



**HB**

# Product Specifications

## R-410A Geothermal Package Heat Pump

### EASIER TO SELL

- 3.7 - 4.3 COP, 18.5 - 21.7 EER (Closed Loop)
- 4.3 - 5.2 COP, 22.7 - 28.1 EER (Open Loop)
- Optional supplemental domestic water heating
- 2" filter, MERV 8
- Unit available in vertical upflow and horizontal
- Fully insulated cabinet with fiberglass
- Optional cupro-nickel heat exchanger for open loop applications
- Available accessories listed in the Geothermal Accessory Catalog

### TOUGHER

- Single-stage scroll compressor (rotary in size 018)
- Multi-speed constant torque blower motor
- Tin plated copper tubing in air coil

### EASIER TO INSTALL AND SERVICE

- Compatible with many 2 stage heat, 1 stage cooling programmable thermostats
- Microprocessor control

### WARRANTY \*

- 5 year parts and labor limited warranty (including compressor)
  - With timely registration, an additional 5 year parts limited warranty (including compressor)
- \* For residential applications only. See warranty certificate for complete details and restrictions, including warranty coverage for other applications.



Illustrations and photographs are only representative. Some product models may vary.



Qualifying models only

This product has been designed and manufactured to meet ENERGY STAR criteria for energy efficiency when matched with appropriate coil components. However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow the manufacturer's refrigerant charging and air flow instructions. Failure to confirm proper charge and airflow may reduce energy efficiency and shorten equipment life.



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](http://www.ahridirectory.org).

Model Number	Size (tons)	Nominal BTU/hr	Min. Circuit Ampacity	Max. Fuse or Breaker	Vertical Dimensions H x W x D (in)	Horizontal Dimensions H x W x D (in)
HB018	1.5	18000	12.1	15	39.25 x 21.75 x 21.75	19.75 x 22.25 x 45.25
HB024	2	24000	19.7	30	47.25 x 21.75 x 26.25	22.00 x 26.25 x 54.75
HB030	2.5	30000	20.1	30	47.25 x 24.25 x 33.50	22.00 x 30.25 x 68.25
HB036	3	36000	26.0	40	47.25 x 24.25 x 33.50	22.00 x 30.25 x 68.25
HB042	3.5	42000	26.9	40	58.25 x 26.25 x 33.50	22.00 x 30.25 x 79.00
HB048	4	48000	30.9	50	58.25 x 26.25 x 33.50	22.00 x 32.25 x 79.00
HB060	5	60000	38.9	60	66.25 x 26.25 x 33.50	22.00 x 30.25 x 89.25

UNIT MODEL NUMBER IDENTIFICATION GUIDE												
Digit Position:	1,2	3,4,5	6	7	8	9	10	11	12	13	14,15	16
Example Part Number:	<b>HB</b>	<b>024</b>	<b>V</b>	<b>T</b>	<b>L</b>	<b>C</b>	<b>D</b>	<b>C</b>	<b>C</b>	<b>1</b>	<b>XX</b>	<b>1</b>
HB = Geothermal Package <b>MODEL</b>  018 = 18,000 BTUH = 1.5 tons 024 = 24,000 BTUH = 2 tons 030 = 30,000 BTUH = 2.5 tons 036 = 36,000 BTUH = 3 tons 042 = 42,000 BTUH = 3.5 tons 048 = 48,000 BTUH = 4 tons 060 = 60,000 BTUH = 5 tons <b>NOMINAL CAPACITY</b>												
V = Vertical H = Horizontal <b>CABINET CONFIGURATION</b>												
T = Top (vertical) E = End (Horizontal) S = Side (horizontal) <b>DISCHARGE AIR CONFIGURATION</b>												
L = Left R = Right <b>RETURN AIR CONFIGURATION</b>												
C = Copper (source) N = Cupronickel (source) <b>COAX OPTIONS</b>												
D = with Desuperheater X = without Desuperheater <b>HOT WATER OPTION</b>												
C = Constant Torque X-13 <b>FAN/MOTOR OPTIONS</b>												
C = Coated fins, Tin Plated Hair Pins <b>AIR COIL COATING</b>												
1 = 208-230/60/1 <b>VOLTAGE</b>												
XX <b>FUTURE USE</b>												
<b>ENGINEERING DIGIT</b>												

AHRI RATINGS

HB with ECM Motor (Const Torque)													
Model Number	Fluid Flow Rate (GPM)	Water Loop				Ground Water				Ground Loop			
		Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP
HB018	5.0	19500	16.4	21300	5.3	21300	25.6	17700	4.5	20500	19.0	14800	3.8
HB024	6.0	24500	18.2	28500	5.7	28400	28.1	23700	4.6	26000	21.1	18000	4.0
HB030	7.0	27000	16.6	31000	5.9	31700	27.0	25000	5.2	28500	19.4	20500	4.3
HB036	10.0	36000	17.2	41000	5.6	40200	25.9	34400	4.9	37500	19.7	26000	4.1
HB042	10.5	40600	18.2	42400	6.0	45000	25.7	35000	5.1	42200	21.7	26800	4.1
HB048	12.0	47400	17.2	50000	5.3	52900	26.1	40500	4.3	49500	20.0	33400	3.7
HB060	15.0	60400	16.2	71500	5.7	66500	24.1	56700	4.9	61500	18.5	47000	4.2

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory ([www.ahridirectory.org](http://www.ahridirectory.org)) for the most up-to-date ratings information.

PHYSICAL DATA

HB Series	018	024	030	036	042	048	060
Compressor Type (Qty 1)	Rotary	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Max Water Working Pressure (PSIG/kPa)	400/3100	400/3100	400/3100	400/3100	400/3100	400/3100	400/3100
<b>Standard Fan Motor &amp; Blower</b>							
Fan Motor Type/Speeds	Multi-speed Constant Torque						
Fan Motor (HP)	1/3	1/3	1/2	3/4	3/4	3/4	1
Blower Wheel Size (Dia. x W)	9x7	9x7	9x7	9x7	10x8	10x8	11x9
<b>Multi-speed Constant Torque Fan Motor</b>							
Fan Motor Type/Speeds	Multi-speed Constant Torque						
Fan Motor (HP)	1/3	1/3	1/2	3/4	3/4	3/4	1
<b>Water Connection Size</b>							
FPT (in)	1	1	1	1	1	1	1
Coaxial Coil Volume (gal)	0.31	0.48	0.39	0.62	0.62	0.62	0.62
<b>Vertical Cabinet</b>							
Refrigeration Charge (oz)	35	65	71	68	83	86	92
Refrigerant Metering Device	Bi-directional thermal expansion valve (TXV)						
Air Coil Dimensions (H x L)	16.5x20	24x21	24x27	24x27	32x27	32x27	40x27
Standard Filter – 2" MERV 8 (H x L)	20x20	24x24	24x30	24x30	16x30 (2)	16x30 (2)	20x30 (2)
Weight – Operating (lbs)	195	229	269	281	334	340	396
Weight – Shipping (lbs)	212	242	292	304	360	366	422
<b>Horizontal Cabinet</b>							
Refrigeration Charge (oz)	35	65	71	71	80	82	90
Air Coil Dimensions (H x L)	18x18.5	18x28	20x32.5	20x32.5	20x43.25	20x43.25	20x54
Standard Filter – 2" MERV 8 (H x L)	18x20	20x30	20x34.5	20x34.5	20x24 (2)	20x24 (2)	20x28 (2)
Weight – Operating (lbs)	198	307	358	369	400	405	452
Weight – Shipping (lbs)	222	340	404	415	465	470	520

ELECTRICAL DATA

Standard Motor – Constant Torque									
Model	Voltage/Hz/Ph	Compressor			Blower			Min Circuit Amps	Max Fuse
		Quantity	RLA	LRA	Quantity	FLA	HP		
HB018	208–230/60/1	1	7.4	33	1	2.8	0.33	12.1	15
HB024	208–230/60/1	1	13.5	58.3	1	2.8	0.33	19.7	30
HB030	208–230/60/1	1	12.8	58.3	1	4.1	0.5	20.1	30
HB036	208–230/60/1	1	16	77	1	6	0.75	26.0	40
HB042	208–230/60/1	1	16.7	79	1	6	0.75	26.9	40
HB048	208–230/60/1	1	19.9	109	1	6	0.75	30.9	50
HB060	208–230/60/1	1	25	134	1	7.6	1	38.9	60

**BLOWER PERFORMANCE DATA**

Standard Motor – Constant Torque													
Model	Motor Speed	Available External Static Pressure (inches of Water)											
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2
HB018	High	730	700	660	615	580	545	505	460	–	–	–	–
	Medium	615	575	540	500	460	420	–	–	–	–	–	–
	Low	540	510	480	445	405	360	–	–	–	–	–	–
HB024	High	975	945	910	880	855	825	790	750	–	–	–	–
	Medium	905	885	855	825	790	755	700	650	–	–	–	–
	Low	725	700	670	640	585	530	–	–	–	–	–	–
HB030	High	1225	1195	1170	1140	1110	1075	1010	940	745	–	–	–
	Medium	1110	1075	1045	1015	985	955	915	880	700	–	–	–
	Low	955	925	890	860	825	790	750	715	685	–	–	–
HB036	High	1440	1420	1400	1380	1345	1315	1240	1165	1005	845	–	–
	Medium	1340	1315	1290	1270	1245	1225	1180	1135	990	845	–	–
	Low	1190	1165	1140	1115	1090	1065	1040	1020	915	810	–	–
HB042	High	1645	1635	1610	1585	1560	1535	1510	1485	1460	1430	–	–
	Medium	1455	1425	1400	1375	1345	1320	1290	1260	1225	1190	–	–
	Low	1220	1190	1160	1130	1100	1070	1015	955	895	830	–	–
HB048	High	1840	1820	1795	1775	1745	1720	1695	1670	1645	1615	–	–
	Medium	1655	1635	1610	1585	1560	1535	1510	1485	1460	1430	–	–
	Low	1455	1425	1400	1375	1345	1320	1290	1260	1225	1190	–	–
HB060	High	2225	2195	2165	2135	2105	2075	2045	2015	1980	1945	1900	1850
	Medium	2070	2045	2015	1990	1960	1925	1895	1870	1840	1810	1685	1600
	Low	1815	1785	1755	1725	1695	1665	1630	1595	1555	1515	1425	–

