

Model: AE4450E-FZ1B

Product Description

Type:	Reciprocating Compressors
Application:	HBP/CBP - High/Commercial Back Pressure
ProductDescription:	R-22
Voltage/Frequency:	220-240V ~ 50Hz
Version:	N/A



Product Specifications

Performance

		Refrigeration Capacity			Input Power	(E) Efficiency			EVAP TEMP	Condition	AMBIENT TEMP	RETURN GAS	LIQUID TEMP
Condition	Test Voltage	(R) Btu/h	(R) kcal/h	(R) W	(I) W	(E) Btu/Wh	(E) kcal/Wh	W/W					
ASHRAE	220V ~ 50HZ	4100	1033	1202	497	8.25	2.08	2.42	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:	12
Weight Unit of Measure:	KG
Displacement (cc):	8.02
Oil Type:	Synthetic Alkylate
Viscosity (cSt):	32
Oil Charge (cc):	380

Electrical

Voltage Range (50 Hz):	198-253
Voltage Range (60 Hz):	
Locked Rotor Amps (LRA):	16.5
Rated Load Amps (RLA 50 Hz):	3
Rated Load Amps (RLA 60 Hz):	0
Max. Continuous Current (MCC in Amps):	0
Motor Resistance (Ohm) - Main:	4.743
Motor Resistance (Ohm) - Start:	25.731
Motor Type:	CSIR
Overload Type:	
Relay Type:	

Agency Approval



Performance Data Sheet

AE4450E-FZ1B

General

Model	AE4450E-FZ1B	Unit of Measure	Celsius
Condition	ASHRAE(R-22)	Voltage/Frequency	220V ~ 50HZ
RETURN GAS	35°C (95°F) RETURN GAS	MotorType	CSIR

Performance Information

EVAP TEMP (°C)	Condensing Temperature (°C)							
		30	35	40	45	50	55	60
-25	Btu/h	1410	1330					
	Watts (Power)	247	253					
	Amps	2.25	2.26					
	Lb/h	15.1	14.4					
-23.3	Btu/h	1520	1430					
	Watts (Power)	253	261					
	Amps	2.26	2.28					
	Lb/h	16.5	15.8					
-20	Btu/h	1780	1670	1560	1460			
	Watts (Power)	265	275	286	295			
	Amps	2.28	2.30	2.33	2.35			
	Lb/h	19.5	18.8	18.0	17.2			
-15	Btu/h	2260	2120	1980	1840	1710	1590	
	Watts (Power)	282	296	312	327	338	344	
	Amps	2.32	2.35	2.39	2.43	2.46	2.47	
	Lb/h	24.8	24.1	23.1	22.2	21.4	20.8	
-10	Btu/h	2850	2680	2500	2320	2140	1980	1830
	Watts (Power)	298	315	335	356	374	388	395
	Amps	2.36	2.40	2.46	2.52	2.57	2.61	2.63
	Lb/h	31.2	30.4	29.4	28.3	27.2	26.3	25.6
-6.7	Btu/h	3300	3110	2900	2690	2490	2290	2100
	Watts (Power)	308	327	349	373	395	414	427
	Amps	2.39	2.44	2.50	2.57	2.64	2.70	2.74
	Lb/h	36.0	35.3	34.2	33.0	31.8	30.6	29.6
-5	Btu/h	3550	3340	3130	2900	2680	2460	2260
	Watts (Power)	312	332	356	381	406	427	442
	Amps	2.40	2.45	2.52	2.60	2.67	2.74	2.79
	Lb/h	38.7	38.0	36.9	35.7	34.3	33.0	31.9
0	Btu/h	4360	4120	3860	3590	3320	3050	2790
	Watts (Power)	326	348	374	404	433	461	484
	Amps	2.45	2.50	2.58	2.67	2.77	2.86	2.94
	Lb/h	47.6	46.9	45.8	44.4	42.8	41.2	39.6
5	Btu/h	5270	4990	4690	4370	4050	3730	3410
	Watts (Power)	338	360	389	422	456	490	520
	Amps	2.49	2.55	2.63	2.74	2.85	2.97	3.08

