

AE2413Y-AA1B

General

Model	AE2413Y-AA1B	Unit of Measure	Fahrenheit
Condition	ASHRAE (R-134a)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	4.4°C (40°F) RETURN GAS	Motor Type	CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)						
		90	100	110	120	130	140
-40	Btu/h	965	881	773	640	483	301
	Watts	14.7	13.7	12.4	10.6	8.38	5.78
	Amps	3.05	3.05	3.04	3.02	2.98	2.92
	Lb/h	236	235	232	227	220	211
-35	Btu/h	1000	924	822	695	545	370
	Watts	15.1	14.3	13.1	11.6	9.60	7.23
	Amps	3.02	3.04	3.03	3.02	2.99	2.95
	Lb/h	233	234	232	229	223	216
-30	Btu/h	1050	979	884	764	619	451
	Watts	15.6	15.0	14.1	12.8	11.0	8.86
	Amps	3.02	3.05	3.05	3.05	3.03	3.00
	Lb/h	233	236	236	234	231	225
-25	Btu/h	1110	1050	957	844	706	544
	Watts	16.3	15.9	15.2	14.1	12.6	10.7
	Amps	3.05	3.08	3.10	3.11	3.10	3.08
	Lb/h	237	241	243	243	241	237
-20	Btu/h	1180	1130	1040	935	804	648
	Watts	17.1	17.0	16.6	15.7	14.4	12.7
	Amps	3.10	3.15	3.18	3.20	3.20	3.19
	Lb/h	245	251	254	256	256	253
-15	Btu/h	1270	1210	1140	1040	912	763
	Watts	18.2	18.3	18.1	17.4	16.3	14.9
	Amps	3.19	3.24	3.29	3.31	3.33	3.33
	Lb/h	256	264	269	272	274	273
-10	Btu/h	1360	1310	1240	1150	1030	887
	Watts	19.4	19.8	19.8	19.3	18.5	17.3
	Amps	3.30	3.37	3.42	3.46	3.49	3.50
	Lb/h	271	280	287	292	295	296
-5	Btu/h	1460	1420	1360	1270	1160	1020
	Watts	20.8	21.5	21.7	21.5	20.9	19.9
	Amps	3.45	3.53	3.59	3.64	3.68	3.70
	Lb/h	290	300	309	315	320	322
0	Btu/h	1580	1540	1480	1400	1300	1160
	Watts	22.5	23.3	23.8	23.8	23.5	22.7
	Amps	3.62	3.71	3.79	3.85	3.90	3.93

	Lb/h	311	324	334	342	348	352
5	Btu/h	1700	1670	1620	1540	1440	1320
	Watts	24.3	25.4	26.1	26.4	26.2	25.7
	Amps	3.83	3.93	4.02	4.10	4.16	4.20
	Lb/h	336	350	362	372	380	386
10	Btu/h	1830	1800	1760	1690	1590	1470
	Watts	26.3	27.7	28.6	29.1	29.2	29.0
	Amps	4.08	4.19	4.29	4.37	4.45	4.50
	Lb/h	365	380	394	405	414	422

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	7.864991E+02	-3.166685E+00	2.205507E+00	1.136564E+02
C2	1.254601E+01	-7.635484E-02	1.769734E-02	1.776630E+00
C3	1.971679E+01	4.647652E-01	2.190417E-02	3.083948E+00
C4	1.756974E-01	3.712542E-03	6.206560E-04	6.838232E-02
C5	1.179678E-01	4.662142E-03	2.313115E-04	3.225572E-02
C6	-1.215877E-01	-1.997339E-03	-6.805250E-05	-9.858469E-03
C7	-8.272280E-04	6.015236E-06	1.098702E-06	-7.786672E-05
C8	-9.564636E-05	3.786777E-06	3.345090E-07	-1.409817E-05
C9	1.690926E-05	3.422818E-07	8.594180E-09	8.398517E-07
C10	1.707272E-07	-1.981182E-08	-1.477161E-09	4.755919E-08

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

AE2413Y-AA1B

General

Model	AE2413Y-AA1B	Unit of Measure	Celsius
Condition	ASHRAE (R-134a)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	32.2°C (90°F) RETURN GAS	Motor Type	CSIR

