

General

Model	AE4450Z-AA1A	Unit of Measure	Fahrenheit
Condition	ASHRAE(R-404A)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	10K (18°F) SUPERHEAT	MotorType	CSIR

AE4450Z-AA1A

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)					
	90	100	110	120	130	140
-10	Btu/h	2280				
	Watts	449				
	Amps	6.33				
	Lb/h	25.8				
-5	Btu/h	2650	2420			
	Watts	464	477			
	Amps	6.40	6.46			
	Lb/h	32.2	31.4			
0	Btu/h	3030	2790	2520		
	Watts	480	496	511		
	Amps	6.47	6.55	6.63		
	Lb/h	38.6	37.7	36.3		
5	Btu/h	3450	3180	2890	2590	
	Watts	495	515	534	550	
	Amps	6.55	6.65	6.74	6.83	
	Lb/h	45.2	44.1	42.6	40.8	
10	Btu/h	3910	3610	3290	2960	2620
	Watts	510	533	556	576	593
	Amps	6.64	6.75	6.86	6.97	7.05
	Lb/h	52.1	50.8	49.1	47.1	44.9
15	Btu/h	4400	4060	3710	3350	2990
	Watts	524	551	578	602	624
	Amps	6.72	6.84	6.98	7.11	7.22
	Lb/h	59.3	57.8	56.0	53.8	51.5
20	Btu/h	4940	4560	4170	3770	3370
	Watts	537	568	598	627	653
	Amps	6.79	6.94	7.10	7.25	7.39
	Lb/h	67.1	65.4	63.3	61.0	58.5
25	Btu/h	5520	5100	4670	4230	3790
	Watts	548	583	617	651	682
	Amps	6.86	7.03	7.21	7.39	7.56
	Lb/h	75.5	73.5	71.3	68.8	66.1
30	Btu/h	6150	5680	5200	4720	4230
	Watts	558	596	635	673	709
	Amps	6.92	7.11	7.31	7.52	7.72
	Lb/h	84.5	82.4	79.9	77.2	74.3
35	Btu/h	6840	6320	5790	5250	4710
	Watts	565	607	651	694	734
	Amps	6.97	7.18	7.41	7.64	7.87
	Lb/h	94.5	92.0	89.3	86.4	83.3
40	Btu/h	7590	7010	6420	5830	5230
	Watts	569	616	664	712	757
	Amps	7.00	7.23	7.49	7.76	8.02
	Lb/h	105	103	99.7	96.5	93.2
45	Btu/h	8400	7750	7110	6450	5800
	Watts	571	622	674	727	778
	Amps	7.02	7.27	7.56	7.85	8.15
	Lb/h	117	114	111	108	104
50	Btu/h	9270	8560	7850	7130	6410
	Watts	569	624	682	739	796
	Amps	7.01	7.29	7.61	7.93	8.27
	Lb/h	130	127	124	120	116
55	Btu/h	10200	9440	8650	7870	7080
	Watts	563	623	685	748	810
	Amps	6.98	7.29	7.63	8.00	8.36
	Lb/h	145	141	137	133	129

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.983499E+03	5.342833E+02	8.235118E+00	1.796611E+01
C2	1.315392E+02	-5.066300E-02	1.760578E-02	1.746509E+00

C3	7.208490E+00 -4.980527E+00 -6.663021E-02 6.238849E-01
C4	1.454055E+00 -2.444171E-02 -1.360230E-04 5.649914E-03
C5	-6.635379E-01 7.326960E-03 -2.971893E-04 -6.488840E-03
C6	-2.462178E-01 7.202048E-02 7.466024E-04 -5.403459E-03
C7	5.452546E-03 -4.856696E-04 -3.737240E-06 1.502571E-04
C8	-9.406365E-03 2.467403E-04 2.480702E-06 -2.717960E-05
C9	1.106216E-03 3.081478E-04 3.063013E-06 1.694688E-05
C10	5.446220E-04 -2.603975E-04 -2.485634E-06 1.133719E-05

