

Submittal Data Sheet

Air To Water Heat Pump

Model No. : FBMBHT4B2

Provides space heating and cooling & domestic hot water in extreme cold climates. With high COP for maximum performance, its modular design allows Flexibility by combining multiple units to various applications. Such as Restaurants, Hotels, Multi-family buildings, Laundry facilities, Healthcare facilities, Schools, Sports arenas, Gyms and much more.



FEATURES

- Eco-Friendly R32 Refrigerant -A2L refrigerant in low GWP675.
- EVI Inverter Twin-Scroll Compressor – Ensuring stable operation down to -13°F.
- Smart Anti-Freeze Protection – Automatically activates in standby mode to prevent freezing.
- Intelligent Defrost System – Rapid, demand-based defrosting for minimal temperature fluctuation and 30% higher efficiency.
- Scalable Cascade Function – Connect up to 8 units for enhanced reliability and extended lifespan.
- Standard Limited Warranty – 10-years coverage on compressor and parts.
- Unit UL-60335-2-40 (safety)

Performance			
Nominal heating capacity	144,000 BTU/hr	Nominal cooling capacity	9 Tons
Refrigerant Type	R32	GWP (Global Warming Potential)	675
Refrigerant Charge (lbs.)	11.8	Operating ambient temperature range (°F)	-13~110
Rated Heating capacity (Btu/hr)	158,074	Rated Cooling capacity (Btu/hr)	108,000
Heating input power (W)	11896	Cooling input power (W)	11840
COP(W/W)	3.89	EER(Btu/W)	9.12
Rated Heating Conditions (°F)	Leaving Water Temp. : 95 Ambient (DB/WB) : 47/43	Rated Cooling Conditions (°F)	Leaving Water Temp. : 45 Ambient (DB/WB) : 95/75.2

