

Model: AKA4476YXA
Product Description

Type: Reciprocating Compressors
Application: HBP - High Back Pressure
Refrigerant: R-134a/R-513A
Voltage/Frequency: 115V ~ 60Hz 100V ~ 50Hz
Version: N/A


Product Specifications
Performance

Condition	Test Voltage	Refrigeration Capacity			Input Power (I) W	(E) Efficiency			EVAP TEMP	Condition	AMBIENT TEMP	RETURN GAS	LIQUID TEMP
		(R) Btu/h	(R) kcal/h	(R) W		(E) Btu/Wh	(E) kcal/Wh	W/W					
ARI (R-513A)	115V ~ 60HZ	7727	1948	2265	1111	6.95	1.75	2.04	7.2°C (45°F)	54°C (130°F)	35°C (95°F)	18.3°C (65°F)	46°C (115°F)
ARI (R-134a)	115V ~ 60HZ	7680	1935	2250	1070	7.18	1.81	2.1	7.2°C (45°F)	54°C (130°F)	35°C (95°F)	18.3°C (65°F)	46°C (115°F)

General

Evaporating Temp. Range: -6.7°C to 12.8°C (20°F to 55°F)
Motor Torque: High Start Torque (HST)
Compressor Cooling: Fan

Mechanical

Weight: 41
Weight Unit of Measure: LB
Displacement (cc): 22.599
Oil Type: Polyolester
Viscosity (cSt): 32
Oil Charge (cc): 512

Electrical

Voltage Range (50 Hz): 90-110
Voltage Range (60 Hz): 103-127
Locked Rotor Amps (LRA): 58.8
Rated Load Amps (RLA 50 Hz): 0
Rated Load Amps (RLA 60 Hz): 11.3
Max. Continuous Current (MCC in Amps): 16

Motor Resistance (Ohm) - Main: .59
Motor Resistance (Ohm) - Start: 4.22

MotorType: CSIR

Overload Type:

Relay Type:

Agency Approval

cURus Recognized

AKA4476YXA
General

Model	AKA4476YXA	Unit of Measure	Fahrenheit
Condition	ARI (R-134a)	Voltage/Frequency	115V~60HZ
RETURN GAS	-6.7°C (20°F) SUPERHEAT	MotorType	CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)								
		80	90	100	110	120	130	140	150
20	Btu/h	5880	5430	4940	4430	3920	3430	2980	2570
	Watts	577	648	699	734	757	773	784	795
	Amps	7.74	8.09	8.37	8.58	8.75	8.87	8.97	9.06
	Lb/h	76.3	73.6	70.2	66.3	62.0	57.8	53.7	50.0
25	Btu/h	6690	6210	5680	5130	4580	4050	3550	3090
	Watts	609	683	739	781	813	838	861	886
	Amps	7.95	8.33	8.65	8.91	9.14	9.35	9.54	9.73
	Lb/h	86.9	84.4	81.1	77.2	72.9	68.5	64.2	60.2
30	Btu/h	7600	7070	6490	5900	5290	4700	4140	3630
	Watts	641	718	778	826	865	900	934	971
	Amps	8.20	8.60	8.95	9.27	9.56	9.84	10.1	10.4
	Lb/h	98.8	96.4	93.0	89.0	84.6	80.0	75.4	71.0
35	Btu/h	8600	8020	7390	6730	6060	5410	4780	4190
	Watts	673	752	816	869	916	959	1000	1050
	Amps	8.45	8.88	9.27	9.63	9.99	10.3	10.7	11.1
	Lb/h	112	110	106	102	97.4	92.4	87.4	82.6
40	Btu/h	9720	9070	8370	7640	6900	6160	5450	4780
	Watts	707	787	854	912	964	1020	1070	1130
	Amps	8.71	9.16	9.58	9.99	10.4	10.8	11.3	11.8
	Lb/h	127	125	121	116	111	106	100	95.1
45	Btu/h	11000	10200	9450	8640	7810	6990	6190	5420
	Watts	742	823	892	954	1010	1070	1130	1200
	Amps	8.96	9.43	9.88	10.3	10.8	11.3	11.8	12.4
	Lb/h	144	141	137	132	127	121	115	109
50	Btu/h	12300	11500	10600	9740	8820	7890	6990	6120
	Watts	780	860	931	996	1060	1120	1190	1270
	Amps	9.19	9.67	10.2	10.6	11.2	11.7	12.3	13.0
	Lb/h	163	160	156	150	144	138	131	124
55	Btu/h	13900	12900	12000	11000	9920	8890	7870	6880
	Watts	820	900	971	1040	1100	1180	1250	1340
	Amps	9.37	9.87	10.4	10.9	11.5	12.1	12.8	13.6
	Lb/h	185	181	176	170	163	156	148	141

