

PRODUCT SPECIFICATION

COMPRESSOR MODEL

KCJ450LAL-BXXX

BILL OF MATERIALS

B320, B321

Emerson Climate Technologies (India) Limited
Karad Dhebewadi Road
Karad - 415 110
INDIA

Note – Sales compressor drawing number and compressor model name are the same.

				1	F25-1206-0591 Current EN No.	A3 20.12.2006
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PRODUCT SPECIFICATION**MODEL – KCJ450LAL-BXXX****A) MODEL DESCRIPTION**

Model Name	KCJ450LAL-BXXX
Compressor Type	Reciprocating ,Connecting Rod Type
Application Group	Low Temperature (LBP)
Evaporating Temperature Range	-40°C To -6.7°C (-40 °F To 20°F)
Refrigerant	R-404A
Rated Voltage	230 V, 50 Hz, 1 Phase
Compressor Cooling	Fan : 350 ft ³ / minute
Typical Applications	Ice Candy, Ice Cream Churner, Softy Machine
Certifications & Approvals	EN60335-2-34

B) PERFORMANCE SPECIFICATION @ RATED CONDITION

Specification	Unit	LBP	CBP
Cooling Capacity	Btu / h	4100	N / A
	kcal / h	1033	
	W	1201	
	Nominal HP	1.23	
Input Power	W	975	
Input Current	A	5.0	
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-h	4.21	
	kcal / W-h	1.06	
	W / W	1.23	

Note – Above performance parameters are nominal values & subject to $\pm 5\%$ variation

C) RATING CONDITIONS

Parameter	Unit	LBP @ ASRE/T	CBP
Evaporating Temperature	°C (°F)	-23.3 (-10)	N / A
Condensing Temperature	°C (°F)	54.4 (130)	
Ambient Temperature	°C (°F)	32 (90)	
Sub cooled Liquid Temp.	°C (°F)	32 (90)	
Return Gas Temperature	°C (°F)	32 (90)	
Test Voltage	V	230	

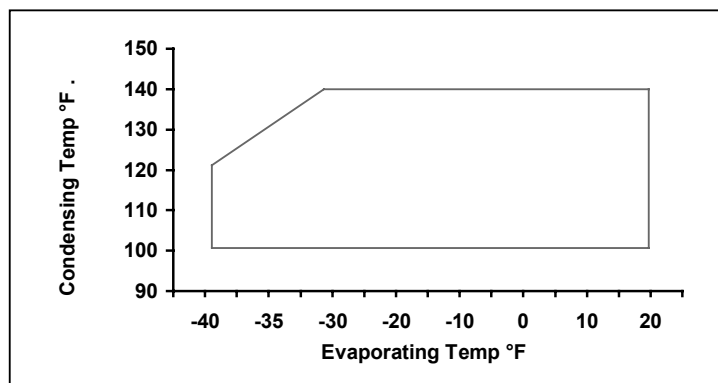
				2	F25-1206- 0591 Current EN No.	A3 20.12.2006
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PRODUCT SPECIFICATION**MODEL – KCJ450LAL-BXXX****D) MECHANICAL SPECIFICATION**

Parameter	Unit	Value
Number of Cylinders	Number (s)	One (1)
Displacement	cm ³ (inch ³) / rev	32.64 (1.99)
Net Weight	kg	25
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

E) ELECTRICAL SPECIFICATION

Parameter	Unit	Value
Operating Voltage Range	V	180 To 260
Motor Circuit	---	CSCR
Electrical Accessories	---	
➤ Start Capacitor	μF @ V AC	150-200 @ 275
➤ Run Capacitor	μF @ V AC	25 @ 440
➤ Relay	---	AC85004
➤ Over Load Protector	---	Internal
Lock Rotor Ampere (LRA)	A	50
Maximum Continuous Current (MCC)	A	6.6
Motor Insulation	---	B Class
High Potential Test	(kV/second/mA)	1.85 / 1 / 5.5

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

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PRODUCT SPECIFICATION**MODEL – KCJ450LAL-BXXX****PERFORMANCE TABLES**

Return Gas Temp.	32°C (90°F)	Voltage	230V, 1Ph, 50Hz
Liquid Sub Cooling	32°C (90°F)	Compressor Cooling	350 ft ³ / minute
Ambient Temp.	32°C (90°F)	-	-

A) COOLING CAPACITY (Btu / h)

Condensing Temperature		Evaporating Temperature							
		-40	-37.2	-34.4	-28.8	-23.3	-17.7	-12.2	-6.7
°C	(°F)	(-40)	(-35)	(-30)	(-20)	(-10)	(0)	(10)	(20)
37.8	100	1110	1660	2488	3800	5450	7140	8860	10660
43.3	110	870	1420	2170	3450	4976	6750	8480	10210
48.9	120	680	1170	1922	3150	4540	6290	8060	9820
54.4	130	-	930	1643	2700	4100	5870	7710	9480
60.0	140	-	-	1321	2416	3720	5450	7290	9090

B) INPUT POWER (W)

Condensing Temperature		Evaporating Temperature							
		-40	-37.2	-34.4	-28.8	-23.3	-17.7	-12.2	-6.7
°C	(°F)	(-40)	(-35)	(-30)	(-20)	(-10)	(0)	(10)	(20)
37.8	100	580	610	640	688	1112	1270	1550	1600
43.3	110	490	510	540	640	1060	1282	1545	1580
48.9	120	480	450	500	590	1020	1325	1595	1640
54.4	130	---	430	453	520	975	1400	1606	1690
60.0	140	---	---	405	477	920	1394	1630	1720

C) INPUT CURRENT (A)

Condensing Temperature		Evaporating Temperature							
		-40	-37.2	-34.4	-28.8	-23.3	-17.7	-12.2	-6.7
°C	(°F)	(-40)	(-35)	(-30)	(-20)	(-10)	(0)	(10)	(20)
37.8	100	3.8	4.0	4.2	4.8	6.1	6.5	7.0	7.5
43.3	110	3.8	3.9	4.1	4.6	5.9	6.5	7.2	7.8
48.9	120	3.7	3.9	4.0	4.4	5.5	6.4	7.3	8.1
54.4	130	---	3.8	3.9	4.2	5.0	6.5	7.5	8.3
60.0	140	---	---	3.9	4.0	4.7	6.5	7.7	8.5

- Note – 1. Nominal performance values ($\pm 5\%$) based on 24 hours running. Subject to change without notice.
 2. Compressor is intended to be operated in the range of condensing & evaporating temperature where performance values are specified in above tables.

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