**AUXILIARY HEATER**

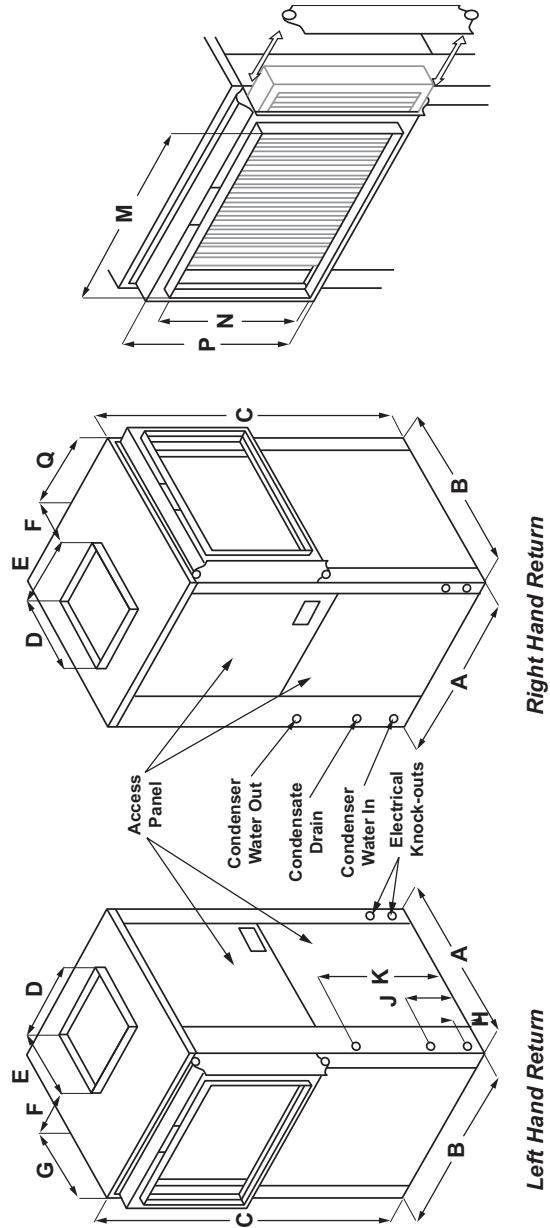
Auxiliary Heater Size Compatibility				
HP Model	5 kW	10 kW	15 kW	20 kW
	KWBEH0101N05	KWBEH0101N10	KWBEH0101B15	KWBEH0101B20
018	●			
024	●	●		
030	●	●		
036	●	●	●	
042	●	●	●	
048	●	●	●	●
060	●	●	●	●

NOTE: Internal electric heaters cannot be used in horizontal SIDE discharge units; external duct heaters must be used.

**DIMENSIONS - VERTICAL TOP DISCHARGE**

Model	A Width	B Depth	C Height	D Discharge Depth	E Discharge Width	F Cabinet Edge to Discharge	G Left Side to Discharge	H Water In	J Bottom to Condensate Drain	K Water Out	M R/A Duct Width	N R/A Duct Flange Height	P Filter Rack Height	Q Right Side to Discharge	Condenser Water Connections	Recommended Replacement Nominal Filter Size
HB018	21.75	21.75	39.25	13.75	13.75	4.00	6.12	2.25	7.50	12.25	18.00	18.00	20.00	4.00	3/4" FPT	20 x 20 x 2
HB024	21.75	26.25	47.25	13.75	15.75	6.25	4.87	2.50	8.75	15.00	22.00	22.00	24.00	4.00	3/4" FPT	24 x 24 x 2
HB030	24.25	33.50	47.25	15.75	15.75	8.87	7.00	2.50	8.50	14.50	28.00	22.00	24.00	4.00	1" FPT	24 x 30 x 2
HB036	24.25	33.50	47.25	15.75	15.75	8.87	7.00	2.50	8.50	14.50	28.00	22.00	24.00	4.00	1" FPT	24 x 30 x 2
HB042	26.25	33.50	58.25	17.75	17.75	7.87	6.75	3.25	8.50	13.25	28.00	30.00	32.00	4.00	1" FPT	16 x 30 x 2 (2)
HB048	26.25	33.50	58.25	17.75	17.75	7.87	6.75	3.25	8.50	13.25	28.00	30.00	32.00	4.00	1" FPT	16 x 30 x 2 (2)
HB060	26.25	33.50	66.25	17.75	17.75	7.87	7.00	3.25	8.50	13.25	28.00	38.00	40.00	4.00	1" FPT	20 x 30 x 2 (2)

NOTE: All dimensions are in inches unless otherwise noted. All dimensions within  $\pm 0.125"$ . Specifications subject to change without notice.



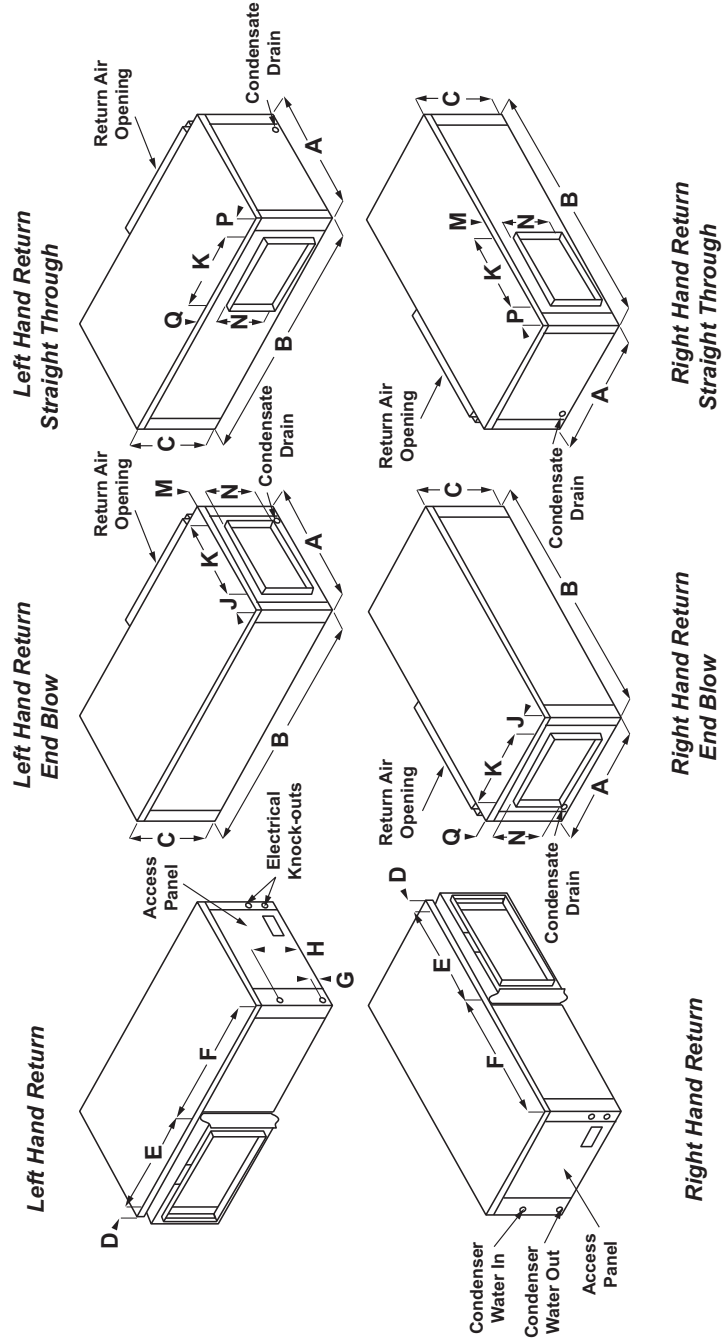
DIMENSIONS - HORIZONTAL

Model	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	T	Condenser Water Connections	Recommended Replacement Nominal Filter Size
	Width	Depth	Height	Cab End to Filter Rack	R/A Duct Width	Cab Front to Filter Rack	Water In	Water Out	Side to Discharge	Discharge Width	Top to Discharge (FLE & FRS)	Discharge Height	End to Discharge	Top to Discharge (FRE & FLS)	Filter Rack Height	R/A Duct Flange Height		
HB018	22.25	45.25	19.75	162	20.25	23.25	2.50	12.50	2.75	13.75	3.12	13.75	2.75	2.87	18.00	16.00	3/4" FPT	8 x 20 x 2
HB024	26.25	54.75	22.00*	125	30.25	23.00	2.62	15.12	3.75	13.75	2.12	16.75	3.75	4.25	20.12	18.00	3/4" FPT	20 x 30 x 2
HB030	30.25	68.25	22.00*	2.00	35.00	31.25	2.50	13.25	4.50	15.75	4.00	16.75	4.50	2.25	20.12	18.00	1" FPT	20 x 34.5 x 2
HB036	30.25	68.25	22.00*	2.00	35.00	31.25	2.50	13.25	4.50	15.75	4.00	16.75	4.50	2.25	20.12	18.00	1" FPT	20 x 34.5 x 2
HB042	30.25	79.00	22.00*	0.75	48.25	29.62	2.75	13.25	4.50	17.75	2.25	17.75	4.50	2.12	20.12	18.00	1" FPT	20 x 24 x 2 (2)
HB048	30.25	79.00	22.00*	0.75	48.25	29.62	2.75	13.25	4.50	17.75	2.25	17.75	4.50	2.12	20.12	18.00	1" FPT	20 x 24 x 2 (2)
HB060	30.25	89.25	22.00*	1.87	56.25	31.00	2.62	13.25	4.50	17.75	2.25	17.75	4.50	2.12	20.12	18.00	1" FPT	20 x 28 x 2 (2)

Internal auxiliary heat cannot be used on side discharge units; use external duct heater.

NOTE: All dimensions within +/- 0.125". Specifications subject to change without notice.

