

Water-Cooled Screw Heat Pump Chiller

Model No.: FBMBHTF4B2U4

Submittal Data



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This unit is designed with an inverter-driven screw compressor and shell-and-tube heat exchangers. The integrated microprocessor control supports three operating modes: cooling, heating, and heat recovery.

It is suitable for buildings and process applications requiring reliable heating and cooling, including schools, hotels, office buildings, libraries, industrial processes, agricultural facilities, and waste heat recovery systems.



Key Features

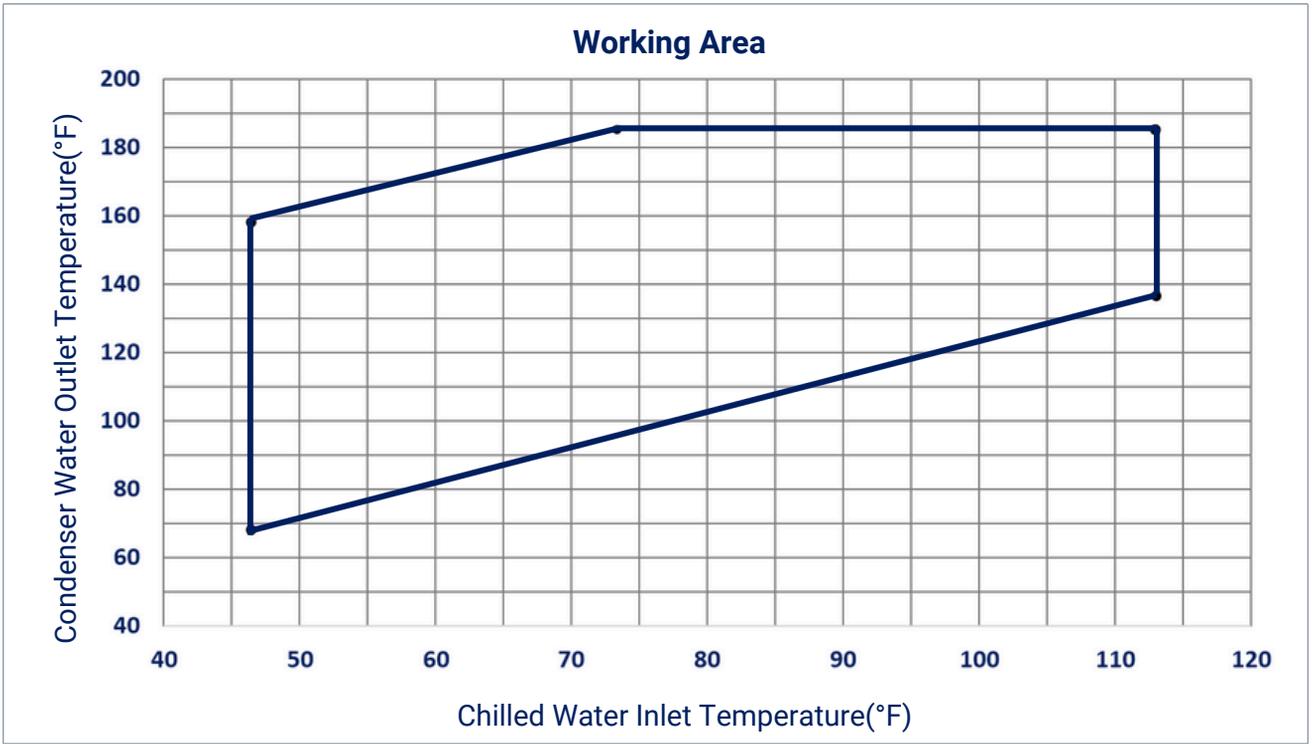
- True 4-pipe operation for simultaneous chilled and hot water up to 185°F
- Built-in heat recovery for combined cooling and heating applications
- Inverter-driven screw compressor for stable and efficient part-load operation
- Electronic expansion valve (EEV) for precise refrigerant control
- High-efficiency shell-and-tube heat exchangers
- PLC-based controller with LCD interface and real-time monitoring
- Refrigerant: R515B (A1 safety class, low GWP)