Performance Information

EVAP TEMP (°C)	Condensing Temperature (°C)							
		30	35	40	45	50	55	60
-40	Btu/h	791	767	703	611			
	Watts (Power)	147	152	158	167			
	Amps	4.18	3.64	3.09	2.51			
	Lb/h	8.70	8.26	8.48	9.29			
-35	Btu/h	1110	1060	975	858	723		
	Watts (Power)	171	177	184	193	203		
	Amps	4.58	4.08	3.55	2.98	2.36		
	Lb/h	12.3	11.5	11.2	11.4	12.1		
-30	Btu/h	1500	1420	1310	1170	1010	837	669
	Watts (Power)	197	204	212	222	234	247	262
	Amps	5.04	4.59	4.10	3.56	2.97	2.30	1.55
	Lb/h	16.5	15.5	15.0	14.8	15.0	15.6	16.4
-25	Btu/h	1950	1850	1710	1540	1350	1160	963
	Watts (Power)	224	233	243	255	269	284	300
	Amps	5.57	5.18	4.75	4.27	3.71	3.08	2.35
	Lb/h	21.2	20.2	19.6	19.3	19.2	19.4	19.8
-23.3	Btu/h	2120	2010	1860	1680	1480	1280	1080
	Watts (Power)	233	243	255	267	282	297	314
	Amps	5.77	5.41	5.00	4.54	4.00	3.38	2.67
	Lb/h	22.9	21.9	21.3	21.0	20.9	21.1	21.3
-20	Btu/h	2470	2340	2170	1970	1760	1540	1320
	Watts (Power)	252	264	278	292	308	325	343
	Amps	6.17	5.87	5.52	5.11	4.61	4.03	3.35
	Lb/h	26.1	25.3	24.8	24.6	24.5	24.6	24.7
-15	Btu/h	3060	2900	2700	2480	2240	1990	1740
	Watts (Power)	282	298	315	332	351	371	392
	Amps	6.87	6.68	6.42	6.10	5.68	5.17	4.55
	Lb/h	31.0	30.7	30.5	30.5	30.6	30.8	30.9
-10	Btu/h	3730	3540	3310	3060	2780	2500	2230
	Watts (Power)	314	334	354	376	398	422	446
	Amps	7.66	7.59	7.46	7.24	6.93	6.51	5.97
	Lb/h	35.7	36.0	36.4	36.9	37.4	37.8	38.2

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	5.543527E+03	2.152084E+02	6.921472E+00	3.106560E+01
C2	2.155390E+02	-4.383938E-01	-3.381614E-02	-1.148280E+00

C3	4.264251E+01	5.230761E+00	1.038221E-01	3.236000E-01
C4	1.798086E+00	-4.471862E-02	2.585498E-04	-4.232190E-02
C5	-1.458148E+00	2.734660E-01	9.460232E-03	7.078169E-02
C6	-2.082154E+00	1.167581E-02	-1.705303E-12	5.056250E-03
C7	3.492882E-03	2.239889E-05	1.427558E-05	-2.842995E-04
C8	-4.905720E-03	2.604279E-03	7.862473E-05	8.454451E-04
C9	1.535031E-03	-6.505212E-04	-3.673608E-05	-3.617551E-04
C10	1.301346E-02	1.705303E-13	-1.689812E-05	-6.320313E-05

