Bard
SINCE 1914
Heating & Cooling Products

ENERGY GUIDE

ENERGY EFFICIENCY SPLIT SYSTEM HEAT PUMP WITH BLOWER COIL

REGION 4
REGION 5

MODELS
WQS30A/BC24B
WQS36A/BC36B
WQS42A/BC36B
24UHPQC/BC24B
30UHPQC/BC36B
36UHPQC/BC36B
42UHPQA/BC48B
48UHPQB/BC48B
60UHPQB/BC60B

BARD MANUFACTURING COMPANY
Bryan, Ohio 43506

Since 1914...Moving, ahead just as planned.

Manual: 2100-186 Rev. D
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CONTENTS

ENERGYGUIDE INFORMATION

The cost grids on the fact sheets are based upon representative incremental rates that should correspond to the type of fuel being considered.

IMPORTANT: All cost grid data are "estimated yearly operating costs". Your actual yearly operating costs are dependent upon such factors as weather severity, routine maintenance items affecting operating efficiency (filters, blowers, etc.), actual heat loss of structure, desired indoor temperatures, living patterns of the occupants, and other items affecting operating time of the heating appliance.

To use the cost grids, it is necessary to know the heat loss of your home or building and the energy rate for your area. If not already known, the heat loss can be calculated by the dealer, builder, architect, etc., and the current energy rates obtained from the appropriate local utility.

Even without the specific information listed above, the cost of operation of competitive models can be compared by using similarly rated input models and their respective fact sheets and using the same heat loss of house and energy cost values on each fact sheet.

An example of how to use the enclosed information is as follows:

Geographic Location:	Ohio—From Region Map: Region IV
Heat Loss of Building:	35,000 Btu/h
Heat Appliance Model Desired:	36UHPQA/BC36B

Consulting the Region IV cost grid (1) and moving down the 35,000 Btu/h (2) column to the $.120 cost per kilowatt hour line (closest value to actual cost determined by contacting local utility) (3), the estimated cost per year to operate is $1,004.00. (4) The cost to heat with electric heat only is $2,127,00 (5).

Subtract the estimated cost of heating with heat pump with electric heat $1,004.00 from the cost of heating with electric heat only $2,127.00 for estimated annual cost savings of $1,123.00.

REGION 4 (1 36UHPQA/BC36B
HEAT PUMP MODEL: OUTDOOR 36UHPQA INDOOR BC36B
ARI RATED COOLING CAP.: BTUH(95) 34000, SEER10.00
ARI RATED HEATING CAP.: BTUH (47) 34000, COP(47) 3.10, HSPF 7.00 MIN.DHR REG IV
BTUH (17) 20000, COP(17) 2.20
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	— THEORETICAL ANNUAL HEATING COST — HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
35,000	.05	$ 417	885	
	.06	$ 502	1060	
	.07	$ 586	1241	
	.08	$ 665	1416	
	.09	$ 750	1596	
	.10	$ 835	1771	
(3)	.12	$ 1004 (4)	2127 (5)	BALANCE POINT 19 DEG.F. (6)
	.14	$ 1168	2482	
	.16	$ 1331	2838	

The balance point (the outdoor temperature at which the heat pump is running 100% of the time and just meeting structure heat loss requirements) is located on right side of page (6).

EXAMPLE: For a structure with a 35,000 Btuh with a 36UHPQA heat pump has a balance point of 19°F. Below this theoretical balance point, the heating load is automatically transferred between the heat pump and the furnace by the wall thermostat to maintain the desired temperature.

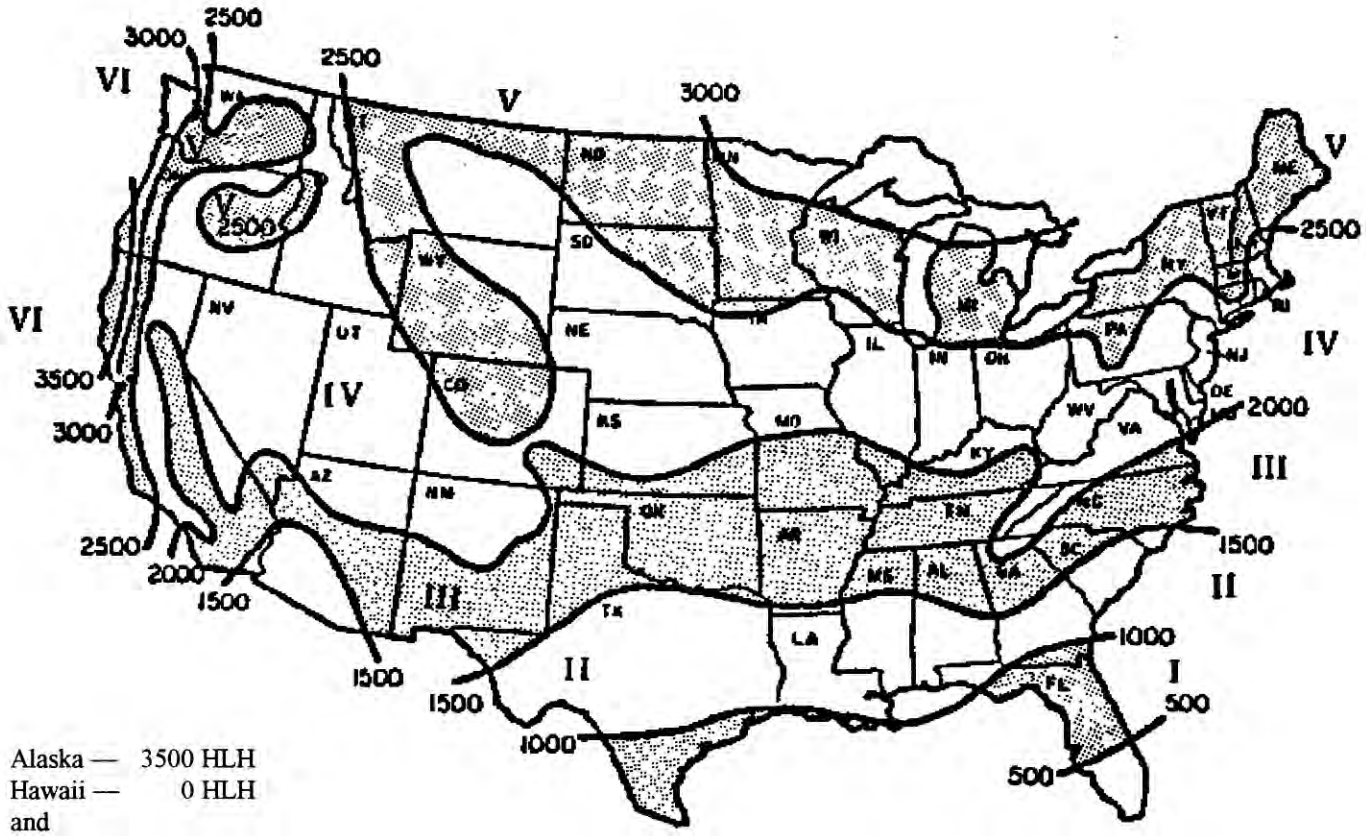
To find annual cooling cost of heat pump, look at the bottom of page under annual air conditioning cost. Directly under the electric rate $/KW (3) line, is located the annual cooling cost.

