PRODUCT SPECIFICATION

COMPRESSOR MODEL

CR32K6M-PFZ-XXXXX

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

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

SC1				01	F45-1015-0554 EN No.	A5 06.10.2015
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A) MODEL DESCRIPTION

Model Name	**CR32K6M-PFZ-XXXXX**
Compressor Type	Reciprocating, Connecting Rod Type
Application Group	High Temperature (HBP)
Evaporating Temperature Range	(-)23.3 °C To 12.8 °C Or (-)10 °F To 55 °F
Refrigerant	R-22
Rated Voltage	220 - 240 V, 50 Hz, 1 Phase
Compressor Cooling	Fan : 400 ft^3 / minute
Typical Application	Air - Conditioning, Heat Pump
***Certifications & Approvals**	UL (File No. SA12060)

* The Electrical Accessories are provided for reference and not included in the scope of Certification.

B) PERFORMANCE SPECIFICATION @ RATED CONDITION

Parameter	Unit	ARI
Cooling Capacity	Btu / hr	27,200
	kcal / hr	6,854
	W	7,972
	Nominal HP	2.27
Input Power	W	2,720
Input Current	A	13.4
$EER = \frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-hr	10.0
	kcal / W-hr	2.52
	W / W	2.93

Note: Above Performance Parameters are Nominal Values & subject to ± 5% variation.

C) RATING CONDITIONS

Parameter	Unit	ARI
Evaporating Temperature	°C (°F)	7.2 ± 0.5 (45)
Condensing Temperature	°C (°F)	54.4 ± 1 (130)
Ambient Temperature	°C (°F)	35 ± 1 (95)
Sub-cooled Liquid Temperature	°C (°F)	46 ± 1 (115)
Return Gas Temperature	°C (°F)	18.3 ± 1 (65)
Test Voltage	V	220

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D) MECHANICAL SPECIFICATIONS

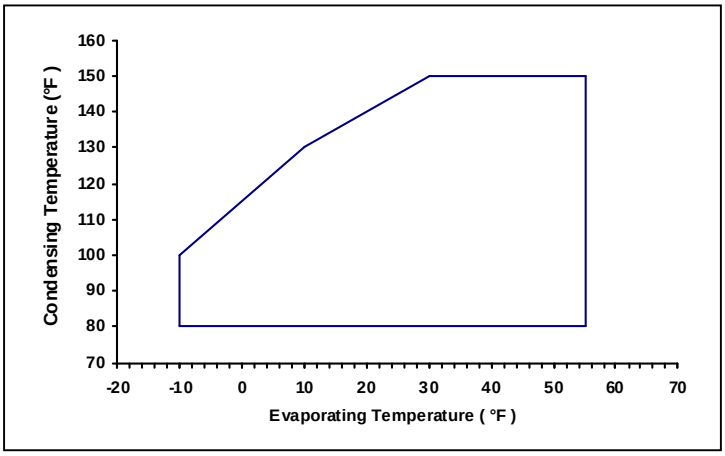
Parameter	Unit	Value
Number of Cylinders	Number	Two (2)
Displacement	cm^3 ($inch^3$) / rev	57.70 (3.521)
Net Weight	kg	32.5
Approximate Shipping Weight	kg	33.1
Oil Charge	cm^3 (Oz)	1,330 (45)
Oil Type	Refrigeration Grade	Mineral
IPRV (Pressure Differential)	kg/cm^2 (psig)	31.64 / 38.67 (450 / 550)
** Crank - case Heater	W @ V	35 @ 240 Wherever Applicable

** Recommended only for Heat Pump Application.

E) ELECTRICAL SPECIFICATIONS

Parameter	Unit	Value
Operating Voltage Range	V	198 To 264
Motor Circuit	---	CSCR
Electrical Accessories	---	
➢ Start Capacitor	µF @ VAC	150-200 @ 230
➢ Run Capacitor	µF @ VAC	45 @ 370
➢ Relay	---	Potential
➢ Over Load Protector	---	Internal
Lock Rotor Ampere (LRA)	A	85
Maximum Continuous Current (MCC)	A	21.3
High Potential Test	(kV/second/mA)	1.85 / 1 / 5.5 ± 0.5

