

37MBRAQ

Outdoor Unit Single Zone Ductless System Sizes 36 / 48 / 58K



Product Data

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Fig. 1 — Size 36K



Fig. 2 — Size 48K and 58K

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

INDUSTRY LEADING FEATURES / BENEFITS

A PERFECT BALANCE BETWEEN BUDGET LIMITS, ENERGY SAVINGS AND COMFORT

The 37MBRAQ series ductless system is 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 for design problems such as:

- Add-ons to current space (an office or family room addition)
- Special space requirements
- 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.

Advanced system components incorporate innovative technology to provide reliable cooling and heating 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. When sound ordinances and proximity to neighbors demand quiet operation, the 37MBRAQ 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 which 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 37MBRAQ 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 37MBRAQ systems the equipment of choice for retrofit applications.

Simple Servicing and Maintenance

Removing the top panel (36K) or side panel (48K) of the outdoor unit provides immediate access to the control compartment, providing the service technician access to the diagnostic components 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 readily accessible filters. Also, error codes are displayed to alert the user to certain system malfunctions

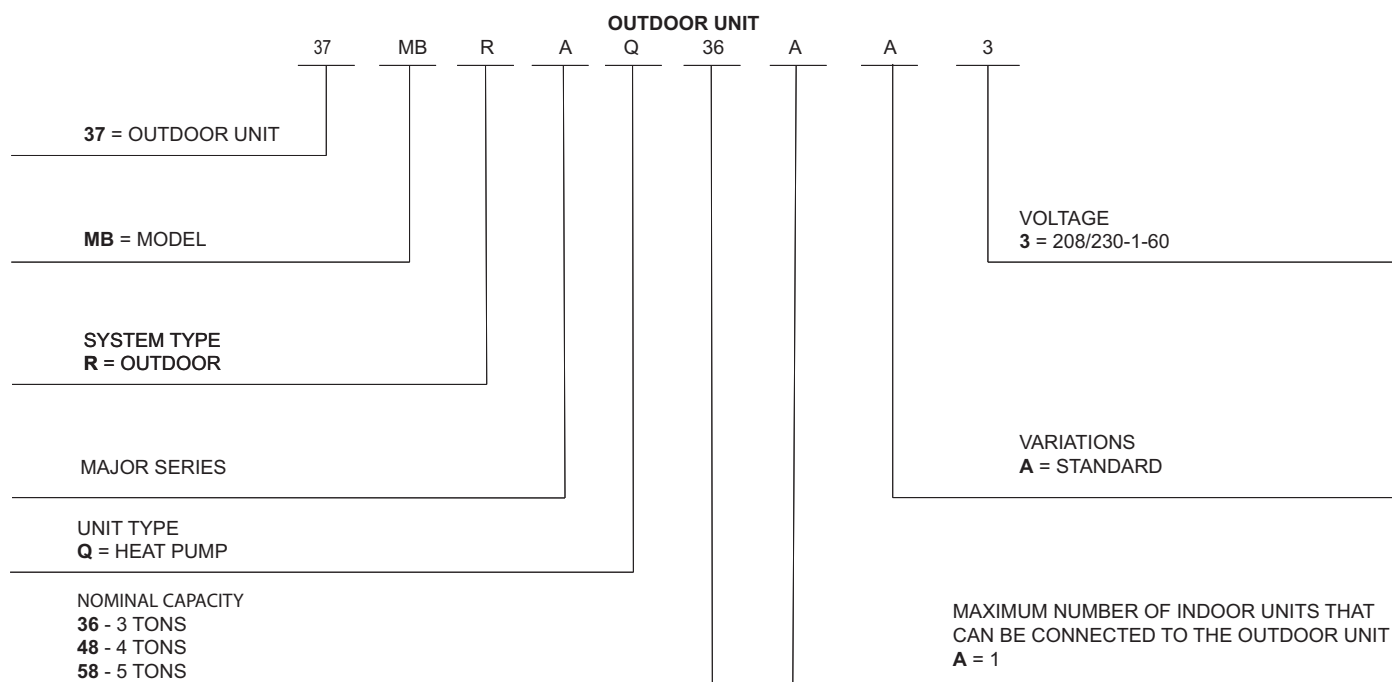
Built-in Reliability

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 CSA certified per UL1995 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

Table 1 — Features

Ease Of Installation	
Low Voltage Controls	S
Comfort Features	
Microprocessor Control	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
Over Current Protection for Compressor	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	
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	S

LEGEND

S - Standard
A - Accessory

ACCESSORIES

Table 2 — Accessories

Outdoor Unit Size	Base Pan Base Rubber Plugs RCD Part No.	Quantity per Unit
36K	12600801A00117	5
48K	12600801A00118	5
58K	12600801A00118	5

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

Outdoor Units

Crankcase Heater

The crankcase heater is standard on all unit sizes.

Base pan Heater

The base pan heater is standard on all unit sizes.

Long Line Piping Length

Piping flexibility up to a total piping length of 246ft. (65m).

DIMENSIONS

Table 3 – Dimensions

UNIT SIZE	36K	48K	58K
Height in (mm)	31.84 (809)	52.5 (1333)	52.5 (1333)
Width in (mm)	37.26 (946)	37.5 (952)	37.5 (952)
Depth in (mm)	16.02 (407)	16.3 (415)	16.3 (415)
Operating Weight lbs (kg)	162.48 (73.7)	208.78 (94.7)	209.44 (95)

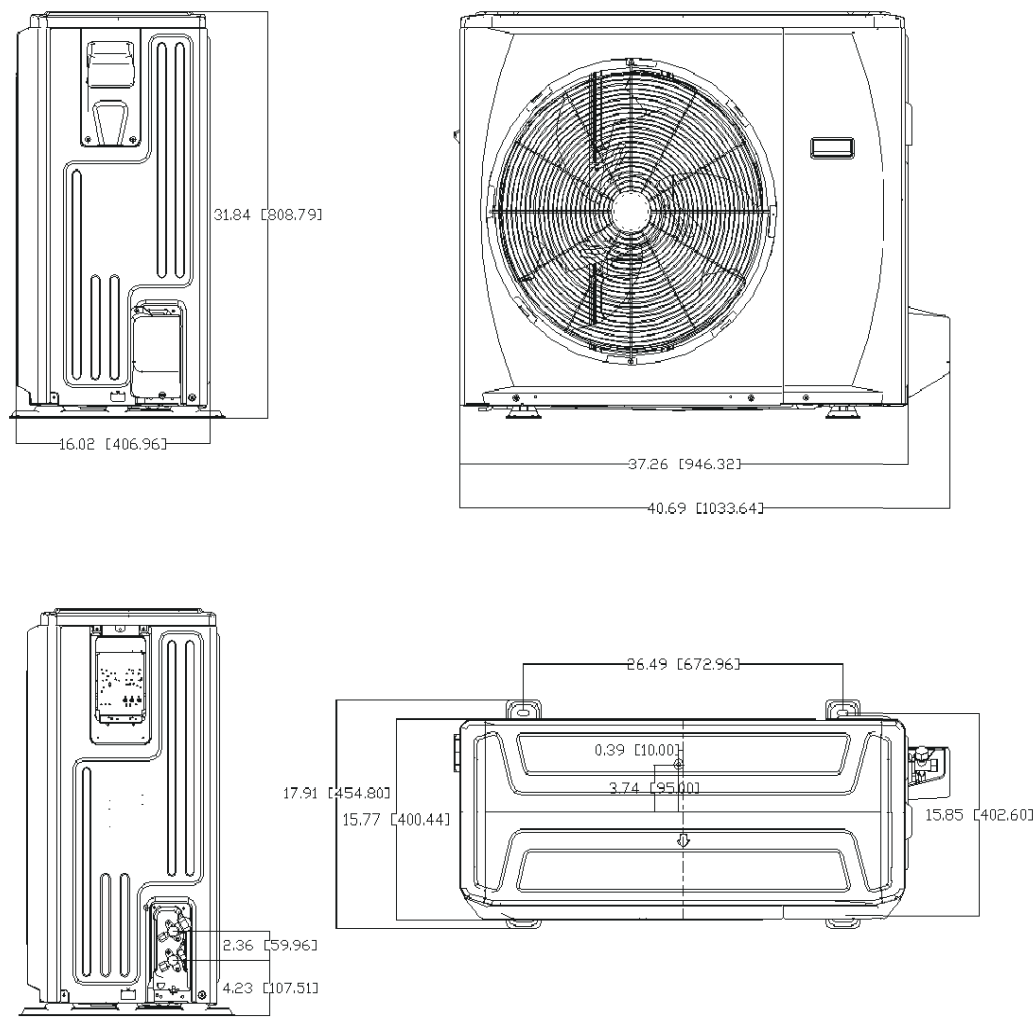


Fig. 3 – Outdoor Dimensions Size 36K, in. (mm)

DIMENSIONS (CONT)

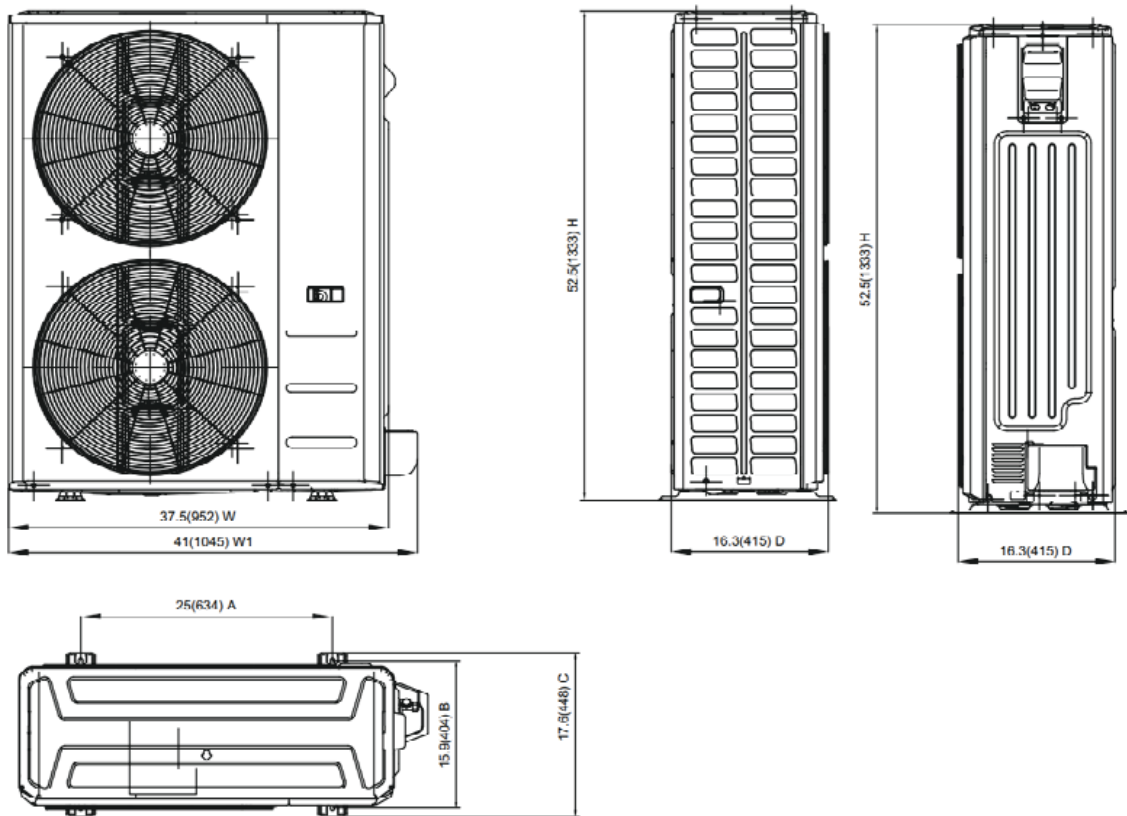


Fig. 4 – Outdoor Dimensions Size 48K and 58K, in. (mm)

CLEARANCES

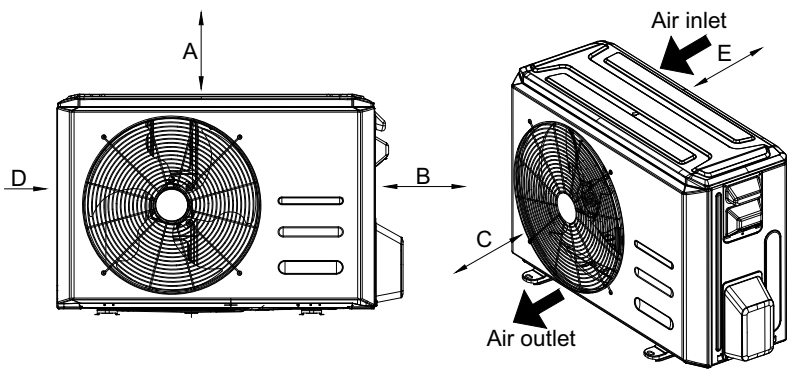


Fig. 5 – Clearances
Table 4 — Clearances

UNIT	MINIMUM VALUE in. (mm)
A	20 (500)
B	14 (350)
C	20 (500)
D	4 (101)
E	4 (101)

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

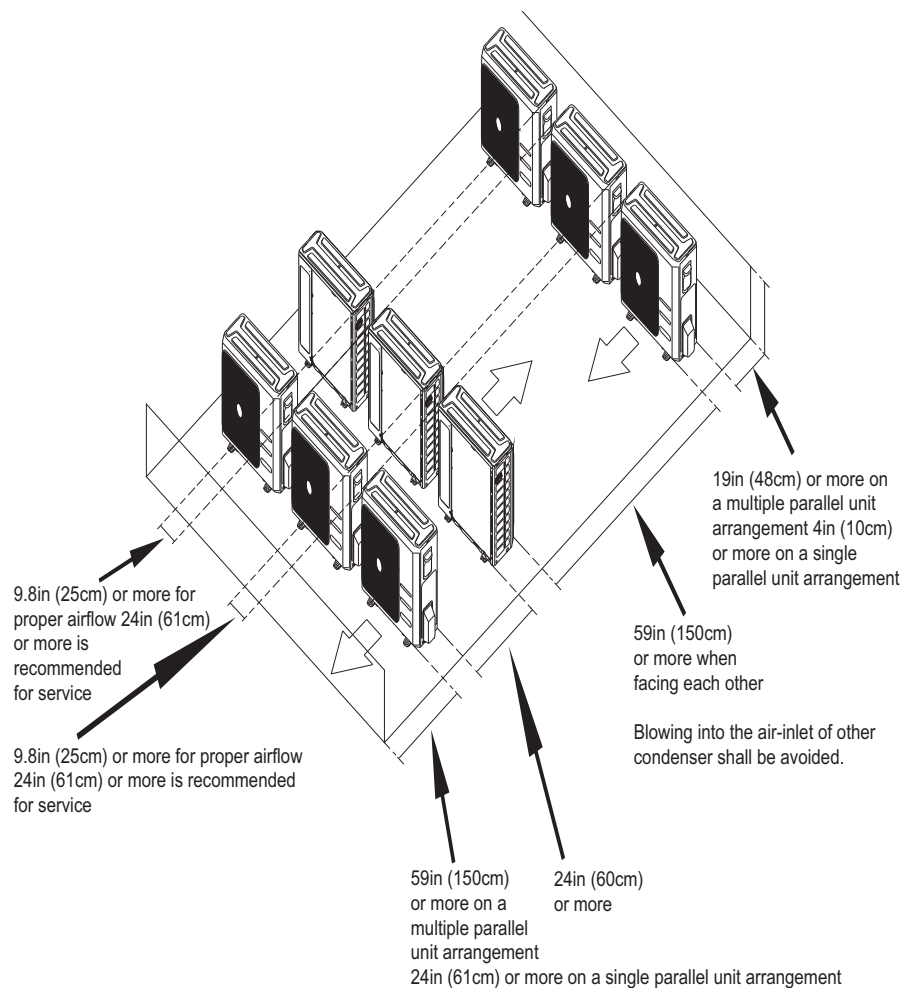


Fig. 6 – Clearances for multiple units

SPECIFICATIONS

Table 5 – Comprehensive Specifications

Outdoor model			37MBRAQ36AA3	37MBRAQ48AA3	37MBRAQ58AA3
Power supply: V;Ph;Hz			208/230V;1Ph;60HZ	208/230V;1Ph;60HZ	208/230V;1Ph;60HZ
COMPRESSOR SPECIFICATIONS	Model		KTF310D43UMT	KTQ420D1UMU	KTQ420D1UMU
	Type		ROTARY	ROTARY	ROTARY
	Brand		GMCC	GMCC	GMCC
	Capacity	W	10010	13700	13700
		Btu/h	34154	46744	46744
	Input	W	2765	3700	3700
	Rated current	A	5.4	7.0	7.0
	Refrigerant Oil		ESTER OIL	ESTER OIL	ESTER OIL
	Oil Type		VG74	VG74	VG74
	Oil Charge	fl. Oz	33.82	47.35	47.35
OUTDOOR SINGLE FAN SPECIFICATIONS	Material	-	Acrylonitrile Styrene +20%GF		
	Type	-	ZL-560*139*12-3KN	ZL-554*148*12-3KFN	ZL-554*148*12-3KFN
	Diameter	inch	22.0	21.8	21.8
		mm	560	554	554
	Height	inch	5.5	5.8	5.8
		mm	139	148	148
OUTDOOR DUAL FAN SPECIFICATIONS	Material	-	N/A	Acrylonitrile Styrene +20%GF	
	Type	-	N/A	ZL-554*148*12-3KFN	ZL-554*148*12-3KFN
	Diameter	inch	N/A	21.8	21.8
		mm	N/A	554	554
	Height	inch	N/A	5.8	5.8
		mm	N/A	148	148

Table 5 – Comprehensive Specifications (Continued)