EXAMPLE: At .12 $/KW rate for electricity, the cooling cost would be $325.00 annually.

	.05	.06	.07	.08	.09	.10	.12	.14	.16	<—ELECTRIC RATE $/KWH
$	136	163	190	217	244	272	326	380	435	<—THEORETICAL AIR CONDITIONING

NOTE: The accuracy of this Energyguide is directly affected by how accurately you estimate the structure's heat loss and heat gain. Because of uncontrollable variables, Bard Manufacturing Company is not responsible for any variation in actual operating costs from these theoretical estimates.

ACTUAL HEATING LOAD HOURS (HLH_A) AND REGIONAL HEATING LOAD HOURS (HLH_R) FOR THE UNITED STATES



Alaska — 3500 HLH
Hawaii — 0 HLH
and
territories

REGION HEATING LOAD HOURS

Region	HLHr
I	750
II	1250
III	1750
IV	2250
V	2750
VI	2750

This map is reasonably accurate for the most parts of the United States but is necessarily highly generalized and consequently not too accurate in mountainous regions, particularly in the Rockies.

BARD MANUFACTURING COMPANY

REGION 4
HEAT PUMP MODEL:COMPRESSOR SECTION W0S30A INDOOR BC24B
COOLING CAPACITY AT 53 DEG.F.ENTERING WATER TEMP.: 31500 BTUH,15.73 SEER
HEATING CAPACITY AT 53 DEG.F.ENTERING WATER TEMP.: 27450 BTUH, 3.59 COP
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00% AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
25,000	.05	$ 214	631	
	.06	$ 259	756	
	.07	$ 299	885	
	.08	$ 344	1010	
	.09	$ 383	1139	
	.10	$ 428	1263	
	.12	$ 513	1517	
	.14	$ 603	1771	BALANCE POINT 20- DEG.F.
	.16	$ 682	2025	
30,000	.05	$ 253	756	
	.06	$ 304	908	
	.07	$ 349	1060	
	.08	$ 406	1213	
	.09	$ 451	1365	
	.10	$ 502	1517	
	.12	$ 603	1822	
	.14	$ 705	2127	BALANCE POINT 6- DEG.F.
	.16	$ 806	2431	
35,000	.05	$ 287	885	
	.06	$ 344	1060	
	.07	$ 406	1241	
	.08	$ 462	1416	
	.09	$ 519	1596	
	.10	$ 575	1771	
	.12	$ 694	2127	
	.14	$ 812	2482	BALANCE POINT 4 DEG.F.
	.16	$ 925	2838	
40,000	.05	$ 327	1010	
	.06	$ 394	1213	
	.07	$ 457	1416	
	.08	$ 524	1619	
	.09	$ 592	1822	
	.10	$ 654	2025	
	.12	$ 784	2431	
	.14	$ 919	2838	BALANCE POINT 11 DEG.F.
	.16	$ 1043	3244	
50,000	.05	$ 423	1263	
	.06	$ 507	1517	
	.07	$ 586	1771	
	.08	$ 677	2025	
	.09	$ 761	2279	
	.10	$ 846	2533	
	.12	$ 1015	3041	
	.14	$ 1184	3549	BALANCE POINT 22 DEG.F.
	.16	$ 1354	4057	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	<--ELECTRIC RATE $/KWH
$	75	90	105	120	135	150	180	210	241	<--THEORETICAL AIR CONDITIONING COST

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATING AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 5
HEAT PUMP MODEL:COMPRESSOR SECTION WQS30A INDOOR BC24B
COOLING CAPACITY AT 45 DEG.F.ENTERING WATER TEMP.: 31700 BTUH,17.55 SEER
HEATING CAPACITY AT 45 DEG.F.ENTERING WATER TEMP.: 24650 BTUH, 3.40 COP
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00% AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
25,000	.05	$ 306	772	
	.06	$ 368	925	
	.07	$ 431	1085	
	.08	$ 486	1238	
	.09	$ 549	1391	
	.10	$ 612	1544	
	.12	$ 737	1857	
	.14	$ 855	2170	
	.16	$ 980	2476	
30,000	.05	$ 361	925	
	.06	$ 431	1112	
	.07	$ 507	1300	
	.08	$ 577	1488	
	.09	$ 646	1669	
	.10	$ 723	1857	
	.12	$ 862	2232	
	.14	$ 1008	2601	BALANCE POINT 14- DEG.F.
	.16	$ 1154	2977	
35,000	.05	$ 417	1085	
	.06	$ 493	1300	
	.07	$ 584	1516	
	.08	$ 660	1732	
	.09	$ 751	1947	
	.10	$ 827	2170	
	.12	$ 994	2601	
	.14	$ 1161	3039	BALANCE POINT 3- DEG.F.
	.16	$ 1328	3471	
40,000	.05	$ 473	1238	
	.06	$ 570	1488	
	.07	$ 660	1732	
	.08	$ 758	1982	
	.09	$ 848	2232	
	.10	$ 946	2476	
	.12	$ 1133	2977	
	.14	$ 1321	3471	BALANCE POINT 5 DEG.F.
	.16	$ 1516	3965	
50,000	.05	$ 619	1544	
	.06	$ 737	1857	
	.07	$ 862	2170	
	.08	$ 987	2476	
	.09	$ 1106	2789	
	.10	$ 1238	3095	
	.12	$ 1481	3721	
	.14	$ 1725	4340	BALANCE POINT 17 DEG.F.
	.16	$ 1975	4959	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	
										<--ELECTRIC RATE $/KWH
$	36	43	50	57	65	72	86	101	115	<--THEORETICAL AIR CONDITIONING COST

