

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	TSD	
2.1 Starting device	MI.E-START 2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(330)	[µF(VAC minimum)]
5 Motor protection	AE18BQ10	
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			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°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]
660	166	193	112	0.51	2.07	5.87	1.48	1.72

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	384	97	112	74	0.35	1.20	5.19	1.31	1.52
-30 (-22)	514	129	150	85	0.40	1.61	6.04	1.52	1.77
-25 (-13)	673	170	197	98	0.45	2.11	6.92	1.74	2.03
-20 (- 4)	865	218	253	111	0.51	2.72	7.84	1.98	2.30
-15 (+ 5)	1090	275	319	124	0.57	3.43	8.79	2.22	2.58
-10 (+14)	1351	340	396	138	0.62	4.26	9.80	2.47	2.87

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	354	89	104	76	0.36	1.11	4.66	1.17	1.37
-30 (-22)	481	121	141	89	0.41	1.51	5.43	1.37	1.59
-25 (-13)	638	161	187	102	0.47	2.00	6.21	1.57	1.82
-20 (- 4)	827	208	242	118	0.53	2.60	7.01	1.77	2.05
-15 (+ 5)	1049	264	307	134	0.60	3.30	7.82	1.97	2.29
-10 (+14)	1307	329	383	151	0.67	4.12	8.66	2.18	2.54

TEST CONDITIONS: @220V50Hz			ASHRAE32 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)	322	81	94	77	0.36	1.01	4.19	1.05	1.23
-30 (-22)	443	112	130	91	0.42	1.39	4.90	1.23	1.44
-25 (-13)	595	150	174	106	0.48	1.87	5.59	1.41	1.64
-20 (- 4)	778	196	228	123	0.55	2.45	6.28	1.58	1.84
-15 (+ 5)	996	251	292	142	0.64	3.14	6.97	1.76	2.04
-10 (+14)	1249	315	366	163	0.73	3.94	7.67	1.93	2.25

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 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)	288	73	84	78	0.37	0.90	3.69	0.93	1.08
-30	(-22)	403	101	118	93	0.42	1.26	4.35	1.10	1.28
-25	(-13)	547	138	160	110	0.50	1.72	4.99	1.26	1.46
-20	(- 4)	723	182	212	129	0.58	2.27	5.59	1.41	1.64
-15	(+ 5)	933	235	273	151	0.68	2.94	6.17	1.55	1.81
-10	(+14)	1179	297	346	175	0.78	3.72	6.73	1.70	1.97

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		