11,000	377	1.7	29/43
12,000 BTUH	12,000	13,000	400	3.0	29/45

18,000 BTUH MODEL

Model # VIR18HP230V1AH 18,000 BTUH 230V



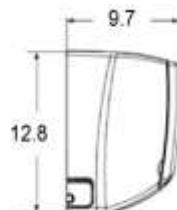
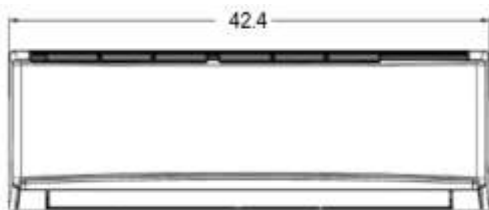
Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	5/8-in OD Flared
Drain Connector	5/8-in OD

Note: Size Refrigerant lines based on evaporator port sizes.

Rated Cooling (BtuH)	Rated Heating	Max. CFM	Dehumid. (Pt/Hr)	Min/Max Sound Power dB(A)**
18,000	19,800	559	3.8	39/47

24,000 BTUH MODEL

Model # VIR24HP230V1AH 24,000 BTUH 230V



Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	5/8-in OD Flared
Drain Connector	5/8-in OD

Note: Size Refrigerant lines based on evaporator port sizes.

Rated Cooling (BtuH)	Rated Heating	Max. CFM	Dehumid. (Pt/Hr)	Min/Max Sound Power dB(A)**
22,000	23,000	706	4.2	36/48

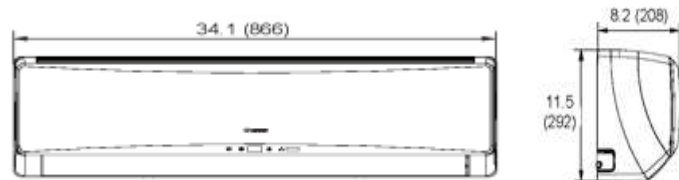
**Sound Power ratings are per AHRI 270 and AHRI 350

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Units: inch (mm)

9,000 AND 12,000 BTUH MODELS

Model # TERRA09HP230V1AH 9,000 BTUH 230V
 Model # TERRA12HP230V1AH 12,000 BTUH 230V



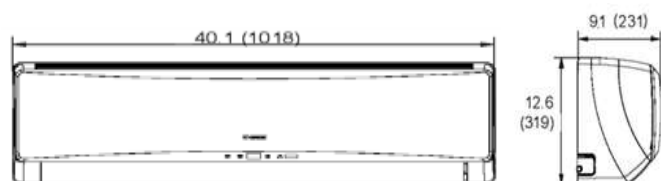
Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	1/2-in OD Flared
Drain Connector	5/8-in OD

Note: Size Refrigerant lines based on evaporator port sizes.

Rated Cooling (BtuH)	Rated Heating	Max. CFM	Dehumid. (Pt/Hr)	Min/Max Sound Power dB(A)**
9,000	9,800	418	1.9	23/43
12,000	13,000	453	3	24/44

18,000 BTUH MODEL

Model # TERRA18HP230V1BH 18,000 BTUH 230V



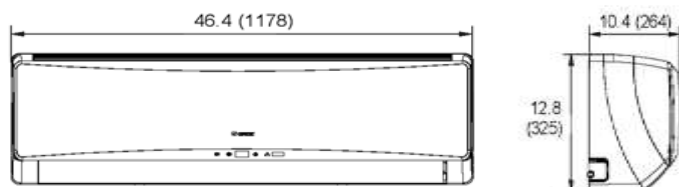
Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	5/8-in OD Flared
Drain Connector	5/8-in OD

Note: Size Refrigerant lines based on evaporator port sizes.

Rated Cooling (BtuH)	Rated Heating	Max. CFM	Dehumid. (Pt/Hr)	Min/Max Sound Power dB(A)**
18,000	19,000	559	3.8	33/51

24,000 BTUH MODEL

Model # TERRA24HP230V1AH 24,000 BTUH 230V



Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	5/8-in OD Flared
Drain Connector	5/8-in OD

Note: Size Refrigerant lines based on evaporator port sizes.

