

AE3440Y-AA1A

General

Model	AE3440Y-AA1A	Unit of Measure	Celsius
Condition	ASHRAE (R-134a)	Voltage/Frequency	115V~60HZ
RETURN GAS	35°C (95°F) RETURN GAS	MotorType	RSIR

Performance Information

EVAP TEMP (°C)	Condensing Temperature (°C)								
		30	35	40	45	50	55	60	65
-15	Btu/h	2090	2030	1900	1730	1530	1300	1060	818
	Watts (Power)	326	344	356	362	363	359	352	341
	Amps	4.73	4.81	4.86	4.88	4.89	4.87	4.83	4.77
	Lb/h	27.6	27.9	27.3	25.9	23.9	21.5	18.8	16.0
-10	Btu/h	2630	2540	2400	2220	2010	1780	1540	1310
	Watts (Power)	348	370	387	398	405	409	409	406
	Amps	4.85	4.94	5.01	5.07	5.11	5.13	5.13	5.12
	Lb/h	34.6	35.0	34.5	33.4	31.7	29.6	27.3	24.9
-6.7	Btu/h	3030	2920	2760	2570	2340	2100	1860	1620
	Watts (Power)	360	385	405	420	431	439	445	448
	Amps	4.92	5.02	5.11	5.19	5.25	5.30	5.34	5.36
	Lb/h	39.8	40.2	39.8	38.7	37.1	35.1	33.0	30.8
-5	Btu/h	3260	3130	2960	2750	2520	2270	2020	1780
	Watts (Power)	365	392	414	431	444	454	462	468
	Amps	4.95	5.06	5.16	5.25	5.33	5.39	5.45	5.49
	Lb/h	42.8	43.2	42.7	41.6	40.0	38.1	36.0	33.9
0	Btu/h	4010	3840	3620	3360	3090	2810	2530	2260
	Watts (Power)	377	409	436	459	479	497	512	527
	Amps	5.03	5.17	5.30	5.42	5.54	5.66	5.76	5.86
	Lb/h	53.0	53.1	52.5	51.2	49.6	47.7	45.6	43.6
5	Btu/h	4940	4690	4410	4090	3760	3430	3100	2800
	Watts (Power)	384	421	453	482	509	535	559	582
	Amps	5.09	5.25	5.42	5.58	5.74	5.91	6.07	6.23
	Lb/h	65.8	65.5	64.5	63.0	61.1	58.9	56.8	54.7
7.2	Btu/h	5410	5120	4810	4460	4100	3740	3390	3060
	Watts (Power)	386	424	459	491	521	550	578	605
	Amps	5.10	5.28	5.46	5.64	5.83	6.01	6.20	6.39
	Lb/h	72.3	71.8	70.6	68.9	66.9	64.6	62.4	60.2
10	Btu/h	6070	5730	5370	4980	4580	4180	3790	3420
	Watts (Power)	386	427	465	501	535	568	601	634
	Amps	5.11	5.31	5.51	5.71	5.92	6.14	6.36	6.58
	Lb/h	81.7	80.9	79.4	77.4	75.1	72.6	70.2	67.9
15	Btu/h	7440	7000	6540	6060	5570	5090	4620	4180
	Watts (Power)	382	428	473	515	557	598	639	681
	Amps	5.09	5.32	5.56	5.81	6.07	6.35	6.63	6.92

	Lb/h	102	100	97.8	95.2	92.3	89.3	86.4	83.7
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COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.514208E+03	6.121181E+01	4.087427E+00	2.742491E+01
C2	2.609142E+02	-1.036815E+00	5.640049E-03	2.884171E+00
C3	7.712297E+01	1.511721E+01	3.478912E-02	1.789757E+00
C4	5.296108E+00	-1.312147E-01	-9.296392E-04	7.199246E-02
C5	-3.710412E+00	1.885211E-02	-3.817657E-04	-2.710205E-02
C6	-2.473886E+00	-1.784463E-01	-1.062605E-04	-3.770002E-02
C7	5.080666E-02	-3.029133E-04	-9.933185E-06	8.730743E-04
C8	-6.512694E-02	9.140330E-04	1.316334E-05	-6.807233E-04
C9	1.914502E-02	2.650618E-03	2.207234E-05	2.215717E-04
C10	1.523950E-02	8.637775E-04	-1.448160E-07	2.153742E-04