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

Te = Evaporator Temperature

Tc = Condensing Temperature



Performance Data Sheet

AE2413Y-AA1B

General

Model	AE2413Y-AA1B	Unit of Measure	Fahrenheit
Condition	ASHRAE (R-513A)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	32.2°C (90°F) RETURN GAS	MotorType	CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)								
		80	90	100	110	120	130	140	150
-40	Btu/h	1310	1230	1120	985	816	616	384	121
	Watts	278	279	278	274	268	260	250	237
	Amps	3.42	3.44	3.44	3.43	3.40	3.35	3.29	3.22
	Lb/h	16.3	15.7	14.6	13.1	11.2	8.91	6.15	2.96
-35	Btu/h	1340	1280	1180	1050	887	695	472	217
	Watts	272	275	276	274	270	264	255	244
	Amps	3.38	3.41	3.42	3.42	3.40	3.37	3.32	3.26
	Lb/h	16.4	16.0	15.2	14.0	12.3	10.2	7.69	4.74
-30	Btu/h	1400	1340	1250	1130	974	790	575	329
	Watts	271	276	278	279	277	272	266	257
	Amps	3.37	3.41	3.43	3.44	3.44	3.42	3.38	3.33
	Lb/h	16.7	16.6	16.0	15.0	13.6	11.7	9.43	6.71
-25	Btu/h	1470	1420	1330	1220	1080	901	694	456
	Watts	274	280	285	287	287	285	280	273
	Amps	3.38	3.44	3.47	3.50	3.50	3.49	3.47	3.43
	Lb/h	17.2	17.3	17.0	16.2	15.0	13.4	11.4	8.89
-20	Btu/h	1550	1510	1440	1330	1190	1030	826	596
	Watts	281	290	296	300	302	302	299	294
	Amps	3.43	3.50	3.55	3.58	3.60	3.61	3.59	3.56
	Lb/h	17.9	18.2	18.1	17.6	16.7	15.3	13.5	11.3
-15	Btu/h	1650	1620	1550	1450	1320	1160	973	751
	Watts	292	303	312	318	322	323	322	319
	Amps	3.52	3.59	3.66	3.70	3.73	3.75	3.75	3.73
	Lb/h	18.7	19.3	19.5	19.2	18.5	17.4	15.8	13.9
-10	Btu/h	1760	1740	1680	1590	1470	1310	1130	918
	Watts	308	321	331	339	345	348	350	348
	Amps	3.63	3.72	3.80	3.86	3.90	3.93	3.94	3.94
	Lb/h	19.8	20.6	21.0	21.0	20.6	19.7	18.4	16.7
-5	Btu/h	1890	1870	1820	1730	1620	1480	1300	1100
	Watts	327	342	355	365	372	378	381	382
	Amps	3.78	3.89	3.97	4.05	4.10	4.14	4.17	4.18
	Lb/h	21.1	22.2	22.8	23.0	22.8	22.2	21.2	19.7
0	Btu/h	2020	2010	1970	1890	1790	1650	1490	1290
	Watts	351	368	382	394	404	411	416	419
	Amps	3.97	4.09	4.19	4.27	4.34	4.40	4.43	4.46

	Lb/h	22.6	23.9	24.8	25.3	25.3	24.9	24.1	22.9
5	Btu/h	2170	2160	2130	2060	1970	1840	1680	1490
	Watts	379	398	414	428	439	449	455	460
	Amps	4.19	4.32	4.44	4.53	4.62	4.68	4.74	4.77
	Lb/h	24.3	25.9	27.0	27.7	28.0	27.9	27.4	26.4
10	Btu/h	2330	2330	2300	2240	2150	2030	1880	1700
	Watts	411	431	449	465	479	490	499	505
	Amps	4.45	4.60	4.72	4.83	4.93	5.01	5.08	5.13
	Lb/h	26.2	28.0	29.4	30.4	31.0	31.1	30.8	30.1

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	1.003299E+03	1.342858E+02	2.485976E+00	-3.368500E+00
C2	1.600434E+01	2.099101E+00	1.994787E-02	-8.122098E-02
C3	2.515177E+01	3.643706E+00	2.468967E-02	4.943850E-01
C4	2.241288E-01	8.079418E-02	6.995834E-04	3.949144E-03
C5	1.504859E-01	3.811035E-02	2.607268E-04	4.959263E-03
C6	-1.551036E-01	-1.164785E-02	-7.670658E-05	-2.124631E-03
C7	-1.055255E-03	-9.200006E-05	1.238421E-06	6.398590E-06
C8	-1.220115E-04	-1.665708E-05	3.770477E-07	4.028110E-06
C9	2.157033E-05	9.922905E-07	9.687082E-09	3.640956E-07
C10	2.177885E-07	5.619151E-08	-1.665008E-09	-2.107444E-08

