

Specifications sheet

KCJ484CAL-B323H

Condensing :	Ambient(K) + 12°C / 21.6 °F
Electrical:	220 - 230 V, 50 Hz, 1 Phase

Sub-Cooling : (K)	0°C / 0°F
Suction Return :	20 °C / 68°F
Refrigerant :	R404A



A) MODEL DESCRIPTION

Model Name	KCJ484CAL-BXXXH
Compressor Type	Reciprocating, Connecting Rod Type
Application Group	Medium Temperature (CBP)
Evaporating Temperature Range	(-) 17.8 °C To 10 °C Or 0 °F To 50 °F
Refrigerant	R-404A
Rated Voltage	220 - 230 V, 50 Hz, 1 Phase
Compressor Cooling	Fan : 350 ft ³ / minute
Typical Application	Visi Cooler, Display Cabinet
Certifications & Approvals	CCC

B) PERFORMANCE SPECIFICATION @ RATED CONDITION

Parameter	Unit	CBP
Cooling Capacity	Btu / hr	7000
	kcal / hr	1763
	W	2052
	Nominal HP	1.05
Input Power	W	1250
Input Current	A	6.2
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-hr	5.6
	kcal / W-hr	1.41
	W / W	1.64

Note: Above Performance Parameters are Nominal Values & subject to $\pm 5\%$ variation.

C) RATING CONDITIONS

Parameter	Unit	CBP @ ASRE/T
Evaporating Temperature	°C (°F)	-6.7 (20)
Condensing Temperature	°C (°F)	54.4 (130)
Ambient Temperature	°C (°F)	35 (95)
Sub-cooled Liquid Temperature	°C (°F)	46 (115)
Return Gas Temperature	°C (°F)	35 (95)
Test Voltage	V	230

D) MECHANICAL SPECIFICATIONS

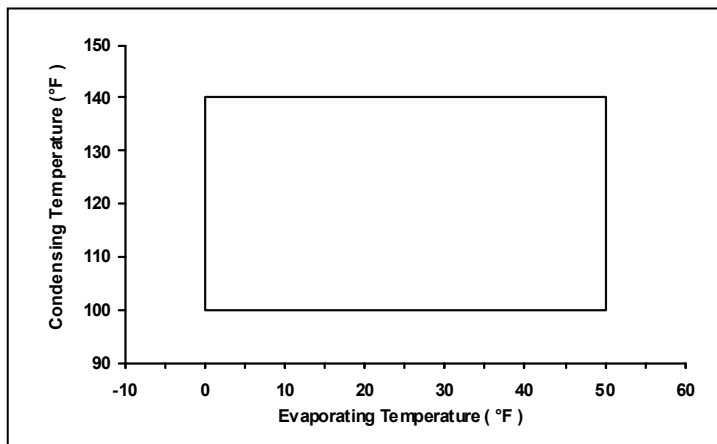
Parameter	Unit	Value
Number of Cylinders	Number	One (1)
Displacement	cm ³ (inch ³) / rev	25.91 (1.581)
Net Weight	kg	22.5
Approximate Shipping Weight	kg	-----
Oil Charge	cm ³ (Oz)	890 (30)
Oil Type	Refrigeration Grade	Polyolester (POE)
IPRV (Pressure Differential)	kg/cm ² (psig)	N/A
** Crank - case Heater	W @ V	N/A

** Recommended only for Heat Pump Application.

E) ELECTRICAL SPECIFICATIONS

Parameter	Unit	Value
Operating Voltage Range	V	180 To 260
Motor Circuit	---	CSCR
Electrical Accessories	---	
➤ Start Capacitor	μF @ V AC	80-100 @ 230
➤ Run Capacitor	μF @ V AC	25 @ 440
➤ Relay	---	AC85001 Or HLR3800-6H3C-1
➤ Over Load Protector	---	Internal
Locked Rotor Ampere (LRA)	A	37
Maximum Continuous Current (MCC)	A	11.5
High Potential Test	(kV / second / mA)	1.85 / 1 / 5.5 ± 0.5

F) OPERATING ENVELOPE @ 230 V, 50 Hz, 1 Phase



G) PERFORMANCE TABLES

Superheat	11 °C (20 °F)	Voltage	230 V, 50 Hz, 1 Phase
Sub - cooling	8.3 °C (15 °F)	Compressor Cooling	350 ft ³ / minute
Ambient Temperature	35 °C (95 °F)	-	-

H) COOLING CAPACITY (Btu / hr)

Condensing Temperature		Evaporating Temperature							Coefficients	
									c1	Under Evolution
°C		-17.8	-12.2	-6.7	-1.1	4.4	7.2	10	c2	
	(°F)	0	10	20	30	40	45	50	c3	
37.8	100	6113	8083	10344	13015	15645	17810	20002	c4	
43.3	110	5343	7209	9097	11755	14152	16440	18339	c5	
48.9	120	4562	6234	8083	10385	12782	14837	16655	c6	
54.4	130	3836	5347	7000	9357	11412	13248	15180	c7	
60.0	140	3150	4329	5918	8220	10165	11988	13810	c8	
									c9	
									c10	

J) INPUT POWER (W)

