

Model: AE4430Y-FZ1A
Product Description

Type: Reciprocating
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	Efficiency			EVAP TEMP	COND TEMP	AMBIENT TEMP	RETURN GAS	LIQUID TEMP
		Btu/h	kcal/h	W	W	Btu/Wh	kcal/Wh	W/W					
ASHRAE	220V ~ 50HZ	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)
ASHRAE (R-513A)	220V ~ 50HZ	2854	719	836	366	7.8	1.96	2.28	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: High Start Torque (HST)
Compressor Cooling: Fan

Mechanical

Weight: 10
Weight Unit of Measure: KG
Displacement (cc): 8.02
Oil Type: Polyolester
Viscosity (cSt): 32
Oil Charge (cc): 285

Electrical

Voltage Range (50 Hz): 198-253
Voltage Range (60 Hz): N/A
Locked Rotor Amps (LRA): 11.5
Rated Load Amps (RLA 50 Hz): 2.13
Rated Load Amps (RLA 60 Hz): 0
Max. Continuous Current (MCC in Amps): 0
Motor Resistance (Ohm) - Main: 8.58
Motor Resistance (Ohm) - Start: 53.44
Motor Type: CSIR
Overload Type: N/A
Relay Type: N/A

Agency Approval

CCC Listed, CE Listed, GOST RUSSIA Listed, GOST
UKRAINE Listed, IRAM Listed, VDE Listed

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Performance Data Sheet

AE4430Y-FZ1A

General Information

Model	AE4430Y-FZ1A	Refrigerant	R-134a
Test Condition	ASHRAE (R-513A)	Performance Test Voltage	220V ~ 50HZ
Return Gas	35°C (95°F) RETURN GAS	Motor Type	CSIR

Performance Information

Evap Temp (°F)		Condensing Temperature (°F)							
		80	90	100	110	120	130	140	150
5	Btu/h	1290	1350	1320	1230	1110	996	917	903
	Watts	213	218	224	231	237	242	246	247
	Amps	1.83	1.83	1.85	1.86	1.88	1.89	1.89	1.89
	Lb/h	15.5	17.3	17.8	17.4	16.5	15.7	15.3	15.8
10	Btu/h	1500	1560	1520	1430	1300	1180	1080	1050
	Watts	223	229	236	244	252	258	263	266
	Amps	1.86	1.86	1.88	1.89	1.91	1.93	1.94	1.94
	Lb/h	18.1	20.1	20.7	20.3	19.4	18.6	18.0	18.4
15	Btu/h	1720	1780	1740	1640	1510	1370	1260	1210
	Watts	233	240	248	257	266	274	281	285
	Amps	1.88	1.89	1.90	1.93	1.95	1.97	1.99	2.00
	Lb/h	20.9	23.0	23.7	23.4	22.5	21.6	21.0	21.2
20	Btu/h	1970	2020	1980	1870	1720	1570	1440	1370
	Watts	242	250	259	270	280	290	298	305
	Amps	1.91	1.91	1.93	1.96	1.99	2.02	2.04	2.06
	Lb/h	23.9	26.2	27.0	26.7	25.9	24.9	24.1	24.2
25	Btu/h	2240	2290	2240	2120	1960	1790	1640	1540
	Watts	251	260	270	282	294	305	316	324
	Amps	1.93	1.94	1.96	1.99	2.03	2.06	2.10	2.13
	Lb/h	27.3	29.7	30.6	30.3	29.5	28.4	27.6	27.4
30	Btu/h	2530	2580	2520	2390	2210	2020	1850	1730
	Watts	259	269	281	294	307	321	333	343
	Amps	1.95	1.96	1.99	2.02	2.07	2.11	2.15	2.19
	Lb/h	31.0	33.5	34.5	34.3	33.4	32.2	31.3	31.0
35	Btu/h	2850	2890	2820	2680	2480	2280	2080	1930
	Watts	266	277	291	305	321	336	350	363
	Amps	1.98	1.99	2.02	2.06	2.11	2.16	2.21	2.26
	Lb/h	35.0	37.7	38.8	38.6	37.7	36.4	35.4	34.9
40	Btu/h	3210	3230	3150	2990	2780	2550	2330	2160
	Watts	272	285	300	317	334	351	367	382
	Amps	2.00	2.01	2.05	2.09	2.15	2.21	2.27	2.33
	Lb/h	39.6	42.4	43.5	43.3	42.4	41.1	39.9	39.2

