

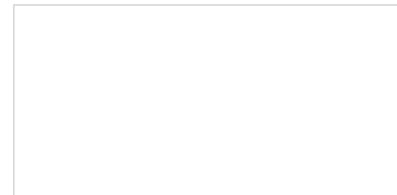
Technical Datasheet

4/24/2023

Model: AE4440Y-FZ1A

Product Description

Type: Reciprocating Compressors
Application: HBP/CBP - High/Commercial Back Pressure
Product Description: R-134a/R-513A
Voltage/Frequency: 220-240V ~ 50Hz
Version: N/A



Product Specifications

Performance

Condition	Test Voltage	Refrigeration Capacity		Input Power		(E) Efficiency		W/W	EVAP TEMP	Condition	AMBIENT TEMP	RETURN GAS	LIQUID TEMP
		(R) Btu/h	(R) kcal/h	(R) W	(I) W	(E) Btu/Wh	(E) kcal/Wh						
ASHRAE (R-134a)	220V ~ 50HZ	3650	920	1070	447	8.17	2.06	2.39	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	3799	957	1113	497	7.64	1.93	2.24	7.2°C (45°F)	54°C (130°F)	35°C (95°F)	35°C (95°F)	46°C (115°F)
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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): 10.33
Oil Type: Polyolester
Viscosity (cSt): 32
Oil Charge (cc): 284.9

Electrical

Voltage Range (50 Hz): 198-253
Voltage Range (60 Hz):
Locked Rotor Amps (LRA): 13.5
Rated Load Amps (RLA 50 Hz): 2.51
Rated Load Amps (RLA 60 Hz): 0
Max. Continuous Current (MCC in Amps): 3.51
Motor Resistance (Ohm) - Main: 8.29
Motor Resistance (Ohm) - Start: 19.16
Motor Type: CSIR
Overload Type:
Relay Type:

Agency Approval

CCC Listed, CE Listed, GOST RUSSIA Listed, GOST UKRAINE Listed, IRAM Listed, TIS Listed, VDE Listed, cURus Recognized

AE4440Y-FZ1A

General

Performance Data Sheet

Model AE4440Y-FZ1A **Unit of Measure** Celsius
Condition ASHRAE(R-134a) **Voltage/Frequency** 220V~50HZ
RETURN GAS 10K (18°F) SUPERHEAT **MotorType** CSIR

Performance Information

EVAP TEMP (°C)	Condensing Temperature (°C)								
	30	35	40	45	50	55	60	65	
-15	Btu/h	1680	1510	1430	1390	1390	1370	1300	1170
	Watts (Power)	244	253	262	270	278	285	290	293
	Amps	1.84	1.86	1.88	1.90	1.92	1.93	1.95	1.95
	Lb/h	22.5	21.6	20.7	19.9	19.1	18.5	18.0	17.9
-10	Btu/h	2160	1990	1890	1830	1790	1720	1600	1400
	Watts (Power)	266	276	287	298	309	319	327	335
	Amps	1.90	1.92	1.95	1.98	2.01	2.04	2.06	2.09
	Lb/h	28.1	27.4	26.5	25.7	24.8	24.1	23.5	23.1
-6.7	Btu/h	2530	2360	2250	2180	2110	2020	1870	1620
	Watts (Power)	279	291	304	317	330	343	354	365
	Amps	1.94	1.97	2.00	2.04	2.08	2.12	2.15	2.19
	Lb/h	32.3	31.6	30.8	29.9	29.1	28.2	27.5	26.9
-5	Btu/h	2740	2560	2450	2370	2300	2190	2020	1750
	Watts (Power)	286	299	313	327	341	355	368	381
	Amps	1.96	1.99	2.03	2.07	2.12	2.16	2.21	2.25
	Lb/h	34.6	34.0	33.2	32.3	31.4	30.5	29.7	29.1
0	Btu/h	3370	3200	3080	2990	2880	2740	2520	2200
	Watts (Power)	304	321	338	356	375	394	412	430
	Amps	2.01	2.06	2.12	2.17	2.24	2.30	2.37	2.44
	Lb/h	42.5	41.9	41.1	40.2	39.2	38.1	37.1	36.2
5	Btu/h	4050	3880	3760	3650	3520	3340	3080	2700
	Watts (Power)	319	339	361	385	409	433	457	481
	Amps	2.06	2.12	2.20	2.28	2.36	2.45	2.55	2.64
	Lb/h	51.9	51.4	50.6	49.6	48.4	47.2	46.0	44.8
7.2	Btu/h	4350	4190	4070	3950	3810	3620	3340	2940
	Watts (Power)	324	347	371	396	423	450	477	504
	Amps	2.07	2.15	2.23	2.32	2.42	2.52	2.63	2.74
	Lb/h	56.7	56.1	55.3	54.3	53.1	51.8	50.5	49.1
10	Btu/h	4740	4580	4460	4340	4190	3980	3680	3260
	Watts (Power)	329	355	382	411	441	471	502	533
	Amps	2.08	2.17	2.27	2.38	2.49	2.61	2.73	2.86
	Lb/h	63.3	62.8	62.0	60.9	59.6	58.2	56.7	55.2
15	Btu/h	5420	5280	5160	5040	4870	4640	4300	3830
	Watts (Power)	334	365	398	434	470	508	547	586
	Amps	2.08	2.20	2.33	2.47	2.61	2.76	2.92	3.08
	Lb/h	77.1	76.5	75.7	74.5	73.0	71.4	69.6	67.7

	COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	7.366090E+03	2.513989E+02	1.870066E+00	3.843756E+01	
C2	8.475279E+01	3.641224E-01	-2.838335E-03	1.408286E+00	
C3	-2.620641E+02	-5.927239E-02	-9.025493E-04	4.299135E-01	
C4	3.011554E-01	-1.624945E-01	-7.381325E-04	3.537499E-02	
C5	2.774448E+00	5.523721E-02	2.400136E-04	1.699414E-02	
C6	5.577825E+00	7.575482E-02	2.221499E-04	-1.220376E-02	
C7	-3.191391E-02	-1.482211E-03	-7.864533E-06	4.638198E-04	
C8	1.603603E-02	3.170922E-03	1.706039E-05	-9.447487E-05	
C9	-4.002300E-02	1.450168E-03	6.298011E-06	-2.261104E-04	
C10	-4.261447E-02	-5.022107E-04	-1.146050E-06	7.788751E-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

AE4440Y-FZ1A

General

Performance Data Sheet

Model AE4440Y-FZ1A **Unit of Measure** Fahrenheit
Condition ASHRAE(R-513A) **Voltage/Frequency** 220V~50HZ
RETURN GAS 10K (18°F) SUPERHEAT **Motor Type** CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)								
	80	90	100	110	120	130	140	150	
5	Btu/h	2150	2010	1870	1710	1560	1420	1300	1200
	Watts	261	279	293	304	312	319	324	329
	Amps	2.06	2.16	2.22	2.25	2.26	2.28	2.29	2.33
	Lb/h	27.4	27.1	26.4	25.4	24.2	23.1	22.3	21.8
10	Btu/h	2450	2300	2130	1970	1800	1650	1510	1400
	Watts	278	296	311	323	333	341	349	357
	Amps	2.10	2.20	2.27	2.31	2.33	2.35	2.38	2.42
	Lb/h	31.5	31.1	30.3	29.2	28.0	26.9	26.0	25.5
15	Btu/h	2760	2600	2420	2240	2060	1890	1740	1610
	Watts	294	313	329	342	354	364	374	385
	Amps	2.14	2.25	2.32	2.37	2.40	2.43	2.46	2.52
	Lb/h	35.7	35.3	34.4	33.2	32.0	30.9	29.9	29.4
20	Btu/h	3100	2920	2720	2530	2330	2150	1980	1840
	Watts	310	329	346	361	375	387	400	414
	Amps	2.18	2.29	2.37	2.43	2.47	2.51	2.55	2.62
	Lb/h	40.3	39.7	38.8	37.6	36.3	35.2	34.2	33.7
25	Btu/h	3470	3270	3060	2840	2630	2430	2250	2090
	Watts	325	345	363	380	395	411	426	443
	Amps	2.21	2.33	2.42	2.49	2.54	2.59	2.65	2.73
	Lb/h	45.2	44.6	43.6	42.3	41.0	39.8	38.8	38.3
30	Btu/h	3870	3650	3410	3180	2950	2730	2530	2360
	Watts	339	360	380	398	416	434	453	474
	Amps	2.24	2.38	2.48	2.55	2.62	2.68	2.75	2.84
	Lb/h	50.5	49.9	48.8	47.5	46.1	44.9	43.9	43.4
35	Btu/h	4300	4060	3800	3550	3300	3060	2840	2650
	Watts	352	375	396	417	437	458	480	504
	Amps	2.28	2.42	2.53	2.62	2.69	2.77	2.86	2.96
	Lb/h	56.4	55.6	54.4	53.1	51.7	50.4	49.4	48.9
40	Btu/h	4770	4500	4220	3950	3670	3420	3180	2970
	Watts	365	389	412	435	458	482	507	535
	Amps	2.31	2.46	2.59	2.69	2.78	2.87	2.97	3.09
	Lb/h	62.7	61.9	60.7	59.3	57.8	56.5	55.5	55.0
45	Btu/h	5270	4980	4680	4380	4080	3800	3550	3310
	Watts	376	402	427	452	478	505	535	567
	Amps	2.34	2.51	2.64	2.76	2.86	2.97	3.08	3.22
	Lb/h	69.6	68.7	67.5	66.0	64.5	63.2	62.2	61.6
50	Btu/h	5810	5500	5170	4850	4530	4230	3950	3690
	Watts	387	415	442	470	499	529	562	599
	Amps	2.37	2.56	2.70	2.83	2.95	3.07	3.21	3.37
	Lb/h	77.2	76.2	74.9	73.4	71.9	70.6	69.5	69.0
55	Btu/h	6400	6060	5710	5360	5010	4690	4380	4100
	Watts	397	426	456	487	519	553	590	631
	Amps	2.41	2.60	2.77	2.91	3.05	3.19	3.34	3.52
	Lb/h	85.5	84.5	83.1	81.5	80.0	78.6	77.6	77.0

	COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	1.577747E+03	-1.466348E+02	-1.451926E+00	-1.037205E+01	
C2	7.825767E+01	6.590128E+00	7.608342E-03	9.694005E-01	
C3	2.622222E+01	8.449387E+00	8.705291E-02	1.017332E+00	
C4	5.278022E-01	-4.228002E-02	-2.190130E-04	2.252132E-03	
C5	-3.506694E-01	-7.063127E-02	-4.309028E-05	-3.599170E-03	
C6	-3.741122E-01	-5.422824E-02	-6.935300E-04	-9.583547E-03	
C7	3.686936E-03	-4.962352E-05	5.937565E-07	7.807259E-05	
C8	-2.624199E-03	3.828008E-04	1.929987E-06	2.433417E-06	
C9	5.414675E-04	4.136748E-04	7.306064E-07	1.151353E-05	
C10	1.158256E-03	1.189880E-04	1.847324E-06	2.715431E-05	

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

Te = Evaporator Temperature

Tc = Condensing Temperature