Specification Parameters

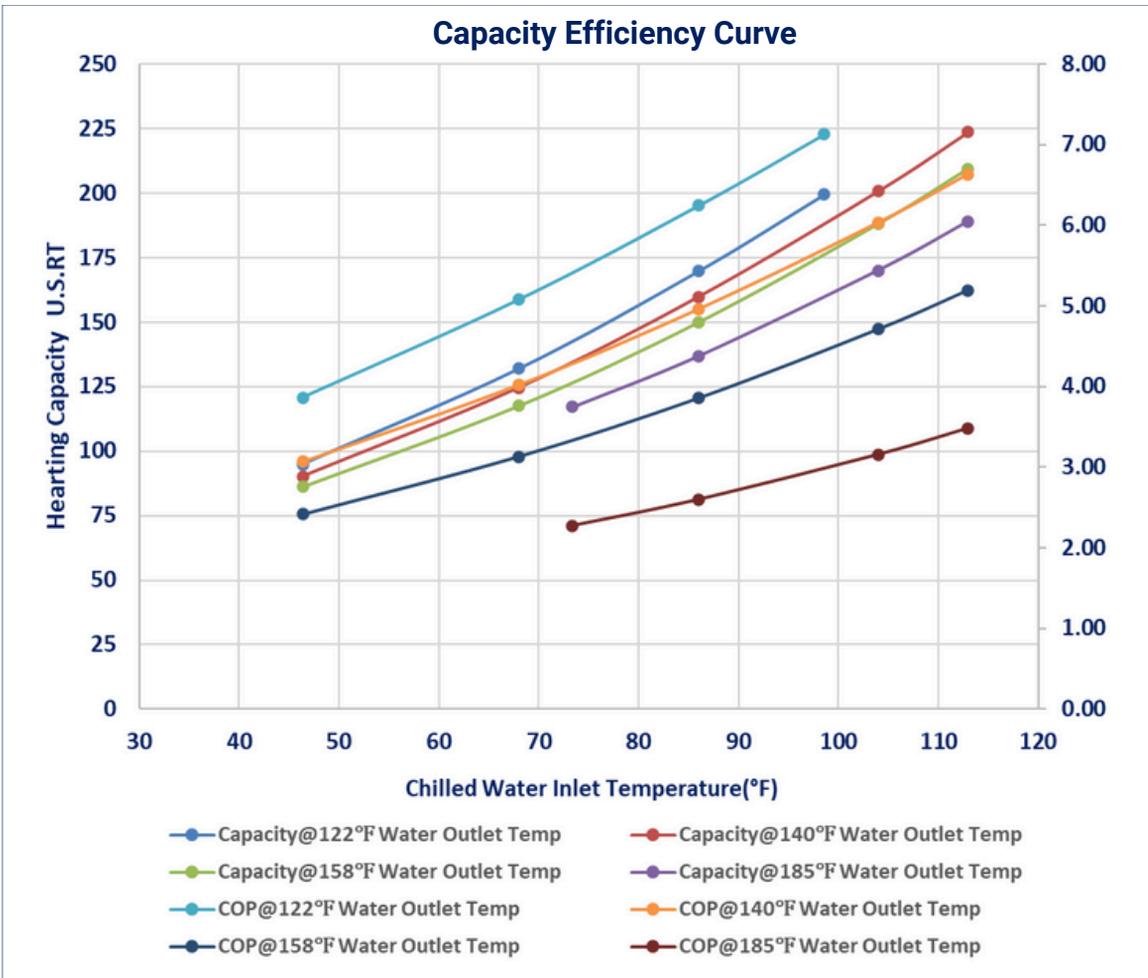


Performance			
Rated Cooling Capacity	95.8 U.S. RT	Rated Heating Capacity	140.2 U.S. RT
Cooling Input Power	68,000 W	Heating Input Power	110,600 W
COP	4.96 W/W	EEV	4.46 W/W
Refrigerant Type	R515B	GWP (Global Warming Potential)	293
Refrigerant Charge (lbs.)	275	Operating Ambient Temperature Range (°F)	32 ~ 104
Cooling Conditions (°F)	Condenser Water Temp.85.0 / 94.3	Heating Conditions (°F)	Condenser Water Temp.120.0 / 140.0
	Chilled Water Temp.54.0 / 44.0		Evaporator Water Temp.76.3 / 65.0
High Temperature Heating Capacity	124.7 U.S. RT	High Temperature Heating Conditions (°F)	Condenser Water Temp.158.0 / 176.0
High Temperature Heating Input Power	162,500 W		Evaporator Water Temp.77.0 / 68.0
Product details			
Power Supply	480V / 3Ph / 60Hz	Compressor Type	Inverter Screw Compressor
Power Supply Connections	L1, L2, L3, Ground	Sound Pressure	80 dB