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



Performance Data Sheet

AE3440Y-AA1A

General

Model	AE3440Y-AA1A	Unit of Measure	Fahrenheit
Condition	ASHRAE (R-134a)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	35°C (95°F) RETURN GAS	Motor Type	RSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)								
		80	90	100	110	120	130	140	150
5	Btu/h	2100	2070	1960	1790	1580	1330	1060	792
	Watts	311	335	352	361	363	360	352	340
	Amps	4.67	4.77	4.84	4.88	4.89	4.87	4.83	4.76
	Lb/h	26.8	27.9	27.7	26.4	24.4	21.8	18.8	15.7
10	Btu/h	2390	2350	2240	2060	1840	1590	1330	1070
	Watts	322	349	368	380	386	387	384	377
	Amps	4.73	4.84	4.92	4.97	5.01	5.01	5.00	4.96
	Lb/h	30.5	31.7	31.6	30.5	28.6	26.3	23.5	20.7
15	Btu/h	2720	2660	2530	2340	2110	1860	1600	1340
	Watts	332	361	383	399	408	414	415	413
	Amps	4.79	4.90	5.00	5.07	5.12	5.16	5.17	5.16
	Lb/h	34.6	35.7	35.7	34.7	33.0	30.7	28.2	25.7
20	Btu/h	3070	2990	2840	2640	2400	2130	1860	1600
	Watts	340	372	397	416	429	439	445	448
	Amps	4.84	4.97	5.07	5.17	5.24	5.30	5.34	5.37
	Lb/h	39.1	40.2	40.1	39.2	37.5	35.4	33.0	30.6
25	Btu/h	3470	3360	3180	2960	2690	2410	2130	1860
	Watts	347	381	409	432	449	463	474	483
	Amps	4.89	5.02	5.15	5.26	5.36	5.44	5.52	5.58
	Lb/h	44.2	45.1	45.0	44.0	42.4	40.3	38.0	35.8
30	Btu/h	3910	3770	3560	3300	3020	2710	2410	2120
	Watts	352	389	420	446	468	486	502	516
	Amps	4.92	5.07	5.22	5.35	5.47	5.59	5.69	5.79
	Lb/h	49.9	50.7	50.5	49.4	47.7	45.6	43.4	41.2
35	Btu/h	4400	4220	3970	3680	3370	3040	2710	2400
	Watts	356	396	430	459	485	508	528	548
	Amps	4.95	5.12	5.28	5.43	5.58	5.73	5.86	6.00
	Lb/h	56.4	57.0	56.6	55.4	53.6	51.4	49.1	46.9
40	Btu/h	4960	4720	4440	4110	3760	3390	3040	2700
	Watts	358	400	438	471	501	528	554	579
	Amps	4.97	5.15	5.33	5.51	5.69	5.86	6.03	6.20
	Lb/h	63.9	64.2	63.5	62.1	60.1	57.8	55.4	53.2
45	Btu/h	5570	5290	4960	4580	4190	3790	3390	3030
	Watts	358	403	444	481	515	547	578	609
	Amps	4.98	5.18	5.38	5.58	5.79	5.99	6.20	6.41

	Lb/h	72.3	72.3	71.3	69.6	67.4	64.9	62.4	60.0
50	Btu/h	6260	5920	5530	5110	4670	4220	3790	3380
	Watts	356	405	449	490	528	565	601	637
	Amps	4.98	5.20	5.42	5.64	5.88	6.11	6.36	6.61
	Lb/h	81.9	81.4	80.1	78.1	75.6	72.9	70.2	67.6
55	Btu/h	7030	6630	6180	5700	5200	4710	4230	3780
	Watts	353	404	452	497	539	581	622	665
	Amps	4.96	5.20	5.44	5.69	5.96	6.23	6.51	6.80
	Lb/h	92.7	91.8	90.0	87.6	84.8	81.8	78.8	76.0