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 4
HEAT PUMP MODEL:COMPRESSOR SECTION W0S36A INDOOR BC36B
COOLING CAPACITY AT 53 DEG.F.ENTERING WATER TEMP.: 37740 BTUH, 16.07 SEER
HEATING CAPACITY AT 53 DEG.F.ENTERING WATER TEMP.: 27450 BTUH, 3.59 COP
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00% AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
25,000				
	.05	$ 214	631	
	.06	$ 259	756	
	.07	$ 299	885	
	.08	$ 344	1010	
	.09	$ 383	1139	
	.10	$ 428	1263	
	.12	$ 513	1517	
	.14	$ 603	1771	BALANCE POINT 20- DEG.F.
	.16	$ 682	2025	
30,000				
	.05	$ 253	756	
	.06	$ 304	908	
	.07	$ 349	1060	
	.08	$ 406	1213	
	.09	$ 451	1365	
	.10	$ 502	1517	
	.12	$ 603	1822	
	.14	$ 705	2127	BALANCE POINT 6- DEG.F.
	.16	$ 806	2431	
35,000				
	.05	$ 287	885	
	.06	$ 344	1060	
	.07	$ 406	1241	
	.08	$ 462	1416	
	.09	$ 519	1596	
	.10	$ 575	1771	
	.12	$ 694	2127	
	.14	$ 812	2482	BALANCE POINT 4 DEG.F.
	.16	$ 925	2838	
40,000				
	.05	$ 327	1010	
	.06	$ 394	1213	
	.07	$ 457	1416	
	.08	$ 524	1619	
	.09	$ 592	1822	
	.10	$ 654	2025	
	.12	$ 784	2431	
	.14	$ 919	2838	BALANCE POINT 11 DEG.F.
	.16	$ 1043	3244	
50,000				
	.05	$ 423	1263	
	.06	$ 507	1517	
	.07	$ 586	1771	
	.08	$ 677	2025	
	.09	$ 761	2279	
	.10	$ 846	2533	
	.12	$ 1015	3041	
	.14	$ 1184	3549	BALANCE POINT 22 DEG.F.
	.16	$ 1354	4057	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	
$	93	112	131	150	169	187	225	263	300	<--THEORETICAL AIR CONDITIONING COST

<-- ELECTRIC RATE $/KWH

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 5
HEAT PUMP MODEL:COMPRESSOR SECTION W0S36A INDOOR BC36B
COOLING CAPACITY AT 45 DEG.F.ENTERING WATER TEMP.: 37900 BTUH,17.20 SEER
HEATING CAPACITY AT 45 DEG.F.ENTERING WATER TEMP.: 30650 BTUH, 3.55 COP
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00% AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
35,000		--- THEORETICAL ANNUAL HEATING COST ---		
	.05	$ 410	1085	
	.06	$ 493	1300	
	.07	$ 570	1516	
	.08	$ 653	1732	
	.09	$ 737	1947	
	.10	$ 813	2170	
	.12	$ 980	2601	
	.14	$ 1147	3039	BALANCE POINT 20- DEG.F.
	.16	$ 1307	3471	
40,000		--- THEORETICAL ANNUAL HEATING COST ---		
	.05	$ 459	1238	
	.06	$ 549	1488	
	.07	$ 646	1732	
	.08	$ 744	1982	
	.09	$ 827	2232	
	.10	$ 925	2476	
	.12	$ 1106	2977	
	.14	$ 1293	3471	BALANCE POINT 9- DEG.F.
	.16	$ 1474	3965	
50,000		--- THEORETICAL ANNUAL HEATING COST ---		
	.05	$ 570	1544	
	.06	$ 688	1857	
	.07	$ 799	2170	
	.08	$ 918	2476	
	.09	$ 1029	2789	
	.10	$ 1147	3095	
	.12	$ 1370	3721	
	.14	$ 1606	4340	BALANCE POINT 5 DEG.F.
	.16	$ 1829	4959	
60,000		--- THEORETICAL ANNUAL HEATING COST ---		
	.05	$ 709	1857	
	.06	$ 855	2232	
	.07	$ 994	2601	
	.08	$ 1133	2977	
	.09	$ 1279	3345	
	.10	$ 1419	3721	
	.12	$ 1704	4465	
	.14	$ 1989	5210	BALANCE POINT 15 DEG.F.
	.16	$ 2274	5954	
70,000		--- THEORETICAL ANNUAL HEATING COST ---		
	.05	$ 876	2170	
	.06	$ 1057	2601	
	.07	$ 1231	3039	
	.08	$ 1412	3471	
	.09	$ 1579	3902	
	.10	$ 1759	4340	
	.12	$ 2114	5210	
	.14	$ 2462	6079	BALANCE POINT 22 DEG.F.
	.16	$ 2817	6942	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	<--ELECTRIC RATE $/KWH
$	44	52	61	70	79	88	105	123	141	<--THEORETICAL AIR CONDITIONING COST

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATING AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 4
HEAT PUMP MODEL:COMPRESSOR SECTION WOS42A INDOOR BC36B
COOLING CAPACITY AT 53 DEG.F.ENTERING WATER TEMP.: 41290 BTUH,16.79 SEER
HEATING CAPACITY AT 53 DEG.F.ENTERING WATER TEMP.: 39090 BTUH, 3.39 COP
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00% AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
40,000				
	.05	$ 355	1010	
	.06	$ 434	1213	
	.07	$ 502	1416	
	.08	$ 575	1619	
	.09	$ 643	1822	
	.10	$ 716	2025	
	.12	$ 857	2431	
	.14	$ 1004	2838	BALANCE POINT 11- DEG.F.
	.16	$ 1145	3244	
50,000				
	.05	$ 434	1263	
	.06	$ 524	1517	
	.07	$ 609	1771	
	.08	$ 699	2025	
	.09	$ 784	2279	
	.10	$ 874	2533	
	.12	$ 1043	3041	
	.14	$ 1218	3549	BALANCE POINT 4 DEG.F.
	.16	$ 1393	4057	
60,000				
	.05	$ 519	1517	
	.06	$ 620	1822	
	.07	$ 727	2127	
	.08	$ 829	2431	
	.09	$ 936	2736	
	.10	$ 1038	3041	
	.12	$ 1247	3650	
	.14	$ 1455	4260	BALANCE POINT 14 DEG.F.
	.16	$ 1664	4869	
70,000				
	.05	$ 615	1771	
	.06	$ 744	2127	
	.07	$ 868	2482	
	.08	$ 987	2838	
	.09	$ 1117	3193	
	.10	$ 1241	3549	
	.12	$ 1484	4260	
	.14	$ 1732	4971	BALANCE POINT 21 DEG.F.
	.16	$ 1974	5682	
80,000				
	.05	$ 739	2025	
	.06	$ 885	2431	
	.07	$ 1032	2838	
	.08	$ 1179	3244	
	.09	$ 1331	3650	
	.10	$ 1478	4057	
	.12	$ 1771	4869	
	.14	$ 2070	5682	BALANCE POINT 27 DEG.F.
	.16	$ 2364	6494	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	<--ELECTRIC RATE $/KWH
$	98	118	137	157	177	196	236	275	314	<--THEORETICAL AIR CONDITIONING COST