F) OPERATING ENVELOP @ 220 V, 50 Hz, 1 Phase



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G) PERFORMANCE TABLES

Superheating	11 °C (20 °F)	**Voltage**	220 V, 50 Hz, 1 Phase
Sub - cooling	8.3 °C (15 °F)	**Compressor Cooling**	400 ft^3 / minute
Ambient Temperature	35 °C (95 °F)	**-**	-

H) COOLING CAPACITY (Btu / hr)

Condensing Temperature		**Evaporating Temperature**									**Coefficients**	
											c1	-4.11E+02
											c2	3.54E+01
°C		**-23.3**	**-17.8**	**-12.2**	**-6.7**	**-1.1**	**4.4**	**7.2**	**10.0**	**12.8**	**c3**	4.99E+02
	(°F)	**-10**	**0**	**10**	**20**	**30**	**40**	**45**	**50**	**55**	**c4**	1.26E+01
37.8	**100**	7100	11900	16100	20500	25000	29800	33800	37800	41800	**c5**	1.09E+00
43.3	**110**	0	10000	14500	19250	23850	28500	31400	35000	39000	**c6**	-4.44E+00
48.9	**120**	0	0	12850	17900	22500	26800	29000	32400	36150	**c7**	1.07E-01
54.4	**130**	0	0	11250	15800	21100	24550	27200	29750	33150	**c8**	-1.69E-01
60.0	**140**	0	0	0	13800	18650	22400	24600	26800	30200	**c9**	3.10E-02
65.6	**150**	0	0	0	11900	16700	20800	22700	23900	27250	**c10**	7.04E-03

J) INPUT POWER (W)

Condensing Temperature		**Evaporating Temperature**									**Coefficients**	
											c1	7.51E+03
											c2	-6.82E+00
°C		**-23.3**	**-17.8**	**-12.2**	**-6.7**	**-1.1**	**4.4**	**7.2**	**10.0**	**12.8**	**c3**	-1.60E+02
	(°F)	**-10**	**0**	**10**	**20**	**30**	**40**	**45**	**50**	**55**	**c4**	-1.15E-01
37.8	**100**	1440	1675	1810	1945	2000	2085	2170	2250	2335	**c5**	2.33E-01
43.3	**110**	0	1710	1935	2035	2110	2235	2330	2430	2510	**c6**	1.37E+00
48.9	**120**	0	0	2095	2235	2385	2435	2520	2605	2705	**c7**	6.23E-03
54.4	**130**	0	0	2285	2460	2555	2610	2720	2790	2900	**c8**	-3.51E-03
60.0	**140**	0	0	0	2630	2750	2820	2915	3000	3095	**c9**	2.87E-04
65.6	**150**	0	0	0	2750	2900	3050	3130	3210	3290	**c10**	-3.60E-03

K) INPUT CURRENT (A)

Condensing Temperature		**Evaporating Temperature**									**Coefficients**	
											c1	-5.27E+01
											c2	3.13E-01
°C		**-23.3**	**-17.8**	**-12.2**	**-6.7**	**-1.1**	**4.4**	**7.2**	**10.0**	**12.8**	**c3**	1.34E+00
	(°F)	**-10**	**0**	**10**	**20**	**30**	**40**	**45**	**50**	**55**	**c4**	2.37E-03
37.8	**100**	6.6	7.7	8.8	9.4	10.1	10.6	10.9	11.2	11.4	**c5**	-6.27E-03
43.3	**110**	0.0	8.3	9.0	10.4	11.2	11.6	11.8	12.0	12.3	**c6**	-9.44E-03
48.9	**120**	0.0	0.0	9.2	10.6	12.1	12.3	12.4	12.8	13.1	**c7**	2.58E-06
54.4	**130**	0.0	0.0	9.8	10.9	12.4	13.0	13.4	13.5	14.0	**c8**	-3.14E-05
60.0	**140**	0.0	0.0	0.0	11.1	12.3	13.7	14.3	14.7	14.9	**c9**	4.16E-05
65.6	**150**	0.0	0.0	0.0	11.3	12.9	15.1	15.5	15.8	16.1	**c10**	2.07E-05