Rated Cooling (BtuH)	Rated Heating	Max. CFM	Dehumid. (Pt/Hr)	Min/Max Sound Power dB(A)**
24,000	25,000	647	5.3	38/52

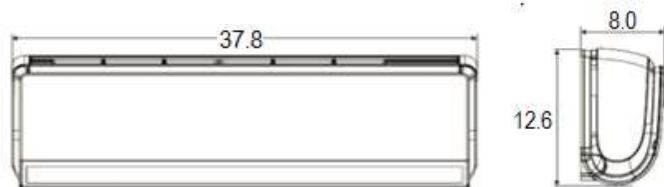
**Sound Power ratings are per AHRI 270 and AHRI 350

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Units: inch

9,000 BTUH MODELS

Model # CROWN09HP230V1AH 9,000 BTUH 230V



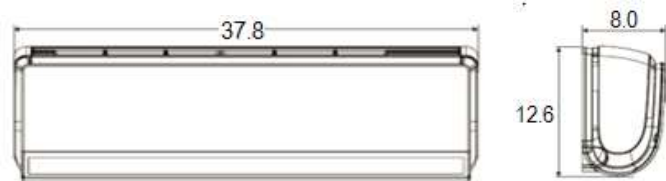
Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	1/2-in OD Flared
Drain Connector	5/8-in OD

Note: Size Refrigerant lines based on evaporator port sizes.

Rated Cooling (BtuH)	Rated Heating	Max. CFM	Dehumid. (Pt/Hr)	Min/Max Sound Power dB(A)**
9,000	9,000	412	1.7	22/41

12,000 BTUH MODEL

Model # CROWN12HP230V1BH 12,000 BTUH 230V



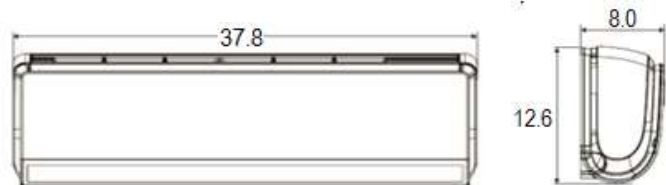
Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	1/2-in OD Flared
Drain Connector	5/8-in OD

Note: Size Refrigerant lines based on evaporator port sizes.

Rated Cooling (BtuH)	Rated Heating	Max. CFM	Dehumid. (Pt/Hr)	Min/Max Sound Power dB(A)**
12,000	13,000	471	3.0	23/42

18,000 BTUH MODEL

Model # CROWN18HP230V1AH 18,000 BTUH 230V



Liquid Line Valve	1/4-in OD Flared
Suction/Gas Line Valve	5/8-in OD Flared
Drain Connector	5/8-in OD

Note: Size Refrigerant lines based on evaporator port sizes.

Rated Cooling (BtuH)	Rated Heating	Max. CFM	Dehumid. (Pt/Hr)	Min/Max Sound Power dB(A)**
18,000	19,000	530	3.8	26/48

**Sound Power ratings are per AHRI 270 and AHRI 350

COOLING CAPACITY (BTUH)

Indoor Units Combinations	Rated System (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)	Indoor Unit E (BtuH)
9+9	19,500	9,000	9,000	NA	NA	NA
9+12	21,000	9,000	12,000	NA	NA	NA
9+18	25,500	8,000	17,500	NA	NA	NA
9+24	26,300	7,000	19,300	NA	NA	NA
12+12	24,000	12,000	12,000	NA	NA	NA
12+18	28,400	11,400	17,000	NA	NA	NA
12+24	32,700	10,000	22,700	NA	NA	NA
18+18	31,680	15,840	15,840	NA	NA	NA
18+24	33,190	14,240	18,950	NA	NA	NA
24+24	35,120	17,560	17,560	NA	NA	NA
9+9+9	24,600	8,200	8,200	8,200	NA	NA
9+9+12	24,900	7,500	7,500	9,900	NA	NA
9+9+18	30,200	7,200	7,200	15,800	NA	NA
9+9+24	34,900	6,600	6,600	21,700	NA	NA
9+12+12	29,600	8,000	10,800	10,800	NA	NA
9+12+18	32,900	7,400	9,800	15,700	NA	NA
9+12+24	36,100	6,800	9,100	20,200	NA	NA
9+18+18	36,100	6,500	14,800	14,800	NA	NA
12+12+12	31,200	10,400	10,400	10,400	NA	NA
12+12+18	35,100	9,960	9,960	15,180	NA	NA
12+12+24	37,500	9,300	9,300	18,900	NA	NA
12+18+18	37,500	8,900	14,300	14,300	NA	NA
9+9+9+9	35,480	8,870	8,870	8,870	8,870	NA
9+9+9+12	36,490	8,460	8,460	8,460	11,110	NA
9+9+9+18	38,350	7,650	7,650	7,650	15,400	NA
9+9+12+12	39,000	8,300	8,300	11,200	11,200	NA
9+9+12+18	39,840	7,470	7,470	9,960	14,940	NA
9+12+12+12	39,280	7,000	10,760	10,760	10,760	NA
9+12+12+18	40,010	6,760	9,600	9,600	14,050	NA
12+12+12+12	39,800	9,950	9,950	9,950	9,950	NA
9+9+9+9+9	39,600	7,920	7,920	7,920	7,920	7,920
9+9+9+9+12	39,700	7,430	7,430	7,430	7,430	9,980