	Lb/h	58.0	57.3	56.2	54.7	52.9	50.9	48.9
7.2	Btu/h	5710	5410	5090	4750	4410	4060	3710
	Watts (Power)	342	365	395	429	465	501	534
	Amps	2.50	2.56	2.65	2.76	2.89	3.01	3.14
	Lb/h	63.1	62.4	61.3	59.7	57.8	55.7	53.6
10	Btu/h	6300	5970	5620	5260	4880	4500	4120
	Watts (Power)	348	371	401	437	475	514	550
	Amps	2.52	2.58	2.68	2.79	2.93	3.07	3.20
	Lb/h	70.0	69.4	68.2	66.6	64.6	62.3	60.0
15	Btu/h	7420	7050	6660	6240	5810	5370	4930
	Watts (Power)	356	379	410	448	489	532	574
	Amps	2.55	2.61	2.71	2.83	2.98	3.14	3.31
	Lb/h	83.8	83.3	82.1	80.4	78.2	75.6	72.9

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	5.239306E+03	4.239165E+02	3.050577E+00	3.692247E+01
C2	2.012213E+02	5.706970E+00	2.405318E-02	1.471550E+00
C3	-5.176167E+00	-1.301147E+01	-5.859450E-02	9.489289E-01
C4	2.376065E+00	5.221682E-02	1.501030E-04	2.742734E-02
C5	-4.827677E-01	-2.475488E-01	-1.128139E-03	2.617520E-02
C6	-1.014138E+00	4.157766E-01	1.616717E-03	-2.437843E-02
C7	-1.866066E-03	-2.189810E-04	-3.500000E-06	1.912990E-04
C8	-8.127805E-03	-2.770375E-03	-7.000000E-06	7.192200E-05
C9	-1.593871E-02	4.702277E-03	2.021220E-05	-3.729080E-04
C10	6.978859E-03	-3.037693E-03	-1.116600E-05	1.551290E-04

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

Te = Evaporator Temperature

Tc = Condensing Temperature



Performance Data Sheet

AE4450E-FZ1B

General

Model	AE4450E-FZ1B	Unit of Measure	Celsius
Condition	EN12900(R-22)	Voltage/Frequency	220V ~ 50HZ
RETURN GAS	20°C (68°F) RETURN GAS	MotorType	CSIR

Performance Information

EVAP TEMP (°C)	Condensing Temperature (°C)							
		30	35	40	45	50	55	60
-25	Btu/h	1300	1230					
	Watts (Power)	242	248					
	Amps	2.23	2.24					
	Lb/h	16.1	15.8					
-23.3	Btu/h	1410	1330					
	Watts (Power)	248	256					
	Amps	2.24	2.25					
	Lb/h	17.4	17.0					
-20	Btu/h	1640	1550	1450	1350			
	Watts (Power)	260	270	281	289			
	Amps	2.26	2.28	2.30	2.32			
	Lb/h	20.4	19.9	19.4	18.8			
-15	Btu/h	2080	1960	1830	1700	1580	1470	
	Watts (Power)	277	290	306	320	332	338	
	Amps	2.29	2.32	2.36	2.40	2.43	2.44	
	Lb/h	26.0	25.4	24.6	23.8	23.0	22.4	
-10	Btu/h	2630	2480	2310	2150	1980	1830	1690
	Watts (Power)	293	310	329	349	366	380	387
	Amps	2.33	2.38	2.43	2.49	2.54	2.58	2.60
	Lb/h	32.9	32.2	31.2	30.1	29.0	28.0	27.1
-6.7	Btu/h	3040	2870	2680	2490	2300	2110	1940
	Watts (Power)	303	321	343	366	387	406	418
	Amps	2.36	2.41	2.47	2.54	2.61	2.66	2.70
	Lb/h	38.2	37.4	36.3	35.1	33.8	32.5	31.4
-5	Btu/h	3270	3090	2890	2690	2480	2270	2090
	Watts (Power)	308	327	350	374	397	418	433
	Amps	2.38	2.43	2.49	2.57	2.64	2.71	2.76
	Lb/h	41.2	40.4	39.2	37.9	36.5	35.1	33.9
0	Btu/h	4010	3800	3570	3320	3070	2820	2570
	Watts (Power)	321	342	368	396	425	452	474
	Amps	2.42	2.48	2.55	2.64	2.73	2.83	2.91
	Lb/h	50.9	50.0	48.8	47.3	45.6	43.9	42.2
5	Btu/h	4860	4610	4340	4050	3750	3450	3150
	Watts (Power)	333	355	383	414	448	480	510
	Amps	2.46	2.52	2.60	2.71	2.82	2.94	3.05