Rated Cooling Operating Current	93.0 A	Rated Heating Operating Current	152.0 A
Piping Connections Inlet/Outlet (in.)	Condenser 4 / 4	Rated Cooling Water Flow	Cond. 301.2 GPM Evap. 229.4 GPM
	Evaporator 4 / 4	Rated Heating Water Flow	Cond. 168.0 GPM Evap. 230.9 GPM
Machine Weight	2,580 kg	Operation Weight	2,760 kg
Net Dimensions (L×W×H) (in.)	90.5 × 57.7 × 73.6	Shipping Dimensions (L×W×H) (in.)	98.0 × 63.8 × 85.4

- Remark:
1. Evaporator side fouling factor 0.000100h-ft²·°F/Btu, Condenser side fouling factor 0.000250h-ft²·°F/Btu.
 2. Power wiring size must comply with the applicable local and national code.
 3. Sound pressure level is converted value at 1m distance.
 4. 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.

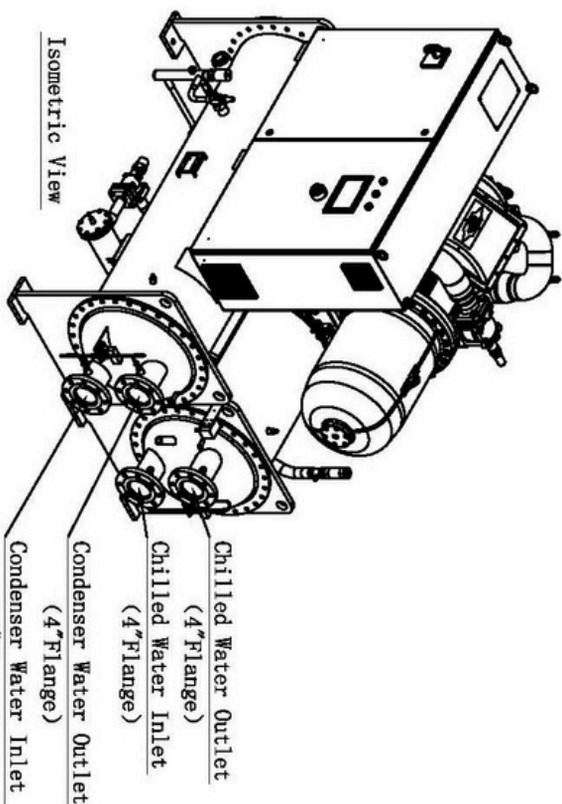
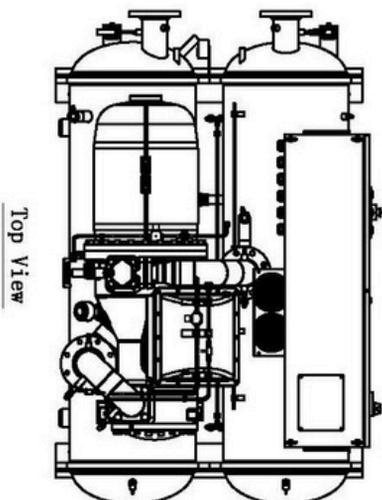
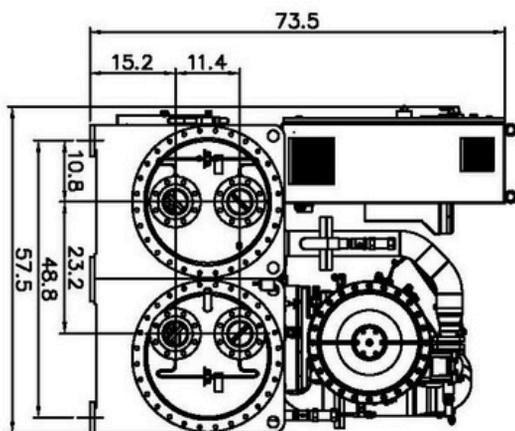
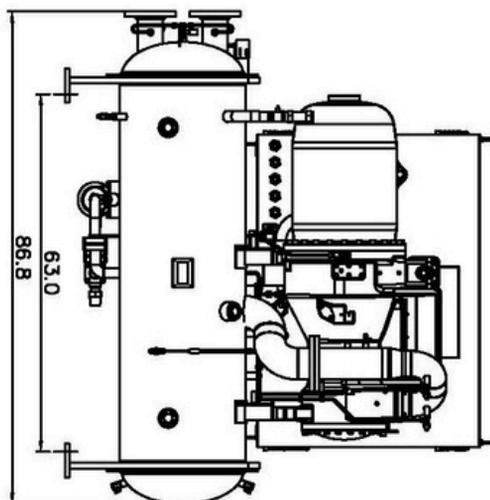
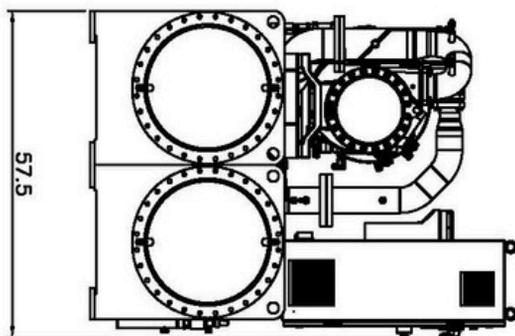