Outdoor model			37MBRAQ36AA3	37MBRAQ48AA3	37MBRAQ58AA3
OUTDOOR MOTOR SPECIFICATIONS	Model	-	ZKFN-120-10-1L	ZKFN-85-10-1L	ZKFN-85-8-22-5
	Type	-	DC	DC	DC
	Input	W	125	126	108
	Max. input	W	181	167	126
	Output	W	93.8	94.5	81
	FLA (The rated current of the conversion equipment)	A	1.35	1.2	2.2
	Rated HP	HP	0.13	0.13	0.11
	Range of current	Amps	0.84~1.69	0.77~1.44	0.81~1.18
	Rated current	Amps	1.33	1.19	1.04
	Speed	rev/min	950 / 800 / 500	850 / 750 / 650	850 / 750 / 650
	Rated RPM	rev/min	950	850	850
	Insulation class	-	B	B	E
	Safe class	-	IP44	IP44	IPX4
OUTDOOR MOTOR DUAL UNIT SPECIFICATIONS	Model	-	N/A	ZKFN-85-10-1L	ZKFN-85-8-22-5
	Type	-	N/A	DC	DC
	Input	W	N/A	126	108
	Max. input	W	N/A	167	126
	Output	W	N/A	94.5	81
	FLA (The rated current of the conversion equipment)	A	N/A	1.2	2.2
	Rated HP	HP	N/A	0.13	0.11
	Range of current	Amps	N/A	0.77~1.44	0.81~1.18
	Rated current	Amps	N/A	1.19	1.04
	Speed	rev/min	N/A	850 / 750 / 650	850 / 750 / 650
	Rated RPM	rev/min	N/A	850	850
	Insulation class	-	N/A	B	E
	Safe class	-	N/A	IP44	IPX4
OUTDOOR REFRIGERANT SINGLE COIL SPECIFICATIONS	Number of rows	Rows	2	2	3
	Tube outside dia.	inch	0.276	0.276	0.276
		mm	Φ7	Φ7	Φ7
	Nominal Tube Wall	mm	0.00945 (0.24)	0.00945 (0.24)	0.00945 (0.24)
	Tube Enhancement	(Yes/No)	Yes	Yes	Yes
	Tube Material		Copper	Copper	Copper
	Tube pitch (a) x row pitch (b)	inch	1 × 0.87	0.83 × 0.87	0.83 × 0.53
		mm	25.4 x 22	21 x 22	21 x 13.37
	Fin Spacing	FPI	20	22	19
		mm	1.3	1.2	1.4
	Fin type		Louvered	Louvered	Louvered
	Fin Material		Gold hydrophilic aluminum	Gold hydrophilic aluminum	Gold hydrophilic aluminum
	Coil length x height x width	inch	39.17 x 30 x 1.73	38.39 x 24.8 x 1.73	38.78 x 49.61 x 1.58
		mm	995 x 76 2x 44	975 x 630 x 44	985 x 1260 x 40.11
	Face area	ft ²	9.85	6.61	13.36
OUTDOOR REFRIGERANT DUAL COIL SPECIFICATIONS	Number of rows	Rows	N/A	2	3
	Tube outside dia.	inch	N/A	0.276	0.276
		mm	N/A	Φ7	Φ7
	Nominal Tube Wall	mm	N/A	0.00945 (0.24)	0.00945 (0.24)
	Tube Enhancement	(Yes/No)	N/A	Yes	Yes
	Tube Material		N/A	Copper	Copper
	Tube pitch (a) x row pitch (b)	inch	N/A	0.83 × 0.87	0.83 × 0.53
		mm	N/A	21 x 22	21 x 13.37
	Fin Spacing	FPI	N/A	22	19
		mm	N/A	1.2	1.4
	Fin type		N/A	Louvered	Louvered
	Fin Material		N/A	Gold hydrophilic aluminum	Gold hydrophilic aluminum
	Coil length x height x width	inch	N/A	38.39 x 24.8 x 1.73	38.78 x 49.61 x 1.58
		mm	N/A	975 x 630 x 44	985 x 1260 x 40.11
	Face area	ft ²	N/A	6.61	13.36
	Number of circuits	#	N/A	10	14
	High Burst Pressure	Psi (MPa)	N/A	550 (3.79)	550 (3.79)
	Low Burst Pressure	Psi (MPa)	N/A	340 (2.34)	340 (2.34)

Table 5 – Comprehensive Specifications (Continued)

Outdoor model			37MBRAQ36AA3	37MBRAQ48AA3	37MBRAQ58AA3
Piping and Refrigerant Information	Refrigerant Type	Type	R454B	R454B	R454B
	Charge Amount	lb. (kg)	5.73 (2.6)	7.94 (3.6)	9.04 (4.1)
	Additional refrigerant charge, >25 ft.	Oz/ft (g/m)	0.32 (30)	0.32 (30)	0.32 (30)
	Liquid Pipe (size - connection type)	In (mm)	3/8" (9.52)	3/8" (9.52)	3/8" (9.52)
	Suction Pipe (size - connection type)	In (mm)	3/4" (19)	3/4" (19)	3/4" (19)
	Min. Piping Length	ft. (m)	10 (3)	10 (3)	10 (3)
	Standard Piping Length	ft. (m)	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)
	Total Maximum Piping Length per system	ft. (m)	246 (75)	246 (75)	246 (75)
	Max. outdoor-indoor height difference (OU higher than IU)	ft. (m)	98.4 (30)	98.4 (30)	98.4 (30)
	Max. outdoor-indoor height difference (IU higher than OU)	ft. (m)	98.4 (30)	98.4 (30)	98.4 (30)
AIRFLOW SPECIFICATIONS		Outdoor (CFM)	CFM	2414.6	4240.3
SOUND DATA		Outdoor Sound Pressure Level	dB(A)	62.5	63.5
ENVIRONMENTAL SPECIFICATIONS	Cooling Operating Range	Indoor Min - Max DB	°F	60~90	60~90
			(°C)	(16~32)	(16~32)
		Indoor Min - Max WB	°F	59-84	59-84
			(°C)	(15-29)	(15-29)
		Outdoor Min - Max DB	°F	-13~122	-13~122
			(°C)	(-25~50)	(-25~50)
	Heating Operating Range	Indoor Min - Max DB	°F	32~86	32~86
			(°C)	(0~30)	(0~30)
		Outdoor Min - Max DB	°F	-13~75	-13~75
			(°C)	(-25~24)	(-25~24)
	Non-operating environment Storage	Temperature range (DB)	°F	-49-140	-49-140
			(°C)	(-45-60)	(-45-60)
	Operation Humidity	%		0-80 %	0-80 %
	Ambient Humidity	%		0-80 %	0-80 %

COOLING PERFORMANCE

For the following tables:

TC = Total Cooling Capacity (BTU/hr)

S/T = Sensible Cooling Capacity Ratio

PI = Power Input (kW)

Extrapolated Data

The highlighted data is tested; other data is simulated and for reference.

HEATING PERFORMANCE

Extrapolated Data

The highlighted data is tested; other data is simulated and for reference.

Table 17 – 36K RH Heating — 37MBRA + 45MBAA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
865	-13°F (-25.0°C)	15229	14925	14850	14335	14206	3.23	3.25	3.26	3.27	3.28
	-4°F (-20.0°C)	17839	17482	17395	16791	16640	3.37	3.40	3.41	3.41	3.43
	0°F (-17.8°C)	19383	18995	18900	18244	18080	3.42	3.45	3.45	3.46	3.47
	5°F (-15.0°C)	21312	20886	20782	20060	19880	3.47	3.50	3.51	3.52	3.53
	14°F (-10.0°C)	23044	22583	22470	21690	21495	3.52	3.55	3.56	3.56	3.58
	17°F (-8.3°C)	23621	23149	23033	22234	22034	3.54	3.57	3.57	3.58	3.59
	22°F (-5.6°C)	24463	23973	23854	23026	22818	3.49	3.52	3.52	3.53	3.54
	27°F (-2.8°C)	25304	24798	24674	23817	23603	3.44	3.47	3.47	3.48	3.49
	32°F (0.0°C)	26145	25622	25494	24609	24388	3.39	3.42	3.42	3.43	3.44
	35°F (1.7°C)	26650	26117	25986	25084	24859	3.36	3.39	3.39	3.40	3.41
	37°F (2.8°C)	28284	27718	27580	26623	26383	3.41	3.43	3.44	3.45	3.46
	42°F (5.6°C)	32370	31722	31564	30468	30194	3.52	3.55	3.56	3.56	3.58
	44.6°F (7.0°C)	34004	33324	33157	32006	31718	3.57	3.60	3.60	3.61	3.62
	47°F (8.3°C)	36455	35726	35547	34314	34005	3.63	3.66	3.67	3.68	3.69
	52°F (11.1°C)	33312	32646	32483	31356	31073	3.27	3.30	3.30	3.31	3.32
	57°F (13.9°C)	30170	29566	29419	28397	28142	2.90	2.93	2.93	2.94	2.95
	59°F (15.0°C)	28913	28334	28193	27214	26969	2.76	2.78	2.79	2.79	2.80
	62°F (16.7°C)	27027	26487	26354	25439	25210	2.54	2.56	2.56	2.57	2.58
	64.4°F (18.0°C)	25519	25008	24883	24020	23803	2.36	2.38	2.39	2.39	2.40
	69.8°F (21.0°C)	22124	21682	21574	20825	20637	1.97	1.98	1.99	1.99	2.00
	75.2°F (24.0°C)	18730	18356	18264	17630	17471	1.57	1.59	1.59	1.59	1.60
971	-13°F (-25.0°C)	16232	15908	15828	15520	15380	3.26	3.29	3.29	3.30	3.31
	-4°F (-20.0°C)	19014	18633	18540	18179	18015	3.41	3.44	3.44	3.45	3.46
	0°F (-17.8°C)	20659	20246	20145	19752	19575	3.45	3.48	3.49	3.49	3.51
	5°F (-15.0°C)	22716	22262	22150	21719	21523	3.51	3.54	3.55	3.55	3.57
	14°F (-10.0°C)	24562	24070	23950	23484	23272	3.56	3.59	3.59	3.60	3.61
	17°F (-8.3°C)	25177	24673	24550	24072	23855	3.57	3.60	3.61	3.62	3.63
	22°F (-5.6°C)	26074	25552	25424	24929	24705	3.52	3.55	3.56	3.57	3.58
	27°F (-2.8°C)	26970	26431	26299	25786	25554	3.47	3.50	3.51	3.52	3.53
	32°F (0.0°C)	27867	27310	27173	26644	26404	3.42	3.45	3.46	3.47	3.48
	35°F (1.7°C)	28405	27837	27698	27158	26914	3.39	3.42	3.43	3.44	3.45
	37°F (2.8°C)	30147	29544	29396	28824	28564	3.44	3.47	3.48	3.48	3.50
	42°F (5.6°C)	34501	33811	33642	32987	32690	3.56	3.58	3.59	3.60	3.61
	44.6°F (7.0°C)	36243	35518	35341	34652	34340	3.60	3.63	3.64	3.65	3.66
	47°F (8.3°C)	38856	38079	37888	37150	36816	3.67	3.70	3.71	3.72	3.73
	52°F (11.1°C)	35506	34796	34622	33948	33642	3.30	3.33	3.34	3.34	3.36
	57°F (13.9°C)	32156	31513	31356	30745	30468	2.93	2.96	2.96	2.97	2.98
	59°F (15.0°C)	30817	30200	30049	29464	29199	2.79	2.81	2.81	2.82	2.83
	62°F (16.7°C)	28807	28231	28090	27542	27295	2.56	2.58	2.59	2.59	2.61
	64.4°F (18.0°C)	27199	26655	26522	26005	25771	2.39	2.41	2.41	2.42	2.43
	69.8°F (21.0°C)	23581	23110	22994	22546	22343	1.99	2.00	2.01	2.01	2.02
	75.2°F (24.0°C)	19964	19565	19467	19088	18916	1.59	1.60	1.60	1.61	1.61

Table 17 – 36K RH Heating — 37MBRA + 45MBAA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1082	-13°F (-25.0°C)	17301	16955	16870	16803	16652	3.29	3.32	3.33	3.33	3.35
	-4°F (-20.0°C)	20266	19860	19761	19682	19505	3.44	3.47	3.48	3.48	3.50
	0°F (-17.8°C)	22019	21579	21471	21385	21193	3.49	3.52	3.52	3.53	3.54
	5°F (-15.0°C)	24212	23727	23609	23514	23303	3.55	3.57	3.58	3.59	3.60
	14°F (-10.0°C)	26179	25655	25527	25425	25196	3.59	3.62	3.63	3.64	3.65
	17°F (-8.3°C)	26835	26298	26167	26062	25827	3.61	3.64	3.65	3.65	3.67
	22°F (-5.6°C)	27790	27235	27099	26990	26747	3.56	3.59	3.59	3.60	3.62
	27°F (-2.8°C)	28746	28171	28030	27918	27667	3.51	3.54	3.54	3.55	3.57
	32°F (0.0°C)	29702	29108	28962	28846	28587	3.46	3.49	3.49	3.50	3.51
	35°F (1.7°C)	30275	29670	29521	29403	29139	3.43	3.46	3.46	3.47	3.48
	37°F (2.8°C)	32132	31489	31332	31206	30926	3.48	3.50	3.51	3.52	3.53
	42°F (5.6°C)	36773	36038	35857	35714	35393	3.59	3.62	3.63	3.64	3.65
	44.6°F (7.0°C)	38630	37857	37668	37517	37179	3.64	3.67	3.68	3.68	3.70
	47°F (8.3°C)	41414	40586	40383	40222	39860	3.71	3.74	3.75	3.75	3.77
	52°F (11.1°C)	37844	37087	36902	36754	36423	3.34	3.36	3.37	3.38	3.39
	57F (13.9°C)	34274	33588	33421	33287	32987	2.96	2.99	2.99	3.00	3.01
	59°F (15.0°C)	32846	32189	32028	31900	31613	2.81	2.84	2.84	2.85	2.86
	62°F (16.7°C)	30704	30090	29939	29819	29551	2.59	2.61	2.62	2.62	2.63
	64.4°F (18.0°C)	28990	28410	28268	28155	27902	2.41	2.43	2.44	2.44	2.45
	69.8°F (21.0°C)	25134	24632	24508	24410	24191	2.01	2.02	2.03	2.03	2.04
	75.2°F (24.0°C)	21278	20853	20749	20666	20480	1.60	1.62	1.62	1.62	1.63
1188	-13°F (-25.0°C)	18440	18072	17981	17909	17748	3.33	3.35	3.36	3.37	3.38
	-4°F (-20.0°C)	21600	21168	21062	20978	20789	3.48	3.50	3.51	3.52	3.53
	0°F (-17.8°C)	23469	23000	22885	22794	22588	3.52	3.55	3.56	3.57	3.58
	5°F (-15.0°C)	25806	25290	25164	25063	24837	3.58	3.61	3.62	3.62	3.64
	14°F (-10.0°C)	27903	27345	27208	27099	26855	3.63	3.66	3.67	3.67	3.69
	17°F (-8.3°C)	28602	28030	27890	27778	27528	3.65	3.67	3.68	3.69	3.70
	22°F (-5.6°C)	29621	29028	28883	28767	28509	3.59	3.62	3.63	3.64	3.65
	27°F (-2.8°C)	30639	30026	29876	29757	29489	3.54	3.57	3.58	3.59	3.60
	32°F (0.0°C)	31658	31025	30870	30746	30469	3.49	3.52	3.53	3.54	3.55
	35°F (1.7°C)	32269	31624	31465	31340	31058	3.46	3.49	3.50	3.51	3.52
	37°F (2.8°C)	34248	33563	33395	33261	32962	3.51	3.54	3.55	3.55	3.57
	42°F (5.6°C)	39195	38411	38219	38066	37723	3.63	3.66	3.66	3.67	3.69
	44.6°F (7.0°C)	41173	40350	40148	39988	39628	3.68	3.71	3.71	3.72	3.73
	47°F (8.3°C)	44142	43259	43042	42870	42484	3.75	3.78	3.78	3.79	3.81
	52°F (11.1°C)	40336	39529	39332	39175	38822	3.37	3.40	3.40	3.41	3.42
	57F (13.9°C)	36531	35800	35621	35479	35159	2.99	3.02	3.02	3.03	3.04
	59°F (15.0°C)	35009	34309	34137	34001	33695	2.84	2.86	2.87	2.88	2.89
	62°F (16.7°C)	32726	32071	31911	31783	31497	2.62	2.64	2.64	2.65	2.66
	64.4°F (18.0°C)	30899	30281	30130	30009	29739	2.44	2.45	2.46	2.46	2.47
	69.8°F (21.0°C)	26789	26254	26122	26018	25784	2.03	2.04	2.05	2.05	2.06
	75.2°F (24.0°C)	22680	22226	22115	22026	21828	1.62	1.63	1.64	1.64	1.65

Table 18 – 48K RH Heating — 37MBRA + 45MBAA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
865	-13°F (-25.0°C)	25398	24890	24766	22203	22003	4.54	4.58	4.59	4.60	4.62
	-4°F (-20.0°C)	29944	29345	29198	26176	25940	4.62	4.66	4.67	4.68	4.70
	0°F (-17.8°C)	30935	30316	30164	27042	26799	4.74	4.78	4.79	4.80	4.82
	5°F (-15.0°C)	32173	31530	31372	28125	27872	4.89	4.93	4.94	4.95	4.97
	14°F (-10.0°C)	37196	36453	36270	32516	32224	5.12	5.16	5.17	5.18	5.20
	17°F (-8.3°C)	38871	38093	37903	33980	33674	5.19	5.23	5.24	5.25	5.28
	22°F (-5.6°C)	40572	39761	39562	35467	35148	5.22	5.26	5.27	5.28	5.30
	27°F (-2.8°C)	42273	41428	41221	36954	36622	5.24	5.28	5.29	5.30	5.32
	32°F (0.0°C)	43975	43095	42880	38442	38096	5.26	5.30	5.31	5.33	5.35
	35°F (1.7°C)	44996	44096	43875	39334	38980	5.28	5.32	5.33	5.34	5.36
	37°F (2.8°C)	46789	45853	45624	40902	40533	5.27	5.31	5.33	5.34	5.36
	42°F (5.6°C)	51272	50246	49995	44820	44417	5.26	5.31	5.32	5.33	5.35
	44.6°F (7.0°C)	53065	52004	51743	46388	45971	5.26	5.30	5.31	5.32	5.34
	47°F (8.3°C)	55755	54639	54366	48739	48301	5.25	5.30	5.31	5.32	5.34
	52°F (11.1°C)	51749	50714	50461	45238	44831	4.80	4.84	4.85	4.86	4.88
	57F (13.9°C)	47744	46789	46555	41737	41361	4.35	4.38	4.39	4.40	4.42
	59°F (15.0°C)	46142	45219	44993	40336	39973	4.17	4.20	4.21	4.22	4.23
	62°F (16.7°C)	43738	42864	42649	38235	37891	3.90	3.93	3.93	3.94	3.96
	64.4°F (18.0°C)	41816	40980	40775	36555	36226	3.68	3.71	3.72	3.72	3.74
	69.8°F (21.0°C)	37490	36740	36557	32773	32478	3.19	3.21	3.22	3.23	3.24
	75.2°F (24.0°C)	33164	32501	32339	28992	28731	2.70	2.72	2.73	2.73	2.74
971	-13°F (-25.0°C)	26829	26292	26160	24720	24498	4.59	4.63	4.64	4.65	4.66
	-4°F (-20.0°C)	31630	30997	30842	29144	28882	4.67	4.71	4.72	4.73	4.75
	0°F (-17.8°C)	32676	32023	31863	30108	29838	4.79	4.83	4.84	4.85	4.87
	5°F (-15.0°C)	33985	33305	33139	31314	31032	4.94	4.98	4.99	5.00	5.02
	14°F (-10.0°C)	39291	38505	38313	36203	35877	5.17	5.21	5.22	5.23	5.25
	17°F (-8.3°C)	41060	40238	40037	37833	37492	5.24	5.29	5.30	5.31	5.33
	22°F (-5.6°C)	42857	42000	41790	39489	39133	5.27	5.31	5.32	5.33	5.35
	27°F (-2.8°C)	44654	43761	43542	41145	40774	5.29	5.33	5.34	5.36	5.38
	32°F (0.0°C)	46451	45522	45294	42801	42415	5.31	5.36	5.37	5.38	5.40
	35°F (1.7°C)	47529	46579	46346	43794	43400	5.33	5.37	5.38	5.39	5.42
	37°F (2.8°C)	49423	48435	48193	45539	45129	5.33	5.37	5.38	5.39	5.41
	42°F (5.6°C)	54159	53076	52810	49903	49453	5.32	5.36	5.37	5.38	5.40
	44.6°F (7.0°C)	56053	54932	54657	51648	51183	5.31	5.36	5.37	5.38	5.40
	47°F (8.3°C)	58894	57716	57428	54266	53777	5.31	5.35	5.36	5.37	5.39
	52°F (11.1°C)	54663	53570	53302	50367	49914	4.85	4.89	4.90	4.91	4.93
	57F (13.9°C)	50432	49424	49177	46469	46051	4.39	4.43	4.44	4.45	4.46
	59°F (15.0°C)	48740	47765	47526	44910	44505	4.21	4.24	4.25	4.26	4.28
	62°F (16.7°C)	46201	45277	45051	42571	42187	3.93	3.97	3.97	3.98	4.00
	64.4°F (18.0°C)	44171	43287	43071	40699	40333	3.72	3.75	3.75	3.76	3.78
	69.8°F (21.0°C)	39601	38809	38615	36489	36161	3.22	3.25	3.25	3.26	3.27
	75.2°F (24.0°C)	35032	34331	34160	32279	31988	2.73	2.75	2.75	2.76	2.77

