



## Model: AE4450Y-FZ1C (AE4450Y)

### Product Description

**Type:** Reciprocating  
**Application:** HBP/CBP - High/Commercial  
 Back Pressure  
**Refrigerant:** R134a  
**Voltage/Frequency:** 220-240V ~ 50Hz

### 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	4650	1172	1363	565	8.23	2.07	2.41	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:** N/A  
**Motor Torque:** High Start Torque (HST)  
**Compressor Cooling:** Fan

#### Mechanical

**Weight:** N/A  
**Weight Unit of Measure:** N/A  
**Displacement (cc):** 13.24  
**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):** 17  
**Rated Load Amps (RLA 50 Hz):** 3.23  
**Rated Load Amps (RLA 60 Hz):** N/A  
**Max. Continuous Current (MCC in Amps):** N/A  
**Motor Resistance (Ohm) - Main:** N/A  
**Motor Resistance (Ohm) - Start:** N/A  
**Motor Type:** CSIR  
**Overload Type:** EXTERNAL  
**Relay Type:** N/A

#### Agency Approval

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



# Tecumseh

## Performance Data Sheet

### AE4450Y-FZ1C

### General Information

<b>Model</b>	AE4450Y-FZ1C	<b>Refrigerant</b>	R134a
<b>Test Condition</b>	EN12900 ASERCOM	<b>Performance Test Voltage</b>	240V ~ 50HZ
<b>Return Gas</b>	20°C (68°F) RETURN GAS	<b>Motor Type</b>	CSIR

### Performance Information

Evap Temp (°C)	Condensing Temperature (°C)					
		30	40	50	60	70
<b>-15</b>	Watts (Capacity)	640	564	478	376	253
	Watts (Power)	302	326	349	365	364
	Amps	2.30	2.37	2.45	2.48	2.44
	Lb/h	13.0	12.5	11.7	10.3	8.48
<b>-10</b>	Watts (Capacity)	811	717	620	513	390
	Watts (Power)	332	360	390	415	427
	Amps	2.40	2.48	2.58	2.66	2.68
	Lb/h	16.5	16.0	15.2	14.1	12.5
<b>-6.7</b>	Watts (Capacity)	942	832	722	606	478
	Watts (Power)	352	383	418	450	471
	Amps	2.46	2.56	2.68	2.79	2.85
	Lb/h	19.2	18.6	17.8	16.7	15.2
<b>-5</b>	Watts (Capacity)	1020	896	778	655	523
	Watts (Power)	363	395	432	468	493
	Amps	2.50	2.60	2.73	2.86	2.94
	Lb/h	20.7	20.0	19.2	18.1	16.7
<b>0</b>	Watts (Capacity)	1260	1110	957	810	659
	Watts (Power)	392	430	475	522	561
	Amps	2.61	2.73	2.89	3.07	3.22
	Lb/h	25.9	24.9	23.8	22.6	21.1
<b>5</b>	Watts (Capacity)	1550	1350	1160	982	803
	Watts (Power)	420	463	518	576	631
	Amps	2.71	2.86	3.06	3.29	3.51
	Lb/h	32.1	30.6	29.2	27.7	26.0
<b>7.2</b>	Watts (Capacity)	1700	1470	1260	1060	870
	Watts (Power)	431	478	537	600	662

	Amps	2.76	2.91	3.14	3.39	3.64
	Lb/h	35.3	33.5	31.9	30.2	28.4
10	Watts (Capacity)	1900	1640	1400	1180	960
	Watts (Power)	445	495	560	631	701
	Amps	2.82	2.98	3.23	3.52	3.81
	Lb/h	39.7	37.6	35.6	33.6	31.6
15	Watts (Capacity)	2300	1980	1680	1400	1140
	Watts (Power)	466	524	599	684	771
	Amps	2.91	3.11	3.40	3.75	4.11
	Lb/h	48.7	45.8	43.1	40.5	38.0

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	1.839412E+03	4.013707E+02	2.937104E+00	2.954764E+01
C2	8.539739E+01	5.851502E+00	2.778917E-02	1.500187E+00
C3	-2.310268E+01	-4.851415E+00	-3.612431E-02	-1.571599E-01
C4	1.493399E+00	-8.233340E-02	-1.954675E-04	3.147284E-02
C5	-1.236945E+00	-9.187459E-02	-6.694110E-04	-1.51304E-02
C6	1.585222E-01	1.881969E-01	1.034619E-03	1.650117E-03
C7	7.784860E-03	-1.149866E-03	-6.232476E-06	2.364577E-04
C8	-1.901063E-02	1.563903E-03	6.513961E-06	-3.122832E-04
C9	5.905217E-03	2.933815E-03	1.555722E-05	1.001890E-04
C10	-9.918053E-04	-1.231933E-03	-6.593673E-06	-1.612981E-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