PRODUCT SPECIFICATION

COMPRESSOR MODEL

KCN418LAL-BXXX

BILL OF MATERIALS

B330, B331

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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SPECIFICATION

A) MODEL DESCRIPTION

Model Name	**KCN418LAL-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 Application	Deep Freezer
Certifications & Approvals	--

B) PERFORMANCE SPECIFICATION @ RATED CONDITION

Specification	**Unit**	**LBP**
Cooling Capacity	Btu / h	1500
	kcal / h	378
	W	439
	Nominal HP	0.45
Input Power	W	375
Input Current	A	2.0
$EER = \frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-h	4.00
	kcal / W-h	1.01
	W / W	1.17

Note – Above performance parameters are nominal values & subject to ± 5% variation

C) RATING CONDITIONS

Parameter	**Unit**	**LBP**
Evaporating Temperature	°C (°F)	-23.3 (-10)
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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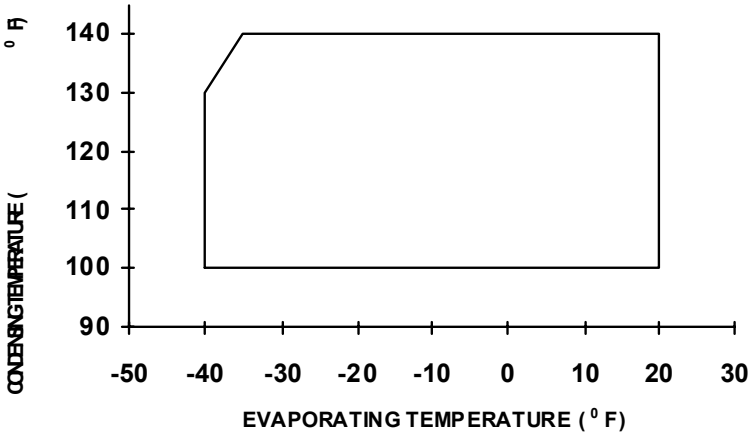
D) MECHANICAL SPECIFICATION

Parameter	Unit	Value
Number of Cylinder (s)	Number (s)	One (1)
Displacement	cm^3 ($inch^3$) / rev	9.00 (0.549)
Net Weight	kg	11.5
Approximate Shipping Weight	kg	--
Oil Charge	cm^3 (Oz)	380 (13.0)
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	180-260
Motor Circuit	---	CSCR
Electrical Accessories	---	
➢ Start Capacitor	μf @ V	80 - 100 @ 275
➢ Run Capacitor	μf @ V	10
➢ Relay	---	LT85002
➢ Over Load Protector	---	KAT0072/ B2
Lock Rotor Ampere (LRA)	A	14
Maximum Continuous Current (MCC)	A	3.5
Motor Insulation Class	---	Class B
High Potential Test	(kV/second/mA)	1.85 / 1 / 5.5

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



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DESIGN SPECIFICATION

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PERFORMANCE TABLES

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

A) COOLING CAPACITY (Btu / h)

Condensing Temperature		Evaporating Temperature							
°C		-40	-37.2	-34.4	-28.8	-23.3	-17.7	-12.2	-6.7
	(°F)	-40	-35	-30	-20	-10	0	10	20
37.8	100	614	800	1020	1440	1930	2520	3140	3960
43.3	110	570	700	920	1280	1740	2290	2880	3620
48.9	120	525	650	820	1130	1600	2080	2650	3420
54.4	130	471	610	710	1000	1450	1900	2440	3190
60.0	140		550	600	870	1260	1700	2200	2930

B) INPUT POWER (W)

Condensing Temperature		Evaporating Temperature							
°C		-40	-37.2	-34.4	-28.8	-23.3	-17.7	-12.2	-6.7
	(°F)	-40	-35	-30	-20	-10	0	10	20
37.8	100	267	280	292	325	352	380	400	425
43.3	110	266	278	294	330	362	395	420	445
48.9	120	266	274	296	337	374	412	440	460
54.4	130	265	276	303	345	385	429	465	480
60.0	140		282	310	355	399	450	486	510

C) INPUT CURRENT (A)

Condensing Temperature		Evaporating Temperature							
°C		-40	-37.2	-34.4	-28.8	-23.3	-17.7	-12.2	-6.7
	(°F)	-40	-35	-30	-20	-10	0	10	20
37.8	100	1.8	1.8	1.9	1.9	2.0	2.1	2.2	2.3
43.3	110	1.8	1.8	1.9	1.9	2.0	2.1	2.3	2.4
48.9	120	1.8	1.8	1.9	1.9	2.1	2.2	2.3	2.4
54.4	130	1.8	1.8	1.9	2.0	2.1	2.2	2.4	2.5
60.0	140		1.9	1.9	2.0	2.1	2.3	2.4	2.6

Note – 1. Nominal performance values (± 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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