\*Total unit height is 22.75 with base rails for HB024-60



**HB018 HEATING PERFORMANCE**

HB018 Heating Performance @ 575 CFM								
Entering Water, °F	Water flow, GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Ent. Air °F	Total kBtu/hr.	Ht. Abs. kBtu/hr.	Unit kW	COP
30	2.5	3.6	1.6	60	13.4	10.0	1.03	3.8
				70	13.0	9.4	1.08	3.5
				80	12.7	8.8	1.16	3.2
	4	8.3	3.6	60	14.0	10.5	1.05	3.9
				70	13.6	9.9	1.11	3.6
				80	13.2	9.3	1.18	3.3
	5	12.4	5.4	60	14.2	10.8	1.06	3.9
				70	13.9	10.1	1.12	3.7
				80	13.4	9.5	1.19	3.3
40	2.5	3.4	1.5	60	15.3	11.7	1.09	4.1
				70	14.9	11.0	1.15	3.8
				80	14.5	10.4	1.23	3.5
	4	8	3.5	60	16.0	12.4	1.11	4.2
				70	15.6	11.7	1.17	3.9
				80	15.2	11.0	1.25	3.6
	5	11.9	5.2	60	16.3	12.7	1.11	4.3
				70	15.9	11.9	1.17	4.0
				80	15.4	11.2	1.26	3.6
50	2.5	3.3	1.4	60	17.3	13.5	1.13	4.5
				70	16.8	12.8	1.20	4.1
				80	16.5	12.1	1.29	3.8
	4	7.7	3.3	60	18.2	14.4	1.14	4.7
				70	17.7	13.6	1.21	4.3
				80	17.3	12.8	1.31	3.9
	5	11.5	5.0	60	18.5	14.8	1.14	4.8
				70	18.0	13.9	1.22	4.3
				80	17.5	13.1	1.31	3.9
60	2.5	3.2	1.4	60	19.4	15.5	1.15	5.0
				70	18.9	14.7	1.23	4.5
				80	18.4	14.0	1.33	4.0
	4	7.4	3.2	60	20.4	16.6	1.15	5.2
				70	19.9	15.7	1.24	4.7
				80	19.4	14.8	1.35	4.2
	5	11.1	4.8	60	20.8	17.0	1.15	5.3
				70	20.3	16.1	1.24	4.8
				80	19.8	15.1	1.36	4.3
70	2.5	3.1	1.3	60	21.5	17.6	1.15	5.5
				70	21.0	16.8	1.25	4.9
				80	20.5	16.0	1.37	4.4
	4	7.2	3.1	60	22.7	18.9	1.16	5.8
				70	22.1	17.9	1.26	5.1
				80	21.6	17.0	1.39	4.6
	5	10.7	4.6	60	23.2	19.4	1.16	5.9
				70	22.6	18.4	1.27	5.2
				80	22.0	17.3	1.39	4.6
80	2.5	3	1.3	60	23.7	19.9	1.16	6.0
				70	23.2	18.9	1.28	5.3
				80	22.7	18.0	1.41	4.7
	4	7	3.0	60	25.1	21.3	1.16	6.3
				70	24.5	20.2	1.29	5.6
				80	23.9	19.1	1.44	4.9
	5	10.4	4.5	60	25.6	21.8	1.17	6.4
				70	25.0	20.7	1.30	5.6
				80	24.4	19.5	1.45	4.9

**HB018 COOLING PERFORMANCE**

HB018 Cooling Performance @ 575 CFM									
Entering Water °F	Water flow GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent. Air db/wb,F	Total kBtu/hr.	Sensible kBtu/hr.	Ht. Rej. kBtu/hr.	Unit kW	EER
50	2.5	3.2	1.4	75/63	20.2	15.2	23.3	0.95	21.2
				80/67	21.5	15.6	24.6	0.93	23.1
				85/71	22.8	15.9	25.8	0.90	25.3
	4	7.4	3.2	75/63	20.8	15.4	23.9	0.95	21.8
				80/67	22.2	15.8	25.2	0.92	24.0
				85/71	23.5	16.2	26.5	0.89	26.4
	5	11.1	4.8	75/63	21.0	15.5	24.1	0.96	21.9
				80/67	22.4	15.9	25.4	0.93	24.2
				85/71	23.8	16.2	26.7	0.89	26.8
60	2.5	3.1	1.3	75/63	19.4	14.8	22.5	0.98	19.7
				80/67	20.6	15.2	23.7	0.97	21.3
				85/71	21.9	15.6	24.9	0.95	23.0
	4	7.2	3.1	75/63	19.9	15.0	23.0	0.96	20.7
				80/67	21.2	15.4	24.3	0.94	22.6
				85/71	22.6	15.8	25.5	0.91	24.8
	5	10.7	4.6	75/63	20.1	15.1	23.2	0.96	21.0
				80/67	21.4	15.5	24.5	0.93	23.0
				85/71	22.8	15.9	25.7	0.90	25.2
70	2.5	3	1.3	75/63	18.5	14.4	21.8	1.04	17.7
				80/67	19.7	14.8	23.0	1.04	19.0
				85/71	20.9	15.2	24.2	1.03	20.3
	4	7	3.0	75/63	19.0	14.6	22.2	1.01	18.9
				80/67	20.3	15.0	23.4	0.99	20.5
				85/71	21.5	15.4	24.7	0.98	22.0
	5	10.4	4.5	75/63	19.2	14.7	22.3	0.99	19.3
				80/67	20.5	15.1	23.6	0.98	21.0
				85/71	21.7	15.5	24.8	0.96	22.6
80	2.5	2.9	1.3	75/63	17.6	14.0	21.2	1.13	15.5
				80/67	18.7	14.4	22.3	1.14	16.5
				85/71	19.9	14.8	23.5	1.14	17.5
	4	6.7	2.9	75/63	18.1	14.2	21.5	1.08	16.7
				80/67	19.2	14.7	22.7	1.08	17.8
				85/71	20.5	15.0	23.9	1.07	19.1
	5	10.1	4.4	75/63	18.2	14.3	21.6	1.07	17.0
				80/67	19.4	14.7	22.8	1.06	18.3
				85/71	20.7	15.1	24.1	1.05	19.7
85	2.5	2.8	1.2	75/63	17.1	13.8	20.9	1.19	14.4
				80/67	18.2	14.2	22.0	1.19	15.3
				85/71	19.3	14.6	23.1	1.20	16.1
	4	6.6	2.9	75/63	17.6	14.0	21.2	1.13	15.5
				80/67	18.7	14.5	22.3	1.13	16.5
				85/71	19.9	14.8	23.5	1.13	17.6
	5	9.9	4.3	75/63	17.8	14.1	21.3	1.12	15.9
				80/67	18.9	14.5	22.4	1.11	17.0
				85/71	20.1	14.9	23.7	1.11	18.2
90	2.5	2.8	1.2	75/63	16.7	13.6	20.6	1.24	13.4
				80/67	17.7	14.1	21.7	1.25	14.1
				85/71	18.8	14.5	22.8	1.26	14.9
	4	6.5	2.8	75/63	17.1	13.8	20.9	1.19	14.4
				80/67	18.2	14.2	22.0	1.19	15.3
				85/71	19.4	14.7	23.2	1.19	16.3
	5	9.8	4.3	75/63	17.3	13.9	21.0	1.17	14.8
				80/67	18.4	14.3	22.1	1.17	15.7
				85/71	19.6	14.8	23.3	1.17	16.8
100	2.5	2.7	1.2	75/63	15.7	13.3	20.0	1.37	11.5
				80/67	16.8	13.7	21.1	1.38	12.2
				85/71	17.8	14.1	22.2	1.39	12.8
	4	6.3	2.7	75/63	16.2	13.4	20.3	1.31	12.3
				80/67	17.2	13.9	21.4	1.32	13.0
				85/71	18.4	14.3	22.5	1.32	13.9
	5	9.5	4.1	75/63	16.3	13.5	20.3	1.29	12.6
				80/67	17.4	13.9	21.4	1.30	13.4
				85/71	18.5	14.3	22.6	1.30	14.2
110	2.5	2.6	1.1	75/63	14.8	12.9	19.5	1.49	9.9
				80/67	15.8	13.3	20.5	1.51	10.4
				85/71	16.8	13.7	21.6	1.53	10.9
	4	6.1	2.6	75/63	15.2	13.0	19.7	1.44	10.5
				80/67	16.2	13.5	20.8	1.45	11.1
				85/71	17.3	14.0	21.9	1.47	11.8
	5	9.2	4.0	75/63	15.3	13.1	19.7	1.42	10.7
				80/67	16.4	13.5	20.9	1.44	11.4
				85/71	17.4	14.0	22.0	1.45	12.0



**HB024 HEATING PERFORMANCE**

HB024 Heating Performance @ 800 CFM								
Entering Water, °F	Water flow, GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Ent. Air °F	Total kBtu/hr.	Ht. Abs. kBtu/hr.	Unit kW	COP
30	3	2.4	1.0	60	18.2	13.6	1.38	3.9
				70	17.8	12.8	1.53	3.4
				80	17.6	11.9	1.71	3.0
	4	4	1.7	60	18.7	14.1	1.38	3.9
				70	18.3	13.2	1.54	3.5
				80	18.1	12.3	1.71	3.1
	6	8.2	3.6	60	19.3	14.7	1.39	4.1
				70	18.9	13.8	1.55	3.6
				80	18.6	12.8	1.72	3.2
40	3	2.3	1.0	60	20.7	16.0	1.41	4.3
				70	20.3	15.1	1.57	3.8
				80	20.0	14.2	1.74	3.4
	4	3.8	1.6	60	21.3	16.6	1.41	4.4
				70	21.0	15.7	1.58	3.9
				80	20.6	14.8	1.76	3.4
	6	8	3.5	60	22.1	17.4	1.42	4.5
				70	21.7	16.4	1.59	4.0
				80	21.3	15.4	1.77	3.5
50	3	2.2	1.0	60	23.4	18.6	1.44	4.8
				70	23.0	17.6	1.61	4.2
				80	22.6	16.6	1.79	3.7
	4	3.7	1.6	60	24.2	19.4	1.45	4.9
				70	23.8	18.4	1.62	4.3
				80	23.4	17.3	1.81	3.8
	6	7.7	3.3	60	25.2	20.3	1.46	5.0
				70	24.7	19.2	1.64	4.4
				80	24.2	18.0	1.83	3.9
60	3	2.1	0.9	60	26.3	21.3	1.48	5.2
				70	25.8	20.3	1.66	4.6
				80	25.4	19.2	1.85	4.0
	4	3.6	1.6	60	27.3	22.3	1.50	5.3
				70	26.8	21.2	1.67	4.7
				80	26.3	20.0	1.87	4.1
	6	7.4	3.2	60	28.5	23.4	1.51	5.5
				70	27.9	22.2	1.69	4.8
				80	27.3	21.0	1.88	4.2
70	3	2.1	0.9	60	29.3	24.2	1.52	5.6
				70	28.8	23.1	1.70	4.9
				80	28.4	21.9	1.90	4.4
	4	3.5	1.5	60	30.6	25.4	1.54	5.8
				70	29.9	24.3	1.73	5.1
				80	29.4	22.9	1.92	4.5
	6	7.2	3.1	60	32.0	26.8	1.57	6.0
				70	31.3	25.4	1.75	5.2
				80	30.6	24.0	1.95	4.6
80	3	2	0.9	60	32.5	27.2	1.58	6.0
				70	31.9	26.0	1.76	5.3
				80	31.4	24.7	1.97	4.7
	4	3.3	1.4	60	33.9	28.6	1.60	6.2
				70	33.3	27.3	1.79	5.4
				80	32.6	25.9	2.00	4.8
	6	6.9	3.0	60	35.5	30.4	1.64	6.3
				70	34.8	28.6	1.83	5.6
				80	34.0	27.1	2.04	4.9