Table 18 – 48K RH Heating — 37MBRA + 45MBAA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1082	-13°F (-25.0°C)	28339	27772	27634	27523	27275	4.64	4.67	4.68	4.69	4.71
	-4°F (-20.0°C)	33411	32743	32579	32449	32157	4.72	4.76	4.76	4.77	4.79
	0°F (-17.8°C)	34516	33826	33657	33522	33221	4.84	4.88	4.89	4.90	4.92
	5°F (-15.0°C)	35899	35181	35005	34865	34551	4.99	5.03	5.04	5.05	5.07
	14°F (-10.0°C)	41503	40673	40470	40308	39945	5.22	5.26	5.27	5.28	5.30
	17°F (-8.3°C)	43372	42504	42292	42123	41744	5.30	5.34	5.35	5.36	5.38
	22°F (-5.6°C)	45270	44365	44143	43966	43571	5.32	5.36	5.37	5.39	5.41
	27°F (-2.8°C)	47168	46225	45994	45810	45398	5.34	5.39	5.40	5.41	5.43
	32°F (0.0°C)	49067	48085	47845	47654	47225	5.37	5.41	5.42	5.43	5.46
	35°F (1.7°C)	50206	49202	48956	48760	48321	5.38	5.43	5.44	5.45	5.47
	37°F (2.8°C)	52206	51162	50907	50703	50247	5.38	5.42	5.43	5.44	5.47
	42°F (5.6°C)	57208	56064	55784	55561	55061	5.37	5.41	5.42	5.44	5.46
	44.6°F (7.0°C)	59209	58025	57735	57504	56987	5.37	5.41	5.42	5.43	5.45
	47°F (8.3°C)	62211	60966	60661	60419	59875	5.36	5.40	5.42	5.43	5.45
	52°F (11.1°C)	57741	56587	56304	56078	55574	4.90	4.94	4.95	4.96	4.98
	57°F (13.9°C)	53272	52207	51946	51738	51272	4.44	4.47	4.48	4.49	4.51
	59°F (15.0°C)	51485	50455	50203	50002	49552	4.25	4.29	4.29	4.30	4.32
	62°F (16.7°C)	48803	47827	47588	47398	46971	3.97	4.01	4.01	4.02	4.04
	64.4°F (18.0°C)	46658	45725	45496	45314	44906	3.75	3.78	3.79	3.80	3.81
	69.8°F (21.0°C)	41831	40995	40790	40626	40261	3.25	3.28	3.29	3.29	3.31
	75.2°F (24.0°C)	37005	36264	36083	35939	35615	2.75	2.78	2.78	2.79	2.80
1188	-13°F (-25.0°C)	29935	29336	29190	29073	28811	4.68	4.72	4.73	4.74	4.76
	-4°F (-20.0°C)	35292	34586	34413	34276	33967	4.76	4.80	4.81	4.82	4.84
	0°F (-17.8°C)	36460	35731	35552	35410	35091	4.89	4.93	4.94	4.95	4.97
	5°F (-15.0°C)	37920	37162	36976	36828	36496	5.04	5.08	5.09	5.10	5.12
	14°F (-10.0°C)	43841	42964	42749	42578	42195	5.27	5.32	5.33	5.34	5.36
	17°F (-8.3°C)	45814	44898	44673	44495	44094	5.35	5.39	5.41	5.42	5.44
	22°F (-5.6°C)	47819	46863	46629	46442	46024	5.37	5.42	5.43	5.44	5.46
	27°F (-2.8°C)	49824	48828	48584	48390	47954	5.40	5.44	5.45	5.46	5.49
	32°F (0.0°C)	51830	50793	50539	50337	49884	5.42	5.47	5.48	5.49	5.51
	35°F (1.7°C)	53033	51972	51712	51505	51042	5.44	5.48	5.49	5.50	5.53
	37°F (2.8°C)	55146	54043	53773	53558	53076	5.43	5.48	5.49	5.50	5.52
	42°F (5.6°C)	60430	59221	58925	58690	58161	5.42	5.47	5.48	5.49	5.51
	44.6°F (7.0°C)	62543	61293	60986	60742	60195	5.42	5.46	5.48	5.49	5.51
	47°F (8.3°C)	65714	64399	64077	63821	63247	5.42	5.46	5.47	5.48	5.50
	52°F (11.1°C)	60993	59773	59474	59236	58703	4.95	4.99	5.00	5.01	5.03
	57°F (13.9°C)	56272	55147	54871	54651	54159	4.48	4.52	4.53	4.54	4.55
	59°F (15.0°C)	54384	53296	53030	52817	52342	4.29	4.33	4.34	4.35	4.36
	62°F (16.7°C)	51551	50520	50268	50067	49616	4.01	4.05	4.06	4.06	4.08
	64.4°F (18.0°C)	49285	48300	48058	47866	47435	3.79	3.82	3.83	3.84	3.85
	69.8°F (21.0°C)	44187	43303	43087	42914	42528	3.29	3.31	3.32	3.33	3.34
	75.2°F (24.0°C)	39088	38307	38115	37963	37621	2.78	2.80	2.81	2.82	2.83

Table 19 – 54K RH Heating — 37MBRA + 45MBAA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1135	-13°F (-25.0°C)	21028	20608	20505	19616	19439	4.07	4.10	4.11	4.12	4.14
	-4°F (-20.0°C)	24830	24333	24212	23162	22954	4.29	4.33	4.33	4.34	4.36
	0°F (-17.8°C)	25842	25325	25198	24106	23889	4.21	4.25	4.26	4.26	4.28
	5°F (-15.0°C)	27106	26564	26431	25285	25058	4.12	4.15	4.16	4.17	4.18
	14°F (-10.0°C)	30434	29826	29676	28390	28134	4.21	4.24	4.25	4.26	4.28
	17°F (-8.3°C)	31544	30913	30758	29425	29160	4.24	4.28	4.29	4.29	4.31
	22°F (-5.6°C)	33119	32457	32294	30894	30616	4.28	4.31	4.32	4.33	4.35
	27°F (-2.8°C)	34695	34001	33831	32364	32073	4.32	4.35	4.36	4.37	4.39
	32°F (0.0°C)	36270	35545	35367	33834	33529	4.35	4.39	4.40	4.41	4.43
	35°F (1.7°C)	37215	36471	36289	34715	34403	4.38	4.41	4.42	4.43	4.45
	37°F (2.8°C)	38584	37812	37623	35992	35668	4.33	4.36	4.37	4.38	4.40
	42°F (5.6°C)	42005	41165	40959	39183	38831	4.21	4.24	4.25	4.26	4.27
	44.6°F (7.0°C)	43373	42506	42293	40460	40096	4.16	4.19	4.20	4.21	4.22
	47°F (8.3°C)	45426	44517	44295	42374	41993	4.08	4.12	4.13	4.13	4.15
	52°F (11.1°C)	43356	42489	42277	40444	40080	3.81	3.85	3.85	3.86	3.88
	57°F (13.9°C)	41287	40461	40259	38513	38167	3.55	3.57	3.58	3.59	3.60
	59°F (15.0°C)	40459	39650	39451	37741	37401	3.44	3.47	3.47	3.48	3.49
	62°F (16.7°C)	39217	38433	38241	36583	36253	3.28	3.30	3.31	3.32	3.33
	64.4°F (18.0°C)	38224	37459	37272	35656	35335	3.15	3.17	3.18	3.18	3.20
	69.8°F (21.0°C)	35988	35269	35092	33571	33269	2.86	2.88	2.88	2.89	2.90
	75.2°F (24.0°C)	33753	33078	32913	31486	31202	2.56	2.59	2.59	2.60	2.61
1359	-13°F (-25.0°C)	23300	22834	22720	22177	21977	4.42	4.46	4.47	4.48	4.50
	-4°F (-20.0°C)	27512	26962	26827	26187	25951	4.66	4.70	4.71	4.72	4.74
	0°F (-17.8°C)	28633	28061	27920	27254	27008	4.58	4.62	4.63	4.63	4.65
	5°F (-15.0°C)	30034	29434	29287	28587	28330	4.47	4.51	4.52	4.53	4.55
	14°F (-10.0°C)	33722	33047	32882	32097	31808	4.58	4.61	4.62	4.63	4.65
	17°F (-8.3°C)	34951	34252	34081	33267	32968	4.61	4.65	4.66	4.67	4.69
	22°F (-5.6°C)	36697	35963	35783	34929	34614	4.65	4.69	4.70	4.71	4.73
	27°F (-2.8°C)	38442	37673	37485	36590	36261	4.69	4.73	4.74	4.75	4.77
	32°F (0.0°C)	40188	39384	39187	38252	37907	4.73	4.77	4.78	4.79	4.81
	35°F (1.7°C)	41235	40411	40209	39249	38895	4.76	4.80	4.81	4.82	4.83
	37°F (2.8°C)	42752	41897	41687	40692	40326	4.70	4.74	4.75	4.76	4.78
	42°F (5.6°C)	46542	45612	45383	44300	43901	4.57	4.61	4.62	4.63	4.65
	44.6°F (7.0°C)	48059	47097	46862	45743	45331	4.52	4.56	4.56	4.57	4.59
	47°F (8.3°C)	50333	49326	49080	47908	47477	4.44	4.48	4.48	4.49	4.51
	52°F (11.1°C)	48040	47079	46844	45725	45314	4.15	4.18	4.19	4.20	4.21
	57°F (13.9°C)	45747	44832	44608	43542	43151	3.85	3.88	3.89	3.90	3.92
	59°F (15.0°C)	44829	43933	43713	42669	42285	3.74	3.77	3.77	3.78	3.80
	62°F (16.7°C)	43453	42584	42371	41360	40988	3.56	3.59	3.60	3.60	3.62
	64.4°F (18.0°C)	42353	41506	41298	40312	39949	3.42	3.45	3.46	3.46	3.48
	69.8°F (21.0°C)	39876	39079	38883	37955	37613	3.10	3.13	3.14	3.14	3.15
	75.2°F (24.0°C)	37399	36651	36468	35597	35277	2.79	2.81	2.82	2.82	2.83

Table 19 – 54K RH Heating — 37MBRA + 45MBAA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1582	-13°F (-25.0°C)	25817	25300	25174	25073	24847	4.81	4.85	4.86	4.87	4.89
	-4°F (-20.0°C)	30484	29874	29725	29606	29340	5.07	5.11	5.12	5.13	5.15
	0°F (-17.8°C)	31726	31092	30936	30813	30535	4.98	5.02	5.03	5.04	5.06
	5°F (-15.0°C)	33279	32613	32450	32320	32030	4.86	4.90	4.91	4.92	4.94
	14°F (-10.0°C)	37365	36617	36434	36288	35962	4.97	5.01	5.03	5.04	5.06
	17°F (-8.3°C)	38726	37952	37762	37611	37273	5.01	5.05	5.06	5.07	5.09
	22°F (-5.6°C)	40661	39848	39648	39490	39134	5.06	5.10	5.11	5.12	5.14
	27°F (-2.8°C)	42595	41743	41534	41368	40996	5.10	5.14	5.15	5.16	5.18
	32°F (0.0°C)	44529	43639	43420	43247	42858	5.14	5.19	5.20	5.21	5.23
	35°F (1.7°C)	45690	44776	44552	44374	43975	5.17	5.21	5.22	5.23	5.26
	37°F (2.8°C)	47370	46422	46190	46006	45592	5.11	5.16	5.17	5.18	5.20
	42°F (5.6°C)	51570	50539	50286	50085	49634	4.97	5.01	5.02	5.03	5.05
	44.6°F (7.0°C)	53250	52185	51924	51716	51251	4.91	4.95	4.96	4.97	4.99
	47°F (8.3°C)	55770	54655	54381	54164	53676	4.83	4.86	4.87	4.88	4.90
	52°F (11.1°C)	53229	52165	51904	51696	51231	4.51	4.54	4.55	4.56	4.58
	57F (13.9°C)	50688	49675	49426	49228	48785	4.19	4.22	4.23	4.24	4.26
	59°F (15.0°C)	49672	48679	48435	48241	47807	4.06	4.09	4.10	4.11	4.13
	62°F (16.7°C)	48147	47184	46949	46761	46340	3.87	3.90	3.91	3.92	3.93
	64.4°F (18.0°C)	46928	45989	45759	45576	45166	3.72	3.75	3.76	3.76	3.78
	69.8°F (21.0°C)	44184	43300	43083	42911	42525	3.37	3.40	3.41	3.42	3.43
	75.2°F (24.0°C)	41439	40611	40408	40246	39884	3.03	3.05	3.06	3.07	3.08
1806	-13°F (-25.0°C)	28605	28033	27893	27782	27531	5.23	5.27	5.28	5.29	5.31
	-4°F (-20.0°C)	33777	33102	32936	32804	32509	5.51	5.55	5.57	5.58	5.60
	0°F (-17.8°C)	35153	34450	34278	34141	33834	5.41	5.45	5.47	5.48	5.50
	5°F (-15.0°C)	36874	36136	35956	35812	35490	5.29	5.33	5.34	5.35	5.37
	14°F (-10.0°C)	41401	40573	40370	40208	39847	5.41	5.45	5.46	5.47	5.49
	17°F (-8.3°C)	42910	42052	41841	41674	41299	5.45	5.49	5.50	5.51	5.54
	22°F (-5.6°C)	45053	44152	43931	43755	43362	5.50	5.54	5.55	5.56	5.59
	27°F (-2.8°C)	47196	46252	46021	45837	45424	5.54	5.59	5.60	5.61	5.63
	32°F (0.0°C)	49339	48353	48111	47918	47487	5.59	5.64	5.65	5.66	5.68
	35°F (1.7°C)	50625	49613	49365	49167	48725	5.62	5.67	5.68	5.69	5.71
	37°F (2.8°C)	52487	51437	51180	50975	50517	5.56	5.60	5.61	5.63	5.65
	42°F (5.6°C)	57141	55998	55718	55495	54996	5.40	5.45	5.46	5.47	5.49
	44.6°F (7.0°C)	59002	57822	57533	57303	56787	5.34	5.38	5.39	5.40	5.43
	47°F (8.3°C)	61795	60559	60256	60015	59475	5.25	5.29	5.30	5.31	5.33
	52°F (11.1°C)	58979	57800	57511	57281	56765	4.90	4.94	4.95	4.96	4.98
	57F (13.9°C)	56164	55041	54765	54546	54055	4.55	4.59	4.60	4.61	4.63
	59°F (15.0°C)	55038	53937	53667	53453	52971	4.41	4.45	4.46	4.47	4.49
	62°F (16.7°C)	53348	52281	52020	51812	51346	4.21	4.24	4.25	4.26	4.28
	64.4°F (18.0°C)	51997	50957	50702	50500	50045	4.04	4.07	4.08	4.09	4.11
	69.8°F (21.0°C)	48956	47977	47737	47546	47119	3.67	3.70	3.70	3.71	3.73
	75.2°F (24.0°C)	45916	44997	44772	44593	44192	3.29	3.32	3.33	3.33	3.35

