

# PRODUCT SPECIFICATION

COMPRESSOR MODEL

**CS27KQME-TF5-XXXXX**

**Copeland (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 : CS27KQME-TF5-XXXXX****A) MODEL DESCRIPTION**

<b>Model Name</b>	<b>CS27KQME-TF5-XXXXX</b>
<b>Compressor Type</b>	Reciprocating, Connecting Rod Type
<b>Application Group</b>	Medium Temp
<b>Evaporating Temperature Range</b>	(-)-31.7 °C To (-)-1.1 °C Or (-)-25 °F To 30 °F
<b>Refrigerant</b>	R404A
<b>Rated Voltage</b>	200-240 V, 50 Hz, 3 Phase 200-230 V, 60 Hz, 3 Phase
<b>Compressor Cooling</b>	Fan : 400 ft <sup>3</sup> / minute
<b>Typical Application</b>	Cold Room Application
<b>*Certifications &amp; Approvals</b>	---

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

**B) PERFORMANCE SPECIFICATION @ RATED CONDITION**

Parameter	Unit	ARI	
		50 Hz	60 Hz
Cooling Capacity	Btu / h	22900	26400
	kcal / h	5771	6653
	W	6705	7730
Input Power	W	3710	4130
Input Current	A	15.0	13.5
EER = $\frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-h	6.17	6.39
	kcal / W-h	1.56	1.61
	W / W	1.81	1.87

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

**C) RATING CONDITIONS**

Parameter	Unit	ARI-MBP
Evaporating Temperature	°C (°F)	-6.7 (20)
Condensing Temperature	°C (°F)	48.9 (120)
Ambient Temperature	°C (°F)	35 (95)
Sub-cooled Liquid Temperature	°C (°F)	48.9 (120)
Return Gas Temperature	°C (°F)	4.4 (40)
Test Voltage	V	220 @ 50Hz
		230 @ 60Hz

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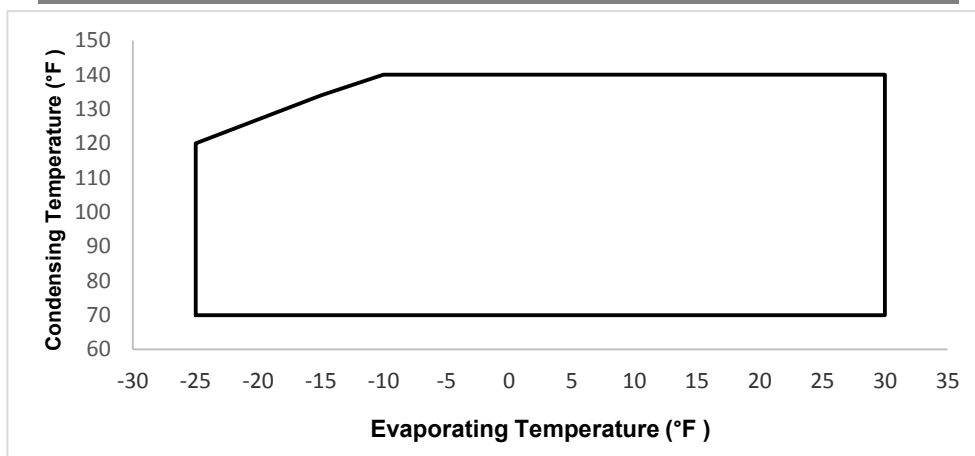
### D) MECHANICAL SPECIFICATIONS

Parameter	Unit	Value
Number of Cylinders	Number	Two (2)
Displacement	cm <sup>3</sup> (inch <sup>3</sup> ) / rev	88.28 (5.387)
Net Weight	kg	36.8
Approximate Shipping Weight	kg	38.0
Oil Charge	cm <sup>3</sup> (Oz)	1,330 (45)
Oil Type	Refrigeration Grade	POE
IPRV (Pressure Differential)	kg/cm <sup>2</sup> (psig)	31.65 / 38.68 (450 / 550)
Crank - Case Heater	W @ V	40 @ 240 for CS27KQME-TF5-XX2 40 @ 480 for CS27KQME-TF5-XX3

### E) ELECTRICAL SPECIFICATIONS

Parameter	Unit	Value
Operating Voltage Range	V	180-242,50Hz 180-253,60Hz
Motor Circuit	---	Three Phase
Electrical Accessories	---	
➤ Start Capacitor	μF @ V AC	N/A
➤ Run Capacitor	μF @ V AC	N/A
➤ Relay	---	N/A
➤ Over Load Protector	---	Internal
Locked Rotor Ampere (LRA)	A	142A @ 50Hz 135A @ 60Hz
Maximum Continuous Current (MCC)	A	26
High Potential Test	(kV / second / mA)	2.3 / 1 / 5.5 ± 0.5

### F) OPERATING ENVELOPE @ 220/230 V, 50/60 Hz, 3 Phase



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**PRODUCT SPECIFICATION****MODEL : CS27KQME-TF5-XXXXX****M) MECHANICAL SPECIFICATIONS**

Parameter	Unit	Value
Cylinder Bore Diameter	cm (inch)	4.98 (1.960)
Crank - Shaft Eccentricity	cm (inch)	1.13 (0.446)
Crank - Shaft Stroke	cm (inch)	2.26 (0.892)
Approximate Internal Free Volume (Without Oil)	cm <sup>3</sup> (inch <sup>3</sup> )	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, Three Phase
Nominal Motor Speed	rpm	2,900 @ 50Hz & 3,500 @ 60Hz
Nominal Motor Winding Resistance (@ 25 °C)	Main	Ω 0.75 To 1.05
	Aux.	Ω -----
Nominal Motor Output Power	kW	3.80
Max. Allowable Motor Winding Temp.	°F (°C)	266 (130) B Class Insulation
Relay		
Type	---	N/A
Part Number	---	N/A
Pick Up (Maximum)	V	N/A
Drop Out (Minimum)	V	N/A
Maximum Voltage Rating of Coils	V	N/A
Over Load Protector		
Type	---	Internal
Part Number		34HM-408-56
Disc Opening Temperature	°F (°C)	266 To 284 (130 To 140)
Disc Closing Temperature	°F (°C)	124 To 156 (51 To 69)
1 <sup>st</sup> Cycle Trip Current	A	78
1 <sup>st</sup> Cycle Trip On Time	second	2 To 10
Terminal Fused Cluster	---	Screw Type Connector
Copper Wire Material	---	Hermetic Grade Round Enameled
Copper Wire Enamel Designation & Construction	---	H Class, Dual Coated

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### P) PERFORMANCE SPECIFICATIONS

Parameter	Unit	Value
Bare Compressor Sound	dBA	82.0 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
Test \ Unit	V	kg/cm <sup>2</sup> (psig)	kg/cm <sup>2</sup> (psig)	°C (°F)	°C (°F)
Overload ( High Load )	242,50Hz 253,60Hz	5.13 (73)	31.70 (451)	--	46 (115)
Blocked Fan	220,50Hz 230,60Hz	6.7 (95)	30.58 (435)	--	35 (95)
Low Voltage Start : Equalised	180,50Hz 180,60Hz 180,50Hz 180,60Hz	8 (114) 14.3 (203)	25.3 (360) 14.3 (203)	65 (149) 65 (149)	-- --
Low Voltage Run	180,50Hz 180,60Hz	5.13 (73)	31.70 (451)	--	46 (115)

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)	46 (115)
Maximum Discharge Line Temperature	°C (°F)	135 (275)
Maximum Return Gas Temperature	°C (°F)	43 (109)

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

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