

# PRODUCT SPECIFICATION

COMPRESSOR MODEL

**CR37K6M-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.

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**PRODUCT SPECIFICATION****MODEL : CR37K6M-PFZ-XXXXX****A) MODEL DESCRIPTION**

<b>Model Name</b>	<b>CR37K6M-PFZ-XXXXX</b>
<b>Compressor Type</b>	Reciprocating, Connecting Rod Type
<b>Application Group</b>	High Temperature (HBP)
<b>Evaporating Temperature Range</b>	(-)23.3 °C To 12.8 °C Or (-)10 °F To 55 °F
<b>Refrigerant</b>	R-22
<b>Rated Voltage</b>	220 - 240 V, 50 Hz, 1 Phase
<b>Compressor Cooling</b>	Fan : 400 ft <sup>3</sup> / minute
<b>Typical Application</b>	Air - Conditioning, Heat Pump
<b>Certifications &amp; Approvals</b>	UL (File No. SA12060)

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

**B) PERFORMANCE SPECIFICATION @ RATED CONDITION**

<b>Parameter</b>	<b>Unit</b>	<b>ARI</b>
Cooling Capacity	Btu / h	30,600
	kcal / h	7,711
	W	8,968
	Nominal HP	2.55
Input Power	W	3,060
Input Current	A	16.0
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-h	10.0
	kcal / W-h	2.52
	W / W	2.93

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

**C) RATING CONDITIONS**

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

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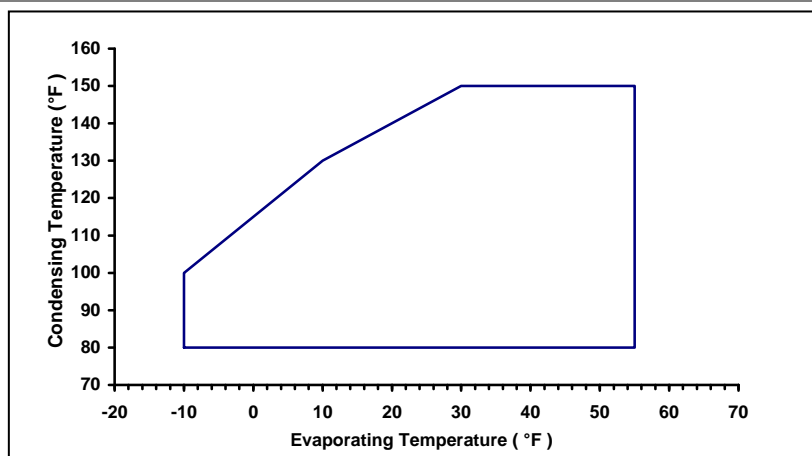
**PRODUCT SPECIFICATION****MODEL : CR37K6M-PFZ-XXXXX****D) MECHANICAL SPECIFICATIONS**

Parameter	Unit	Value
Number of Cylinders	Number	Two (2)
Displacement	cm <sup>3</sup> (inch <sup>3</sup> ) / rev	63.52 ( 3.87 )
Net Weight	kg	34.9
Approximate Shipping Weight	kg	36.0
Oil Charge	cm <sup>3</sup> (Oz)	1,330 (45)
Oil Type	Refrigeration Grade	Mineral
IPRV (Pressure Differential)	kg/cm <sup>2</sup> (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 @ V AC	150 / 200 @ 275
➤ Run Capacitor	μF @ V AC	50 @ 440
➤ Relay	---	Potential
➤ Over Load Protector	---	Internal
Locked Rotor Ampere (LRA)	A	90
Maximum Continuous Current (MCC)	A	25
Motor Insulation	---	B Class
High Potential Test	(kV / second / mA)	1.85 / 1 / 5.5 ± 0.5

**F) OPERATING ENVELOPE @ 220 V, 50 Hz, 1 Phase**

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**PRODUCT SPECIFICATION****MODEL : CR37K6M-PFZ-XXXXX****A) MECHANICAL SPECIFICATIONS**

Parameter	Unit	Value
Cylinder Bore Diameter	cm (inch)	4.21 (1.656)
Crank - Shaft Eccentricity	cm (inch)	1.14 (0.450)
Crank - Shaft Stroke	cm (inch)	2.28 (0.900)
Approximate Internal Free Volume (Without Oil)	cm <sup>3</sup> (inch <sup>3</sup> )	7,000 (427)
Maximum Residual Moisture	mg	300
Maximum Internal Solid Residue / Impurities	mg	40

**B) 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 0.70 To 0.79
	Aux.	Ω 2.35 To 2.85
Nominal Motor Output Power	kW	2.67
Max. Allowable Motor Winding Temp.	°F (°C)	266 (130)
Relay		
Type	---	Potential
Part Number	---	HLR3800-6H3C-1 or 3ARR3C10S5 or RVA-4H3D
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-1493-78
Disc Opening Temperature	°F (°C)	257 To 275 (125 To 135)
Disc Closing Temperature	°F (°C)	140 To 172 (61 To 78)
1 <sup>st</sup> Cycle Trip Current	A	75
1 <sup>st</sup> Cycle Trip On Time	second	1 to 10
Terminal Fused Cluster	---	¼" Quick connector
Copper Wire Material	---	Hermetic Grade Round Enameled
Copper Wire Enamel Designation	---	H Class

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**PRODUCT SPECIFICATION****MODEL : CR37K6M-PFZ-XXXXX****C) PERFORMANCE SPECIFICATIONS**

Parameter	Unit	Value
Bare Compressor Sound	dB(A)	74 Maximum
Bare Compressor Vibration	µm	140 Maximum
Compressor Discharge Pulse	psi	8.0 Maximum

**D) TEST CONDITIONS**

Parameter	Voltage	Suction Pressure	Discharge Pressure	Top Shell Temperature	Ambient Temperature
Unit	V	kg/cm <sup>2</sup> (psig)	kg/cm <sup>2</sup> (psig)	°C (°F)	°C (°F)
Test					
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 and not for customer product qualification.

**E) REFERENCE APPLICATION DETIAL 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.

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