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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	198 to 255 V	-
8.2 LBP (43ºC Ambient temperature)	Static	198 to 255 V	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	11.14	[cm³] (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/cm²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	MI2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(300)	[µF(VAC minimum)]
5 Motor protection	AE37FQ	
6 Start winding resistance	14.10	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	18.80	[Ω at 25ºC (77ºF)] +/- 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**			**CECOMAFLBP** **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	107	0.53	1.86	4.58	1.15	1.34

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V50Hz**		**CECOMAF** **Static**				(Condensing temperature **45ºC (+113ºF))**				
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)**	283	71	83	87	0.48	0.98	3.25	0.82	0.95
-30	**(-22)**	419	106	123	93	0.44	1.46	4.50	1.13	1.32
-25	**(-13)**	560	141	164	104	0.47	1.95	5.38	1.36	1.58
-20	**(- 4)**	717	181	210	119	0.55	2.50	6.04	1.52	1.77
-15	**(+ 5)**	898	226	263	136	0.66	3.13	6.59	1.66	1.93
-10	**(+14)**	1115	281	327	155	0.77	3.90	7.16	1.81	2.10

TEST CONDITIONS: **@220V50Hz**		**CECOMAF** **Static**				(Condensing temperature **55ºC (+131ºF))**				
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)**	221	56	65	86	0.40	0.84	2.59	0.65	0.76
-30	**(-22)**	352	89	103	94	0.37	1.34	3.73	0.94	1.09
-25	**(-13)**	485	122	142	107	0.42	1.85	4.51	1.14	1.32
-20	**(- 4)**	629	158	184	125	0.52	2.40	5.04	1.27	1.48
-15	**(+ 5)**	794	200	233	145	0.65	3.04	5.47	1.38	1.60
-10	**(+14)**	991	250	290	167	0.78	3.80	5.91	1.49	1.73

TEST CONDITIONS: **@220V50Hz**		**CECOMAF** **Static**				(Condensing temperature **65ºC (+149ºF))**				
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)**	171	43	50	85	0.48	0.72	2.01	0.51	0.59
-30	**(-22)**	292	74	85	95	0.46	1.23	3.05	0.77	0.89
-25	**(-13)**	410	103	120	111	0.51	1.73	3.71	0.93	1.09
-20	**(- 4)**	537	135	157	131	0.62	2.27	4.12	1.04	1.21
-15	**(+ 5)**	680	171	199	154	0.75	2.89	4.42	1.11	1.30
-10	**(+14)**	851	214	249	179	0.88	3.63	4.73	1.19	1.39

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		