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	-2.888787E+03	-3.041961E+02	2.779282E+00	-5.693043E+01
C2	8.423741E+01	2.456514E+00	2.853288E-02	7.076668E-01
C3	1.316743E+02	1.328341E+01	3.518282E-02	2.078409E+00
C4	1.155627E+00	-4.052740E-02	-1.956433E-04	1.158341E-02
C5	-6.405861E-01	-3.329970E-02	-5.045031E-04	-3.326130E-03
C6	-1.119449E+00	-8.383843E-02	-1.515229E-04	-1.639682E-02
C7	8.711705E-03	-5.193986E-05	-1.703221E-06	1.497041E-04
C8	-1.116717E-02	1.567272E-04	2.257089E-06	-1.167221E-04
C9	3.282753E-03	4.544955E-04	3.784695E-06	3.799241E-05
C10	2.613083E-03	1.481100E-04	-2.483128E-08	3.692973E-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



Performance Data Sheet

AE3440Y-AA1A

General

Model	AE3440Y-AA1A	Unit of Measure	Fahrenheit
Condition	ASHRAE (R-513A)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	35°C (95°F) RETURN GAS	Motor Type	RSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)								
		80	90	100	110	120	130	140	150
5	Btu/h	2410	2380	2260	2070	1820	1530	1220	912
	Watts	337	363	381	391	393	390	381	368
	Amps	4.91	5.02	5.09	5.13	5.14	5.13	5.08	5.00
	Lb/h	29.2	30.3	30.1	28.8	26.6	23.8	20.5	17.1
10	Btu/h	2760	2710	2580	2380	2120	1840	1530	1230
	Watts	349	378	399	412	419	420	416	409
	Amps	4.98	5.09	5.17	5.23	5.27	5.27	5.26	5.21
	Lb/h	33.3	34.5	34.4	33.2	31.2	28.6	25.6	22.6
15	Btu/h	3130	3060	2910	2700	2440	2140	1840	1540
	Watts	360	391	415	432	443	448	450	448
	Amps	5.04	5.16	5.26	5.33	5.39	5.42	5.44	5.43
	Lb/h	37.7	38.9	38.9	37.8	35.9	33.5	30.8	28.0
20	Btu/h	3540	3450	3270	3040	2760	2450	2140	1840
	Watts	369	403	430	451	465	476	482	486
	Amps	5.09	5.22	5.34	5.43	5.51	5.58	5.62	5.65
	Lb/h	42.6	43.8	43.7	42.7	40.9	38.6	36.0	33.4
25	Btu/h	3990	3870	3670	3400	3100	2780	2450	2140
	Watts	376	413	444	468	487	502	513	523
	Amps	5.14	5.28	5.41	5.53	5.64	5.73	5.80	5.87
	Lb/h	48.1	49.2	49.0	48.0	46.2	43.9	41.4	39.0
30	Btu/h	4500	4340	4100	3800	3470	3120	2780	2440
	Watts	382	422	455	483	507	527	544	559
	Amps	5.18	5.34	5.49	5.63	5.76	5.88	5.99	6.09
	Lb/h	54.4	55.3	55.0	53.8	52.0	49.7	47.2	44.8
35	Btu/h	5070	4860	4580	4240	3880	3500	3120	2770
	Watts	386	429	466	498	525	550	572	594
	Amps	5.21	5.38	5.55	5.71	5.87	6.02	6.17	6.31
	Lb/h	61.5	62.1	61.7	60.3	58.4	56.0	53.5	51.1
40	Btu/h	5710	5440	5110	4730	4320	3910	3500	3110
	Watts	388	434	474	510	543	572	600	627
	Amps	5.23	5.42	5.61	5.80	5.98	6.16	6.35	6.52
	Lb/h	69.6	69.9	69.2	67.6	65.5	63.0	60.4	57.9
45	Btu/h	6420	6090	5710	5280	4820	4360	3910	3490
	Watts	388	437	481	521	558	593	626	660
	Amps	5.24	5.45	5.66	5.87	6.09	6.30	6.52	6.74

