

# PRODUCT SPECIFICATION

COMPRESSOR MODEL

**KCN372LAG-BXXX**

BILL OF MATERIALS

**B230, B231, B130**

**Emerson Climate Technologies (India) Limited**

Karad-Dhebewadi Road

Karad - 415 110

INDIA

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

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**PRODUCT SPECIFICATION****MODEL – KCN372LAG-BXXX****A ) MODEL DESCRIPTION**

<b>Model Name</b>	<b>KCN372LAG-BXXX</b>
Compressor Type	Reciprocating ,Connecting Rod Type
Application Group	Low temperature (LBP)
Evaporating Temperature Range	-37.2°C To - 6.7°C ( -35°F To 20°F )
Refrigerant	R-134a
Rated Voltage	230V, 1Phase, 50Hz
Compressor Cooling	Oil Cooler / Fan : 260 ft <sup>3</sup> / minute
Typical Application	Deep Freezer
Certifications & Approvals	ISI, EN60335-2-34

**B ) PERFORMANCE SPECIFICATION @ RATED CONDITION**

Specification	Unit	LBP	CBP
Cooling Capacity	Btu / h	600	N / A
	kcal / h	152	
	W	176	
	Nominal HP	0.18	
Input Power	W	159	
Input Current	A	1.34	
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-h	3.77	
	kcal / W-h	0.96	
	W / W	1.11	

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

**C ) RATING CONDITIONS**

Parameter	Unit	LBP @ ASHRAE-T	CBP @ ASHRAE-T
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	

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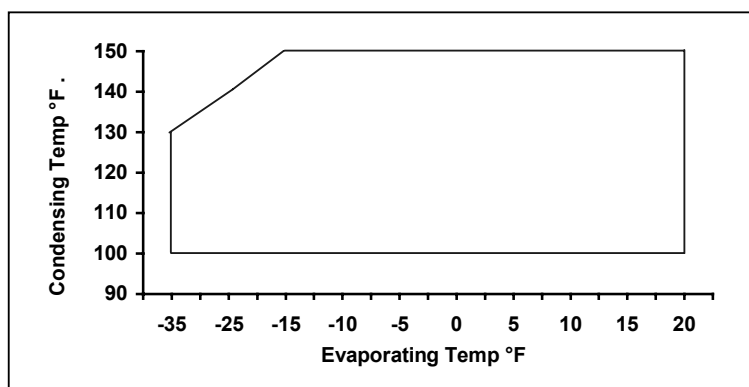
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**PRODUCT SPECIFICATION****MODEL – KCN372LAG-B2XXX****D) MECHANICAL SPECIFICATION**

Parameter	Unit	Value
Number of Cylinders	Number (s)	1
Displacement	cm <sup>3</sup> ( inch <sup>3</sup> ) / rev	7.31 (0.446)
Net Weight	kg	10.2
Approximate Shipping Weight	kg	----
Oil Charge	cm <sup>3</sup> ( Oz )	340 (11.5)
Oil Type	Refrigeration Grade	Polyolester (POE)
IPRV ( Pressure Differential )	kg / cm <sup>2</sup> ( 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	---	CSIR
Electrical Accessories	---	
➤ Start Capacitor	μF @ V AC	40 - 60 @ 275
➤ Run Capacitor	μF @ V AC	N / A
➤ Relay	---	KARP-3141
➤ Over Load Protector	---	TAE15/H3
Lock Rotor Ampere ( LRA )	A	10
Maximum Continuous Current ( MCC )	A	1.85
Motor Insulation	---	B Class
High Potential Test	(KV / Sec. / mA )	1.85kV / 1sec / 5.5± 0.5

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

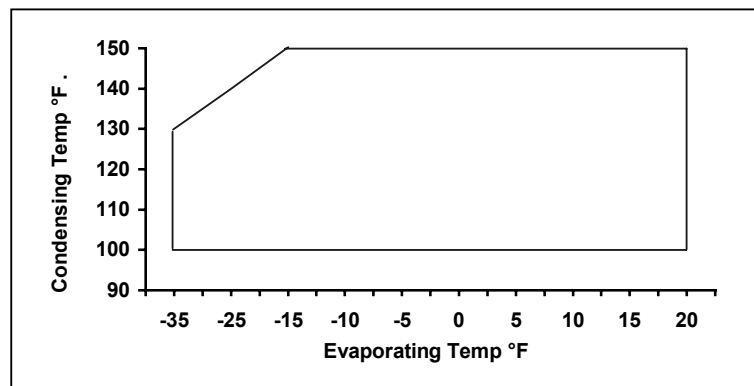
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**PRODUCT SPECIFICATION****MODEL – KCN372LAG-B1XX****D) MECHANICAL SPECIFICATION**