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 5
HEAT PUMP MODEL:COMPRESSOR SECTION MOS42A INDOOR BC36B
COOLING CAPACITY AT 45 DEG.F.ENTERING WATER TEMP.: 41650 BTUH,18.14 SEER
HEATING CAPACITY AT 45 DEG.F.ENTERING WATER TEMP.: 35400 BTUH, 3.20 COP
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00% APUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
40,000				
	.05	$ 507	1238	
	.06	$ 612	1488	
	.07	$ 716	1732	
	.08	$ 813	1982	
	.09	$ 918	2232	
	.10	$ 1022	2476	
	.12	$ 1224	2977	
	.14	$ 1426	3471	BALANCE POINT 21- DEG.F.
	.16	$ 1634	3965	
50,000				
	.05	$ 619	1544	
	.06	$ 751	1857	
	.07	$ 869	2170	
	.08	$ 1001	2476	
	.09	$ 1119	2789	
	.10	$ 1245	3095	
	.12	$ 1495	3721	
	.14	$ 1745	4340	BALANCE POINT 4- DEG.F.
	.16	$ 1996	4959	
60,000				
	.05	$ 751	1857	
	.06	$ 890	2232	
	.07	$ 1043	2601	
	.08	$ 1196	2977	
	.09	$ 1342	3345	
	.10	$ 1488	3721	
	.12	$ 1794	4465	
	.14	$ 2086	5210	BALANCE POINT 7 DEG.F.
	.16	$ 2385	5954	
70,000				
	.05	$ 897	2170	
	.06	$ 1078	2601	
	.07	$ 1252	3039	
	.08	$ 1432	3471	
	.09	$ 1613	3902	
	.10	$ 1787	4340	
	.12	$ 2142	5210	
	.14	$ 2511	6079	BALANCE POINT 16 DEG.F.
	.16	$ 2865	6942	
80,000				
	.05	$ 1071	2476	
	.06	$ 1279	2977	
	.07	$ 1495	3471	
	.08	$ 1704	3965	
	.09	$ 1926	4465	
	.10	$ 2142	4959	
	.12	$ 2566	5954	
	.14	$ 2991	6942	BALANCE POINT 22 DEG.F.
	.16	$ 3422	7936	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	<--ELECTRIC RATE $/KWH
$	45	55	64	73	82	91	110	128	146	<--THEORETICAL AIR CONDITIONING COST

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATING AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

BARD MANUFACTURING COMPANY

REGION 4 24UHPQC/BC24B
HEAT PUMP MODEL: OUTDOOR 24UHPQC INDOOR BC24B
ARI RATED COOLING CAP.: BTUH(95) 22600, SEER12.00
ARI RATED HEATING CAP.: BTUH (47) 22400, COP(47) 3.20, HSPF 7.00 MIN.DHR REG IV
BTUH (17) 13400, COP(17) 2.00
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	— THEORETICAL ANNUAL HEATING COST — HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
20,000				
	.05	$ 242	502	
	.06	$ 299	603	
	.07	$ 344	705	
	.08	$ 394	806	
	.09	$ 445	908	
	.10	$ 490	1010	
	.12	$ 592	1213	BALANCE POINT 15 DEG.F.
	.14	$ 688	1416	
	.16	$ 784	1619	
25,000				
	.05	$ 310	631	
	.06	$ 366	756	
	.07	$ 434	885	
	.08	$ 490	1010	
	.09	$ 552	1139	
	.10	$ 620	1263	
	.12	$ 739	1517	BALANCE POINT 21 DEG.F.
	.14	$ 863	1771	
	.16	$ 987	2025	
30,000				
	.05	$ 378	756	
	.06	$ 451	908	
	.07	$ 524	1060	
	.08	$ 603	1213	
	.09	$ 677	1365	
	.10	$ 756	1517	
	.12	$ 902	1822	BALANCE POINT 26 DEG.F.
	.14	$ 1055	2127	
	.16	$ 1201	2431	
35,000				
	.05	$ 457	885	
	.06	$ 541	1060	
	.07	$ 631	1241	
	.08	$ 727	1416	
	.09	$ 818	1596	
	.10	$ 902	1771	
	.12	$ 1089	2127	BALANCE POINT 30 DEG.F.
	.14	$ 1269	2482	
	.16	$ 1455	2838	
40,000				
	.05	$ 541	1010	
	.06	$ 648	1213	
	.07	$ 756	1416	
	.08	$ 863	1619	
	.09	$ 970	1822	
	.10	$ 1077	2025	
	.12	$ 1292	2431	BALANCE POINT 33 DEG.F.
	.14	$ 1506	2838	
	.16	$ 1726	3244	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	<—ELECTRIC RATE $/KWH
$	75	90	105	120	135	150	180	210	241	<—THEORETICAL AIR CONDITIONING

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

BARD MANUFACTURING COMPANY

REGION 5 24UHPQC/BC24B
HEAT PUMP MODEL: OUTDOOR 24UHPQC INDOOR BC24B
ARI RATED COOLING CAP.: BTUH(95) 22600, SEER12.00
ARI RATED HEATING CAP.: BTUH (47) 22400, COP(47) 3.20, HSPF 7.00 MIN.DHR REG IV
BTUH (17) 13400, COP(17) 2.00
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	— THEORETICAL ANNUAL HEATING COST — HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
25,000				
	.05	$ 438	772	
	.06	$ 528	925	
	.07	$ 619	1085	
	.08	$ 709	1238	
	.09	$ 793	1391	
	.10	$ 883	1544	
	.12	$ 1064	1857	BALANCE POINT 15 DEG.F.
	.14	$ 1238	2170	
	.16	$ 1419	2476	
30,000				
	.05	$ 535	925	
	.06	$ 639	1112	
	.07	$ 751	1300	
	.08	$ 862	1488	
	.09	$ 966	1669	
	.10	$ 1078	1857	
	.12	$ 1286	2232	BALANCE POINT 19 DEG.F
	.14	$ 1502	2601	
	.16	$ 1718	2977	
35,000				
	.05	$ 639	1085	
	.06	$ 772	1300	
	.07	$ 897	1516	
	.08	$ 1022	1732	
	.09	$ 1147	1947	
	.10	$ 1279	2170	
	.12	$ 1530	2601	BALANCE POINT 24 DEG.F.
	.14	$ 1794	3039	
	.16	$ 2045	3471	
40,000				
	.05	$ 744	1238	
	.06	$ 897	1488	
	.07	$ 1043	1732	
	.08	$ 1196	1982	
	.09	$ 1342	2232	
	.10	$ 1495	2476	
	.12	$ 1794	2977	BALANCE POINT 27 DEG.F.
	.14	$ 2093	3471	
	.16	$ 2392	3965	
50,000				
	.05	$ 987	1544	
	.06	$ 1182	1857	
	.07	$ 1384	2170	
	.08	$ 1586	2476	
	.09	$ 1780	2789	
	.10	$ 1975	3095	
	.12	$ 2372	3721	BALANCE POINT 33 DEG.F.
	.14	$ 2768	4340	
	.16	$ 3165	4959	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	
$	37	45	52	60	67	75	90	105	120	<—THEORETICAL AIR CONDITIONING