45	Btu/h	3590	3610	3520	3340	3110	2850	2610	2400
	Watts	278	293	309	328	347	366	384	402
	Amps	2.01	2.03	2.07	2.13	2.19	2.26	2.33	2.41
	Lb/h	44.6	47.5	48.7	48.6	47.6	46.2	44.8	43.9
50	Btu/h	4010	4020	3910	3710	3460	3180	2910	2670
	Watts	284	300	318	338	359	381	401	421
	Amps	2.03	2.06	2.10	2.16	2.23	2.31	2.40	2.48
	Lb/h	50.2	53.2	54.5	54.3	53.3	51.8	50.3	49.2
55	Btu/h	4480	4470	4340	4120	3840	3540	3230	2960
	Watts	289	306	326	348	372	395	418	441
	Amps	2.05	2.08	2.13	2.20	2.28	2.37	2.46	2.56
	Lb/h	56.4	59.5	60.8	60.7	59.6	58.0	56.4	55.1

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	-6.024899E+03	2.943031E+02	2.415916E+00	-1.001223E+02
C2	6.845940E+00	2.229196E+00	1.635564E-02	-1.599432E-01
C3	2.003305E+02	-3.471583E+00	-1.952169E-02	3.060579E+00
C4	5.299074E-01	-2.733940E-02	-1.019408E-04	2.860506E-03
C5	6.362591E-01	-1.123148E-02	-2.392965E-04	1.212137E-02
C6	-1.797711E+00	3.891266E-02	1.976345E-04	-2.653353E-02
C7	3.525529E-03	-5.545865E-06	-1.066922E-07	6.793399E-05
C8	-3.506993E-03	1.901321E-04	1.071175E-06	-1.230573E-05
C9	-3.248132E-03	1.456149E-04	1.323752E-06	-5.150607E-05
C10	5.090579E-03	-1.248395E-04	-6.219947E-07	7.445009E-05

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

T_e = Evaporator Temperature

T_c = Condensing Temperature



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Performance Data Sheet

AE4430Y-FZ1A

General Information

Model	AE4430Y-FZ1A	Refrigerant	R-134a
Test Condition	EN12900	Performance Test Voltage	240V ~ 50HZ
Return Gas	20°C (68°F) RETURN GAS	Motor Type	CSIR

Performance Information

Evap Temp (°C)		Condensing Temperature (°C)							
		30	35	40	45	50	55	60	65
-15	Watts (Capacity)	365	342	318	294	270	246	223	202
	Watts (Power)	199	206	211	217	222	226	231	236
	Amps	1.76	1.78	1.79	1.79	1.80	1.81	1.81	1.81
-10	Watts (Capacity)	472	442	412	382	352	321	292	263
	Watts (Power)	212	222	230	237	244	251	257	264
	Amps	1.79	1.81	1.83	1.85	1.86	1.88	1.89	1.90
-6.7	Watts (Capacity)	553	520	485	450	414	379	344	310
	Watts (Power)	220	231	242	251	260	268	276	284
	Amps	1.80	1.83	1.86	1.88	1.91	1.93	1.95	1.96
-5	Watts (Capacity)	599	563	526	488	450	412	374	336
	Watts (Power)	224	236	248	258	267	276	285	294
	Amps	1.81	1.84	1.87	1.90	1.93	1.95	1.97	2.00
0	Watts (Capacity)	750	705	659	613	566	518	471	424
	Watts (Power)	233	249	264	277	290	302	313	325
	Amps	1.83	1.87	1.91	1.95	1.99	2.03	2.06	2.09
5	Watts (Capacity)	925	872	816	760	702	644	586	529
	Watts (Power)	240	260	278	296	312	327	342	356
	Amps	1.86	1.91	1.96	2.01	2.05	2.10	2.14	2.18
7.2	Watts (Capacity)	1010	953	893	832	769	706	643	580
	Watts (Power)	241	263	284	303	321	338	354	370
	Amps	1.87	1.92	1.98	2.03	2.08	2.13	2.18	2.23
10	Watts (Capacity)	1130	1060	998	930	861	792	722	652
	Watts (Power)	243	267	290	312	332	351	369	387
	Amps	1.88	1.94	2.00	2.06	2.12	2.17	2.23	2.28

15	Watts (Capacity)	1360	1290	1210	1130	1050	963	879	796
	Watts (Power)	242	271	299	325	350	373	396	418
	Amps	1.90	1.98	2.05	2.12	2.18	2.25	2.31	2.37

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	9.726062E+02	8.834062E+01	1.542870E+00	
C2	4.226463E+01	-3.663419E+00	-7.611000E-03	
C3	-5.739992E+00	6.573863E+00	1.069850E-02	
C4	6.589996E-01	-1.152817E-01	7.045180E-06	
C5	-2.947726E-01	1.956949E-01	4.069330E-04	
C6	-6.943348E-02	-6.967202E-02	-3.499790E-05	
C7	2.951841E-03	-7.717834E-04	0.000000E+00	
C8	-5.039077E-03	1.916606E-03	0.000000E+00	
C9	-9.376387E-04	-6.693567E-04	0.000000E+00	
C10	4.299661E-04	3.771039E-04	0.000000E+00	

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

Te = Evaporator Temperature

Tc = Condensing Temperature