



Model: AE3425Y-AA1A

Product Description

Type: Reciprocating
Application: HBP/CBP - High/Commercial
 Back Pressure
Refrigerant: R134a
Voltage/Frequency: 115V ~ 60Hz

Product Specifications

Performance

Condition	Test Voltage	Refrigeration Capacity			Input Power	Efficiency			EVAP TEMP	COND TEMP	AMBIENT TEMP	RETURN GAS	LIQUID TEMP
		Btu/h	kcal/h	W	W	Btu/Wh	kcal/Wh	W/W					
ASHRAE	115V ~ 60HZ	2800	706	821	337	8.31	2.09	2.44	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): 6.69
Oil Type: Polyolester
Viscosity (cSt): 32
Oil Charge (cc): 285

Electrical

Voltage Range (50 Hz): N/A
Voltage Range (60 Hz): 103-127
Locked Rotor Amps (LRA): 29
Rated Load Amps (RLA 50 Hz): N/A
Rated Load Amps (RLA 60 Hz): 3.65
Max. Continuous Current (MCC in Amps): N/A
Motor Resistance (Ohm) - Main: 2,91
Motor Resistance (Ohm) - Start: 5,67
Motor Type: RSIR
Overload Type: EXTERNAL
Relay Type: Current Relay

Agency Approval

cURus Recognized



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Performance Data Sheet

AE3425Y-AA1A

General Information

Model	AE3425Y-AA1A	Refrigerant	R134a
Test Condition	ASHRAE	Test Voltage	115V ~ 60HZ
Return Gas	18.3°C (65°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	1360	1320	1240	1140	1020	901	788	691
	Watts	170	184	193	199	203	205	207	208
	Amps	2.75	2.71	2.70	2.72	2.74	2.76	2.75	2.71
	Lb/h	16.1	16.5	16.3	15.7	14.8	13.7	12.7	11.9
10	Btu/h	1580	1520	1430	1320	1190	1070	953	855
	Watts	180	195	206	214	219	223	227	230
	Amps	2.82	2.79	2.79	2.81	2.85	2.87	2.88	2.85
	Lb/h	18.8	19.1	18.9	18.2	17.3	16.4	15.4	14.7
15	Btu/h	1820	1750	1640	1520	1380	1250	1130	1030
	Watts	189	206	218	228	235	241	247	252
	Amps	2.88	2.86	2.87	2.91	2.95	2.99	3.01	3.00
	Lb/h	21.7	22.0	21.7	21.1	20.2	19.2	18.3	17.7
20	Btu/h	2100	2000	1880	1740	1590	1450	1320	1210
	Watts	197	215	229	241	250	258	266	274
	Amps	2.93	2.92	2.94	2.99	3.05	3.10	3.14	3.14
	Lb/h	25.1	25.3	24.9	24.2	23.3	22.3	21.4	20.8
25	Btu/h	2400	2280	2140	1980	1820	1660	1520	1400
	Watts	204	224	240	253	265	275	285	296
	Amps	2.97	2.97	3.01	3.07	3.14	3.21	3.26	3.29
	Lb/h	28.9	28.9	28.4	27.6	26.7	25.7	24.8	24.2
30	Btu/h	2740	2590	2430	2250	2070	1890	1730	1600
	Watts	210	231	250	265	279	292	304	317
	Amps	3.00	3.01	3.06	3.14	3.23	3.32	3.39	3.43
	Lb/h	33.1	33.0	32.4	31.5	30.4	29.3	28.4	27.9
35	Btu/h	3110	2940	2740	2540	2330	2140	1960	1810
	Watts	214	238	258	276	292	307	323	339
	Amps	3.02	3.05	3.11	3.21	3.32	3.43	3.52	3.59
	Lb/h	37.9	37.5	36.7	35.7	34.5	33.4	32.4	31.8
40	Btu/h	3520	3310	3090	2860	2630	2400	2200	2030
	Watts	218	244	266	286	305	323	341	359
	Amps	3.03	3.07	3.16	3.28	3.41	3.54	3.65	3.74
	Lb/h	43.1	42.5	41.5	40.3	39.0	37.7	36.7	36.0