Table 20 – 36K Heating — 37MBRA + 45MBCA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
753	-13°F (-25.0°C)	13916	13637	13569	13249	13130	2.50	2.52	2.53	2.53	2.54
	-4°F (-20.0°C)	17542	17191	17105	16702	16552	2.70	2.72	2.72	2.73	2.74
	0°F (-17.8°C)	19716	19322	19225	18772	18603	2.74	2.77	2.77	2.78	2.79
	5°F (-15.0°C)	22434	21985	21875	21359	21167	2.80	2.83	2.83	2.84	2.85
	14°F (-10.0°C)	23383	22915	22800	22263	22062	2.90	2.93	2.93	2.94	2.95
	17°F (-8.3°C)	23699	23225	23109	22564	22361	2.94	2.96	2.97	2.97	2.98
	22°F (-5.6°C)	24506	24016	23895	23332	23122	2.87	2.90	2.90	2.91	2.92
	27°F (-2.8°C)	25312	24806	24682	24100	23883	2.81	2.83	2.84	2.84	2.86
	32°F (0.0°C)	26119	25597	25469	24868	24645	2.75	2.77	2.78	2.78	2.79
	35°F (1.7°C)	26603	26071	25941	25329	25101	2.71	2.73	2.74	2.74	2.75
	37°F (2.8°C)	28143	27580	27443	26796	26554	2.73	2.75	2.76	2.76	2.77
	42°F (5.6°C)	31993	31354	31197	30461	30187	2.78	2.80	2.81	2.82	2.83
	44.6°F (7.0°C)	33533	32863	32698	31928	31640	2.80	2.83	2.83	2.84	2.85
	47°F (8.3°C)	35843	35127	34951	34127	33820	2.83	2.86	2.86	2.87	2.88
	52°F (11.1°C)	35485	34776	34602	33786	33482	2.65	2.68	2.68	2.69	2.70
	57°F (13.9°C)	35127	34425	34253	33445	33144	2.48	2.50	2.50	2.51	2.52
	59°F (15.0°C)	34984	34284	34113	33309	33009	2.40	2.42	2.43	2.43	2.44
	62°F (16.7°C)	34769	34074	33903	33104	32806	2.30	2.32	2.32	2.33	2.33
	64.4°F (18.0°C)	34597	33905	33736	32940	32644	2.21	2.23	2.23	2.24	2.25
	69.8°F (21.0°C)	34211	33526	33359	32572	32279	2.02	2.04	2.04	2.04	2.05
	75.2°F (24.0°C)	33824	33147	32982	32204	31914	1.83	1.84	1.84	1.85	1.86
853	-13°F (-25.0°C)	14853	14556	14483	14283	14154	2.94	2.97	2.97	2.98	2.99
	-4°F (-20.0°C)	18724	18349	18258	18005	17843	3.17	3.20	3.20	3.21	3.22
	0°F (-17.8°C)	21044	20623	20520	20236	20054	3.23	3.25	3.26	3.27	3.28
	5°F (-15.0°C)	23945	23466	23349	23026	22818	3.30	3.33	3.33	3.34	3.35
	14°F (-10.0°C)	24958	24458	24336	23999	23783	3.42	3.44	3.45	3.46	3.47
	17°F (-8.3°C)	25295	24789	24665	24324	24105	3.45	3.48	3.49	3.50	3.51
	22°F (-5.6°C)	26156	25633	25505	25152	24926	3.38	3.41	3.41	3.42	3.43
	27°F (-2.8°C)	27017	26477	26345	25980	25746	3.31	3.33	3.34	3.35	3.36
	32°F (0.0°C)	27879	27321	27184	26808	26567	3.23	3.26	3.27	3.27	3.28
	35°F (1.7°C)	28395	27827	27688	27305	27059	3.19	3.21	3.22	3.23	3.24
	37°F (2.8°C)	30039	29438	29291	28886	28626	3.21	3.24	3.24	3.25	3.26
	42°F (5.6°C)	34148	33465	33298	32837	32542	3.27	3.30	3.31	3.31	3.33
	44.6°F (7.0°C)	35792	35076	34901	34418	34108	3.30	3.32	3.33	3.34	3.35
	47°F (8.3°C)	38258	37493	37305	36789	36458	3.33	3.36	3.37	3.37	3.39
	52°F (11.1°C)	37876	37118	36932	36421	36094	3.12	3.15	3.15	3.16	3.17
	57°F (13.9°C)	37493	36743	36560	36054	35729	2.91	2.94	2.94	2.95	2.96
	59°F (15.0°C)	37340	36594	36411	35907	35584	2.83	2.85	2.86	2.86	2.88
	62°F (16.7°C)	37111	36369	36187	35686	35365	2.70	2.73	2.73	2.74	2.75
	64.4°F (18.0°C)	36928	36189	36008	35510	35190	2.60	2.62	2.63	2.63	2.64
	69.8°F (21.0°C)	36515	35785	35606	35113	34797	2.38	2.39	2.40	2.40	2.41
	75.2°F (24.0°C)	36102	35380	35203	34716	34404	2.15	2.17	2.17	2.17	2.18

Table 20 – 36K Heating — 37MBRA + 45MBCA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
947	-13°F (-25.0°C)	15853	15536	15459	15397	15258	3.10	3.12	3.13	3.14	3.15
	-4°F (-20.0°C)	19985	19585	19487	19409	19235	3.34	3.36	3.37	3.38	3.39
	0°F (-17.8°C)	22462	22013	21902	21815	21619	3.40	3.43	3.43	3.44	3.45
	5°F (-15.0°C)	25558	25047	24921	24822	24598	3.47	3.50	3.51	3.52	3.53
	14°F (-10.0°C)	26639	26106	25975	25871	25639	3.60	3.62	3.63	3.64	3.65
	17°F (-8.3°C)	26999	26459	26327	26221	25985	3.64	3.67	3.67	3.68	3.69
	22°F (-5.6°C)	27918	27360	27223	27114	26870	3.56	3.59	3.59	3.60	3.62
	27°F (-2.8°C)	28837	28261	28119	28007	27755	3.48	3.51	3.52	3.52	3.54
	32°F (0.0°C)	29756	29161	29016	28899	28639	3.40	3.43	3.44	3.44	3.46
	35°F (1.7°C)	30308	29702	29553	29435	29170	3.36	3.38	3.39	3.40	3.41
	37°F (2.8°C)	32062	31421	31264	31139	30859	3.38	3.41	3.42	3.42	3.44
	42°F (5.6°C)	36449	35720	35541	35399	35080	3.45	3.47	3.48	3.49	3.50
	44.6°F (7.0°C)	38203	37439	37252	37103	36769	3.47	3.50	3.51	3.51	3.53
	47°F (8.3°C)	40835	40018	39818	39659	39302	3.51	3.54	3.54	3.55	3.57
	52°F (11.1°C)	40427	39618	39420	39262	38909	3.29	3.31	3.32	3.33	3.34
	57°F (13.9°C)	40019	39218	39022	38866	38516	3.07	3.09	3.10	3.10	3.12
	59°F (15.0°C)	39856	39059	38863	38708	38359	2.98	3.00	3.01	3.01	3.03
	62°F (16.7°C)	39611	38819	38625	38470	38124	2.85	2.87	2.87	2.88	2.89
	64.4°F (18.0°C)	39415	38627	38434	38280	37935	2.74	2.76	2.77	2.77	2.78
	69.8°F (21.0°C)	38975	38195	38004	37852	37511	2.50	2.52	2.53	2.53	2.54
	75.2°F (24.0°C)	38534	37763	37574	37424	37087	2.26	2.28	2.28	2.29	2.30
1041	-13°F (-25.0°C)	16921	16583	16500	16434	16286	3.13	3.15	3.16	3.17	3.18
	-4°F (-20.0°C)	21331	20905	20800	20717	20530	3.37	3.40	3.41	3.41	3.43
	0°F (-17.8°C)	23975	23495	23378	23284	23075	3.43	3.46	3.47	3.47	3.49
	5°F (-15.0°C)	27279	26734	26600	26494	26255	3.51	3.54	3.54	3.55	3.57
	14°F (-10.0°C)	28433	27864	27725	27614	27366	3.63	3.66	3.67	3.68	3.69
	17°F (-8.3°C)	28818	28241	28100	27988	27736	3.67	3.70	3.71	3.72	3.73
	22°F (-5.6°C)	29799	29203	29057	28940	28680	3.59	3.62	3.63	3.64	3.65
	27°F (-2.8°C)	30780	30164	30013	29893	29624	3.52	3.54	3.55	3.56	3.57
	32°F (0.0°C)	31761	31126	30970	30846	30568	3.44	3.46	3.47	3.48	3.49
	35°F (1.7°C)	32349	31702	31544	31418	31135	3.39	3.42	3.42	3.43	3.44
	37°F (2.8°C)	34222	33538	33370	33236	32937	3.42	3.44	3.45	3.46	3.47
	42°F (5.6°C)	38904	38126	37935	37783	37443	3.48	3.51	3.52	3.52	3.54
	44.6°F (7.0°C)	40776	39961	39761	39602	39246	3.51	3.53	3.54	3.55	3.56
	47°F (8.3°C)	43585	42714	42500	42330	41949	3.54	3.57	3.58	3.59	3.60
	52°F (11.1°C)	43150	42287	42075	41907	41530	3.32	3.35	3.35	3.36	3.37
	57°F (13.9°C)	42714	41860	41651	41484	41111	3.10	3.12	3.13	3.14	3.15
	59°F (15.0°C)	42540	41689	41481	41315	40943	3.01	3.03	3.04	3.04	3.06
	62°F (16.7°C)	42279	41433	41226	41061	40692	2.87	2.90	2.90	2.91	2.92
	64.4°F (18.0°C)	42070	41229	41022	40858	40491	2.77	2.79	2.80	2.80	2.81
	69.8°F (21.0°C)	41600	40768	40564	40402	40038	2.53	2.55	2.55	2.56	2.57
	75.2°F (24.0°C)	41130	40307	40105	39945	39585	2.28	2.30	2.31	2.31	2.32

Table 21 – 48K Heating — 37MBRA + 45MBCA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
753	-13°F (-25.0°C)	21374	20946	20842	20557	20372	3.69	3.72	3.73	3.74	3.75
	-4°F (-20.0°C)	27118	26576	26443	26082	25847	4.11	4.15	4.16	4.16	4.18
	0°F (-17.8°C)	30272	29667	29519	29115	28853	4.26	4.30	4.31	4.32	4.33
	5°F (-15.0°C)	34215	33531	33363	32907	32611	4.45	4.49	4.50	4.51	4.52
	14°F (-10.0°C)	36813	36076	35896	35405	35087	4.77	4.81	4.82	4.83	4.85
	17°F (-8.3°C)	37679	36925	36740	36238	35912	4.88	4.92	4.93	4.94	4.96
	22°F (-5.6°C)	38340	37573	37385	36874	36542	4.79	4.83	4.84	4.85	4.87
	27°F (-2.8°C)	39001	38221	38029	37510	37172	4.70	4.74	4.75	4.76	4.78
	32°F (0.0°C)	39662	38868	38674	38145	37802	4.62	4.65	4.66	4.67	4.69
	35°F (1.7°C)	40058	39257	39061	38527	38180	4.56	4.60	4.61	4.62	4.64
	37°F (2.8°C)	42112	41269	41063	40502	40137	4.59	4.62	4.63	4.64	4.66
	42°F (5.6°C)	47245	46300	46069	45439	45030	4.64	4.68	4.69	4.70	4.72
	44.6°F (7.0°C)	49298	48312	48071	47414	46987	4.67	4.70	4.71	4.72	4.74
	47°F (8.3°C)	52378	51331	51074	50376	49923	4.70	4.74	4.75	4.76	4.78
	52°F (11.1°C)	50419	49411	49164	48492	48056	4.16	4.19	4.20	4.21	4.22
	57°F (13.9°C)	48460	47491	47254	46608	46188	3.61	3.64	3.65	3.65	3.67
	59°F (15.0°C)	47677	46723	46489	45854	45441	3.39	3.42	3.43	3.43	3.45
	62°F (16.7°C)	46501	45571	45343	44724	44321	3.06	3.09	3.10	3.10	3.11
	64.4°F (18.0°C)	45561	44650	44426	43819	43425	2.80	2.83	2.83	2.84	2.85
	69.8°F (21.0°C)	43445	42576	42363	41784	41408	2.21	2.23	2.24	2.24	2.25
	75.2°F (24.0°C)	41329	40503	40300	39749	39392	1.62	1.64	1.64	1.64	1.65
853	-13°F (-25.0°C)	22801	22344	22233	22036	21838	4.34	4.38	4.39	4.39	4.41
	-4°F (-20.0°C)	28929	28350	28208	27959	27707	4.84	4.88	4.89	4.90	4.92
	0°F (-17.8°C)	32293	31647	31489	31211	30930	5.02	5.06	5.07	5.08	5.10
	5°F (-15.0°C)	36499	35769	35590	35275	34958	5.24	5.28	5.29	5.30	5.32
	14°F (-10.0°C)	39270	38485	38292	37954	37612	5.62	5.66	5.67	5.68	5.71
	17°F (-8.3°C)	40194	39390	39193	38846	38497	5.74	5.79	5.80	5.81	5.83
	22°F (-5.6°C)	40899	40081	39880	39528	39172	5.64	5.68	5.69	5.71	5.73
	27°F (-2.8°C)	41604	40772	40568	40209	39847	5.53	5.58	5.59	5.60	5.62
	32°F (0.0°C)	42309	41463	41256	40891	40523	5.43	5.47	5.49	5.50	5.52
	35°F (1.7°C)	42732	41877	41668	41299	40928	5.37	5.41	5.42	5.43	5.46
	37°F (2.8°C)	44923	44024	43804	43417	43026	5.40	5.44	5.45	5.46	5.48
	42°F (5.6°C)	50399	49391	49144	48709	48271	5.46	5.51	5.52	5.53	5.55
	44.6°F (7.0°C)	52589	51537	51280	50826	50369	5.49	5.53	5.55	5.56	5.58
	47°F (8.3°C)	55875	54757	54483	54002	53516	5.53	5.58	5.59	5.60	5.62
	52°F (11.1°C)	53785	52709	52446	51982	51514	4.89	4.93	4.94	4.95	4.97
	57°F (13.9°C)	51695	50661	50408	49962	49512	4.25	4.28	4.29	4.30	4.32
	59°F (15.0°C)	50859	49842	49593	49154	48712	3.99	4.02	4.03	4.04	4.05
	62°F (16.7°C)	49605	48613	48370	47942	47511	3.61	3.63	3.64	3.65	3.66
	64.4°F (18.0°C)	48602	47630	47392	46973	46550	3.30	3.32	3.33	3.34	3.35
	69.8°F (21.0°C)	46345	45418	45191	44791	44388	2.60	2.62	2.63	2.64	2.65
	75.2°F (24.0°C)	44088	43206	42990	42610	42226	1.91	1.93	1.93	1.93	1.94

Table 21 – 48K Heating — 37MBRA + 45MBCA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
947	-13°F (-25.0°C)	24322	23836	23717	23622	23409	4.57	4.61	4.62	4.63	4.64
	-4°F (-20.0°C)	30860	30243	30091	29971	29701	5.09	5.14	5.15	5.16	5.18
	0°F (-17.8°C)	34449	33760	33591	33457	33156	5.28	5.32	5.33	5.34	5.37
	5°F (-15.0°C)	38935	38156	37966	37814	37474	5.51	5.56	5.57	5.58	5.60
	14°F (-10.0°C)	41891	41054	40848	40685	40319	5.91	5.96	5.97	5.98	6.01
	17°F (-8.3°C)	42877	42019	41809	41642	41267	6.04	6.09	6.10	6.12	6.14
	22°F (-5.6°C)	43629	42756	42543	42372	41991	5.93	5.98	5.99	6.01	6.03
	27°F (-2.8°C)	44381	43493	43276	43103	42715	5.83	5.87	5.88	5.90	5.92
	32°F (0.0°C)	45133	44231	44009	43833	43439	5.72	5.76	5.77	5.79	5.81
	35°F (1.7°C)	45585	44673	44449	44272	43873	5.65	5.70	5.71	5.72	5.74
	37°F (2.8°C)	47921	46963	46728	46541	46122	5.68	5.73	5.74	5.75	5.77
	42°F (5.6°C)	53763	52688	52424	52214	51745	5.75	5.80	5.81	5.82	5.84
	44.6°F (7.0°C)	56100	54978	54703	54484	53993	5.78	5.83	5.84	5.85	5.87
	47°F (8.3°C)	59605	58412	58120	57888	57367	5.82	5.87	5.88	5.89	5.92
	52°F (11.1°C)	57375	56228	55947	55723	55221	5.15	5.19	5.20	5.21	5.23
	57°F (13.9°C)	55146	54043	53773	53558	53076	4.47	4.51	4.52	4.52	4.54
	59°F (15.0°C)	54254	53169	52903	52692	52217	4.20	4.23	4.24	4.25	4.27
	62°F (16.7°C)	52916	51858	51599	51392	50930	3.79	3.83	3.83	3.84	3.86
	64.4°F (18.0°C)	51846	50809	50555	50353	49900	3.47	3.50	3.51	3.51	3.53
	69.8°F (21.0°C)	49439	48450	48208	48015	47583	2.74	2.76	2.77	2.77	2.79
	75.2°F (24.0°C)	47031	46090	45860	45676	45265	2.01	2.03	2.03	2.04	2.04
1041	-13°F (-25.0°C)	25946	25427	25300	25199	24972	4.62	4.65	4.66	4.67	4.69
	-4°F (-20.0°C)	32920	32261	32100	31972	31684	5.15	5.19	5.20	5.21	5.23
	0°F (-17.8°C)	36748	36013	35833	35690	35369	5.33	5.38	5.39	5.40	5.42
	5°F (-15.0°C)	41534	40704	40500	40338	39975	5.57	5.61	5.63	5.64	5.66
	14°F (-10.0°C)	44688	43794	43575	43401	43010	5.97	6.02	6.03	6.04	6.07
	17°F (-8.3°C)	45739	44824	44600	44422	44022	6.10	6.15	6.17	6.18	6.20
	22°F (-5.6°C)	46541	45610	45382	45201	44794	5.99	6.04	6.05	6.07	6.09
	27°F (-2.8°C)	47344	46397	46165	45980	45566	5.88	5.93	5.94	5.96	5.98
	32°F (0.0°C)	48146	47183	46947	46759	46339	5.77	5.82	5.83	5.84	5.87
	35°F (1.7°C)	48627	47655	47417	47227	46802	5.71	5.75	5.77	5.78	5.80
	37°F (2.8°C)	51120	50098	49847	49648	49201	5.74	5.78	5.80	5.81	5.83
	42°F (5.6°C)	57352	56205	55924	55700	55199	5.81	5.86	5.87	5.88	5.90
	44.6°F (7.0°C)	59844	58647	58354	58121	57598	5.84	5.88	5.90	5.91	5.93
	47°F (8.3°C)	63583	62312	62000	61752	61196	5.88	5.93	5.94	5.95	5.98
	52°F (11.1°C)	61205	59981	59681	59442	58907	5.20	5.24	5.25	5.26	5.28
	57°F (13.9°C)	58827	57650	57362	57133	56618	4.52	4.55	4.56	4.57	4.59
	59°F (15.0°C)	57876	56718	56435	56209	55703	4.24	4.28	4.29	4.29	4.31
	62°F (16.7°C)	56449	55320	55043	54823	54330	3.83	3.86	3.87	3.88	3.90
	64.4°F (18.0°C)	55307	54201	53930	53714	53231	3.51	3.53	3.54	3.55	3.56
	69.8°F (21.0°C)	52739	51684	51426	51220	50759	2.77	2.79	2.80	2.80	2.81
	75.2°F (24.0°C)	50170	49167	48921	48725	48287	2.03	2.05	2.05	2.06	2.06