Parameter	Unit	Value
Number of Cylinders	Number (s)	1
Displacement	cm <sup>3</sup> ( inch <sup>3</sup> ) / rev	7.31 (0.446)
Net Weight	kg	10.2
Approximate Shipping Weight	kg	----
Oil Charge	cm <sup>3</sup> ( Oz )	340 (11.5)
Oil Type	Refrigeration Grade	Polyolester (POE)
IPRV ( Pressure Differential )	kg / cm <sup>2</sup> ( 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	---	RSIR
Electrical Accessories	---	
➤ Start Capacitor	μF @ V AC	N / A
➤ Run Capacitor	μF @ V AC	N / A
➤ Relay	---	KARP-3227
➤ Over Load Protector	---	TAE15/H3
Lock Rotor Ampere ( LRA )	A	11
Maximum Continuous Current ( MCC )	A	1.85
Motor Insulation	---	B Class
High Potential Test	(KV / Sec. / mA )	1.85kV / 1sec / 5.5± 0.5

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

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**PRODUCT SPECIFICATION****MODEL - KCN372LAG-BXXX****PERFORMANCE TABLES**

<b>Return Gas Temp</b>	32°C (90°F)	<b>Voltage</b>	230V, 1Ph, 50Hz
<b>Sub Cooled Liquid Temperature</b>	32°C (90°F)	<b>Compressor Cooling</b>	Fan : 260 ft <sup>3</sup> / minute
<b>Ambient Temp</b>	32°C (90°F)	-	-

**A ) COOLING CAPACITY ( Btu / h )**

Condensig Temperature		Evaporating Temperature									
°C		- 37.2	- 31.7	-26.1	-23.3	-20.6	-17.8	-15	-12.2	-9.4	- 6.7
	(°F)	- 35	-25	-15	-10	- 5	0	5	10	15	20
<b>37.8</b>	<b>100</b>	314	436	618	730	851	985	1130	1280	1430	1600
<b>43.3</b>	<b>110</b>	273	389	570	681	805	941	1090	1240	1400	1570
<b>48.9</b>	<b>120</b>	254	358	531	640	765	890	1040	1200	1370	1540
<b>54.4</b>	<b>130</b>	258	344	502	600	725	855	1000	1150	1320	1490
<b>60.0</b>	<b>140</b>		346	494	578	690	815	951	1100	1260	1430
<b>65.6</b>	<b>150</b>			476	560	660	775	905	1050	1200	1360

**B ) INPUT POWER ( W )**

Condensig Temperature		Evaporating Temperature									
°C		- 37.2	- 31.7	-26.1	-23.3	-20.6	-17.8	-15	-12.2	-9.4	-6.7
	(°F)	- 35	-25	-15	-10	- 5	0	5	10	15	20
<b>37.8</b>	<b>100</b>	112	130	150	152	169	177	185	192	199	204
<b>43.3</b>	<b>110</b>	113	130	150	155	171	182	192	202	212	220
<b>48.9</b>	<b>120</b>	114	129	150	158	174	186	198	211	223	234
<b>54.4</b>	<b>130</b>	115	131	152	159	176	190	203	217	231	245
<b>60.0</b>	<b>140</b>		134	154	162	179	193	207	222	238	253
<b>65.6</b>	<b>150</b>			158	165	181	195	210	226	242	259

**C ) INPUT CURRENT ( A )**

Condensig Temperature		Evaporating Temperature									
°C		- 37.2	- 31.7	-26.1	-23.3	-20.6	-17.8	-15	-12.2	-9.4	-6.7
	(°F)	- 35	-25	-15	-10	- 5	0	5	10	15	20
<b>37.8</b>	<b>100</b>	1.3	1.30	1.32	1.32	1.44	1.46	1.47	1.48	1.49	1.5
<b>43.3</b>	<b>110</b>	1.3	1.31	1.33	1.33	1.44	1.45	1.47	1.49	1.51	1.53
<b>48.9</b>	<b>120</b>	1.3	1.31	1.34	1.34	1.44	1.46	1.48	1.51	1.54	1.57
<b>54.4</b>	<b>130</b>	1.3	1.32	1.34	1.34	1.44	1.47	1.49	1.53	1.56	1.6
<b>60.0</b>	<b>140</b>		1.34	1.35	1.35	1.44	1.47	1.51	1.54	1.59	1.64
<b>65.6</b>	<b>150</b>			1.35	1.36	1.44	1.48	1.52	1.56	1.61	1.67

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