

Model: AE3440Y-FZ1A

Product Description

Type:	Reciprocating Compressors
Application:	HBP/CBP - High/Commercial Back Pressure
Refrigerant:	R-134a
Voltage/Frequency:	220-240V ~ 50Hz
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)	220V ~ 50HZ	3600	907	1055	452	7.96	2.01	2.33	7.2°C (45°F)	54°C (130°F)	35°C (95°F)	35°C (95°F)	46°C (115°F)
ASHRAE (R-513A)	220V ~ 50HZ	3612	910	1058	483	7.48	1.88	2.19	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):	10.3
Oil Type:	Polyolester
Viscosity (cSt):	32
Oil Charge (cc):	285

Electrical

Voltage Range (50 Hz):	198-253
Voltage Range (60 Hz):	
Locked Rotor Amps (LRA):	18
Rated Load Amps (RLA 50 Hz):	2.56
Rated Load Amps (RLA 60 Hz):	0
Max. Continuous Current (MCC in Amps):	0
Motor Resistance (Ohm) - Main:	8.32
Motor Resistance (Ohm) - Start:	19.36
Motor Type:	RSIR
Overload Type:	
Relay Type:	

Agency Approval

CE Listed, GOST RUSSIA Listed, GOST UKRAINE Listed, VDE Listed



Performance Data Sheet

AE3440Y-FZ1A

General

Model	AE3440Y-FZ1A	Unit of Measure	Fahrenheit
Condition	ASHRAE (R-513A)	Voltage/Frequency	220V ~ 50HZ
RETURN GAS	35°C (95°F) RETURN GAS	MotorType	RSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)								
		80	90	100	110	120	130	140	150
5	Btu/h	2000	1970	1870	1710	1500	1260	1010	755
	Watts	274	296	310	318	320	318	311	300
	Amps	2.10	2.14	2.17	2.19	2.20	2.19	2.17	2.14
	Lb/h	24.2	25.1	24.9	23.8	22.0	19.7	17.0	14.2
10	Btu/h	2280	2240	2130	1970	1760	1520	1270	1020
	Watts	284	308	325	336	341	342	339	333
	Amps	2.13	2.17	2.21	2.23	2.25	2.25	2.24	2.23
	Lb/h	27.5	28.5	28.5	27.5	25.8	23.7	21.2	18.7
15	Btu/h	2590	2540	2410	2230	2020	1770	1520	1270
	Watts	293	319	338	352	361	365	366	365
	Amps	2.15	2.20	2.24	2.28	2.30	2.32	2.32	2.32
	Lb/h	31.2	32.2	32.2	31.3	29.7	27.7	25.5	23.1
20	Btu/h	2930	2850	2710	2510	2280	2030	1770	1520
	Watts	300	328	351	367	379	388	393	396
	Amps	2.17	2.23	2.28	2.32	2.35	2.38	2.40	2.41
	Lb/h	35.2	36.2	36.2	35.3	33.8	31.9	29.8	27.6
25	Btu/h	3310	3200	3030	2820	2570	2300	2030	1770
	Watts	306	337	361	381	397	409	418	426
	Amps	2.19	2.26	2.31	2.36	2.41	2.45	2.48	2.50
	Lb/h	39.8	40.7	40.6	39.7	38.2	36.3	34.3	32.2
30	Btu/h	3730	3590	3390	3150	2870	2590	2300	2020
	Watts	311	344	371	394	413	429	443	455
	Amps	2.21	2.28	2.34	2.40	2.46	2.51	2.56	2.60
	Lb/h	45.0	45.7	45.5	44.5	43.0	41.1	39.1	37.1
35	Btu/h	4200	4020	3790	3510	3210	2890	2580	2290
	Watts	314	349	379	405	428	448	466	484
	Amps	2.22	2.30	2.37	2.44	2.51	2.57	2.63	2.69
	Lb/h	50.9	51.4	51.0	49.9	48.3	46.3	44.3	42.3
40	Btu/h	4720	4500	4230	3920	3580	3230	2890	2570
	Watts	316	353	386	416	442	466	489	511
	Amps	2.23	2.31	2.40	2.48	2.55	2.63	2.71	2.79
	Lb/h	57.6	57.9	57.2	56.0	54.2	52.1	50.0	47.9
45	Btu/h	5310	5040	4720	4370	3990	3610	3230	2880
	Watts	316	356	392	425	455	483	510	537
	Amps	2.24	2.33	2.42	2.51	2.60	2.69	2.78	2.88

	Lb/h	65.2	65.2	64.3	62.7	60.8	58.5	56.3	54.1
50	Btu/h	5970	5650	5270	4870	4450	4020	3610	3230
	Watts	315	357	396	432	466	499	531	563
	Amps	2.24	2.33	2.43	2.53	2.64	2.75	2.86	2.97
	Lb/h	73.8	73.4	72.2	70.4	68.2	65.7	63.2	61.0
55	Btu/h	6700	6320	5890	5430	4960	4490	4030	3600
	Watts	312	357	399	439	476	513	550	587
	Amps	2.23	2.33	2.44	2.56	2.68	2.80	2.92	3.06
	Lb/h	83.5	82.7	81.2	79.0	76.5	73.7	71.0	68.5