HB024 COOLING PERFORMANCE

HB024 Cooling Performance @ 800 CFM									
Entering Water °F	Water flow GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent. Air db/wb,F	Total kBtu/hr.	Sensible kBtu/hr.	Ht. Rej. kBtu/hr.	Unit kW	EER
50	3	2.1	0.9	75/63	27.1	20.5	30.5	1.05	25.9
				80/67	28.8	21.0	32.3	1.06	27.3
				85/71	30.6	21.6	34.1	1.06	28.8
	4	3.6	1.6	75/63	27.6	20.8	30.8	0.98	28.2
				80/67	29.4	21.3	32.7	0.98	30.0
				85/71	31.2	21.8	34.6	0.98	31.8
	6	7.4	3.2	75/63	28.1	21.0	31.1	0.92	30.8
				80/67	30.0	21.5	33.0	0.91	33.1
				85/71	31.9	22.1	34.9	0.90	35.5
60	3	2.1	0.9	75/63	25.8	20.0	29.7	1.20	21.5
				80/67	27.5	20.5	31.5	1.21	22.7
				85/71	29.2	21.1	33.3	1.22	23.9
	4	3.5	1.5	75/63	26.3	20.2	30.0	1.14	23.1
				80/67	28.1	20.7	31.9	1.14	24.6
				85/71	29.9	21.3	33.7	1.15	26.1
	6	7.2	3.1	75/63	26.8	20.4	30.4	1.08	24.9
				80/67	28.7	21.0	32.2	1.08	26.7
				85/71	30.5	21.6	34.0	1.07	28.5
70	3	2	0.9	75/63	24.6	19.4	29.0	1.36	18.1
				80/67	26.2	20.0	30.6	1.37	19.1
				85/71	27.8	20.6	32.3	1.39	20.1
	4	3.3	1.4	75/63	25.1	19.6	29.3	1.30	19.4
				80/67	26.7	20.3	30.9	1.31	20.5
				85/71	28.4	20.8	32.7	1.32	21.6
	6	6.9	3.0	75/63	25.6	19.8	29.6	1.24	20.7
				80/67	27.3	20.5	31.3	1.24	22.1
				85/71	29.0	21.1	33.1	1.24	23.3
80	3	1.9	0.8	75/63	23.3	18.9	28.2	1.53	15.3
				80/67	24.8	19.5	29.7	1.54	16.1
				85/71	26.4	20.1	31.4	1.56	17.0
	4	3.2	1.4	75/63	23.8	19.1	28.4	1.46	16.3
				80/67	25.3	19.7	30.1	1.48	17.2
				85/71	27.0	20.3	31.8	1.49	18.2
	6	6.7	2.9	75/63	24.2	19.3	28.7	1.41	17.2
				80/67	25.9	19.9	30.4	1.41	18.4
				85/71	27.6	20.5	32.2	1.42	19.5
85	3	1.9	0.8	75/63	22.7	18.7	27.8	1.61	14.1
				80/67	24.1	19.3	29.3	1.63	14.8
				85/71	25.6	19.9	30.9	1.65	15.5
	4	3.2	1.4	75/63	23.1	18.8	28.0	1.55	14.9
				80/67	24.7	19.4	29.7	1.56	15.8
				85/71	26.2	20.1	31.3	1.58	16.6
	6	6.6	2.9	75/63	23.5	19.0	28.3	1.49	15.8
				80/67	25.1	19.7	29.9	1.50	16.8
				85/71	26.8	20.2	31.7	1.51	17.8
90	3	1.9	0.8	75/63	22.0	18.4	27.4	1.71	12.9
				80/67	23.5	19.0	29.0	1.72	13.7
				85/71	24.9	19.6	30.5	1.74	14.3
	4	3.1	1.3	75/63	22.5	18.6	27.7	1.64	13.7
				80/67	23.9	19.2	29.2	1.66	14.5
				85/71	25.5	19.7	30.9	1.67	15.3
	6	6.5	2.8	75/63	22.9	18.7	27.9	1.59	14.5
				80/67	24.4	19.3	29.5	1.59	15.3
				85/71	26.0	20.0	31.2	1.60	16.2
100	3	1.8	0.8	75/63	20.8	17.8	26.7	1.90	10.9
				80/67	22.1	18.5	28.2	1.92	11.5
				85/71	23.5	19.1	29.7	1.94	12.1
	4	3	1.3	75/63	21.2	18.0	27.0	1.84	11.5
				80/67	22.5	18.7	28.4	1.86	12.1
				85/71	24.0	19.3	29.9	1.87	12.8
	6	6.3	2.7	75/63	21.5	18.2	27.2	1.78	12.1
				80/67	23.0	18.8	28.7	1.79	12.9
				85/71	24.5	19.4	30.2	1.81	13.6
110	3	1.8	0.8	75/63	19.4	17.3	26.1	2.13	9.2
				80/67	20.8	17.9	27.5	2.14	9.7
				85/71	22.1	18.6	29.0	2.16	10.3
	4	3	1.3	75/63	19.8	17.5	26.2	2.06	9.6
				80/67	21.1	18.1	27.7	2.07	10.2
				85/71	22.5	18.8	29.1	2.08	10.8
	6	6.1	2.6	75/63	20.1	17.6	26.4	2.01	10.0
				80/67	21.5	18.2	27.9	2.01	10.7
				85/71	23.0	18.9	29.4	2.02	11.4

**HB030 HEATING PERFORMANCE**

HB030 Heating Performance @ 1000 CFM								
Entering Water, °F	Water flow, GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Ent. Air °F	Total kBtu/hr.	Ht. Abs. kBtu/hr.	Unit kW	COP
30	4	1.4	0.6	60	19.8	15.0	1.43	4.1
				70	19.4	14.1	1.60	3.6
				80	19.0	13.0	1.78	3.1
	6	2.9	1.3	60	20.5	15.7	1.43	4.2
				70	20.0	14.6	1.60	3.7
				80	19.6	13.3	1.78	3.2
	8	4.9	2.1	60	21.0	16.1	1.43	4.3
				70	20.5	15.2	1.60	3.8
				80	19.8	14.0	1.78	3.2
40	4	1.4	0.6	60	22.4	17.6	1.43	4.6
				70	21.8	16.5	1.60	4.0
				80	21.5	15.3	1.79	3.5
	6	2.8	1.2	60	23.4	18.5	1.43	4.8
				70	22.8	17.3	1.60	4.2
				80	22.3	16.2	1.79	3.6
	8	4.7	2.0	60	23.9	19.2	1.43	4.9
				70	23.3	17.8	1.60	4.3
				80	22.5	16.6	1.79	3.7
50	4	1.3	0.6	60	25.3	20.4	1.43	5.2
				70	24.9	19.3	1.61	4.5
				80	24.3	18.1	1.81	3.9
	6	2.7	1.2	60	26.5	21.6	1.44	5.4
				70	26.0	20.8	1.62	4.7
				80	25.6	19.6	1.82	4.1
	8	4.6	2.0	60	27.2	22.5	1.45	5.5
				70	26.5	20.8	1.63	4.8
				80	25.9	19.7	1.82	4.2
60	4	1.3	0.6	60	28.6	23.7	1.46	5.7
				70	27.9	22.2	1.64	5.0
				80	27.3	21.0	1.84	4.4
	6	2.6	1.1	60	30.1	25.1	1.48	5.9
				70	29.3	23.5	1.66	5.2
				80	28.8	22.5	1.86	4.5
	8	4.4	1.9	60	30.8	25.9	1.50	6.0
				70	30.0	24.3	1.67	5.2
				80	29.4	22.9	1.87	4.6
70	4	1.2	0.5	60	32.1	26.9	1.52	6.2
				70	31.2	25.4	1.70	5.4
				80	30.6	24.1	1.89	4.7
	6	2.5	1.1	60	33.7	28.4	1.55	6.4
				70	33.2	27.6	1.74	5.6
				80	32.2	25.5	1.93	4.9
	8	4.3	1.9	60	34.8	29.6	1.58	6.4
				70	34.1	28.5	1.77	5.7
				80	33.5	27.3	1.97	5.0
80	4	1.2	0.5	60	35.8	30.4	1.60	6.5
				70	34.9	28.7	1.79	5.7
				80	34.2	27.3	1.99	5.0
	6	2.5	1.1	60	37.7	32.1	1.67	6.6
				70	36.9	30.5	1.86	5.8
				80	36.1	29.0	2.06	5.1
	8	4.1	1.8	60	39.2	33.4	1.72	6.7
				70	38.5	32.1	1.91	5.9
				80	37.7	31.3	2.12	5.2