Note:

1) It is critical to size the outdoor unit for the entire building load and each indoor unit for it's individual zone load.
Cooling Nominal Test Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB

HEATING CAPACITY (BTUH)

Indoor Units Combinations	Rated System (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)	Indoor Unit E (BtuH)
9+9	32,500	9,500	9,500	NA	NA	NA
9+12	35,500	9,500	13,000	NA	NA	NA
9+18	46,300	9,300	18,500	NA	NA	NA
9+24	51,200	8,000	21,600	NA	NA	NA
12+12	39,000	13,000	13,000	NA	NA	NA
12+18	47,000	12,000	17,500	NA	NA	NA
12+24	58,400	11,200	23,600	NA	NA	NA
18+18	52,000	17,400	17,300	NA	NA	NA
18+24	59,400	16,200	21,600	NA	NA	NA
24+24	57,600	19,200	19,200	NA	NA	NA
9+9+9	36,000	9,000	9,000	9,000	NA	NA
9+9+12	37,800	9,000	9,000	10,800	NA	NA
9+9+18	43,800	8,800	8,800	17,400	NA	NA
9+9+24	47,500	7,900	7,900	23,800	NA	NA
9+12+12	45,000	9,000	12,000	12,000	NA	NA
9+12+18	47,350	8,650	11,200	16,300	NA	NA
9+12+24	51,180	7,900	10,240	22,800	NA	NA
9+18+18	57,750	7,560	16,730	16,730	NA	NA
12+12+12	48,000	12,000	12,000	12,000	NA	NA
12+12+18	51,500	11,400	11,400	17,300	NA	NA
12+12+24	53,120	10,620	10,620	21,260	NA	NA
12+18+18	58,685	10,130	16,185	16,185	NA	NA
9+9+9+9	55,000	11,000	11,000	11,000	11,000	NA
9+9+9+12	54,460	10,260	10,260	10,260	13,420	NA
9+9+9+18	53,880	8,920	8,920	8,920	18,200	NA
9+9+12+12	54,630	9,630	9,630	12,870	12,870	NA
9+9+12+18	54,150	8,550	8,550	11,400	17,100	NA
9+12+12+12	57,680	8,120	12,390	12,390	12,390	NA
9+12+12+18	56,250	8,010	10,680	10,680	16,200	NA
12+12+12+12	57,350	11,470	11,470	11,470	11,470	NA
9+9+9+9+9	54,600	9,100	9,100	9,100	9,100	9,100
9+9+9+9+12	54,180	8,540	8,540	8,540	8,540	11,480

Note:

1) It is critical to size the outdoor unit for the entire building load and each indoor unit for it's individual zone load.
 Cooling Nominal Test Conditions: Indoor: 80°F DB/67°F WB Outdoor: 95°F DB/75°F WB