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

AE2413Y-AA1B

General

Model	AE2413Y-AA1B	Unit of Measure	Fahrenheit
Condition	EN12900 (R-134a)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	20°C (68°F) RETURN GAS	Motor Type	CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)						
		90	100	110	120	130	140
-40	Btu/h	974	836	721	627	555	505
	Watts	83.4	90.2	99.7	112	127	145
	Amps	1.99	2.06	2.14	2.24	2.34	2.46
	Lb/h	15.2	13.1	11.5	10.4	10.0	10.2
-35	Btu/h	1070	940	830	741	674	630
	Watts	160	166	175	187	201	218
	Amps	2.50	2.57	2.64	2.73	2.83	2.95
	Lb/h	15.7	13.8	12.4	11.6	11.3	11.7
-30	Btu/h	1180	1050	943	859	798	758
	Watts	214	219	227	238	252	268
	Amps	2.86	2.93	3.00	3.08	3.18	3.29
	Lb/h	16.6	14.8	13.6	13.0	13.0	13.5
-25	Btu/h	1280	1160	1060	981	924	889
	Watts	250	254	262	271	284	300
	Amps	3.11	3.17	3.24	3.32	3.41	3.51
	Lb/h	17.7	16.2	15.2	14.7	14.9	15.6
-20	Btu/h	1390	1270	1180	1100	1050	1020
	Watts	273	276	283	292	304	318
	Amps	3.28	3.33	3.39	3.46	3.55	3.64
	Lb/h	19.1	17.7	16.9	16.7	17.0	18.0
-15	Btu/h	1500	1390	1300	1230	1180	1160
	Watts	288	290	296	304	315	329
	Amps	3.39	3.44	3.50	3.56	3.64	3.73
	Lb/h	20.6	19.4	18.8	18.8	19.3	20.5
-10	Btu/h	1620	1510	1420	1360	1320	1300
	Watts	299	301	306	313	323	336
	Amps	3.49	3.53	3.58	3.65	3.72	3.80
	Lb/h	22.2	21.2	20.8	20.9	21.7	23.0
-5	Btu/h	1730	1630	1550	1490	1450	1430
	Watts	313	314	318	324	333	345
	Amps	3.61	3.64	3.69	3.75	3.81	3.89
	Lb/h	23.8	23.0	22.8	23.1	24.1	25.6
0	Btu/h	1850	1750	1670	1620	1580	1570
	Watts	334	334	336	342	350	361
	Amps	3.78	3.81	3.84	3.89	3.96	4.03

	Lb/h	25.4	24.8	24.7	25.3	26.4	28.1
5	Btu/h	1960	1870	1800	1740	1720	1710
	Watts	366	365	367	371	379	388
	Amps	4.03	4.05	4.08	4.13	4.18	4.25
	Lb/h	26.8	26.4	26.5	27.3	28.6	30.5
10	Btu/h	2080	1990	1920	1870	1850	1850
	Watts	415	413	414	418	424	433
	Amps	4.40	4.41	4.44	4.48	4.52	4.58
	Lb/h	28.1	27.9	28.2	29.1	30.6	32.7

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.708209E+03	4.538863E+02	4.004243E+00	5.700788E+01
C2	1.462829E+01	6.739156E+00	5.144390E-02	-3.955455E-02
C3	-3.044885E+01	-2.541628E+00	-7.288690E-03	-6.116874E-01
C4	1.817730E-02	2.406198E-01	1.702470E-03	-1.928249E-03
C5	9.661443E-02	-1.737155E-02	-1.141710E-04	3.872334E-03
C6	1.082326E-01	1.334910E-02	5.273089E-05	2.888521E-03
C7	-7.734642E-04	6.620399E-03	4.432589E-05	-8.806371E-05
C8	-1.880495E-04	-4.701011E-05	-3.425431E-07	-3.506590E-06
C9	-2.991140E-05	-7.059288E-06	-5.148521E-08	-5.522274E-07
C10	1.764321E-06	4.480967E-07	3.262549E-09	3.307670E-08

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: AE2413Y-AA1B

Product Description

Type:	Reciprocating Compressors
Application:	LBP - Low 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-513A)	115V ~ 60HZ	1467	370	430	345	4.25	1.07	1.25	-23°C (-10°F)	54°C (130°F)	32°C (90°F)	32°C (90°F)	32°C (90°F)
ASHRAE (R-134a)	115V ~ 60HZ	1300	328	381	295	4.41	1.11	1.29	-23°C (-10°F)	54°C (130°F)	32°C (90°F)	32°C (90°F)	32°C (90°F)

General

Evaporating Temp. Range:	-40°C to -10°C (-40°F to 14°F)
Motor Torque:	High Start Torque (HST)
Compressor Cooling:	Fan

Mechanical

Weight:	11
Weight Unit of Measure:	KG
Displacement (cc):	12.01
Oil Type:	Polyolester
Viscosity (cSt):	32
Oil Charge (cc):	285

Electrical

Voltage Range (50 Hz):	
Voltage Range (60 Hz):	103-127
Locked Rotor Amps (LRA):	29
Rated Load Amps (RLA 50 Hz):	0
Rated Load Amps (RLA 60 Hz):	3.45
Max. Continuous Current (MCC in Amps):	6.9
Motor Resistance (Ohm) - Main:	1.38
Motor Resistance (Ohm) - Start:	3.4
Motor Type:	CSIR
Overload Type:	
Relay Type:	

Agency Approval

CE Listed, cURus Recognized