Performance values indicated above are in accordance with EN14511

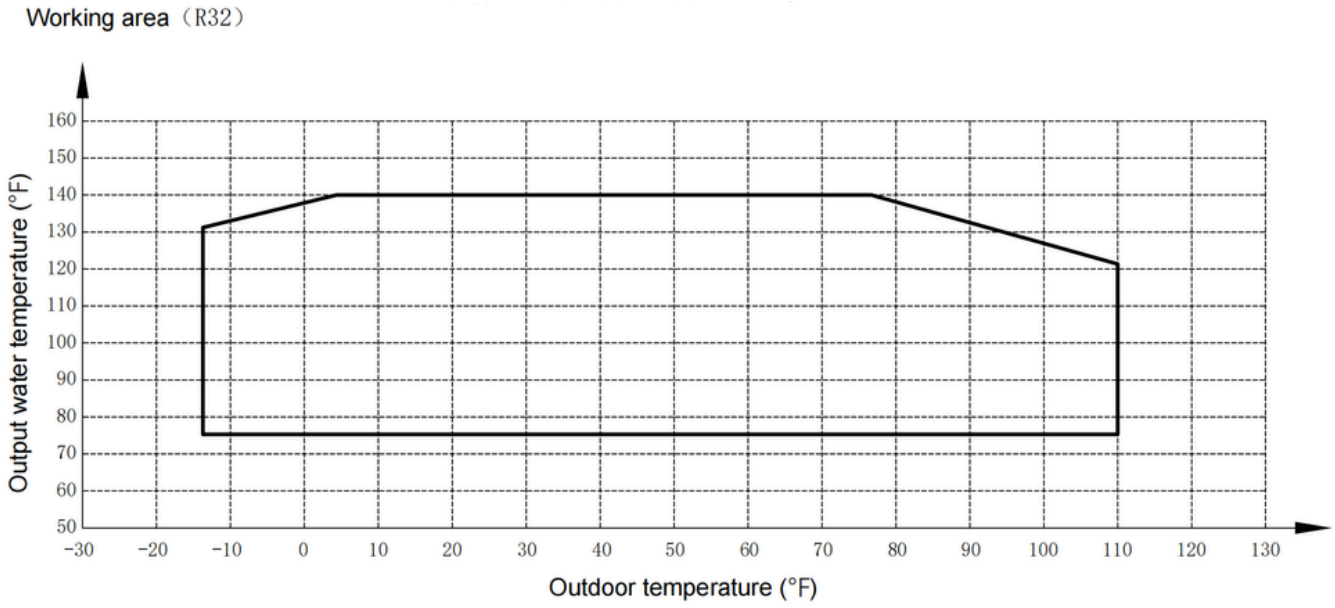
Product Details

Power Supply (V/Ph/Hz)	380~460V / 3Ph / 60Hz	Compressor Type	Twin-Scroll Inverter
Power Supply Connections	L1, L2,L3 ,N ,Ground	Sound Pressure dB(A) (Daytime Max/Rated/Low Noise)	65/61/58
Min. Circuit Amps MCA (A):	34.9	Max Overcurrent Protection (MOP) (A)	43.6
Cooling Mode Leaving Water Temp (°F)	44.6 ~ 80.6	Heating Mode Leaving Water Temp (°F)	77 ~ 140
Piping Connections Inlet/ Outlet (inch)	2 NPT female thread	Water flow(GPM)	27.5
Net Dimensions (LxWxH) (in.)	44-11/16 × 40-3/4 × 83-3/8	Shipping Dimensions (LxWxH) (in.)	47-13/16×43-7/8×90-7/16
Net (kgs)	330	Shipping Weight (kgs)	430

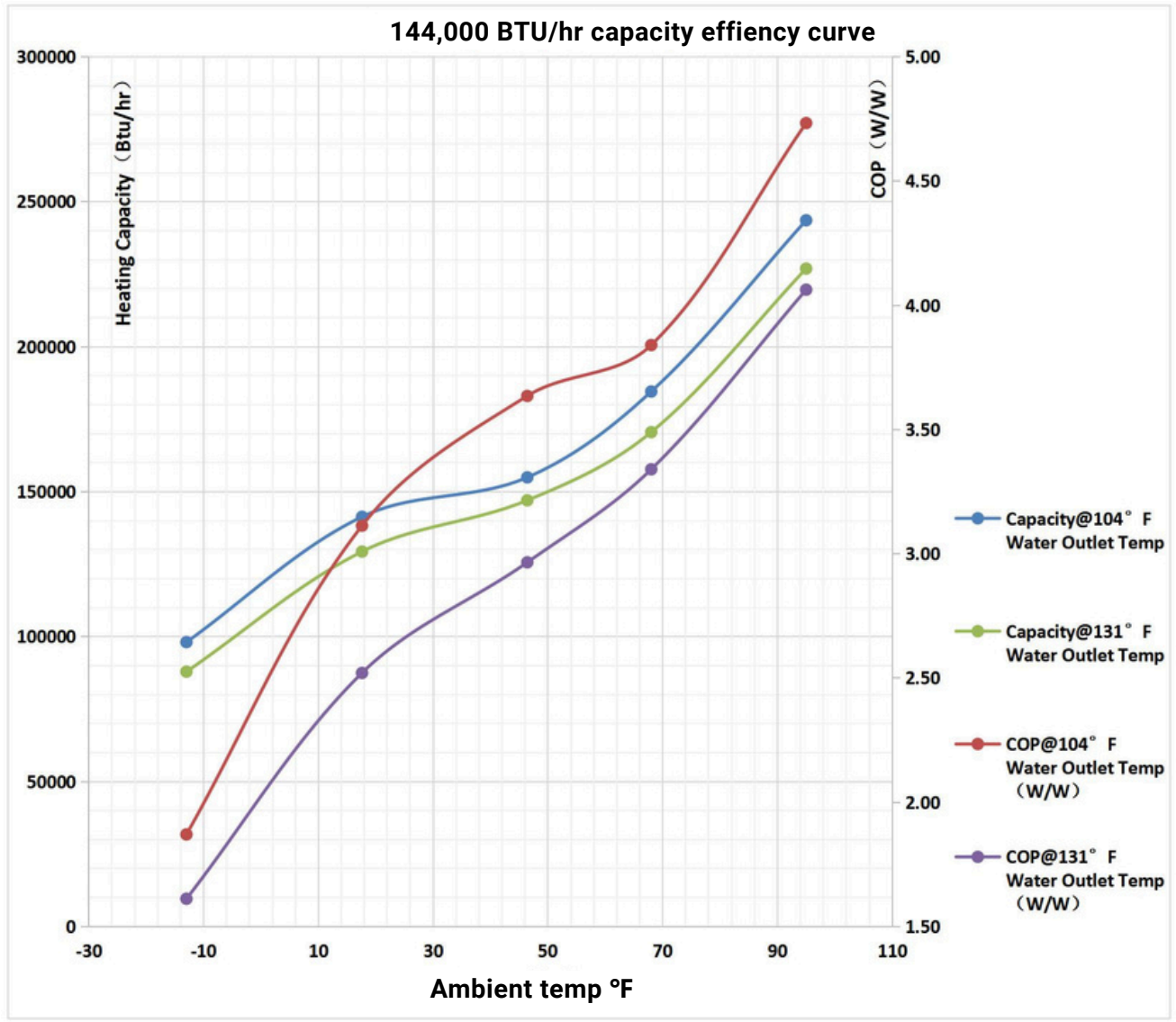
Notes:

- Must follow installation instructions in the applicable installation manual.
- 1. Power wiring size must comply with the applicable local and national code.
- 2. Acceptable operating voltage range: 480 - 600V.
- 3. Sound power level is measured in accordance with ISO 9614.
- Daytime Max: This mode is measured based on max. fan RPM and max. compressor Hz. that can be reached under outdoor air temperature of 35.6°F.
- Rated: This mode is measured on the rated condition in the semi-anechoic rooms. Therefore, these values may vary depending on operation conditions.
- Low Noise: This mode lowers noise by limiting the compressor Hz. and fan RPM, and thus the performance may be limited.
- 4. Sound pressure level is converted value at 1m distance .
- 5.All installation sites must be equipped with ground fault protection in accordance with the local codes, such as a Ground Fault Protection device or Ground Fault Circuit Breaker.

Operating Envelope



Heating Curve

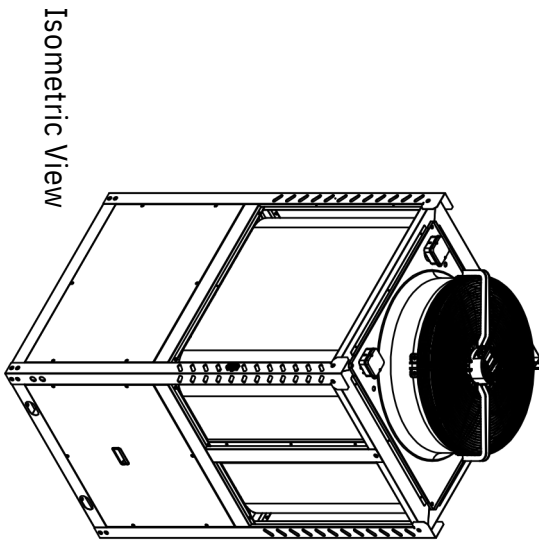
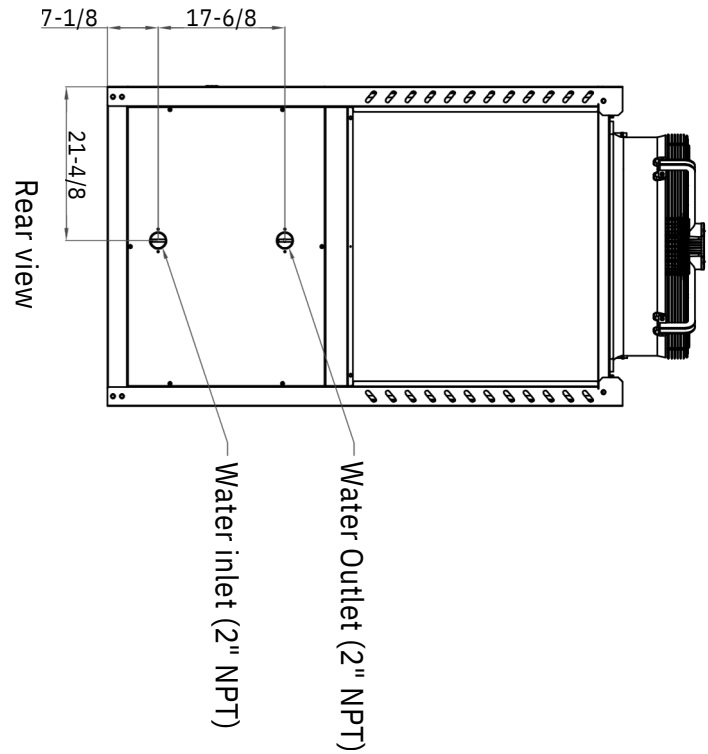
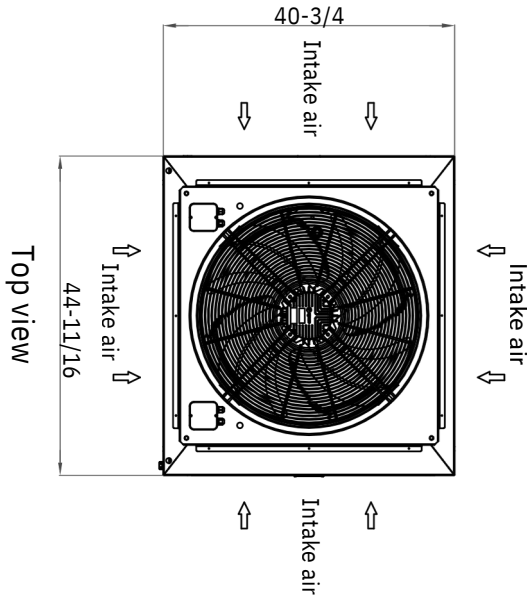
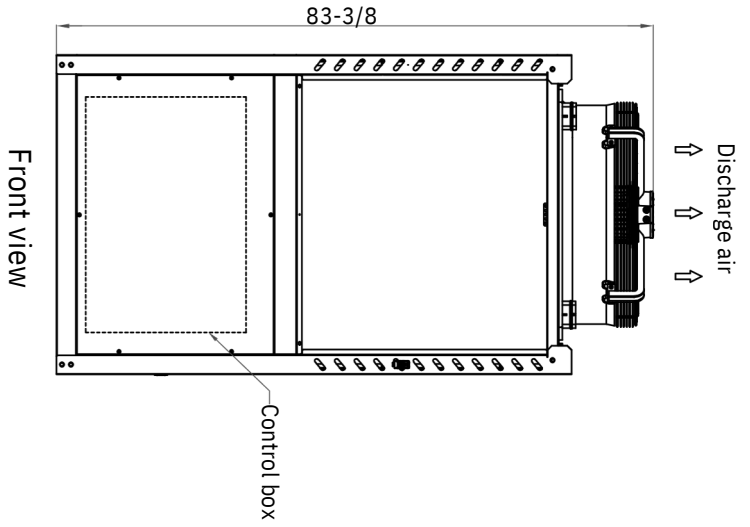
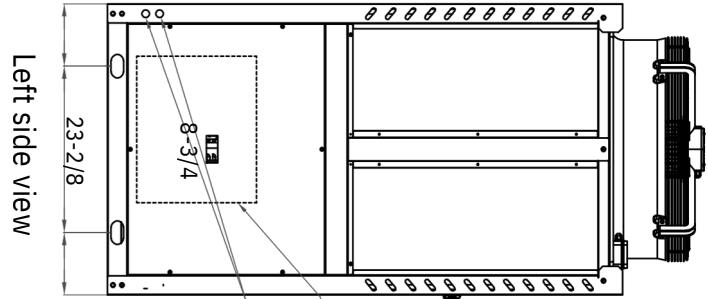