COOLING PERFORMANCE

		Indoor Ambient Temperature											
		70°F (21°C)			75°F (24°C)			80°F (27°C)			90°F (32°C)		
		59°F (15°C)			63°F (17°C)			67°F (19°C)			73°F (23°C)		
DB	WB	TC	SC	Input Power	TC	SC	Input Power	TC	SC	Input Power	TC	SC	Input Power
		(BtuH)	(BtuH)	(watts)	(BtuH)	(BtuH)	(watts)	(BtuH)	(BtuH)	(watts)	(BtuH)	(BtuH)	(watts)
Outdoor Ambient Temperature (DB)	-0.4°F (-18°C)	23,610	18,510	1,620	26,630	20,890	1,710	28,140	22,070	1,780	31,720	24,870	1,900
	5°F (-15°C)	24,210	18,990	1,620	27,310	21,420	1,730	29,220	22,910	1,780	32,520	25,510	1,900
	14°F (-10°C)	24,880	19,510	1,630	28,070	22,020	1,730	29,670	23,270	1,800	33,440	26,220	1,920
	23°F (-5°C)	27,260	21,380	1,630	31,060	24,360	1,730	33,410	26,200	1,780	36,750	28,820	1,910
	32°F (0°C)	28,654	22,475	1,629	32,641	25,603	1,725	32,329	26,323	1,785	38,639	29,478	1,915
	41°F (5°C)	30,124	23,627	1,713	34,315	26,916	1,813	33,987	27,673	1,877	40,621	30,989	2,014
	50°F (10°C)	31,379	24,612	1,784	35,745	28,038	1,889	35,403	28,826	1,955	42,313	32,281	2,098
	59°F (15°C)	33,060	25,930	1,880	37,660	29,540	1,990	37,300	30,370	2,060	44,580	34,010	2,210
	68°F (20°C)	33,012	29,754	1,980	33,575	29,396	1,990	37,499	32,125	2,000	44,870	34,138	2,210
	77°F (25°C)	35,213	29,174	2,480	37,977	30,965	2,685	41,389	33,541	2,820	47,804	34,463	2,515
	86°F (30°C)	36,510	29,037	3,650	38,540	31,238	3,555	43,334	34,121	3,600	48,572	35,333	3,280
	95°F (35°C)	33,780	29,344	3,635	36,612	31,801	3,485	40,809	33,780	3,590	41,406	33,814	3,555
	104°F (40°C)	29,481	27,297	3,600	33,831	30,931	3,645	34,974	32,586	3,670	37,875	32,722	3,735
	113°F (45°C)	23,203	22,486	2,750	25,779	24,567	2,775	28,662	26,683	2,800	29,856	28,031	2,830
118°F (48°C)	16,795	16,508	1,988	18,255	17,668	2,101	19,381	18,528	2,158	20,531	19,749	2,204	

HEATING PERFORMANCE

		Indoor Ambient Temperature											
		70°F (21°C)			75°F (24°C)			80°F (27°C)			90°F (32°C)		
		59°F (15°C)			63°F (17°C)			67°F (19°C)			73°F (23°C)		
DB	WB	TC	SC	Input Power	TC	SC	Input Power	TC	SC	Input Power	TC	SC	Input Power
		(BtuH)	(BtuH)	(watts)	(BtuH)	(BtuH)	(watts)	(BtuH)	(BtuH)	(watts)	(BtuH)	(BtuH)	(watts)
Outdoor Ambient Temperature (DB)	-4°F (-20°C)	22,950	22,950	2,070	22,300	22,300	2,120	21,870	21,870	2,190	21,320	21,320	2,240
	0°F (-18°C)	24,880	24,880	2,280	24,160	24,160	2,320	23,710	23,710	2,410	23,080	23,080	2,470
	5°F (-15°C)	26,240	26,240	2,380	25,490	25,490	2,430	25,010	25,010	2,520	24,360	24,360	2,580
	7°F (-14°C)	27,350	27,350	2,450	26,550	26,550	2,500	26,040	26,040	2,590	25,370	25,370	2,650
	17°F (-8°C)	28,170	28,170	2,480	27,350	27,350	2,530	26,830	26,830	2,630	26,120	26,120	2,690
	28°F (-2°C)	31,820	31,820	2,650	30,990	30,990	2,700	30,100	30,100	2,800	29,740	29,740	2,860
	38°F (3°C)	39,560	39,560	3,040	38,730	38,730	3,110	37,850	37,850	3,220	37,480	37,480	3,290
	47°F (8°C)	44,720	44,720	3,170	43,360	43,360	3,230	42,500	42,500	3,350	41,330	41,330	3,430
	57°F (14°C)	46,190	46,190	3,230	44,800	44,800	3,290	43,910	43,910	3,410	42,690	42,690	3,490
	68°F (20°C)	48,080	48,080	3,340	46,620	46,620	3,410	45,690	45,690	3,530	44,430	44,430	3,620
	77°F (25°C)	49,190	49,190	3,420	47,710	47,710	3,490	46,750	46,750	3,620	45,460	45,460	3,700

LEGEND

- DB --- Dry Bulb
- WB --- Wet Bulb
- TC --- Total Net Cooling Capacity (BtuH)
- SC --- Sensible Capacity (BtuH)
- Input Power---(Watts)

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