HB030 COOLING PERFORMANCE

HB030 Cooling Performance @ 1000 CFM									
Entering Water °F	Water flow GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent. Air db/wb,F	Total kBTu/hr.	Sensible kBTu/hr.	Ht. Rej. kBTu/hr.	Unit kW	EER
50	4	1.3	0.6	75/63	30.0	24.0	34.0	1.23	24.5
				80/67	31.9	24.6	36.1	1.27	25.2
				85/71	33.8	25.4	38.1	1.31	25.8
	6	2.6	1.1	75/63	30.9	24.3	34.6	1.14	27.2
				80/67	32.8	25.0	36.7	1.17	28.1
				85/71	34.8	25.7	38.9	1.21	28.7
	8	4.4	1.9	75/63	31.3	24.5	34.9	1.09	28.8
				80/67	33.2	25.2	36.9	1.12	29.7
				85/71	35.3	25.9	39.2	1.16	30.5
60	4	1.2	0.5	75/63	28.7	23.4	33.1	1.38	20.8
				80/67	30.4	24.2	35.0	1.42	21.5
				85/71	32.3	24.9	37.1	1.47	22.0
	6	2.5	1.1	75/63	29.5	23.7	33.7	1.29	22.9
				80/67	31.4	24.4	35.7	1.33	23.7
				85/71	33.2	25.2	37.7	1.37	24.3
	8	4.3	1.9	75/63	29.9	23.9	33.9	1.25	24.0
				80/67	31.7	24.7	35.9	1.28	24.9
				85/71	33.8	25.3	38.2	1.32	25.7
70	4	1.2	0.5	75/63	27.3	22.8	32.3	1.54	17.7
				80/67	29.0	23.6	34.1	1.58	18.4
				85/71	30.8	24.4	36.1	1.63	18.9
	6	2.5	1.1	75/63	28.0	23.1	32.7	1.46	19.3
				80/67	29.9	23.9	34.7	1.49	20.1
				85/71	31.7	24.7	36.7	1.53	20.7
	8	4.1	1.8	75/63	28.4	23.3	32.9	1.41	20.1
				80/67	30.3	24.0	35.0	1.44	21.0
				85/71	32.2	24.8	37.1	1.48	21.7
80	4	1.1	0.5	75/63	25.9	22.3	31.4	1.72	15.1
				80/67	27.6	23.0	33.2	1.76	15.7
				85/71	29.3	23.8	35.1	1.81	16.2
	6	2.4	1.0	75/63	26.6	22.6	31.8	1.63	16.3
				80/67	28.3	23.3	33.7	1.67	17.0
				85/71	30.2	24.0	35.7	1.71	17.7
	8	4	1.7	75/63	26.9	22.7	32.0	1.59	16.9
				80/67	28.7	23.4	34.0	1.62	17.7
				85/71	30.6	24.3	36.0	1.66	18.5
85	4	1.1	0.5	75/63	25.2	22.0	31.0	1.82	13.9
				80/67	26.8	22.8	32.8	1.85	14.5
				85/71	28.6	23.5	34.7	1.91	15.0
	6	2.3	1.0	75/63	25.9	22.2	31.4	1.73	15.0
				80/67	27.6	23.1	33.2	1.76	15.7
				85/71	29.4	23.8	35.2	1.80	16.3
	8	3.9	1.7	75/63	26.2	22.4	31.6	1.68	15.6
				80/67	27.9	23.2	33.4	1.71	16.3
				85/71	29.8	23.9	35.4	1.75	17.0
90	4	1.1	0.5	75/63	24.5	21.7	30.5	1.92	12.8
				80/67	26.1	22.5	32.3	1.96	13.4
				85/71	27.8	23.3	34.2	2.00	13.9
	6	2.3	1.0	75/63	25.2	21.9	31.0	1.83	13.8
				80/67	26.8	22.8	32.7	1.86	14.4
				85/71	28.5	23.6	34.6	1.90	15.0
	8	3.9	1.7	75/63	25.5	22.1	31.2	1.78	14.3
				80/67	27.2	22.9	33.0	1.81	15.0
				85/71	29.0	23.6	34.9	1.85	15.7
100	4	1.1	0.5	75/63	23.0	21.1	29.7	2.14	10.8
				80/67	24.6	22.0	31.5	2.17	11.3
				85/71	26.2	22.8	33.2	2.22	11.8
	6	2.2	1.0	75/63	23.6	21.4	30.1	2.04	11.6
				80/67	25.3	22.1	31.9	2.08	12.2
				85/71	26.9	23.0	33.7	2.12	12.7
	8	3.7	1.6	75/63	23.9	21.5	30.2	2.00	12.0
				80/67	25.6	22.3	32.1	2.03	12.6
				85/71	27.3	23.2	33.9	2.07	13.2
110	4	1	0.4	75/63	21.5	20.5	29.0	2.39	9.0
				80/67	23.0	21.4	30.7	2.42	9.5
				85/71	24.6	22.2	32.4	2.45	10.0
	6	2.2	1.0	75/63	22.1	20.8	29.3	2.29	9.7
				80/67	23.6	21.6	31.0	2.32	10.2
				85/71	25.3	22.5	32.8	2.35	10.8
	8	3.6	1.6	75/63	22.4	20.8	29.5	2.25	10.0
				80/67	23.9	21.7	31.1	2.27	10.5
				85/71	25.6	22.6	32.9	2.30	11.1

**HB036 HEATING PERFORMANCE**

HB036 Heating Performance @ 1200 CFM								
Entering Water, °F	Water flow, GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Ent. Air °F	Total kBtu/hr.	Ht. Abs. kBtu/hr.	Unit kW	COP
30	4.5	2.3	1.0	60	26.3	20.0	1.90	4.1
				70	25.7	18.8	2.09	3.6
				80	25.2	17.4	2.31	3.2
	6	3.8	1.6	60	27.0	20.4	1.91	4.2
				70	26.7	19.4	2.10	3.7
				80	26.0	18.4	2.32	3.3
	9	8	3.5	60	28.3	21.7	1.92	4.3
				70	27.8	20.5	2.12	3.8
				80	27.1	19.4	2.34	3.4
40	4.5	2.2	1.0	60	29.5	23.1	1.94	4.5
				70	29.2	21.5	2.14	4.0
				80	28.3	20.6	2.36	3.5
	6	3.7	1.6	60	30.8	24.6	1.96	4.6
				70	30.6	22.6	2.16	4.2
				80	29.7	21.6	2.37	3.7
	9	7.7	3.3	60	32.1	25.3	1.97	4.8
				70	31.4	24.3	2.17	4.2
				80	31.1	22.8	2.39	3.8
50	4.5	2.1	0.9	60	33.7	26.9	1.99	5.0
				70	32.9	25.5	2.19	4.4
				80	32.3	24.4	2.41	3.9
	6	3.6	1.6	60	35.0	28.4	2.01	5.1
				70	34.4	27.0	2.21	4.6
				80	33.8	25.6	2.43	4.1
	9	7.4	3.2	60	36.6	29.6	2.03	5.3
				70	35.7	28.4	2.23	4.7
				80	35.0	27.0	2.45	4.2
60	4.5	2.1	0.9	60	37.8	30.8	2.04	5.4
				70	36.9	29.7	2.24	4.8
				80	36.3	28.0	2.47	4.3
	6	3.4	1.5	60	39.6	32.6	2.06	5.6
				70	38.7	30.8	2.26	5.0
				80	37.8	29.7	2.49	4.5
	9	7.2	3.1	60	41.6	34.6	2.08	5.9
				70	40.9	33.3	2.29	5.2
				80	39.7	31.0	2.52	4.6
70	4.5	2	0.9	60	42.3	35.1	2.09	5.9
				70	41.4	33.6	2.30	5.3
				80	40.5	32.2	2.53	4.7
	6	3.3	1.4	60	44.4	37.5	2.12	6.1
				70	43.3	34.9	2.33	5.5
				80	42.4	33.7	2.56	4.9
	9	6.9	3.0	60	47.4	40.4	2.16	6.4
				70	45.6	38.5	2.37	5.6
				80	44.7	36.2	2.60	5.0
80	4.5	1.9	0.8	60	47.0	39.6	2.16	6.4
				70	46.2	38.1	2.37	5.7
				80	45.3	36.4	2.61	5.1
	6	3.2	1.4	60	49.1	41.8	2.19	6.6
				70	48.1	40.4	2.41	5.9
				80	47.1	38.8	2.65	5.2
	9	6.7	2.9	60	52.8	45.3	2.24	6.9
				70	51.4	43.3	2.46	6.1
				80	49.7	40.1	2.69	5.4

