



Model: AE4440Z-FZ1A (AE4440Z-FZ)

Product Description

Type:	Reciprocating
Application:	HBP/CBP - High/Commercial Back Pressure
Refrigerant:	R-404A
Voltage/Frequency:	220-240V ~ 50Hz
Version:	N/A

Product Specifications

Performance

Condition	Test Voltage	Refrigeration Capacity			Input Power W	Efficiency			EVAP TEMP	COND TEMP	AMBIENT TEMP	RETURN GAS	LIQUID TEMP
		Btu/h	kcal/h	W		Btu/Wh	kcal/Wh	W/W					
ASHRAE	220V ~ 50HZ	3600	907	1055	462	7.79	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)
ASHRAE (R-452A)	220V ~ 50HZ	3520	884	1028	444	7.91	1.99	2.31	7.2°C (45°F)	54°C (130°F)	35°C (95°F)	35°C (95°F)	46°C (115°F)
ASHRAE (R-449A)	220V ~ 50HZ	3369	849	987	425	7.93	2	2.32	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):	6.69
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):	16
Rated Load Amps (RLA 50 Hz):	2.74
Rated Load Amps (RLA 60 Hz):	0
Max. Continuous Current (MCC in Amps):	0
Motor Resistance (Ohm) - Main:	6.79
Motor Resistance (Ohm) - Start:	18
Motor Type:	CSIR
Overload Type:	N/A
Relay Type:	N/A

Agency Approval

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



Performance Data Sheet

AE4440Z-FZ1A

General Information

Model	AE4440Z-FZ1A	Refrigerant	R-404A
Test Condition	ASHRAE (R-449A)	Performance Test Voltage	220V ~ 50HZ
Return Gas	35°C (95°F) RETURN GAS	Motor Type	CSIR

Performance Information

Evap Temp (°F)	Condensing Temperature (°F)					
		100	110	120	130	140
0	Btu/h	1750	1530			
	Watts	253	261			
	Amps	2.01	2.03			
	Lb/h	19.7	18.5			
5	Btu/h	2000	1760	1520		
	Watts	268	277	285		
	Amps	2.05	2.08	2.11		
	Lb/h	22.7	21.4	20.0		
10	Btu/h	2270	2010	1750	1480	
	Watts	281	292	302	311	
	Amps	2.09	2.13	2.17	2.19	
	Lb/h	25.8	24.6	23.1	21.6	
15	Btu/h	2560	2280	1990	1700	1440
	Watts	294	307	319	330	338
	Amps	2.13	2.18	2.23	2.26	2.27
	Lb/h	29.2	28.0	26.5	24.9	23.6
20	Btu/h	2870	2570	2250	1930	1630
	Watts	305	321	335	348	358
	Amps	2.16	2.23	2.29	2.33	2.35
	Lb/h	32.9	31.7	30.1	28.5	27.1
25	Btu/h	3210	2880	2530	2180	1850
	Watts	316	333	350	365	378
	Amps	2.20	2.27	2.34	2.39	2.43
	Lb/h	37.0	35.7	34.1	32.5	30.9
30	Btu/h	3590	3220	2830	2450	2070
	Watts	326	345	364	381	397
	Amps	2.23	2.31	2.39	2.46	2.51
	Lb/h	41.6	40.2	38.6	36.8	35.1

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	-7.461794E+02	1.933545E+02	2.371595E+00	-3.263125E+01
C2	5.112100E+01	8.948221E-01	1.325864E-02	2.471658E-01

C3	1.022873E+02	-4.705896E-01	-2.172313E-02	1.557061E+00
C4	1.117575E+00	-2.356376E-02	8.564456E-05	6.268307E-03
C5	1.672340E-01	5.252877E-03	-2.852210E-04	5.461249E-03
C6	-1.088182E+00	1.901847E-02	2.937501E-04	-1.436541E-02
C7	2.927526E-03	-1.007859E-04	-2.904720E-07	7.568107E-05
C8	-7.548374E-03	1.044566E-04	-1.194047E-06	-3.198002E-05
C9	-2.014440E-03	1.471105E-04	2.394358E-06	-2.262264E-05
C10	3.148878E-03	-8.303869E-05	-1.131152E-06	4.031952E-05

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

AE4440Z-FZ1A

General Information

Model	AE4440Z-FZ1A	Refrigerant	R-404A
Test Condition	ASHRAE (R-452A)	Performance Test Voltage	220V ~ 50HZ
Return Gas	35°C (95°F) RETURN GAS	Motor Type	CSIR

Performance Information

Evap Temp (°F)	Condensing Temperature (°F)					
		100	110	120	130	140
0	Btu/h	1820	1590			
	Watts	265	273			
	Amps	2.04	2.06			
	Lb/h	25.5	23.9			
5	Btu/h	2080	1840	1580		
	Watts	279	289	298		
	Amps	2.08	2.12	2.14		
	Lb/h	29.3	27.7	25.8		
10	Btu/h	2360	2100	1820	1550	
	Watts	293	305	316	324	
	Amps	2.12	2.17	2.20	2.22	
	Lb/h	33.3	31.7	29.8	27.9	
15	Btu/h	2660	2380	2070	1770	1500
	Watts	306	320	333	344	353
	Amps	2.16	2.22	2.27	2.30	2.31
	Lb/h	37.7	36.1	34.2	32.2	30.5
20	Btu/h	2990	2680	2350	2010	1700
	Watts	319	335	350	363	374
	Amps	2.20	2.26	2.32	2.37	2.39
	Lb/h	42.5	40.9	38.9	36.9	35.0
25	Btu/h	3350	3000	2640	2270	1920
	Watts	330	348	365	381	395
	Amps	2.23	2.31	2.38	2.43	2.47
	Lb/h	47.8	46.2	44.1	41.9	40.0
30	Btu/h	3740	3360	2950	2550	2160
	Watts	340	360	380	398	415
	Amps	2.26	2.35	2.42	2.50	2.55
	Lb/h	53.7	51.9	49.8	47.5	45.4