	Lb/h	62.2	61.3	59.9	58.2	56.3	54.3	52.2
7.2	Btu/h	5260	5000	4710	4400	4080	3750	3430
	Watts (Power)	338	360	388	421	456	491	524
	Amps	2.48	2.54	2.62	2.73	2.85	2.98	3.10
	Lb/h	67.7	66.7	65.3	63.6	61.6	59.4	57.2
10	Btu/h	5800	5520	5200	4870	4520	4170	3810
	Watts (Power)	343	365	394	429	466	504	540
	Amps	2.50	2.55	2.65	2.76	2.89	3.03	3.17
	Lb/h	75.1	74.1	72.7	70.9	68.8	66.4	64.0
15	Btu/h	6840	6520	6170	5790	5390	4980	4560
	Watts (Power)	350	372	403	439	480	522	563
	Amps	2.52	2.58	2.68	2.80	2.95	3.11	3.27
	Lb/h	89.6	88.7	87.2	85.3	83.0	80.4	77.7

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	4.403900E+03	4.308079E+02	3.045682E+00	4.310118E+01
C2	1.812068E+02	5.777569E+00	2.417536E-02	1.865570E+00
C3	2.298068E+01	-1.351230E+01	-5.934520E-02	7.806298E-01
C4	2.234544E+00	3.788569E-02	1.150290E-04	2.703165E-02
C5	-2.488262E-01	-2.474650E-01	-1.125574E-03	1.609391E-02
C6	-1.511176E+00	4.204211E-01	1.620395E-03	-2.135919E-02
C7	-5.846840E-04	-4.085530E-04	-3.904790E-06	9.061930E-05
C8	-7.790625E-03	-2.442754E-03	-6.205080E-06	1.146540E-04
C9	-1.665038E-02	4.650257E-03	2.007010E-05	-2.763990E-04
C10	1.033104E-02	-3.052513E-03	-1.116010E-05	1.349580E-04