HB036 COOLING PERFORMANCE

HB036 Cooling Performance @ 1200 CFM									
Entering Water °F	Water flow GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent. Air db/wb,F	Total kBtu/hr.	Sensible kBtu/hr.	Ht. Rej. kBtu/hr.	Unit kW	EER
50	4.5	2.1	0.9	75/63	37.1	29.1	42.4	1.64	22.6
				80/67	39.4	30.0	44.8	1.66	23.7
				85/71	42.0	30.7	47.5	1.68	24.9
	6	3.4	1.5	75/63	37.8	29.4	42.9	1.56	24.2
				80/67	40.3	30.3	45.4	1.58	25.6
				85/71	42.9	31.2	48.1	1.59	27.0
	9	7.2	3.1	75/63	38.6	29.7	43.4	1.48	26.1
				80/67	41.2	30.6	46.1	1.48	27.7
				85/71	43.9	31.4	48.9	1.49	29.4
60	4.5	2	0.9	75/63	35.4	28.4	41.3	1.81	19.5
				80/67	37.8	29.2	43.7	1.84	20.6
				85/71	40.1	30.2	46.1	1.86	21.6
	6	3.3	1.4	75/63	36.2	28.7	41.8	1.74	20.8
				80/67	38.5	29.6	44.2	1.75	22.0
				85/71	41.0	30.5	46.8	1.77	23.2
	9	6.9	3.0	75/63	36.9	29.0	42.3	1.66	22.3
				80/67	39.5	29.9	44.9	1.67	23.7
				85/71	42.0	30.8	47.5	1.67	25.1
70	4.5	1.9	0.8	75/63	33.9	27.8	40.3	2.00	17.0
				80/67	36.1	28.7	42.6	2.02	17.9
				85/71	38.4	29.6	45.0	2.04	18.8
	6	3.2	1.4	75/63	34.5	28.0	40.6	1.92	18.0
				80/67	36.8	28.9	43.0	1.94	19.0
				85/71	39.2	29.9	45.6	1.95	20.1
	9	6.7	2.9	75/63	35.2	28.3	41.1	1.84	19.1
				80/67	37.6	29.2	43.6	1.85	20.3
				85/71	40.0	30.1	46.1	1.86	21.5
80	4.5	1.9	0.8	75/63	32.1	27.0	39.1	2.19	14.6
				80/67	34.2	28.0	41.3	2.22	15.4
				85/71	36.4	28.9	43.7	2.24	16.2
	6	3.1	1.3	75/63	32.7	27.3	39.5	2.11	15.4
				80/67	35.0	28.3	41.9	2.13	16.4
				85/71	37.3	29.2	44.2	2.15	17.3
	9	6.5	2.8	75/63	33.5	27.4	40.0	2.04	16.4
				80/67	35.8	28.5	42.4	2.05	17.4
				85/71	38.2	29.4	44.9	2.06	18.5
85	4.5	1.8	0.8	75/63	31.2	26.7	38.6	2.30	13.5
				80/67	33.3	27.6	40.7	2.32	14.3
				85/71	35.4	28.5	43.0	2.35	15.1
	6	3.1	1.3	75/63	31.9	27.0	39.0	2.22	14.4
				80/67	34.0	27.9	41.2	2.24	15.2
				85/71	36.6	28.1	43.9	2.26	16.2
	9	6.4	2.8	75/63	32.5	27.2	39.4	2.14	15.2
				80/67	34.8	28.2	41.7	2.15	16.1
				85/71	37.1	29.1	44.1	2.16	17.1
90	4.5	1.8	0.8	75/63	30.3	26.3	38.0	2.41	12.5
				80/67	32.4	27.3	40.1	2.44	13.3
				85/71	34.6	28.2	42.4	2.46	14.1
	6	3	1.3	75/63	31.0	26.6	38.4	2.33	13.3
				80/67	33.1	27.5	40.7	2.35	14.1
				85/71	35.2	28.5	42.8	2.37	14.8
	9	6.3	2.7	75/63	31.6	26.9	38.8	2.25	14.0
				80/67	33.8	27.8	41.0	2.26	14.9
				85/71	35.8	28.7	43.2	2.28	15.7
100	4.5	1.7	0.7	75/63	28.6	25.6	37.0	2.66	10.7
				80/67	30.5	26.6	39.1	2.68	11.4
				85/71	32.6	27.6	41.2	2.69	12.1
	6	2.9	1.3	75/63	29.2	25.9	37.4	2.58	11.3
				80/67	31.2	26.8	39.4	2.59	12.0
				85/71	33.4	27.7	41.7	2.60	12.8
	9	6.1	2.6	75/63	29.8	26.1	37.7	2.49	11.9
				80/67	31.9	27.0	39.9	2.51	12.7
				85/71	34.0	28.1	42.1	2.51	13.5
110	4.5	1.7	0.7	75/63	26.8	24.2	36.2	2.94	9.1
				80/67	28.7	25.9	38.1	2.95	9.7
				85/71	30.8	26.8	40.3	2.97	10.4
	6	2.8	1.2	75/63	27.4	24.4	36.4	2.85	9.6
				80/67	29.3	26.1	38.4	2.86	10.2
				85/71	31.3	27.1	40.5	2.87	10.9
	9	5.9	2.6	75/63	27.9	25.3	36.7	2.77	10.1
				80/67	29.9	26.4	38.7	2.77	10.8
				85/71	32.0	27.4	40.8	2.77	11.5

**HB042 HEATING PERFORMANCE**

HB042 Heating Performance @ 1400 CFM								
Entering Water, °F	Water flow, GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Ent. Air °F	Total kBtu/hr.	Ht. Abs. kBtu/hr.	Unit kW	COP
30	5	1.7	0.7	60	26.2	20.3	1.87	4.1
				70	25.5	18.8	2.09	3.6
				80	25.0	17.5	2.33	3.1
	8	3.9	1.7	60	27.6	21.6	1.89	4.3
				70	26.9	20.2	2.11	3.7
				80	26.3	18.8	2.35	3.3
	11	6.9	3.0	60	28.4	22.4	1.90	4.4
				70	27.7	20.9	2.11	3.8
				80	27.0	19.4	2.35	3.4
40	5	1.6	0.7	60	29.9	23.7	1.91	4.6
				70	29.2	21.9	2.12	4.0
				80	28.8	20.9	2.37	3.6
	8	3.7	1.6	60	31.7	25.1	1.92	4.8
				70	30.8	23.8	2.15	4.2
				80	30.3	22.2	2.39	3.7
	11	6.6	2.9	60	32.8	26.3	1.94	5.0
				70	31.7	24.9	2.16	4.3
				80	31.0	23.3	2.40	3.8
50	5	1.5	0.7	60	33.9	27.4	1.95	5.1
				70	33.3	26.0	2.17	4.5
				80	32.3	24.1	2.42	3.9
	8	3.6	1.6	60	36.1	29.7	1.97	5.4
				70	35.1	27.4	2.20	4.7
				80	34.3	26.3	2.44	4.1
	11	6.4	2.8	60	37.2	30.7	1.99	5.5
				70	36.5	29.4	2.21	4.8
				80	35.4	27.5	2.46	4.2
60	5	1.5	0.7	60	38.2	31.6	2.00	5.6
				70	37.4	30.0	2.23	4.9
				80	36.7	28.7	2.47	4.3
	8	3.5	1.5	60	41.3	35.1	2.04	5.9
				70	40.1	33.2	2.26	5.2
				80	38.6	30.6	2.50	4.5
	11	6.2	2.7	60	42.5	35.7	2.05	6.1
				70	41.0	33.8	2.27	5.3
				80	40.1	32.1	2.52	4.7
70	5	1.4	0.6	60	43.0	36.1	2.06	6.1
				70	41.7	34.6	2.29	5.3
				80	41.1	32.8	2.53	4.8
	8	3.4	1.5	60	46.5	39.0	2.10	6.5
				70	45.5	37.8	2.33	5.7
				80	44.3	36.0	2.58	5.0
	11	6	2.6	60	48.1	40.8	2.12	6.6
				70	46.1	40.0	2.36	5.7
				80	45.2	37.0	2.60	5.1
80	5	1.4	0.6	60	47.9	40.8	2.12	6.6
				70	46.9	38.9	2.36	5.8
				80	45.9	37.1	2.61	5.2
	8	3.3	1.4	60	52.6	44.6	2.18	7.1
				70	47.9	42.5	2.37	5.9
				80	48.9	40.6	2.67	5.4
	11	5.8	2.5	60	53.9	48.1	2.22	7.1
				70	52.7	45.1	2.45	6.3
				80	51.3	42.3	2.71	5.6

HB042 COOLING PERFORMANCE

HB042 Cooling Performance @ 1400 CFM									
Entering Water °F	Water flow GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent. Air db/wb,F	Total kBtu/hr.	Sensible kBtu/hr.	Ht. Rej. kBtu/hr.	Unit kW	EER
50	5	1.5	0.7	75/63	43.5	34.3	49.1	1.68	25.8
				80/67	46.3	35.4	51.9	1.70	27.3
				85/71	49.2	36.3	55.0	1.72	28.6
	8	3.5	1.5	75/63	45.0	35.0	50.1	1.53	29.4
				80/67	48.1	36.0	53.2	1.54	31.3
				85/71	51.0	37.0	56.2	1.54	33.2
	11	6.2	2.7	75/63	45.8	35.2	50.7	1.46	31.4
				80/67	48.8	36.4	53.7	1.45	33.6
				85/71	52.0	37.4	56.9	1.45	35.9
60	5	1.4	0.6	75/63	41.6	33.4	47.8	1.88	22.1
				80/67	44.3	34.5	50.6	1.90	23.3
				85/71	47.1	35.5	53.4	1.92	24.5
	8	3.4	1.5	75/63	43.0	34.0	48.8	1.74	24.7
				80/67	45.9	35.1	51.7	1.74	26.3
				85/71	48.9	36.1	54.7	1.75	27.9
	11	6	2.6	75/63	43.7	34.3	49.3	1.67	26.2
				80/67	46.6	35.5	52.2	1.67	27.9
				85/71	49.7	36.5	55.3	1.67	29.7
70	5	1.4	0.6	75/63	39.5	32.7	46.3	2.08	19.0
				80/67	42.1	33.8	49.0	2.10	20.0
				85/71	44.9	34.7	51.9	2.13	21.1
	8	3.3	1.4	75/63	40.9	33.2	47.3	1.95	21.0
				80/67	43.6	34.3	50.1	1.95	22.3
				85/71	46.5	35.4	53.0	1.97	23.7
	11	5.8	2.5	75/63	41.5	33.5	47.7	1.88	22.1
				80/67	44.4	34.5	50.7	1.89	23.6
				85/71	47.3	35.7	53.6	1.89	25.0
80	5	1.4	0.6	75/63	37.5	31.8	45.0	2.31	16.3
				80/67	40.0	32.9	47.6	2.33	17.2
				85/71	42.5	34.0	50.2	2.35	18.1
	8	3.2	1.4	75/63	38.8	32.4	45.8	2.16	17.9
				80/67	41.5	33.4	48.6	2.18	19.1
				85/71	44.2	34.5	51.4	2.19	20.2
	11	5.6	2.4	75/63	39.4	32.6	46.2	2.10	18.8
				80/67	42.1	33.8	49.0	2.11	20.0
				85/71	45.0	34.7	52.0	2.12	21.3
85	5	1.3	0.6	75/63	36.4	31.4	44.3	2.42	15.0
				80/67	39.0	32.5	46.9	2.44	16.0
				85/71	41.4	33.6	49.4	2.47	16.8
	8	3.1	1.3	75/63	37.8	31.8	45.2	2.28	16.6
				80/67	40.3	33.0	47.8	2.29	17.6
				85/71	43.0	34.2	50.5	2.30	18.7
	11	5.5	2.4	75/63	38.3	32.2	45.5	2.22	17.3
				80/67	41.0	33.2	48.3	2.22	18.4
				85/71	43.7	34.4	51.0	2.23	19.6
90	5	1.3	0.6	75/63	35.5	30.9	43.7	2.55	13.9
				80/67	37.8	32.2	46.1	2.57	14.7
				85/71	40.2	33.3	48.7	2.59	15.5
	8	3.1	1.3	75/63	36.6	31.5	44.4	2.40	15.2
				80/67	39.2	32.7	47.0	2.41	16.2
				85/71	41.8	33.8	49.7	2.43	17.2
	11	5.4	2.3	75/63	37.2	31.7	44.8	2.34	15.9
				80/67	39.8	32.9	47.4	2.34	17.0
				85/71	42.5	34.0	50.2	2.35	18.1
100	5	1.3	0.6	75/63	33.4	30.2	42.4	2.81	11.9
				80/67	35.6	31.3	44.8	2.84	12.6
				85/71	38.0	32.5	47.3	2.86	13.3
	8	3	1.3	75/63	34.5	30.5	43.1	2.67	12.9
				80/67	36.9	31.8	45.5	2.68	13.8
				85/71	39.4	33.0	48.2	2.69	14.6
	11	5.3	2.3	75/63	34.9	30.8	43.3	2.61	13.4
				80/67	37.5	31.9	46.0	2.61	14.4
				85/71	40.1	33.2	48.6	2.62	15.3
110	5	1.2	0.5	75/63	31.3	29.3	41.3	3.11	10.1
				80/67	33.5	30.6	43.6	3.14	10.7
				85/71	35.4	31.6	45.6	3.16	11.2
	8	2.9	1.3	75/63	32.3	29.7	41.8	2.96	10.9
				80/67	34.7	30.9	44.3	2.98	11.7
				85/71	37.0	32.1	46.8	2.99	12.4
	11	5.1	2.2	75/63	32.8	29.9	42.2	2.90	11.3
				80/67	35.2	31.1	44.6	2.91	12.1
				85/71	37.6	32.3	47.1	2.92	12.9