Table 22 – 36K RH High Static Heating — 37MBRA + 45MBDA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
765	-13°F (-25.0°C)	12314	12068	12008	12842	12727	2.32	2.33	2.34	2.34	2.35
	-4°F (-20.0°C)	15135	14832	14758	15784	15642	2.42	2.44	2.45	2.45	2.46
	0°F (-17.8°C)	16721	16386	16304	17438	17281	2.48	2.50	2.51	2.51	2.52
	5°F (-15.0°C)	18703	18329	18237	19505	19329	2.55	2.57	2.58	2.58	2.59
	14°F (-10.0°C)	21081	20659	20556	21985	21787	2.70	2.72	2.72	2.73	2.74
	17°F (-8.3°C)	21873	21436	21328	22811	22606	2.75	2.77	2.77	2.78	2.79
	22°F (-5.6°C)	23013	22553	22440	24000	23784	2.71	2.73	2.74	2.74	2.75
	27°F (-2.8°C)	24153	23670	23551	25188	24962	2.67	2.70	2.70	2.71	2.72
	32°F (0.0°C)	25292	24787	24663	26377	26140	2.64	2.66	2.66	2.67	2.68
	35°F (1.7°C)	25976	25457	25329	27090	26846	2.62	2.64	2.64	2.65	2.66
	37°F (2.8°C)	26750	26215	26084	27897	27646	2.58	2.61	2.61	2.62	2.63
	42°F (5.6°C)	28685	28111	27970	29915	29646	2.50	2.52	2.53	2.53	2.54
	44.6°F (7.0°C)	29459	28869	28725	30722	30446	2.47	2.49	2.50	2.50	2.51
	47°F (8.3°C)	30619	30007	29857	31933	31645	2.42	2.44	2.45	2.45	2.46
	52°F (11.1°C)	31624	30991	30836	32980	32683	2.30	2.32	2.32	2.33	2.34
	57°F (13.9°C)	32628	31976	31816	34028	33722	2.18	2.20	2.20	2.20	2.21
	59°F (15.0°C)	33030	32370	32208	34447	34137	2.13	2.15	2.15	2.15	2.16
	62°F (16.7°C)	33633	32960	32795	35075	34760	2.05	2.07	2.07	2.08	2.09
	64.4°F (18.0°C)	34115	33433	33266	35578	35258	1.99	2.01	2.01	2.02	2.03
	69.8°F (21.0°C)	31914	31276	31119	33283	32983	1.86	1.88	1.88	1.88	1.89
	75.2°F (24.0°C)	22560	22109	21998	23528	23316	1.73	1.74	1.75	1.75	1.76
941	-13°F (-25.0°C)	13943	13664	13595	14032	13906	2.57	2.59	2.60	2.60	2.61
	-4°F (-20.0°C)	17136	16793	16709	17246	17091	2.69	2.72	2.72	2.73	2.74
	0°F (-17.8°C)	18932	18553	18460	19053	18881	2.76	2.78	2.78	2.79	2.80
	5°F (-15.0°C)	21176	20752	20649	21312	21120	2.83	2.86	2.86	2.87	2.88
	14°F (-10.0°C)	23868	23391	23274	24021	23805	3.00	3.02	3.03	3.03	3.04
	17°F (-8.3°C)	24765	24270	24149	24924	24700	3.05	3.08	3.08	3.09	3.10
	22°F (-5.6°C)	26056	25535	25407	26223	25987	3.01	3.03	3.04	3.05	3.06
	27°F (-2.8°C)	27346	26799	26665	27521	27274	2.97	2.99	3.00	3.01	3.02
	32°F (0.0°C)	28637	28064	27924	28820	28561	2.93	2.95	2.96	2.97	2.98
	35°F (1.7°C)	29411	28823	28679	29599	29333	2.91	2.93	2.94	2.94	2.95
	37°F (2.8°C)	30287	29681	29533	30481	30207	2.87	2.89	2.90	2.91	2.92
	42°F (5.6°C)	32478	31828	31669	32686	32392	2.78	2.80	2.81	2.82	2.83
	44.6°F (7.0°C)	33354	32687	32523	33567	33265	2.75	2.77	2.77	2.78	2.79
	47°F (8.3°C)	34668	33975	33805	34890	34576	2.69	2.72	2.72	2.73	2.74
	52°F (11.1°C)	35805	35089	34914	36035	35710	2.56	2.58	2.58	2.59	2.60
	57°F (13.9°C)	36943	36204	36023	37179	36845	2.42	2.44	2.44	2.45	2.46
	59°F (15.0°C)	37398	36650	36466	37637	37299	2.36	2.38	2.39	2.39	2.40
	62°F (16.7°C)	38080	37318	37132	38324	37979	2.28	2.30	2.31	2.31	2.32
	64.4°F (18.0°C)	38626	37853	37664	38873	38524	2.22	2.23	2.24	2.24	2.25
	69.8°F (21.0°C)	36134	35411	35234	36365	36038	2.07	2.09	2.09	2.09	2.10
	75.2°F (24.0°C)	25543	25032	24907	25707	25475	1.92	1.94	1.94	1.94	1.95

Table 22 – 36K RH High Static Heating — 37MBRA + 45MBDA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1059	-13°F (-25.0°C)	15786	15470	15393	15332	15194	2.86	2.88	2.89	2.89	2.90
	-4°F (-20.0°C)	19402	19014	18919	18843	18674	2.99	3.02	3.02	3.03	3.04
	0°F (-17.8°C)	21435	21006	20901	20818	20630	3.06	3.09	3.09	3.10	3.11
	5°F (-15.0°C)	23976	23496	23379	23285	23076	3.15	3.17	3.18	3.19	3.20
	14°F (-10.0°C)	27024	26483	26351	26246	26009	3.33	3.36	3.36	3.37	3.38
	17°F (-8.3°C)	28040	27479	27342	27232	26987	3.39	3.42	3.42	3.43	3.44
	22°F (-5.6°C)	29501	28911	28766	28651	28394	3.35	3.37	3.38	3.39	3.40
	27°F (-2.8°C)	30962	30343	30191	30070	29800	3.30	3.33	3.33	3.34	3.35
	32°F (0.0°C)	32423	31775	31616	31489	31206	3.26	3.28	3.29	3.30	3.31
	35°F (1.7°C)	33300	32634	32471	32341	32050	3.23	3.26	3.26	3.27	3.28
	37°F (2.8°C)	34292	33606	33438	33304	33005	3.19	3.22	3.22	3.23	3.24
	42°F (5.6°C)	36772	36037	35856	35713	35392	3.09	3.12	3.12	3.13	3.14
	44.6°F (7.0°C)	37764	37009	36824	36677	36346	3.05	3.08	3.08	3.09	3.10
	47°F (8.3°C)	39252	38467	38275	38122	37779	2.99	3.02	3.02	3.03	3.04
	52°F (11.1°C)	40540	39729	39530	39372	39018	2.84	2.86	2.87	2.87	2.89
	57°F (13.9°C)	41828	40991	40786	40623	40257	2.69	2.71	2.72	2.72	2.73
	59°F (15.0°C)	42343	41496	41288	41123	40753	2.63	2.65	2.65	2.66	2.67
	62°F (16.7°C)	43115	42253	42042	41874	41497	2.54	2.56	2.56	2.57	2.58
	64.4°F (18.0°C)	43733	42859	42644	42474	42092	2.46	2.48	2.49	2.49	2.50
	69.8°F (21.0°C)	40912	40094	39893	39734	39376	2.30	2.32	2.32	2.33	2.34
	75.2°F (24.0°C)	28921	28342	28201	28088	27835	2.13	2.15	2.16	2.16	2.17
1235	-13°F (-25.0°C)	17874	17516	17428	17359	17203	3.18	3.20	3.21	3.21	3.23
	-4°F (-20.0°C)	21968	21528	21421	21335	21143	3.33	3.35	3.36	3.37	3.38
	0°F (-17.8°C)	24269	23784	23665	23570	23358	3.40	3.43	3.44	3.44	3.46
	5°F (-15.0°C)	27146	26603	26470	26364	26127	3.50	3.53	3.53	3.54	3.55
	14°F (-10.0°C)	30597	29985	29835	29716	29449	3.70	3.73	3.74	3.74	3.76
	17°F (-8.3°C)	31748	31113	30957	30833	30556	3.77	3.80	3.80	3.81	3.83
	22°F (-5.6°C)	33402	32734	32570	32440	32148	3.72	3.75	3.75	3.76	3.78
	27°F (-2.8°C)	35056	34355	34183	34047	33740	3.67	3.70	3.70	3.71	3.73
	32°F (0.0°C)	36711	35976	35796	35653	35332	3.62	3.65	3.65	3.66	3.68
	35°F (1.7°C)	37703	36949	36764	36617	36288	3.59	3.62	3.63	3.63	3.65
	37°F (2.8°C)	38826	38050	37860	37708	37369	3.54	3.57	3.58	3.59	3.60
	42°F (5.6°C)	41634	40802	40598	40435	40071	3.44	3.46	3.47	3.48	3.49
	44.6°F (7.0°C)	42758	41902	41693	41526	41152	3.39	3.42	3.43	3.43	3.45
	47°F (8.3°C)	44442	43554	43336	43162	42774	3.33	3.35	3.36	3.37	3.38
	52°F (11.1°C)	45900	44982	44757	44578	44177	3.16	3.18	3.19	3.19	3.21
	57°F (13.9°C)	47358	46411	46179	45994	45580	2.99	3.01	3.02	3.02	3.04
	59°F (15.0°C)	47942	46983	46748	46561	46142	2.92	2.94	2.95	2.95	2.97
	62°F (16.7°C)	48816	47840	47601	47410	46984	2.82	2.84	2.85	2.85	2.86
	64.4°F (18.0°C)	49516	48526	48283	48090	47657	2.74	2.76	2.76	2.77	2.78
	69.8°F (21.0°C)	46321	45395	45168	44987	44582	2.55	2.57	2.58	2.58	2.59
	75.2°F (24.0°C)	32745	32090	31929	31802	31516	2.37	2.39	2.39	2.40	2.41

Table 23 – 48K RH High Static Heating — 37MBRA + 45MBDA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1059	-13°F (-25.0°C)	22140	21697	21589	20887	20699	3.44	3.46	3.47	3.48	3.49
	-4°F (-20.0°C)	26233	25708	25580	24749	24526	3.64	3.67	3.67	3.68	3.70
	0°F (-17.8°C)	28526	27956	27816	26913	26671	3.76	3.79	3.80	3.80	3.82
	5°F (-15.0°C)	31393	30765	30611	29617	29351	3.91	3.94	3.95	3.95	3.97
	14°F (-10.0°C)	35582	34870	34696	33569	33267	4.11	4.14	4.15	4.16	4.17
	17°F (-8.3°C)	36978	36238	36057	34886	34572	4.18	4.21	4.22	4.23	4.24
	22°F (-5.6°C)	39229	38445	38252	37010	36677	4.20	4.23	4.24	4.25	4.27
	27°F (-2.8°C)	41480	40651	40448	39134	38782	4.22	4.26	4.27	4.27	4.29
	32°F (0.0°C)	43732	42857	42643	41258	40887	4.25	4.28	4.29	4.30	4.32
	35°F (1.7°C)	45083	44181	43960	42532	42150	4.26	4.30	4.30	4.31	4.33
	37°F (2.8°C)	45590	44678	44455	43011	42624	4.16	4.20	4.21	4.22	4.23
	42°F (5.6°C)	46859	45922	45692	44208	43810	3.92	3.96	3.96	3.97	3.99
	44.6°F (7.0°C)	47367	46419	46187	44687	44285	3.83	3.86	3.87	3.87	3.89
	47°F (8.3°C)	48128	47165	46930	45405	44997	3.68	3.71	3.72	3.73	3.74
	52°F (11.1°C)	47489	46539	46307	44803	44399	3.37	3.40	3.40	3.41	3.42
	57°F (13.9°C)	46850	45913	45684	44200	43802	3.05	3.08	3.08	3.09	3.10
	59°F (15.0°C)	46595	45663	45434	43959	43563	2.93	2.95	2.96	2.96	2.97
	62°F (16.7°C)	46211	45287	45061	43597	43205	2.74	2.76	2.76	2.77	2.78
	64.4°F (18.0°C)	45905	44986	44761	43308	42918	2.59	2.61	2.61	2.62	2.63
	69.8°F (21.0°C)	40804	39988	39788	38496	38150	2.25	2.26	2.27	2.27	2.28
	75.2°F (24.0°C)	35704	34990	34815	33684	33381	1.90	1.92	1.92	1.93	1.94
1294	-13°F (-25.0°C)	24074	23593	23475	23044	22837	3.82	3.85	3.86	3.86	3.88
	-4°F (-20.0°C)	28525	27955	27815	27305	27059	4.04	4.07	4.08	4.09	4.11
	0°F (-17.8°C)	31019	30399	30247	29692	29425	4.17	4.21	4.22	4.23	4.24
	5°F (-15.0°C)	34136	33454	33286	32676	32382	4.34	4.38	4.39	4.39	4.41
	14°F (-10.0°C)	38691	37917	37727	37035	36702	4.56	4.60	4.61	4.62	4.64
	17°F (-8.3°C)	40209	39405	39208	38489	38142	4.64	4.68	4.69	4.70	4.71
	22°F (-5.6°C)	42657	41804	41595	40832	40464	4.67	4.70	4.71	4.72	4.74
	27°F (-2.8°C)	45105	44203	43982	43175	42787	4.69	4.73	4.74	4.75	4.77
	32°F (0.0°C)	47553	46602	46369	45518	45109	4.72	4.76	4.77	4.78	4.79
	35°F (1.7°C)	49022	48041	47801	46924	46502	4.73	4.77	4.78	4.79	4.81
	37°F (2.8°C)	49574	48582	48339	47453	47026	4.63	4.66	4.67	4.68	4.70
	42°F (5.6°C)	50954	49935	49685	48773	48335	4.36	4.40	4.40	4.41	4.43
	44.6°F (7.0°C)	51505	50475	50223	49302	48858	4.25	4.29	4.30	4.30	4.32
	47°F (8.3°C)	52333	51287	51030	50094	49643	4.09	4.13	4.13	4.14	4.16
	52°F (11.1°C)	51639	50606	50353	49429	48984	3.74	3.77	3.78	3.79	3.80
	57°F (13.9°C)	50944	49925	49675	48764	48325	3.39	3.42	3.43	3.43	3.45
	59°F (15.0°C)	50666	49653	49404	48498	48062	3.25	3.28	3.28	3.29	3.30
	62°F (16.7°C)	50249	49244	48998	48099	47666	3.04	3.07	3.07	3.08	3.09
	64.4°F (18.0°C)	49916	48917	48673	47780	47350	2.87	2.90	2.90	2.91	2.92
	69.8°F (21.0°C)	44370	43482	43265	42471	42089	2.49	2.51	2.52	2.52	2.54
	75.2°F (24.0°C)	38824	38047	37857	37163	36828	2.12	2.13	2.14	2.14	2.15

Table 23 – 48K RH High Static Heating — 37MBRA + 45MBDA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1471	-13°F (-25.0°C)	26178	25654	25526	25424	25195	4.24	4.28	4.29	4.29	4.31
	-4°F (-20.0°C)	31018	30397	30245	30124	29853	4.49	4.53	4.54	4.55	4.56
	0°F (-17.8°C)	33729	33055	32890	32758	32463	4.64	4.68	4.69	4.69	4.71
	5°F (-15.0°C)	37119	36377	36195	36050	35726	4.82	4.86	4.87	4.88	4.90
	14°F (-10.0°C)	42071	41230	41024	40860	40492	5.07	5.11	5.12	5.13	5.15
	17°F (-8.3°C)	43722	42848	42634	42463	42081	5.15	5.20	5.21	5.22	5.24
	22°F (-5.6°C)	46384	45457	45229	45048	44643	5.18	5.23	5.24	5.25	5.27
	27°F (-2.8°C)	49046	48065	47825	47634	47205	5.21	5.26	5.27	5.28	5.30
	32°F (0.0°C)	51708	50674	50421	50219	49767	5.24	5.29	5.30	5.31	5.33
	35°F (1.7°C)	53305	52239	51978	51770	51304	5.26	5.30	5.31	5.32	5.35
	37°F (2.8°C)	53905	52827	52563	52353	51882	5.14	5.18	5.19	5.20	5.22
	42°F (5.6°C)	55406	54298	54026	53810	53326	4.84	4.88	4.89	4.90	4.92
	44.6°F (7.0°C)	56006	54886	54611	54393	53903	4.73	4.76	4.77	4.78	4.80
	47°F (8.3°C)	56906	55768	55489	55267	54770	4.55	4.58	4.59	4.60	4.62
	52°F (11.1°C)	56151	55028	54753	54534	54043	4.16	4.19	4.20	4.21	4.23
	57°F (13.9°C)	55395	54287	54016	53800	53316	3.77	3.80	3.81	3.81	3.83
	59°F (15.0°C)	55093	53991	53721	53506	53025	3.61	3.64	3.65	3.66	3.67
	62°F (16.7°C)	54640	53547	53279	53066	52589	3.38	3.41	3.41	3.42	3.43
	64.4°F (18.0°C)	54277	53192	52926	52714	52240	3.19	3.22	3.22	3.23	3.24
	69.8°F (21.0°C)	48247	47282	47045	46857	46435	2.77	2.79	2.80	2.81	2.82
	75.2°F (24.0°C)	42216	41372	41165	41000	40631	2.35	2.37	2.38	2.38	2.39
1647	-13°F (-25.0°C)	28465	27896	27757	27646	27397	4.71	4.75	4.76	4.77	4.79
	-4°F (-20.0°C)	33728	33054	32888	32757	32462	4.99	5.03	5.04	5.05	5.07
	0°F (-17.8°C)	36677	35943	35763	35620	35300	5.15	5.20	5.21	5.22	5.24
	5°F (-15.0°C)	40362	39555	39357	39200	38847	5.36	5.40	5.41	5.42	5.45
	14°F (-10.0°C)	45748	44833	44608	44430	44030	5.64	5.68	5.69	5.70	5.73
	17°F (-8.3°C)	47543	46592	46359	46173	45758	5.73	5.77	5.79	5.80	5.82
	22°F (-5.6°C)	50437	49428	49181	48985	48544	5.76	5.81	5.82	5.83	5.85
	27°F (-2.8°C)	53332	52265	52004	51796	51330	5.79	5.84	5.85	5.86	5.89
	32°F (0.0°C)	56226	55102	54826	54607	54116	5.83	5.87	5.88	5.90	5.92
	35°F (1.7°C)	57963	56804	56520	56294	55787	5.84	5.89	5.90	5.92	5.94
	37°F (2.8°C)	58616	57443	57156	56927	56415	5.71	5.76	5.77	5.78	5.81
	42°F (5.6°C)	60247	59042	58747	58512	57985	5.38	5.43	5.44	5.45	5.47
	44.6°F (7.0°C)	60900	59682	59383	59146	58613	5.25	5.29	5.30	5.31	5.34
	47°F (8.3°C)	61879	60641	60338	60096	59556	5.05	5.09	5.10	5.11	5.13
	52°F (11.1°C)	61057	59836	59537	59299	58765	4.62	4.66	4.67	4.68	4.70
	57°F (13.9°C)	60236	59031	58736	58501	57974	4.19	4.22	4.23	4.24	4.26
	59°F (15.0°C)	59907	58709	58415	58182	57658	4.01	4.05	4.06	4.06	4.08
	62°F (16.7°C)	59414	58226	57935	57703	57184	3.75	3.79	3.79	3.80	3.82
	64.4°F (18.0°C)	59020	57839	57550	57320	56804	3.55	3.58	3.58	3.59	3.60
	69.8°F (21.0°C)	52462	51413	51156	50951	50493	3.08	3.10	3.11	3.12	3.13
	75.2°F (24.0°C)	45905	44987	44762	44583	44182	2.61	2.63	2.64	2.64	2.65