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	-2.753113E+03	-2.686046E+02	1.248125E+00	-5.131634E+01
C2	8.028114E+01	2.169097E+00	1.281360E-02	6.378815E-01
C3	1.254901E+02	1.172923E+01	1.579996E-02	1.873450E+00
C4	1.101352E+00	-3.578562E-02	-8.785985E-05	1.044113E-02
C5	-6.105005E-01	-2.940357E-02	-2.265632E-04	-2.998130E-03
C6	-1.066873E+00	-7.402918E-02	-6.804618E-05	-1.477988E-02
C7	8.302554E-03	-4.586280E-05	-7.648856E-07	1.349413E-04
C8	-1.064270E-02	1.383898E-04	1.013618E-06	-1.052118E-04
C9	3.128576E-03	4.013187E-04	1.699638E-06	3.424585E-05
C10	2.490358E-03	1.307809E-04	-1.115127E-08	3.328797E-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

AE3440Y-FZ1A

General

Model	AE3440Y-FZ1A	Unit of Measure	Celsius
Condition	EN12900	Voltage/Frequency	240V ~ 50HZ
RETURN GAS	20°C (68°F) RETURN GAS	MotorType	RSIR

Performance Information

EVAP TEMP (°C)	Condensing Temperature (°C)								
		30	35	40	45	50	55	60	65
-15	Watts (Capacity)	473	440	406	372	338	304	273	243
	Watts (Power)	239	251	261	270	277	281	282	280
	Amps	1.83	1.86	1.90	1.93	1.96	1.97	1.98	1.98
	Lb/h	9.66	9.34	9.00	8.63	8.27	7.91	7.57	7.26
-10	Watts (Capacity)	602	566	528	489	450	411	373	336
	Watts (Power)	263	276	288	299	310	319	326	331
	Amps	1.90	1.94	1.97	2.01	2.05	2.08	2.10	2.12
	Lb/h	12.3	12.0	11.7	11.4	11.0	10.6	10.3	9.90
-6.7	Watts (Capacity)	700	660	618	575	531	487	444	401
	Watts (Power)	280	292	306	319	333	345	356	365
	Amps	1.96	1.99	2.03	2.08	2.12	2.16	2.20	2.23
	Lb/h	14.3	14.0	13.8	13.4	13.1	12.7	12.2	11.8
-5	Watts (Capacity)	754	713	668	623	576	529	482	436
	Watts (Power)	288	301	315	330	344	358	371	382
	Amps	1.99	2.02	2.07	2.11	2.16	2.21	2.25	2.29
	Lb/h	15.4	15.2	14.9	14.6	14.2	13.8	13.3	12.9
0	Watts (Capacity)	935	885	832	777	720	663	605	548
	Watts (Power)	313	326	343	360	379	398	416	434
	Amps	2.08	2.12	2.17	2.22	2.29	2.35	2.42	2.49
	Lb/h	19.2	19.0	18.7	18.3	17.9	17.4	16.9	16.3
5	Watts (Capacity)	1150	1090	1020	957	888	818	747	675
	Watts (Power)	336	351	369	390	412	436	461	486
	Amps	2.17	2.21	2.27	2.34	2.42	2.51	2.60	2.70
	Lb/h	23.7	23.5	23.2	22.8	22.3	21.7	21.1	20.4
7.2	Watts (Capacity)	1250	1190	1120	1050	971	894	816	738
	Watts (Power)	347	362	381	403	427	453	480	508
	Amps	2.20	2.25	2.31	2.39	2.48	2.58	2.68	2.79
	Lb/h	26.0	25.8	25.5	25.0	24.5	23.9	23.2	22.4
10	Watts (Capacity)	1400	1330	1250	1170	1080	999	912	824
	Watts (Power)	359	375	395	419	445	474	505	537
	Amps	2.24	2.29	2.36	2.45	2.55	2.66	2.79	2.91
	Lb/h	29.2	29.0	28.6	28.1	27.5	26.8	26.0	25.2
15	Watts (Capacity)	1690	1600	1510	1410	1310	1210	1110	999
	Watts (Power)	380	397	419	446	476	510	547	586
	Amps	2.30	2.36	2.45	2.55	2.68	2.82	2.97	3.13

