

Submittal Data Sheet

Air To Water Heat Pump

Model No. : FBMBHT4B2E3

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... like Restaurants, Hotels, Multi-family buildings, Laundry facilities, Healthcare facilities, Schools, Sports arenas, Gyms and so on.



FEATURES

- R290 New Eco-friendly Refrigerant – Energy-saving, green, non-ozone depleting, and low-carbon.
- Inverter Twin-Rotary Compressor – Ensuring stable operation down to -25°C.
- 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 all components.
- Unit IEC-60335-2-40 (safety) , EN 14825 (performance) approved.

Performance			
Nominal heating capacity	45KW	Nominal cooling capacity	34KW
Refrigerant Type	R290	GWP (Global Warming Potential)	3
Refrigerant Charge (kg)	3.5	Workable ambient temperature range (°C)	-25~43
Min/Max Heating Capacity	12.8~47.3KW	Min/Max Cooling Capacity (Kw)	10.8-36.2KW
EL. Heating Power input Min/Max (W)	3316~10534	EL. Cooling Power input Min/Max (W)	3942~11138
COP(W/W)	3.86-4.49	EER(W/W)	2.74~3.25
Rated Heating Conditions(°C)	Leaving Water Temp. : 35 Ambient (DB/WB) : 7/6	Rated Cooling Conditions (°C)	Leaving Water Temp. : 7 Ambient (DB/WB) : 35/24

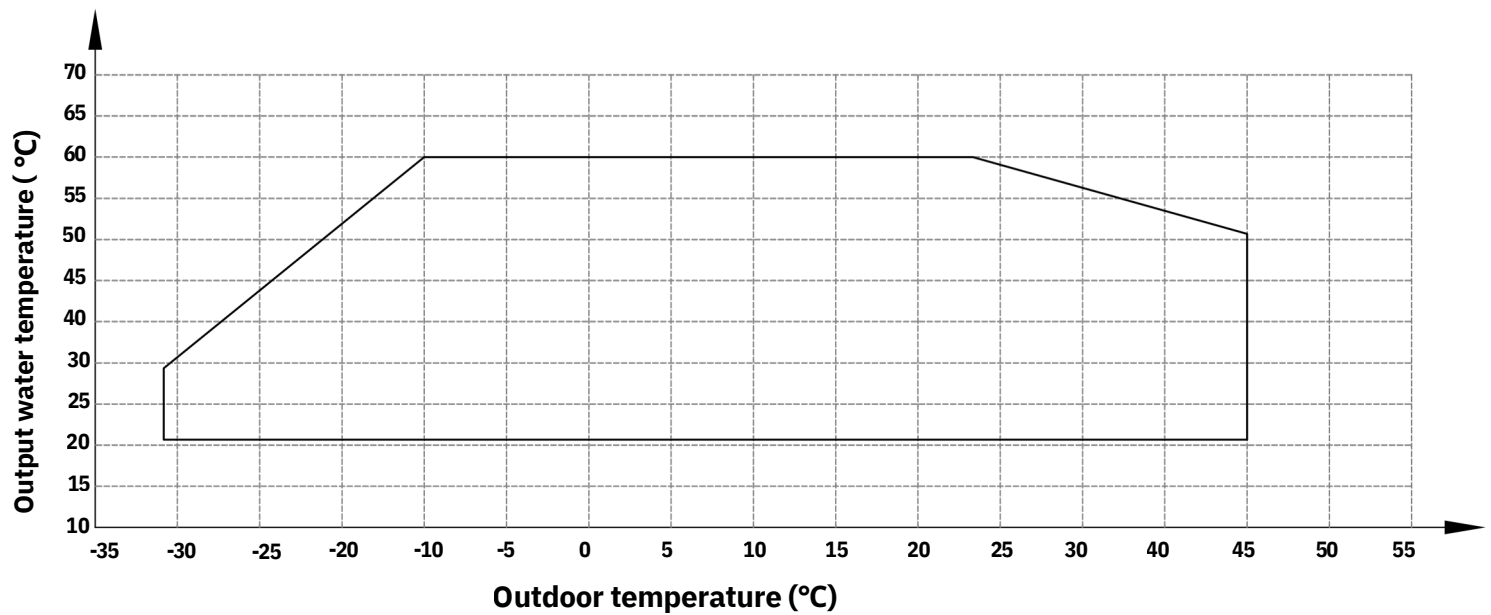
Performance values indicated above are in accordance with EN14511

Product Details			
Power Supply (V/Hz/Ph)	380~400V / 50Hz / 3Ph	Compressor Type	DC inverter EVI scroll
Power Supply Connections	R, S ,T ,N ,Ground	Sound Pressure dB(A)(Daytime Max/Rated/Low Noise)	65/61/58
Min. Circuit Amps MCA (A):	40	Max Overcurrent Protection (MOP) (A)	50
Cooling Mode Leaving Water Temp (°C)	7 ~ 27	Heating Mode Leaving Water Temp (°C)	35 ~ 60
Piping Connections Inlet/ Outlet	2 inch female thread	Water flow(m3/h)	7.7
Net Dimensions (LxWxH) (mm)	1135*1035*2118	Shipping Dimensions (LxWxH) (mm)	1195*1095*2197
Net Weight (kg)	400	Shipping Weight (kg)	450