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

Te = Evaporator Temperature

Tc = Condensing Temperature



Performance Data Sheet

AE4450E-FZ1B

General

Model	AE4450E-FZ1B	Unit of Measure	Fahrenheit
Condition	EN12900(R-22)	Voltage/Frequency	220V ~ 50HZ
RETURN GAS	20°C (68°F) RETURN GAS	MotorType	CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)								
		80	90	100	110	120	130	140	150
5	Btu/h	2160	2030	1890	1740	1600	1480	1380	1320
	Watts	270	283	299	316	329	337	336	323
	Amps	2.28	2.31	2.35	2.39	2.43	2.44	2.43	2.37
	Lb/h	26.3	25.7	24.9	24.0	23.1	22.4	22.0	22.0
10	Btu/h	2450	2310	2150	1990	1820	1670	1540	1440
	Watts	278	292	311	331	348	361	365	358
	Amps	2.30	2.33	2.38	2.43	2.48	2.52	2.52	2.49
	Lb/h	30.0	29.4	28.5	27.4	26.4	25.4	24.7	24.3
15	Btu/h	2780	2630	2450	2260	2070	1890	1730	1600
	Watts	286	302	322	345	366	383	392	391
	Amps	2.32	2.36	2.41	2.47	2.54	2.59	2.62	2.61
	Lb/h	34.1	33.5	32.5	31.3	30.0	28.8	27.8	27.1
20	Btu/h	3140	2970	2770	2560	2340	2130	1940	1780
	Watts	294	311	333	358	383	404	418	423
	Amps	2.35	2.38	2.44	2.52	2.59	2.66	2.70	2.72
	Lb/h	38.6	38.0	36.9	35.6	34.1	32.7	31.4	30.5
25	Btu/h	3540	3340	3130	2890	2650	2410	2190	1990
	Watts	302	319	343	371	399	424	443	453
	Amps	2.37	2.41	2.47	2.56	2.64	2.73	2.79	2.83
	Lb/h	43.6	42.9	41.8	40.3	38.7	37.1	35.6	34.3
30	Btu/h	3960	3750	3510	3250	2980	2710	2460	2230
	Watts	309	327	352	382	413	442	466	481
	Amps	2.39	2.43	2.50	2.59	2.69	2.79	2.88	2.93
	Lb/h	49.0	48.3	47.1	45.6	43.8	42.0	40.2	38.6
35	Btu/h	4410	4190	3920	3640	3340	3050	2760	2490
	Watts	316	334	361	392	426	459	487	507
	Amps	2.42	2.46	2.53	2.63	2.74	2.85	2.96	3.04
	Lb/h	54.9	54.2	52.9	51.3	49.4	47.4	45.4	43.5
40	Btu/h	4900	4650	4370	4060	3730	3400	3080	2780
	Watts	322	341	368	402	438	474	506	532
	Amps	2.44	2.48	2.56	2.66	2.79	2.91	3.03	3.13
	Lb/h	61.2	60.5	59.3	57.5	55.5	53.3	51.0	48.9
45	Btu/h	5420	5150	4840	4510	4150	3790	3430	3090
	Watts	328	347	375	410	449	488	524	554
	Amps	2.46	2.50	2.58	2.69	2.83	2.97	3.10	3.22

	Lb/h	68.0	67.4	66.1	64.3	62.1	59.7	57.3	54.9
50	Btu/h	5970	5680	5350	4980	4600	4210	3810	3430
	Watts	333	352	381	417	458	500	540	575
	Amps	2.48	2.52	2.60	2.72	2.86	3.01	3.17	3.31
	Lb/h	75.4	74.7	73.4	71.5	69.3	66.7	64.0	61.4
55	Btu/h	6550	6240	5880	5490	5080	4650	4220	3800
	Watts	338	356	385	423	465	510	554	593
	Amps	2.50	2.53	2.62	2.74	2.89	3.06	3.23	3.39
	Lb/h	83.2	82.6	81.3	79.3	77.0	74.3	71.4	68.5

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	1.006443E+03	6.419940E+02	3.870408E+00	2.578226E+00
C2	5.302156E+01	4.648990E+00	2.156346E-02	3.829820E-01
C3	4.330189E+01	-1.377115E+01	-5.378069E-02	6.907993E-01
C4	7.420454E-01	3.182157E-02	1.338260E-04	6.222325E-03
C5	1.914158E-01	-1.006031E-01	-4.995530E-04	6.742241E-03
C6	-5.451104E-01	1.544909E-01	5.737020E-04	-7.297284E-03
C7	-1.002550E-04	-7.005360E-05	-6.695450E-07	1.553830E-05
C8	-1.335841E-03	-4.188540E-04	-1.063970E-06	1.965940E-05
C9	-2.855003E-03	7.973690E-04	3.441370E-06	-4.739360E-05
C10	1.771440E-03	-5.234080E-04	-1.913590E-06	2.314100E-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