45	Btu/h	3960	3720	3470	3200	2940	2690	2470	2270
	Watts	220	248	273	296	317	338	358	380
	Amps	3.03	3.10	3.20	3.34	3.49	3.65	3.79	3.90
	Lb/h	48.9	48.0	46.8	45.4	43.9	42.5	41.3	40.5
50	Btu/h	4440	4170	3870	3580	3280	3000	2750	2530
	Watts	221	251	279	304	328	352	376	400
	Amps	3.03	3.11	3.24	3.40	3.58	3.76	3.93	4.07
	Lb/h	55.2	54.1	52.6	51.0	49.3	47.7	46.4	45.4
55	Btu/h	4970	4650	4310	3980	3650	3340	3050	2800
	Watts	221	254	284	312	339	366	392	421
	Amps	3.01	3.12	3.28	3.46	3.67	3.87	4.07	4.24
	Lb/h	62.1	60.7	59.0	57.1	55.1	53.3	51.8	50.8
60	Btu/h	5530	5160	4790	4410	4050	3700	3380	3100
	Watts	219	255	288	319	349	379	409	440
	Amps	3.00	3.13	3.31	3.53	3.76	3.99	4.22	4.42
	Lb/h	69.6	67.9	65.9	63.7	61.5	59.5	57.7	56.5

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	-9.641406E+02	-1.876514E+02	5.938709E+00	-2.972137E+01
C2	6.290582E+01	1.306030E+00	1.996313E-02	6.247613E-01
C3	6.558372E+01	8.068571E+00	-9.012447E-02	1.176610E+00
C4	1.028704E+00	-4.096837E-02	-5.826339E-04	1.062085E-02
C5	-5.152901E-01	3.133910E-03	-9.292654E-05	-4.538123E-03
C6	-6.157811E-01	-5.756363E-02	8.010186E-04	-9.942423E-03
C7	1.724512E-03	-2.672410E-05	1.110796E-06	3.892326E-05
C8	-6.269128E-03	2.574582E-04	3.651214E-06	-5.712626E-05
C9	2.028163E-03	1.200867E-04	1.021637E-06	2.579886E-05
C10	1.633704E-03	1.358091E-04	-2.334036E-06	2.552895E-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



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Performance Data Sheet

AE3425Y-AA1A

General Information

Model	AE3425Y-AA1A	Refrigerant	R134a
Test Condition	ASHRAE	Test Voltage	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	1780	1510	1310	1160	1050	944	838	708
	Watts	209	201	199	201	204	207	209	207
	Amps	2.78	2.75	2.74	2.74	2.75	2.76	2.76	2.74
	Lb/h	20.6	17.8	15.9	14.7	13.9	13.2	12.4	11.1
10	Btu/h	1970	1710	1500	1350	1230	1120	997	850
	Watts	213	209	210	214	219	224	226	225
	Amps	2.79	2.78	2.79	2.82	2.84	2.86	2.87	2.86
	Lb/h	22.8	20.1	18.3	17.2	16.4	15.6	14.7	13.3
15	Btu/h	2190	1920	1720	1560	1430	1300	1170	1000
	Watts	217	216	220	227	234	241	244	243
	Amps	2.81	2.82	2.85	2.89	2.93	2.97	2.99	2.98
	Lb/h	25.2	22.7	21.0	19.9	19.0	18.2	17.2	15.7
20	Btu/h	2430	2160	1950	1790	1640	1510	1350	1160
	Watts	220	223	230	240	249	258	263	263
	Amps	2.81	2.85	2.91	2.97	3.03	3.08	3.11	3.11
	Lb/h	28.0	25.6	23.9	22.8	22.0	21.1	20.0	18.3
25	Btu/h	2700	2430	2210	2040	1880	1720	1550	1340
	Watts	221	229	239	252	264	274	281	282
	Amps	2.82	2.89	2.97	3.05	3.13	3.19	3.23	3.25
	Lb/h	31.0	28.7	27.2	26.1	25.2	24.3	23.0	21.1
30	Btu/h	3000	2720	2500	2310	2140	1960	1770	1530
	Watts	222	233	248	264	279	291	300	302
	Amps	2.82	2.92	3.02	3.13	3.23	3.31	3.37	3.39
	Lb/h	34.4	32.2	30.7	29.7	28.8	27.7	26.3	24.3
35	Btu/h	3330	3040	2810	2610	2420	2230	2000	1740
	Watts	221	237	256	275	293	308	319	323
	Amps	2.81	2.94	3.08	3.21	3.33	3.43	3.50	3.54
	Lb/h	38.2	36.1	34.7	33.6	32.7	31.5	30.0	27.7
40	Btu/h	3700	3400	3160	2940	2730	2510	2260	1970
	Watts	219	240	262	285	306	324	337	343
	Amps	2.80	2.96	3.12	3.28	3.43	3.55	3.64	3.69
	Lb/h	42.5	40.5	39.1	38.0	36.9	35.7	34.0	31.6

