

### COMPRESSOR DEFINITION

Designation	EM X20CLC
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	898AE77

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	115-127 / 60	[ 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	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 140 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	1/12	[hp]
2 Displacement	3.97	[cm <sup>3</sup> ] (0.242 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.000	
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)	7.8	[kg] (17.20 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M4R7MD3/8EA14C3/8EA21C3/8M4R7MD3/QPS2-A4R7MD3/C	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	12(165)	[μF(VAC minimum)]
5 Motor protection	4TM142RFBYY-53	
6 Start winding resistance	6.70	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.65	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	3.70	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.55	[A]
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A]
11 Approval boards certification	UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
260	66	76	49	0.51	0.82	5.33	1.34	1.56

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	151	38	44	35	0.45	0.47	4.31	1.09	1.26
-30 (-22)	204	51	60	38	0.46	0.64	5.32	1.34	1.56
-25 (-13)	272	68	80	43	0.48	0.85	6.37	1.61	1.87
-20 (- 4)	355	90	104	47	0.51	1.12	7.50	1.89	2.20
-15 (+ 5)	455	115	133	52	0.54	1.43	8.72	2.20	2.56
-10 (+14)	572	144	168	57	0.57	1.81	10.07	2.54	2.95

TEST CONDITIONS: @115V60Hz			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)	134	34	39	35	0.45	0.42	3.85	0.97	1.13
-30 (-22)	185	47	54	39	0.47	0.58	4.78	1.20	1.40
-25 (-13)	251	63	73	44	0.49	0.79	5.70	1.44	1.67
-20 (- 4)	331	84	97	50	0.52	1.04	6.65	1.68	1.95
-15 (+ 5)	428	108	125	56	0.56	1.35	7.64	1.93	2.24
-10 (+14)	541	136	159	62	0.60	1.71	8.72	2.20	2.56

TEST CONDITIONS: @115V60Hz			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)	110	28	32	35	0.45	0.34	3.14	0.79	0.92
-30 (-22)	160	40	47	39	0.47	0.50	4.09	1.03	1.20
-25 (-13)	224	56	66	45	0.50	0.70	4.97	1.25	1.46
-20 (- 4)	302	76	88	52	0.54	0.95	5.83	1.47	1.71
-15 (+ 5)	396	100	116	59	0.58	1.25	6.69	1.69	1.96
-10 (+14)	505	127	148	67	0.63	1.59	7.59	1.91	2.22

### 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		