

### COMPRESSOR DEFINITION

Designation	EM X70CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513309560

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[ V / Hz ]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	198 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	11.14	[cm <sup>3</sup> ] (0.680 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	21.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	8.6	[kg] (18.96 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	TSD-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(300)	[µF(VAC minimum)]
5 Motor protection	4TM276KFBYY-73	
6 Start winding resistance	14.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.80	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	4.90	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.85	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - IRAM - UKCA - VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			<b>CECOMAFLBP</b> Static		Evaporating temperature (Condensing temperature		-25°C (-13°F) 55°C (131°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
488	123	143	105	0.53	1.86	4.66	1.17	1.37

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			<b>CECOMAF</b> Static		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	350	88	103	85	0.46	1.22	4.12	1.04	1.21
-30	(-22)	440	111	129	91	0.44	1.53	4.82	1.21	1.41
-25	(-13)	560	141	164	103	0.48	1.95	5.47	1.38	1.60
-20	(- 4)	712	179	208	117	0.56	2.48	6.08	1.53	1.78
-15	(+ 5)	897	226	263	134	0.65	3.13	6.69	1.69	1.96
-10	(+14)	1118	282	328	153	0.75	3.91	7.31	1.84	2.14

TEST CONDITIONS: @220V50Hz			<b>CECOMAF</b> Static		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	294	74	86	84	0.41	1.12	3.50	0.88	1.02
-30	(-22)	377	95	110	93	0.41	1.43	4.07	1.03	1.19
-25	(-13)	486	123	142	106	0.46	1.85	4.58	1.15	1.34
-20	(- 4)	624	157	183	123	0.55	2.38	5.06	1.28	1.48
-15	(+ 5)	793	200	232	143	0.66	3.03	5.53	1.39	1.62
-10	(+14)	993	250	291	165	0.78	3.81	6.03	1.52	1.77

TEST CONDITIONS: @220V50Hz			<b>CECOMAF</b> Static		(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	248	62	73	84	0.46	1.05	2.95	0.74	0.86
-30	(-22)	319	80	93	94	0.46	1.34	3.39	0.86	0.99
-25	(-13)	413	104	121	109	0.52	1.74	3.78	0.95	1.11
-20	(- 4)	532	134	156	129	0.62	2.26	4.13	1.04	1.21
-15	(+ 5)	679	171	199	152	0.73	2.88	4.47	1.13	1.31
-10	(+14)	854	215	250	176	0.86	3.64	4.83	1.22	1.42

### F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted parallel BP+45°to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 30° up + 24° to Back		
3.3 PROCESS	6.35 +0.08/-0.08	[mm]	(0.250" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		