	Lb/h	78.8	78.7	77.7	75.8	73.4	70.7	68.0	65.4
50	Btu/h	7210	6820	6370	5880	5370	4860	4360	3900
	Watts	386	439	486	531	572	612	651	691
	Amps	5.24	5.46	5.70	5.94	6.18	6.43	6.69	6.95
	Lb/h	89.2	88.7	87.3	85.1	82.4	79.4	76.4	73.7
55	Btu/h	8100	7630	7120	6560	5990	5420	4870	4360
	Watts	383	438	490	538	585	630	675	720
	Amps	5.22	5.47	5.72	5.99	6.27	6.55	6.85	7.16
	Lb/h	101	100	98.1	95.5	92.4	89.1	85.8	82.8

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	-3.326747E+03	-3.296663E+02	2.923118E+00	-6.200943E+01
C2	9.700838E+01	2.662197E+00	3.000954E-02	7.708007E-01
C3	1.516370E+02	1.439562E+01	3.700363E-02	2.263833E+00
C4	1.330828E+00	-4.392074E-02	-2.057684E-04	1.261681E-02
C5	-7.377033E-01	-3.608787E-02	-5.306126E-04	-3.622868E-03
C6	-1.289165E+00	-9.085817E-02	-1.593647E-04	-1.785965E-02
C7	1.003246E-02	-5.628876E-05	-1.791368E-06	1.630598E-04
C8	-1.286019E-02	1.698499E-04	2.373900E-06	-1.271354E-04
C9	3.780441E-03	4.925502E-04	3.980564E-06	4.138187E-05
C10	3.009244E-03	1.605112E-04	-2.611636E-08	4.022439E-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



Performance Data Sheet

AE3440Y-AA1A

General

Model	AE3440Y-AA1A	Unit of Measure	Fahrenheit
Condition	EN12900 (R-134a)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	20°C (68°F) RETURN GAS	MotorType	RSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)								
		80	90	100	110	120	130	140	150
5	Btu/h	2100	2070	1960	1790	1580	1330	1060	792
	Watts	311	335	352	361	363	360	352	340
	Amps	4.67	4.77	4.84	4.88	4.89	4.87	4.83	4.76
	Lb/h	26.8	27.9	27.7	26.4	24.4	21.8	18.8	15.7
10	Btu/h	2390	2350	2240	2060	1840	1590	1330	1070
	Watts	322	349	368	380	386	387	384	377
	Amps	4.73	4.84	4.92	4.97	5.01	5.01	5.00	4.96
	Lb/h	30.5	31.7	31.6	30.5	28.6	26.3	23.5	20.7
15	Btu/h	2720	2660	2530	2340	2110	1860	1600	1340
	Watts	332	361	383	399	408	414	415	413
	Amps	4.79	4.90	5.00	5.07	5.12	5.16	5.17	5.16
	Lb/h	34.6	35.7	35.7	34.7	33.0	30.7	28.2	25.7
20	Btu/h	3070	2990	2840	2640	2400	2130	1860	1600
	Watts	340	372	397	416	429	439	445	448
	Amps	4.84	4.97	5.07	5.17	5.24	5.30	5.34	5.37
	Lb/h	39.1	40.2	40.1	39.2	37.5	35.4	33.0	30.6
25	Btu/h	3470	3360	3180	2960	2690	2410	2130	1860
	Watts	347	381	409	432	449	463	474	483
	Amps	4.89	5.02	5.15	5.26	5.36	5.44	5.52	5.58
	Lb/h	44.2	45.1	45.0	44.0	42.4	40.3	38.0	35.8
30	Btu/h	3910	3770	3560	3300	3020	2710	2410	2120
	Watts	352	389	420	446	468	486	502	516
	Amps	4.92	5.07	5.22	5.35	5.47	5.59	5.69	5.79
	Lb/h	49.9	50.7	50.5	49.4	47.7	45.6	43.4	41.2
35	Btu/h	4400	4220	3970	3680	3370	3040	2710	2400
	Watts	356	396	430	459	485	508	528	548
	Amps	4.95	5.12	5.28	5.43	5.58	5.73	5.86	6.00
	Lb/h	56.4	57.0	56.6	55.4	53.6	51.4	49.1	46.9
40	Btu/h	4960	4720	4440	4110	3760	3390	3040	2700
	Watts	358	400	438	471	501	528	554	579
	Amps	4.97	5.15	5.33	5.51	5.69	5.86	6.03	6.20
	Lb/h	63.9	64.2	63.5	62.1	60.1	57.8	55.4	53.2
45	Btu/h	5570	5290	4960	4580	4190	3790	3390	3030
	Watts	358	403	444	481	515	547	578	609
	Amps	4.98	5.18	5.38	5.58	5.79	5.99	6.20	6.41

