PRODUCT SPECIFICATION

COMPRESSOR MODEL

CR36K6M-TFM-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.

DVM				01	F45-0615-0415 EN No.	A3 27.06.2015
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A) MODEL DESCRIPTION

Model Name	**CR36K6M-TFM-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	380 - 420 V, 50 Hz, 3 Phase
Compressor Cooling	Fan : 400 ft^3 / minute
Typical Application	Air - Conditioning, Heat Pump
Certifications & Approvals	-----

B) PERFORMANCE SPECIFICATION @ RATED CONDITION

Parameter	Unit	ASRE / T	ARI
Cooling Capacity	Btu / hr	29,900	29,100
	kcal / hr	7,535	7,335
	W	8,755	8,520
	Nominal HP	- - -	3.0
Input Power	W	2,680	2,680
Input Current	A	4.9	4.9
$EER = \frac{\text{Cooling Capacity}}{\text{Input Power}}$	Btu / W-hr	11.16	10.86
	kcal / W-hr	2.81	2.74
	W / W	3.27	3.18

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

C) RATING CONDITIONS

Parameter	Unit	ASRE / T	ARI
Evaporating Temperature	°C (°F)	7.2 ± 0.5 (45)	7.2 ± 0.5 (45)
Condensing Temperature	°C (°F)	54.4 ± 1 (130)	54.4 ± 1 (130)
Ambient Temperature	°C (°F)	35 ± 1 (95)	35 ± 1 (95)
Sub-cooled Liquid Temperature	°C (°F)	46 ± 1 (115)	46 ± 1 (115)
Return Gas Temperature	°C (°F)	35 ± 1 (95)	18.3 ± 1 (65)
Test Voltage	V	400	400

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D) MECHANICAL SPECIFICATIONS

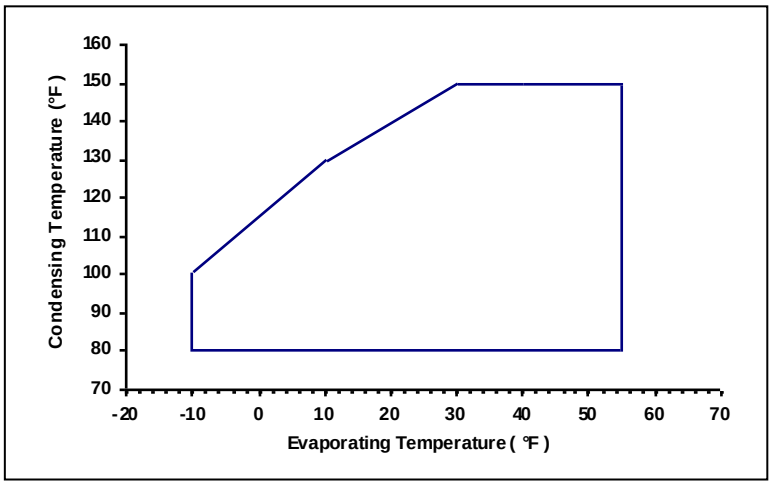
Parameter	Unit	Value
Number of Cylinders	Number	Two (2)
Displacement	cm^3 ($inch^3$) / rev	59.66 (3.640)
Net Weight	kg	31.0
Approximate Shipping Weight	kg	32.1
Oil Charge	cm^3 (Oz)	1,330 (45)
Oil Type	Refrigeration Grade	Mineral
IPRV (Pressure Differential)	kg/cm^2 (psig)	31.64 / 38.67 (450 / 550)
** Crank - case Heater	W @ V	40 @ 240 For CR36K6M-TFM-102

** Recommended only for Heat Pump Application.

E) ELECTRICAL SPECIFICATIONS

Parameter	Unit	Value
Operating Voltage Range	V	360 To 460
Motor Circuit	---	Three Phase
Electrical Accessories	---	
➢ Start Capacitor	µF @ VAC	N/A
➢ Run Capacitor	µF @ VAC	N/A
➢ Relay	---	N/A
➢ Over Load Protector	---	Internal
Lock Rotor Ampere (LRA)	A	41
Maximum Continuous Current (MCC)	A	7.3
High Potential Test	(kV/second/mA)	2.3 / 1 / 5.5 ± 0.5

F) OPERATING ENVELOP @ 400 V, 50 Hz, 3 Phase



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G) PERFORMANCE TABLES

Superheating	11 °C (20 °F)	**Voltage**	400 V, 50 Hz, 3 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	11009.223
											c2	578.984604
°C		**-23.0**	**-17.8**	**-12.2**	**-6.7**	**-1.1**	**4.4**	**7.2**	**10.0**	**12.8**	**c3**	224.128606
	(°F)	**-10**	**0**	**10**	**20**	**30**	**40**	**45**	**50**	**55**	**c4**	7.035851
38.0	**100**	6170	10300	15000	20400	26500	33500	37300	41500	45900	**c5**	-2.154647
43.0	**110**	-	8690	13300	18500	24300	30900	34600	38500	42700	**c6**	-3.121181
49.0	**120**	-	-	11500	16500	22100	28400	31800	35500	39400	**c7**	0.019989
54.0	**130**	-	-	9700	14500	19900	25800	29100	32600	36200	**c8**	-0.044042
60.0	**140**	-	-	-	12600	17700	23400	26400	29700	33100	**c9**	0.007814
											c10	0.008115