<—ELECTRIC RATE $/KW

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

BARD MANUFACTURING COMPANY

REGION 4 30UHPQC/BC36B
HEAT PUMP MODEL: OUTDOOR 30UHPQC INDOOR BC36B
ARI RATED COOLING CAP.: BTUH(95) 29000, SEER12.00
ARI RATED HEATING CAP.: BTUH (47) 27000, COP(47) 3.30, HSPF 7.50 MIN.DHR REG IV
BTUH (17) 17000, COP(17) 2.20
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	— THEORETICAL ANNUAL HEATING COST — HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
25,000				
	.05	$ 293	631	
	.06	$ 344	756	
	.07	$ 406	885	
	.08	$ 462	1010	
	.09	$ 519	1139	
	.10	$ 575	1263	
	.12	$ 694	1517	BALANCE POINT 14 DEG.F.
	.14	$ 806	1771	
	.16	$ 925	2025	
30,000				
	.05	$ 349	756	
	.06	$ 417	908	
	.07	$ 490	1060	
	.08	$ 558	1213	
	.09	$ 626	1365	
	.10	$ 699	1517	
	.12	$ 835	1822	BALANCE POINT 19 DEG.F.
	.14	$ 970	2127	
	.16	$ 1111	2431	
35,000				
	.05	$ 411	885	
	.06	$ 496	1060	
	.07	$ 575	1241	
	.08	$ 665	1416	
	.09	$ 744	1596	
	.10	$ 829	1771	
	.12	$ 993	2127	BALANCE POINT 24 DEG.F.
	.14	$ 1162	2482	
	.16	$ 1326	2838	
40,000				
	.05	$ 485	1010	
	.06	$ 586	1213	
	.07	$ 682	1416	
	.08	$ 778	1619	
	.09	$ 874	1822	
	.10	$ 976	2025	
	.12	$ 1168	2431	BALANCE POINT 28 DEG.F.
	.14	$ 1365	2838	
	.16	$ 1557	3244	
50,000				
	.05	$ 654	1263	
	.06	$ 789	1517	
	.07	$ 919	1771	
	.08	$ 1049	2025	
	.09	$ 1179	2279	
	.10	$ 1314	2533	
	.12	$ 1574	3041	BALANCE POINT 34 DEG.F.
	.14	$ 1839	3549	
	.16	$ 2104	4057	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

.05	.06	.07	.08	.09	.10	.12	.14	.16	<—ELECTRIC RATE $/KWH
$ 96	115	135	154	173	193	231	270	309	<—THEORETICAL AIR CONDITIONING

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 5 30UHPQC/BC36B
HEAT PUMP MODEL: OUTDOOR 30UHPQC INDOOR BC36B
ARI RATED COOLING CAP.: BTUH(95) 29000, SEER12.00
ARI RATED HEATING CAP.: BTUH (47) 27000, COP(47) 3.30, HSPF 7.50 MIN.DHR REG IV
BTUH (17) 17000, COP(17) 2.20
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	— THEORETICAL ANNUAL HEATING COST — HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
30,000				
	.05	$ 493	925	
	.06	$ 591	1112	
	.07	$ 695	1300	
	.08	$ 799	1488	
	.09	$ 890	1669	
	.10	$ 994	1857	
	.12	$ 1189	2232	BALANCE POINT 13 DEG.F.
	.14	$ 1391	2601	
	.16	$ 1586	2977	
35,000				
	.05	$ 584	1085	
	.06	$ 702	1300	
	.07	$ 820	1516	
	.08	$ 939	1732	
	.09	$ 1057	1947	
	.10	$ 1168	2170	
	.12	$ 1405	2601	BALANCE POINT 17 DEG.F.
	.14	$ 1634	3039	
	.16	$ 1878	3471	
40,000				
	.05	$ 681	1238	
	.06	$ 813	1488	
	.07	$ 952	1732	
	.08	$ 1092	1982	
	.09	$ 1231	2232	
	.10	$ 1363	2476	
	.12	$ 1634	2977	BALANCE POINT 21 DEG.F.
	.14	$ 1905	3471	
	.16	$ 2184	3965	
50,000				
	.05	$ 897	1544	
	.06	$ 1078	1857	
	.07	$ 1259	2170	
	.08	$ 1439	2476	
	.09	$ 1613	2789	
	.10	$ 1794	3095	
	.12	$ 2156	3721	BALANCE POINT 28 DEG.F.
	.14	$ 2511	4340	
	.16	$ 2879	4959	
60,000				
	.05	$ 1133	1857	
	.06	$ 1370	2232	
	.07	$ 1592	2601	
	.08	$ 1822	2977	
	.09	$ 2045	3345	
	.10	$ 2281	3721	
	.12	$ 2733	4465	BALANCE POINT 33 DEG.F.
	.14	$ 3192	5210	
	.16	$ 3638	5954	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

