



TRM with Hydronic Heating

Models TRM09-36 - 60Hz - HFC-410A

Traditional water source heat pump systems are designed for applications where there is demand for some units to be in heating while others are in cooling throughout much of the year. Hybrid water source heat pump systems outperform traditional systems by combining the best of refrigerant air conditioning and hydronic heating resulting in quieter operation and potential operating cost savings.

Advantages of the TRM in a Hybrid WSHP Application:

- Building water loop temperatures can be designed as high as 120 degrees with a hybrid water source heat pump system. This lets the system retain more of the heat generated by the heat pumps that are in the cooling mode without rejecting that heat through a cooling tower.
- Instead of using a compressor in the heating mode, the hybrid heat pump operates as a fan coil in the heating mode. This can be more cost effective than traditional water source heat pump systems based on energy costs.
- Heat utilization is maximized. With a hybrid water source heat pump system up to 100% of the outdoor air can be brought into the building using an air handler with a hydronic water coil fed by the buildings higher temperature building loop. This can prevent the scenario where you have gas heat treating outdoor air while a cooling tower rejecting heat from the building loop.
- Quiet operation during heating mode because the unit is not using a compressor to generate heat.
- Reduced compressor cycling.
- No reversing valve.

Unit Size

Unit	Height	Width	Depth
09-12	88"	16"(406)	16"(406)
15-18	88"	19"(483)	19"(483)
24-36	88"	23"(584)	23"(584)

Measurements shown in inches

Hydronic Heating Performance Data

Model	Heating Pressure Drop		Hydronic Heating Capacity BTUH						
	PSI*	FT	CFM	GPM	90°F	100°F	110°F	115°F	120°F
09	5.5	12.7	325	3.0	4,608	6,624	8,975	10,068	10,848
12	7.3	16.9	350	3.5	4,896	7,008	9,372	10,509	11,629
15	6.3	14.6	600	5.5	6,912	10,272	12,011	13,373	14,816
18	6.3	14.6	700	5.5	7,392	10,944	14,295	15,850	17,538
24	15.4	35.6	800	8.0	10,394	14,775	1,973	21,499	23,843
30	15.4	35.6	1200	8.0	13,763	19,252	25,534	24,441	31,210
36	10.5	24.3	1200	8.0	13,763	19,252	25,534	28,441	31,210

Physical Data

Model	09	12	15	18	24	30	36
Compressor (1 each)	Rotary			Scroll			
Factory Charge HFC-410A(oz) [kg]	33.5 [0.95]	35 [0.99]	43[1.22]	48.5[1.38]	71[2.01]	75[2.13]	75[2.13]
Blower Wheel							
Blower Wheel Size (dia x w) - (in) [mm]	6.75 x 7.25 [174 x 184]	6.75 x 7.25 [174 x 184]	9.50 x 7.12 [241 x 181]	9.50 x 7.12 [241 x 181]	9.50 x 7.12 [241 x 181]	9.50 x 8.06 [241 x 205]	9.50 x 8.06 [241 x 205]
ECM* Motor & Blower							
Fan Motor (hp) [w]	1/8[93]	1/8[93]	1/3[248]	1/3[248]	1/3[248]	1/2[373]	
Blower Wheel Size (dia x w) - (in) [mm]	6.75 x 7.25 [174 x 184]	6.75 x 7.25 [174 x 184]	9.50 x 7.12 [241 x 181]	9.50 x 7.12 [241 x 181]	10.00 x 8.00 [254 x 205]		
Coax							
Internal Volume U.S. Galloon (L)	.22(.84)	.26(.98)	.37(1.40)	.37(1.40)	.60(2.27)	.60(2.27)	.60(2.27)
Hose Kit (AHH Series Required)							
FPT (in)	1/2	1/2	3/4	3/4	1	1	1
Drain Hose							
Internal Diameter in (mm)	.875(22.2)						
Chasis Air Coil							
Air Coil Dimensions (h x w) - (in) [mm]	22 x 11.5 [559 x 292]	22 x 11.5 [559 x 292]	28 x 14 [711 x 356]	28 x 14 [711 x 356]	30 x 18 [762 x 457]	30 x 18 [762 x 457]	30 x 18 [762 x 457]
Standard Filter - 1" [25.4mm] Throwaway, qty (in) [mm]	14 x 24 [356 x 610]	14 x 24 [356 x 610]	16 x 30 [406 x 762]	16 x 30 [406 x 762]	20 x 32 [508 x 813]	20 x 32 [508 x 813]	20 x 32 [508 x 813]
Weight							
Chasis - (lbs) [kg]	90[41]	97[44]	115[52]	115[52]	176[80]	182[83]	182[83]
Cabinet - (lbs) [kg]	174[79]	174[79]	189[86]	189[86]	243[110]	243[110]	243[110]

* ECM on sizes 09 and 12 is constant volume and only available with DXM2 controls, ECM on sizes 15-36 is constant torque and only available with CXM and DXM controls.

Tested To ASHRAE/AHRI/ISO 13256-1 English (I-P) Units

Model with ECM Motor	Water Loop Heat Pump		Ground Water Heat Pump		Ground Loop Heat Pump	
	Cooling 86°F		Cooling 59°F		Cooling 77°F	
	Capacity Btuh	EER Btuh/W	Capacity Btuh	EER Btuh/W	Capacity Btuh	EER Btuh/W
TRM09	8,800	14.0	10,100	22.0	9,300	16.3
TRM12	11,600	13.4	13,700	20.2	12,200	15.7
TRM15	13,800	14.1	16,500	23.5	15,200	16.5
TRM18	16,700	14.0	19,600	22.3	17,600	16.4
TRM24	22,100	13.8	26,400	22.0	23,800	16.2
TRM30	27,100	13.6	30,700	19.6	29,300	16.2
TRM36	32,300	13.0	37,000	19.6	33,300	14.9

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature

All units AHRI/ISO/ASHRAE 13256-1 tested on high speed motor TAP

All ratings based upon operation at lower voltage of dual voltage rated models

Note: Product is offered by ClimateMaster as a special only. Contact your ClimateMaster sales manager for ordering details.

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