	Lb/h	72.3	72.3	71.3	69.6	67.4	64.9	62.4	60.0
50	Btu/h	6260	5920	5530	5110	4670	4220	3790	3380
	Watts	356	405	449	490	528	565	601	637
	Amps	4.98	5.20	5.42	5.64	5.88	6.11	6.36	6.61
	Lb/h	81.9	81.4	80.1	78.1	75.6	72.9	70.2	67.6
55	Btu/h	7030	6630	6180	5700	5200	4710	4230	3780
	Watts	353	404	452	497	539	581	622	665
	Amps	4.96	5.20	5.44	5.69	5.96	6.23	6.51	6.80
	Lb/h	92.7	91.8	90.0	87.6	84.8	81.8	78.8	76.0

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	-2.888787E+03	-3.041961E+02	2.779282E+00	-5.693043E+01
C2	8.423741E+01	2.456514E+00	2.853288E-02	7.076668E-01
C3	1.316743E+02	1.328341E+01	3.518282E-02	2.078409E+00
C4	1.155627E+00	-4.052740E-02	-1.956433E-04	1.158341E-02
C5	-6.405861E-01	-3.329970E-02	-5.045031E-04	-3.326130E-03
C6	-1.119449E+00	-8.383843E-02	-1.515229E-04	-1.639682E-02
C7	8.711705E-03	-5.193986E-05	-1.703221E-06	1.497041E-04
C8	-1.116717E-02	1.567272E-04	2.257089E-06	-1.167221E-04
C9	3.282753E-03	4.544955E-04	3.784695E-06	3.799241E-05
C10	2.613083E-03	1.481100E-04	-2.483127E-08	3.692973E-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

Model: AE3440Y-AA1A

Product Description

Type:	Reciprocating Compressors
Application:	HBP/CBP - High/Commercial Back Pressure
Refrigerant:	R-134a/R-513A
Voltage/Frequency:	115V ~ 60Hz
Version:	N/A



Product Specifications

Performance

Condition	Test Voltage	Refrigeration Capacity			Input Power (I) W	(E) Efficiency			EVAP TEMP	Condition	AMBIENT TEMP	RETURN GAS	LIQUID TEMP
		(R) Btu/h	(R) kcal/h	(R) W		(E) Btu/Wh	(E) kcal/Wh	W/W					
ASHRAE (R-134a)	115V ~ 60HZ	4350	1096	1275	555	7.84	1.98	2.3	7.2°C (45°F)	54°C (130°F)	35°C (95°F)	35°C (95°F)	46°C (115°F)
ASHRAE (R-513A)	115V ~ 60HZ	4365	1100	1279	593	7.36	1.86	2.16	7.2°C (45°F)	54°C (130°F)	35°C (95°F)	35°C (95°F)	46°C (115°F)

General

Evaporating Temp. Range:	-15°C to 15°C (5°F to 59°F)
Motor Torque:	Low Start Torque (LST)
Compressor Cooling:	Fan

Mechanical

Weight:	10
Weight Unit of Measure:	KG
Displacement (cc):	10.33
Oil Type:	Polyolester
Viscosity (cSt):	32
Oil Charge (cc):	280

Electrical

Voltage Range (50 Hz):	
Voltage Range (60 Hz):	103-127
Locked Rotor Amps (LRA):	43
Rated Load Amps (RLA 50 Hz):	0
Rated Load Amps (RLA 60 Hz):	6
Max. Continuous Current (MCC in Amps):	8.67
Motor Resistance (Ohm) - Main:	1.64
Motor Resistance (Ohm) - Start:	4.18
Motor Type:	RSIR
Overload Type:	
Relay Type:	

Agency Approval

CE Listed, cURus Recognized