Condensing Temperature		Evaporating Temperature							Coefficients	
									c1	Under Evolution
°C		-17.8	-12.2	-6.7	-1.1	4.4	7.2	10	c2	
	(°F)	0	10	20	30	40	45	50	c3	
37.8	100	959	1067	1161	1229	1289	1335	1364	c4	
43.3	110	965	1080	1193	1269	1350	1412	1457	c5	
48.9	120	972	1094	1224	1323	1431	1497	1538	c6	
54.4	130	959	1107	1250	1379	1499	1563	1615	c7	
60.0	140	940	1127	1293	1434	1564	1635	1690	c8	
									c9	
									c10	

K) INPUT CURRENT (A)

Condensing Temperature		Evaporating Temperature							Coefficients	
									c1	Under Evolution
°C		-17.8	-12.2	-6.7	-1.1	4.4	7.2	10	c2	
	(°F)	0	10	20	30	40	45	50	c3	
37.8	100	5.0	5.4	5.7	6.0	6.4	6.5	6.6	c4	
43.3	110	5.1	5.4	5.8	6.3	6.6	6.8	6.9	c5	
48.9	120	5.1	5.5	6.0	6.5	6.9	7.1	7.2	c6	
54.4	130	5.1	5.5	6.2	6.7	7.1	7.4	7.6	c7	
60.0	140	5.1	5.5	6.3	7.0	7.5	7.7	7.9	c8	
									c9	
									c10	

L) MASS FLOW RATE (lbs / hr)

Condensing Temperature		Evaporating Temperature							Coefficients	
									c1	Under Evolution
°C		-17.8	-12.2	-6.7	-1.1	4.4	7.2	10	c2	
	(°F)	0	10	20	30	40	45	50	c3	
37.8	100								c4	
43.3	110								c5	
48.9	120								c6	
54.4	130								c7	
60.0	140								c8	
									c9	
									c10	

Note: 1. Nominal Performance Values (± 5%) based on 24 h of 'run in'. Subject to change without notice.

2. Compressor is intended to be operated in the range of condensing & evaporating temperatures where performance values are specified in above tables.

M) MECHANICAL SPECIFICATIONS

Parameter	Unit	Value
Cylinder Bore Diameter	cm (inch)	3.99 (1.5742)
Crank - Shaft Eccentricity	cm (inch)	1.03 (0.4065)
Crank - Shaft Stroke	cm (inch)	2.06 (0.813)
Approximate Internal Free Volume (Without Oil)	cm ³ (inch ³)	-----
Maximum Residual Moisture	mg	30
Maximum Internal Solid Residue / Impurities	mg	30

N) ELECTRICAL SPECIFICATIONS

Parameter	Unit	Value
Motor Type	---	2 Pole, Induction, Single Phase
Nominal Motor Speed	rpm	2,900
Nominal Motor Winding Resistance (@ 25 °C)	Main	Ω 1.58 To 1.82
	Aux.	Ω 4.46 To 5.14
Nominal Motor Output Power	kW	0.98
Max. Allowable Motor Winding Temp.	°F (°C)	266 (130) B Class Insulation
Relay		
Type	---	Potential
Part Number	---	AC85001 Or HLR3800-6H3C-1
Pick Up (Maximum)	V	195 To 215
Drop Out (Minimum)	V	80 To 110
Maximum Voltage Rating of Coils	V	430
Over Load Protector		
Type	---	Internal
Part Number		15HM-1824-147 (Sensata) Or 5DN0824-147 (Krishna)
Disc Opening Temperature	°F (°C)	257 To 275 (125 To 135)
Disc Closing Temperature	°F (°C)	134 To 166 (57 To 75)
1 st Cycle Trip Current	A	32
1 st Cycle Trip On Time	second	2 To 10
Terminal Fused Cluster	---	1/4" Quick connector
Wire Material	---	Hermetic Grade Round Enameled
Wire Enamel Designation & Construction	---	H Class, Dual Coated

P) PERFORMANCE SPECIFICATIONS

Parameter	Unit	Value
Bare Compressor Sound	dBA	73.0 Maximum
Bare Compressor Vibration	µm	150.0 Maximum
Compressor Discharge Pulse	psi	4.5 Maximum

Q) TEST CONDITIONS

Parameter	Voltage	Suction Pressure	Discharge Pressure	Top Shell Temperature	Ambient Temperature
Unit Test	V	kg/cm ² (psig)	kg/cm ² (psig)	°C (°F)	°C (°F)
Overload (High Load)	230 260	5.13 (73)	31.7 (451)	---	46 (115)
Blocked Fan	230	6.7 (95)	28.4 (404)	---	35 (95)
Low Voltage Start :					---
Unequalised	180	8 (114)	25.3 (360)	65 (149)	
Equalised	180	14.3 (203)	14.3 (203)	65 (149)	
Low Voltage Run	180	5.13 (73)	31.7 (451)	---	46 (115)

Note: Above test conditions are only for reference. Refer operating envelop and maximum allowable discharge line temperature for safe operation of compressor.

R) REFERENCE APPLICATION DETAIL CONDITIONS

Parameter	Unit	Value
Maximum Allowable Ambient Temperature	°C (°F)	43 (109)
Maximum Discharge Line Temperature	°C (°F)	135 (275)
Maximum Return Gas Temperature	°C (°F)	43 (109)

Note: Application Details are the guidelines for safe operation of compressor.