

COMPRESSOR DEFINITION

Designation	EM CS60CLC
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513301910

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 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	0.13	[hp]
2 Displacement	9.04	[cm ³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.5	[kg] (16.53 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	5SP14X 115V/8EA14C3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	4TM319KFBYY-53	
6 Start winding resistance	6.87	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.54	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	9.60/9.60	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	2.50/2.50	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @127V60Hz			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]
648	163	190	104	0.83	2.04	6.24	1.57	1.83

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		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)	374	94	110	68	0.57	1.17	5.48	1.38	1.61
-30	(-22)	512	129	150	80	0.65	1.60	6.40	1.61	1.88
-25	(-13)	652	164	191	90	0.73	2.05	7.28	1.83	2.13
-20	(- 4)	813	205	238	100	0.80	2.55	8.20	2.07	2.40
-15	(+ 5)	1011	255	296	109	0.87	3.18	9.25	2.33	2.71
-10	(+14)	1265	319	371	120	0.96	3.99	10.52	2.65	3.08

TEST CONDITIONS: @127V60Hz		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)	345	87	101	70	0.58	1.08	4.89	1.23	1.43
-30	(-22)	484	122	142	83	0.67	1.52	5.77	1.45	1.69
-25	(-13)	623	157	183	95	0.76	1.96	6.56	1.65	1.92
-20	(- 4)	781	197	229	106	0.85	2.45	7.34	1.85	2.15
-15	(+ 5)	973	245	285	118	0.95	3.06	8.20	2.07	2.40
-10	(+14)	1219	307	357	132	1.05	3.84	9.22	2.32	2.70

TEST CONDITIONS: @127V60Hz		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)	313	79	92	73	0.59	0.98	4.31	1.09	1.26
-30	(-22)	455	115	133	87	0.69	1.43	5.20	1.31	1.52
-25	(-13)	594	150	174	100	0.80	1.86	5.94	1.50	1.74
-20	(- 4)	749	189	219	113	0.90	2.35	6.63	1.67	1.94
-15	(+ 5)	937	236	274	127	1.02	2.95	7.34	1.85	2.15
-10	(+14)	1175	296	344	143	1.15	3.71	8.17	2.06	2.39

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		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)	279	70	82	75	0.60	0.87	3.70	0.93	1.08
-30	(-22)	424	107	124	90	0.72	1.33	4.64	1.17	1.36
-25	(-13)	564	142	165	104	0.83	1.77	5.40	1.36	1.58
-20	(- 4)	718	181	210	120	0.95	2.26	6.04	1.52	1.77
-15	(+ 5)	902	227	264	136	1.09	2.84	6.65	1.68	1.95
-10	(+14)	1134	286	332	155	1.24	3.58	7.32	1.85	2.15

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	7.6 +0.05/-0.05	[mm]	(0.299" +0.002"/-0.002")
3.1.1 Material	Copper(OD)		
3.1.2 Shape	Straight		
3.2 DISCHARGE	4.25 +0.05/-0.05	[mm]	(0.167" +0.002"/-0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		