45	Btu/h	4100	3790	3530	3300	3070	2820	2550	2220
	Watts	216	241	268	295	320	340	356	364
	Amps	2.78	2.97	3.17	3.36	3.53	3.67	3.78	3.84
	Lb/h	47.2	45.2	43.9	42.8	41.7	40.3	38.5	35.8
50	Btu/h	4540	4220	3950	3690	3440	3170	2860	2500
	Watts	211	241	273	304	332	356	374	384
	Amps	2.75	2.98	3.21	3.42	3.62	3.79	3.92	4.00
	Lb/h	52.4	50.5	49.2	48.0	46.9	45.4	43.3	40.5
55	Btu/h	5030	4690	4400	4120	3840	3540	3200	2800
	Watts	204	240	276	311	344	371	392	405
	Amps	2.71	2.98	3.24	3.49	3.71	3.91	4.06	4.16
	Lb/h	58.1	56.3	55.0	53.8	52.5	50.9	48.7	45.6
60	Btu/h	5560	5210	4890	4580	4280	3940	3570	3140
	Watts	196	237	278	318	354	386	410	425
	Amps	2.66	2.97	3.27	3.55	3.80	4.02	4.20	4.32
	Lb/h	64.5	62.7	61.3	60.1	58.8	57.0	54.6	51.2

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	8.751880E+03	7.124785E+02	5.202923E+00	1.097656E+02
C2	-2.962651E+00	-7.157682E+00	-5.254982E-02	-2.232103E-01
C3	-1.665237E+02	-1.322445E+01	-6.271356E-02	-2.209094E+00
C4	7.217683E-01	-4.761027E-02	-2.466051E-04	5.126404E-03
C5	7.076674E-01	1.415921E-01	9.330858E-04	1.132677E-02
C6	1.217129E+00	1.096131E-01	5.167843E-04	1.694440E-02
C7	2.991478E-03	-1.289968E-04	-1.268432E-06	4.791290E-05
C8	-4.209955E-03	4.302301E-04	3.074234E-06	-1.918583E-05
C9	-3.406340E-03	-4.758867E-04	-3.009446E-06	-4.802101E-05
C10	-3.136680E-03	-2.979848E-04	-1.417519E-06	-4.461255E-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