Heating Capacity Table

Amient temp	Water Outlet Temp (°F)	Heating Capacity(Btu/hr)	Input Power (W)	COP (W/W)
DB95°F	140	215608	16862	3.75
	131	226955	16371	4.06
	122	231587	15894	4.27
	113	236313	15537	4.46
	104	243622	15084	4.73
	95	248594	14788	4.93
DB86°F	140	199446	15853	3.69
	131	209944	15543	3.96
	122	216437	15090	4.2
	113	220854	14794	4.38
	104	227684	14504	4.6
	95	232331	14220	4.79
DB77°F	140	183243	16004	3.36
	131	188910	15538	3.56
	122	194753	15085	3.78
	113	200776	14646	4.02
	104	206986	14220	4.27
	95	211210	13941	4.44
DB68°F	140	165423	15264	3.18
	131	170539	14964	3.34
	122	173950	14665	3.48
	113	179168	14372	3.65
	104	184543	14084	3.84
	95	193770	13803	4.11

DB46.4°F	140	144076	15400	2.74
	131	147016	14529	2.97
	122	149255	13837	3.16
	113	152301	13115	3.4
	104	154935	12491	3.64
	95	158034	11896	3.89
DB35.6°F	140	132051	15183	2.55
	131	136135	14460	2.76
	122	140346	13771	2.99
	113	144686	13115	3.23
	104	147580	12460	3.47
	95	150531	11837	3.73
DB17.6°F	140	122862	15790	2.28
	131	129328	15038	2.52
	122	133208	14437	2.7
	113	137205	13859	2.9
	104	141321	13305	3.11
	95	146267	12773	3.36
DB10°F	131	118982	15640	2.23
	122	123218	14870	2.43
	113	126777	14413	2.58
	104	131428	13970	2.76
	95	135297	14050	2.82
DB-13°F	131	87900	15985	1.61
	122	90618	15519	1.71
	113	93421	15067	1.82
	104	98092	15368	1.87
	95	102997	15676	1.93

Dimensional Drawing



Unit:inch