Value = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3

Te = Evaporator Temperature

Tc = Condensing Temperature

AE4450Z-AA1A

General

Performance Data Sheet

Model	AE4450Z-AA1A	Unit of Measure	Fahrenheit
Condition	ASHRAE(R-448A)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	10K (18°F) SUPERHEAT	MotorType	CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)					
	90	100	110	120	130	140
-10	Btu/h 2230					
	Watts 411					
	Amps 5.98					
	Lb/h 19.8					
-5	Btu/h 2580 2360					
	Watts 425 438					
	Amps 6.04 6.11					
	Lb/h 24.7 24.0					
0	Btu/h 2960 2720 2460					
	Watts 440 455 469					
	Amps 6.12 6.19 6.27					
	Lb/h 29.6 28.9 27.8					
5	Btu/h 3370 3100 2820 2530					
	Watts 454 472 489 504					
	Amps 6.19 6.28 6.37 6.45					
	Lb/h 34.6 33.8 32.6 31.2					
10	Btu/h 3810 3520 3210 2890 2560					
	Watts 467 489 510 528 544					
	Amps 6.27 6.37 6.48 6.58 6.66					
	Lb/h 39.9 38.9 37.6 36.1 34.4					
15	Btu/h 4290 3970 3620 3270 2910 2550					
	Watts 480 505 529 552 572 587					
	Amps 6.35 6.47 6.59 6.72 6.82 6.89					
	Lb/h 45.5 44.3 42.9 41.3 39.5 37.5					
20	Btu/h 4820 4450 4070 3680 3290 2890					
	Watts 492 520 548 575 599 618					
	Amps 6.42 6.55 6.70 6.85 6.98 7.08					
	Lb/h 51.4 50.1 48.5 46.8 44.8 42.8					
25	Btu/h 5390 4980 4550 4130 3690 3260					
	Watts 503 534 566 597 625 649					
	Amps 6.48 6.64 6.81 6.98 7.14 7.27					
	Lb/h 57.8 56.3 54.6 52.7 50.6 48.5					
30	Btu/h 6000 5550 5080 4600 4130 3650					
	Watts 511 546 582 617 650 679					
	Amps 6.54 6.72 6.91 7.11 7.29 7.45					
	Lb/h 64.8 63.1 61.2 59.1 56.9 54.7					
35	Btu/h 6670 6160 5650 5120 4600 4070					
	Watts 518 557 597 636 673 707					
	Amps 6.58 6.78 7.00 7.22 7.44 7.63					
	Lb/h 72.4 70.5 68.5 66.2 63.9 61.4					
40	Btu/h 7400 6840 6260 5690 5110 4530					
	Watts 522 565 609 652 694 733					
	Amps 6.61 6.83 7.08 7.33 7.58 7.80					
	Lb/h 80.7 78.7 76.4 74.0 71.5 68.9					
45	Btu/h 8190 7570 6930 6300 5660 5030					
	Watts 523 570 618 666 713 757					
	Amps 6.63 6.87 7.14 7.42 7.70 7.96					
	Lb/h 89.9 87.6 85.1 82.5 79.8 77.1					
50	Btu/h 9050 8360 7660 6960 6260 5560					
	Watts 521 572 625 678 730 779					
	Amps 6.62 6.89 7.19 7.50 7.81 8.11					
	Lb/h 99.9 97.4 94.7 91.9 89.0 86.1					
55	Btu/h 9970 9210 8440 7680 6910 6150					
	Watts 516 571 628 686 743 797					
	Amps 6.59 6.89 7.21 7.55 7.90 8.24					
	Lb/h 111 108 105 102 99.2 96.1					

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.886612E+03	4.898212E+02	7.780413E+00	1.376783E+01
C2	1.283418E+02	-4.633204E-02	1.663412E-02	1.338386E+00
C3	7.033294E+00	-4.566053E+00	-6.295126E-02	4.780951E-01
C4	1.418660E+00	-2.240991E-02	-1.285145E-04	4.329734E-03
C5	-6.474010E-01	6.716770E-03	-2.807861E-04	-4.972572E-03
C6	-2.402316E-01	6.602724E-02	7.053801E-04	-4.140768E-03
C7	5.320280E-03	-4.452433E-04	-3.530949E-06	1.151440E-04
C8	-9.177650E-03	2.262123E-04	2.343807E-06	-2.082791E-05
C9	1.079318E-03	2.825066E-04	2.893890E-06	1.298677E-05
C10	5.313811E-04	-2.387285E-04	-2.348394E-06	8.687879E-06