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.808963E+03	-1.375643E+03	-4.719180E-01	3.160500E+01
C2	5.575858E+01	8.890893E+00	1.910895E-02	4.515158E-03

C3	4.937675E+01	4.312899E+01	1.818001E-01	9.128011E-01
C4	2.591842E+00	6.105638E-02	2.248646E-03	1.975614E-02
C5	8.420097E-01	-1.468877E-01	-1.468702E-03	2.500208E-02
C6	-9.258680E-01	-3.077342E-01	-1.205275E-03	-1.293927E-02
C7	1.384351E-02	7.227432E-04	-1.788573E-05	2.957970E-04
C8	-2.233983E-02	-1.430275E-03	-4.167025E-06	-2.104871E-04
C9	-2.875453E-03	1.644816E-03	1.287025E-05	-7.196777E-05
C10	2.973120E-03	6.530255E-04	2.104538E-06	3.917792E-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



Performance Data Sheet

AKA4476YXA

General

Model	AKA4476YXA	Unit of Measure	Fahrenheit
Condition	ARI (R-513A)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	18.3°C (65°F) RETURN GAS	MotorType	CSIR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)					
		100	110	120	130	140
20	Btu/h	4970	4460	3950	3450	2990
	Watts	781	820	846	863	876
	Amps	9.18	9.42	9.60	9.73	9.84
	Lb/h	86.3	81.5	76.3	71.0	66.0
25	Btu/h	5720	5170	4610	4070	3570
	Watts	826	873	908	936	962
	Amps	9.49	9.78	10.0	10.3	10.5
	Lb/h	99.7	94.9	89.6	84.2	78.9
30	Btu/h	6530	5930	5330	4730	4170
	Watts	869	923	967	1010	1040
	Amps	9.83	10.2	10.5	10.8	11.1
	Lb/h	114	109	104	98.3	92.6
35	Btu/h	7430	6770	6100	5440	4800
	Watts	912	971	1020	1070	1120
	Amps	10.2	10.6	11.0	11.3	11.7
	Lb/h	131	125	120	114	107
40	Btu/h	8420	7690	6940	6200	5490
	Watts	954	1020	1080	1130	1190
	Amps	10.5	11.0	11.4	11.9	12.4
	Lb/h	149	143	137	130	123
45	Btu/h	9510	8690	7860	7030	6220
	Watts	997	1070	1130	1200	1260
	Amps	10.8	11.3	11.9	12.4	13.0
	Lb/h	169	163	156	149	141
50	Btu/h	10700	9800	8870	7940	7030
	Watts	1040	1110	1180	1250	1330
	Amps	11.1	11.7	12.3	12.9	13.5
	Lb/h	191	185	177	169	161
55	Btu/h	12000	11000	9980	8940	7910
	Watts	1080	1160	1230	1310	1400
	Amps	11.4	12.0	12.6	13.3	14.1
	Lb/h	217	209	201	192	182

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.832226E+03	-1.536683E+03	-5.178569E-01	3.884542E+01
C2	5.609912E+01	9.931709E+00	2.096911E-02	5.549540E-03

C3	4.967831E+01	4.817790E+01	1.994975E-01	1.121916E+00
C4	2.607671E+00	6.820397E-02	2.467541E-03	2.428209E-02
C5	8.471522E-01	-1.640832E-01	-1.611673E-03	3.072983E-02
C6	-9.315227E-01	-3.437592E-01	-1.322603E-03	-1.590354E-02
C7	1.392806E-02	8.073514E-04	-1.962682E-05	3.635614E-04
C8	-2.247627E-02	-1.597711E-03	-4.572665E-06	-2.587078E-04
C9	-2.893015E-03	1.837367E-03	1.412311E-05	-8.845493E-05
C10	2.991278E-03	7.294722E-04	2.309405E-06	4.815323E-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