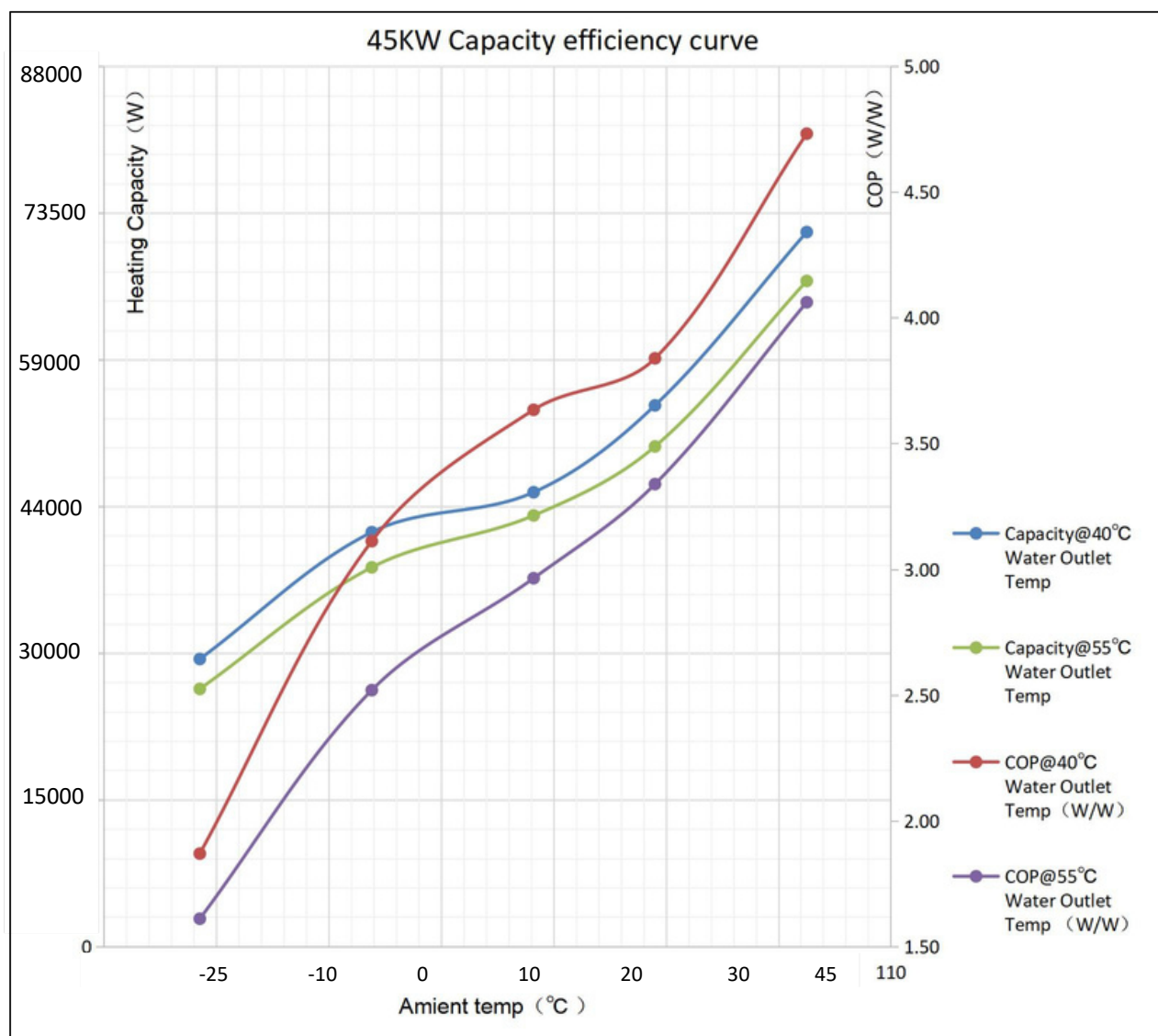
Notes:

- Must follow installation instructions in the applicable installation manual.
- 1. Power wiring size must comply with the applicable local and national code.
- 2. 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 2°C .
- 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.
- 3. Sound pressure level is converted value at 1m distance .
- 4.All installation sites must be equipped with an Earth Leakage Circuit Breaker (ELCB).

Operating Envelop



Heating Curve



Heating Capacity Table

Amient temp	Water Outlet Temp (°C)	Heating Capacity(W)	Input Power (W)	COP (W/W)
DB35°C	60	63188	16862	3.75
	55	66514	16371	4.06
	50	67871	15894	4.27
	45	69257	15537	4.46
	40	71399	15084	4.73
	35	72856	14788	4.93
DB30°C	60	58452	15853	3.69
	55	61528	15543	3.96
	50	63431	15090	4.2
	45	64726	14794	4.38
	40	66728	14504	4.6
	35	68089	14220	4.79
DB25°C	60	53703	16004	3.36
	55	55364	15538	3.56
	50	57076	15085	3.78
	45	58842	14646	4.02
	40	60661	14220	4.27
	35	61899	13941	4.44
DB20°C	60	48481	15264	3.18
	55	49980	14964	3.34
	50	50980	14665	3.48
	45	52509	14372	3.65
	40	54084	14084	3.84
	35	56789	13803	4.11

DB8°C	60	42225	15400	2.74
	55	43086	14529	2.97
	50	43742	13837	3.16
	45	44635	13115	3.4
	40	45407	12491	3.64
	35	46315	11896	3.89
DB2°C	60	38700	15183	2.55
	55	39897	14460	2.76
	50	41131	13771	2.99
	45	42403	13115	3.23
	40	43251	12460	3.47
	35	44116	11837	3.73
DB-8°C	60	36007	15790	2.28
	55	37902	15038	2.52
	50	39039	14437	2.7
	45	40211	13859	2.9
	40	41417	13305	3.11
	35	42867	12773	3.36
DB-12°C	55	34870	15640	2.23
	50	36112	14870	2.43
	45	37155	14413	2.58
	40	38518	13970	2.76
	35	39652	14050	2.82
DB-25°C	55	25761	15985	1.61
	50	26558	15519	1.71
	45	27379	15067	1.82
	40	28748	15368	1.87
	35	30185	15676	1.93

Dimension Drawing