Table 24 – 60K RH High Static Heating — 37MBRA + 45MBDA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1059	-13°F (-25.0°C)	16848	16511	16428	15404	15266	3.15	3.17	3.18	3.18	3.20
	-4°F (-20.0°C)	22160	21717	21609	20262	20079	3.66	3.69	3.69	3.70	3.72
	0°F (-17.8°C)	24673	24180	24059	22559	22356	3.73	3.76	3.77	3.77	3.79
	5°F (-15.0°C)	27814	27258	27122	25431	25202	3.82	3.85	3.86	3.87	3.88
	14°F (-10.0°C)	28403	27835	27696	25970	25736	3.64	3.67	3.68	3.68	3.70
	17°F (-8.3°C)	28600	28028	27887	26149	25914	3.58	3.61	3.61	3.62	3.64
	22°F (-5.6°C)	30506	29896	29747	27892	27641	3.69	3.72	3.73	3.74	3.75
	27°F (-2.8°C)	32413	31765	31606	29636	29369	3.81	3.84	3.85	3.85	3.87
	32°F (0.0°C)	34320	33633	33465	31379	31097	3.92	3.95	3.96	3.97	3.99
	35°F (1.7°C)	35464	34754	34581	32425	32133	3.99	4.02	4.03	4.04	4.05
	37°F (2.8°C)	37274	36529	36346	34081	33774	3.95	3.98	3.99	4.00	4.01
	42°F (5.6°C)	41801	40965	40760	38219	37875	3.84	3.87	3.88	3.89	3.90
	44.6°F (7.0°C)	43612	42740	42526	39875	39516	3.80	3.83	3.84	3.84	3.86
	47°F (8.3°C)	46328	45401	45174	42358	41977	3.73	3.76	3.77	3.78	3.79
	52°F (11.1°C)	45124	44221	44000	41257	40886	3.36	3.39	3.39	3.40	3.41
	57°F (13.9°C)	43920	43041	42826	40157	39795	2.98	3.01	3.01	3.02	3.03
	59°F (15.0°C)	43438	42569	42357	39716	39359	2.83	2.86	2.86	2.87	2.88
	62°F (16.7°C)	42716	41861	41652	39056	38704	2.61	2.63	2.63	2.64	2.65
	64.4°F (18.0°C)	42138	41295	41089	38527	38181	2.43	2.45	2.45	2.46	2.47
	69.8°F (21.0°C)	37457	36707	36524	34247	33939	2.02	2.04	2.04	2.05	2.06
	75.2°F (24.0°C)	32773	32118	31957	29965	29695	1.62	1.63	1.63	1.64	1.64
1294	-13°F (-25.0°C)	19177	18794	18700	18072	17909	3.50	3.52	3.53	3.54	3.55
	-4°F (-20.0°C)	25224	24720	24596	23770	23556	4.06	4.10	4.10	4.11	4.13
	0°F (-17.8°C)	28085	27523	27385	26465	26227	4.14	4.18	4.19	4.19	4.21
	5°F (-15.0°C)	31660	31027	30872	29834	29566	4.25	4.28	4.29	4.30	4.31
	14°F (-10.0°C)	32330	31684	31525	30466	30192	4.04	4.08	4.08	4.09	4.11
	17°F (-8.3°C)	32554	31903	31743	30677	30400	3.98	4.01	4.02	4.02	4.04
	22°F (-5.6°C)	34724	34030	33860	32722	32427	4.10	4.14	4.14	4.15	4.17
	27°F (-2.8°C)	36895	36157	35976	34767	34454	4.23	4.26	4.27	4.28	4.30
	32°F (0.0°C)	39065	38284	38092	36812	36481	4.36	4.39	4.40	4.41	4.43
	35°F (1.7°C)	40367	39560	39362	38039	37697	4.43	4.47	4.48	4.49	4.51
	37°F (2.8°C)	42428	41580	41372	39981	39621	4.39	4.42	4.43	4.44	4.46
	42°F (5.6°C)	47581	46629	46396	44837	44433	4.27	4.30	4.31	4.32	4.34
	44.6°F (7.0°C)	49642	48649	48406	46779	46358	4.22	4.25	4.26	4.27	4.29
	47°F (8.3°C)	52733	51679	51420	49692	49245	4.15	4.18	4.19	4.20	4.22
	52°F (11.1°C)	51363	50336	50084	48401	47965	3.73	3.76	3.77	3.78	3.79
	57°F (13.9°C)	49992	48993	48748	47109	46685	3.31	3.34	3.35	3.35	3.37
	59°F (15.0°C)	49444	48455	48213	46593	46173	3.15	3.17	3.18	3.19	3.20
	62°F (16.7°C)	48622	47649	47411	45818	45405	2.90	2.92	2.93	2.93	2.94
	64.4°F (18.0°C)	47964	47005	46770	45198	44791	2.70	2.72	2.72	2.73	2.74
	69.8°F (21.0°C)	42636	41783	41574	40177	39815	2.25	2.27	2.27	2.27	2.28
	75.2°F (24.0°C)	37304	36558	36376	35153	34837	1.80	1.81	1.82	1.82	1.83

Table 24 – 60K RH High Static Heating — 37MBRA + 45MBDA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1471	-13°F (-25.0°C)	21829	21393	21286	21200	21010	3.88	3.92	3.92	3.93	3.95
	-4°F (-20.0°C)	28712	28138	27997	27885	27634	4.51	4.55	4.56	4.57	4.59
	0°F (-17.8°C)	31968	31328	31172	31047	30768	4.60	4.64	4.65	4.66	4.68
	5°F (-15.0°C)	36038	35317	35140	35000	34685	4.72	4.76	4.76	4.77	4.79
	14°F (-10.0°C)	36801	36065	35884	35741	35419	4.49	4.53	4.54	4.55	4.56
	17°F (-8.3°C)	37055	36314	36132	35988	35664	4.42	4.45	4.46	4.47	4.49
	22°F (-5.6°C)	39525	38735	38541	38387	38042	4.56	4.60	4.60	4.61	4.63
	27°F (-2.8°C)	41996	41156	40950	40786	40419	4.70	4.74	4.75	4.76	4.78
	32°F (0.0°C)	44466	43577	43359	43186	42797	4.84	4.88	4.89	4.90	4.92
	35°F (1.7°C)	45948	45029	44804	44625	44223	4.93	4.97	4.98	4.99	5.01
	37°F (2.8°C)	48294	47329	47092	46904	46481	4.87	4.91	4.92	4.93	4.95
	42°F (5.6°C)	54160	53076	52811	52600	52126	4.74	4.78	4.79	4.80	4.82
	44.6°F (7.0°C)	56506	55375	55099	54878	54384	4.69	4.73	4.74	4.75	4.76
	47°F (8.3°C)	60025	58824	58530	58296	57771	4.61	4.65	4.66	4.67	4.68
	52°F (11.1°C)	58465	57295	57009	56781	56270	4.15	4.18	4.19	4.20	4.21
	57°F (13.9°C)	56905	55767	55488	55266	54768	3.68	3.71	3.72	3.73	3.74
	59°F (15.0°C)	56281	55155	54879	54660	54168	3.50	3.53	3.53	3.54	3.55
	62°F (16.7°C)	55345	54238	53967	53751	53267	3.22	3.25	3.25	3.26	3.27
	64.4°F (18.0°C)	54596	53504	53236	53023	52546	3.00	3.02	3.03	3.03	3.05
	69.8°F (21.0°C)	48531	47560	47322	47133	46709	2.50	2.52	2.52	2.53	2.54
	75.2°F (24.0°C)	42462	41613	41405	41239	40868	2.00	2.01	2.02	2.02	2.03
1647	-13°F (-25.0°C)	24847	24350	24229	24132	23915	4.32	4.35	4.36	4.37	4.39
	-4°F (-20.0°C)	32682	32028	31868	31741	31455	5.02	5.06	5.07	5.08	5.10
	0°F (-17.8°C)	36388	35660	35482	35340	35022	5.12	5.16	5.17	5.18	5.20
	5°F (-15.0°C)	41020	40200	39999	39839	39480	5.24	5.28	5.29	5.30	5.33
	14°F (-10.0°C)	41889	41051	40846	40683	40316	4.99	5.03	5.04	5.05	5.07
	17°F (-8.3°C)	42178	41335	41128	40964	40595	4.91	4.95	4.96	4.97	4.99
	22°F (-5.6°C)	44990	44091	43870	43695	43301	5.06	5.11	5.12	5.13	5.15
	27°F (-2.8°C)	47802	46846	46612	46426	46008	5.22	5.26	5.27	5.29	5.31
	32°F (0.0°C)	50614	49602	49354	49157	48714	5.38	5.42	5.43	5.44	5.47
	35°F (1.7°C)	52301	51255	50999	50795	50338	5.47	5.52	5.53	5.54	5.56
	37°F (2.8°C)	54972	53872	53603	53389	52908	5.41	5.46	5.47	5.48	5.50
	42°F (5.6°C)	61648	60415	60113	59872	59334	5.27	5.31	5.32	5.33	5.35
	44.6°F (7.0°C)	64318	63032	62717	62466	61904	5.21	5.25	5.26	5.27	5.29
	47°F (8.3°C)	68324	66957	66623	66356	65759	5.12	5.16	5.17	5.18	5.20
	52°F (11.1°C)	66548	65217	64891	64632	64050	4.61	4.64	4.65	4.66	4.68
	57°F (13.9°C)	64773	63477	63160	62907	62341	4.09	4.13	4.13	4.14	4.16
	59°F (15.0°C)	64062	62781	62467	62217	61657	3.89	3.92	3.93	3.93	3.95
	62°F (16.7°C)	62997	61737	61428	61183	60632	3.58	3.61	3.61	3.62	3.64
	64.4°F (18.0°C)	62145	60902	60597	60355	59812	3.33	3.36	3.36	3.37	3.38
	69.8°F (21.0°C)	55241	54136	53865	53650	53167	2.77	2.80	2.80	2.81	2.82
	75.2°F (24.0°C)	48333	47367	47130	46941	46519	2.22	2.24	2.24	2.25	2.25

Table 25 – 36K Heating — 37MBRA + 45MCFA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
765	-13°F (-25.0°C)	16085	15763	15684	15613	15452	2.70	2.73	2.73	2.74	2.75
	-4°F (-20.0°C)	19002	18622	18529	18445	18255	2.85	2.88	2.88	2.89	2.90
	0°F (-17.8°C)	19668	19275	19178	19091	18894	2.82	2.84	2.85	2.85	2.87
	5°F (-15.0°C)	20500	20090	19990	19899	19694	2.78	2.80	2.81	2.81	2.82
	14°F (-10.0°C)	23398	22930	22815	22711	22477	2.97	3.00	3.00	3.01	3.02
	17°F (-8.3°C)	24364	23877	23757	23649	23405	3.04	3.06	3.07	3.07	3.09
	22°F (-5.6°C)	25078	24577	24454	24342	24091	2.88	2.90	2.91	2.92	2.93
	27°F (-2.8°C)	25792	25276	25150	25035	24778	2.73	2.75	2.75	2.76	2.77
	32°F (0.0°C)	26507	25976	25846	25729	25464	2.57	2.59	2.60	2.60	2.61
	35°F (1.7°C)	26935	26396	26264	26145	25875	2.48	2.50	2.50	2.51	2.52
	37°F (2.8°C)	27768	27213	27077	26953	26676	2.53	2.55	2.55	2.56	2.57
	42°F (5.6°C)	29851	29254	29107	28975	28676	2.65	2.67	2.67	2.68	2.69
	44.6°F (7.0°C)	30684	30070	29920	29783	29476	2.70	2.72	2.72	2.73	2.74
	47°F (8.3°C)	31933	31295	31138	30996	30677	2.77	2.79	2.80	2.80	2.81
	52°F (11.1°C)	32588	31936	31777	31632	31306	2.64	2.66	2.67	2.67	2.68
	57°F (13.9°C)	33243	32578	32415	32267	31935	2.51	2.53	2.54	2.54	2.55
	59°F (15.0°C)	33505	32835	32671	32522	32187	2.46	2.48	2.49	2.49	2.50
	62°F (16.7°C)	33898	33220	33054	32903	32564	2.39	2.41	2.41	2.41	2.42
	64.4°F (18.0°C)	34212	33528	33360	33208	32866	2.32	2.34	2.35	2.35	2.36
	69.8°F (21.0°C)	34920	34221	34050	33895	33546	2.19	2.20	2.21	2.21	2.22
	75.2°F (24.0°C)	35627	34914	34740	34581	34225	2.05	2.06	2.07	2.07	2.08
988	-13°F (-25.0°C)	17558	17207	17121	17043	16867	3.18	3.21	3.21	3.22	3.23
	-4°F (-20.0°C)	20742	20328	20226	20134	19926	3.36	3.38	3.39	3.40	3.41
	0°F (-17.8°C)	21469	21040	20935	20839	20625	3.32	3.34	3.35	3.36	3.37
	5°F (-15.0°C)	22378	21930	21820	21721	21497	3.27	3.30	3.30	3.31	3.32
	14°F (-10.0°C)	25541	25030	24905	24791	24536	3.50	3.53	3.53	3.54	3.55
	17°F (-8.3°C)	26595	26063	25933	25815	25549	3.57	3.60	3.61	3.62	3.63
	22°F (-5.6°C)	27375	26827	26693	26571	26298	3.39	3.42	3.42	3.43	3.44
	27°F (-2.8°C)	28154	27591	27453	27328	27047	3.21	3.23	3.24	3.25	3.26
	32°F (0.0°C)	28934	28355	28213	28085	27796	3.02	3.05	3.05	3.06	3.07
	35°F (1.7°C)	29402	28814	28670	28539	28245	2.91	2.94	2.94	2.95	2.96
	37°F (2.8°C)	30311	29705	29556	29422	29118	2.97	2.99	3.00	3.01	3.02
	42°F (5.6°C)	32584	31933	31773	31628	31302	3.11	3.14	3.15	3.15	3.17
	44.6°F (7.0°C)	33494	32824	32660	32511	32176	3.17	3.20	3.20	3.21	3.22
	47°F (8.3°C)	34858	34160	33990	33835	33486	3.26	3.29	3.29	3.30	3.31
	52°F (11.1°C)	35572	34861	34687	34529	34173	3.11	3.13	3.14	3.15	3.16
	57°F (13.9°C)	36287	35562	35384	35222	34860	2.96	2.98	2.99	2.99	3.01
	59°F (15.0°C)	36573	35842	35663	35500	35134	2.90	2.92	2.93	2.93	2.94
	62°F (16.7°C)	37002	36262	36081	35916	35546	2.81	2.83	2.84	2.84	2.85
	64.4°F (18.0°C)	37345	36598	36415	36249	35876	2.73	2.76	2.76	2.77	2.78
	69.8°F (21.0°C)	38117	37355	37168	36999	36618	2.57	2.59	2.60	2.60	2.61
	75.2°F (24.0°C)	38889	38112	37921	37748	37359	2.41	2.43	2.43	2.44	2.45