.05	.06	.07	.08	.09	.10	.12	.14	.16	<—ELECTRIC RATE $/KWH
$ 48	57	67	77	86	96	115	135	154	<—THEORETICAL AIR CONDITIONING

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

BARD MANUFACTURING COMPANY

REGION 4 36UHPQC/BC36B
HEAT PUMP MODEL: OUTDOOR 36UHPQC INDOOR BC36B
ARI RATED COOLING CAP.: BTUH(95) 34000, SEER12.00
ARI RATED HEATING CAP.: BTUH (47) 34000, COP(47) 3.20, HSPF 7.50 MIN.DHR REG IV
BTUH (17) 19600, COP(17) 2.10
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	— THEORETICAL ANNUAL HEATING COST — HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
35,000				
	.05	$ 400	885	
	.06	$ 485	1060	
	.07	$ 558	1241	
	.08	$ 643	1416	
	.09	$ 722	1596	
	.10	$ 806	1771	
	.12	$ 959	2127	BALANCE POINT 19 DEG.F.
	.14	$ 1122	2482	
	.16	$ 1280	2838	
40,000				
	.05	$ 468	1010	
	.06	$ 558	1213	
	.07	$ 648	1416	
	.08	$ 744	1619	
	.09	$ 840	1822	
	.10	$ 931	2025	
	.12	$ 1117	2431	BALANCE POINT 22 DEG.F.
	.14	$ 1303	2838	
	.16	$ 1489	3244	
50,000				
	.05	$ 609	1263	
	.06	$ 733	1517	
	.07	$ 857	1771	
	.08	$ 976	2025	
	.09	$ 1100	2279	
	.10	$ 1224	2533	
	.12	$ 1467	3041	BALANCE POINT 28 DEG.F.
	.14	$ 1709	3549	
	.16	$ 1952	4057	
60,000				
	.05	$ 773	1517	
	.06	$ 925	1822	
	.07	$ 1083	2127	
	.08	$ 1241	2431	
	.09	$ 1393	2736	
	.10	$ 1546	3041	
	.12	$ 1856	3650	BALANCE POINT 32 DEG.F.
	.14	$ 2166	4260	
	.16	$ 2477	4869	
70,000				
	.05	$ 959	1771	
	.06	$ 1151	2127	
	.07	$ 1342	2482	
	.08	$ 1534	2838	
	.09	$ 1726	3193	
	.10	$ 1918	3549	
	.12	$ 2302	4260	BALANCE POINT 36 DEG.F.
	.14	$ 2685	4971	
	.16	$ 3063	5682	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	<—ELECTRIC RATE $/KWH
$	113	135	158	181	203	226	271	317	362	<—THEORETICAL AIR CONDITIONING

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

BARD MANUFACTURING COMPANY

REGION 5 36UHPQC/BC36B
HEAT PUMP MODEL: OUTDOOR 36UHPQC INDOOR BC36B
ARI RATED COOLING CAP.: BTUH(95) 34000, SEER12.00
ARI RATED HEATING CAP.: BTUH (47) 34000, COP(47) 3.20, HSPF 7.50 MIN.DHR REG IV
BTUH (17) 19600, COP(17) 2.10
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	— THEORETICAL ANNUAL HEATING COST — HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
35,000				
	.05	$ 584	1085	
	.06	$ 702	1300	
	.07	$ 820	1516	
	.08	$ 932	1732	
	.09	$ 1050	1947	
	.10	$ 1168	2170	
	.12	$ 1405	2601	BALANCE POINT 14 DEG.F.
	.14	$ 1634	3039	
	.16	$ 1871	3471	
40,000				
	.05	$ 674	1238	
	.06	$ 806	1488	
	.07	$ 939	1732	
	.08	$ 1071	1982	
	.09	$ 1217	2232	
	.10	$ 1349	2476	
	.12	$ 1613	2977	BALANCE POINT 17 DEG.F.
	.14	$ 1892	3471	
	.16	$ 2156	3965	
50,000				
	.05	$ 869	1544	
	.06	$ 1043	1857	
	.07	$ 1217	2170	
	.08	$ 1391	2476	
	.09	$ 1565	2789	
	.10	$ 1745	3095	
	.12	$ 2093	3721	BALANCE POINT 22 DEG.F.
	.14	$ 2434	4340	
	.16	$ 2782	4959	
60,000				
	.05	$ 1092	1857	
	.06	$ 1300	2232	
	.07	$ 1523	2601	
	.08	$ 1739	2977	
	.09	$ 1961	3345	
	.10	$ 2170	3721	
	.12	$ 2608	4465	BALANCE POINT 27 DEG.F
	.14	$ 3039	5210	
	.16	$ 3478	5954	
70,000				
	.05	$ 1321	2170	
	.06	$ 1579	2601	
	.07	$ 1843	3039	
	.08	$ 2114	3471	
	.09	$ 2379	3902	
	.10	$ 2643	4340	
	.12	$ 3172	5210	BALANCE POINT 31 DEG.F.
	.14	$ 3700	6079	
	.16	$ 4222	6942	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

.05	.06	.07	.08	.09	.10	.12	.14	.16	<—ELECTRIC RATE $/KWH
$ 56	67	79	90	101	113	135	158	181	<—THEORETICAL AIR CONDITIONING

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 4 42UHPQA/BC48B
HEAT PUMP MODEL: OUTDOOR 42UHPQA INDOOR BC48B
ARI RATED COOLING CAP.: BTUH(95) 40500, SEER10.50
ARI RATED HEATING CAP.: BTUH (47) 39000, COP(47) 3.00, HSPF 7.50 MIN.DHR REG IV
BTUH (17) 24000, COP(17) 2.10
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
40,000				
	.05	$ 479	1010	
	.06	$ 575	1213	
	.07	$ 665	1416	
	.08	$ 767	1619	
	.09	$ 857	1822	
	.10	$ 953	2025	
	.12	$ 1145	2431	
	.14	$ 1337	2838	BALANCE POINT 17 DEG.F.
	.16	$ 1523	3244	
50,000				
	.05	$ 609	1263	
	.06	$ 733	1517	
	.07	$ 852	1771	
	.08	$ 976	2025	
	.09	$ 1094	2279	
	.10	$ 1218	2533	
	.12	$ 1461	3041	
	.14	$ 1709	3549	BALANCE POINT 24 DEG.F.
	.16	$ 1952	4057	
60,000				
	.05	$ 761	1517	
	.06	$ 914	1822	
	.07	$ 1060	2127	
	.08	$ 1213	2431	
	.09	$ 1365	2736	
	.10	$ 1517	3041	
	.12	$ 1816	3650	
	.14	$ 2127	4260	BALANCE POINT 29 DEG.F.
	.16	$ 2426	4869	
70,000				
	.05	$ 925	1771	
	.06	$ 1111	2127	
	.07	$ 1292	2482	
	.08	$ 1478	2838	
	.09	$ 1670	3193	
	.10	$ 1856	3549	
	.12	$ 2223	4260	
	.14	$ 2595	4971	BALANCE POINT 33 DEG.F.
	.16	$ 2962	5682	
80,000				
	.05	$ 1111	2025	
	.06	$ 1337	2431	
	.07	$ 1557	2838	
	.08	$ 1777	3244	
	.09	$ 2003	3650	
	.10	$ 2223	4057	
	.12	$ 2668	4869	
	.14	$ 3114	5682	BALANCE POINT 36 DEG.F.
	.16	$ 3560	6494	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	<--ELECTRIC RATE $/KWH
$	154	185	215	246	277	308	370	431	493	<--THEORETICAL AIR CONDITIONING COST