L) MASS FLOW RATE (lbs / hr)

Condensing Temperature		**Evaporating Temperature**									**Coefficients**	
											c1	-1.05E+03
											c2	-1.52E+01
°C		**-23.3**	**-17.8**	**-12.2**	**-6.7**	**-1.1**	**4.4**	**7.2**	**10.0**	**12.8**	**c3**	3.33E+01
	(°F)	**-10**	**0**	**10**	**20**	**30**	**40**	**45**	**50**	**55**	**c4**	1.97E-01
37.8	**100**	96	173	220	273	315	375	415	475	533	**c5**	2.08E-01
43.3	**110**	0.0	143	210	267	327	385	422	467	518	**c6**	-2.76E-01
48.9	**120**	0.0	0.0	189	260	322	379	407	452	501	**c7**	2.33E-03
54.4	**130**	0.0	0.0	165	241	317	363	400	434	481	**c8**	-3.24E-03
60.0	**140**	0.0	0.0	0.0	221	295	349	380	411	460	**c9**	7.03E-05
65.6	**150**	0.0	0.0	0.0	202	279	342	370	387	438	**c10**	6.58E-04

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.

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M) MECHANICAL SPECIFICATIONS

Parameter	Unit	Value
Cylinder Bore Diameter	cm (inch)	4.21 (1.656)
Crank - Shaft Eccentricity	cm (inch)	1.04 (0.409)
Crank - Shaft Stroke	cm (inch)	2.08 (0.817)
Approximate Internal Free Volume (Without Oil)	cm^3 ($inch^3$)	7000 (427)
Maximum Residual Moisture	mg	300
Maximum Internal Solid Residue / Impurities	mg	40

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	0.90 To 1.02
	Aux.	Ω	3.18 To 3.62
Nominal Motor Output Power		kW	2.28
Max. Allowable Motor Winding Temp.		°F (°C)	266 (130) B Class Insulation
Relay			
Type		---	Potential
Make - Part Number		---	Annapurna : AC85004 Or GE : 3ARR3CT3P5 Or Electrica : RVA-3F6D
Pick Up (Maximum)		V	165 To 185
Drop Out (Minimum)		V	65 To 95
Maximum Voltage Rating of Coils		V	330
Over Load Protector			
Type		---	Internal
Part Number			15HM-1899-78
Disc Opening Temperature		°F (°C)	221 To 239 (105 To 115)
Disc Closing Temperature		°F (°C)	126 To 158 (52 To 70)
1st Cycle Trip Current		A	56
1st Cycle Trip On Time		second	2 To 10
Terminal Fused Cluster		---	¼" Quick connector
Copper Wire Material		---	Hermetic Grade Round Enameled
Copper Wire Enamel Designation & Construction		---	H Class, Dual Coated

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P) SOUND & VIBRATION SPECIFICATIONS

Parameter	Unit	Value
Bare Compressor Sound	dBA	74.0 Maximum
Bare Compressor Vibration	µm	100.0 Maximum
Compressor Discharge Pulse	psi	5.0 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)	220	6.50 (92.43)	30 (426.6)	--	55 (131)
Blocked Fan	220	6.33 (90)	28.12 (400)	--	--
Low Voltage Start: Equalised	198	11.9 ± 0.5 (169)	11.9 ± 0.5 (169)	62 (143.6)	--
Low Voltage Run	198	6.50 (92.43)	30 (426.6)	--	55 (131)

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)	55 (131)
Maximum Discharge Line Temperature	°C (°F)	129.4 (265)
Maximum Return Gas Temperature	°C (°F)	27 (80.6)

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