	Lb/h	35.7	35.5	35.0	34.4	33.7	32.9	31.9	30.9
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COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	1.137868E+03	3.052711E+02	2.261979E+00	1.771430E+01
C2	4.756873E+01	7.871600E+00	2.878083E-02	7.332500E-01
C3	-3.146689E+00	-2.736916E+00	-2.127823E-02	1.386514E-01
C4	9.380199E-01	-1.805798E-02	-3.986850E-04	1.873839E-02
C5	-2.081121E-01	-2.194950E-01	-8.262377E-04	5.609800E-03
C6	-1.464998E-01	1.222005E-01	6.179385E-04	-3.503563E-03
C7	6.412827E-03	-7.573807E-04	-9.895574E-06	1.911316E-04
C8	-9.402312E-03	1.771885E-04	1.060850E-05	-9.893751E-05
C9	-2.430921E-03	3.969348E-03	1.550442E-05	-8.335503E-05
C10	8.491090E-04	-7.626254E-04	-3.650881E-06	1.600108E-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

AE3440Y-FZ1A

General

Model	AE3440Y-FZ1A	Unit of Measure	Celsius
Condition	EN12900 (R-134a)	Voltage/Frequency	220V ~ 50HZ
RETURN GAS	20°C (68°F) RETURN GAS	MotorType	RSIR

Performance Information

EVAP TEMP (°C)	Condensing Temperature (°C)								
		30	35	40	45	50	55	60	65
-15	Btu/h	1620	1500	1390	1270	1150	1040	931	830
	Watts (Power)	239	251	261	270	277	281	282	280
	Amps	1.83	1.86	1.90	1.93	1.96	1.97	1.98	1.98
	Lb/h	9.66	9.34	9.00	8.63	8.27	7.91	7.57	7.26
-10	Btu/h	2060	1930	1800	1670	1540	1400	1270	1150
	Watts (Power)	263	276	288	299	310	319	326	331
	Amps	1.90	1.94	1.97	2.01	2.05	2.08	2.10	2.12
	Lb/h	12.3	12.0	11.7	11.4	11.0	10.6	10.3	9.90
-6.7	Btu/h	2390	2250	2110	1960	1810	1660	1510	1370
	Watts (Power)	280	292	306	319	333	345	356	365
	Amps	1.96	1.99	2.03	2.08	2.12	2.16	2.20	2.23
	Lb/h	14.3	14.0	13.8	13.4	13.1	12.7	12.2	11.8
-5	Btu/h	2580	2430	2280	2130	1970	1810	1650	1490
	Watts (Power)	288	301	315	330	344	358	371	382
	Amps	1.99	2.02	2.07	2.11	2.16	2.21	2.25	2.29
	Lb/h	15.4	15.2	14.9	14.6	14.2	13.8	13.3	12.9
0	Btu/h	3190	3020	2840	2650	2460	2260	2070	1870
	Watts (Power)	313	326	343	360	379	398	416	434
	Amps	2.08	2.12	2.17	2.22	2.29	2.35	2.42	2.49
	Lb/h	19.2	19.0	18.7	18.3	17.9	17.4	16.9	16.3
5	Btu/h	3920	3710	3500	3270	3030	2790	2550	2310
	Watts (Power)	336	351	369	390	412	436	461	486
	Amps	2.17	2.21	2.27	2.34	2.42	2.51	2.60	2.70
	Lb/h	23.7	23.5	23.2	22.8	22.3	21.7	21.1	20.4
7.2	Btu/h	4280	4050	3820	3570	3320	3050	2790	2520
	Watts (Power)	347	362	381	403	427	453	480	508
	Amps	2.20	2.25	2.31	2.39	2.48	2.58	2.68	2.79
	Lb/h	26.0	25.8	25.5	25.0	24.5	23.9	23.2	22.4
10	Btu/h	4770	4530	4260	3990	3700	3410	3120	2820
	Watts (Power)	359	375	395	419	445	474	505	537
	Amps	2.24	2.29	2.36	2.45	2.55	2.66	2.79	2.91
	Lb/h	29.2	29.0	28.6	28.1	27.5	26.8	26.0	25.2
15	Btu/h	5770	5470	5160	4830	4490	4140	3780	3410
	Watts (Power)	380	397	419	446	476	510	547	586
	Amps	2.30	2.36	2.45	2.55	2.68	2.82	2.97	3.13

	Lb/h	35.7	35.5	35.0	34.4	33.7	32.9	31.9	30.9
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COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.886023E+03	3.052711E+02	2.261979E+00	1.771430E+01
C2	1.624557E+02	7.871600E+00	2.878083E-02	7.332500E-01
C3	-1.074651E+01	-2.736916E+00	-2.127823E-02	1.386514E-01
C4	3.203506E+00	-1.805798E-02	-3.986850E-04	1.873839E-02
C5	-7.107401E-01	-2.194950E-01	-8.262377E-04	5.609800E-03
C6	-5.003230E-01	1.222005E-01	6.179385E-04	-3.503563E-03
C7	2.190095E-02	-7.573807E-04	-9.895574E-06	1.911316E-04
C8	-3.211058E-02	1.771885E-04	1.060850E-05	-9.893751E-05
C9	-8.302030E-03	3.969348E-03	1.550442E-05	-8.335503E-05
C10	2.899859E-03	-7.626254E-04	-3.650881E-06	1.600108E-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