Table 25 – 36K Heating — 37MBRA + 45MCFA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1706	-13°F (-25.0°C)	19166	18782	18689	18614	18446	3.35	3.38	3.38	3.39	3.40
	-4°F (-20.0°C)	22642	22189	22078	21990	21792	3.53	3.56	3.57	3.57	3.59
	0°F (-17.8°C)	23435	22967	22852	22760	22555	3.49	3.52	3.53	3.53	3.55
	5°F (-15.0°C)	24427	23938	23819	23723	23510	3.44	3.47	3.48	3.48	3.50
	14°F (-10.0°C)	27880	27322	27185	27077	26833	3.68	3.71	3.72	3.73	3.74
	17°F (-8.3°C)	29031	28450	28308	28194	27941	3.76	3.79	3.80	3.81	3.82
	22°F (-5.6°C)	29882	29284	29137	29021	28760	3.57	3.60	3.60	3.61	3.63
	27°F (-2.8°C)	30733	30118	29967	29847	29579	3.38	3.40	3.41	3.42	3.43
	32°F (0.0°C)	31584	30952	30797	30674	30398	3.18	3.21	3.21	3.22	3.23
	35°F (1.7°C)	32094	31452	31295	31170	30889	3.07	3.09	3.10	3.10	3.12
	37°F (2.8°C)	33087	32425	32263	32134	31845	3.13	3.15	3.16	3.17	3.18
	42°F (5.6°C)	35568	34857	34683	34544	34233	3.28	3.31	3.31	3.32	3.33
	44.6°F (7.0°C)	36561	35830	35650	35508	35188	3.34	3.37	3.37	3.38	3.39
	47°F (8.3°C)	38050	37289	37102	36954	36621	3.43	3.46	3.47	3.47	3.49
	52°F (11.1°C)	38830	38053	37863	37712	37372	3.27	3.30	3.30	3.31	3.32
	57°F (13.9°C)	39610	38818	38624	38470	38123	3.11	3.14	3.14	3.15	3.16
	59°F (15.0°C)	39923	39124	38928	38773	38424	3.05	3.07	3.08	3.09	3.10
	62°F (16.7°C)	40391	39583	39385	39227	38874	2.95	2.98	2.98	2.99	3.00
	64.4°F (18.0°C)	40765	39950	39750	39591	39235	2.88	2.90	2.91	2.91	2.93
	69.8°F (21.0°C)	41608	40776	40572	40410	40046	2.71	2.73	2.73	2.74	2.75
	75.2°F (24.0°C)	42451	41602	41394	41228	40857	2.54	2.56	2.56	2.57	2.58
1224	-13°F (-25.0°C)	20921	20503	20400	20318	20136	3.38	3.41	3.42	3.42	3.44
	-4°F (-20.0°C)	24715	24221	24100	24004	23788	3.57	3.60	3.60	3.61	3.63
	0°F (-17.8°C)	25581	25070	24944	24845	24621	3.53	3.56	3.56	3.57	3.58
	5°F (-15.0°C)	26664	26131	26000	25896	25663	3.48	3.50	3.51	3.52	3.53
	14°F (-10.0°C)	30433	29824	29675	29556	29290	3.72	3.75	3.76	3.76	3.78
	17°F (-8.3°C)	31689	31055	30900	30776	30499	3.80	3.83	3.84	3.85	3.86
	22°F (-5.6°C)	32618	31966	31806	31679	31393	3.60	3.63	3.64	3.65	3.66
	27°F (-2.8°C)	33547	32876	32712	32581	32288	3.41	3.44	3.44	3.45	3.46
	32°F (0.0°C)	34476	33786	33617	33483	33182	3.21	3.24	3.25	3.25	3.27
	35°F (1.7°C)	35033	34333	34161	34024	33718	3.10	3.12	3.13	3.14	3.15
	37°F (2.8°C)	36117	35394	35217	35077	34761	3.16	3.18	3.19	3.20	3.21
	42°F (5.6°C)	38825	38049	37859	37707	37368	3.31	3.34	3.35	3.35	3.37
	44.6°F (7.0°C)	39909	39111	38915	38760	38411	3.37	3.40	3.41	3.41	3.43
	47°F (8.3°C)	41534	40704	40500	40338	39975	3.47	3.49	3.50	3.51	3.52
	52°F (11.1°C)	42386	41538	41331	41165	40795	3.30	3.33	3.34	3.34	3.36
	57°F (13.9°C)	43238	42373	42161	41993	41615	3.14	3.17	3.18	3.18	3.20
	59°F (15.0°C)	43578	42707	42493	42323	41942	3.08	3.11	3.11	3.12	3.13
	62°F (16.7°C)	44090	43208	42992	42820	42434	2.98	3.01	3.01	3.02	3.03
	64.4°F (18.0°C)	44498	43608	43390	43217	42828	2.91	2.93	2.94	2.94	2.95
	69.8°F (21.0°C)	45418	44510	44287	44110	43713	2.73	2.76	2.76	2.77	2.78
	75.2°F (24.0°C)	46338	45412	45184	45004	44599	2.56	2.58	2.59	2.59	2.60

Table 26 – 48K Heating — 37MBRA + 45MCFA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
800	-13°F (-25.0°C)	23798	23322	23205	21285	21093	3.76	3.79	3.80	3.81	3.82
	-4°F (-20.0°C)	29257	28672	28529	26167	25931	4.21	4.24	4.25	4.26	4.28
	0°F (-17.8°C)	30849	30232	30081	27591	27343	4.37	4.41	4.42	4.43	4.44
	5°F (-15.0°C)	32840	32183	32022	29371	29107	4.58	4.62	4.63	4.64	4.65
	14°F (-10.0°C)	37062	36321	36139	33147	32849	4.83	4.87	4.88	4.89	4.91
	17°F (-8.3°C)	38469	37700	37511	34406	34096	4.91	4.95	4.96	4.97	4.99
	22°F (-5.6°C)	39459	38669	38476	35291	34973	4.83	4.87	4.88	4.89	4.91
	27°F (-2.8°C)	40448	39639	39441	36176	35850	4.75	4.79	4.80	4.81	4.83
	32°F (0.0°C)	41437	40608	40405	37061	36727	4.67	4.71	4.72	4.73	4.75
	35°F (1.7°C)	42031	41190	40984	37591	37253	4.63	4.66	4.67	4.68	4.70
	37°F (2.8°C)	43484	42615	42401	38891	38541	4.63	4.67	4.68	4.69	4.70
	42°F (5.6°C)	47118	46176	45945	42142	41762	4.63	4.67	4.68	4.69	4.71
	44.6°F (7.0°C)	48572	47600	47362	43442	43051	4.64	4.67	4.68	4.69	4.71
	47°F (8.3°C)	50752	49737	49488	45392	44983	4.64	4.68	4.68	4.69	4.71
	52°F (11.1°C)	49146	48163	47922	43955	43560	4.15	4.18	4.19	4.20	4.22
	57°F (13.9°C)	47540	46589	46356	42519	42136	3.66	3.69	3.70	3.70	3.72
	59°F (15.0°C)	46897	45960	45730	41944	41567	3.46	3.49	3.50	3.51	3.52
	62°F (16.7°C)	45934	45015	44790	41082	40713	3.17	3.20	3.20	3.21	3.22
	64.4°F (18.0°C)	45163	44260	44038	40393	40029	2.94	2.96	2.97	2.97	2.98
	69.8°F (21.0°C)	43428	42560	42347	38841	38492	2.41	2.43	2.43	2.44	2.45
	75.2°F (24.0°C)	41694	40860	40656	37290	36954	1.88	1.90	1.90	1.90	1.91
1082	-13°F (-25.0°C)	25305	24799	24675	23585	23372	4.43	4.46	4.47	4.48	4.50
	-4°F (-20.0°C)	31110	30488	30336	28995	28734	4.95	4.99	5.00	5.01	5.03
	0°F (-17.8°C)	32803	32147	31986	30573	30297	5.15	5.19	5.20	5.21	5.23
	5°F (-15.0°C)	34920	34221	34050	32545	32252	5.39	5.43	5.44	5.45	5.48
	14°F (-10.0°C)	39409	38621	38428	36729	36399	5.68	5.73	5.74	5.75	5.77
	17°F (-8.3°C)	40906	40088	39887	38124	37781	5.78	5.82	5.84	5.85	5.87
	22°F (-5.6°C)	41958	41119	40913	39105	38753	5.69	5.73	5.74	5.75	5.78
	27°F (-2.8°C)	43010	42149	41939	40085	39724	5.59	5.64	5.65	5.66	5.68
	32°F (0.0°C)	44062	43180	42965	41065	40696	5.50	5.54	5.56	5.57	5.59
	35°F (1.7°C)	44693	43799	43580	41654	41279	5.44	5.49	5.50	5.51	5.53
	37°F (2.8°C)	46238	45314	45087	43094	42706	5.45	5.49	5.50	5.51	5.53
	42°F (5.6°C)	50103	49100	48855	46696	46275	5.45	5.50	5.51	5.52	5.54
	44.6°F (7.0°C)	51648	50615	50362	48136	47703	5.45	5.50	5.51	5.52	5.54
	47°F (8.3°C)	53967	52887	52623	50297	49844	5.46	5.50	5.51	5.52	5.54
	52°F (11.1°C)	52259	51214	50958	48705	48267	4.88	4.92	4.93	4.94	4.96
	57°F (13.9°C)	50551	49540	49292	47113	46689	4.31	4.34	4.35	4.36	4.38
	59°F (15.0°C)	49868	48870	48626	46477	46059	4.08	4.11	4.12	4.13	4.14
	62°F (16.7°C)	48843	47866	47627	45522	45112	3.73	3.76	3.77	3.78	3.79
	64.4°F (18.0°C)	48023	47063	46828	44758	44355	3.46	3.48	3.49	3.50	3.51
	69.8°F (21.0°C)	46179	45255	45029	43039	42651	2.83	2.86	2.86	2.87	2.88
	75.2°F (24.0°C)	44335	43448	43231	41320	40948	2.21	2.23	2.24	2.24	2.25

Table 26 – 48K Heating — 37MBRA + 45MCFA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1235	-13°F (-25.0°C)	26908	26370	26238	26133	25898	4.66	4.70	4.71	4.72	4.73
	-4°F (-20.0°C)	33081	32419	32257	32128	31839	5.21	5.26	5.27	5.28	5.30
	0°F (-17.8°C)	34881	34183	34012	33876	33571	5.42	5.46	5.47	5.48	5.50
	5°F (-15.0°C)	37131	36389	36207	36062	35737	5.67	5.72	5.73	5.74	5.76
	14°F (-10.0°C)	41905	41067	40862	40698	40332	5.98	6.03	6.04	6.05	6.08
	17°F (-8.3°C)	43497	42627	42414	42244	41864	6.08	6.13	6.14	6.16	6.18
	22°F (-5.6°C)	44615	43723	43504	43330	42940	5.98	6.03	6.04	6.06	6.08
	27°F (-2.8°C)	45734	44819	44595	44417	44017	5.89	5.93	5.95	5.96	5.98
	32°F (0.0°C)	46852	45915	45686	45503	45094	5.79	5.84	5.85	5.86	5.88
	35°F (1.7°C)	47524	46573	46340	46155	45739	5.73	5.78	5.79	5.80	5.82
	37°F (2.8°C)	49167	48184	47943	47751	47321	5.73	5.78	5.79	5.80	5.83
	42°F (5.6°C)	53276	52210	51949	51742	51276	5.74	5.78	5.80	5.81	5.83
	44.6°F (7.0°C)	54919	53821	53552	53338	52858	5.74	5.79	5.80	5.81	5.83
	47°F (8.3°C)	57385	56237	55956	55732	55230	5.74	5.79	5.80	5.81	5.84
	52°F (11.1°C)	55569	54457	54185	53968	53483	5.14	5.18	5.19	5.20	5.22
	57°F (13.9°C)	53753	52678	52414	52205	51735	4.53	4.57	4.58	4.59	4.61
	59°F (15.0°C)	53026	51966	51706	51499	51036	4.29	4.33	4.33	4.34	4.36
	62°F (16.7°C)	51937	50898	50644	50441	49987	3.93	3.96	3.97	3.98	3.99
	64.4°F (18.0°C)	51065	50044	49794	49594	49148	3.64	3.67	3.67	3.68	3.70
	69.8°F (21.0°C)	49104	48122	47881	47690	47260	2.98	3.01	3.01	3.02	3.03
	75.2°F (24.0°C)	47143	46200	45969	45785	45373	2.33	2.35	2.35	2.36	2.37
1353	-13°F (-25.0°C)	28612	28040	27900	27788	27538	4.71	4.74	4.75	4.76	4.78
	-4°F (-20.0°C)	35176	34472	34300	34163	33855	5.27	5.31	5.32	5.33	5.35
	0°F (-17.8°C)	37090	36348	36167	36022	35698	5.47	5.52	5.53	5.54	5.56
	5°F (-15.0°C)	39483	38693	38500	38346	38001	5.73	5.77	5.79	5.80	5.82
	14°F (-10.0°C)	44560	43668	43450	43276	42887	6.04	6.09	6.10	6.11	6.14
	17°F (-8.3°C)	46252	45327	45100	44920	44515	6.14	6.19	6.21	6.22	6.24
	22°F (-5.6°C)	47441	46492	46260	46075	45660	6.04	6.09	6.11	6.12	6.14
	27°F (-2.8°C)	48631	47658	47420	47230	46805	5.95	5.99	6.01	6.02	6.04
	32°F (0.0°C)	49820	48824	48579	48385	47950	5.85	5.89	5.91	5.92	5.94
	35°F (1.7°C)	50534	49523	49275	49078	48637	5.79	5.84	5.85	5.86	5.88
	37°F (2.8°C)	52281	51236	50979	50776	50319	5.79	5.84	5.85	5.86	5.88
	42°F (5.6°C)	56650	55517	55240	55019	54524	5.80	5.84	5.85	5.87	5.89
	44.6°F (7.0°C)	58398	57230	56944	56716	56206	5.80	5.85	5.86	5.87	5.89
	47°F (8.3°C)	61019	59799	59500	59262	58729	5.80	5.85	5.86	5.87	5.90
	52°F (11.1°C)	59088	57907	57617	57387	56870	5.19	5.23	5.24	5.25	5.27
	57°F (13.9°C)	57157	56014	55734	55511	55012	4.58	4.62	4.62	4.63	4.65
	59°F (15.0°C)	56385	55257	54981	54761	54268	4.33	4.37	4.38	4.39	4.40
	62°F (16.7°C)	55226	54122	53851	53636	53153	3.97	4.00	4.01	4.02	4.03
	64.4°F (18.0°C)	54299	53213	52947	52736	52261	3.67	3.70	3.71	3.72	3.73
	69.8°F (21.0°C)	52214	51170	50914	50710	50254	3.01	3.04	3.04	3.05	3.06
	75.2°F (24.0°C)	50128	49126	48880	48685	48247	2.35	2.37	2.38	2.38	2.39

Table 27 – 60K Heating — 37MBRA + 45MCFA

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
882	-13°F (-25.0°C)	19365	18977	18883	18790	18621	3.53	3.56	3.57	3.58	3.59
	-4°F (-20.0°C)	24518	24027	23907	23790	23576	3.64	3.67	3.68	3.68	3.70
	0°F (-17.8°C)	26549	26018	25888	25761	25529	3.82	3.85	3.86	3.86	3.88
	5°F (-15.0°C)	29089	28507	28364	28225	27971	4.04	4.07	4.08	4.09	4.10
	14°F (-10.0°C)	35509	34799	34625	34455	34145	4.56	4.60	4.61	4.61	4.63
	17°F (-8.3°C)	37649	36896	36712	36532	36203	4.73	4.77	4.78	4.79	4.81
	22°F (-5.6°C)	37270	36524	36342	36164	35838	4.59	4.62	4.63	4.64	4.66
	27°F (-2.8°C)	36890	36153	35972	35795	35473	4.44	4.47	4.48	4.49	4.51
	32°F (0.0°C)	36511	35781	35602	35427	35109	4.29	4.33	4.33	4.34	4.36
	35°F (1.7°C)	36283	35558	35380	35207	34890	4.20	4.24	4.24	4.25	4.27
	37°F (2.8°C)	38547	37776	37587	37403	37067	4.26	4.30	4.31	4.31	4.33
	42°F (5.6°C)	44207	43323	43106	42895	42509	4.41	4.45	4.46	4.47	4.48
	44.6°F (7.0°C)	46471	45541	45314	45091	44686	4.47	4.51	4.52	4.53	4.54
	47°F (8.3°C)	49866	48869	48625	48386	47951	4.56	4.60	4.61	4.62	4.64
	52°F (11.1°C)	48996	48016	47776	47542	47114	4.13	4.16	4.17	4.18	4.20
	57°F (13.9°C)	48126	47163	46928	46698	46277	3.70	3.73	3.74	3.74	3.76
	59°F (15.0°C)	47778	46822	46588	46360	45943	3.53	3.56	3.56	3.57	3.58
	62°F (16.7°C)	47256	46311	46079	45853	45441	3.27	3.30	3.30	3.31	3.32
	64.4°F (18.0°C)	46838	45901	45672	45448	45039	3.06	3.09	3.09	3.10	3.11
	69.8°F (21.0°C)	45898	44980	44755	44536	44135	2.60	2.62	2.62	2.63	2.64
	75.2°F (24.0°C)	44959	44059	43839	43624	43232	2.13	2.15	2.15	2.16	2.16
1118	-13°F (-25.0°C)	20770	20355	20253	20163	19982	4.16	4.19	4.20	4.21	4.22
	-4°F (-20.0°C)	26297	25771	25642	25528	25299	4.28	4.32	4.33	4.33	4.35
	0°F (-17.8°C)	28476	27907	27767	27644	27395	4.49	4.53	4.54	4.55	4.56
	5°F (-15.0°C)	31200	30576	30423	30288	30015	4.75	4.79	4.80	4.81	4.83
	14°F (-10.0°C)	38086	37325	37138	36973	36640	5.36	5.41	5.42	5.43	5.45
	17°F (-8.3°C)	40382	39574	39376	39201	38848	5.57	5.61	5.62	5.64	5.66
	22°F (-5.6°C)	39975	39175	38980	38806	38457	5.39	5.44	5.45	5.46	5.48
	27°F (-2.8°C)	39568	38777	38583	38411	38065	5.22	5.26	5.27	5.28	5.31
	32°F (0.0°C)	39161	38378	38186	38016	37674	5.05	5.09	5.10	5.11	5.13
	35°F (1.7°C)	38917	38139	37948	37779	37439	4.94	4.98	4.99	5.00	5.02
	37°F (2.8°C)	41345	40518	40316	40136	39775	5.01	5.05	5.06	5.07	5.10
	42°F (5.6°C)	47416	46467	46235	46029	45615	5.19	5.23	5.24	5.25	5.27
	44.6°F (7.0°C)	49844	48847	48603	48386	47951	5.26	5.30	5.31	5.33	5.35
	47°F (8.3°C)	53486	52416	52154	51922	51455	5.37	5.41	5.42	5.43	5.45
	52°F (11.1°C)	52553	51501	51244	51016	50557	4.86	4.90	4.91	4.92	4.94
	57°F (13.9°C)	51619	50587	50334	50110	49659	4.35	4.39	4.40	4.41	4.42
	59°F (15.0°C)	51246	50221	49970	49747	49300	4.15	4.18	4.19	4.20	4.22
	62°F (16.7°C)	50686	49672	49424	49204	48761	3.85	3.88	3.88	3.89	3.91
	64.4°F (18.0°C)	50238	49233	48987	48769	48330	3.60	3.63	3.64	3.65	3.66
	69.8°F (21.0°C)	49230	48245	48004	47790	47360	3.05	3.08	3.08	3.09	3.10
	75.2°F (24.0°C)	48222	47257	47021	46812	46390	2.51	2.53	2.53	2.54	2.55

Table 27 – 60K Heating — 37MBRA + 45MCFA (Continued)