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	-7.773293E+02	2.018896E+02	2.410262E+00	-4.213398E+01
C2	5.325510E+01	9.343215E-01	1.347481E-02	3.191444E-01

C3	1.065573E+02	-4.913625E-01	-2.207730E-02	2.010502E+00
C4	1.164229E+00	-2.460392E-02	8.704090E-05	8.093737E-03
C5	1.742153E-01	5.484750E-03	-2.898712E-04	7.051651E-03
C6	-1.133609E+00	1.985798E-02	2.985394E-04	-1.854884E-02
C7	3.049738E-03	-1.052348E-04	-2.952078E-07	9.772059E-05
C8	-7.863488E-03	1.090675E-04	-1.213514E-06	-4.129311E-05
C9	-2.098535E-03	1.536043E-04	2.433396E-06	-2.921071E-05
C10	3.280330E-03	-8.670419E-05	-1.149594E-06	5.206120E-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

AE4440Z-FZ1A

General Information

Model	AE4440Z-FZ1A	Refrigerant	R-404A
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)	573	525	477	427	377	325	272	216
	Watts (Power)	286	297	308	318	327	334	337	337
	Amps	2.20	2.22	2.25	2.28	2.30	2.32	2.33	2.32
	Lb/h	14.2	13.7	13.2	12.7	12.1	11.4	10.7	9.92
-10	Watts (Capacity)	711	655	599	541	482	422	360	297
	Watts (Power)	302	316	331	345	358	369	377	381
	Amps	2.24	2.28	2.32	2.35	2.39	2.42	2.45	2.46
	Lb/h	17.7	17.2	16.7	16.2	15.6	14.9	14.2	13.4
-6.7	Watts (Capacity)	815	752	688	624	558	490	421	350
	Watts (Power)	311	328	344	361	377	391	402	410
	Amps	2.27	2.31	2.36	2.40	2.45	2.49	2.52	2.55
	Lb/h	20.4	19.9	19.4	18.8	18.1	17.5	16.7	15.9
-5	Watts (Capacity)	873	806	738	669	599	527	454	378
	Watts (Power)	316	333	351	369	386	401	414	424
	Amps	2.28	2.33	2.38	2.43	2.48	2.53	2.56	2.59
	Lb/h	21.9	21.4	20.8	20.2	19.6	18.9	18.1	17.3
0	Watts (Capacity)	1060	981	899	815	730	644	556	466
	Watts (Power)	325	346	367	389	411	431	449	464
	Amps	2.31	2.37	2.43	2.50	2.56	2.62	2.68	2.73
	Lb/h	27.0	26.4	25.7	25.1	24.3	23.5	22.7	21.8
5	Watts (Capacity)	1280	1180	1080	984	881	777	671	563
	Watts (Power)	329	353	379	406	432	457	480	500
	Amps	2.33	2.40	2.47	2.55	2.64	2.72	2.79	2.86
	Lb/h	33.1	32.4	31.6	30.8	30.0	29.1	28.1	27.1
7.2	Watts (Capacity)	1390	1280	1180	1070	955	842	727	610
	Watts (Power)	329	355	383	411	439	467	492	515

	Amps	2.33	2.40	2.49	2.57	2.66	2.75	2.84	2.91
	Lb/h	36.2	35.4	34.6	33.8	32.8	31.9	30.9	29.8
10	Watts (Capacity)	1540	1420	1300	1180	1060	930	803	674
	Watts (Power)	327	355	385	416	447	478	506	533
	Amps	2.32	2.41	2.50	2.59	2.69	2.79	2.89	2.98
	Lb/h	40.5	39.7	38.7	37.8	36.8	35.7	34.6	33.5
15	Watts (Capacity)	1840	1690	1550	1400	1260	1110	957	803
	Watts (Power)	318	350	385	421	457	493	527	559
	Amps	2.29	2.39	2.50	2.61	2.73	2.85	2.97	3.08
	Lb/h	49.4	48.3	47.2	46.1	44.9	43.7	42.4	41.0

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	1.545993E+03	2.697847E+02	2.237290E+00	3.033131E+01
C2	5.979524E+01	-1.701713E+00	-4.125342E-03	1.245266E+00
C3	-1.628364E+01	-1.318744E+00	-8.830929E-03	-1.155727E-01
C4	1.008331E+00	-1.298480E-01	-4.639330E-04	2.575277E-02
C5	-6.211656E-01	6.562031E-02	1.428772E-04	-4.491650E-03
C6	1.482926E-02	1.383463E-01	4.868532E-04	4.408443E-04
C7	5.457096E-03	-1.293617E-03	-6.776420E-06	2.574327E-04
C8	-1.250096E-02	9.151408E-04	5.298779E-06	-1.433231E-04
C9	-2.557976E-04	1.215401E-03	5.114587E-06	5.977181E-06
C10	-3.071863E-04	-1.109614E-03	-3.604014E-06	-1.061793E-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