

COMPRESSOR DEFINITION

Designation	EM X70CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	898ZA77

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 254 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 254 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 ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	11.36	[cm ³] (0.693 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	21.400	
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)	8.1	[kg] (17.86 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL 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	V230	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	5(330)	[μF(VAC minimum)]
5 Motor protection	T0225/07	
6 Start winding resistance	15.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	20.10	[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]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	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 +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
491	124	144	109	0.48	1.87	4.50	1.13	1.32

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			CECOMAF Static		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	377	95	111	76	0.35	1.21	4.97	1.25	1.46
-30	(-22)	503	127	147	87	0.40	1.61	5.79	1.46	1.70
-25	(-13)	658	166	193	100	0.45	2.11	6.63	1.67	1.94
-20	(- 4)	843	213	247	113	0.51	2.71	7.52	1.89	2.20
-15	(+ 5)	1062	268	311	126	0.57	3.42	8.44	2.13	2.47
-10	(+14)	1318	332	386	140	0.62	4.25	9.42	2.37	2.76

TEST CONDITIONS: @220V50Hz			CECOMAF Static		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	321	81	94	78	0.36	1.12	4.11	1.04	1.21
-30	(-22)	436	110	128	91	0.41	1.51	4.80	1.21	1.41
-25	(-13)	576	145	169	105	0.47	2.00	5.49	1.38	1.61
-20	(- 4)	744	188	218	120	0.53	2.59	6.20	1.56	1.82
-15	(+ 5)	943	238	276	136	0.60	3.29	6.93	1.75	2.03
-10	(+14)	1175	296	344	153	0.67	4.12	7.69	1.94	2.25

TEST CONDITIONS: @220V50Hz			CECOMAF Static		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	264	67	78	79	0.36	1.01	3.36	0.85	0.98
-30	(-22)	366	92	107	93	0.42	1.39	3.93	0.99	1.15
-25	(-13)	490	124	144	109	0.48	1.87	4.50	1.13	1.32
-20	(- 4)	640	161	187	126	0.55	2.44	5.06	1.28	1.48
-15	(+ 5)	817	206	239	145	0.64	3.13	5.62	1.42	1.65
-10	(+14)	1024	258	300	165	0.73	3.93	6.20	1.56	1.82

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	213	54	62	80	0.37	0.90	2.66	0.67	0.78
-30	(-22)	300	76	88	95	0.42	1.26	3.17	0.80	0.93
-25	(-13)	407	103	119	112	0.50	1.72	3.64	0.92	1.07
-20	(- 4)	536	135	157	132	0.58	2.27	4.08	1.03	1.20
-15	(+ 5)	690	174	202	153	0.68	2.93	4.50	1.14	1.32
-10	(+14)	871	220	255	177	0.78	3.72	4.92	1.24	1.44

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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 42°		
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	Straight		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		