AIRFLOW (CFM)	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OUTDOOR DB	TC: Total Heating Capacity (BTU/hr)					PI: Power Input (kW)				
		Indoor Conditions (DB)					Indoor Conditions (DB)				
		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)
1235	-13°F (-25.0°C)	22278	21832	21723	21636	21442	4.37	4.41	4.42	4.43	4.45
	-4°F (-20.0°C)	28206	27642	27504	27394	27147	4.51	4.54	4.55	4.56	4.58
	0°F (-17.8°C)	30543	29932	29783	29664	29397	4.73	4.77	4.77	4.78	4.80
	5°F (-15.0°C)	33465	32795	32631	32501	32208	5.00	5.04	5.05	5.06	5.08
	14°F (-10.0°C)	40851	40034	39834	39674	39317	5.65	5.69	5.70	5.72	5.74
	17°F (-8.3°C)	43313	42447	42234	42066	41687	5.86	5.91	5.92	5.93	5.96
	22°F (-5.6°C)	42877	42019	41809	41642	41267	5.68	5.72	5.74	5.75	5.77
	27°F (-2.8°C)	42440	41591	41383	41218	40847	5.50	5.54	5.55	5.56	5.58
	32°F (0.0°C)	42004	41164	40958	40794	40427	5.31	5.36	5.37	5.38	5.40
	35°F (1.7°C)	41742	40907	40702	40540	40175	5.20	5.25	5.26	5.27	5.29
	37°F (2.8°C)	44346	43459	43242	43069	42681	5.28	5.32	5.33	5.34	5.36
	42°F (5.6°C)	50857	49840	49591	49392	48948	5.46	5.51	5.52	5.53	5.55
	44.6°F (7.0°C)	53462	52392	52130	51922	51455	5.54	5.58	5.59	5.61	5.63
	47°F (8.3°C)	57368	56221	55940	55716	55214	5.65	5.70	5.71	5.72	5.74
	52°F (11.1°C)	56367	55240	54963	54744	54251	5.12	5.16	5.17	5.18	5.20
	57°F (13.9°C)	55366	54259	53987	53771	53287	4.58	4.62	4.63	4.64	4.66
	59°F (15.0°C)	54966	53866	53597	53382	52902	4.37	4.40	4.41	4.42	4.44
	62°F (16.7°C)	54365	53278	53011	52799	52324	4.05	4.08	4.09	4.10	4.11
	64.4°F (18.0°C)	53884	52807	52543	52332	51861	3.79	3.82	3.83	3.84	3.85
	69.8°F (21.0°C)	52803	51747	51488	51282	50821	3.21	3.24	3.25	3.25	3.27
	75.2°F (24.0°C)	51722	50688	50434	50232	49780	2.64	2.66	2.66	2.67	2.68
1365	-13°F (-25.0°C)	23895	23417	23300	23207	22998	4.42	4.45	4.46	4.47	4.49
	-4°F (-20.0°C)	30253	29648	29500	29382	29118	4.55	4.59	4.60	4.61	4.63
	0°F (-17.8°C)	32760	32105	31944	31817	31530	4.77	4.81	4.82	4.83	4.85
	5°F (-15.0°C)	35894	35176	35000	34860	34546	5.05	5.09	5.10	5.11	5.13
	14°F (-10.0°C)	43816	42940	42725	42554	42171	5.70	5.75	5.76	5.77	5.80
	17°F (-8.3°C)	46457	45528	45300	45119	44713	5.92	5.97	5.98	5.99	6.02
	22°F (-5.6°C)	45989	45069	44844	44664	44262	5.74	5.78	5.79	5.81	5.83
	27°F (-2.8°C)	45521	44610	44387	44210	43812	5.55	5.60	5.61	5.62	5.64
	32°F (0.0°C)	45052	44151	43931	43755	43361	5.37	5.41	5.42	5.43	5.45
	35°F (1.7°C)	44772	43876	43657	43482	43091	5.26	5.30	5.31	5.32	5.34
	37°F (2.8°C)	47565	46614	46381	46195	45779	5.33	5.37	5.39	5.40	5.42
	42°F (5.6°C)	54549	53458	53190	52978	52501	5.52	5.56	5.58	5.59	5.61
	44.6°F (7.0°C)	57342	56195	55914	55691	55189	5.59	5.64	5.65	5.66	5.69
	47°F (8.3°C)	61532	60302	60000	59760	59222	5.71	5.75	5.77	5.78	5.80
	52°F (11.1°C)	60458	59249	58953	58717	58189	5.17	5.21	5.22	5.23	5.25
	57°F (13.9°C)	59385	58197	57906	57674	57155	4.63	4.67	4.68	4.68	4.70
	59°F (15.0°C)	58955	57776	57487	57257	56742	4.41	4.45	4.46	4.47	4.48
	62°F (16.7°C)	58311	57145	56859	56632	56122	4.09	4.12	4.13	4.14	4.16
	64.4°F (18.0°C)	57796	56640	56356	56131	55626	3.83	3.86	3.87	3.88	3.89
	69.8°F (21.0°C)	56636	55503	55226	55005	54510	3.25	3.27	3.28	3.29	3.30
	75.2°F (24.0°C)	55476	54367	54095	53878	53394	2.66	2.69	2.69	2.70	2.71

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, the units should be level in all planes.

Clearance – Minimum clearance (See Fig. 5 – on page 5) 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

Table 28A — Operating Range (min/max °F (°C))

	Cooling & Heating
Outdoor DB	-13 / 122°F (-25 / 50°C)

METERING DEVICES

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

DRAIN CONNECTIONS

Install the drains in accordance with 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), review [Table 29](#) section 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 the lines 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.

Table 29 – Additional Charge

Unit Size	Indoor Unit Metering Device	Total Line Length ft (m)		Additional Charge oz/ft (g/m)	
		Min	Max	>10-25 ft (3-8m)	>25-213 ft (8-65m)
36K	None	10 (3)	246 (75)	None	0.32 (30)
48K					
58K					

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.

SIZES 36-58 RECOMMENDED CONNECTION METHOD FOR POWER AND COMMUNICATION WIRING

Power and Communication Wiring: The main power is supplied to the outdoor unit. The field supplied power wiring from the outdoor unit to the indoor unit consists of three (3) wires and provides the power for the indoor unit. Two wires are high voltage AC power and one is a ground wire. To minimize voltage drop, the factory recommended wire size is 14/2 stranded with a ground.

Communication Wiring: A separate shielded stranded copper conductor only, with a 600 volt rating and double insulated copper wire, must be used as the communication wire from the outdoor unit to the indoor unit.

NOTE: Use a separate shielded 16GA stranded control wire.

Table 30 — Wiring Sizes 36 – 58

Cable	Cable Size	Remarks
Power Connection Cable	14AWG	2 wire + Ground 1φ 208/230 V
Communication Cable	16AWG	2 wire stranded shielded control wire



WARNING

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. Route the cable & conduit through the hole in the conduit panel.

NOTE: The main power is supplied to the outdoor unit. When disconnecting the power of the outdoor unit, the indoor unit would lose power. A disconnect switch is not required on the Indoor unit side on the wiring between the Outdoor and Indoor unit. A 3 pole disconnect may be used for extra protection between the Indoor and Outdoor Unit. A separate power is required for an Auxiliary Electric Heater.

AIR FLOW DATA

Refer to [Table 5](#) for complete specifications.

Table 31 – Airflow Data

System Size	36K	48K	58K
Outdoor (CFM)	2414.6	4240.3	4240.3

SOUND PRESSURE AND SOUND POWER

Refer to [Table 5](#) for complete specifications.

OUTDOOR UNIT SOUND PRESSURE TEST CONDITIONS

Refer to [Table 5](#) for complete specifications.

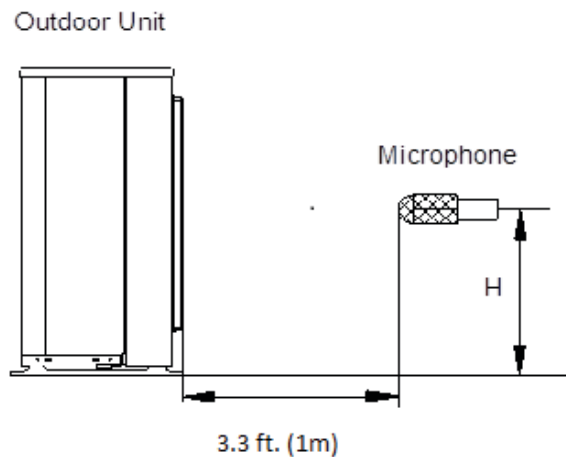


Fig. 7 – Outdoor Unit Sound Pressure Test Conditions

NOTE: H=0.5 x Height of outdoor unit

Table 32 – Outdoor Unit Sound Pressure Test Conditions

	INDOOR CONDITION		OUTDOOR CONDITION	
	DB	WB	DB	WB
Cooling	80.6°F (27°C)	66.2°F (19°C)	95°F (35°C)	75.2°F (24°C)
heating	68°F (20°C)	59°F (15°C)	44.6°F (7°C)	42.8°F (6°C)

FAN AND MOTOR AND ELECTRICAL SPECIFICATIONS

Refer to [Table 5](#) for complete specifications.

WIRING DIAGRAMS

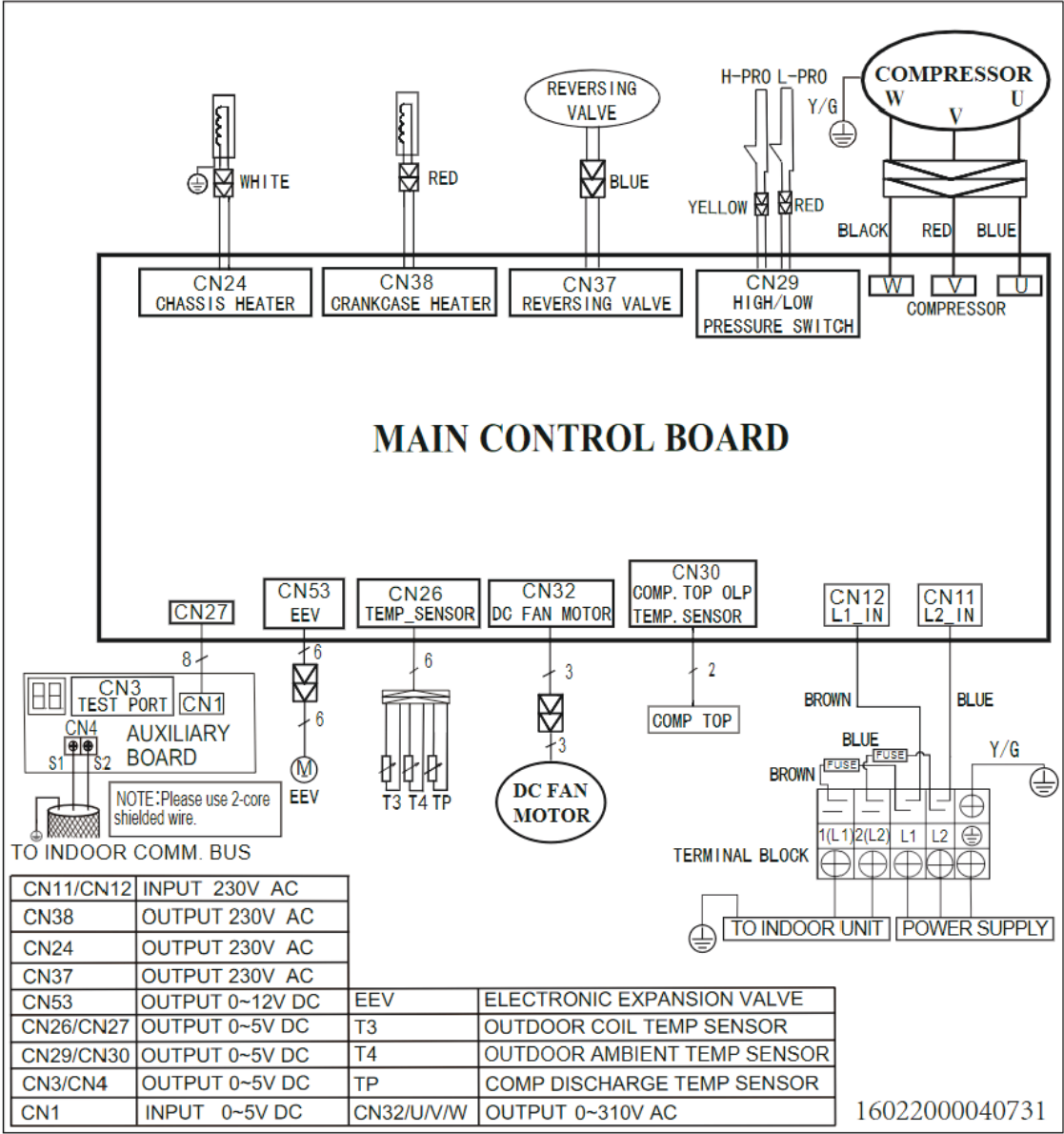


Fig. 8 – 36K Wiring Diagram

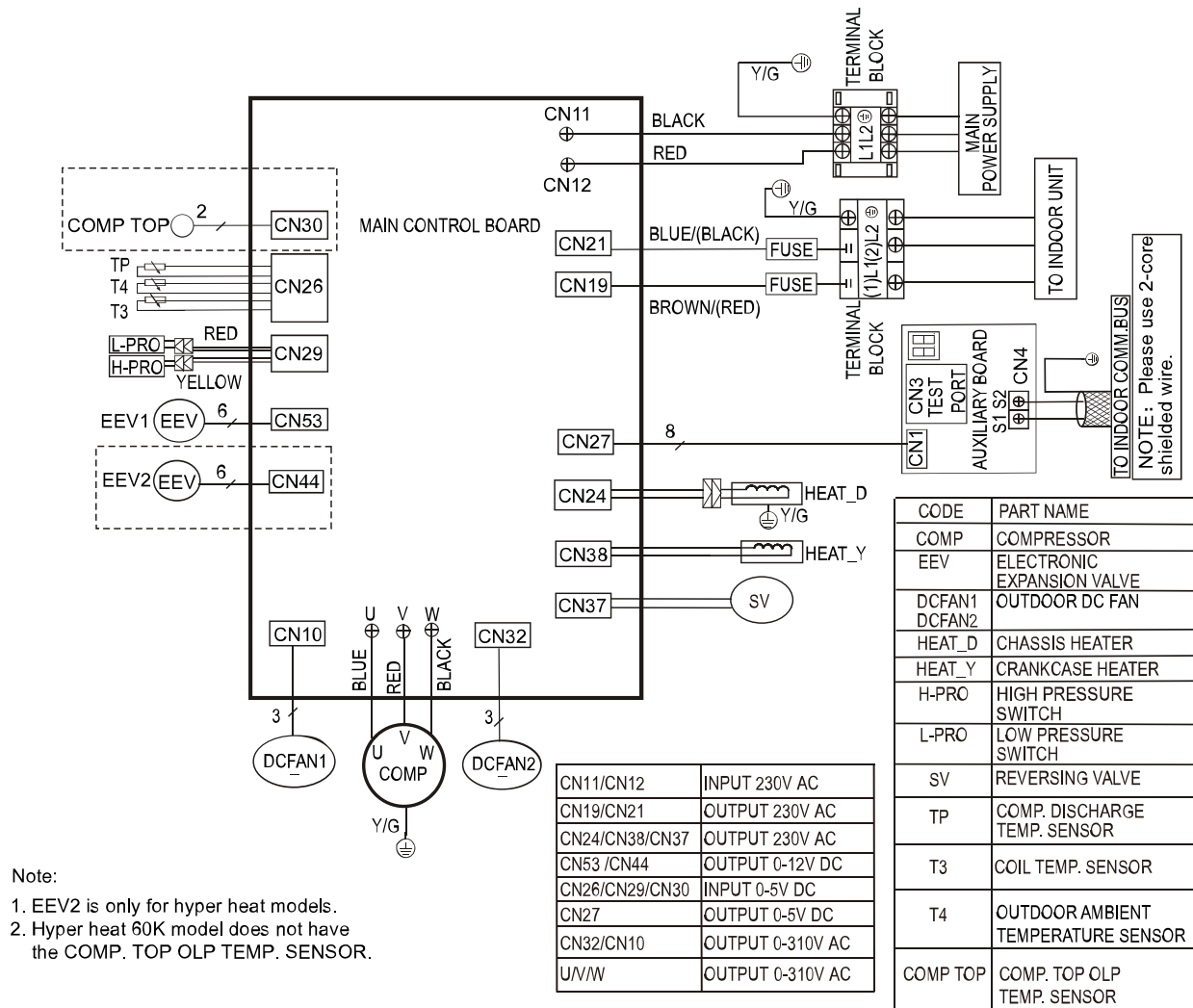


Fig. 9 – 48K / 58K Wiring Diagram

GUIDE SPECIFICATIONS**SINGLE-ZONE DUCTLESS OUTDOOR UNITS**

Size Range: 3 to 5 Ton Nominal Cooling and Heating Capacity

Model Number: 37MBRAQ

Part 1 - General**1.01 System Description**

- a. 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.
- b. Units are to be used in a refrigeration circuit matched to ductless heat pump fan coil units.

1.02 Agency Listings

- a. Unit construction complies with ANSI/ASHRAE 15, latest revision, and with the NEC.
- b. Units are evaluated in accordance with the UL standard 60335-2-40/ CSA C22.2 No. 60335-2-40.
- c. Units are listed in CEC directory.
- d. Unit cabinet is capable of withstanding the 500-hour salt spray test per Federal Test Standard no. 141 (method 6061).
- e. 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 the manufacturer's recommendations.

1.04 Warranty (For Inclusion By Specifying Engineer)**Part 2 - Products****2.01 Equipment****1. General:**

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

2. Unit Cabinet:

- a. The unit cabinet is constructed of galvanized steel, bonderized and coated with baked-enamel finish on the inside and outside.
- b. The unit access panels are removable and provide full access to the compressor, fan, and the control components.
- c. The outdoor compartment is isolated and has an acoustic lining to assure a quiet operation.

3. Fans:

- a. The outdoor fans are direct-drive propeller type, and discharge air horizontally. The fan draws air through the outdoor coil.
- b. Outdoor fan motors are totally-enclosed, single phase motors with class E insulation and permanently lubricated ball bearings. The motor is protected by internal thermal overload protection.
- c. The shaft has an inherent corrosion resistance.
- d. Fan blades are non-metallic and statically and dynamically balanced.
- e. Outdoor fan openings are equipped with a PVC metal/mesh coated protection grille over the fan.

4. Compressor:

- a. The compressor is the fully hermetic variable speed rotary type.
- b. The compressor is equipped with an oil system, operating oil charge, and motor.
- c. The motor is NEMA rated class E, suitable for operation in a refrigerant atmosphere.
- d. The compressor assembly is installed on rubber vibration isolators.

5. Outdoor Coil:

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

6. Refrigerant Components:

Refrigerant circuit components include multiple brass external liquid line service valves with a service gauge connection port, multiple suction line service valves with a service gauge connection port, accumulator, reversing valve, and electronic expansion valves.

7. Safety:

Operating safety features are factory selected, assembled, and tested. The minimum functions include the following:

- a. Compressor discharge over temperature protection.
- b. System low voltage protection.
- c. Compressor overload protection.
- d. Compressor over current protection.
- e. IPM module protection.

8. Electrical Requirements:

- a. Units operate on single-phase, 60 Hz power at 208/230v.
- b. The unit electrical power is a single point connection.
- c. All power and control wiring must be installed per NEC and all local electrical codes.
- d. Units have multiple terminal blocks to connect to multiple indoor units.