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATING AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 5 42UHPQA/BC48B
HEAT PUMP MODEL: OUTDOOR 42UHPQA INDOOR BC48B
ARI RATED COOLING CAP.: BTUH(95) 40500, SEER10.50
ARI RATED HEATING CAP.: BTUH (47) 39000, COP(47) 3.00, HSPF 7.50 MIN.DHR REG IV
BTUH (17) 24000, COP(17) 2.10
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
50,000				
	.05	$ 862	1544	
	.06	$ 1029	1857	
	.07	$ 1210	2170	
	.08	$ 1377	2476	
	.09	$ 1551	2789	
	.10	$ 1718	3095	
	.12	$ 2065	3721	
	.14	$ 2406	4340	BALANCE POINT 17 DEG.F.
	.16	$ 2754	4959	
60,000				
	.05	$ 1057	1857	
	.06	$ 1272	2232	
	.07	$ 1481	2601	
	.08	$ 1697	2977	
	.09	$ 1905	3345	
	.10	$ 2121	3721	
	.12	$ 2538	4465	
	.14	$ 2970	5210	BALANCE POINT 23 DEG.F.
	.16	$ 3387	5954	
70,000				
	.05	$ 1272	2170	
	.06	$ 1530	2601	
	.07	$ 1787	3039	
	.08	$ 2038	3471	
	.09	$ 2295	3902	
	.10	$ 2552	4340	
	.12	$ 3067	5210	
	.14	$ 3568	6079	BALANCE POINT 27 DEG.F.
	.16	$ 4083	6942	
80,000				
	.05	$ 1509	2476	
	.06	$ 1815	2977	
	.07	$ 2114	3471	
	.08	$ 2420	3965	
	.09	$ 2719	4465	
	.10	$ 3018	4959	
	.12	$ 3624	5954	
	.14	$ 4229	6942	BALANCE POINT 30 DEG.F.
	.16	$ 4834	7936	
90,000				
	.05	$ 1759	2789	
	.06	$ 2114	3345	
	.07	$ 2469	3902	
	.08	$ 2817	4465	
	.09	$ 3165	5022	
	.10	$ 3519	5578	
	.12	$ 4222	6698	
	.14	$ 4924	7811	BALANCE POINT 33 DEG.F.
	.16	$ 5627	8931	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	<--ELECTRIC RATE $/KWH
$	77	92	107	123	138	154	185	215	246	<--THEORETICAL AIR CONDITIONING COST

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATING AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 4 48UHPQB/BC48B
HEAT PUMP MODEL: OUTDOOR 48UHPQB INDOOR BC48B
ARI RATED COOLING CAP.: BTUH(95) 46000, SEER10.00
ARI RATED HEATING CAP.: BTUH (47) 47000, COP(47) 3.00, HSPF 7.20 MIN.DHR REG IV
BTUH (17) 29000, COP(17) 2.05
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
50,000				
	.05	$ 581	1263	
	.06	$ 699	1517	
	.07	$ 812	1771	
	.08	$ 936	2025	
	.09	$ 1049	2279	
	.10	$ 1168	2533	
	.12	$ 1399	3041	
	.14	$ 1636	3549	BALANCE POINT 18 DEG.F.
	.16	$ 1862	4057	
60,000				
	.05	$ 716	1517	
	.06	$ 857	1822	
	.07	$ 998	2127	
	.08	$ 1139	2431	
	.09	$ 1280	2736	
	.10	$ 1421	3041	
	.12	$ 1709	3650	
	.14	$ 1997	4260	BALANCE POINT 23 DEG.F.
	.16	$ 2279	4869	
70,000				
	.05	$ 852	1771	
	.06	$ 1026	2127	
	.07	$ 1190	2482	
	.08	$ 1365	2838	
	.09	$ 1534	3193	
	.10	$ 1704	3549	
	.12	$ 2042	4260	
	.14	$ 2386	4971	BALANCE POINT 27 DEG.F.
	.16	$ 2725	5682	
80,000				
	.05	$ 1010	2025	
	.06	$ 1213	2431	
	.07	$ 1416	2838	
	.08	$ 1613	3244	
	.09	$ 1822	3650	
	.10	$ 2025	4057	
	.12	$ 2426	4869	
	.14	$ 2832	5682	BALANCE POINT 30 DEG.F.
	.16	$ 3238	6494	
90,000				
	.05	$ 1179	2279	
	.06	$ 1416	2736	
	.07	$ 1653	3193	
	.08	$ 1890	3650	
	.09	$ 2127	4107	
	.10	$ 2364	4564	
	.12	$ 2832	5478	
	.14	$ 3306	6393	BALANCE POINT 33 DEG.F.
	.16	$ 3780	7307	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	
										<--ELECTRIC RATE $/KWH
$	184	220	257	294	331	368	441	515	588	<--THEORETICAL AIR CONDITIONING COST

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATING AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 5 48UHPQB/BC48B
HEAT PUMP MODEL: OUTDOOR 48UHPQB INDOOR BC48B
ARI RATED COOLING CAP.: BTUH(95) 46000, SEER10.00
ARI RATED HEATING CAP.: BTUH (47) 47000, COP(47) 3.00, HSPF 7.20 MIN.DHR REG IV
BTUH (17) 29000, COP(17) 2.05
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
60,000	.05	$ 1022	1857	
	.06	$ 1217	2232	
	.07	$ 1419	2601	
	.08	$ 1627	2977	
	.09	$ 1829	3345	
	.10	$ 2031	3721	
	.12	$ 2441	4465	
	.14	$ 2852	5210	BALANCE POINT 17 DEG.F.
	.16	$ 3255	5954	
70,000	.05	$ 1210	2170	
	.06	$ 1453	2601	
	.07	$ 1697	3039	
	.08	$ 1940	3471	
	.09	$ 2184	3902	
	.10	$ 2420	4340	
	.12	$ 2907	5210	
	.14	$ 3387	6079	BALANCE POINT 21 DEG.F.
	.16	$ 3874	6942	
80,000	.05	$ 1419	2476	
	.06	$ 1704	2977	
	.07	$ 1996	3471	
	.08	$ 2281	3965	
	.09	$ 2559	4465	
	.10	$ 2845	4959	
	.12	$ 3415	5954	
	.14	$ 3978	6942	BALANCE POINT 24 DEG.F.
	.16	$ 4549	7936	
90,000	.05	$ 1641	2789	
	.06	$ 1968	3345	
	.07	$ 2295	3902	
	.08	$ 2622	4465	
	.09	$ 2956	5022	
	.10	$ 3283	5578	
	.12	$ 3944	6698	
	.14	$ 4598	7811	BALANCE POINT 27 DEG.F.
	.16	$ 5251	8931	
100,000	.05	$ 1878	3095	
	.06	$ 2246	3721	
	.07	$ 2622	4340	
	.08	$ 3005	4959	
	.09	$ 3380	5578	
	.10	$ 3749	6197	
	.12	$ 4507	7443	
	.14	$ 5251	8681	BALANCE POINT 30 DEG.F.
	.16	$ 6003	9926	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	
										<--ELECTRIC RATE $/KWH
$	92	110	128	147	165	184	220	257	294	<--THEORETICAL AIR CONDITIONING COST