Heating Curve



Chilled Water Inlet Temp (°F)	Hot Water Outlet Temp (°F)	Heating Capacity (RT)	Input Power (W)	COP (W/W)
113	185	189	190,738	3.48
	176	195.6	172,323	3.99
	167	202.4	156,087	4.56
	158	209.4	141,806	5.19
	149	216.5	129,337	5.88
	140	223.5	118,539	6.63
104	185	170	189,277	3.16
	176	175.8	170,889	3.62
	167	181.8	154,653	4.13
	158	188	140,349	4.71
	149	194.3	127,838	5.34
	140	200.7	116,973	6.03
	131	207	107,582	6.76
95	185	152.6	187,368	2.86
	176	157.5	169,064	3.28
	167	162.7	152,881	3.74
	158	168.1	138,605	4.26
	149	173.7	126,094	4.84
	140	179.4	115,203	5.47
	131	185	105,758	6.15
	122	190.6	97,568	6.87
86	185	136.8	185,031	2.6
	176	140.8	166,873	2.97
	167	145.2	150,800	3.38
	158	149.9	136,602	3.86
	149	154.7	124,140	4.38
	140	159.7	113,267	4.96
	131	164.8	103,808	5.58
	122	169.8	95,571	6.25
	113	174.6	88,369	6.95

Chilled Water Inlet Temp (°F)	Hot Water Outlet Temp (°F)	Heating Capacity (RT)	Input Power (W)	COP (W/W)
77	185	122.6	182,305	2.36
	176	125.5	164,310	2.69
	167	129	148,400	3.06
	158	132.9	134,329	3.48
	149	137	121,960	3.95
	140	141.3	111,144	4.47
	131	145.6	101,706	5.03
	122	149.9	93,453	5.64
	113	154.2	86,197	6.29
68	176	111.6	161,407	2.43
	167	114.4	145,725	2.76
	158	117.5	131,842	3.13
	149	120.9	119,622	3.55
	140	124.5	108,917	4.02
	131	128.2	99,549	4.53
	122	131.9	91,327	5.08
	113	135.6	84,062	5.67
59	167	101.1	142,806	2.49
	158	103.5	129,171	2.82
	149	106.2	117,157	3.19
	140	109.2	106,613	3.6
	131	112.3	97,364	4.06
	122	115.5	89,218	4.55
	113	118.6	81,986	5.09
50	158	90.8	126,361	2.53
	149	92.9	114,609	2.85
	140	95.3	104,283	3.21
	131	97.9	95,204	3.62
	122	100.5	87,182	4.05
	113	103.2	80,029	4.53



Unit: inch