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Performance Data Sheet

AE3425Y-AA1A

General Information

Model	AE3425Y-AA1A	Refrigerant	R134a
Test Condition	ASHRAE	Test Voltage	115V ~ 60HZ
Return Gas	4.4°C (40°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	1470	1260	1090	960	858	772	691	606
	Watts	173	188	196	200	203	209	219	239
	Amps	3.07	2.85	2.75	2.73	2.75	2.79	2.80	2.76
	Lb/h	20.8	18.3	16.6	15.4	14.6	14.1	13.6	12.9
10	Btu/h	1670	1450	1280	1140	1020	917	812	697
	Watts	180	199	210	216	221	228	240	260
	Amps	3.11	2.92	2.84	2.83	2.86	2.89	2.90	2.85
	Lb/h	23.6	21.2	19.5	18.4	17.5	16.8	16.0	15.0
15	Btu/h	1880	1660	1480	1330	1200	1070	945	802
	Watts	188	210	223	232	239	247	260	280
	Amps	3.12	2.96	2.91	2.92	2.96	3.00	3.01	2.95
	Lb/h	26.4	24.3	22.7	21.6	20.7	19.8	18.8	17.5
20	Btu/h	2090	1870	1690	1530	1380	1240	1090	919
	Watts	195	220	236	247	256	265	278	299
	Amps	3.10	2.98	2.96	3.00	3.06	3.12	3.13	3.07
	Lb/h	29.4	27.5	26.0	24.9	24.0	23.0	21.8	20.1
25	Btu/h	2310	2090	1900	1740	1580	1420	1240	1040
	Watts	201	229	248	260	270	280	294	314
	Amps	3.05	2.99	3.01	3.08	3.17	3.25	3.28	3.22
	Lb/h	32.5	30.7	29.4	28.4	27.4	26.3	24.9	23.0
30	Btu/h	2520	2310	2120	1940	1770	1590	1400	1180
	Watts	204	235	256	270	281	292	305	326
	Amps	2.98	2.97	3.04	3.16	3.29	3.39	3.44	3.41
	Lb/h	35.5	34.0	32.9	31.9	30.9	29.7	28.1	26.0
35	Btu/h	2730	2520	2330	2150	1970	1770	1560	1310
	Watts	203	236	259	275	287	298	312	331
	Amps	2.89	2.95	3.07	3.24	3.41	3.55	3.63	3.62
	Lb/h	38.4	37.2	36.3	35.4	34.4	33.2	31.4	29.0
40	Btu/h	2940	2730	2540	2350	2160	1950	1720	1450
	Watts	197	232	257	274	286	298	311	330
	Amps	2.79	2.91	3.10	3.33	3.55	3.74	3.85	3.87
	Lb/h	41.3	40.3	39.6	38.8	37.9	36.5	34.7	32.0

45	Btu/h	3140	2930	2740	2550	2350	2130	1870	1580
	Watts	184	221	247	265	278	290	303	321
	Amps	2.67	2.87	3.14	3.42	3.70	3.94	4.11	4.16
	Lb/h	43.9	43.2	42.7	42.1	41.2	39.8	37.8	35.0
50	Btu/h	3320	3130	2930	2740	2530	2290	2020	1710
	Watts	163	202	229	248	262	273	285	302
	Amps	2.54	2.83	3.17	3.53	3.88	4.18	4.39	4.49
	Lb/h	46.2	45.9	45.6	45.1	44.3	42.9	40.8	37.8
55	Btu/h	3500	3300	3110	2920	2700	2450	2160	1830
	Watts	133	173	202	221	235	246	257	272
	Amps	2.40	2.79	3.22	3.66	4.08	4.44	4.72	4.87
	Lb/h	48.2	48.2	48.2	47.9	47.2	45.8	43.6	40.4
60	Btu/h	3650	3470	3280	3080	2860	2600	2300	1940
	Watts	91.6	134	163	183	196	206	217	231
	Amps	2.26	2.75	3.27	3.80	4.30	4.74	5.08	5.30
	Lb/h	49.8	50.2	50.5	50.4	49.7	48.4	46.2	42.8

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	6.182920E+03	-5.554183E+02	1.309235E+01	9.333887E+01
C2	8.322673E+00	-9.096665E+00	-5.238764E-02	-3.642495E-01
C3	-1.096291E+02	1.993035E+01	-2.579725E-01	-1.757663E+00
C4	1.257779E-01	1.074194E-01	-1.977379E-03	2.894938E-03
C5	7.201382E-01	1.597597E-01	1.430435E-03	1.713731E-02
C6	7.476776E-01	-1.788374E-01	2.089476E-03	1.276022E-02
C7	-3.633207E-03	-1.734128E-03	4.155012E-06	-8.324080E-05
C8	1.772508E-03	-4.207321E-04	1.508825E-05	3.814247E-05
C9	-4.593032E-03	-4.928800E-04	-6.710830E-06	-8.425425E-05
C10	-1.786684E-03	5.359683E-04	-5.543222E-06	-3.130277E-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