**HB048 HEATING PERFORMANCE**

HB048 Heating Performance @ 1600 CFM								
Entering Water, °F	Water flow, GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Ent. Air °F	Total kBtu/hr.	Ht. Abs. kBtu/hr.	Unit kW	COP
30	6	4	1.7	60	32.7	24.6	2.41	4.0
				70	32.1	23.1	2.66	3.5
				80	31.5	21.8	2.95	3.1
	8	6.6	2.9	60	33.8	25.6	2.43	4.1
				70	33.1	24.0	2.68	3.6
				80	32.6	22.7	2.97	3.2
	12	13.8	6.0	60	35.3	26.8	2.45	4.2
				70	34.3	25.4	2.70	3.7
				80	33.8	23.9	3.00	3.3
40	6	3.8	1.6	60	37.2	28.8	2.48	4.4
				70	36.5	27.4	2.74	3.9
				80	35.9	25.9	3.04	3.5
	8	6.4	2.8	60	38.4	29.9	2.49	4.5
				70	37.7	28.5	2.76	4.0
				80	37.3	26.6	3.07	3.6
	12	13.3	5.8	60	40.0	31.6	2.52	4.7
				70	39.2	29.9	2.79	4.1
				80	38.6	28.3	3.10	3.7
50	6	3.7	1.6	60	42.1	33.5	2.55	4.8
				70	41.3	31.8	2.83	4.3
				80	41.0	30.2	3.13	3.8
	8	6.2	2.7	60	43.8	35.1	2.57	5.0
				70	42.9	33.3	2.85	4.4
				80	42.2	31.6	3.16	3.9
	12	12.8	5.6	60	45.6	37.3	2.60	5.1
				70	44.6	35.3	2.88	4.5
				80	43.8	33.2	3.19	4.0
60	6	3.6	1.6	60	47.7	38.7	2.62	5.3
				70	47.0	36.9	2.91	4.7
				80	45.9	34.9	3.22	4.2
	8	6	2.6	60	49.5	40.6	2.64	5.5
				70	48.5	38.6	2.93	4.8
				80	47.7	37.0	3.26	4.3
	12	12.4	5.4	60	51.8	42.8	2.67	5.7
				70	50.6	41.0	2.96	5.0
				80	49.9	38.3	3.28	4.5
70	6	3.4	1.5	60	53.1	44.1	2.68	5.8
				70	52.1	42.1	2.98	5.1
				80	51.3	40.1	3.31	4.5
	8	5.8	2.5	60	55.5	46.4	2.70	6.0
				70	54.8	44.9	3.01	5.3
				80	53.4	42.2	3.34	4.7
	12	12	5.2	60	58.2	49.1	2.72	6.3
				70	57.0	46.8	3.03	5.5
				80	55.8	44.4	3.37	4.9
80	6	3.3	1.4	60	58.9	49.8	2.73	6.3
				70	57.9	47.6	3.04	5.6
				80	56.9	45.4	3.38	4.9
	8	5.6	2.4	60	61.7	52.5	2.74	6.6
				70	60.5	50.2	3.06	5.8
				80	59.5	47.8	3.41	5.1
	12	11.6	5.0	60	64.9	55.6	2.76	6.9
				70	63.3	53.0	3.09	6.0
				80	61.9	50.4	3.44	5.3

HB048 COOLING PERFORMANCE

HB048 Cooling Performance @ 1600 CFM									
Entering Water °F	Water flow GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent. Air db/wb,F	Total kBtu/hr.	Sensible kBtu/hr.	Ht. Rej. kBtu/hr.	Unit kW	EER
50	6	3.6	1.6	75/63	49.9	39.2	56.9	2.14	23.3
				80/67	53.3	40.3	60.2	2.13	25.1
				85/71	56.6	41.4	63.6	2.10	26.9
	8	6	2.6	75/63	50.9	39.6	57.6	2.04	25.0
				80/67	54.4	40.7	61.1	2.01	27.0
				85/71	57.9	41.9	64.5	1.98	29.2
	12	12.4	5.4	75/63	52.1	40.0	58.5	1.94	26.9
				80/67	55.6	41.3	61.9	1.90	29.2
				85/71	59.3	42.4	65.5	1.86	31.9
60	6	3.4	1.5	75/63	47.8	38.2	55.5	2.37	20.1
				80/67	50.9	39.5	58.6	2.36	21.5
				85/71	54.2	40.5	61.9	2.35	23.1
	8	5.8	2.5	75/63	48.8	38.6	56.2	2.26	21.6
				80/67	52.1	39.8	59.5	2.24	23.2
				85/71	55.4	41.1	62.7	2.22	25.0
	12	12	5.2	75/63	49.8	39.1	56.8	2.15	23.1
				80/67	53.2	40.4	60.2	2.12	25.1
				85/71	56.7	41.6	63.6	2.09	27.2
70	6	3.3	1.4	75/63	45.5	37.3	54.0	2.64	17.3
				80/67	48.6	38.5	57.2	2.63	18.5
				85/71	51.6	39.8	60.2	2.62	19.7
	8	5.6	2.4	75/63	46.5	37.7	54.6	2.52	18.5
				80/67	49.6	39.0	57.8	2.50	19.8
				85/71	52.9	40.2	61.0	2.48	21.3
	12	11.6	5.0	75/63	47.5	38.1	55.3	2.40	19.8
				80/67	50.7	39.4	58.5	2.38	21.3
				85/71	54.1	40.7	61.8	2.35	23.1
80	6	3.2	1.4	75/63	43.3	36.4	52.7	2.93	14.8
				80/67	46.2	37.7	55.6	2.93	15.8
				85/71	49.2	38.8	58.7	2.93	16.8
	8	5.4	2.3	75/63	44.2	36.7	53.3	2.81	15.7
				80/67	47.2	38.1	56.2	2.80	16.9
				85/71	50.4	39.2	59.4	2.78	18.1
	12	11.2	4.9	75/63	45.2	37.1	53.8	2.69	16.8
				80/67	48.3	38.4	57.0	2.67	18.1
				85/71	51.5	39.7	60.1	2.64	19.5
85	6	3.2	1.4	75/63	42.1	36.0	52.0	3.09	13.6
				80/67	45.0	37.1	55.0	3.09	14.5
				85/71	47.8	38.5	57.8	3.09	15.5
	8	5.3	2.3	75/63	43.0	36.3	52.5	2.97	14.5
				80/67	45.9	37.6	55.5	2.96	15.5
				85/71	49.0	38.8	58.5	2.94	16.6
	12	11	4.8	75/63	44.0	36.6	53.1	2.85	15.5
				80/67	47.0	37.9	56.2	2.83	16.6
				85/71	50.1	39.2	59.2	2.80	17.9
90	6	3.1	1.3	75/63	41.0	35.4	51.5	3.26	12.6
				80/67	43.7	36.8	54.2	3.26	13.4
				85/71	46.7	37.9	57.2	3.26	14.3
	8	5.2	2.3	75/63	41.8	35.8	51.9	3.14	13.3
				80/67	44.7	37.1	54.8	3.13	14.3
				85/71	47.6	38.4	57.7	3.11	15.3
	12	10.8	4.7	75/63	42.8	36.1	52.4	3.01	14.2
				80/67	45.7	37.5	55.3	2.99	15.3
				85/71	48.8	38.6	58.5	2.97	16.4
100	6	3	1.3	75/63	38.7	34.4	50.3	3.63	10.7
				80/67	41.3	35.8	52.9	3.63	11.4
				85/71	43.9	37.1	55.6	3.63	12.1
	8	5.1	2.2	75/63	39.5	34.8	50.7	3.50	11.3
				80/67	42.1	36.2	53.3	3.49	12.1
				85/71	44.9	37.4	56.1	3.48	12.9
	12	10.5	4.6	75/63	40.3	35.1	51.1	3.38	11.9
				80/67	43.1	36.5	53.9	3.36	12.8
				85/71	46.0	37.8	56.8	3.34	13.8
110	6	2.9	1.3	75/63	36.2	33.5	49.0	4.02	9.0
				80/67	38.7	34.9	51.6	4.03	9.6
				85/71	41.1	36.2	54.1	4.03	10.2
	8	4.9	2.1	75/63	37.0	33.8	49.4	3.90	9.5
				80/67	39.5	35.2	51.9	3.89	10.1
				85/71	42.2	36.5	54.7	3.88	10.9
	12	10.2	4.4	75/63	37.7	34.2	49.7	3.77	10.0
				80/67	40.3	35.5	52.3	3.76	10.7
				85/71	43.1	36.9	55.2	3.74	11.5