Value = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3

Te = Evaporator Temperature

Tc = Condensing Temperature

AE4450Z-AA1A

General

Performance Data Sheet

Model	AE4450Z-AA1A	Unit of Measure	Fahrenheit
Condition	ASHRAE(R-449A)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	10K (18°F) SUPERHEAT	MotorType	CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)					
	90	100	110	120	130	140
-10	Btu/h 2230					
	Watts 411					
	Amps 5.98					
	Lb/h 19.8					
-5	Btu/h 2580 2360					
	Watts 425 438					
	Amps 6.04 6.11					
	Lb/h 24.7 24.0					
0	Btu/h 2960 2720 2460					
	Watts 440 455 469					
	Amps 6.12 6.19 6.27					
	Lb/h 29.6 28.9 27.8					
5	Btu/h 3370 3100 2820 2530					
	Watts 454 472 489 504					
	Amps 6.19 6.28 6.37 6.45					
	Lb/h 34.6 33.8 32.6 31.2					
10	Btu/h 3810 3520 3210 2890 2560					
	Watts 467 489 510 528 544					
	Amps 6.27 6.37 6.48 6.58 6.66					
	Lb/h 39.9 38.9 37.6 36.1 34.4					
15	Btu/h 4290 3970 3620 3270 2910 2550					
	Watts 480 505 529 552 572 587					
	Amps 6.35 6.47 6.59 6.72 6.82 6.89					
	Lb/h 45.5 44.3 42.9 41.3 39.5 37.5					
20	Btu/h 4820 4450 4070 3680 3290 2890					
	Watts 492 520 548 575 599 618					
	Amps 6.42 6.55 6.70 6.85 6.98 7.08					
	Lb/h 51.4 50.1 48.5 46.8 44.8 42.8					
25	Btu/h 5390 4980 4550 4130 3690 3260					
	Watts 503 534 566 597 625 649					
	Amps 6.48 6.64 6.81 6.98 7.14 7.27					
	Lb/h 57.8 56.3 54.6 52.7 50.6 48.5					
30	Btu/h 6000 5550 5080 4600 4130 3650					
	Watts 511 546 582 617 650 679					
	Amps 6.54 6.72 6.91 7.11 7.29 7.45					
	Lb/h 64.8 63.1 61.2 59.1 56.9 54.7					
35	Btu/h 6670 6160 5650 5120 4600 4070					
	Watts 518 557 597 636 673 707					
	Amps 6.58 6.78 7.00 7.22 7.44 7.63					
	Lb/h 72.4 70.5 68.5 66.2 63.9 61.4					
40	Btu/h 7400 6840 6260 5690 5110 4530					
	Watts 522 565 609 652 694 733					
	Amps 6.61 6.83 7.08 7.33 7.58 7.80					
	Lb/h 80.7 78.7 76.4 74.0 71.5 68.9					
45	Btu/h 8190 7570 6930 6300 5660 5030					
	Watts 523 570 618 666 713 757					
	Amps 6.63 6.87 7.14 7.42 7.70 7.96					
	Lb/h 89.9 87.6 85.1 82.5 79.8 77.1					
50	Btu/h 9050 8360 7660 6960 6260 5560					
	Watts 521 572 625 678 730 779					
	Amps 6.62 6.89 7.19 7.50 7.81 8.11					
	Lb/h 99.9 97.4 94.7 91.9 89.0 86.1					
55	Btu/h 9970 9210 8440 7680 6910 6150					
	Watts 516 571 628 686 743 797					
	Amps 6.59 6.89 7.21 7.55 7.90 8.24					
	Lb/h 111 108 105 102 99.2 96.1					

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.886612E+03	4.898212E+02	7.780413E+00	1.376783E+01
C2	1.283418E+02	-4.633204E-02	1.663412E-02	1.338386E+00
C3	7.033294E+00	-4.566053E+00	-6.295126E-02	4.780951E-01
C4	1.418660E+00	-2.240991E-02	-1.285145E-04	4.329734E-03
C5	-6.474010E-01	6.716770E-03	-2.807861E-04	-4.972572E-03
C6	-2.402316E-01	6.602724E-02	7.053801E-04	-4.140768E-03
C7	5.320280E-03	-4.452433E-04	-3.530949E-06	1.151440E-04
C8	-9.177650E-03	2.262123E-04	2.343807E-06	-2.082791E-05
C9	1.079318E-03	2.825066E-04	2.893890E-06	1.298677E-05
C10	5.313811E-04	-2.387285E-04	-2.348394E-06	8.687879E-06

