

Model: AE4450E-FZ1B
Product Description

Type: Reciprocating
Application: HBP/CBP - High/Commercial
 Back Pressure
Refrigerant: R-22
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	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: 0
Weight Unit of Measure: N/A
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): N/A
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: N/A
Relay Type: N/A

Agency Approval

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



Tecumseh

Performance Data Sheet

AE4450E-FZ1B

General Information

Model	AE4450E-FZ1B	Refrigerant	R-22
Test Condition	EN12900	Performance Test Voltage	220V ~ 50HZ
Return Gas	20°C (68°F) RETURN GAS	Motor Type	CSIR

Performance Information

Evap Temp (°C)	Condensing Temperature (°C)				
		30	40	50	60
-15	Btu/h	2080	1830	1580	1380
	Watts (Power)	277	306	332	336
	Amps	2.29	2.36	2.43	2.43
	Lb/h	26.0	24.6	23.0	22.0
-10	Btu/h	2630	2310	1980	1690
	Watts (Power)	293	329	366	387
	Amps	2.33	2.43	2.54	2.60
	Lb/h	32.9	31.2	29.0	27.1
-6.7	Btu/h	3040	2680	2300	1940
	Watts (Power)	303	343	387	418
	Amps	2.36	2.47	2.61	2.70
	Lb/h	38.2	36.3	33.8	31.4
-5	Btu/h	3270	2890	2480	2090
	Watts (Power)	308	350	397	433
	Amps	2.38	2.49	2.64	2.76
	Lb/h	41.2	39.2	36.5	33.9
0	Btu/h	4010	3570	3070	2570
	Watts (Power)	321	368	425	474
	Amps	2.42	2.55	2.73	2.91
	Lb/h	50.9	48.8	45.6	42.2
5	Btu/h	4860	4340	3750	3150
	Watts (Power)	333	383	448	510
	Amps	2.46	2.60	2.82	3.05
	Lb/h	62.2	59.9	56.3	52.2
7.2	Btu/h	5260	4710	4080	3430
	Watts (Power)	338	388	456	524
	Amps	2.48	2.62	2.85	3.10
	Lb/h	67.7	65.3	61.6	57.2
10	Btu/h	5800	5200	4520	3810
	Watts (Power)	343	394	466	540
	Amps	2.50	2.65	2.89	3.17
	Lb/h	75.1	72.7	68.8	64.0

15	Btu/h	6840	6170	5390	4560
	Watts (Power)	350	403	480	563
	Amps	2.52	2.68	2.95	3.27
	Lb/h	89.6	87.2	83.0	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	1.150294E-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	-5.846842E-04	-4.085525E-04	-3.904788E-06	9.061931E-05
C8	-7.790625E-03	-2.442754E-03	-6.205079E-06	1.146538E-04
C9	-1.665038E-02	4.650257E-03	2.007009E-05	-2.763992E-04
C10	1.033104E-02	-3.052513E-03	-1.116005E-05	1.349583E-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



Tecumseh

Performance Data Sheet

AE4450E-FZ1B

General Information

Model	AE4450E-FZ1B	Refrigerant	R-22
Test Condition	EN12900	Performance Test Voltage	220V ~ 50HZ
Return Gas	20°C (68°F) RETURN GAS	Motor Type	CSIR

Performance Information

Evap Temp (°F)		Condensing Temperature (°F)						
		80	90	100	110	120	130	140
5	Btu/h	2160	2030	1890	1740	1600	1480	1380
	Watts	270	283	299	316	330	337	336
	Amps	2.28	2.31	2.35	2.39	2.43	2.44	2.43
	Lb/h	26.3	25.7	24.9	24.0	23.1	22.4	22.0
10	Btu/h	2450	2310	2150	1990	1820	1670	1540
	Watts	278	292	311	331	348	361	365
	Amps	2.30	2.33	2.38	2.43	2.48	2.52	2.52
	Lb/h	30.0	29.4	28.5	27.4	26.4	25.4	24.7
15	Btu/h	2780	2630	2450	2260	2070	1890	1730
	Watts	286	302	322	345	366	383	392
	Amps	2.32	2.36	2.41	2.47	2.54	2.59	2.62
	Lb/h	34.1	33.5	32.5	31.3	30.0	28.8	27.8
20	Btu/h	3140	2970	2770	2560	2340	2130	1940
	Watts	294	311	333	358	383	404	418
	Amps	2.35	2.38	2.44	2.52	2.59	2.66	2.70
	Lb/h	38.6	38.0	36.9	35.6	34.1	32.7	31.4
25	Btu/h	3540	3340	3130	2890	2650	2410	2190
	Watts	302	319	343	371	399	424	443
	Amps	2.37	2.41	2.47	2.56	2.64	2.73	2.79
	Lb/h	43.6	42.9	41.8	40.3	38.7	37.1	35.6
30	Btu/h	3960	3750	3510	3250	2980	2710	2460
	Watts	309	327	352	382	413	442	466
	Amps	2.39	2.43	2.50	2.59	2.69	2.79	2.88
	Lb/h	49.0	48.3	47.1	45.6	43.8	42.0	40.2
35	Btu/h	4410	4190	3920	3640	3340	3050	2760
	Watts	316	334	361	392	426	459	487
	Amps	2.42	2.46	2.53	2.63	2.74	2.85	2.96
	Lb/h	54.9	54.2	52.9	51.3	49.4	47.4	45.4
40	Btu/h	4900	4650	4370	4060	3730	3400	3080
	Watts	322	341	368	402	438	474	506
	Amps	2.44	2.48	2.56	2.66	2.79	2.91	3.03
	Lb/h	61.2	60.5	59.3	57.5	55.5	53.3	51.0

45	Btu/h	5420	5150	4840	4510	4150	3790	3430
	Watts	328	347	375	410	449	488	524
	Amps	2.46	2.50	2.58	2.69	2.83	2.97	3.10
	Lb/h	68.0	67.4	66.1	64.3	62.1	59.7	57.3
50	Btu/h	5970	5680	5350	4980	4600	4210	3810
	Watts	333	352	381	417	458	500	540
	Amps	2.48	2.52	2.60	2.72	2.86	3.01	3.17
	Lb/h	75.4	74.7	73.4	71.5	69.3	66.7	64.0
55	Btu/h	6550	6240	5880	5490	5080	4650	4220
	Watts	338	356	385	423	465	510	554
	Amps	2.50	2.53	2.62	2.74	2.89	3.06	3.23
	Lb/h	83.2	82.6	81.3	79.3	77.0	74.3	71.4
60	Btu/h	7160	6820	6440	6020	5580	5120	4650
	Watts	342	359	389	427	472	519	566
	Amps	2.51	2.54	2.63	2.76	2.92	3.10	3.28
	Lb/h	91.5	91.0	89.7	87.7	85.2	82.4	79.3

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	1.338263E-04	6.222325E-03
C5	1.914158E-01	-1.006031E-01	-4.995531E-04	6.742241E-03
C6	-5.451104E-01	1.544909E-01	5.737023E-04	-7.297284E-03
C7	-1.002545E-04	-7.005358E-05	-6.695452E-07	1.553829E-05
C8	-1.335841E-03	-4.188535E-04	-1.063971E-06	1.965943E-05
C9	-2.855003E-03	7.973692E-04	3.441374E-06	-4.739355E-05
C10	1.771440E-03	-5.234075E-04	-1.913588E-06	2.314099E-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