J) INPUT POWER (W)

Condensing Temperature		**Evaporating Temperature**									**Coefficients**	
											c1	1259.19000
											c2	-3.685381
°C		**-23.0**	**-17.8**	**-12.2**	**-6.7**	**-1.1**	**4.4**	**7.2**	**10.0**	**12.8**	**c3**	-4.162956
	(°F)	**-10**	**0**	**10**	**20**	**30**	**40**	**45**	**50**	**55**	**c4**	-0.146653
38.0	**100**	1200	1460	1690	1860	1990	2070	2090	2090	2070	**c5**	0.068149
43.0	**110**	-	1450	1730	1950	2130	2250	2290	2320	2330	**c6**	0.145587
49.0	**120**	-	-	1740	2020	2250	2430	2490	2540	2580	**c7**	-0.000648
54.0	**130**	-	-	1730	2070	2360	2590	2680	2760	2820	**c8**	-0.000587
60.0	**140**	-	-	-	2090	2440	2730	2850	2960	3050	**c9**	0.002125
											c10	-0.000836

K) INPUT CURRENT (A)

Condensing Temperature		**Evaporating Temperature**									**Coefficients**	
											c1	-2.936220
											c2	0.060387
°C		**-23.0**	**-17.8**	**-12.2**	**-6.7**	**-1.1**	**4.4**	**7.2**	**10.0**	**12.8**	**c3**	0.120408
	(°F)	**-10**	**0**	**10**	**20**	**30**	**40**	**45**	**50**	**55**	**c4**	-0.000030
38.0	**100**	3.3	3.3	3.5	3.7	3.9	4.0	4.0	4.0	4.0	**c5**	-0.001169
43.0	**110**	-	3.4	3.6	3.8	4.1	4.3	4.3	4.4	4.4	**c6**	-0.000659
49.0	**120**	-	-	3.7	3.9	4.3	4.5	4.6	4.7	4.8	**c7**	-0.000009
54.0	**130**	-	-	3.7	4.0	4.4	4.8	4.9	5.0	5.1	**c8**	0.000005
60.0	**140**	-	-	-	4.0	4.5	5.0	5.2	5.4	5.5	**c9**	0.000007
											c10	0.000001

L) MASS FLOW RATE (lbs / hr)

Condensing Temperature		**Evaporating Temperature**									**Coefficients**	
											c1	**Under Evolution.**
											c2	
°C		**-23.3**	**-17.8**	**-12.2**	**-6.7**	**-1.1**	**4.4**	**7.2**	**10.0**	**12.8**	**c3**	
	(°F)	**-10**	**0**	**10**	**20**	**30**	**40**	**45**	**50**	**55**	**c4**	
37.8	**100**	**Under Evolution.**									**c5**	
43.3	**110**										**c6**	
48.9	**120**										**c7**	
54.4	**130**										**c8**	
60.0	**140**										**c9**	

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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SPECIFICATION CONFIDENTIAL

M) MECHANICAL SPECIFICATIONS

Parameter	Unit	Value
Cylinder Bore Diameter	cm (inch)	4.21 (1.656)
Crank - Shaft Eccentricity	cm (inch)	1.07 (0.423)
Crank - Shaft Stroke	cm (inch)	2.15 (0.846)
Approximate Internal Free Volume (Without Oil)	cm^3 ($inch^3$)	7,866 (480)
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
Nominal Motor Winding Resistance (@ 25 °C)	Main	Ω	4.08 To 4.63
	Aux.	Ω	-----
Nominal Motor Output Power		kW	2.35
Max. Allowable Motor Winding Temp.		°F (°C)	266 (130) B Class Insulation
Relay			
Type		---	N/A
Make - 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-252-56
Disc Opening Temperature		°F (°C)	212 To 230 (100 To 110)
Disc Closing Temperature		°F (°C)	126 To 158 (52 To 70)
1st Cycle Trip Current		A	24
1st Cycle Trip On Time		second	3 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	79.0 Maximum
Bare Compressor Vibration	µm	142.0 Maximum
Compressor Discharge Pulse	psi	6.0 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)	400	6.50 (92.43)	30 (426.6)	--	55 (131)
Blocked Fan	400	6.33 (90)	28.12 (400)	--	--
Low Voltage Start : Equalised Unequilised	 360 360	 11.9 (169) 8.4 (119)	 11.9 (169) 18.9 (269)	 62 (143.6) 62 (143.6)	 -- --
Low Voltage Run	360	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.