THE ABOVE ANNUAL HEATING AND COOLING OPERATING COSTS ARE THEORETICAL ESTIMATES ONLY AND ARE PROVIDED FOR A COMMON BASIS OF COMPARISON BETWEEN VARIOUS TYPES OF HEATNG AND COOLING SYSTEMS. ACTUAL VALUES MAY VARY DEPENDING ON ACTUAL WEATHER CONDITIONS AND INDIVIDUAL USAGE PATTERN.

REGION 4 60UHPQB/BC60B
HEAT PUMP MODEL: OUTDOOR 60UHPQB INDOOR BC60B
ARI RATED COOLING CAP.: BTUH(95) 57500, SEER10.30
ARI RATED HEATING CAP.: BTUH (47) 58000, COP(47) 3.20, HSPF 7.50 MIN.DHR REG IV
BTUH (17) 34500, COP(17) 2.20
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST S/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
70,000				
	.05	$ 829	1771	
	.06	$ 998	2127	
	.07	$ 1162	2482	
	.08	$ 1331	2838	
	.09	$ 1495	3193	
	.10	$ 1664	3549	
	.12	$ 1991	4260	
	.14	$ 2330	4971	BALANCE POINT 23 DEG.F.
	.16	$ 2657	5682	
80,000				
	.05	$ 964	2025	
	.06	$ 1156	2431	
	.07	$ 1354	2838	
	.08	$ 1546	3244	
	.09	$ 1737	3650	
	.10	$ 1929	4057	
	.12	$ 2319	4869	
	.14	$ 2702	5682	BALANCE POINT 26 DEG.F.
	.16	$ 3086	6494	
90,000				
	.05	$ 1117	2279	
	.06	$ 1342	2736	
	.07	$ 1563	3193	
	.08	$ 1788	3650	
	.09	$ 2014	4107	
	.10	$ 2240	4564	
	.12	$ 2685	5478	
	.14	$ 3131	6393	BALANCE POINT 29 DEG.F.
	.16	$ 3577	7307	
100,000				
	.05	$ 1269	2533	
	.06	$ 1529	3041	
	.07	$ 1783	3549	
	.08	$ 2042	4057	
	.09	$ 2290	4564	
	.10	$ 2544	5072	
	.12	$ 3052	6088	
	.14	$ 3566	7104	BALANCE POINT 32 DEG.F.
	.16	$ 4073	8119	
110,000				
	.05	$ 1455	2787	
	.06	$ 1749	3346	
	.07	$ 2036	3904	
	.08	$ 2330	4463	
	.09	$ 2629	5021	
	.10	$ 2917	5580	
	.12	$ 3498	6697	
	.14	$ 4085	7815	BALANCE POINT 34 DEG.F.
	.16	$ 4666	8932	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	
										<--ELECTRIC RATE $/KWH
$	223	267	312	357	401	446	535	625	714	<--THEORETICAL AIR CONDITIONING COST

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REGION 5 60UHPQB/BC60B
HEAT PUMP MODEL: OUTDOOR 60UHPQB INDOOR BC60B
ARI RATED COOLING CAP.: BTUH(95) 57500, SEER10.30
ARI RATED HEATING CAP.: BTUH (47) 58000, COP(47) 3.20, HSPF 7.50 MIN.DHR REG IV
BTUH (17) 34500, COP(17) 2.20
FURNACE TYPE ELECTRIC FURNACE EFFICIENCY 100.00 % AFUE

HEAT LOSS BTUH	ELEC. COST $/KWH	--- THEORETICAL ANNUAL HEATING COST --- HEAT PUMP WITH ELECTRIC HEAT	ELECTRIC HEAT ONLY	
80,000	.05	$ 1370	2476	
	.06	$ 1648	2977	
	.07	$ 1926	3471	
	.08	$ 2198	3965	
	.09	$ 2476	4465	
	.10	$ 2754	4959	
	.12	$ 3304	5954	
	.14	$ 3846	6942	BALANCE POINT 20 DEG.F.
	.16	$ 4403	7936	
90,000	.05	$ 1579	2789	
	.06	$ 1892	3345	
	.07	$ 2205	3902	
	.08	$ 2525	4465	
	.09	$ 2838	5022	
	.10	$ 3151	5578	
	.12	$ 3784	6698	
	.14	$ 4417	7811	BALANCE POINT 23 DEG.F.
	.16	$ 5050	8931	
100,000	.05	$ 1780	3095	
	.06	$ 2142	3721	
	.07	$ 2497	4340	
	.08	$ 2858	4959	
	.09	$ 3213	5578	
	.10	$ 3568	6197	
	.12	$ 4284	7443	
	.14	$ 5001	8681	BALANCE POINT 26 DEG.F.
	.16	$ 5717	9926	
110,000	.05	$ 2010	3408	
	.06	$ 2413	4090	
	.07	$ 2817	4771	
	.08	$ 3220	5453	
	.09	$ 3624	6135	
	.10	$ 4027	6823	
	.12	$ 4827	8187	
	.14	$ 5641	9550	BALANCE POINT 28 DEG.F.
	.16	$ 6448	10914	
130,000	.05	$ 2490	4027	
	.06	$ 2984	4834	
	.07	$ 3485	5641	
	.08	$ 3978	6448	
	.09	$ 4479	7255	
	.10	$ 4980	8062	
	.12	$ 5975	9676	
	.14	$ 6970	11289	BALANCE POINT 32 DEG.F.
	.16	$ 7964	12903	

ANNUAL AIR CONDITIONING COST WHEN COOLING LOAD IS SIZED TO MATCH COOLING CAPACITY OF HEAT PUMP

	.05	.06	.07	.08	.09	.10	.12	.14	.16	
										<--ELECTRIC RATE $/KWH
$	111	133	156	178	200	223	267	312	357	<--THEORETICAL AIR CONDITIONING COST

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