**HB060 HEATING PERFORMANCE**

HB060 Heating Performance @ 2000 CFM								
Entering Water, °F	Water flow, GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Ent. Air °F	Total kBtu/hr.	Ht. Abs. kBtu/hr.	Unit kW	COP
30	7.5	3.2	1.4	60	44.2	33.8	3.16	4.1
				70	43.6	31.9	3.47	3.7
				80	43.2	30.2	3.82	3.3
	10	5.3	2.3	60	46.0	35.0	3.18	4.2
				70	45.1	33.3	3.50	3.8
				80	44.5	31.5	3.85	3.4
	15	11	4.8	60	47.6	36.8	3.21	4.3
				70	46.8	34.9	3.52	3.9
				80	46.1	33.0	3.87	3.5
40	7.5	3	1.3	60	49.8	39.0	3.24	4.5
				70	49.1	37.2	3.56	4.0
				80	48.9	35.6	3.92	3.7
	10	5.1	2.2	60	52.4	41.1	3.27	4.7
				70	51.5	39.1	3.59	4.2
				80	50.6	37.2	3.95	3.8
	15	10.6	4.6	60	54.5	43.0	3.30	4.8
				70	53.5	41.3	3.63	4.3
				80	52.6	38.9	3.99	3.9
50	7.5	2.9	1.3	60	56.8	45.6	3.34	5.0
				70	56.0	43.6	3.66	4.5
				80	55.2	41.4	4.03	4.0
	10	4.9	2.1	60	58.9	47.6	3.37	5.1
				70	58.4	46.1	3.70	4.6
				80	57.3	43.5	4.07	4.1
	15	10.2	4.4	60	62.5	50.6	3.41	5.4
				70	61.0	48.2	3.74	4.8
				80	59.8	45.8	4.11	4.3
60	7.5	2.8	1.2	60	64.0	52.4	3.43	5.5
				70	62.9	50.2	3.77	4.9
				80	62.0	47.9	4.15	4.4
	10	4.8	2.1	60	67.0	55.3	3.48	5.6
				70	65.7	52.9	3.81	5.0
				80	64.6	50.3	4.19	4.5
	15	9.9	4.3	60	70.7	58.5	3.52	5.9
				70	69.2	55.6	3.86	5.2
				80	67.6	53.0	4.25	4.7
70	7.5	2.7	1.2	60	71.5	59.8	3.54	5.9
				70	70.2	57.4	3.89	5.3
				80	69.2	54.7	4.28	4.7
	10	4.6	2.0	60	74.7	62.8	3.59	6.1
				70	73.1	60.0	3.93	5.4
				80	72.2	57.5	4.33	4.9
	15	9.6	4.2	60	79.4	66.8	3.65	6.4
				70	77.6	63.6	4.00	5.7
				80	75.7	60.7	4.39	5.1
80	7.5	2.7	1.2	60	79.5	67.3	3.65	6.4
				70	78.0	64.6	4.01	5.7
				80	76.6	61.9	4.41	5.1
	10	4.5	2.0	60	83.7	71.5	3.71	6.6
				70	81.9	68.5	4.07	5.9
				80	80.2	65.1	4.47	5.3
	15	9.2	4.0	60	87.8	74.2	3.77	6.8
				70	85.5	70.9	4.13	6.1
				80	84.1	68.8	4.55	5.4

**HB060 COOLING PERFORMANCE**

HB060 Cooling Performance @ 2000 CFM									
Entering Water °F	Water flow GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent. Air db/wb,F	Total kBtu/hr.	Sensible kBtu/hr.	Ht. Rej. kBtu/hr.	Unit kW	EER
50	7.5	2.8	1.2	75/63	64.4	50.2	74.5	3.07	20.9
				80/67	68.9	51.7	79.2	3.11	22.2
				85/71	73.0	53.5	83.5	3.14	23.3
	10	4.8	2.1	75/63	65.9	50.5	75.6	2.95	22.3
				80/67	70.2	52.5	80.1	2.97	23.6
				85/71	74.7	54.3	84.7	3.00	24.9
	15	9.9	4.3	75/63	67.2	51.4	76.6	2.83	23.8
				80/67	71.8	53.1	81.3	2.85	25.2
				85/71	76.6	54.8	86.2	2.86	26.8
60	7.5	2.7	1.2	75/63	61.9	49.0	72.9	3.34	18.5
				80/67	66.0	50.8	77.1	3.37	19.6
				85/71	70.2	52.6	81.4	3.40	20.7
	10	4.6	2.0	75/63	63.0	49.6	73.6	3.21	19.7
				80/67	67.3	51.3	77.9	3.23	20.9
				85/71	71.7	53.4	82.5	3.25	22.1
	15	9.6	4.2	75/63	64.3	50.0	74.5	3.08	20.9
				80/67	68.8	51.8	79.1	3.09	22.3
				85/71	73.5	53.7	83.8	3.10	23.7
70	7.5	2.7	1.2	75/63	59.2	47.6	71.1	3.65	16.2
				80/67	62.5	49.5	74.5	3.67	17.0
				85/71	63.1	51.1	75.1	3.66	17.3
	10	4.5	2.0	75/63	60.3	48.4	71.8	3.50	17.2
				80/67	64.5	50.1	76.1	3.52	18.3
				85/71	68.3	52.8	79.9	3.53	19.3
	15	9.2	4.0	75/63	61.6	48.9	72.7	3.37	18.3
				80/67	66.0	50.5	77.2	3.38	19.6
				85/71	70.4	52.6	81.6	3.38	20.8
80	7.5	2.6	1.1	75/63	53.4	46.4	66.3	3.97	13.5
				80/67	55.0	47.6	67.9	3.97	13.9
				85/71	66.4	52.4	79.9	4.09	16.3
	10	4.3	1.9	75/63	58.3	48.4	71.0	3.87	15.1
				80/67	62.8	50.7	75.6	3.89	16.1
				85/71	61.1	50.4	73.7	3.84	15.9
	15	8.9	3.9	75/63	58.6	47.5	70.7	3.70	15.9
				80/67	62.8	49.2	75.0	3.71	16.9
				85/71	68.8	53.0	81.8	3.91	17.6
85	7.5	2.5	1.1	75/63	53.1	44.0	66.7	4.17	12.7
				80/67	54.8	47.5	68.4	4.18	13.1
				85/71	64.7	52.1	78.8	4.28	15.1
	10	4.2	1.8	75/63	51.9	45.8	64.8	4.00	13.0
				80/67	61.2	50.1	74.6	4.08	15.0
				85/71	66.2	52.4	79.8	4.12	16.1
	15	8.8	3.8	75/63	55.9	44.3	68.6	3.89	14.4
				80/67	59.4	46.9	72.1	3.88	15.3
				85/71	66.9	52.3	80.4	4.08	16.4
90	7.5	2.5	1.1	75/63	51.7	43.3	65.9	4.38	11.8
				80/67	55.6	44.2	70.0	4.41	12.6
				85/71	62.8	51.0	77.6	4.48	14.0
	10	4.2	1.8	75/63	52.7	43.9	66.5	4.23	12.5
				80/67	56.5	45.5	70.4	4.24	13.3
				85/71	64.3	51.9	78.5	4.31	14.9
	15	8.7	3.8	75/63	53.8	44.3	67.1	4.08	13.2
				80/67	55.8	47.9	69.1	4.06	13.7
				85/71	65.1	51.5	79.2	4.27	15.3
100	7.5	2.4	1.0	75/63	49.0	41.2	64.7	4.84	10.1
				80/67	52.0	43.2	67.9	4.86	10.7
				85/71	51.8	47.3	67.6	4.86	10.7
	10	4.1	1.8	75/63	48.2	44.3	63.3	4.66	10.3
				80/67	52.0	45.8	67.3	4.68	11.1
				85/71	60.4	50.4	76.1	4.76	12.7
	15	8.4	3.6	75/63	50.1	43.6	64.8	4.52	11.1
				80/67	53.0	46.6	67.7	4.51	11.7
				85/71	54.4	48.1	69.1	4.50	12.1
110	7.5	2.3	1.0	75/63	44.8	41.4	62.1	5.36	8.4
				80/67	47.1	44.2	64.5	5.38	8.8
				85/71	48.7	46.2	66.3	5.39	9.0
	10	3.9	1.7	75/63	44.7	42.9	61.5	5.19	8.6
				80/67	48.4	44.4	65.3	5.21	9.3
				85/71	56.8	49.1	74.1	5.28	10.8
	15	8.2	3.6	75/63	49.3	44.7	66.1	5.16	9.6
				80/67	49.9	44.1	66.3	5.04	9.9
				85/71	57.7	49.4	74.7	5.17	11.2

**ANTI-FREEZE CORRECTION TABLE**

Antifreeze Type	Antifreeze % volume	Cooling			Heating		WPD Correction Factor EWT 30°F
		EWT 90 °F			EWT 30 °F		
		Total Cap.	Sens. Cap	Power	Htg. Cap	Power	
Water	0	1.000	1.000	1.000	1.000	1.000	1.000
Propylene Glycol	5	0.997	0.997	1.004	0.989	0.997	1.060
	10	0.994	0.994	1.006	0.986	0.995	1.125
	15	0.990	0.990	1.009	0.978	0.988	1.190
	25	0.983	0.983	1.016	0.960	0.979	1.300
Methanol	5	0.997	0.997	1.003	0.990	0.997	1.060
	10	0.996	0.996	1.005	0.979	0.993	1.100
	15	0.994	0.994	1.008	0.970	0.990	1.140
Ethanol	5	0.998	0.998	1.002	0.981	0.994	1.160
	10	0.996	0.996	1.004	0.960	0.988	1.230
	15	0.992	0.992	1.006	0.944	0.983	1.280
	25	0.986	0.986	1.009	0.917	0.974	1.400

NOTE: Available accessories are listed in the Geothermal Accessory Catalog.