Value = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3

Te = Evaporator Temperature

Tc = Condensing Temperature

AE4450Z-AA1A

General

Performance Data Sheet

Model	AE4450Z-AA1A	Unit of Measure	Fahrenheit
Condition	ASHRAE(R-452A)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	10K (18°F) SUPERHEAT	MotorType	CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)					
	90	100	110	120	130	140
-10	Btu/h 2160					
	Watts 430					
	Amps 6.02					
	Lb/h 23.8					
-5	Btu/h 2500 2290					
	Watts 444 457					
	Amps 6.09 6.15					
	Lb/h 29.7 29.0					
0	Btu/h 2870 2630 2380					
	Watts 459 475 489					
	Amps 6.16 6.24 6.31					
	Lb/h 35.7 34.8 33.5					
5	Btu/h 3270 3010 2730 2450					
	Watts 474 493 511 527					
	Amps 6.24 6.33 6.42 6.50					
	Lb/h 41.8 40.7 39.3 37.7					
10	Btu/h 3700 3410 3110 2800 2480					
	Watts 488 510 532 552 568					
	Amps 6.32 6.42 6.53 6.63 6.71					
	Lb/h 48.1 46.9 45.4 43.5 41.5					
15	Btu/h 4160 3840 3510 3170 2820 2470					
	Watts 502 527 553 577 597 613					
	Amps 6.39 6.51 6.64 6.77 6.87 6.94					
	Lb/h 54.8 53.4 51.7 49.8 47.6 45.3					
20	Btu/h 4670 4310 3940 3570 3190 2800					
	Watts 514 543 573 600 625 646					
	Amps 6.46 6.60 6.75 6.90 7.03 7.13					
	Lb/h 62.0 60.4 58.5 56.4 54.1 51.6					
25	Btu/h 5220 4820 4410 4000 3580 3160					
	Watts 525 558 591 623 653 678					
	Amps 6.53 6.69 6.86 7.03 7.19 7.32					
	Lb/h 69.7 67.9 65.9 63.5 61.1 58.5					
30	Btu/h 5820 5370 4920 4460 4000 3540					
	Watts 534 571 608 645 679 709					
	Amps 6.59 6.77 6.96 7.16 7.35 7.51					
	Lb/h 78.1 76.1 73.8 71.3 68.7 65.9					
35	Btu/h 6470 5970 5470 4960 4450 3950					
	Watts 541 581 623 664 703 738					
	Amps 6.63 6.83 7.05 7.28 7.49 7.69					
	Lb/h 87.3 85.1 82.6 79.8 77.0 74.1					
40	Btu/h 7170 6620 6070 5510 4950 4390					
	Watts 545 590 636 681 725 766					
	Amps 6.66 6.88 7.13 7.38 7.63 7.86					
	Lb/h 97.4 94.9 92.1 89.2 86.2 83.1					
45	Btu/h 7940 7330 6720 6100 5480 4870					
	Watts 546 595 645 696 745 791					
	Amps 6.68 6.92 7.19 7.48 7.76 8.02					
	Lb/h 108 106 103 99.5 96.3 93.0					
50	Btu/h 8770 8100 7420 6740 6060 5390					
	Watts 544 597 652 708 762 813					
	Amps 6.67 6.94 7.24 7.55 7.87 8.17					
	Lb/h 121 117 114 111 107 104					
55	Btu/h 9660 8920 8180 7440 6690 5960					
	Watts 539 596 656 716 776 833					
	Amps 6.64 6.94 7.26 7.61 7.96 8.30					
	Lb/h 134 131 127 123 120 116					

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.765567E+03	5.114748E+02	7.837848E+00	1.660380E+01
C2	1.243403E+02	-4.866669E-02	1.675738E-02	1.614070E+00
C3	6.813910E+00	-4.767887E+00	-6.341591E-02	5.765713E-01
C4	1.374523E+00	-2.339437E-02	-1.294785E-04	5.221421E-03
C5	-6.272234E-01	7.014560E-03	-2.828590E-04	-5.996789E-03
C6	-2.327459E-01	6.894556E-02	7.105869E-04	-4.993679E-03
C7	5.154034E-03	-4.649626E-04	-3.556852E-06	1.388630E-04
C8	-8.891743E-03	2.361995E-04	2.361097E-06	-2.511839E-05
C9	1.045672E-03	2.949925E-04	2.915260E-06	1.566180E-05
C10	5.148248E-04	-2.492800E-04	-2.365729E-06	1.047740E-05

$$\text{Value} = C1 + C2 * \text{Te} + C4 * \text{Te}^2 + C7 * \text{Te}^3 + (C3 + C5 * \text{Te} + C8 * \text{Te}^2) * \text{Tc} + (C6 + C9 * \text{Te}) * \text{Tc}^2 + C10 * \text{Tc}^3$$

Te = Evaporator Temperature

Tc = Condensing Temperature